



**NEC**

# ***UNIVERGE<sup>®</sup> SV8100***

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## **Features and Specifications Manual**



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Communications Technology Group



# *Preface*

## ***Before Reading this Manual***

This manual provides detailed information for each of the system's features. If you are not familiar with the features, the Table of Contents provides a list of the features and where to find the feature within the manual.

## **GENERAL INFORMATION**

### **Congratulations! You have purchased the NEC UNIVERGE SV8100 System.**

The UNIVERGE SV8100 system is a feature-rich key system that provides many features including Automatic Call Distribution, IP Station and IP Trunk support, ISDN compatibility, PBX compatibility, TAPI compatibility, Voice over Internet Protocol and Uniform Call Distribution.

The UNIVERGE SV8100 system meets the customer needs today, and as business expands, the system can be expanded to grow as well.

The UNIVERGE SV8100 system has a set of manuals that provide all the information necessary to install and support the system. This preface describes these manuals.

## **SUPPORTING DOCUMENTS**

### **UNIVERGE SV8100 General Description Manual**

This Manual provides general information about the system, its features, system configuration and standards. This manual provides an overview of the UNIVERGE SV8100 system and can be used to present information to potential customers.

### **SV8100 System Hardware Manual**

The System Hardware Manual is provided for the system installer. This manual has detailed instructions for installing the SV8100 chassis, blades, multiline terminals, and optional equipment.

## **UNIVERGE SV8100 Programming Manual**

This manual provides instructions for programming the UNIVERGE SV8100 system using a multiline terminal or PC.

# TABLE OF CONTENTS

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## ***Chapter 1 Introduction***

Section 1	General Information .....	1-1
Section 2	Multiline Terminals used with the System.....	1-1

## ***Chapter 2 Features***

Section 1	About This Chapter .....	2-1
Section 2	Important Notes .....	2-2
Section 3	IPK II to UNIVERGE SV8100 Feature Comparison List .....	2-2
Section 4	Features.....	2-10
	<i>Account Code – Forced/Verified/Unverified</i> .....	2-11
	<i>Account Code Entry</i> .....	2-19
	<i>Alarm</i> .....	2-25
	<i>Alarm Reports</i> .....	2-29
	<i>Alphanumeric Display</i> .....	2-43
	<i>Analog Communications Interface (ACI)</i> .....	2-47
	<i>Ancillary Device Connection</i> .....	2-55
	<i>Answer Hold</i> .....	2-59
	<i>Answer Key</i> .....	2-63
	<i>Attendant Call Queuing</i> .....	2-67
	<i>Automatic Call Distribution (ACD)</i> .....	2-71
	<i>Automatic Release</i> .....	2-103
	<i>Automatic Route Selection</i> .....	2-109
	<i>Recognize Extension Location when Logging in with NetLink</i> .....	2-113
	<i>Background Music</i> .....	2-139

---

<i>Barge-In</i> .....	2-143
<i>Battery Backup – System Memory</i> .....	2-149
<i>Battery Backup – System Power</i> .....	2-151
<i>Call Appearance (CAP) Keys</i> .....	2-153
<i>Call Arrival (CAR) Keys</i> .....	2-159
<i>Call Duration Timer</i> .....	2-165
<i>Call Forwarding – Centrex</i> .....	2-167
<i>Call Forwarding</i> .....	2-173
<i>Call Forwarding with Follow Me</i> .....	2-187
<i>Call Forwarding, Off-Premise</i> .....	2-191
<i>Call Forwarding/Do Not Disturb Override</i> .....	2-207
<i>Call Monitoring</i> .....	2-211
<i>Call Redirect</i> .....	2-219
<i>Call Waiting/Camp-On</i> .....	2-223
<i>Callback</i> .....	2-229
<i>Caller ID Call Return</i> .....	2-233
<i>Caller ID</i> .....	2-237
<i>Memo Display Function</i> .....	2-242
<i>Caller ID – Flexible Ringing</i> .....	2-255
<i>Central Office Calls, Answering</i> .....	2-263
<i>Central Office Calls, Placing</i> .....	2-275
<i>Class of Service</i> .....	2-287
<i>Clock/Calendar Display</i> .....	2-307
<i>CO Message Waiting Indication</i> .....	2-311
<i>Code Restriction</i> .....	2-317
<i>Code Restriction Override</i> .....	2-327
<i>Code Restriction, Dial Block</i> .....	2-335
<i>Conference</i> .....	2-339
<i>Conference, Voice Call/Privacy Release</i> .....	2-347
<i>Continued Dialing</i> .....	2-351



---

<i>Cordless DECT Terminals</i> .....	2-355
<i>Cordless Telephone Connection</i> .....	2-375
<i>Data Line Security</i> .....	2-393
<i>Delayed Ringing</i> .....	2-395
<i>Department Calling</i> .....	2-401
<i>Department Step Calling</i> .....	2-413
<i>Dial Pad Confirmation Tone</i> .....	2-417
<i>Dial Tone Detection</i> .....	2-419
<i>Dialing Number Preview</i> .....	2-423
<i>Digital Trunk Clocking</i> .....	2-427
<i>Direct Inward Dialing (DID)</i> .....	2-433
<i>Direct Inward Line (DIL)</i> .....	2-455
<i>Direct Inward System Access (DISA)</i> .....	2-461
<i>Direct Station Selection (DSS) Console</i> .....	2-479
<i>Directed Call Pickup</i> .....	2-489
<i>Directory Dialing</i> .....	2-493
<i>Distinctive Ringing, Tones and Flash Patterns</i> .....	2-497
<i>Do Not Disturb</i> .....	2-509
<i>Door Box</i> .....	2-515
<i>Drop Key</i> .....	2-523
<i>D<sup>term</sup> Cordless II Terminal</i> .....	2-527
<i>D<sup>term</sup> Cordless Lite II Terminal</i> .....	2-549
<i>DTPlusWare</i> .....	2-569
<i>Ecology</i> .....	2-577
<i>E911 Compatibility</i> .....	2-587
<i>Electra Elite IPK Terminals</i> .....	2-623
<i>Facsimile CO Branch Connection</i> .....	2-645
<i>Flash</i> .....	2-649
<i>Flexible System Numbering</i> .....	2-653
<i>Flexible Timeouts</i> .....	2-673

---

<i>Forced Trunk Disconnect</i> .....	2-683
<i>General Purpose Relay</i> .....	2-687
<i>Group Call Pickup</i> .....	2-693
<i>Group Listen</i> .....	2-697
<i>Handset Mute</i> .....	2-701
<i>Handsfree and Monitor</i> .....	2-709
<i>Handsfree Answerback/Forced Intercom Ringing</i> .....	2-713
<i>Headset Operation</i> .....	2-717
<i>Hold</i> .....	2-721
<i>Hot Key-Pad</i> .....	2-729
<i>Hotel/Motel</i> .....	2-733
<i>Hotline</i> .....	2-751
<i>Howler Tone Service</i> .....	2-757
<i>Intercom</i> .....	2-759
<i>IP Multiline Station (SIP)</i> .....	2-767
<i>NAPT Traversal</i> .....	2-775
<i>IP Multiline Station (SIP) – ML440 Cordless</i> .....	2-791
<i>IP Single Line Telephone (SIP)</i> .....	2-807
<i>STD SIP Transfer-Unattended</i> .....	2-818
<i>IP Trunk – (SIP) Session Initiation Protocol</i> .....	2-833
<i>SIP Trunk E.164 Support</i> .....	2-835
<i>SIP Trunk E.164 CLIP Enhancement</i> .....	2-837
<i>Video Support over SIP Trunks</i> .....	2-838
<i>IP Trunk – H.323</i> .....	2-865
<i>IPK/IPK II Migration</i> .....	2-877
<i>IP/Digital Call Logging</i> .....	2-887
<i>ISDN Compatibility</i> .....	2-891
<i>ISDN 2 B-Channel Transfer</i> .....	2-897
<i>IVR – Appointment Reminder Server</i> .....	2-917
<i>IVR – Broadcast Server</i> .....	2-925

---

<i>K-CCIS – IP</i> .....	2-933
<i>CCIS Networking via IP (Peer to Peer Connections Basis)</i> .....	2-937
<i>K-CCIS – IP with PVA</i> .....	2-943
<i>K-CCIS – T1</i> .....	2-953
<i>Last Number Redial</i> .....	2-961
<i>Licensing</i> .....	2-965
<i>Temporary License</i> .....	2-971
<i>Line Preference</i> .....	2-981
<i>Long Conversation Cutoff</i> .....	2-987
<i>Loop Keys</i> .....	2-991
<i>Maintenance</i> .....	2-997
<i>Meet Me Conference</i> .....	2-999
<i>Meet Me Paging</i> .....	2-1003
<i>Meet Me Paging Transfer</i> .....	2-1009
<i>Memo Dial</i> .....	2-1015
<i>Message Waiting</i> .....	2-1019
<i>MH240 Wireless IP Telephone</i> .....	2-1027
<i>Microphone Cutoff</i> .....	2-1063
<i>Mobile Extension</i> .....	2-1067
<i>Callback to Cell Phone</i> .....	2-1075
<i>Multiple Trunk Types</i> .....	2-1091
<i>Music on Hold</i> .....	2-1111
<i>Name Storing</i> .....	2-1121
<i>NEC Meeting Center (NMC)</i> .....	2-1125
<i>Night Service</i> .....	2-1133
<i>Off-Hook Signaling</i> .....	2-1143
<i>One-Touch Calling</i> .....	2-1149
<i>Operator</i> .....	2-1155
<i>(OPX) Off-Premise Extension</i> .....	2-1159
<i>Paging, External</i> .....	2-1169

---

<i>Paging, External (VRS)</i> .....	2-1177
<i>Paging, Internal</i> .....	2-1181
<i>Park</i> .....	2-1187
<i>Personal Park at a Co-Worker's Extension</i> .....	2-1189
<i>PBX Compatibility</i> .....	2-1197
<i>PC Programming</i> .....	2-1203
<i>Outbound IP Connection</i> .....	2-1212
<i>Power Failure Transfer</i> .....	2-1223
<i>Prime Line Selection</i> .....	2-1227
<i>Private Line</i> .....	2-1233
<i>Programmable Function Keys</i> .....	2-1239
<i>Programming from a Multiline Terminal</i> .....	2-1245
<i>Pulse to Tone Conversion</i> .....	2-1249
<i>Redial Function</i> .....	2-1253
<i>Remote (System) Upgrade</i> .....	2-1257
<i>Repeat Redial</i> .....	2-1261
<i>Resident System Program</i> .....	2-1265
<i>Reverse Voice Over</i> .....	2-1267
<i>Ring Groups</i> .....	2-1271
<i>Ringdown Extension, Internal/External</i> .....	2-1277
<i>Room Monitor</i> .....	2-1281
<i>Save Number Dialed</i> .....	2-1287
<i>Secondary Incoming Extension</i> .....	2-1291
<i>Secretary Call (Buzzer)</i> .....	2-1297
<i>Secretary Call Pickup</i> .....	2-1301
<i>Security</i> .....	2-1305
<i>Selectable Display Messaging</i> .....	2-1325
<i>Selectable Ring Tones</i> .....	2-1331
<i>Serial Call</i> .....	2-1335
<i>Single Line Telephones, Analog 500/2500 Sets</i> .....	2-1339

---

<i>SLT Adapter</i> .....	2-1351
<i>SMB8000 Communications Analyst</i> .....	2-1369
<i>SMB8000 E911 Security Notification</i> .....	2-1379
<i>SMB8000 Conference Bridge</i> .....	2-1383
<i>SMB8000 Conference Bridge – Outlook Integration</i> .....	2-1395
<i>Softkeys</i> .....	2-1415
<i>Speed Dial – System/Group/Station</i> .....	2-1419
<i>Speed Dial – Telephone Book</i> .....	2-1439
<i>Station Hunt</i> .....	2-1447
<i>Station Message Detail Recording</i> .....	2-1451
<i>Station Name Assignment – User Programmable</i> .....	2-1477
<i>Station Relocation</i> .....	2-1481
<i>SV8100 Internal Router</i> .....	2-1485
<i>SV8100 NetLink</i> .....	2-1489
<i>NetLink Multi-SIP Carrier</i> .....	2-1495
<i>SV8100 PoE Gigabit Switch</i> .....	2-1507
<i>SV8100 UC Desktop Suite Applications</i> .....	2-1515
<i>SV8100/SV8300 Terminals</i> .....	2-1541
<i>Synchronous Ringing</i> .....	2-1557
<i>T1 Trunking (with ANI/DNIS Compatibility)</i> .....	2-1561
<i>Tandem Ringing</i> .....	2-1575
<i>Tandem Trunking (Unsupervised Conference)</i> .....	2-1579
<i>TAPI Compatibility</i> .....	2-1597
<i>Tone Override</i> .....	2-1603
<i>Traffic Reports</i> .....	2-1607
<i>Transfer</i> .....	2-1611
<i>Trunk Group Routing</i> .....	2-1625
<i>Trunk Groups</i> .....	2-1631
<i>Trunk Queuing/Camp-On</i> .....	2-1637

<i>UCB (Unified Communications for Business)</i> .....	2-1641
<i>Call Processing</i> .....	2-1648
<i>Agent and Supervisor Functions</i> .....	2-1650
<i>Announcement Function</i> .....	2-1651
<i>Voicemail Function</i> .....	2-1652
<i>InUCB Blade</i> .....	2-1654
<i>UM8000 Mail</i> .....	2-1671
<i>uMobility – Server Based</i> .....	2-1699
<i>uMobility – Wi-Fi Client</i> .....	2-1715
<i>Unicast/Multicast Paging Mode</i> .....	2-1729
<i>Uniform Call Distribution (UCD)</i> .....	2-1737
<i>Uniform Numbering Network</i> .....	2-1747
<i>Universal Slots</i> .....	2-1755
<i>User Programming Ability</i> .....	2-1771
<i>Virtual Extensions</i> .....	2-1773
<i>VM8000 InMail</i> .....	2-1785
<i>VM8000 InMail Park and Page</i> .....	2-1835
<i>VM8000 InMail Upload Download Audio</i> .....	2-1843
<i>VM8000 InMail – Automatic Access to VM by Caller ID</i> .....	2-1853
<i>VM8000 InMail – Cascade Message Notification</i> .....	2-1861
<i>VM8000 InMail – Email Notification</i> .....	2-1887
<i>VM8000 InMail – Find-Me Follow-Me</i> .....	2-1897
<i>VM8000 InMail – Language Setting</i> .....	2-1907
<i>Voice Call Recording</i> .....	2-1913
<i>D<sup>term</sup>® Voice Security Recorder (VSR)</i> .....	2-1913
<i>NEC SonicView™ IP Recorder (1.0)</i> .....	2-1917
<i>NEC SonicView Recorder (TDM and IP) (2.0)</i> .....	2-1923
<i>NEC SonicView Recorder (2.7)</i> .....	2-1929
<i>Voice Mail Integration (Analog)</i> .....	2-1941
<i>Voice Mail Message Indication on Line Keys</i> .....	2-1963
<i>Voice Over</i> .....	2-1969

<i>Voice Response System (VRS)</i> .....	2-1973
<i>Voice Response System (VRS) Embedded VRS</i> .....	2-1997
<i>Voice Response System (VRS) Upload Download Audio</i> .....	2-2011
<i>Voice Response System (VRS) – Call Forwarding – Park and Page</i> .....	2-2019
<i>Volume Controls</i> .....	2-2025
<i>Warning Tone for Long Conversation</i> .....	2-2029
<i>Wireless DECT (SIP)</i> .....	2-2033
<i>Off-Hook Signaling</i> .....	2-2044
<i>Caller ID Display After a Call Transfer</i> .....	2-2045
<i>Out of Range Call Warning Notification</i> .....	2-2046

## ***Chapter 3***      ***Codes Tables***

Section 1	About This Chapter.....	3-1
Section 2	Simplifying Multiline Terminal Operations with One-Touch Key Operation .....	3-1
Section 3	Using Handsfree .....	3-2

## ***Chapter 4***      ***Feature Availability by Software Revision***

Section 1	Feature Availability Chart.....	4-1
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# LIST OF FIGURES

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---

Figure 1-1	SV8100 Key Assignment Example .....	1-2
Figure 1-2	Feature Access/One-Touch Key Assignment Example .....	1-3
Figure 2-1	Left Cursor Key Operation Flow Chart .....	2-238
Figure 2-2	Department Calling Priority Call Routing .....	2-404
Figure 2-3	Department Calling Circular Routing .....	2-405
Figure 2-4	Digital Trunk Clocking Example 1 .....	2-428
Figure 2-5	Digital Trunk Clocking Example 2 .....	2-429
Figure 2-6	Digital Trunk Clocking Example 3 .....	2-429
Figure 2-7	Digital Trunk Clocking Example 4 .....	2-429
Figure 2-8	Digital Trunk Clocking Example 5 .....	2-430
Figure 2-9	Digital Trunk Clocking Example 6 .....	2-430
Figure 2-10	Digital Trunk Clocking Example 7 .....	2-430
Figure 2-11	Digital Trunk Clocking Example 8 .....	2-431
Figure 2-12	Trunk Distinctive Ringing Flow Chart .....	2-499
Figure 2-13	ICM Distinctive Ringing Flow Chart .....	2-500
Figure 2-14	Automatic Night Service .....	2-583
Figure 2-15	Multiline Terminal Darkens .....	2-586
Figure 2-16	CCIS Standard Calls .....	2-593
Figure 2-17	CCIS VE Standard Calls .....	2-596
Figure 2-18	CCIS 911 Calls .....	2-604
Figure 2-19	CCIS VE 911 Calls .....	2-608
Figure 2-20	Example – NAT Traversal .....	2-776
Figure 2-21	ML440 Cordless Handset .....	2-791
Figure 2-22	Example – SIP Phone .....	2-830

Figure 2-23	Single SV8100 to IPK/IPK II Connection .....	2-878
Figure 2-24	Multiple SV8100 to IPK/IPK II Connection (Layout 1) .....	2-879
Figure 2-25	Multiple SV8100 to IPK/IPK II Connection (Layout 2) .....	2-880
Figure 2-26	Multiple SV8100 to IPK/IPK II Connection (Layout 3) .....	2-881
Figure 2-27	Left Cursor Key Operation Flow Chart .....	2-961
Figure 2-28	Mobile Extension Layout .....	2-1068
Figure 2-29	Example – Callback to Cell Phone .....	2-1075
Figure 2-30	PC Programming Overview .....	2-1204
Figure 2-31	PCPro Connection Dialog .....	2-1205
Figure 2-32	WebPro Login Screen .....	2-1206
Figure 2-33	WebPro Home Page .....	2-1206
Figure 2-34	Maintenance Debug Screen .....	2-1207
Figure 2-35	WebPro End User Screen .....	2-1208
Figure 2-36	Idle Terminal Display .....	2-1309
Figure 2-37	Confirm Ring Time Display .....	2-1309
Figure 2-38	No Answer Display .....	2-1311
Figure 2-39	E911 Deployment Example .....	2-1379
Figure 2-40	Conference Bridge – Schedule New Conference .....	2-1400
Figure 2-41	Conference Bridge – Download Outlook Plugin .....	2-1400
Figure 2-42	File Download – Open .....	2-1401
Figure 2-43	Add or Remove Programs – Currently Installed Programs Example .....	2-1402
Figure 2-44	New Toolbars Added – Outlook 2007 .....	2-1402
Figure 2-45	New Toolbars Added – Outlook 2010 .....	2-1403
Figure 2-46	NEC Bridge Settings Screen – Outlook 2007 .....	2-1404
Figure 2-47	NEC Bridge Settings Screen – Outlook 2010 .....	2-1404
Figure 2-48	Schedule NEC Meeting – Using Default Options .....	2-1405
Figure 2-49	Meeting Scheduled with Meeting ID Example .....	2-1406

---

Figure 2-50	Meeting Scheduled Example .....	2-1406
Figure 2-51	Schedule NEC Meeting – Using Advanced Options .....	2-1407
Figure 2-52	Schedule a Recurring NEC Meeting .....	2-1409
Figure 2-53	Editing a NEC Meeting .....	2-1410
Figure 2-54	NEC Meeting Delete .....	2-1411
Figure 2-55	NEC Meeting Delete Confirmation .....	2-1411
Figure 2-56	Delete NEC Meeting .....	2-1411
Figure 2-57	NEC Meeting Delete Confirmation .....	2-1412
Figure 2-58	Email and iCalendar for Recurring Meeting .....	2-1412
Figure 2-59	Conference Scheduled from Web UI .....	2-1413
Figure 2-60	Meeting Scheduled Example .....	2-1413
Figure 2-61	Cancelled – Conference Scheduled from Web UI .....	2-1414
Figure 2-62	Right Cursor Key Operation Flow Chart .....	2-1421
Figure 2-63	Example of SMDR Report .....	2-1455
Figure 2-64	Virtual Loopback – S-Point .....	2-1455
Figure 2-65	Example of S-Point Report .....	2-1456
Figure 2-66	Example of S-Point Report (Flagged) .....	2-1456
Figure 2-67	Virtual Loopback – T-Point .....	2-1456
Figure 2-68	Example of Twice Through Virtual Loop .....	2-1457
Figure 2-69	Example of Twice Through Virtual Loop (Reverse Order) .....	2-1457
Figure 2-70	Virtual Loopback – External Call Routed Through T-Point .....	2-1457
Figure 2-71	Example of Twice Through Virtual Loop (Reverse Direction) .....	2-1458
Figure 2-72	Example – Version 4000 or Earlier .....	2-1495
Figure 2-73	Example – Version 5000 .....	2-1496
Figure 2-74	SV8100 Encryption Configuration .....	2-1542
Figure 2-75	VPN Between Smart Device and Office LAN .....	2-1718
Figure 2-76	Port Forwarding without Session Boarder Controller .....	2-1719

---

---

Figure 2-77	Port Forwarding with Session Boarder Controller .....	2-1720
Figure 2-78	Multicast Mode Example .....	2-1730
Figure 2-79	Unicast Mode Example .....	2-1730
Figure 2-80	Auto Mode Example .....	2-1731
Figure 2-81	Uniform Call Distribution (UCD) Priority Call Routing .....	2-1739
Figure 2-82	Uniform Call Distribution (UCD) Circular Routing .....	2-1740
Figure 2-83	VM8000 InMail User Pro Login Diagram .....	2-1844
Figure 2-84	Example – User Access to Voice Mail .....	2-1853
Figure 2-85	Cascade Message Notification Flow Chart-1 .....	2-1864
Figure 2-86	Cascade Message Notification Flow Chart-2 .....	2-1865
Figure 2-87	Cascade Message Notification Flow Chart-3 .....	2-1866
Figure 2-88	Cascade Message Flow Chart 1 .....	2-1884
Figure 2-89	Cascade Message Flow Chart 2 .....	2-1885
Figure 2-90	Program 22-02: Incoming Call Trunk Setup .....	2-2001
Figure 2-91	Program 40-10: Voice Announcement Service Option .....	2-2001
Figure 2-92	Program 25-02: VRS/DISA Message .....	2-2002
Figure 2-93	Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 1 .....	2-2002
Figure 2-94	Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 2 .....	2-2003
Figure 2-95	Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 3 .....	2-2003
Figure 2-96	Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 4 .....	2-2004
Figure 2-97	VRS User Pro Login Diagram .....	2-2012
Figure 2-98	IP DECT – 2nd Indication .....	2-2044
Figure 2-99	IP DECT – Caller ID Display .....	2-2045
Figure 2-100	Out of Range Example .....	2-2046

---

# LIST OF TABLES

---

---

Table 2-1	Feature Comparison List .....	2-2
Table 2-2	Sample Alarm Report .....	2-30
Table 2-3	Alarm Report Definitions .....	2-31
Table 2-4	Alarm Report Item Definitions .....	2-31
Table 2-5	Sample System Information Printout .....	2-32
Table 2-6	DT330 Compatibility Settings .....	2-56
Table 2-7	Firmware Compatibility Matrix .....	2-56
Table 2-8	Keys for Entering Names .....	2-250
Table 2-9	Caller ID Matching Rule .....	2-257
Table 2-10	Dial Tone Detection Program Interaction .....	2-422
Table 2-11	Example 2 (Manual Change) .....	2-438
Table 2-12	Example 1 – Monday ~ Friday .....	2-440
Table 2-13	Example 2 – Saturday .....	2-440
Table 2-14	Example 3 – Sunday .....	2-440
Table 2-15	LED Flash Patterns .....	2-453
Table 2-16	Distinctive Ringing: Tones and Flash Patterns .....	2-497
Table 2-17	Basic Tone Table – Tone 06 .....	2-505
Table 2-18	Basic Tone Table – Tone 14 .....	2-505
Table 2-19	Basic Tone Table – Tone 39 .....	2-506
Table 2-20	DTPlusWare OAI/TAPI License Feature Matrix .....	2-570
Table 2-21	Program 12-02: Automatic Night Service Patterns .....	2-583
Table 2-22	CPN for Standard Calls .....	2-589
Table 2-23	CPN for VE Standard Calls .....	2-590
Table 2-24	CPN for 911 Calls .....	2-591

---

Table 2-25	CPN for VE 911 Calls .....	2-592
Table 2-26	CPN for CCIS Standard Calls .....	2-593
Table 2-27	CPN for CCIS VE Standard Calls .....	2-597
Table 2-28	CPN for CCIS 911 Calls .....	2-605
Table 2-29	CPN for CCIS VE 911 Calls .....	2-609
Table 2-30	CPN for Line Key+911 Calls .....	2-617
Table 2-31	Electra Elite IPK Telephone Specifications .....	2-644
Table 2-32	General Purpose Relay Specifications .....	2-687
Table 2-33	Service Tone Setup Defaults, Program 80-01-01 .....	2-703
Table 2-34	Service Tone Setup, Program 80-01-02 .....	2-707
Table 2-35	Migration Supported Blades .....	2-739
Table 2-36	Valid Room Status Changes when Program 42-01-06 is set to 1 (Enabled) .....	2-739
Table 2-37	Valid Room Status Changes when Program 42-01-06 is set to 0 (Disabled) .....	2-740
Table 2-38	Extension Busy Setup .....	2-756
Table 2-39	Default Incoming Ringing Tone .....	2-764
Table 2-40	Example – Required System Settings .....	2-776
Table 2-41	Example – Required IP Terminal Settings .....	2-777
Table 2-42	Example – SV8100 System Router A Port Forwarding Settings .....	2-777
Table 2-43	NAPT Terminals – Minimum Timer Settings .....	2-779
Table 2-44	Minimum Bandwidth Requirements .....	2-808
Table 2-45	Feature Support Table for Standard SIP Device .....	2-811
Table 2-46	SIP INVITE Header Fields .....	2-861
Table 2-47	Delete + from Incoming SIP INVITE .....	2-862
Table 2-48	Delete + and Country Code from Incoming SIP INVITE .....	2-863
Table 2-49	Delete + and Country Code from Incoming SIP INVITE .....	2-863

---

---

Table 2-50	IPK II Supported Hardware .....	2-882
Table 2-51	Supported Optional Equipment (via MGN-U10 ETU) .....	2-883
Table 2-52	Supported Optional Equipment .....	2-884
Table 2-53	Restrictions for Calling Party Names .....	2-893
Table 2-54	K-CCIS Main and Remote System VoIP Resources Used .....	2-937
Table 2-55	CD-PVAA Blade Installed in Slot 6 .....	2-945
Table 2-56	CD-PVAA Blade Installed in Slot 4 and Slot 6 .....	2-945
Table 2-57	Minimum Bandwidth Required .....	2-946
Table 2-58	Migration Supported Blades .....	2-950
Table 2-59	License Information .....	2-974
Table 2-60	Supported Features .....	2-1031
Table 2-61	Program 15-07 Function Codes (Service Code 751) .....	2-1040
Table 2-62	Program 15-07 Function Codes (Service Code 752) .....	2-1043
Table 2-63	Program 11-10 Service Code Setup (Setup/Entry Operation) .....	2-1044
Table 2-64	Program 11-11 Service Code Setup (Setup/Entry Operation) .....	2-1045
Table 2-65	Program 11-12 Service Code Setup (Service Access) .....	2-1048
Table 2-66	Program 11-13 Service Code Setup (ACD) .....	2-1050
Table 2-67	Program 11-14 Service Code Setup (Hotel) .....	2-1051
Table 2-68	Program 11-15 Service Code Setup (Special Access) .....	2-1052
Table 2-69	Supported Service Codes .....	2-1069
Table 2-70	Caller ID Sent to Mobile Telephone .....	2-1073
Table 2-71	Keys for Entering Names .....	2-1124
Table 2-72	Feature Support Table for Standard SIP Device .....	2-1126
Table 2-73	Feature Support Table for Standard SIP Device .....	2-1127
Table 2-74	Feature Support Table for Standard SIP Device .....	2-1128
Table 2-75	PCPro and WebPro Comparison .....	2-1219
Table 2-76	Selectable Display Messaging Defaults .....	2-1325

---

---

Table 2-77	Selectable Display Message – Character Entry Chart .....	2-1329
Table 2-78	Intercom or Trunk Ring Setting .....	2-1333
Table 2-79	Communications Analyst Support .....	2-1370
Table 2-80	Migration Supported Blades .....	2-1387
Table 2-81	Keys for Entering Names .....	2-1433
Table 2-82	SMDR Report Definitions .....	2-1458
Table 2-83	SMDR Report Format with Program 35-02-14 Set to ‘0’ .....	2-1459
Table 2-84	SMDR Report Format with Program 35-02-14 Set to ‘1’ .....	2-1461
Table 2-85	SMDR Summary Report .....	2-1462
Table 2-86	Keys for Entering Names .....	2-1479
Table 2-87	Migration Supported Blades .....	2-1486
Table 2-88	VoIP Resource Chart .....	2-1492
Table 2-89	CPU Reset Programs .....	2-1493
Table 2-90	Migration Supported Blades .....	2-1510
Table 2-91	Desktop Suite Licenses .....	2-1526
Table 2-92	Exceptions to Firewall for Ports .....	2-1527
Table 2-93	Exceptions to Windows Process .....	2-1528
Table 2-94	DT700 Supported Encryption .....	2-1541
Table 2-95	Terminal Category Reference Chart (DT300/DT700) .....	2-1543
Table 2-96	Terminal Category Reference Chart ( <i>D<sup>term</sup></i> Series i Terminals) .....	2-1545
Table 2-97	Connectivity of Options .....	2-1546
Table 2-98	Terminal and Adapter Compatibility .....	2-1547
Table 2-99	DT330 Compatibility Settings .....	2-1548
Table 2-100	Firmware Compatibility Matrix .....	2-1548
Table 2-101	Terminal and Line Key/LCD Compatibility .....	2-1549
Table 2-102	Terminal and Ten Key Kit Compatibility .....	2-1550
Table 2-103	Adapter Compatibility .....	2-1551

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Table 2-104	IPLA DSP Usage .....	2-1552
Table 2-105	IPLB DSP Usage .....	2-1553
Table 2-106	TAPI Commands .....	2-1598
Table 2-107	SV8100 Configuration .....	2-1646
Table 2-108	Windows Mobile Devices .....	2-1704
Table 2-109	Nokia Devices .....	2-1705
Table 2-110	iPhone Devices .....	2-1706
Table 2-111	Mobile Device Requirements .....	2-1721
Table 2-112	Feature Support Table .....	2-1722
Table 2-113	SV8100 Maximum System Capacities – Trunks/Ports/Channels .....	2-1756
Table 2-114	SV8100 9.5” (Base and Expansion) Maximum System Capacities – Trunks/Ports/Channels .....	2-1757
Table 2-115	Maximum System Capacities for Station Interface Blades .....	2-1758
Table 2-116	Maximum System Capacities for Trunk Interface Blades .....	2-1762
Table 2-117	Maximum System Capacities for Application Interface Blades .....	2-1764
Table 2-118	Board Power Factor .....	2-1765
Table 2-119	Terminal Power Factor .....	2-1766
Table 2-120	Maximum Number of Packages Installed .....	2-1767
Table 2-121	Migration Supported Application Blades .....	2-1767
Table 2-122	SV8100 VM8000 InMail Part Numbers and Capacities .....	2-1789
Table 2-123	Park and Page Call Handling .....	2-1836
Table 2-124	Park and Page Call Handling .....	2-1837
Table 2-125	Recording Your Paging Message .....	2-1841
Table 2-126	Setting the Call Handling Options .....	2-1842
Table 2-127	Picking Up a Parked Call .....	2-1842
Table 2-128	Default Incoming Ringing Tone .....	2-1844
Table 2-129	Error Messages and Causes .....	2-1848

---

Table 2-130	VM8000 Email Account Information .....	2-1888
Table 2-131	Typical SMS Notification (No Wav File) .....	2-1889
Table 2-132	Common Email Notification SMTP Server Settings .....	2-1890
Table 2-133	Some Common Mobile Telephone Service Provider SMS Portals .....	2-1891
Table 2-134	Turn Email Notification On or Off .....	2-1895
Table 2-135	Language Setting Operation .....	2-1911
Table 2-136	IP Recorder Basic Licenses .....	2-1921
Table 2-137	SV8100 CPU License (NEC SonicView Recorder) .....	2-1927
Table 2-138	Known Limitations .....	2-1929
Table 2-139	System Minimum Requirements .....	2-1935
Table 2-140	Server Hardware Matrix .....	2-1935
Table 2-141	Common Hardware Requirements .....	2-1936
Table 2-142	Supervisor/Agent Studio PC Recommendations .....	2-1936
Table 2-143	Supported Operating Systems .....	2-1937
Table 2-144	Supported Databases .....	2-1937
Table 2-145	SV8100 CPU License (NEC SonicView Recorder) .....	2-1938
Table 2-146	Voice Prompting Messages .....	2-1977
Table 2-147	Embedded VRS Prompts .....	2-2009
Table 2-148	Default Incoming Ringing Tone .....	2-2013
Table 2-149	Error Messages and Causes .....	2-2016
Table 2-150	Supported Wireless DECT (SIP) Features .....	2-2033
Table 3-1	Post Dialing Service Codes – Single Digit Post Dialing Codes .....	3-2
Table 3-2	Service Codes by Number .....	3-3
Table 3-3	Service Codes by Feature .....	3-14
Table 3-4	Function Key Codes by Feature .....	3-26
Table 3-5	Function Key Codes by Number .....	3-35
Table 4-1	Feature Availability by Software Revision .....	4-2

# Introduction



## SECTION 1 GENERAL INFORMATION

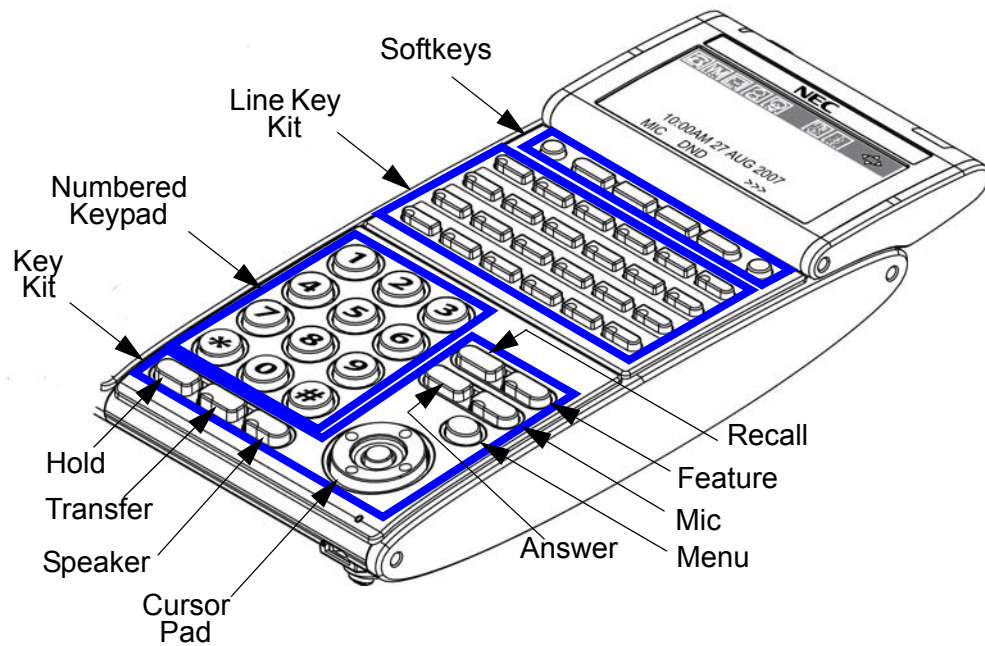
UNIVERGE SV8100 (DTL and ITL telephones), Electra Elite IPK II (DTH telephones), *D<sup>term</sup>* Series i (DTR telephones) can be used with the UNIVERGE SV8100 system.

## SECTION 2 MULTILINE TERMINALS USED WITH THE SYSTEM

### SV8100 Terminals

The SV8100 multiline terminals, either with or without LCD display, offer a variety of colors, and line sizes.

- Terminals are available in black or white.
- The large Liquid Crystal Display (LCD) on the display provides call status data and programming information.
- Terminal line sizes include 2, 6, 12, 24, and 32.
- IP Terminals are available in 2, 6, 12, 24, and 32.
- Speakerphone with full handsfree operation and headset jack is standard.
- Only the DT330 series terminals are compatible with APR-L adapters.
- An Attendant Add-On DCL-60-1 Console is available with 60 stations and/or outside line assignments.
- If the page switching key on the DCL-60-1 Console is used, there is a maximum of 120 keys. Two pages of 54 programmable keys and six fixed keys.
- A power failure module PSA-L is available for fail-over to POTS line when there is a loss of power or network connection to the SV8100.



**Figure 1-1 SV8100 Key Assignment Example**

### Electra Elite IPK Terminals

The Electra Elite IPK Series i Terminals (DTR/DTH telephones) either with or without LCD display offer a variety of colors, and line sizes.

- Terminals are available in black or white.
- The large Liquid Crystal Display (LCD) on the display terminals provides call status data and programming information.
- Terminal line sizes include 8-line, 16-line, and 32-line.
- An Attendant Add-On DCL-60-1 Console is available with 60 stations and/or outside line assignments.
- If the page switching key on the DCL-60-1 Console is used, there is a maximum of 120 keys. Two pages of 54 programmable keys and six fixed keys.

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### Feature Access, Single On/Off, or One-Touch Keys

Keys are designated Feature Access, Single On/Off, or One-Touch throughout this manual. The keys operate much the same, but various limitations imposed on each type are described below.

Feature Access Keys

Depending on the type, a multiline terminal can have 2, 8, 16, 24, or 32 line keys. These highly-flexible keys can be used for station DSS/BLF and Speed Dial.

Single On/Off Keys

Line keys may also be assigned as Single On/Off keys in System Programming to toggle a feature on/off. This assignment has no impact on the Feature Access keys, but the assigned features are very specific. Scrolling (CID) and headset are examples of features available for Single On/Off keys.

One-Touch Keys

One-Touch keys can perform the same function as Feature Access keys. A multiline terminal has a fixed number of these keys. No system assignment is necessary, and the number of keys ranges from none to 16 depending on the terminal type.



**Figure 1-2 Feature Access/One-Touch Key Assignment Example**

- ❑ 2-line on the DTR-2DT-1.
- ❑ Speakerphone with full handsfree operation and headset jack is standard (except on the DTR-2DT-1).
- ❑ All but the DTR-2DT-1, DTR-1-1, DTR-1HM-1 and Cordless terminals are compatible with the AD(A)-R, AP(A)-R, AP(R)-R, CT(A)-R and HF-R Unit adapters. The AP(R)-R Unit requires an AC(A)-R Unit to supply AC power. For Attendant Positions, an Attendant Add-On DCL-60-1 Console is available with 60 station and/or outside line assignments and 12 function keys. The DTR-2DT-1 has an internal Analog Port without ringer.
- ❑ A two-line terminal with two Flexible Line keys (each with 2-color LED), nine function keys, built-in speakerphone, a large LED to indicate incoming calls or messages, and an outgoing only Analog SLT Port [AD(A)-R] is also available.
- ❑ The Electra Elite IPK Single Line Terminals are offered in two variations (DTR-1-1, DTR-1HM-1 and DTH-1-1). Both terminals come in black or white. Both have DTMF and Pulse Dialing compatibility, and offer Flash and Redial key functionality. The UNIVERGE SV8100 Single Line Terminals come standard with a Message Waiting Indicator that also functions as an Incoming Call Indication. During a call, the receive audio level can be increased three levels and decreased two levels from the default setting (six volume level settings in all). The terminals offer four ring volume settings (Off, Soft, Medium, and Loud), and three ring patterns (Slow, Medium, and Fast). The DTR Single Line Terminals also have a Data Port that functions similar to that of an AP(R)-R optional adapter, and have a built-in wall mount adapter. The DTR-1HM-1 terminal has eight programmable speed dial buttons (maximum 21 digits each). The DTR-1HM-1 also has Hold and Monitor Function keys.

# Features



## SECTION 1 ABOUT THIS CHAPTER

This chapter provides an alphabetical listing of the features that are available with the UNIVERGE SV8100 system.

Each feature provides the following information:

**Description** – briefly describes the feature and how it is used.

**Conditions** – provides special operating conditions (if any) that need to be considered with using the feature.

**Default Settings** – indicates the factory default setting (if any).

**System Availability** – describes multiline terminals that can be used with this feature and lists any additional equipment, such as adapters or blades, that must be installed for this feature to operate.

**Programming** – lists the memory blocks that support the feature.

**Related Features** – lists features that are associated with the feature being described (e.g., the Account Codes feature lists the Speed Dialing feature in the related features list because speed dialing bins can contain stored account code (if any).

**Operation** – provides step-by-step instructions for using the feature.

## SECTION 2      **IMPORTANT NOTES**

### **Simplifying Multiline Terminal Operation with One-Touch Keys**

A multiline terminal user can access many features using Service Codes (e.g., Service Code 744 sets Call Forward Busy/No Answer). To streamline the operation of their telephone, a multiline terminal user can store these codes under One-Touch Keys. This provides one-button operation for almost any feature. To find out more, turn to the One-Touch Calling and One-Touch Serial Operation features.

### **Programmable Keys**

When reading an instruction using programmable keys, you will see a notation similar to (*PRG 15-07 or SC nnn*). This means that the key requires service code nnn, and you can program this code in Program 15-07 or by dialing Service Code 751 or 752. Refer to the Programmable Function Keys feature for more information.

### **Using Handsfree**

The manual assumes each extension has Automatic Handsfree. This lets a user just press a line key or Speaker key to answer or place a call. For extensions without Automatic Handsfree, the user must:

- Lift the handset or press **Speaker** for Intercom dial tone.
- Lift the handset or press **Speaker**, then press a line key for trunk dial tone.

### **Port Assignments**

#### ***Port Calculation for Trunks:***

The system detects the type of blade (trunk or extension) and assigns the required extension or trunk ports to the slot. The system will use the next available port numbers – it will not reserve any ports.

## SECTION 3      **IPK II TO UNIVERGE SV8100 FEATURE COMPARISON LIST**

[Table 2-1 Feature Comparison List](#) provides a cross-reference between the Electra Elite IPK II and the UNIVERGE SV8100 features.

**Table 2-1 Feature Comparison List**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Account Code – Forced/Verified/Unverified	Account Code – Forced/Verified/Unverified
Account Code Entry	Account Code Entry
Alarm	Alarm



**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Alarm Reports	Alarm Reports
Alphanumeric Display	Alphanumeric Display
Analog Communications Interface (ACI)	Analog Communications Interface (ACI)
Ancillary Device Connection	Ancillary Device Connection
Answer Hold	Answer Hold
Answer Key	Answer Key
Attendant Call Queuing	Attendant Call Queuing
Automatic Call Distribution (ACD)	Automatic Call Distribution (ACD)
Automatic Release	Automatic Release
Automatic Route Selection	Automatic Route Selection
Background Music	Background Music
Barge-In	Barge-In
Battery Backup – System Memory	Battery Backup – System Memory
Battery Backup – System Power	Battery Backup – System Power
Call Appearance (CAP) Keys	Call Appearance (CAP) Keys
Call Arrival (CAR) Keys	Call Arrival (CAR) Keys
Call Duration Timer	Call Duration Timer
Call Forwarding – Centrex	Call Forwarding – Centrex
Call Forwarding – Park and Page	Voice Response System (VRS) – Call Forwarding – Park and Page
Call Forwarding	Call Forwarding
Call Forwarding with Follow Me	Call Forwarding with Follow Me
Call Forwarding, Off-Premise	Call Forwarding, Off-Premise
Call Forwarding/Do Not Disturb Override	Call Forwarding/Do Not Disturb Override
Call Monitoring	Call Monitoring
Call Redirect	Call Redirect
Call Waiting/Camp-On	Call Waiting/Camp-On
Callback	Callback
Caller ID Call Return	Caller ID Call Return

**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Caller ID	Caller ID
<i>Not Supported</i>	Caller ID – Flexible Ringing
Central Office Calls, Answering	Central Office Calls, Answering
Central Office Calls, Placing	Central Office Calls, Placing
Class of Service	Class of Service
Clock/Calendar Display	Clock/Calendar Display
CO Message Waiting Indication	CO Message Waiting Indication
Code Restriction	Code Restriction
Code Restriction Override	Code Restriction Override
Code Restriction, Dial Block	Code Restriction, Dial Block
Computer Telephony Integration (CTI) Applications	TAPI Compatibility
Conference	Conference
Conference, Voice Call/Privacy Release	Conference, Voice Call/Privacy Release
Continued Dialing	Continued Dialing
<i>Not Supported</i>	Cordless DECT Terminals
Cordless Telephone Connection	Cordless Telephone Connection
Data Line Security	Data Line Security
Delayed Ringing	Delayed Ringing
Department Calling	Department Calling
Department Step Calling	Department Step Calling
Dial Pad Confirmation Tone	Dial Pad Confirmation Tone
Dial Tone Detection	Dial Tone Detection
Dialing Number Preview	Dialing Number Preview
Digital Trunk Clocking	Digital Trunk Clocking
Digital Voice Mail	VM8000 InMail
Direct Inward Dialing (DID)	Direct Inward Dialing (DID)
Direct Inward Line (DIL)	Direct Inward Line (DIL)
Direct Inward System Access (DISA)	Direct Inward System Access (DISA)
Direct Station Selection (DSS) Console	Direct Station Selection (DSS) Console

**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Directed Call Pickup	Directed Call Pickup
Directory Dialing	Directory Dialing
Distinctive Ringing, Tones and Flash Patterns	Distinctive Ringing, Tones and Flash Patterns
Do Not Disturb	Do Not Disturb
Door Box	Door Box
Drop Key	Drop Key
<i>D<sup>term</sup></i> Cordless II Terminal	<i>D<sup>term</sup></i> Cordless II Terminal
<i>D<sup>term</sup></i> Cordless Lite II Terminal	<i>D<sup>term</sup></i> Cordless Lite II Terminal
<i>Not Supported</i>	DTPlusWare
<i>D<sup>term</sup></i> Handset Cordless	SV8100/SV8300 Terminals
<i>D<sup>term</sup></i> IP Gateway System	<i>Not Supported</i>
<i>Not Supported</i>	Ecology
E911 Compatibility	E911 Compatibility
Electra Elite IPK Terminals	Electra Elite IPK Terminals
Electra Elite Terminal Migration	IPK/IPK II Migration
EliteApps – Interactive Voice Response	IVR – Appointment Reminder Server
<i>Not Supported</i>	IVR – Broadcast Server
Elite CallAnalyst	SMB8000 Communications Analyst
Facsimile CO Branch Connection	Facsimile CO Branch Connection
Flash	Flash
Flexible System Numbering	Flexible System Numbering
Flexible Timeouts	Flexible Timeouts
Forced Trunk Disconnect	Forced Trunk Disconnect
<i>Not Supported</i>	General Purpose Relay
Group Call Pickup	Group Call Pickup
Group Listen	Group Listen
Handset Mute	Handset Mute
Handsfree and Monitor	Handsfree and Monitor

**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Handsfree Answerback/Forced Intercom Ringing	Handsfree Answerback/Forced Intercom Ringing
Headset Operation	Headset Operation
Hold	Hold
Hot Key-Pad	Hot Key-Pad
Hotel/Motel	Hotel/Motel
Hotline	Hotline
Howler Tone Service	Howler Tone Service
Intercom	Intercom
Internal Hub	SV8100 PoE Gigabit Switch
IP Extenders/Mobile ConneX	<i>Not Supported</i>
IP Station (MEGACO) – IAD Integrated Access Device	IP Multiline Station (SIP)
IP Station (MEGACO) – MG 16	IP Multiline Station (SIP)
<i>Not Supported</i>	IP Multiline Station (SIP) – ML440 Cordless
IP Station (SIP) – MG16	IP Single Line Telephone (SIP)
IP Trunk – (SIP) Session Initiation Protocol	IP Trunk – (SIP) Session Initiation Protocol
IP Trunk – H.323 Protocol	IP Trunk – H.323
IP Trunk (SIP) – MG16	IP Trunk – (SIP) Session Initiation Protocol
IPK II – PC Assistant	SV8100 UC Desktop Suite Applications
IPK II – PC Attendant	SV8100 UC Desktop Suite Applications
IPK II In-Mail	VM8000 InMail
IPK II VoIP Management System	<i>Not Supported</i>
<i>Not Supported</i>	IP/Digital Call Logging
ISDN Compatibility	ISDN Compatibility
<i>Not Supported</i>	K-CCIS – IP
K-CCIS - IP with IAD	<i>Not Supported</i>
K-CCIS - IP with PVA	K-CCIS – IP with PVA
K-CCIS - T1	K-CCIS – T1
Last Number Redial	Last Number Redial

**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Licensing	Licensing
Line Preference	Line Preference
Long Conversation Cutoff	Long Conversation Cutoff
<i>Not Supported</i>	Loop Keys
<i>Not Supported</i>	Maintenance
Meet Me Conference	Meet Me Conference
Meet Me Paging	Meet Me Paging
Meet Me Paging Transfer	Meet Me Paging Transfer
Memo Dial	Memo Dial
Message Waiting	Message Waiting
<i>Not Supported</i>	MH240 Wireless IP Telephone
Microphone Cutoff	Microphone Cutoff
<i>Not Supported</i>	Mobile Extension
Multiline Conference Bridge	SMB8000 Conference Bridge
Multimedia Conference Bridge	SMB8000 Conference Bridge
Multiple Trunk Types	Multiple Trunk Types
Music on Hold	Music on Hold
Name Storing	Name Storing
<i>Not Supported</i>	NEC Meeting Center (NMC)
Night Service	Night Service
Off-Hook Signaling	Off-Hook Signaling
One-Digit Dial Option	Automatic Call Distribution (ACD)
One-Touch Calling	One-Touch Calling
Operator	Operator
(OPX) Off-Premise Extension	(OPX) Off-Premise Extension
Paging, External	Paging, External
<i>Not Supported</i>	Paging, External (VRS)
Paging, Internal	Paging, Internal
Park	Park

**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
PBX Compatibility	PBX Compatibility
PC Programming	PC Programming
Power Failure Transfer	Power Failure Transfer
Prime Line Selection	Prime Line Selection
Private Line	Private Line
Programmable Function Keys	Programmable Function Keys
Programming from a Multiline Terminal	Programming from a Multiline Terminal
Pulse to Tone Conversion	Pulse to Tone Conversion
Quick Transfer to Voice Mail	VM8000 InMail
Redial Key	Redial Function
Remote (System) Upgrade	Remote (System) Upgrade
Repeat Redial	Repeat Redial
Resident System Program	Resident System Program
Reverse Voice Over	Reverse Voice Over
Ring Groups	Ring Groups
Ringdown Extension, Internal/External	Ringdown Extension, Internal/External
Room Monitor	Room Monitor
Save Number Dialed	Save Number Dialed
Secondary Incoming Extension	Secondary Incoming Extension
Secretary Call (Buzzer)	Secretary Call (Buzzer)
Secretary Call Pickup	Secretary Call Pickup
<i>Not Supported</i>	Security
Selectable Display Messaging	Selectable Display Messaging
Selectable Ring Tones	Selectable Ring Tones
Serial Call	Serial Call
Single Line Telephones, Analog 500/2500 Sets	Single Line Telephones, Analog 500/2500 Sets
SLT Adapter	SLT Adapter
SNMP Simple Network Management Protocol	<i>Not Supported</i>
<i>Not Supported</i>	SMB8000 Conference Bridge – Outlook Integration

**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Softkeys	Softkeys
Speed Dial – System/Group/Station	Speed Dial – System/Group/Station
<i>Not Supported</i>	Speed Dial – Telephone Book
Station Add-On Console	SV8100/SV8300 Terminals
Station Hunt	Station Hunt
Station Message Detail Recording	Station Message Detail Recording
Station Name Assignment-User Programmable	Station Name Assignment – User Programmable
Station Relocation	Station Relocation
<i>Not Supported</i>	SV8100 Internal Router
<i>Not Supported</i>	SV8100 NetLink
Synchronous Ringing	Synchronous Ringing
T1 Trunking (with ANI/DNIS Compatibility)	T1 Trunking (with ANI/DNIS Compatibility)
Tandem Ringing	Tandem Ringing
Tandem Trunking (Unsupervised Conference)	Tandem Trunking (Unsupervised Conference)
TAPI Compatibility	TAPI Compatibility
Tone Override	Tone Override
Traffic Reports	Traffic Reports
Transfer	Transfer
Trunk Group Routing	Trunk Group Routing
Trunk Groups	Trunk Groups
Trunk Queuing/Camp-On	Trunk Queuing/Camp-On
<i>Not Supported</i>	UCB (Unified Communications for Business)
Unified Messaging	UM8000 Mail
<i>Not Supported</i>	uMobility
<i>Not Supported</i>	Unicast/Multicast Paging Mode
Uniform Call Distribution (UCD)	Uniform Call Distribution (UCD)
Uniform Numbering Network	Uniform Numbering Network
Universal Slots	Universal Slots
User Programming Ability	User Programming Ability

**Table 2-1 Feature Comparison List (Continued)**

<b>IPK II Feature Name</b>	<b>UNIVERGE SV8100 Feature Name</b>
Virtual Extensions	Virtual Extensions
<i>Not Supported</i>	VM8000 InMail Park and Page
<i>Not Supported</i>	VM8000 InMail Upload Download Audio
<i>Not Supported</i>	VM8000 InMail – Automatic Access to VM by Caller ID
<i>Not Supported</i>	VM8000 InMail – Cascade Message Notification
<i>Not Supported</i>	VM8000 InMail – Email Notification
<i>Not Supported</i>	VM8000 InMail – Find-Me Follow-Me
<i>Not Supported</i>	VM8000 InMail – Language Setting
<i>Not Supported</i>	Voice Call Recording
Voice Mail Integration (Analog)	Voice Mail Integration (Analog)
Voice Mail Message Indication on Line Keys	Voice Mail Message Indication on Line Keys
Voice Over	Voice Over
Voice Over Internet Protocol (VoIP)	<i>Not Supported</i>
Voice Response System (VRS)	Voice Response System (VRS)
<i>Not Supported</i>	Voice Response System (VRS) Embedded VRS
<i>Not Supported</i>	Voice Response System (VRS) Upload Download Audio
Volume Controls	Volume Controls
Warning Tone For Long Conversation	Warning Tone for Long Conversation
Wireless – DECT	Wireless DECT (SIP)

## **SECTION 4      FEATURES**

The remainder of this document provides the features for the UNIVERGE SV8100 system.



# Account Code – Forced/Verified/Unverified

## Description

Account Codes are user-dialed codes that help the system administrator categorize and/or restrict trunk calls. The system has two types of Forced Account Codes:

### Forced Account Codes (Unverified)

Forced Account Codes **require** an extension user to enter an Account Code every time they place a trunk call. If the user does not enter the code, the system prevents the call. As with Account Codes, the extension user can elect to enter an Account Code for an incoming call. However, the system does not require it. **Forced Account Codes do not block emergency assistance (911) calls.**

Once set up in system programming, you can enable Forced Account Codes trunk-by-trunk. In addition, Forced Account Codes can apply to all outside calls or only long distance calls. Forced Account Codes for Toll Calls restricts calls according to the following chart:

Number of Digits Dialed	If first digit is not 1	If first digit is 1
1~3	Not allowed	Not allowed
4~7	Does not require Account Code	Requires Account Code
More than 7	Does not require Account Code	Requires Account Code
800 and 888	Does not require Account Code	Does not require Account Code
011 (International)	Requires Account Code	N/A
911	Does not require Account Code	N/A

### Verified Account Codes

With Verified Account Codes, the system compares the Account Code the user dials to a list of up to 2000 programmed codes. If the Account Code is in the list, the call goes through. If the code dialed is not in the list, the system prevents the call. Verified Account Codes can have 3~16 digits using the characters 0~9 and #. During programming, you can use “wild cards” to streamline entering codes into system memory. For example, the entry 123@ lets users dial Verified Account Codes from 1230 through 1239.

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## Operator Notification

To prevent Account Code abuse, the system can notify the operator each time an Account Code violation occurs (Program: 20-13-20). This can happen if the user fails to enter an Account Code (if Forced) or enters a Verified Account Code that is not in the list. The notification is an automatic Intercom call to the attendant and a *RESTRICT* message in the operator display.

## Account Codes for Incoming Calls

The system allows extension users to enter Account Codes for incoming calls. When this option is enabled, a user can dial \* while on an incoming call, enter an Account Code, and then dial \* to return to their caller. If the option is disabled, any digit the user dials after answering an incoming call outdials on the connected trunk.

## Hiding Account Codes


Optionally, Account Codes can be hidden from a telephone display. This prevents, for example, an unauthorized co-worker from obtaining a Verified Account Code by watching the display. When hidden, the Account Code digits show as \* on the telephone display.

## Account Code Capacity

Account Codes print along with the other call data on the SMDR record after the call completes. Account Codes can have 1~16 digits using 0~9 and #. Verified Account Codes can have 3~16 digits.

## Redialed Numbers Do Not Contain Account Codes

When using the Last Number Redial, Save or Repeat Dial features, the system does not retain Account Code information. For any number redialed with these features, the user must enter an Account Code.

 *If a user enters \*12345\*203 926 5400\*67890\*, if the Last Number Redial feature is used, the system dials the number as 203 926 5400\*67890\*. The \*67890\* is not treated as an Account Code.*

## Conditions

- If a user enters a code that exceeds 16 digits, the system ignores the Account Code Entry.
- If the system has Account Codes disabled, the digits dialed (e.g., \*1234\*) appear on the SMDR report as part of the number dialed.
- If using Forced Account Code with single line telephone you need a VRS to get the prompts to enter the Forced Account Code.
- When you use Forced Account Code on only toll calls, and you dial a local call, you hear a beep.
- The timer set in Program 21-01-14 is applied to toll calls and local calls.
- Speed Dial – System/Group/Station bins can contain stored Account Codes. They can be prevented from being displayed using Program 20-07-04.

- 
- 
- To simplify Account Code Entry, store the Account Code (e.g., \*1234\*) in a One-Touch Key. Just press the key instead of dialing the codes.
  - Account Codes appear on the SMDR report (even if they are hidden on the telephone display).
  - Do not use an asterisk in a PBX/CTX access code when using Account Codes. The \*, causes the trunk to stop sending digits to the central office until another \* is entered.
  - Account Codes for incoming calls are not available for single line telephones.
  - When using Forced Account Codes (Unverified) for toll calls only, the station follows the timer setting in Program 21-01-14 for all calls.
  - System Account codes are bypassed when using DISA trunks. If a user calls in via a DISA trunk, the user is not required to enter an account code.
  - When Account Codes are enabled in a Class of Service, extensions in that Class of Service no longer follow the Maximum Dialing Digit setting in the ARS/F-Routes.
  - Verified Account Codes for Toll Calls across a CCIS network are not restricted when a trunk access code is added to the number allowing ARS routing through another K-CCIS T1/IP networked site. This access code (typically a 9), precedes the dialed "1" used by the system to identify a long distance call. As a result, the call is no longer considered long distance and the account code is not required.
  - Forced Account Codes restrict toll calls based off the digits the system dials, not what the user dials. For example, ARS can be used to manipulate what the user dials. The determination of a toll versus local call is made after ARS has manipulated the number.

## Default Settings

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

VRS for Forced Account Codes for Single Line Telephones

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## Related Features

Automatic Route Selection

PBX Compatibility

Speed Dial – System/Group/Station

Station Message Detail Recording

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-11	<b>Basic Trunk Data Setup – Account Code Required</b>	Enable/Disable Account Codes for each trunk.	0 = Disable 1 = Enable (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key as an Account Code key (code 50). Use this key instead of the dial pad to enter the * before and after the Account Code.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On the Operator Alert when a forced account code is incorrectly entered.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
21-01-14	<b>System Options for Outgoing Calls – Forced Account Code Inter-digit Timer</b>	The system waits this time for a user to enter a Forced Account code.	0~64800 (seconds) (default = 3)		✓	
21-04-01	<b>Toll Restriction Class for Extensions</b>	Assign a Toll Restriction Class (1~15) to an extension.	Day/Night Mode 1~9 (9 = Power Failure Mode) 1~15 (default = 2)		✓	
35-05-01	<b>Account Code Setup – Account Code Mode</b>	For each Class of Service (1~15) select the Account Code Mode.	0 = Account Codes disabled (None) 1 = Account Codes optional 2 = Account Codes required but not verified (No verify) 3 = Account Codes required and verified (Verify) (default = 0)	✓		
35-05-02	<b>Account Code Setup – Forced Account Code Toll Call Setup</b>	Enable Account Codes for all calls or just toll calls (for mode 2 or 3 in Program 35-05-01).	0 = Account Codes for toll and local calls (All) 1 = Account Codes just for toll calls (STD) (default = 0)		✓	
35-05-03	<b>Account Code Setup – Account Codes for Incoming Calls</b>	For each Class of Service (1~15), enter 1 in this option to Enable Account Codes for incoming calls. Enter 0 to Disable Account Codes for incoming calls. If disabled, any codes you enter dial out on the connected trunk.	0 = Disable Account Codes for incoming calls 1 = Enable Account codes for incoming calls (default = 0)		✓	
35-05-04	<b>Account Code Setup – Hiding Account Codes</b>	For each Class of Service (1~15), enter 1 to have the system hide Account Codes on an extension display as they are entered. Enter 0 to have the Account Codes displayed.	0 = Account Codes Displayed 1 = Account Codes not Displayed (default = 0)		✓	
35-06-01	<b>Verified Account Code Table – Verified Account Code</b>	Enter data in the Verified Account Code Table. You can enter up to 2000 codes from 3~16 digits in length. For a wild card @, press the LK 1.	Up to 16 digits Enter: 1~9, 0, #, @ (@ = Wild Card) (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
40-10-01	Voice Announcement Service Option – VRS Fixed Message	Enable (1) or Disable (0) the system ability to play the fixed VRS messages (such as You have a message).	0 = Not Used 1 = Used (default = 0)		✓	

## Operation

### To enter an Account Code anytime while on a trunk call:


The outside caller cannot hear the Account Code digits you enter. Use this procedure if your system has Optional Account Codes enabled. You may also use this procedure for incoming calls. This procedure is not available for single line telephones.


- Dial \*.  
- OR -  
Press your Account Code key (Program 15-07-01 or SC 751: code 50).
- Dial your Account Code (1~16 digits, using 0~9 and #).  
 *If Account Codes are hidden, each digit you dial shows \* on the telephone display.*
- Dial \*.  
- OR -  
Press your Account Code key (Program 15-07-01 or SC 751: code 50).

### To enter a Forced Account Code before dialing the outside number:

If your system has Forced or Verified Account Codes, you may use this procedure instead of letting the system prompt you for your Account Code. You may also use this procedure if your system has Optional Account Codes.

If your system has Verified Account Codes enabled, be sure to choose a code programmed in your Verified Account Code list.

- Access trunk for outside call.  
 *Press a line key or dial a code to access a trunk. Refer to [Central Office Calls, Placing on page 2-275](#) for more information.*
- Dial \*.  
- OR -  
Press your Account Code key (Program 15-07-01 or SC 751: code 50).



3. Dial your Account Code [1~16 digits, using 0~9 and # or (3~16 digits for Forced)].
  -  *If you make an incorrect entry, your system may automatically alert the operator. If Account Codes are hidden, each digit you dial shows \* on the telephone display (depending on programming).*
4. Dial \*.
  - OR -
  - Press your Account Code key (Program 15-07-01 or SC 751: code 50).
5. Dial the number you want to call.

#### **To dial an outside number and let your system tell you when a Forced Account Code is required:**



1. Access a trunk and dial the number you want to call.
2. Wait for your call to go through.
  - OR -
3. If you hear “Please enter an Account Code,” (depending on system programming) and your display shows *ENTER ACCOUNT CODE*.
  - Dial \*.
    - OR -
    - Press your Account Code key (Program 15-07-01 or SC 751: code 50).
  - Dial your Account Code (3~16 digits, using 0~9 and #).  
If Account Codes are hidden, each digit you dial shows \* on the telephone display.
  - Dial \*.
    - OR -
    - Press your Account Code key (Program 15-07-01 or SC 751: code 50).

#### **To enter an Account Code for an incoming call:**

This procedure is not available for single line telephones.

1. Answer incoming call.
  -  *If Account Codes for Incoming Calls is disabled, the following steps dial digits out onto the connected trunk.*
2. Dial \*.
3. Enter the Account Code (1~16 digits).
  -  *You can enter any code of the proper length.*
4. Dial \*.

**To enter a Forced Account Code at a single line telephone:**

1. Access trunk for outside call.
  -  *Dial a code to access a trunk. Refer to Central Office Calls, Placing for more information.*
  -  *With Forced Account Codes, you hear, "Please enter an Account Code."(depending on programming).*
2. Dial \*.
3. Enter Account Code (3~16 digits).
4. Dial \*.
5. Dial number you want to call.



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# Account Code Entry

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## Description

Account Codes are user-dialed codes that help the system administrator categorize and/or restrict trunk calls. Optional Account Codes allow a user to enter an Account Code while placing a trunk call or anytime while on a call. The system does not require the user to enter the optional account code.

### Account Codes for Incoming Calls

The system can control extension user ability to enter Account Codes for incoming calls. When this option is enabled, a user can dial \* while on an incoming call, enter an Account Code, and then dial \* to return to their caller. If the option is disabled, any digit the user dials after answering an incoming call outdials on the connected trunk.

### Hiding Account Codes


Account Codes can be optionally hidden from a telephone display. This prevents, for example, an unauthorized co-worker from obtaining a Verified Account Code by watching the display. When hidden, the Account Code digits show \* on the telephone display.

### Account Code Capacity

Account Codes print along with the other call data on the SMDR record after the call completes. Account Codes can have 1~16 digits using 0~9 and #.

### Redialed Numbers Do Not Contain Account Codes

When using the Last Number Redial, Save or Repeat Dial features, the system does not retain Account Code information. To redial any number with these features, the user must enter an Account Code.

 *If a user enters \*12345\*203 926 5400\*67890\*, if the Last Number Redial feature is used, the system dials the number as 203 926 5400\*67890\*. The \*67890\* is not treated as an Account Code.*

## Conditions

- If a user enters a code that exceeds 16 digits, the system ignores it.
- If the system has Account Codes disabled, the digits dialed (e.g., \*1234\*) appear on the SMDR report as part of the number dialed.
- Do not use an asterisk in a PBX access code when using Account Codes. Otherwise, after the \*, the trunk stops sending digits to the central office.
- Account Codes appear on the SMDR report (even if they are hidden on the telephone display).

- To simplify Account Code Entry, store the Account Code (e.g., 1234) in a One-Touch Key, and press the key instead of dialing the code.
- Speed Dialing bins can contain stored Account Codes. Prevent them from being displayed using Program 20-07-04.
- When Account Codes are enabled, the user must press the \* three times before the \* character is passed to the telco. The system recognizes the initial \* as the beginning of an Account Code entry, the second \* as the end of an Account Code entry, and the third \* is passed to telco.

## **Default Settings**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Automatic Route Selection**

**One-Touch Calling**

**PBX Compatibility**

**Speed Dial – System/Group/Station**

**Station Message Detail Recording**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-11	<b>Basic Trunk Data Setup – Account Code Required</b>	Enable/Disable Account Codes for each trunk.	0= Disable 1= Enable (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key as an Account Code key (code 50). Use this key instead of the dial pad to enter the * before and after the Account Code.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
21-01-04	<b>System Options for Outgoing Calls – Dial Tone Detection Time</b>	Set the time the system waits for the Telco to return Dial Tone.	0~64800 (seconds) (default = 5)	✓		
35-05-01	<b>Account Code Setup – Account Code Mode</b>	Select the Account Code Mode.	0 = Account Codes disabled (None) 1 = Account Codes optional 2 = Account Codes required but not verified (No verify) 3 = Account Codes required and verified (Verify) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-05-02	<b>Account Code Setup – Forced Account Code Toll Call Setup</b>	Enable Account Codes for all calls or just toll calls (for mode 2 or 3 in Program 35-05-01).	0 = Account Codes for toll and local calls (All) 1 = Account Codes just for toll calls (STD) (default = 0)		✓	
35-05-03	<b>Account Code Setup – Account Codes for Incoming Calls</b>	For each Class of Service (1~15), enter 1 in this option to Enable Account Codes for incoming calls. Enter 0 to Disable Account Codes for incoming calls. If disabled, any codes you enter dial out on the connected trunk.	0 = Account Codes for incoming calls disabled (No) 1 = Account codes for incoming calls (Yes) (default = 0)		✓	
35-05-04	<b>Account Code Setup – Hiding Account Codes</b>	For each Class of Service (1~15), enter 1 to have the system hide Account Codes on an extension display as they are entered. Enter 0 to have the Account Codes displayed.	0 = Display Account Codes 1 = Hide Account Codes (default = 0)		✓	
35-06-01	<b>SMDR Account Code Setup – Verified Account Code</b>	Enter Account Codes in the Verification Account Code List. You can enter up to 2000 codes with 3~6 digits, using the characters 0~9 or #. Use the LK1 to enter a wild card. For example, the entry @234 means the user can enter 0234-9234.	Up to 16 digits Enter: 1~9, 0, #, @ (@ = Wild Card) (default not assigned)		✓	

## Operation

### To enter an Account Code anytime while on a trunk call:


The outside caller cannot hear the Account Code digits you enter. Use this procedure if your system has Optional Account Codes enabled. You may also use this procedure for incoming calls. This procedure is not available for single line telephones.

1. Dial \*.

- OR -

Press your Account Code key (Program 15-07 or SC 751: code 50).

2. Dial your Account Code (1~16 digits, using 0~9 and #).

 If Account Codes are hidden, each digit you dial shows \* on the telephone display.

3. Dial \*.

- OR -


Press your Account Code key (Program 15-07 or SC 751: code 50).

### To enter an Account Code before dialing the outside number:

If your system has Forced or Verified Account Codes, you may use this procedure instead of letting the system prompt you for your Account Code. You may also use this procedure if your system has Optional Account Codes.

If your system has Verified Account Codes enabled, be sure to choose a code programmed into your Verified Account Code list.

1. Access trunk for outside call.


 Press a line key or dial a code (except 9) to access a trunk. Refer to [Central Office Calls, Placing on page 2-275](#) for more information.

2. Dial \*.

- OR -

Press your Account Code key (Program 15-07 or SC 751: code 50).

3. Dial your Account Code (1~16 digits, using 0~9 and #).

 If you make an incorrect entry, your system may automatically alert the operator. If Account Codes are hidden, each digit you dial shows \* on the telephone display.

4. Dial \*.

- OR -


Press your Account Code key (Program 15-07 or SC 751: code 50).

5. Dial the number you want to call.

### To enter an Account Code for an incoming call:


This procedure is not available for single line telephones.

1. Answer incoming call.

 If Account Codes for Incoming Calls is disabled, the following steps dial digits out to the connected trunk.


2. Dial \*.

3. Enter the Account Code.

 You can enter any code of the proper length. Incoming Account Codes cannot be Forced or Verified.

4. Dial \*.

**To enter an Account Code at a single line telephone:**

1. Access trunk for outside call.  
 *Dial a code to access a trunk. Refer to Central Office Calls, Placing for more information.*
2. Dial \*
3. Enter Account Code (1~16 digits).
4. Dial \*.
5. Dial number you want to call.

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# Alarm

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## Description

Alarm lets any station extension work like an Alarm clock. An extension user can have Alarm remind them of a meeting or an appointment. There are two types of Alarms:

- Alarm 1 (sounds only once at the preset time)
- Alarm 2 (sounds every day at the preset time)

## Conditions

- Single line telephones ring and Music on Hold is heard when the Alarm sounds.
- Only a multiline terminal user can view what time the Alarm is currently set for.

## Default Settings

Enabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

None

## Guide to Feature Programming



The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-01-06	System Options – Alarm Duration	Set the duration of the Alarm signal.	0~64800 seconds (default = 30)		✓	

## Operation

### To set the alarm:

1. At the multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
2. Dial **727**.
3. Dial alarm type (**1** or **2**).  
 *Alarm 1 sounds only once. Alarm 2 sounds each day at the preset time.*
4. Dial the alarm time (24-hour clock).  
 *For example, for 1:15 PM dial 1315.  
A confirmation tone is heard if the alarm has been set. If the alarm was not set, an error tone is heard instead.*
5. At the multiline terminal, press **Speaker** to hang up.  
- OR -  
At the single line telephone, hang up.



**To silence an alarm:**

1. At multiline terminal, press **Exit**.


- OR -

At the single line telephone, lift the handset.

 *The single line set user hears Music on Hold when the handset is lifted.*

**To check the programmed alarm time at a multiline terminal:**

1. Press **Help**.
2. Dial **727**.
3. Dial alarm type (**1** or **2**).

 *The programmed time displays.*

4. Press **Exit**.

**To cancel an alarm:**

1. At the multiline terminal, press **Speaker**.

- OR -

At the single line telephone, lift the handset.

2. Dial **727**.
3. Dial alarm type (**1** or **2**).
4. Dial **9999**.
5. At a multiline terminal, press **Speaker** to hang up.

- OR -

At the single line telephone, hang up.

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## Alarm Reports

### Enhancements

When attempting a call requiring an IP to TDM conversion and no DSP resource is available, the system displays a message on the multiline terminal and can generate an alarm via the Alarm Report (system software **Version 3000 or higher** required).

With **Version 5000 or higher** CPU software, the Alarm Reports feature has been enhanced to include an alarm for IP duplication. With **Version 4000 or lower** CPU software, the SV8100 had no alarm function for an IP address duplication. With this enhancement, the SV8100 is able to detect another device on the same subnet having an IP address that conflicts with those assigned to the CPU, IPLA/ IPLB, and DSP resources to make troubleshooting easy when IP packets are not sent.

With **Version 7000 or higher** software, the SV8100 can be configured to send an email notification of a system event that causes a reset and DIMLast and DIMDump files to be created. The system can also be configured to email the DIMLast and DIMDump text files by using the SMTP email settings in the 47-18-xx programs and mounting a PZ-ME50-US to the CCPU. This enhancement requires the **V7000 Enhancement License (0036)** and **Maintenance License (0043)**.

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### Description

The UNIVERGE SV8100 system logs various errors and reports information about the operation that can be used to determine the cause of a problem. The system can indicate several errors on the multiline telephone display, output to a USB stick on the CD-CP00-US, or be downloaded in PCPro. The report data also can be sent via email.

#### Alarm Report

The Alarm Reports indicate:

- System start-up/upgrade date and time
- Blade communication error with date and time and the restoration date and time
- Date and time a blade was removed from the system
- Date and time an extension was disconnected from the system
- Date and time of any system data change

Table 2-2 Sample Alarm Report

&lt;&lt; Alarm Report

05/16/2006 14:30 PAGE 001

LVL	NO	STAT	DATE	TIME	ITEM	UNIT	SLT	PRT	PARAMETER
MIN	0002	REC	05/16/06	14:21	PKG Installation	PRT	02	00	
MAJ	0010	ERR	05/16/06	14:21	ISDN Link	PRT	02	12	
MAJ	0010	REC	05/16/06	14:21	ISDN Link	PRT	02	12	
MIN	0002	ERR	05/16/06	14:33	PKG Installation	PRT	02	00	
MIN	0002	ERR	05/16/06	14:33	PKG Installation	ESI	05	00	
MIN	0002	ERR	05/16/06	14:33	PKG Installation	SLIB	07	00	
MAJ	0050	WAR	05/16/06	14:33	System Start Up	none	00	00	
MIN	0002	REC	05/16/06	14:33	PKG Installation	PRT	02	00	
MAJ	0014	ERR	05/16/06	14:33	NTCPU-LAN Link	none	00	00	
MAJ	0014	REC	05/16/06	14:35	NTCPU-LAN Link	none	00	00	
MIN	0002	ERR	05/16/06	14:36	PKG Installation	CTP	08	00	
MIN	0002	REC	05/16/06	14:37	PKG Installation	VMS	08	00	
MIN	0002	ERR	05/16/06	14:38	PKG Installation	VMS	08	00	
MIN	0002	REC	05/16/06	14:40	PKG Installation	PRT	07	00	
MIN	0002	ERR	05/16/06	14:40	PKG Installation	PRT	07	00	
MAJ	0006	ERR	05/16/06	14:41	Blocking	ESIB	01	05	
MAJ	0006	REC	05/16/06	15:01	Blocking	ESIB	01	05	
MAJ	0006	ERR	05/16/06	15:05	Blocking	ESIB	01	07	
MAJ	0006	REC	05/16/06	15:07	Blocking	ESIB	01	07	
MIN	0068	ERR	01/22/09	09:30	VoIP All DSP Busy	VoIPDB	01	00	STA
MIN	0068	ERR	01/22/09	09:31	VoIP All DSP Busy	VoIPDB	01	00	TRK
MIN	0068	ERR	01/22/09	09:35	VoIP All DSP Busy	VoIPDB	01	00	LNK
MIN	0068	ERR	01/22/09	09:40	VoIP All DSP Busy	VoIPDB	01	00	NET

**Table 2-3 Alarm Report Definitions**

<b>Alarm Report Heading</b>	<b>Definitions</b>
LVL	Alarm Type (MAJ = Major, MIN = Minor)
NO	Number of Alarm (4-digit)
STAT	Status (REC = Recovered, ERR = Error, WAR = Warning)
DATE	Date the Alarm Occurred
TIME	Time the Alarm Occurred
ITEM	Name of the Alarm
UNIT	Name of the Blade
SLT	Chassis Slot Number
PRT	Chassis Port Number
PARAMETER	Related Information

**Table 2-4 Alarm Report Item Definitions**

<b>Item Name</b>	<b>Definition</b>
PKG Installation	Blade is removed or inserted.
ISDN Link	ISDN Line failure is detected.
CD-CP00-US – LAN Link	CD-CP00-US – Lan connection failure is detected.
Blocking	Terminal Failure may have occurred because terminal blocking is detected. Terminal is unplugged or wire is disconnected.
System Data Change	System Upgrade performed or Programming change.
System Start Up	System is reset.
SMDR Link	Connection failure is detected between the CD-CP00-US and SMDR printer device.
STA	DSP for IP Station Call were all busy.
TRK	DSP for Trunk Call were all busy, includes SIP trunks.
LNK	DSP for Net-Link Call were all busy.
NET	DSP for CCISoIP Networking Call were all busy.

### System Information

The system can print a report of the blades installed, the port assignments, and the port types. This information is sent to the extension defined in Program 90-13.

The System Information Reports indicate:

- Date and Time of the Report
- Blade names
- Slot condition (working, blocked)
- Port assignment
- Port classification

**Table 2-5 Sample System Information Printout**

System Information				05/18/2006 11:02	
slot	location	type	assign port	condition	note
1	1-1	DLC	1-16	Running	***** ----- Connect: *
2	1-2	PRT	1-23	Running	
3	1-3	COT	25-28	Running	
4	1-4	none	none	Not Install	
5	1-5	DLC	33-40	Not Install	----- Connect: *
6	1-6	LCA	17-24	Running	
7	1-7	PRT	29-51	Not Install	
8	1-8	VM00	25-32	Running	
9	2-1	none	Not Install		
10	2-2	none	Not Install		
11	2-3	none	Not Install		
12	2-4	none	Not Install		
13	2-5	none	Not Install		
14	2-6	none	Not Install		
15	2-7	none	Not Install		
16	2-8	none	Not Install		


**Table 2-5 Sample System Information Printout (Continued)**

System Information				05/18/2006 11:02	
slot	location	type	assign port	condition	note
17	3-1	none	Not Install		
18	3-2	none	Not Install		
19	3-3	none	Not Install		
20	3-4	none	Not Install		
21	3-5	none	Not Install		
22	3-6	none	Not Install		
23	3-7	none	Not Install		
24	3-8	none	Not Install		

## Conditions

- Alarm Reports and System Information Reports can be output to a USB stick on the CD-CP00-US.
- The UNIVERGE SV8100 supports the following Alarms to be output to the LCD of a multiline terminal:
  - SMDR Buffer Full
  - CD-CP00-US-LAN link Error
- The UNIVERGE SV8100 does not support printouts of the following Alarms:
  - Power Failure
  - RAM Backup Battery Error
  - Networking Keep Alive Error
  - IP Duplication Alarm
- Up to 12 System Alarm times can be scheduled to print on a Monthly, Daily, and Hourly time frame. The report indicates both Major and Minor Alarms.
- System Information Reports cannot be set to output at a scheduled time.
- When using the email functionality of reports, the email address in Program 90-11-10 (From Address) must be set for the email feature to work.
- After a new alarm is output, it cannot be output a second time. New alarms must be generated before Program 90-12-04 can be performed a second time.

- Up to 100 System Alarm Reports can be stored. When the buffer fills, the oldest record is deleted to allow the new record to be saved.
- If the System is set up to email the Alarm Reports and the Mail Server is down, the report is not sent.
- System Information Reports cannot be set for output via email.
- Scheduled Alarm Reports via email prints all alarms. When the system detects New alarms, this information is output via email individually.
- Email Alarm Reports can be sent when each New alarm occurs (Per Event). If you want to receive complete Alarm Reports periodically, you must specify 12 individual dates and times in Program 90-24-01~Program 90-24-04 (per period).

 *A maximum of 99 entries are emailed with the scheduled alarms.*

- The DIMLast and DIMDump files are attached to the email only when using the 47-18-xx programs for SMTP email and if a PZ-ME50-US and USB memory stick are mounted on the CCPU.
- The DIMLast and DIMDump files are not sent via email when Program 90-03-01 is used to manually generate a data dump. They are only saved on the USB attached to the CCPU.
- The PZ-ME50 must be mounted to the CCPU for the 47-18-xx program settings to work.
- Once successfully sent, the DIMLast and DIMDump files are deleted from the system.
- If the email retry limit is exceeded, the DIMLast and DIMDump files are deleted from the system.
- A USB Drive must be mounted to the CCPU for the DIMLast and DIMDump files to be sent via email.
- If Program 90-11-15 is set to 1 (Enable) and no USB drive is mounted to the CCPU, the system will not restart if an error occurs which causes the SV8100 to reboot.
- The Alarm Improvement, where the DIMLast and DIMDump files are sent via email, require the **V7000 Enhancement License (0036)** and **Maintenance License (0043)**.
- The Alarm Improvement, where the DIMLast and DIMDump files are sent via email, require the occurrence of a major system event. DIMLast and DIMDump files are not sent for normal alarm events.

## Default Settings

None



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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

When using the Version 7.00 feature to email DIMLast and DIMDump files, the following components are required:

USB memory stick

PZ-ME50-US

V7000 Enhancement License (0036)

Maintenance License (0043)

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### Setting Up Alarms:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-10-01	System Alarm Setup – Alarm Type	Set the alarm type 14 and 60. <b>Alarm 14 – CD-CP00-US-LAN Link Error (IP Layer 1)</b> Assign a Major or Minor alarm status to the LAN link. This program also assigns whether or not the alarm is displayed to a key telephone and whether or not the alarm information is reported to the predefined destination. <b>Alarm 57 – IP Duplication Alarm</b> Assign a Major or Minor alarm status to the IP Duplication Alarm. <b>Alarm 60 – SIP Registration Error Notification</b> Assign a Major or Minor alarm status to the SIP Registration Error. This program also assigns whether or not the alarm is displayed to a key telephone and whether or not the alarm information is reported to the predefined destination.	0 = Not Set 1 = Major Alarm 2 = Minor Alarm (default = 0)		✓	
90-10-02	System Alarm Setup – Report	Assign whether or not the alarm is displayed to a multiline terminal and whether or not the alarm information is reported to the predefined destination in Program 90-11.	0 = No Report (no autodial) 1 = Report (autodial) (default = 0)		✓	
90-24-01	System Alarm Report Notification Time Setup – Month	Set the month for the alarm report to print.	Month 00~12 (0 = Disabled) (default = 00)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-24-02	<b>System Alarm Report Notification Time Setup – Day</b>	Set the day for the alarm report to print.	Day 00~31 (0 = Disabled) (default = 00)		✓	
90-24-03	<b>System Alarm Report Notification Time Setup – Hour</b>	Set the hour for the alarm report to print.	Day 00~23 (0 = Disabled) (default = 00)		✓	
90-24-04	<b>System Alarm Report Notification Time Setup – Minute</b>	Set the minute for the alarm report to print.	Day 00~59 (0 = Disabled) (default = 00)		✓	

### Printing Reports:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-12-01	<b>System Alarm Output – Output Port Type</b>	Indicate the type of connection used for the System Alarms. The baud rate for the COM port should be set in Program 10-21-02.	0 = No Setting 1~3 = Reserved 4 = CTA/CTU 5 = USB Memory (default = 0)		✓	

### Printing System Information Reports:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-13-01	<b>System Information Output – Output Port Type</b>	Indicate the type of connection system information.	0 = No Setting 4 = CTA/CTU 5 = USB (default = 0)		✓	
90-13-02	<b>System Information Output – CTA Output Destination Extension Number</b>	If the output port type (Program 90-13-01) is set to CTA, enter the extension number with the CTA connection.	Extension Number (up to eight digits) (default not assigned)		✓	

## Emailing Alarm Reports:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	Assign the IP Address.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		
10-12-02	CD-CP00-US Network Setup – Subnet Mask	The setting of Subnet Mask is invalid when all Host Addresses are 0. If the network section is: 0, 127, 128.0, 191.255, 192.0.0, 223.255.255 The setting of Subnet Mask is invalid.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.255.0)		✓	
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-10-02	<b>System Alarm Setup – Report</b>	When enabled the system will provide notification of events for each of the enabled reports. This does not have to be set for DIMLast/DIMDump files to be sent.	0 = Disabled 1 = Enabled (default = 0)		✓	
90-11-02	<b>System Alarm Report – Report Method</b>	When Alarm Reports are to be emailed, set this option to 1. This program has higher priority than Program 90-12-06.	0 = No Report 1 = Email Address (default = 0)		✓	
90-11-06	<b>System Alarm Report – SMTP Host Name</b>	When Alarm Reports are to be emailed, set the SMTP name (for example, smtp.yourisp.com). Contact your ISP (Internet Service Provider) for the correct entry if needed.	Up to 255 characters (default not assigned)		✓	
90-11-07	<b>System Alarm Report – SMTP Host Port Number</b>	When Alarm Reports are to be emailed, set the SMTP host port number. Contact your ISP (internet service provider) for the correct entry if needed.	0~65535 (default = 25)		✓	
90-11-08	<b>System Alarm Report – To Email Address</b>	When Alarm Reports are to be emailed, set this email address to which the report should be sent.	Up to 255 characters (default not assigned)		✓	
90-11-09	<b>System Alarm Report – Reply Address</b>	When Alarm Reports are to be emailed, set the email address where replies should be emailed.	Up to 255 characters (default not assigned)		✓	
90-11-10	<b>System Alarm Report – From Address</b>	When Alarm Reports are to be emailed, set this email address for the station sending the report.	Up to 255 characters (default not assigned)		✓	
90-11-11	<b>System Alarm Report – DNS Primary Address</b>	When Alarm Reports are to be emailed, set the DNS primary address.	0.0.0.0~ 255.255.255.255 (default = 0.0.0.0)		✓	
90-11-12	<b>System Alarm Report – DNS Secondary Address</b>	When Alarm Reports are to be emailed, set the DNS secondary address.	0.0.0.0~ 255.255.255.255 (default = 0.0.0.0)		✓	
90-11-13	<b>System Alarm Report – Customer Name</b>	When Alarm Reports are to be emailed, enter a name to identify the particular system.	Up to 255 characters (default not assigned)		✓	
90-11-14	<b>System Alarm Report – Change SMTP Client</b>	When enabled the system uses the programs in 47-18-xx for email server integration. This program must be used for DIMLast/ DIMDump files to be sent. Note you must have a PZ-ME50-US mounted to the CCPU when using this program.	0 = Disabled 1 = Enabled (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-11-15	<b>System Alarm Report – DIMLOG Notification</b>	When enabled the system will send an email notification when a system fault occurs and DIMLast/ DIMDump files are generated. If Program 90-11-14 is also enabled the log files will be attached to the email.	0 = Disabled 1 = Enabled (default = 0)	✓		
90-25-01	<b>System Alarm Report CC Mail Setup – CC Mail Address</b>	Define the mail address to receive the system alarm report CC Mail setup.	Up to 255 characters (default not assigned)		✓	
90-50-01	<b>System Alarm Display Setup – System Alarm Display Telephone</b>	Define the extension number that Alarm reports are displayed on.	Up to eight digits (default not assigned)		✓	

### InMail SMTP Setup:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-18-01	<b>VM8000 InMail Setup – SMTP Enabled</b>	Enables the SMTP forwarding feature for the system.	0 = Off 1 = On (default = 0)	✓		
47-18-02	<b>VM8000 InMail Setup – Server Name</b>	Sets the SMTP server name. If the DNS server setting is not assigned in Program 90-11-11, the IP Address must be used instead of the name.	Up to 48 characters (default = No Setting)	✓		
47-18-03	<b>VM8000 InMail Setup – SMTP Port</b>	Sets the SMTP server port.	0~65535 (default = 25)		✓	
47-18-04	<b>VM8000 InMail Setup – Encryption</b>	Enable SSL Encryption.	0 = Off 1 = On (default = 0)		✓	
47-18-05	<b>VM8000 InMail Setup – Authentication</b>	Enables authentication, when set to 2 (POP3) refer to Programs 47-19-xx.	0 = Off 1 = On 3 = POP3 (default = 0)		✓	
47-18-06	<b>VM8000 InMail Setup – User Name</b>	Set the user name for SMTP authentication.	Up to 48 characters (default = No Setting)		✓	
47-18-07	<b>VM8000 InMail Setup – Password</b>	Set the password for SMTP authentication.	Up to 48 characters (default = No Setting)		✓	
47-18-08	<b>VM8000 InMail Setup – Email Address</b>	Set the email address for the system. This is the "from address" for outgoing emails.	Up to 48 characters (default = No Setting)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-18-09	VM8000 InMail Setup – Reply to Address	Set the email address for replies to outgoing emails. This email account is not monitored by the system and must be checked manually.	Up to 48 characters (default = No Setting)	✓		

### InMail POP3 Setup:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-19-01	VM8000 InMail POP3 Setup – Server Name	Set the POP3 server name. If the DNS server setting is not assigned in Program 90-11-11 the IP Address must be used instead of the name.	Up to 48 characters (default = No Setting)		✓	
47-19-02	VM8000 InMail POP3 Setup – POP3 Port	Set the POP3 server port.	0~65535 (default = 110)		✓	
47-19-03	VM8000 InMail POP3 Setup – SSL Encryption	Enable SSL encryption.	0 = Off 1 = On (default = 0)		✓	
47-19-04	VM8000 InMail POP3 Setup – User Name	Set the user name for POP3 authentication.	Up to 48 characters (default = No Setting)		✓	
47-19-05	VM8000 InMail POP3 Setup – Password	Set the password for POP3 authentication.	Up to 48 characters (default = No Setting)		✓	

## Operation

### To use this feature at any terminal:

The user must be logged in with an Installer (IN) level password as defined in Program 90-02.

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# *Alphanumeric Display*

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## **Description**

Multibutton display telephones have a 3-line, 24 character-per-line Alphanumeric Display that provides various feature status messages. These messages help the display telephone user process calls, identify callers and customize features.

### **Conditions**

- The contrast is not adjustable when the telephone has background music enabled.

### **Default Settings**

Enabled for all display telephones.

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## **System Availability**

### **Terminals**

All Multiline Terminals with Display

### **Required Component(s)**

None

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## **Related Features**

**Clock/Calendar Display**

**Selectable Display Messaging**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-13	<b>Service Code Setup (for Setup/Entry Operation) – Display Language Selection for Multiline Terminal</b>	If needed, redefine the service code used to select the language for display multiline terminals.	MLT (default = 678)		✓	
15-02-01	<b>Multiline Telephone Basic Data Setup – Display Language Selection</b> (To select options 8~10, press either 8 or Recall, then press line keys 1~3. Key 1 is option 8, Key 2 is option 9, and Key 3 is option 10.)	Select the language to be displayed on a multiline terminal display.	0 = Japanese 1 = English 2 = German 3 = French 4 = Italian 5 = Spanish 6 = Dutch 7 = Portuguese 8 = Norwegian 9 = Danish 10 = Swedish 11 = Turkish 12 = Latin American Spanish 13 = Romanian 14 = Polish (default = 1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an incoming transfer preanswer display for an extension.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	



## Operation

Operation is automatic if enabled in programming.

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# *Analog Communications Interface (ACI)*

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## **Description**

The Analog Communications Interface (ACI) feature uses a PGD(2)-U10 ADP (Door Phone/Paging) adapter to provide two analog ports (with associated relays) for Music on Hold, External Paging, Door Boxes and auxiliary devices such as tape recorders and loud bells. The system allows up to 48 PGD(2)-U10 ADPs (when used for ACI ports) for a maximum of 96 analog ports. Each PGD(2)-U10 ADP requires an unused port on a CD-8DLCA/CD-16DLCA blade.

## **Music on Hold**

You can connect up to two customer-provided Music on Hold music sources to a PGD(2)-U10 ADP. This lets you add additional music sources if the external source on the CD-CP00-US ETU or the internal source is not adequate. By using PGD(2)-U10 ADPs, you can even have a different music source for each trunk.

When the system switches the ACI analog port to a trunk on Hold, the PGD(2)-U10 ADP relay associated with the ACI analog port closes. You can use this ability to switch on the music source, if desired.

Extension users can dial the ACI analog port extension number and listen to the connected music source. The PGD(2)-U10 ADP relay associated with the port closes when the call goes through.

For Music on Hold, connect the music source to the PGD(2)-U10 ADP module. Connect the music source control leads to the CTL (control relay) jack. Refer to the UNIVERGE SV8100 System Hardware Manual for additional details.

## **External Paging**

An ACI analog port also can be an External Page output. When connected to customer-provided External Paging equipment, the ACI port provides External Paging. To use the External Paging, an extension user just dials the ACI analog port extension number and makes the announcement. The system broadcasts the announcement from the ACI analog port and simultaneously closes the associated PGD(2)-U10 ADP relay. You can use the relay closure to control the External Paging amplifier, if required. This external paging zone is not included in external all call paging or combination paging (internal and external).

For External Paging, connect the Paging amplifier to the PGD(2)-U10 ADP jack. Connect the amplifier control leads to the CTL (control relay) jack. Refer to the UNIVERGE SV8100 System Hardware Manual for additional details.

## Auxiliary Device Control

The PGD(2)-U10 ADP can control a customer-provided tape recorder. When an extension user dials the ACI analog port extension number, they can automatically start the recorder and activate the record function. When the user hangs up, the recording stops and the tape recorder turns off. For tape recording, connect the tape recorder AUX input jack to the PGD(2)-U10 ADP jack. Connect the recorder control leads (if available) to the CTL (control relay) jack. Refer to the System Hardware Manual for additional details.

By using Department Calling, you can arrange multiple tape recorders into a pool. When an extension user dials the Department Group pilot number, they reach the first available tape recorder in the pool.

The relays in the PGD(2)-U10 ADP can optionally control customer-provided external ringers (loud bells) and buzzers. When an extension user dials the ACI analog port extension number, the associated PGD(2)-U10 ADP relay closes and activates the ringer. You can use this ability to control an emergency buzzer for a noisy machine shop floor, for example.

## ACI Call Recording

ACI Call Recording allows you to use a recording device connected to a PGD(2)-U10 ADP to automatically record calls. The recording device is typically a customer-provided tape recorder. You can set up ACI Call Recording to output to a single ACI port/recording device or to a pool of ACI ports/devices. With a single device, all calls are stored in a centralized location. With a pool of devices, be sure you have a port available for recording – even in peak traffic periods. You can set up recording per trunk or per extension.

When set up for automatic recording, ACI Call Recording starts automatically when the user places or answers their call. The system can be programmed to record all *incoming* trunk calls which ring an extension. This includes the following trunks:

- Central Office calls programmed to ring the extension
- Direct Inward Dialing (DID)
- Direct Inward Line (DIL)
- Direct Inward System Access (DISA)
- Tie Lines

The system also can be programmed to record *outgoing* trunk calls, however, this is possible only using E&M Tie Lines, PRI or BRI trunks.

ACI Call Recording is not available for intercom calls, transferred calls, or calls placed on hold and answered by an extension with Call Recording enabled. To manually record any call (transferred, ICM, outgoing CO trunk, etc.), use the Voice Mail Conversation Record key (Service Code 751 + 78).

## Physical Ports and Software Ports

Each PGD(2)-U10 ADP has a physical port for connection to the telephone system and two logical ports. For programming, the ports are also called software ports. The physical port connects to a station position on a ESI ETU. During installation, the first PGD(2)-U10 ADP you set up is physical port 1; the second PGD(2)-U10 ADP is physical port 2, etc. Each PGD(2)-U10 ADP has two software ports, which are numbered independently of the physical ports. Normally, the first PGD(2)-U10 ADP set up has software ports 1~2; the second PGD(2)-U10 ADP has software ports 3~4, etc. There are a total of 96 software ports (48 PGD(2)-U10 ADPs x 2 ports each). During programming, you assign ACI extension numbers and Department Group options to PGD(2)-U10 ADP software ports, not physical ports. During installation, you connect equipment to the jacks on the PGD(2)-U10 ADP that correspond to the software port. Refer to the UNIVERGE SV8100 System Hardware Manual for installation details.

## Conditions

- ACD agents who are logged on can be recorded.
- When ACI software ports are set to be a Background Music source, it only plays to a speaker, not a multiline telephone.
- An extension cannot have Hotline keys for ACI software ports. Music on Hold ACI software ports can be Music on Hold music sources.
- An extension can have One-Touch Keys for ACI software ports. The gives the extension user:
  - One-Touch access to external music
  - One-Touch External Paging
  - One-Touch loud ringer control
- ACI software ports can provide External Paging with control, independent of the External Paging circuits on the CD-CP00-US. The PGD(2)-U10 ADP can be connected to any DLC port.

The devices connected to the PGD(2)-U10 ADP must be compatible with the specifications below. Refer to the UNIVERGE SV8100 System Hardware Manual for installation details.

<b>PGD(2)-U10 ADP/ACI Interface Specifications</b>	
<b>Relay Contacts</b>	
Maximum Contact Ratings	30 V DC @ 60 mA
	90 V AC @ 10 mA
Minimum Application Load	1 V DC @ 1 mA
<b>Audio/Music Input</b>	
Input Impedance	47 K Ohms @ 1 K Hz

<b>PGD(2)-U10 ADP/ACI Interface Specifications</b>	
Maximum Input	0.4Vrms or 1.0Vp-p.
<b>Audio/Paging Output</b>	
Output Impedance	600 Ohms @ 1 K Hz
Maximum Output	+ 3 dBm

## **Default Settings**

No PGD(2)-U10 ADPs programmed.

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## **System Availability**

### **Terminals**

None

### **Required Component(s)**

PGD(2)-U10 ADP

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## **Related Features**

**Automatic Call Distribution (ACD)**

**Background Music**

**Hotline**

**One-Touch Calling**

**Paging, External**



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Assign or display the current terminal type assigned to B Channel 1 for each port on the DLCA.	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)	✓		
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Assign or display the current terminal type assigned to B Channel 2 for each port on the ESI.	0 = Not set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)	✓		
11-06-01	<b>ACI Extension Numbering</b>	Assign extension numbers to ACI software ports. Select a number outside of the normal extension number range.	ACI Ports: 1~96 (default not assigned)	✓		
11-08-01	<b>ACI Group Pilot Number – Dial</b>	Assign pilot numbers to ACI groups. When a user dials the pilot number, they reach an available ACI software port within the group.	Up to eight digits ACI Groups 1~16 (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-09-01	<b>Conversation Recording Destination for Trunks – ACI Recording Destination Extension Number</b>	Assign the ACI Call Recording destination per trunk. The destination can be an ACI port extension number (assigned in Program 11-06-01) or an ACI Department Group pilot number (assigned in Program 11-08-01). If destinations are assigned in Program 14-09 and Program 15-12, the destination in Program 15-12 is followed.	Extension Number = Maximum eight digits (default not assigned)		✓	
14-09-02	<b>Conversation Recording Destination for Trunks – ACI Automatic Recording for Incoming Calls</b>	Determine whether or not a trunk should be automatically recorded when an incoming call is received.	0 = Off 1 = On (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	If required, program an ACI Conversation Record Key (code 69 + 0). This key allows an extension user to press the key to manually record a call to the ACI.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
15-12-01	<b>Conversation Recording Destination for Extensions – ACI Recording Destination Extension Number</b>	Assign the ACI Call Recording destination per extension. The destination can be an ACI port extension number (assigned in Program 11-06) or an ACI Department Group pilot number (assigned in Program 11-08). If destinations are assigned in Program 14-09 and Program 15-12, the destination in Program 15-12 is followed.	Extension Number = Maximum eight digits (default not assigned)		✓	
15-12-02	<b>Conversation Recording Destination for Extensions – ACI Automatic Recording for Incoming Calls</b>	Determine whether or not an extension should be automatically recorded when an incoming call is received.	0 = Off 1 = On (default = 0)		✓	
33-01-01	<b>ACI Port Type Setup – ACI Type</b>	Set each ACI software port for input (1) or input/output (2). Use input ports for Music on Hold sources. Use output ports for External Paging/ringer control.	ACI Ports: 1~96 ACI Types: 0 = None 1 = MOH/BGM (Input) 2 = External Audio Port (Input/Output (default = 2)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
33-02-01	ACI Department Calling Group – Group Number	Assign ACI software ports to ACI Department Groups. This lets ACI callers connect to ACI software ports by dialing the group pilot number (set in Program 11-08).	ACI Ports: 1~96 ACI Groups: 1~16 Default: ACI Port/Group/Priority 01/ 1/ 1 02/ 1/ 2 : / : / : 96/ 1/ 96	✓		

## Operation

### To call an ACI software port:

1. Press **Speaker**.
2. Dial ACI software port extension number.
  - OR -
  - Dial ACI Department Group extension number.
  - OR -
  - Press the **One-Touch Key** for ACI extension or Department Group.

### After you call an ACI software port:

- If the port is set for input (Program 33-01-01=1) and a music source is connected, you hear music.
  - OR -
- If the port is set for output (Program 33-01-01=2) and External Paging is connected, you can page into the external zone.
  - OR -
- If the port is set for output (Program 33-01-01=2) and a loud ringer is connected, you activate the loud ringer.

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## *Ancillary Device Connection*

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### **Description**

Ancillary Device Connection allows installation of selected peripheral (ancillary) devices to a multiline terminal. This feature enhances peripheral device objectives.

An UNIVERGE SV8100 multiline terminal user can accomplish this by using the AP(R)-R/APR-L Unit (Analog Port Adapter with Ringer) or AP(A)-R Unit (Analog Port Adapter without Ringer) for analog telephone devices, or installing the AD(A)-R/APA-L Unit to connect devices such as tape recorders.

The AP(A)-R/AP(R)-R/APA-L Units are the interface for installing a single line telephone, Modem, credit card reader, wireless headset, NEC Conference Max Conferencing unit or other compatible analog device.

The PSA-L Unit (Power Save Adapter), an optional adapter for the ITL/DTL Terminals, is used to make or receive a call using the Public Switched Telephone Network (PSTN) when a call cannot be made with the ITL/DTL extension.

### **Conditions**

- The optional device fits underneath the terminal.
- A single line telephone connected to an AP(R)-R Unit or AP(A)-R Unit cannot perform Trunk-to-Trunk Transfer and does not support a conference with itself and two outside parties.
- A single line telephone connected to an AP(R)-R Unit or AP(A)-R Unit does not support Message Waiting Indication or Caller ID Indication.
- An AP(R)-R Unit (analog port adapter with ringer) can be installed on a multiline terminal and function separately from the multiline terminal.
- When Program 10-03-06 is assigned as APR you cannot manually assign a port number for an APR. The system uses ports 193~256 (starting with 256 and working down) for a total of 64 APR ports. APR 1 uses port 256, and APR 2 uses port 255, and so on.
- When Program 10-03-06 is assigned as APR you cannot manually assign a port number for the APR.
- DTP-2DT-1 and DTR-2DT-1 telephones have a built-in APA adapter.
- Phones that have an APR/APA installed do not pass voice to a trunk until the interdigit time expires (Program 21-01-03).
- When a single line phone is connected to an AP(R)-R or APR-L, a conference cannot be established unless the 2nd channel of ESI is used for APR in Program 10-03-06 and Program 10-03-07.


- When a single line phone is connected to an AP(R)-R or APR-L, the 2nd channel of ESI must be used (Programs 10-03-06 and 10-03-07) to switch back and forth between a call and call waiting.
- APR-L does not support DTL-2E-1, DTL-6E-1, or all ITL style phones.
- ADA-L can send confirmation sound to far end, but the recording machine must generate confirmation sound.

**Table 2-6 DT330 Compatibility Settings**

ADA-L Unit Switch Settings	Terminal Lot Number DT-330		
	xxx I Lx or lower (Version 1.E0 or lower)	xxx I Mx (Version 8.10)	xxxJSx or higher (Version 2.20 or higher)
ADA Connection for Recording Only.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.
ADA Connection for Sending Recorded Calls to the Telephone.	Dip switches 2, 3, 5, 7 and 8 are OFF. Switches 1, 4 and 6 are ON.	Dip switches 2, 3, 5, 7 and 8 are OFF. Switches 1, 4 and 6 are ON.	Dip switches 2, 3, 5, 7 and 8 are OFF. Switches 1, 4 and 6 are ON.
To Send and Receive to the Terminal	Not supported	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.


Lot Numbers: I, J – Hardware Revision

Lot Numbers: L, M, S – Software Revision

 To verify DT-330 terminal firmware, hold down keypad buttons 1, 2 and 3 while plugging the line cord into the terminal.

**Table 2-7 Firmware Compatibility Matrix**

		BCH-L Unit Lot Number	
		xxxDxx or lower	xxxExx or higher
<b>Terminal Lot Number DT-330</b>	xxx I xx or lower (Version 8.10 and 1, E0 or lower)	Supported	Supported
	xxxJxx or higher (Version 2.20 or higher)	Not supported	Supported

 BCH Support may differ based on terminal firmware. To verify both DT-330 terminal and BCH-L Unit firmware, hold down keypad buttons 1, 2 and 3 while plugging the line cord into the terminal.

## Default Settings

None

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## System Availability

### Terminals

All Multiline Terminals except DTR-2DT-1 TEL, DTP-2DT-1 TEL, and DTP-16HC-1 TEL.

### Required Component(s)

- AP(R)-R
- AP(A)-R
- PSA-L
- ADA-L
- APR-L

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## Related Features

Electra Elite IPK Terminals

SV8100/SV8300 Terminals

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-03	ETU Setup (LCA PKG Setup) – Transmit Gain Level (S-Level)	Customize the transmit and receive levels of the CODEC Gain Types for 500/2500 type single line telephones.	1~63 (-15.5 +15.5dB) [default = 32 (0dB)]	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-04	<b>ETU Setup (LCA PKG Setup) – Receive Gain Level (R-Level)</b>	Customize the transmit and receive levels of the CODEC Gain Types for 500/2500 type single line telephones.	1~63 (-15.5 +15.5dB) [default = 32 (0dB)]		✓	
15-03-01	<b>Single Line Telephone Basic Data Setup – SLT Signaling Type</b>	Tell the system the type of dialing the connected telephone uses.	0 = DP 1 = DTMF (default = 1)		✓	
15-03-04	<b>Single Line Telephone Basic Data Setup – Flashing</b>	Enable/Disable Flash for single line (500/2500 type) telephones.	0 = No 1 = Yes (default = 1)		✓	

## Operation

Depends on the connected ancillary device.



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# *Answer Hold*

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## **Description**

Answer Hold allows a multiline terminal user to press the flashing Answer Key to answer an incoming ringing call or a Camp-On call. When the multiline terminal user is already answering a call, the first call is automatically placed on hold, depending on the user setting in Program 15-02-06.

### **Conditions**

- When multiple incoming calls activate the Answer Key LED, the LED continues to flash until all calls are answered.
- Use Program 15-02-06 (Normal Common, Exclusive Hold) to set the type of Hold key to be used (Default = Normal Common).
- For calls placed in a Park Group, the LED blinks fast (green).
- For calls placed in a Park Group by another user, the LED blinks slow (red).
- The Answer Hold Feature is not available for Virtual Extensions.
- The Answer Hold feature does not function for incoming internal calls.
- CO/PBX incoming calls, not assigned to ring or assigned to another ring group, do not activate the Answer Hold feature.
- If the direct trunk appearance key is not assigned when all Call Appearance Keys are in use, the next incoming call cannot be answered.

### **Default Settings**

Normal Hold

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## **System Availability**

### **Terminals**

All Multiline Terminals

## Required Component(s)

None

## Related Features

### Answer Key


### Central Office Calls, Answering

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.



- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-32	<b>Service Code Setup (for Service Access) – Answer for Park Hold</b>	Assign a key on the multiline terminal or single line telephone for park hold.	MLT, SLT (default = *6)		✓	
15-02-06	<b>Multiline Telephone Basic Data Setup – Hold Key Operating Mode</b>	Set the function of the Multiline Hold key. The Hold key can activate normal Hold or Exclusive Hold.	0 = Normal (Common) 1 = Exclusive Hold (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a park group to multiline terminal line key.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 01~15)		✓	

## Operation

### To answer a call on a different line key or CAP key with a call in progress:

1. Receive a CO/PBX, DID/DISA/DIL/E&M incoming ring.  
 *Answer flashes.*
2. Press **Answer**, and answer the new call.  
 *The Answer LED goes out. The original call is put on hold.*
3. If additional calls are received, press **Answer** to place the current call on hold and connect to the next call as long as Call Appearance Keys and or CO line keys are available.

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## Answer Key

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### Description

Multiline terminals have an Answer Key with an LED that flashes when the multiline terminal user receives an incoming CO/PBX, Tie/DID transfer, or CO/PBX transfer call. When multiple calls are received, the Answer Key is used to pick up calls and continues flashing until the last unanswered call is answered. Press the Answer Key during a call to hold the current call and allow the next call to be answered.

### Conditions

- The Answer LED functions for incoming CO/PBX calls, CO/PBX transfer/camp-on calls, and transfer/camp-on Tie/DID calls.
- Incoming calls answered by Answer are handled *first in-first out*.
- An Internal call, internal transfer/camp-on call, CAR/SIE/VE calls do not activate the Answer LED.

### Default Settings

None

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### System Availability

#### Terminals

All Multiline Terminals

#### Required Component(s)

None

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### Related Features

Answer Hold

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type for each trunk.	Incoming Type for Day/Night Mode (1~8): 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions (up to 32) to Ring Groups. Calls ring extensions according to Ring Group programming. There are 100 available ring groups.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	Assign trunks to incoming Ring Groups. Use this program to assign Normal Ring Trunks (Program 22-02) to Incoming Ring Groups (Program 22-04).	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-07-01	DIL Assignment	Assign the destination extension or Department Group Pilot Number for each DIL Incoming trunk.	Number of Transferring Destinations for Day/ Night Modes (1~8): Extension Number (maximum eight digits) Pilot Number (default not assigned)		✓	

## Operation

### To answer calls using the Answer Key:

1. Receive CO/PBX incoming ring.
2. Press **Answer**.
3. Talk with the CO/PBX incoming calling party.
4. When additional CO incoming calls are received, press **Answer** to place the current call on hold and connect the multiline terminal user to the next call.

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# Attendant Call Queuing

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## Description

Attendant extensions can have up to 32 incoming calls queued before additional callers hear a busy tone. This helps minimize call congestion in systems that use the attendant as the overflow destination for unanswered calls. For example, you can program Direct Inward Lines and Voice Mail calls to route to the attendant when their primary destination is busy. With Attendant Call Queuing, unanswered calls would normally “stack up” for the attendant until they can be processed.

The 32 call queue total includes Intercom, DISA, DID, DIL, Tie Line and transferred calls. If the attendant does not have an appearance for the queued call, it waits in line to be answered. If the attendant has more than 32 calls queued, an extension can transfer a call to the attendant only if they have Busy Transfer enabled.

Attendant Call Queuing is a permanent, non-programmable system feature.

## Conditions

- Forwarding when unanswered or busy can occur only at the attendant if more than 32 calls are in queue.
- Assigning a station as operator in Program 20-17-01 enables call queuing function.
- Program 20-17-01 setting overrides setting in Program 20-09-07: Call Queuing Class of Service Option when set to disable.

## Default Settings

Enabled

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## System Availability

### Terminals

All Multiline Terminals assigned as an operator

### Required Component(s)

None

## Related Features

### Call Forwarding

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	<b>System Numbering – Service Code</b>	Set the system internal (Intercom) numbering plan. The numbering plan assigns the first and second digits dialed and affects the digits an extension user must dial to access other extensions and features, such as service codes and trunk codes. If the default numbering plan does not meet the site requirements, use this program to tailor the system numbering to the site.	Refer to System Numbering Default Settings table in the UNIVERGE SV8100 Programming Manual for a list of default settings.	✓		
20-01-01	<b>System Options – Operator Access Mode</b>	Assign the priority of a call when calling an operator telephone.	0 = Step 1 = Circular (default = 0)	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Define the extension numbers which are to be used by operators.	Up to eight digits (default = ext. 101)	✓		
24-02-01	<b>System Options for Transfer – Busy Transfer</b>	Enable/Disable extensions to Transfer calls to busy extensions. If disabled, calls transferred to busy extensions recall immediately.	0 = Disable 1 = Enable (default = 1)		✓	



## Operation

None

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# *Automatic Call Distribution (ACD)*

## Enhancements

With **Version 5000 or higher** software, ACD calls can be routed based on agent skill levels.

With **Version 7000 or higher** software, the number of ACD MIS Monitoring programs that can run simultaneously increases from five to a maximum of 16.

With **Version 8000 or higher** software, ACD calls can be marked so that the next time the same Caller ID calls back in the call will attempt to return to the original agent first.

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## Description

Automatic Call Distribution (ACD) uniformly distributes calls among agents of a programmed ACD Group. When a call rings into an ACD Group, the system automatically routes the call to the agent that has been idle the longest. Automatic Call Distribution is much more sophisticated and comprehensive than Department Calling and other group services – it can accurately judge the work load at each agent and distribute calls accordingly. The system allows up to 64 ACD Groups and 512 ACD agents.

You can put any agent in any group. An agent can be in more than one group only when using AICs. This allows, for example, a Technical Service representative to answer customer service calls at lunch when many of the Customer Service representatives are unavailable.

The ACD Master Number is the extension number of the whole group. Calls directly ringing or transferred to the ACD Master number enter the group and are routed accordingly. Although the master number can be any valid extension number, you should choose a number that is out of the normal extension range.

Automatic Call Distribution operation is further enhanced by:

### ACD Call Queuing

When all agents in an ACD Group are unavailable, an incoming call queues and causes the Queue Status Display to occur on the ACD Group Supervisor display. The display helps the supervisor keep track of the traffic load in their group.

The Queue Status Displays shows:

- The number of calls queued for an available agent in the group.
- The trunk that has been waiting the longest, and how long it has been waiting.

For each ACD Group, you can set the following conditions:

- The number of trunks that can wait in queue before the Queue Status Display occurs.

- How often the time in queue portion of the display reoccurs.
- If the supervisor should hear a Queue Alarm when the time in queue portion reoccurs.
- This alarm is a single beep tone that reminds the supervisor to check the condition of the queue.
- A remote K-CCIS user can call, or transfer to an ACD Pilot number. However, an incoming K-CCIS call to the ACD Pilot does NOT provide a Link Reconnect.

### **ACD Overflow (With Announcements)**

ACD offers extensive overflow options for each ACD Group. For example, a caller ringing in when all agents are unavailable can hear an initial announcement (called the 1st Announcement). This announcement can be a general greeting like, "Thank you for calling. All of our agents are currently busy helping other customers. Please stay on the line and we will help you shortly." If the caller continues to wait, you can have them hear another announcement (called the 2nd Announcement) such as, "Your business is important to us. Your call will be automatically answered by the first available agent. Please stay on the line." If all the ACD Group agents still are unavailable, the call can automatically overflow to another ACD Group or the Voice Mail. If all agents in the overflow ACD Group are busy, Lookback Routing automatically ensures that the waiting call rings into the first agent in either group that becomes free.

You can assign an ACD Group with any combination of 1st Announcement, 2nd Announcement and overflow methods. You can have, for example, a Technical Service group that plays only the 2nd Announcement to callers and then immediately overflows to Voice Mail. At the same time, you can have a Customer Service group that plays both announcements and does not overflow.

You can assign an ACD Group to play the Queue Depth only when using the VRS for message. The Queue Depth can be played after the 1st Announcement only, 2nd Announcement only, or after both Announcements.

### **Dial Out of Delay Announcements**

When listening to a VRS delay announcement, the caller can press a 1-key option to transfer them to another extension, Voice Mail, Ring Group, another ACD Group, or to a Speed Dial bin. The caller can press the digit during the message only or for X seconds after the message. This per Queue option effects both the first and second delay announcement if set.

### **VRS Delay Announcements Using VM8000 InMail**

VM8000 InMail can provide ACD Delay Announcements. Any of the 32 (1~32) VM8000 InMail Routing mailboxes (Program 47-07-01) can be set to Announcement mailboxes and can be used as the message source for the 1st and 2nd Announcement Messages. This option is applicable only to ACD Overflow modes that are assigned ACD delayed messages and Program 41-08-03 must be set to 2.

### **Agent Log In and Log Out Services**

An ACD Agent can log in and log out of their ACD Group. While logged in, the agent is available to receive ACD Group calls. When logged out, the agent is excluded from the group calls. The programmable keys and Alphanumeric Display on an agent telephone show at a glance when they are logged in or logged out.

## Agent Identity Code (AIC)

An Agent Identity Code (AIC) allows ACD agents to log in any extension without setting Program 41-02-01. Using AIC, ACD agents can also log in to multiple ACD groups at the same time (up to 64 ACD Groups). The system also allows all extensions (up to the system maximum) to log in using the same AIC code. AIC and ACD groups for each work period (mode pattern number) can be set in Program 41-18-01 as shown in the following example.

Table #	AIC	Operation Group	Mode Pattern Number							
			1	2	3	4	5	6	7	8
1	789	1	1	1	-	-	-	-	-	-
2	789	1	2	1	-	-	-	-	-	-
3	789	1	16	1	-	-	-	-	-	-
4	567	10	10	10	10	10	10	10	10	10
5	678	2	2	2	2	2	2	2	2	2
6	678	2	3	3	3	3	3	3	3	3
7	678	2	5	5	5	5	5	5	5	5

### EXAMPLE:

With this example, ACD works as follows:

#### Example 1: Log In with AIC 789

- During Mode Pattern 1, ACD agents belong to ACD groups 1, 2, and 16 at the same time.
- During Mode Pattern 2, ACD agents belong to only ACD group 1.
- During Mode Pattern 3~8, ACD agents do not belong to any ACD group and the ACD extensions work as normal extensions.

#### Example 2: Log In with AIC 567

- During Mode Patterns 1~8, ACD agents belong to only ACD group 10.

#### Example 3: Log In with AIC 678

- During Mode Patterns 1~8, ACD agents belong to ACD groups 2, 3 and 5 at the same time.

## Multiple Agent Log In

ACD agents can log in any extension with multiple AICs (up to three). Using the example setup above, ACD works as follows:

### EXAMPLE:

#### *Example 1: Log In with AIC 789 and 567*

- During Mode Pattern 1, ACD agents belong to ACD groups 1, 2, 10 and 16 at the same time.
- During Mode Pattern 2, ACD agents belong to ACD groups 1 and 10.
- During Mode Pattern 3~8, ACD agents belong to only ACD group 10.

#### *Example 2: Log In with AIC 789, 567 and 678*

- During Mode Pattern 1, ACD agents belong to ACD groups 1, 2, 3, 5, 10 and 16 at the same time.
- During Mode Pattern 2, ACD agents belong to ACD groups 1, 2, 3, 5 and 10.
- During Mode Pattern 3~8, ACD agents belong to only ACD groups 2, 3, 5 and 10.

Some conditions with Multiple Agent Log In:

- ACD agents cannot log in to the system supervisor or group supervisor extension.
- To log in with AIC, the extension should be set to AIC Log In mode in Program 41-17-01.
- If the extension is set to AIC log in mode in Program 41-17-01, the system ignores the setting of Program 41-02-01 for the extension.
- Multiple extensions (up to the maximum capacity of the extension) can log-in with one AIC. For example, even if ACD agent A logs in extension 350 with AIC 789, ACD agent B can also log in to extension 351 with the same AIC 789 at the same time.
- A supervisor cannot log out an agent logged in by an AIC code.

## Emergency Call

If an ACD Agent needs assistance with a caller, they can place an Emergency Call to their ACD Group Supervisor. Once the supervisor answers the Emergency Call, they automatically monitor both the ACD Agent and the caller. If the agent needs assistance, the supervisor can join in the conversation. Emergency Call can be a big help to inexperienced ACD Agents that need technical advice or assistance with a difficult caller. The supervisor can easily listen to the conversation and then “jump in” if the situation gets out of hand.

## Enhanced DSS Operation

A programmed extension user can use their DSS Console to monitor the status of the ACD Agents in a group. The DSS Console is an essential tool for supervisors. The console key flash rates tell the supervisor at a glance which of the group agents is:

- Logged onto the group (i.e., in service).
- Logged out of the group (i.e., out of service).



- Busy on a call.
- Placing an Emergency Call to the supervisor.
- Not available or installed.

The ACD Supervisor can use their console also for placing and transferring calls – just like any other extension user.

### **Flexible Time Schedules**

An ACD Work Schedule lets you divide a day into segments (called Work Periods) for scheduling the activity in your ACD Groups. You can set up four distinct Work Schedules, with up to eight Work Periods in each Work Schedule. Each day of the week has one Work Schedule, but different days can share the same schedule. For example, your Monday through Friday Work Schedule could consist of only two Work Periods. Work Period 1 could be from 8:00 AM to 5:00 PM – when your business is open. Work Period 2 could be from 5:00 PM to 8:00 AM – which covers those times when your business is closed.

### **Headset Operation (With Automatic Answer)**

An ACD Agent or ACD Group Supervisor can use a customer-provided headset in place of the handset. The headset conveniently frees up the user's hands for other work and provides privacy while on the call. In addition, an ACD Agent with a headset can have Automatic Answer. This allows an agent busy on a call to automatically connect to the next waiting call when they hang up.

### **Incoming Call Routing**

Incoming trunk calls can automatically route to specific ACD Groups. These types of calls ring directly into the ACD Group without being transferred by a co-worker or the Automated Attendant.

### **Rest Mode**

Rest Mode temporarily logs-out an ACD agent's telephone. There are two types of Rest Mode:

#### ***Manual Rest Mode:***

An ACD Agent can enable Manual Rest Mode anytime they want to temporarily leave the ACD Group. They might want to do this if they go to a meeting or get called away from their work area. While in Rest Mode, calls to the ACD Group do not ring the agent's telephone.

#### ***Automatic Rest Mode:***

When an ACD Group has Automatic Rest Mode, the system automatically puts an agent's telephone in Rest Mode if it is not answered. This ensures callers do not have to wait while ACD rings an extension that is not answered. For multiline terminals, the system enables Automatic Rest Mode for all telephones with Rest Mode keys. For single line telephones, you must set an option in programming to enable Automatic Rest Mode. If an agent's telephone is placed in Rest Mode because a call is not answered, the agent needs to manually cancel Rest Mode to log back into the ACD group.

With a Rest Mode key programmed on an ACD agent's telephone, when the agent is in rest mode, the key is lit. If the Rest Mode key is pressed while an agent is on a call, the key flashes to indicate a pre-Rest Mode status. When the current call is finished, the agent's telephone is in rest mode. The agent can place intercom calls or receive direct incoming calls while in Rest Mode. The ability to receive incoming intercom calls is defined in system programming for each ACD group.

 *An ACD System Supervisor cannot be placed in Rest Mode.*

## Supervisor, ACD Group

You can designate an extension in an ACD Group to be the group supervisor. Once assigned as an ACD Group Supervisor, the user can:

- Take the entire ACD Group out of service.
- Check the log out status of each agent after the group is taken down.
- Restore the ACD Group to service.

During programming, you can choose one of three modes of operation for each ACD Group supervisor:

- Supervisor's extension cannot receive calls to the ACD Group.
- Supervisor's extension can receive only ACD Group calls during overflow conditions.
- Supervisor's extension receives calls just like any other ACD Group agent.

An ACD Group can have only one supervisor. An extension can be a supervisor for only one ACD Group.

## Supervisor, ACD System

You can designate an extension as an ACD System Supervisor. Once assigned as an ACD System Supervisor, the user can:

- Take all the system ACD Groups out of service simultaneously.
- Check the log out status of each agent after the groups are taken down.
- Restore all the ACD Groups to service simultaneously.

The system can have only one ACD System Supervisor.

## Work Time

Work Time temporarily busies-out an ACD agent's telephone so they can work at their desk uninterrupted. This gives the agent time to fill out important logs and records as soon as they are finished with their call. There are two types of Work Time:

### **Manual Work Time:**

An ACD Agent can enable Manual Work Time anytime they need to work at their desk undisturbed. You might prefer this Work Time mode if an agent only occasionally has to fill out follow-up paper work after they complete their call. When the agent is through catching up with their work, they manually return themselves to the ACD Group.

**Automatic Work Time:**

The system implements Automatic Work Time for the agent as soon as they hang up their current call. This is helpful in applications (such as Tech Service groups) where follow-up paperwork is a requirement for every call. When the agent is done with their work, they manually return themselves to the ACD Group.

**Hotline Key Shows Agent Status**

An extension Hotline key provides the normal Busy Lamp Field (BLF) for co-workers and a unique BLF for ACD Agents. Like the supervisor's DSS Console BLF, the unique BLF shows when the covered agent is in service, out of service or busy on a call. This enhanced BLF gives a department manager, for example, ACD Group monitoring abilities without having to become a supervisor with a DSS Console.

Hotline gives a multiline terminal user one-button calling and Transfer to another extension (the Hotline partner). Hotline helps co-workers that work closely together. The Hotline partners can call or Transfer calls to each other just by pressing a single key. Enhanced for ACD applications, Hotline provides a unique Busy Lamp Field for ACD agents as well as a BLF for co-workers that are not ACD agents. The charts below show both sets of BLF indications.

<b>BLF For ACD Agents</b>	
<b>When the key is . . .</b>	<b>The ACD Agent is . . .</b>
Off	Idle and is not an ACD Agent
On	Busy
Double Wink Off	Making an Emergency Call
Wink Off	Logged off or not installed
Double Wink On	Logged on

<b>BLF For Co-Workers That Are Not ACD Agents</b>	
<b>When the key is . . .</b>	<b>Your co-worker is . . .</b>
Off	Idle
On	Busy or ringing
Fast	Flash In Do Not Disturb – All calls (option 3) or Intercom calls (option 2)

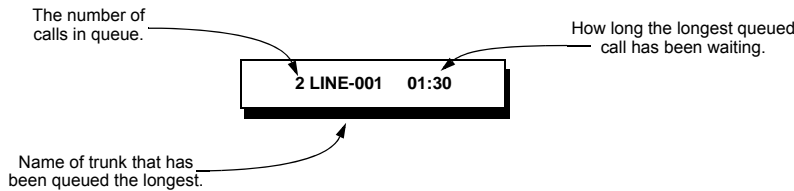
**Enhanced Supervisor Options:**

An ACD supervisor can individually assign extensions to ACD Groups, and set an agent's status once assigned. This provides the supervisor with tremendous flexibility to reassign agents as work loads vary.

**Queue Status Display with Scrolling:**

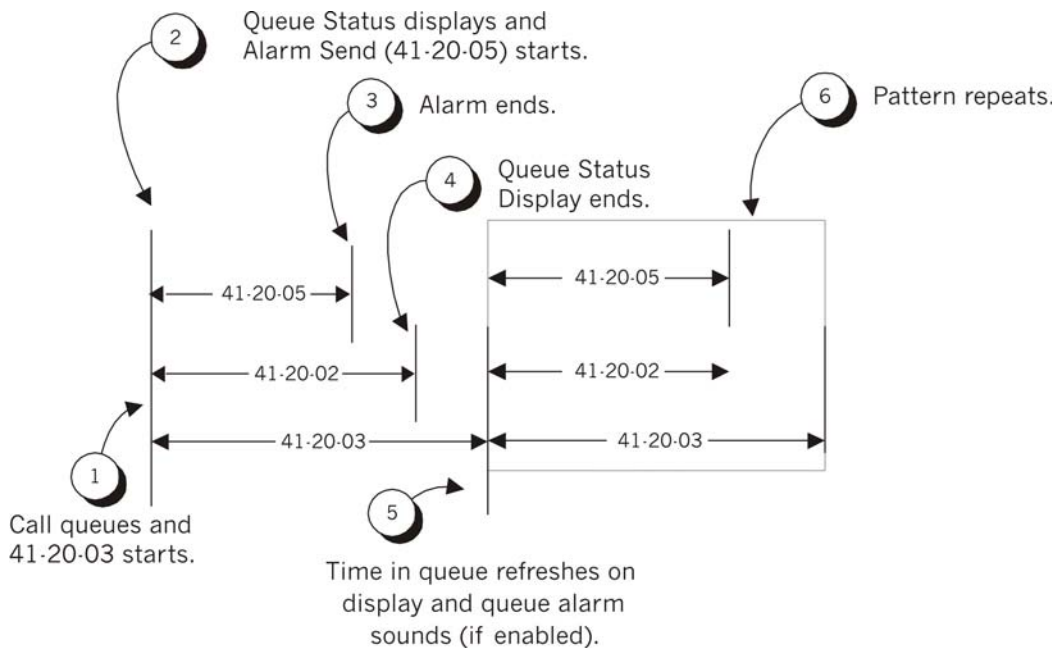
When all agents in an ACD Group are unavailable, an incoming call queues and causes the Queue Status Display to occur on the ACD Group Supervisor and/or agent's display (based on the Class of Service). The display helps the supervisor keep track of the traffic load in their group. Any display multiline terminal can have a Queue Status Display Check programmable function key. The multiline terminal user can press this key anytime while idle, and using the VOL (▲) and VOL (▼), scroll through the Queue Status Displays of all the ACD Groups. The Queue Status Displays shows (see the Queue Status Display illustration below):

- The number of calls queued.
- The trunk that has been waiting the longest, and how long it has been waiting.




For each ACD Group, you can set the following conditions:

- The number of trunks that can wait in queue before the Queue Status Display occurs.
- How often the time in queue portion of the display reoccurs (see the Queue Status display Timing illustration below).
- Queue Status Display holding time.
- Queue Status Alarm enable/disable.
- Queue Status Alarm sending time.









**When Logged Out of ACD Group:**

When ACD agents are logged out and a call is placed into the ACD queue, the telephones of the logged out agents display the Queue Status and they hear the alarm according to the settings defined in system programming. Pressing the Queue Status Display Programmable Function key returns the telephone to idle until the time in Program 41-20-03 expires again.

-  Do not use both Program 41-15-01~02 and Program 41-20-01~05 to set the ACD queue alarm. Select either one or the other for the system to follow.

Feature	Available in Program 41-15-01~02	Available in Program 41-20-01~05
Queue Status Display	---	Yes
Queue Status Display Time	---	Yes
Alarm	Yes	Yes
Alarm Send Time	Program 41-15-02 determines the length/interval of the alarm.	Yes
Interval Time of Queue Status Display		Yes
Class of Service	---	Yes
Timing of alarm and display queue status	Alarm triggered after the number of calls in Program 41-15-01 is exceeded.	Alarm triggered after the number of calls in Program 41-20-01 is exceeded. Then follows Program 41-20-03 timing for displaying status.

-  If a telephone is not idle, it cannot use the Queue Status Display Programmable Function key.
-  The Queue Status Display is not shown and the Queue Alarm is not heard by ACD agents in Off-Duty mode.
-  To scroll through the ACD groups queue status, the Queue Status Display Programmable Function key must be used. You cannot scroll when the Queue Status Display is displayed due to an alarm.
-  If the Queue Status display and alarm are active and the queued called is answered/disconnected, the display and alarm continue until the times in Program 41-20-02 and Program 41-20-05 expire.
-  When an overflowed call is in queue, the call is included in its original ACD group queue and not in the group queue to which it overflowed.
-  The Queue Status is not displayed on a supervisor's telephone based on the settings in Programs 41-20-xx. The supervisor must use the Queue Status Display Programmable Function key to view the queue.

## Programmable Wrap-up Timer

When an agent finishes their call, the system automatically starts a wrap-up timer and blocks any ACD calls to the agent. This gives them time to complete important logs and records before a new call comes in. When the time expires, the system returns the agent to the ACD Group to handle new callers.

## MIS

The UNIVERGE SV8100 ACD MIS is a series of Windows®-based software programs designed to enhance the ACD features of the UNIVERGE SV8100 Telephone System. The software displays both real-time data and historical reports. The UNIVERGE SV8100 ACD MIS is supported on Windows XP, Windows Vista 32-bit, and Windows 7 32- and 64-bit. Refer to the UNIVERGE SV8100 ACD MIS Supervisors Manual for more information.

## ACD Group as Overflow Destination

The system can transfer an overflow call to a specific ACD Group, off-site via a speed dial bin, Ring Group or to voice mail using Program 41-09-01. When Program 41-08-02: ACD Overflow Destination has the ACD Overflow Destination set to 65, the system overflows the call to the ACD Group programmed in Program 41-09-01. (The system does not allow you to program an ACD group with that ACD group as the overflow.) If, while the call is ringing, the extension where the call was transferred becomes available, both the extension and the overflow ACD group ring.

## ACD Skill Based Routing (Version 5000 or higher is required)

With **Version 5000 or higher** CPU Software, the system can receive and distribute ACD calls based on the Agent's skill level. There are seven priority levels that the Agents can be set to for each ACD Queue. Each queue can have a different priority level. This works for both AIC and Normal Agents. The Skill levels are based on the Login ID that the Agents use. Both the V5000 Enhancement license (0034) and the ACD Advance license (2105) are required. Refer to the ACD Installation Manual for more information on how to set this up.

## ACD Caller ID Based Routing (Version 8000 or higher is required)

The SV8100 can allocate an ACD incoming call to an agent by using Caller ID registered in a buffer. This is done when an ACD Agent presses the **[ACD Caller ID Marking Setup]** Function Key and marks information of the caller when he thinks this caller would call again. By the ACD Agent pressing the Function Key that marks the Caller ID to the system, the next time the same Caller ID calls back into ACD, the Caller ID based routing tries to route the call to the agent that marked the call. It provides smoother call center operation. ACD Caller ID based Routing requires both the V8000 Enhancement license (0037) and the ACD Advance license (2105).

## Conditions

### System:

- The Call Duration Timer (Program 20-13-36) is not displayed for inbound ACD calls.
- VM8000 InMail can play ACD Delay Announcements.

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- If all agents are logged out of an ACD Queue, a transferred call to the ACD Pilot number recalls immediately back to the transferring party (**Version 2500 or lower** software).
  - If all agents are logged out of an ACD Queue, a trunk call directly to the Queue is placed in queue.
  - If all agents are logged out of an ACD Queue, a transferred call to the ACD Pilot number recalls immediately back to the transferring party if no Overflow Destination is setup (**Version 3000 or higher** software is required).
  - If all agents are logged out of an ACD Queue, a transferred call to the ACD Pilot number will be placed in queue if an Overflow Destination is setup (**Version 3000 or higher** software is required).
  - If defined in Program 22-11-03, DID calls in queue display the trunk name with the Queue Status feature.
  - When Program 12-07-01 is customized, an agent's display does not indicate the WAIT ACD LOGIN status, however an agent may still log in.
  - Conversation Recording is programmed system-wide – it is not ACD feature-specific.
  - Refer to the UNIVERGE SV8100 *ACD Manual* for additional information.
  - Up to 16 channels (speech paths) are available when using the DSP with VRS installed on the CD-CP00-US for messages.
  - When the PGD(2)-U10 ADP is providing the 1st Delay Announcements, it continues to play until the call is answered, abandoned, or the time in 41-10-04 expires and starts to play the 2nd Delay Announcement. The 2nd Delay Announcement continues to play until the call is answered, abandoned, or the time in 41-10-05 expires and drops the call. This message does not start from the beginning because it is on a constant loop.
  - The Dial Out of Queue feature is not supported during VM8000 InMail Delay Announcements.
  - Wireless DECT (SIP) is not supported with ACD.
  - When all VM8000 InMail talk paths (ports) are simultaneously being accessed by VM8000 InMail Mailbox subscribers or Voice Mail Delay Announcements, or combination of the two, the next incoming call to the VM8000 InMail will Ring No Answer until an available talk path becomes idle (First Come – First Served).
  - When Voice Mail Delay Announcements are being played, VM8000 InMail talk paths (ports) are used.
  - VM8000 InMail cannot be used for ACD Night Announcement.
  - Program 41-08-03: ACD Overflow Options – Delay Announcement Source Type.
  - The ACI port used for the ACD Delay Announcements is programmed like Music on Hold (MOH) ACI ports. Refer to the MOH [Music on Hold on page 2-1111](#).
  - ACD can only support one Music on Hold source.

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- When an agent is in a Ring Group and logged in, it will not ring when a call comes to the Ring Group. It will ring when logged out.
  - If a phone has never been brought up and is assigned as an agent, the system will have to be reset before the phone is able to login.
  - The End of Work Key (\*14) from a System Supervisor will only put ACD Groups that have Normal Agents logged in into the End of Work. Groups that only have AIC agents will not be put in the End of Work.
  - AIC code tables 65 ~ 512 are only available when a PZ-ME50-US is mounted on the CD-CP00-US.
  - UCB is not supported in conjunction with ACD.
  - If the Help key is pressed when an Agent is logged in, calls in Queue are not received until the Agent exits the Help menu.
  - When ACD delay announcements are used, and a call is delivered to an available ACD agent, the agent MLT display may show one or two exclamation points while the call is ringing.
    - One exclamation point – indicates the incoming caller has queued long enough to hear the first delay announcement.
    - Two exclamation points – the caller has been in queue and heard both the first and second delay announcements.
  - If an ACD Agent places an ACD call on hold to answer an incoming non-ACD call (Trunk or Station), the system will offer another ACD call to the Agent when the non-ACD call terminates. To prevent the second ACD call from being sent, it is recommended the Agent go into the break or wrap mode before finishing the non-ACD call.
  - On ACD extensions, **Hold Recall to Operator is not supported.**
  - When a caller dials out of one queue into another queue, the overflow timer of the original queue is followed.

**MIS:**

- InServer Blade – The InServer is an in-skin blade for the SV8100 designed to be an application server for several of the external applications available for the SV8100 product line. Initially, the InServer will come pre-installed with Windows Embedded Standard OS and support the setup and deployment of the NEC Desktop Suite and InACD MIS (**Version 5000 or higher** software is required).
- The UNIVERGE SV8100 system does not buffer the ACD Statistics when the PC running the ACD Server application is not connected.
- The programming of the Agents and Queues in the UNIVERGE SV8100 system are not transferred to the PC running the ACD Server/MIS applications. The ACD Server/MIS applications are programmed separately.



- A supervisor assigned to not receive calls or take calls after the overflow time is reached shows as idle in MIS when they are logged in and idle even when calls are queued up and not reaching the overflow timer.
- Call Detail by Queue Report shows the Caller ID (if available) for each call. (**ACD MIS 1.5.0.0 or higher** is required).
- A new report (Abandoned Call Detail by Queue) has been built and will display the Caller ID for each abandoned call. (**ACD MIS 1.5.0.0 or higher** is required).

## Default Setting

Refer to the UNIVERGE SV8100 ACD Manual for more details.

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## System Availability

### Terminals

All Terminals

### Required Component(s)

- ACD Software License
- PZ-VM21 Unit
- VM8000 InMail Compact Flash
- VM8000 InMail license (1002)  
(For Delay Announcements using VM8000 InMail)

### Required Software

None

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## Related Features

**Direct Inward Dialing (DID)**

**VM8000 InMail**

**Music on Hold**

## Night Service

### Voice Mail Integration (Analog)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Refer to the UNIVERGE SV8100 ACD Manual for complete programming information.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-13-01	Service Code Setup (for ACD) – ACD Login/Log Out (for KTS)	Assign for multiline terminals and single line telephones.	MLT, SLT (default = * 5)		✓	
11-13-02	Service Code Setup (for ACD) – ACD Log Out (for SLT)	Assign for single line telephones.	SLT (default = 655)		✓	
11-13-03	Service Code Setup (for ACD) – Set ACD Wrap-Up Time (for SLT)	Assign for single line telephones.	SLT (default = 656)		✓	
11-13-04	Service Code Setup (for ACD) – Cancel ACD Wrap-Up Time (for SLT)	Assign for single line telephones.	SLT (default = 657)		✓	
11-13-05	Service Code Setup (for ACD) – Set ACD Off Duty (for SLT)	Assign for single line telephones.	SLT (default = 658)		✓	
11-13-06	Service Code Setup (for ACD) – Cancel ACD Off Duty (for SLT)	Assign for single line telephones.	SLT (default = 659)		✓	
11-13-08	Service Code Setup (for ACD) – Agent ID Code Login	Assign to allow an AIC Agent to log into a group.	MLT (default not assigned)		✓	
11-13-09	Service Code Setup (for ACD) – Agent ID Code Logout	Assign to allow an AIC Agent to log out of a group.	MLT (default not assigned)		✓	
11-13-10	Service Code Setup (for ACD) – ACD Agent Login by Supervisor	Assign to allow an ACD Supervisor to log into a group.	MLT (default = 667)		✓	
11-13-11	Service Code Setup (for ACD) – ACD Agent Logout by Supervisor	Assign to allow an ACD Supervisor to log out of a group.	MLT (default = 668)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-13-12	<b>Service Code Setup (for ACD) – Change Agent ACD Group by Supervisor</b>	When using service code 669 to change an agent ACD group, the supervisor must enter a 2-digit number for the group. For example, to change to ACD group 4, the entry would be 669 04.	MLT (default = 669)		✓	
11-13-13	<b>Service Code Setup (for ACD) – ACD Agent Changing Own ACD Group</b>	When this service code is used, an ACD Agent can reassign themselves to another ACD Group.	MLT (default = 670)		✓	
11-17-01	<b>ACD Group Pilot Number</b>	Assign the ACD Master Number for each ACD Group.	ACD Group Number: 01~64 ACD Group Pilot Number: Up to eight digits (default not assigned)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-08-01	<b>Incoming Virtual Extension Ring Tone Setup</b>	When an extension or a virtual extension is assigned to the function key on the key telephone, select the ring tone when receiving a call on that key.  For ACD CAR keys, only tone pattern 1 (entry 0) can be used. The remaining patterns are not checked with this feature.	0 = Tone Pattern 1 1 = Tone Pattern 2 2 = Tone Pattern 3 3 = Tone Pattern 4 4 = Incoming Ring Tone Extension 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 (default = 0, Tone Pattern 1)		✓	
15-09-01	<b>Virtual Extension Ring Assignment</b>	Assign the ringing options for an extension Virtual Extension Key or Virtual Extension Group Answer Key, which is defined in Program 15-07. Make an assignment for each Night Service Mode. There are 256 Virtual Extension Ports.	Day Night/Mode: 1~8 Ringing: 0 = No Ringing 1 = Ring (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-11-01	<b>Virtual Extension Delayed Ring Assignment</b>	Assign the delayed ringing options for an extension Virtual Extension or Virtual Extension Group Answer keys (defined in Program 15-09). You make an assignment for each Night Service Mode. There are 256 Virtual Extension Ports.	Day Night/Mode: 1~8 Ringing: 0 = Immediate Ring 1 = Delayed Ring (default = 0)		✓	
20-04-03	<b>System Options for Virtual Extensions – CAR/SIE/Virtual Extension Delay Interval</b>	CAR Keys/SIE Keys/Virtual Extensions set for Delayed Ringing (see Program 15-11) ring the extension after this interval.	0~64800 (seconds) (default = 10)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (COS) to an extension. There are 15 Classes of Service that can be assigned. Assign eight entries, one for each Night Service Mode.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allows a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor’s Position Enhancement</b>	Set this option to On for the operator to use service codes in Program 11-13-10~11-13-13.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension Class of Service. Any extension, which has this option enabled, also hears the queue alarm.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
22-01-11	<b>System Options for Incoming Calls – VRS Waiting Message Interval Time</b>	Setup the sending duration time of the Auto – Attendant & Queuing. The message is repeatedly sent out during the specified time.	0~64800 (seconds) (default = 20)	✓		
30-01-01	<b>DSS Console Operating Mode</b>	Set the mode of the system DSS consoles. The entry for this option applies to all the system DSS consoles.	0 = Business Mode 1 = Hotel Mode 2 = ACD Monitor Mode 3 = Business/ACD Mode (default = 0)		✓	
30-05-04	<b>DSS Console Lamp Table – ACD Agent Busy</b>	Define the LED patterns for functions on the DSS consoles. The entry for this option applies to all the system DSS consoles.	Lamp Pattern Data 0~7 [default = 7(on)]		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-05-05	<b>DSS Console Lamp Table – Out of Schedule (ACD DSS)</b>	Define the LED patterns for out of schedule (ACD/DSS) functions on the DSS consoles.	Lamp Pattern Data 0~7 [default = 0 (Off)]		✓	
30-05-06	<b>DSS Console Lamp Table – ACD Agent Log Out (ACD DSS)</b>	Define the LED patterns for functions on the DSS consoles.	Lamp Pattern Data: 0~7 [default = 5 (IL)]		✓	
30-05-07	<b>DSS Console Lamp Table – ACD Agent Log In (ACD DSS)</b>	Define the LED patterns for functions on the DSS consoles.	Lamp Pattern Data: 0~7 [default = 4 (IR)]		✓	
30-05-08	<b>DSS Console Lamp Table – ACD Agent Emergency (ACD DSS)</b>	Define the LED patterns for functions on the DSS consoles.	Lamp Pattern Data: 0~7 [default = 6 (IW)]		✓	
40-10-01	<b>Voice Announcement Service Option – VRS Fixed Message</b>	Enable (1) or Disable (0) the system ability to play the fixed VRS messages (such as You have a message).	0 = Not Used 1 = Used (default = 0)		✓	
41-01-01	<b>System Options for ACD – System Supervisory Extension</b>	Define the ACD Supervisor for the entire system.	Up to eight digits (0~9, *, #) (default not assigned)		✓	
41-01-02	<b>System Options for ACD – Login ID Code Digit</b>	Define the number of digits for agent login ID code.	0~20 (0 = No Login ID) (default = 0)		✓	
41-01-03	<b>System Options for ACD – ACD MIS Connection Ports</b>	Define what port is used for ACD MIS connection. Currently only LAN is supported.	0 = None 3 = LAN (CD-CP00-US) (default = 0)	✓		
41-01-04	<b>System Options for ACD – ACD-MIS Command Notification when a BT Message is returned</b>	ACD-MIS Command Notification when a BT message is returned.	0 = Notifies 1 = No notification (default = 0)		✓	
41-02-01	<b>ACD Group and Agent Assignments</b>	For each ACD extension number, assign an ACD Group (1~64). An ACD Group number is assigned to each Work Period number (1~8).	ACD Work Period Mode Number: 1~8 ACD Group Number: 0~64 (0 = No Setting) (default = 0)	✓		
41-03-01	<b>Incoming Ring Group Assignment for ACD Group – ACD Group Number</b>	For each incoming trunk group set up in Program 22-05, designate which ACD Group (1~64) the trunks should ring for each of the eight Work Periods.	ACD Group Number: 0~64 (0 = No Setting) (default = 0)	✓		
41-03-02	<b>Incoming Ring Group Assignment for ACD Group – Night Announcement Service</b>	Designate for each incoming trunk, whether or not Night Announcement Service is assigned.	0 = No 1 = Yes (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-03-03	<b>Incoming Ring Group Assignment for ACD Group – Priority Data</b>	Determine whether an incoming call to a trunk ring group should follow a priority assignment.	0, 1~7 0 = No Priority 1 = Highest Priority 7 = Lowest Priority (default = 0)		✓	
41-04-01	<b>ACD Group Supervisor – Group Supervisor Extension</b>	Assign the group supervisor extension.	Extension Number = Up to eight digits (default not assigned)		✓	
41-04-02	<b>ACD Group Supervisor – Operation Type</b>	Assign the supervisor operating type.	0 = Do Not receive any ACD incoming calls (No) 1 = Receive ACD incoming calls in case of overflow (Busy) 2 = Receive ACD incoming calls all the time (Yes) (default = 0)		✓	
41-05-01	<b>ACD Agent Work Schedules</b>	Set up the Work Schedules for ACD Agents and Groups. For each ACD Work Schedule (1~4), designate the start and stop times for each of the eight Work Periods. After the schedules are set up in this program, assign them to days of the week in Program 41-07. (This is the same program used by the Trunk Work Schedules.)  After the schedules are set up in this program, assign them to days of the week in Program 41-07.	Work Period Mode Number = 1~8 Start Time = 0000~2359 End Time = 0000~2359 Default: (Start) 0000 (End) 0000	✓		
41-06-01	<b>Trunk Work Schedules</b>	Set up the Work Schedules for trunks. For each Work Schedule (1~4), designate the start and stop times for each of the eight Work Periods.  After the schedules are set up, assign them to days of the week in Program 41-07.	Work Period Mode Number = 1~8 Start Time = 0000~2359 End Time = 0000~2359 Default: (Start) 0000 (End) 0000	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-07-01	<b>ACD Weekly Schedule Setup</b>	Assign the four Work Schedules (1~4) to days of the week. The assignments made in this program apply to both the ACD Agent Work Schedules (Program 41-05) and the Trunk Work Schedules (Program 41-06).	Day No./Time Pattern: 1 = Sunday/ 0~4 (0 = No ACD) (default = 0) 2 = Monday/ 0~4 (0 = No ACD) (default = 0) 3 = Tuesday/ 0~4 (0 = No ACD) (default = 0) 4 = Wednesday/ 0~4 (0 = No ACD) (default = 0) 5 = Thursday/ 0~4 (0 = No ACD) (default = 0) 6 = Friday/ 0~4 (0 = No ACD) (default = 0) 7 = Saturday/ 0~4 (0 = No ACD) (default = 0)	✓		
41-08-01	<b>ACD Overflow Options – Overflow Operation Mode</b>	Assign the overflow mode (0~9), destination and announcement message types. Delay Announcement functions are not available for ACD pilot number calls. Each ACD Group can have unique overflow options.	0 = No overflow (None) 1 = Overflow with No Announcement 2 = No Overflow with First Announcement Only 3 = No Overflow with First & Second Announcements 4 = Overflow with First Announcement Only 5 = Overflow with First and Second Announcement 6 = Not Used 7 = Not Used 8 = No Overflow with Second Announcement Only 9 = Overflow with Second Announcement Only (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-08-02	<b>ACD Overflow Options – ACD Overflow Destination</b>	Assign the overflow mode (0~9), destination and announcement message types. Delay Announcement functions are not available for ACD pilot number calls. Each ACD Group can have unique overflow options.	0 = No Setting 1~64 = ACD Group 65 = Overflow Table (Program 41-09) 66 = Voice Mail Integration 67 = System Speed (Program 41-08-05) 68 = Incoming Ring Group (Program 41-08-06) (default = 0)		✓	
41-08-03	<b>ACD Overflow Options – Delay Announcement Source Type</b>	Assign the overflow mode (0~9), destination and announcement message types. Delay Announcement functions are not available for ACD pilot number calls. Each ACD Group can have unique overflow options.	0 = ACI 1 = VRS 2 = VM8000 InMail (default = 0)		✓	
41-08-04	<b>ACD Overflow Options – ACD Overflow Transfer Time</b>	Define the time before ACD overflow occurs. Each ACD Group can have unique overflow options.	0~64800 (seconds) (default = 30)		✓	
41-08-05	<b>ACD Overflow Options – System Speed Dial Bin</b>	Assign the speed dial bin to be used as the ACD overflow destination. Using a speed dial bin for ACD Overflow is supported only for off premise calls.	0~1999 (Used when 41-08-02 is set to 67) (default = 1999)		✓	
41-08-06	<b>ACD Overflow Options – Incoming Ring Group when Overflow</b>	Assign the Ring Group for ACD overflow calls to go to.	1~100 (Used when 41-08-02 is set to 68) (default = 1)		✓	
41-09-01	<b>ACD Overflow Table Setting</b>	Define the ACD group to which a call is transferred when overflow occurs.	0~65 0 = No Setting 65 = In-Skin Voice Mail Integration (default = 0)		✓	
41-10-01	<b>ACI Delay Announcement – 1st Delay Announcement ACI Port Number</b>	Define the ACI port number to be used for the delay announcement. This program is activated when the delay announcement source and options are assigned as ACI in Program 41-08-03.	0~96 0 = No Setting (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-10-02	<b>ACI Delay Announcement – 2nd Delay Announcement ACI Port Number</b>	Define the ACI port number to be used for the delay announcement. This program is activated when the delay announcement source and options are assigned as ACI in Program 41-08-03.	0~96 0 = No Setting (default = 0)		✓	
41-10-03	<b>ACI Delay Announcement – 1st Delay Announcement Connection Timer</b>	Define the time before the 1st Delay Announcement is played.	0~64800 (seconds) (default = 4)		✓	
41-10-04	<b>ACI Delay Announcement – 2nd Delay Announcement Connection Timer</b>	Set the time between when the 1st Delay Announcement plays and when the 2nd Delay Announcement plays.	0~64800 (seconds) (default = 60)		✓	
41-10-05	<b>ACI Delay Announcement – 2nd Delay Announcement Sending Duration</b>	Set the time the 2nd Delay Announcement plays. After this time expires, the call disconnects. To keep the call in queue, set this time to 0.	0~64800 (seconds) (default = 0)		✓	
41-11-01	<b>VRS Delay Announcement – Delay Message Start Timer</b>	Set the time before the 1st Delay Message Starts.	0~64800 (seconds) (default = 0)		✓	
41-11-02	<b>VRS Delay Announcement – 1st Delay Message Number</b>	Assign the VRS message number to be used as the message source for the 1st and 2nd Delay Announcement Messages. Refer to Program 41-08 for more on setting up the ACD overflow options. This program is activated when the delay announcement source and options are assigned as VRS in Program 41-08-03.	0~101 0 = No Message 101 = Fixed Message (default = 0)		✓	
41-11-03	<b>VRS Delay Announcement – 1st Delay Message Sending Count</b>	Input the number of times the 1st Delay Message is sent. If set to 0, the message is not played.	0~255 (default = 0)		✓	
41-11-04	<b>VRS Delay Announcement – 2nd Delay Message Number</b>	Input the VRS Message to be played as the 2nd Delay Message.	0~101 0 = No Message 101 = Fixed Message (default = 0)		✓	
41-11-05	<b>VRS Delay Announcement – 2nd Waiting Message Sending Count</b>	Input the number of times the 2nd Delay Message is sent. If set to 0, the message is not played.	0~255 (default = 0)		✓	
41-11-06	<b>VRS Delay Announcement – Tone Kind at Message Interval</b>	Input what is heard between the Delay messages.	0 = Ring Back Tone 1 = MOH Tone 2 = BGM Source (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-11-07	<b>VRS Delay Announcement – ACD Forced Disconnect Time after the 2nd Delay Message</b>	Set the time, after the last 2nd Delay Message is played, before the call is disconnected.	0~64800 (seconds) 0 = No Disconnect (default = 60)		✓	
41-11-08	<b>VRS Delay Announcement – Queue Depth Announcement (Requires VRS)</b>	Input when the Queue Depth Announcement will be played.	0 = Disable 1 = After 1st (1st) 2 = After 2nd (2nd) 3 = After 1st and 2nd (1st and 2nd) (default = 0)		✓	
41-12-01	<b>Night Announcement Setup – Night Announcement Source Type</b>	Define the source for each ACD groups night announcement. Night announcement availability depends on the setting in Program 41-03-02.	0 = ACI 1 = VRS (default = 0)		✓	
41-12-02	<b>Night Announcement Setup – Night Announcement ACI Port Number</b>	Define the ACI port to be used for the ACD Night Announcement function.	0~96 0 = No Setting (default = 0)		✓	
41-12-03	<b>Night Announcement Setup – ACD Night Announce Sending Time</b>	Define the time the ACD night Announcement plays. Only used when Program 41-12-01 is set to 0 (ACI). Night announcement availability depends on the setting in Program 41-03-02.	0~64800 (seconds) (default = 30)		✓	
41-13-01	<b>VRS Message Number for Night Announcement – VRS Message Number</b>	Define the VRS message number to be used as the night announcement. This program is activated when the night announcement source is assigned as VRS in Program 41-12-01.	0~100 0 = No Message (default = 0)		✓	
41-13-02	<b>VRS Message Number for Night Announcement – Tone Kind at Message Interval</b>	Define what is heard between the Night Announcements.	0 = Ring Back Tone 1 = MOH Tone 2 = BGM Source (default = 0)		✓	
41-14-01	<b>ACD Options Setup – Emergency Call Operation Mode</b>	Define if Emergency Calls ring the system supervisory extension or not when the group supervisory extension is busy. This option allows the supervisor to press an Emergency Key (programmed for this feature) once to monitor the call or twice to barge in on the call. The supervisor must be logged in for this feature to work.	0 = Call to system supervisory extension when group supervisory extension is busy. 1 = No calls to system supervisory extension when group supervisory extension is busy. (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-14-02	<b>ACD Options Setup – Automatic Wrap Up Mode</b>	Define if agents manually enter wrap mode by pressing a key, or are put automatically into wrap mode at end of an ACD call. This setting applies to all agents in the selected group.	0 = After wrap up mode key is pressed (Manual) 1 = After call is finished automatically (Auto) (default = 0)		✓	
41-14-03	<b>ACD Options Setup – ACD Priority for Overflow Calls</b>	This option determines whether the ACD group should use its own priority assignment or if it should follow the priority assigned in Program 41-03-03.	0 = Own group priority 1 = Priority order by Program 41-03-03 (default = 0)		✓	
41-14-04	<b>ACD Options Setup – Automatic Answer at Headset</b>	Enable (1)/Disable (0) Automatic Answer for agents using headsets.	0 = Off 1 = On (default = 0)		✓	
41-14-06	<b>ACD Options Setup – Call Queuing after 2nd Announcement</b>	Determine whether the caller should hear the 2nd Delay Announcement and then be taken out of queue (1), or be placed back into queue (0).	0 = Enable (Yes) 1 = Disable (No) (default = 0)		✓	
41-14-07	<b>ACD Options Setup – Automatic Off Duty for SLT</b>	Enable (1)/Disable (0) Automatic Off Duty (rest) mode for agents with single line telephones.	0 = No change to off duty mode 1 = Change to off duty mode automatically (Skip) (default = 0)		✓	
41-14-08	<b>ACD Options Setup – ACD Off Duty Mode</b>	Enable (1)/Disable (0) the agent's ability to receive internal calls in ACD Off Duty Mode.	0 = Cannot receive internal call 1 = Can receive internal call (default = 0)		✓	
41-14-09	<b>ACD Options Setup – Automatic Wrap Up End Time</b>	Set the time for the Automatic Wrap Up End Time.	0~64800 (seconds) (default = 0)		✓	
41-14-10	<b>ACD Options Setup – ACD No Answer Skip Time</b>	Set the time a call to the ACD Group rings an idle extension before routing to the next agent.	0~64800 (seconds) (default = 10)		✓	
41-14-12	<b>ACD Options Setup – Start Headset Ear Piece Ringing (for SLT)</b>	Set the ringing start time for the headset ear piece on a single line telephone.	0~64800 (seconds) (default = 0)		✓	
41-14-13-1	<b>ACD Options Setup – ACD Queue 1-Digit Assignment</b>	Set various options for ACD Groups. When an option is set for an ACD Group, the setting is in force (if applicable) for all agents in the group. For each ACD Queue (1~64) assign the One-Digit number (0~9, *, #) to be used for the One-Digit Dial Out Option.	1st Data: Up to one digit (0, 1~9, #, *) 2nd Data: (default = Blank)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-14-13-2	<b>ACD Options Setup – Destination Number Type</b>	Set various options for ACD Groups. When an option is set for an ACD Group, the setting is in force (if applicable) for all agents in the group. For each ACD Queue (1~64), assign the Destination Number Type.	2nd Data: 0 = None 1 = Extension or Voice Mail 2 = Incoming Ring Group 3 = Speed Dial Bin 4 = ACD Group (default = 0)		✓	
41-14-13-3	<b>ACD Options Setup – Destination Number</b>	Set various options for ACD Groups. When an option is set for an ACD Group, the setting is in force (if applicable) for all agents in the group. For each ACD Queue (1~64), assign the destination number for the assigned Destination Type.	3rd Data: Up to eight digits (0, 1~9, #, *) (default = Blank)		✓	
41-14-14	<b>ACD Options Setup – DTMF Detection Assignment during Delay Announcement</b>	Set various options for ACD Groups. When an option is set for an ACD Group, the setting is in force (if applicable) for all agents in the group. For each ACD Queue (1~64), assign if the One-Digit Dial Out option can (1 = Yes) or cannot (0 = No) be pressed during the Delay Announcements.	0 = Does not detect during message 1 = Detect during message (default = 1)		✓	
41-14-15	<b>ACD Options Setup – DTMF Detect Time after Delay Announcement Message</b>	Set various options for ACD Groups. When an option is set for an ACD Group, the setting is in force (if applicable) for all agents in the group. For each ACD Queue (1~64), assign the time after the Delay Announcement that the 1-Digit Dial Out option works.	0~64800 (seconds) (default = 0)		✓	
41-15-01	<b>ACD Queue Alarm Information – Number of Calls in ACD Queue to Activate Alarm Information</b>	Define the number of calls that must be in queue before the Alarm Information is activated. Do not use these programs if the alarm options are defined in Program 41-20-01 through 41-20-05.	0~200 0 = No Alarm (default = 0)		✓	
41-15-02	<b>ACD Queue Alarm Information – Interval Time of Alarm Information</b>	Define the time the Alarm will ring when activated. Do not use these programs if the alarm options are defined in Program 41-20-01 through 41-20-05.	0~64800 (seconds) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-16-01	<b>ACD Threshold Overflow – Number of Calls in Queue</b>	Define the maximum number of calls allowed in the ACD queue before overflow occurs.	0~200 (0 = No Limitation) (default = 0)		✓	
41-16-02	<b>ACD Threshold Overflow – Operation Mode for ACD Queue</b>	Define how the system should handle calls when the number of calls in queue exceeds the threshold.	0 = The last waiting call is transferred 1 = The longest waiting call is transferred 2 = Send Busy Tone (default = 0)		✓	
41-17-01	<b>ACD Login Mode Setup</b>	Define the ACD login mode for each extension. If the AIC Login Mode is enabled, set the AIC Login and AIC Logout service codes for the AIC members in Program 11-13-08 and 11-13-09.	0 = Normal Login Mode 1 = AIC Login Mode (default = 0)		✓	
41-18-01	<b>ACD Agent Identity Code Setup – ACD Agent Identity Code</b>	Define the ACD Agent Identity Codes.	Up to four digits (default not assigned)		✓	
41-18-02	<b>ACD Agent Identity Code Setup – Default ACD Group Number</b>	Define the default ACD group for AIC Agents in each AIC table.	0~64 0 = No Setting (default = 0)		✓	
41-18-03	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 1</b>	For each AIC table, define the ACD group AIC Agents are in during mode 1.	0~64 0 = No Setting (default = 0)		✓	
41-18-04	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 2</b>	For each AIC table, define the ACD group AIC Agents are in during mode 2.	0~64 0 = No Setting (default = 0)		✓	
41-18-05	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 3</b>	For each AIC table, define the ACD group AIC Agents are in during mode 3.	0~64 0 = No Setting (default = 0)		✓	
41-18-06	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 4</b>	For each AIC table, define the ACD group AIC Agents are in during mode 4.	0~64 0 = No Setting (default = 0)		✓	
41-18-07	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 5</b>	For each AIC table, define the ACD group AIC Agents are in during mode 5.	0~64 0 = No Setting (default = 0)		✓	
41-18-08	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 6</b>	For each AIC table, define the ACD group AIC Agents are in during mode 6.	0~64 0 = No Setting (default = 0)		✓	
41-18-09	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 7</b>	For each AIC table, define the ACD group AIC Agents are in during mode 7.	0~64 0 = No Setting (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-18-10	<b>ACD Agent Identity Code Setup – ACD Group Number in Mode 8</b>	For each AIC table, define the ACD group AIC Agents are in during mode 8.	0~64 0 = No Setting (default = 0)		✓	
41-19-01	<b>ACD Voice Mail Delay Announcement – Delay Message Start Timer</b>	Assign how long the system waits before playing the Delay Message.	0~64800 (seconds) (default = 0)		✓	
41-19-02	<b>ACD Voice Mail Delay Announcement – Mailbox Number for 1st Announcement Message</b>	Assign the Voice Mail ACD Announcement Mailbox as the message source for the 1st Announcement Message.	Dial (up to eight digits) (default not assigned)		✓	
41-19-03	<b>ACD Voice Mail Delay Announcement – 1st Delay Message Sending Count</b>	Assign the 1st Delay Message Sending Count. This entry must be set to 1 or higher for the message to play.	0 = No message is played 1~255 (default = 0)		✓	
41-19-04	<b>ACD Voice Mail Delay Announcement – Mailbox Number for 2nd Announcement Message</b>	Assign the Voice Mail ACD Announcement Mailboxes as the message source for the 2nd Announcement Message.	Dial (up to eight digits) (default not assigned)		✓	
41-19-05	<b>ACD Voice Mail Delay Announcement – 2nd Delay Message Sending Count</b>	Assign the 2nd Delay Message Sending Count. This entry must be set to 1 or higher for the message to play.	0 = No message is played 1~255 (default = 0)		✓	
41-19-06	<b>ACD Voice Mail Delay Announcement – Wait Tone Type at Message Interval</b>	Assign what the caller hears between the messages.	0 = Ring Back Tone 1 = Music On Hold Tone 2 = Background Music Source (default = 0)		✓	
41-19-07	<b>ACD Voice Mail Delay Announcement – ACD Forced Disconnect Time after 2nd Announcement</b>	Assign how long the system waits after the end of the ACD Delay Message before disconnecting.	0~64800 (seconds) (default = 0)		✓	
41-19-08	<b>ACD Voice Mail Delay Announcement – Delay Message Interval Time</b>	Set the time between the Delay Messages.	0~64800 (seconds) (default = 20)		✓	
41-20-01	<b>ACD Queue Display Settings – Number of Calls in Queue</b>	Program 41-15 can also provide a queue alarm to the agents. The options in Program 41-20 should not be used if 41-15 is set. Assign the number of calls that can accumulate in the ACD queue before the Queue Status Display (and optional queue alarm) occurs.	0=No Display, 1~200 (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-20-02	<b>ACD Queue Display Settings – Queue Status Display Time</b>	Program 41-15 can also provide a queue alarm to the agents. The options in Program 41-20 should not be used if 41-15 is set. Assign how long the Queue Status display remains on the telephone display.	0~64800 (seconds) (default = 5)		✓	
41-20-03	<b>ACD Queue Display Settings – Queue Status Display Interval</b>	Program 41-15 can also provide a queue alarm to the agents. The options in Program 41-20 should not be used if 41-15 is set. This option assigns the time that refreshes the Queue Status Alarm time in queue display and causes the optional queue alarm to occur on telephones active on a call, logged out, or in wrap-up.	0~64800 (seconds) (default = 60)		✓	
41-20-04	<b>ACD Queue Display Settings – ACD Call Waiting Alarm</b>	Program 41-15 can also provide a queue alarm to the agents. The options in Program 41-20 should not be used if 41-15 is set. Enable/Disable the queue alarm.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	
41-20-05	<b>ACD Queue Display Settings – ACD Call Waiting Alarm Hold Time</b>	Program 41-15 can also provide a queue alarm to the agents. The options in Program 41-20 should not be used if 41-15 is set. Assign the time the Call Waiting Alarm should sound.	0~64800 (seconds) (default = 0)		✓	
41-21-01	<b>ACD Login ID Setup – Login ID Code</b>	Input the Login IDs that will be used ( <b>Version 5000 or higher</b> ).	Up to 20 digits (followed by Program 41-01-02) (default not assigned)		✓	
41-21-02	<b>ACD Login ID Setup – Skill Table Number</b>	Input the Skill Table number to be used for each Login ID ( <b>Version 5000 or higher</b> ).	0, 1~512 (default = 0)		✓	
41-22-01	<b>ACD Skill Based Routing Setup – Skill Base Routing</b>	Turn On (1)/Off (0) the Skill Based Routing ( <b>Version 5000 or higher</b> ).	0 = Off 1 = On (default = 0)		✓	
41-23-01	<b>ACD Skill Table Setup – Skill Level</b>	Input the Skill Level for each Queue for each Skill Table number ( <b>Version 5000 or higher</b> ).	1~7 (default = 1)		✓	
41-24-01	<b>Caller ID Marking Setup – Caller ID Marking Setup</b>	Enable/Disable the availability of setting that the ACD Agent can mark the originator caller ID, system base.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-24-02	<b>Caller ID Marking Setup – ACD Agent Info for Caller ID</b>	Set whether the Agent ID or extension number of the ACD Agent is used to mark with the CID in the buffer.	0 = Agent Extension Number 1 = ACD Agent ID (default = 0)		✓	
41-24-03	<b>Caller ID Marking Setup – Caller ID Buffer Clear Timer</b>	Set time interval for clearing stored Caller ID record in buffer.	1~168 (hours) (default = 24)		✓	
41-24-04	<b>Caller ID Marking Setup – Caller ID Buffer Store Size</b>	Set the Caller ID Buffer Size. When the number of CID records is over the limit, CID buffer threshold alarm (71) can be reported.	1000~10000 (default = 10000)		✓	
47-03-02	<b>SV8100 InMail Group Mailbox Options – Mailbox Number</b>	The Group Mailbox Number is the same as the Department Group master (pilot) number. Select the Department Group master (pilot) number associated with the Master Mailbox you are programming.	Digits (eight maximum, using 0~9). No Setting (entered by pressing Hold) (default not assigned)		✓	
47-03-03	<b>SV8100 InMail Group Mailbox Options – Mailbox Type</b>	Set the Group Mailbox type.	0 = None 1 = Subscriber 2 = Call Routing (default = 1)		✓	
47-07-02	<b>SV8100 InMail Routing Mailbox Options – Routing Mailbox Type</b>	Set the Routing Mailbox type.	0 = None 1 = Call Routing 2 = Announcement 3 = Directory 4 = Distribution Default: Mailboxes 01~08 = 1 (Call Routing) Mailboxes 09~32 = 2 (Announcement)		✓	
47-09-03	<b>Announcement Mailbox Options – Hang Up After</b>	Use this option along with <i>Next Call Routing Mailbox</i> and <i>Repeat Count</i> above to provide additional routing options to Automated Attendant callers. For more detail on this interaction, refer to Direct Announcement Mailbox Routing and Routed Announcement Mailbox Routing in the VM8000 InMail System Guide.	0 = None 1 = Goodbye 2 = Silent (default = 0)		✓	





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## Operation


### Using the Headset with Automatic Answer for ACD Agents:

1. With the multiline terminal in an idle state, press **Feature**.
2. Press the **HEADSET** key (Program 15-07-01 or SC 751: 05).
  -  *The Headset key blinks when Automatic Headset is activated.*
  -  *To cancel Automatic Headset, repeat these steps.*

### Transferring Trunk Calls to the ACD Pilot Number:

1. While on an outside call, press **Transfer**.
2. Dial the ACD Pilot number.
3. Hang up.
  -  *The call is transferred to the ACD group.*



### A Supervisor can monitor an ACD call:

1. When an ACD agent is on an outside call, the supervisor presses the **MONITOR** key (Program 15-07-01 or SC 752: \*15).
  -  *The supervisor can hear but cannot participate in the call. If participation is required, use the Barge-In feature instead.*
2. To cancel the call monitoring, press the **MONITOR** key again.


### AIC Agent Log In:

#### To Log In:

##### Multiline Terminal

1. Press the **ACD LOG IN/LOG OUT** key (Program 15-07-01 or SC 752: \*10).  
- OR -  
Press **Speaker** and dial the AIC Log In service code (Program 11-13-08).
2. Dial the log in code (up to 20 digits).
  -  *This step is not required if the ID code is disabled in Program 41-01-02.*
3. Dial the Agent Identity Code (AIC) (up to four digits).
  -  *The ACD LOG IN/LOG OUT key lights.*

**To Log Out (for single or multiple agent log ins):**Multiline Terminal

 All AIC log ins become logged out.


1. Press the **ACD LOG IN/LOG OUT** key (Program 15-07-01 or SC 752: \*10).
2. Dial **1** to accept.

- OR -

Press **Speaker** and dial the AIC Log In service code (Program 11-13-08).

 The **ACD LOG IN/LOG OUT** key goes out.

Single Line Telephone

 All AIC log ins become logged out.

1. Lift the handset.
  2. Dial the AIC Log Out service code (Program 11-13-08).
- OR -
1. To log out of an ACD group without using AIC, lift the handset.
  2. Dial the ACD Log Out service code **655** (Program 11-13-02).

**Multiple Agent Log In:****To Log In:**Multiline Terminal

*After already being logged in:*


1. Press the **ACD LOG IN/LOG OUT** key (Program 15-07-01 or SC 752: \*10).
2. Dial **0** to cancel the log out option.
3. Dial the Agent Identity Code (AIC) (up to four digits).

 The **ACD LOG IN/LOG OUT** key lights.

- OR -

Press **Speaker** and dial the AIC Log In service code (Program 11-13-08).


4. Dial the Agent Identity Code (AIC) (up to four digits).


 The **ACD Log In/Log Out** key lights.


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### Single Line Telephone

-  Follow Steps 1~3 to log in with additional AICs (up to three) anytime.
1. Lift the handset and dial the AIC Log In service code (Program 11-13-08).
  2. Dial the log in code (up to 20 digits).

 This step is not required if the ID code is disabled in Program 41-01-02.
  3. Dial the first Agent Identity Code (AIC) (up to four digits).

 You hear a confirmation tone when immediately logging in with additional AICs.
  4. For second agent log: Dial the second Agent Identity Code (AIC) (up to four digits).


 You hear a confirmation tone.
  5. For third agent log: Dial the third Agent Identity Code (AIC) (up to four digits).


 You hear a confirmation tone.


### **Queue Status Display:**

#### **When Logged Into ACD Group**

1. With an idle multiline terminal, press the Queue Status Display Programmable Function Key (Code: \*19).

 The display indicates the number of calls in queue, the trunk name, and the time the call has been waiting.

 When the Queue Status Display key is pressed, the queue status of the extension group is displayed. When the extension is not in an ACD group, the Queue Status of group 1 is displayed instead.

 When an agent logs in using an AIC code, the Queue Status of the default ACD group defined in Program 41-18-02 is displayed.
2. Press **VOL UP** and **VOL DOWN** to scroll through the Queue Status Displays of all the ACD Groups.
3. Press the **EXIT** key to return the telephone to an idle state.

#### **When Logged Out of ACD Group**



When ACD agents are logged out and a call is placed in the ACD queue, the telephone of the logged out agents displays the Queue Status and they hear the alarm according to the settings defined in system programming.

Pressing the Queue Status Display Programmable Function key returns the telephone to idle until the time in Program 41-20-03 expires again.



## Rest Mode:

### To Set The Manual Rest Mode:

#### Multiline Terminal


1. With the multiline terminal idle, press the **ACD Rest Mode** key (Program 15-07-01 or SC 752: \*13).
  -  *The ACD Rest Mode key lights. If the Rest Mode key is pressed while the agent is on an active call, the key flashes until the agent hangs up.*
  -  *This operation is not available for the System Supervisor.*

#### Single Line Telephone


1. Lift the handset and dial **658**.
  -  *A fast busy is heard.*
  -  *To set Pre-Rest Mode (while on a call), press the hookflash and then dial 658. Press the Hookflash again to return to the outside party. Rest Mode begins once the call is completed.*
2. Hang up.

### To Cancel The Manual Rest Mode:

#### Multiline Terminal

1. Press the **ACD Rest Mode** key (Program 15-07-01 or SC 752: \*13).
  -  *The ACD Rest Mode key light goes off.*

#### Single Line Telephone

1. Lift the handset.
  -  *A fast busy is heard.*
2. Dial **659**.
3. Hang up.

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## *Automatic Release*

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### Description

Automatic Release drops the line circuit when an outside party abandons the call. For this feature to work with Loop Start Trunks, the CO/PBX providing the outside line must provide a timed disconnect signal. Automatic Release is normally provided on Ground Start, DID, ISDN, and Tie Line trunks.

### Conditions

- Automatic Release on ISDN trunks is provided by the protocol.
- When an outside line is accessed using a dedicated line key, the LED associated with the line key goes off when Automatic Release occurs.
- This feature functions while a call is in progress, on hold, or in a conference.
- This feature applies to all ICM type calls in progress, holding or parked.
- When Automatic Release occurs and the telephone is in handsfree mode, **Speaker** automatically turns off. If using the handset, the station is set to idle when the handset goes on-hook.

### Default Settings

None

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### System Availability

#### Terminals

None

#### Required Component(s)

None

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## Related Features

Central Office Calls, Answering

Central Office Calls, Placing

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-09	Analog Trunk Data Setup – Busy Tone Detection	Enable/Disable Busy Tone Detection.	0 = Disable (No) 1 = Enable (Yes) (default = 0)		✓	
14-02-14	Analog Trunk Data Setup – Loop Start/Ground Start	Identify the analog trunk as either loop or ground start.	0 = Loop Start (Loop) 1 = Ground Start (Ground) (default = 0)			✓
80-04-01	Call Progress Tone Detector Setup – Detection Level	Set the Detection Level.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1 (DT) – 0 (-25dBm) Type 2 (BT) – 0 (-25dBm) Type 3 (RBT) – 0 (-25dBm) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-02	<b>Call Progress Tone Detector Setup – Min. Detection Level</b>	Set the minimum detection level.	0~15 detect level 0: –15dBm(0) to –30dBm(15) detect level 1: –30dBm(0) to –45dBm(15) detect level 2: –40dBm(0) to –55dBm(15) default: Type 1 (DT) – 15 (-25dBm) Type 2 (BT) – 15 (-25dBm) Type 3 (RBT) – 15 (-25dBm) Type 4, Type 5 – 0			✓
80-04-03	<b>Call Progress Tone Detector Setup – S/N Ratio</b>	Set the Signal to Noise ratio.	0~4 (0dB ~ -20dB) Default: Type 1 (DT) = 4 (-20dB) Type 2 (BT) = 4 (-20dB) Type 3 (RBT) = 4 (-20dB) Type 4 = 0 Type 5 = 0			✓
80-04-04	<b>Call Progress Tone Detector Setup – No Tone Time</b>	Set No Tone Time.	0~255 (30+30-7680ms) The formula is 30+30N. When set to N=1, it means 30+30*1=60 When set to N=255, it means 30+30*255=7680 (0 =not detect) default: Type 1 (DT) – 132 (3990ms) Type 2 (BT) – 132 (3990ms) Type 3 (RBT) – 132 (3990ms) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-05	Call Progress Tone Detector Setup – Pulse Count	Set the Pulse Count.	1~255 default: Type 1 (DT) – 1 Type 2 (BT) – 1 Type 3 (RBT) – 1 Type 4, Type 5 – 0			✓
80-04-06	Call Progress Tone Detector Setup – ON Minimum Time	Set the minimum On time.	1~255 (30+30-7680ms) default: Type 1 (DT) – 9 (300ms) Type 2 (BT) – 12 (300ms) Type 3 (RBT) – 25 (780ms) Type 4, Type 5 – 0			✓
80-04-07	Call Progress Tone Detector Setup – ON Maximum Time	Set the maximum On time.	0~255 (30+30-7680ms) default: Type 1 (DT) – 0 Type 2 (BT) – 20 (630ms) [ET] Type 3 (RBT) – 40 (1230ms) Type 4, Type 5 – 0			✓
80-04-08	Call Progress Tone Detector Setup – OFF Minimum Time	Set the minimum Off time.	1~255 (30+30-7680ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 12 (390ms) Type 3 (RBT) – 83 (2520ms) Type 4, Type 5 – 0			✓
80-04-09	Call Progress Tone Detector Setup – OFF Maximum Time	Set the maximum Off time.	0~255 (30+30-7680ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 20 (630ms) Type 3 (RBT) – 115 (3480ms) Type 4, Type 5 – 0			✓





## Operation

None

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# *Automatic Route Selection*

## Enhancements

With **Version 7000 or higher** software:

- The Dial Analysis table has expanded from 400 to 800 tables (**V7000 Enhancement License (0036)** required).
- The SV8100 can recognize each system where the DT700 extension(s) are connected and provide an Automatic Route Selection COS based on the System (System ID) when using NetLink.

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## Description

Automatic Route Selection (ARS) provides call routing and call restriction based on the digits a user dials. ARS gives the system the most cost-effective use of the connected long distance carriers.

ARS is an on-line call routing program that you can customize (like other system options) from a display telephone. ARS accommodates 800 call routing choices – without a custom-ordered rate structure database. With ARS, you can modify the system routing choices quickly and easily. This is often necessary in the telecommunications world of today where the cost structure and service choices frequently change.

The ARS feature can add or delete digits and route calls according to predetermined levels. When UNIVERGE SV8100 systems are networked together by Tie Lines or K-CCIS, the networked systems can be called by a system number and a user extension number, just an extension number, or by using a trunk access code.

## ARS Feature Summary

ARS provides:

### Call Routing

ARS can apply up to 24-digit analysis to every number dialed. For programming, ARS provides separate 8-digit and 24-digit tables. Each table can have up to 250 numbers.

- Dialing Translation (Special Dialing Instructions)

ARS can automatically execute stored dialing instructions (called Dial Treatments) when it chooses a route for a call. The system allows up to 15 Dial Treatments. The Dial Treatments can:

- Insert or delete an area code (NPA)
- Add digits (such as a dial-up OCC number), pauses and waits to the dialing sequence
- Require the user to enter an authorization code when placing a call (refer to Program 44-03)

Time of Day Selection

For routing, ARS provides 10 different day selections (called Time Schedule Patterns). Each Time Schedule Pattern can provide up to 20 time intervals which are assigned to one of the eight day/night modes. The Time Schedule Patterns are then assigned to a day of the week (Monday~Friday, Saturday, Sunday or Holiday).

 Hierarchical Class of Service Control

ARS allows or denies call route choices based on an extension ARS Class of Service. This allows lower Classes of Service (e.g., 1) to access routes unavailable to higher Classes of Service (e.g., 16). The system provides up to 16 (0=unrestricted, 1~16) ARS Classes of Service.

 Separate Routing for Selected Call Types

To provide unique control, you can program separate routing instructions for:

- Directory assistance (411, 1411 and 555) calls
- Emergency (911) calls

 Separate Routing for Equal Access (1010XXX) Calls

Choose different routing for directly-dialed (1010XXX + 1) and operator-assisted (1010XXX + 0) Equal Access calls.

## Basic ARS Operation

When a user places an outside call, ARS analyzes the digits dialed and assigns one of 800 Selection Numbers to the call. The Selection Number chosen depends on which digits the user dialed. ARS then checks the time of day, the day of week and the extension ARS Class of Service. Based on these call routing options, ARS selects a trunk group for the call and imposes the Dial Treatment instructions (if any).

## Class of Service Option Allows Outgoing Calls to Not Follow Access Map

Using this option allows a Class of Service to be set so that ARS does not follow the trunk access map settings (Program 14-07-01 and Program 15-06-01). The feature allows an extension user to have CO line keys on their telephone which allow incoming access only. The user has only outgoing access on the CO lines when using ARS to place a call.

## Class of Service Matching

With the ARS Class of Service Match Access feature, you can determine whether the system should allow a call based on the COS assigned to the Dial Analysis Table (Program 26-02). This change can be used to create a tenant-like application. It then uses the trunk group defined in the Additional Entry in Program 26-02-03 to place the outgoing call.

When this feature is enabled, the calls are routed in sequential order, and are allowed if the Class of Service for the trunk group matches.

For this feature, **Program 26-01-06: Automatic Route Selection Service, COS Match Access** is used.

The examples below use the following system programming:

**Program 26-02 for Dial Analysis Table for ARS set as:**

Table No.	Program 26-02-01 Dial	Program 26-02-02 Service Type	Program 26-02-03 Add Data	Program 26-02-04 ARS COS
1	203@@@@@@@	1:Route to trunk group	3 (Group 3)	5
2	214@@@@@@@	1:Route to trunk group	1 (Group 1)	4
197	@@@@@@@@@@	1:Route to trunk group	2 (Group 2)	4
198	@@@@@@@@@@	1:Route to trunk group	3 (Group 3)	3
199	@@@@@@@@@@	1:Route to trunk group	2 (Group 2)	2
200	@@@@@@@@@@	1:Route to trunk group	1 (Group 1)	1

**Program 12-02 for Automatic Night Service Patterns as:**

Time Pattern No.	Program 12-02-01 Start Time	Program 12-02-02 End Time	Program 12-02-03 Operation Mode
1	00:00	08:30	2 (Night)
2	08:30	17:00	1 (Day)
3	17:00	00:00	2 (Night)

**Program 12-02 for Automatic Night Service Patterns as:**

Mode	Ext. 301	Ext. 302	Ext. 401	Ext. 402
Mode 1 (Day)	1	2	3	3
Mode 2 (Night)	1	4	3	5

**Program 26-01-03 for ARS Misdialed Number Handling as: 1 (Warning Tone)**

**With Program 26-01-06: ARS COS Match Access disabled (set to 0):**

- If at 9:00 AM, each extension dialed 9+(203)926-5400  
All Extension would use Trunk Group 3
- If at 9:00 AM, each extension dialed 9+(214)262-2000  
All Extension would use Trunk Group 1
- If at 6:00 PM, each extension dialed 9+(203)926-5400  
All Extension would use Trunk Group 3
- If at 6:00 PM, each extension dialed 9+(214)262-2000  
Extension 301, 302 and 401 would use Trunk Group 1  
Extension 402 would not be able to dial out as the COS is lower

**With Program 26-01-06: ARS COS Match Access enabled (set to 1):**

- If at 9:00 AM, each extension dialed 9+(203)926-5400  
Extension 301 would use Trunk Group 1  
Extension 302 would use Trunk Group 2  
Extension 401, 402 would use Trunk Group 3
- If at 9:00 AM, each extension dialed 9+(214)262-2000  
Extension 301 would use Trunk Group 1  
Extension 302 would use Trunk Group 2  
Extension 401, 402 would use Trunk Group 3
- If at 6:00 PM, each extension dialed 9+(203)926-5400  
Extension 301 would use Trunk Group 1  
Extension 302 would use Trunk Group 2  
Extension 401, 402 would use Trunk Group 3
- If at 6:00 PM, each extension dialed 9+(214)262-2000  
Extension 301, 302 would use Trunk Group 1  
Extension 401 would use Trunk Group 3  
Extension 402 would not be able to dial out as the COS does not match

**Conditions**

- With **Version 7000 or higher** software and the **V7000 Enhancement (0036) license**, Dial Analysis Tables have expanded from 400 to 800 tables.
- ARS is intended for areas that use the North American Number Plan (NANP).
- Line keys, Call Appearance (CAP) Keys, outgoing trunk group keys, dialing 704 + trunk group, dialing +trunk number, and speed dial numbers assigned to a certain trunk group can all be used to by-pass ARS.
- If no PBX access code is entered in the Dial Treatment, the system can still dial 911.
- Toll Restriction overrides ARS.
- A system with Automatic Route Selection cannot also have Trunk Group Routing.
- With ARS installed, Trunk Queuing automatically queues for the least costly route. The system automatically redials the queued call when the extension user lifts the handset.
- Speed Dialing may bypass ARS routing.
- Set up other options for outgoing calls (e.g., unassign line keys, adjust gains, ARS access key, Call Appearance (CAP) Keys, etc.).
- Refer to the Dial Tone Detection feature for the specifics on how the system handles Dial Tone Detection.
- ARS does not permit 0 and 011+ calls to be routed out separate trunk groups. The UNIVERGE SV8100 supports only direct trunk selection for dial 0 (Operator) type calls.

- If an entry of 911 is programmed in ARS, but ARS is turned off, 911 calls still attempt to route using ARS.
- When using ARS Class of Service Matching, CCIS calls will always follow Class of Service 1.
- If a user dials a number not programmed in ARS, Program 26-01-03 determines if the system should route over the trunk group settings defined in Program 21-02 or play an error tone.
- When using ARS Class of Service, with Program 26-01-03 set to (1) “Play Warning Tone”, any trunk (except a CCIS trunk) pointed or transferred to a virtual that is Call Forward Off-Premise will not complete. For a virtual to Call Forward Off-Premise, Program 26-01-03 must be set to “Route to trunk group” and the call will follow the trunk group settings of the trunk, assigned in Program 21-03.
- When using ARS Class of Service, with Program 26-01-03 set to (1) “Play Warning Tone”, a CCIS trunk pointed or transferred to a virtual that is call forwarded off premise will always follow ARS Class 1 routing properties.

### Default Setting

Disabled

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## System Availability

### Terminals

None

### Required Component(s)

None

## Recognize Extension Location when Logging in with NetLink

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### Description

With **Version 7000 or higher** software, the SV8100 can recognize each system where the DT700 extension(s) are connected then provide an Automatic Route Selection COS based on the System (System ID) when using NetLink.

## Conditions

- The Recognize Extension Location when Logging in with NetLink requires **Version 7000 or higher** software.
- This feature requires Netlink to be enabled.
- This feature is only supported on DT700 and softphones.

## Default Setting

None

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## System Availability

### Terminals

DT700

### Required Component(s)

Version 7000 or higher system software

Refer to the SV8100 NetLink Feature for Required Component(s)

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## Related Features

**Central Office Calls, Placing**

**Code Restriction**

**Dial Tone Detection**

**E911 Compatibility**

**Speed Dial – System/Group/Station**

**SV8100 NetLink**

**Trunk Group Routing**



## Trunk Queuing/Camp On

### Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

#### Automatic Route Selection:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	<b>System Numbering</b>	Set the system internal (Intercom) numbering plan. The numbering plan assigns the first and second digits dialed and affects the digits an extension user must dial to access other extensions and features, such as service codes and trunk codes. If the default numbering plan does not meet the site requirements, use this program to tailor the system numbering to the site.	Refer to SV8100 Programming Manual for a detailed description of this program.	✓		
11-09-01	<b>Trunk Access Code</b>	Specify the digit or digits to be used to access ARS (normally 9).	Dial up to four digits (default = 9)		✓	
11-09-02	<b>2nd Trunk Route Access Code</b>	Define additional trunk access codes. When a user dials the Alternate Trunk Route Access Code, the system routes their call to the Alternate Trunk Route.	Dial up to four digits (default not assigned)		✓	
12-01-01	<b>Night Mode Function Setup – Manual Night Mode Switching</b>	Turn Off or On any extension from activating Manual Night Service.	0 = Off 1 = On (default = 1)		✓	
12-01-02	<b>Night Mode Function Setup – Automatic Night Mode Switching</b>	According to a preset schedule, Enable (1)/Disable (0) Automatic Night Service for the system. Make sure to set the Service Patterns in Program 12-02-01, Program 12-02-02 and Program 12-02-03.	0 = Off 1 = On (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
12-02-01	<b>Automatic Night Service Patterns –Start Time</b>	Define the daily pattern of the Automatic Mode Switching. Each Mode Group has 10 patterns. These patterns are used in Programs 12-03 and 12-04. The daily pattern consists of 20 timer settings.  This option defines the starting time.	0000~2359 Refer to the SV8100 Programming Manual for defaults.		✓	
12-02-02	<b>Automatic Night Service Patterns –End Time</b>	Define the daily pattern of the Automatic Mode Switching. Each Mode Group has 10 patterns. These patterns are used in Programs 12-03 and 12-04. The daily pattern consists of 20 timer settings.  This option defines the ending time.	0000~2359 Refer to the SV8100 Programming Manual for defaults.		✓	
12-02-03	<b>Automatic Night Service Patterns –Operation Mode</b>	Define the daily pattern of the Automatic Mode Switching. Each Mode Group has 10 patterns. These patterns are used in Programs 12-03 and 12-04. The daily pattern consists of 20 timer settings.  This option defines the operation mode that the system should be in during each time number.	1~8 (default = 1 or 2 depending on time pattern and time number.)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
12-03-01	<b>Weekly Night Service Switching</b>	Define which time pattern should be used on each day of the week.	Night Mode Service Group Numbers: 01~32 Time Schedule Pattern Number: 1~10 Day of Week: 01 = Sunday (default = Time Pattern 2) 02 = Monday (default = Time Pattern 1) 03 = Tuesday (default = Time Pattern 1) 04 = Wednesday (default = Time Pattern 1) 05 = Thursday (default = Time Pattern 1) 06 = Friday (default = Time Pattern 1) 07 = Saturday (default = Time Pattern 2)		✓	
12-04-01	<b>Holiday Night Service Switching</b>	Define a yearly schedule of holiday night-switch settings. This schedule is used for setting special days when the company is expected to be closed, such as national holidays.	Days and Months: 0101~1231 (e.g. 0101 = Jan. 1; 1231 = Dec. 31) Time Pattern Number: 0~10 (0 = No Setting) (default not assigned)		✓	
12-05-01	<b>Night Mode Group Assignment for Extensions</b>	Assign Day/Night Mode Group for each extension.	Night Mode Service Group Number: 01~32 (default = 1)		✓	
12-06-01	<b>Night Mode Group Assignment for Trunks</b>	Assign a Day/Night Mode Group for each trunk port.	Trunk Port Number: 001~200 Night Mode Service Group Number: 01~32 (default Night Mode Service Group Number = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
12-07-01	<b>Text Data for Night Mode</b>	Make up an original text message, which, depending on programming, can be displayed on an LCD of a multiline telephone in each Mode.	Night Mode Service Group Number: 01~32 Day/Night Mode: 1~8 Text Message: Maximum 12 Characters (alphabetic or numeric) Default Text Messages for Day/Night Modes: Mode 1 = No Setting Mode 2 = <Night> Mode 3 = <Midnight> Mode 4 = <Rest> Mode 5 = <Day2> Mode 6 = <Night2> Mode 7 = <Midnight2> Mode 8 = <Rest2>		✓	
12-08-01	<b>Night Mode Service Range</b>	Define the changing range of toggle key for each Day/Night Mode.	Night Mode Service Group Number: 01~32 Range: 2~8 (default = 2)		✓	
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Program trunks of the same carrier type in the same trunk group.	Trunks 1-200 Trunk Group 1-100 Priority - 1-200 (default = All trunks in Trunk Group 1 with priorities of: Trunk 1 = Priority 1 Trunk 2 = Priority 2 Trunk 200 = Priority 200)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	Set up the Trunk Access Maps. This sets the access options for trunks.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign Trunk Access Maps to extensions.	Trunk Access Maps: 1~200 (default = 1)		✓	
20-03-04	<b>System Options for Single Line Telephones – Dial Sending Start Time for SLT or ARS</b>	When ARS or an analog extension user accesses a trunk and dials an outside call, the system waits this time before outdialing the first digit.	0~64800 (seconds) (default = 3)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day/Night Mode: 1~8 Class of Service for Extensions: 1~15 Defaults: Extension number 101 as Class 15. All other extension numbers are set as Class 1.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming (Program 14-07-01 and Program 15-06-01) for outgoing calls.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
21-02-01	<b>Trunk Group Routing for Extensions</b>	Assign Program 14-06 routes to extensions.	Day/Night Mode: 1~8 Route Table Number: 0~100 (0 = No Setting) (default = 1)		✓	
26-01-01	<b>Automatic Route Selection Service – ARS Service</b>	Enable/Disable ARS.	0 = Disable (Off) 1 = Enable (On) (default = 0)	✓		
26-01-02	<b>Automatic Route Selection Service – Network Outgoing Inter-Digit ARS Timer</b>	With Networking, this timer replaces Program 20-03-04 when determining if all network protocol digits are received. If ARS is enabled at Site B, this timer can be programmed for 5 at Site A. If ARS is disabled and Site B is using F-Route for outbound dialing, this timer should be programmed for 30 at Site A.	0~64800 (seconds) (default = 30)		✓	
26-01-03	<b>Automatic Route Selection Service – ARS Misdialed Number Handling</b>	If a user dials a number not programmed in ARS, determine if the system should Route over trunk group 1 (0) or Play error tone (1).	0 = Route to Trunk Group 1 1 = Play Warning Tone to Dialer (default = 0)		✓	
26-01-06	<b>Automatic Route Selection Service – Class of Service Match Access</b>	With the ARS Class of Service Match Access feature, you can determine whether or not the system should allow a call based on the COS assigned to the Dial Analysis Table (Program 26-02). This change can be used to create a tenant-like application. It then uses the trunk group set in the Additional Entry in Program 26-02-03 to place the out-going call. When this feature is enabled, the calls are routed in sequential order, and forward – provided the Class of Service for the trunk groups match.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-01-07	<b>Automatic Route Selection Service – F-Route Access COS Reference</b>	Define the system options for Automatic Route Selection (ARS).	0 = F-Route 1 = ARS (default = 0)		✓	
26-02-01	<b>Dial Analysis Table for ARS/LCR – Dial</b>	Enter the digits (16 digits maximum: 1~9, 0 *, #, @; 800 separate entries) for the Dial Analysis Table which is analyzed by ARS/LCR. This table is checked after any programmed F-Route operations have completed. The system then refers to Program 26-02-02 and Program 26-02-03 to determine the routing for the call. To enter a wild card/ don't care digit, press Line Key 1 to enter an @ symbol. It is important to remember that the system checks the table numbers in numerical order. This means that entries for specific numbers should be entered first (such as your local area codes), then enter the items containing wild card digits. If the system sees an entry of 2@@, any table entries which follow are ignored.  For example, if 268, 269, and 270 are local exchanges, these would be the first three table entries which route according to the settings made in Program 26-02-02 and Program 26-02-03 for each of the table entries. If the next entry is 2@@, the system checks no further in this program and routes all other 2xx numbers according to the entries made in Program 26-02-02 and Program 26-02-03 for this table entry.	Dial Digits (16 digits maximum) 1~9, 0, *, #, or for wild character (Press line key 1) (default not assigned)	✓		
26-02-02	<b>Dial Analysis Table for ARS – ARS Service Type</b>	For each Dial Analysis Table (1~800), select 0 for no ARS, 1 for Service Type 1 – Route to Trunk Group Number to have the number route to a trunk group [Refer to Program 26-02-03] or 2 for Service Type 2 – F-Route Selected to have the dialed number controlled by the F-Route table. If Service Type 2 is selected and F-Route operation is on, the F-Route table used is determined by Program 44-04. If F-Route operation is off, the routing is determined by Program 44-05.	0 = No Service (None) 1 = Route to Trunk Group 2 = Select F-Route Access (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-02-03	<b>Dial Analysis Table for ARS – Additional Data/Service Number</b>	For each Dial Analysis Table (1~800), if Service Type 1 was selected in Program 26-02-02, enter the trunk group number (0~100, 0 = No Route).	If Service Type 1 (in 26-02): Select Trunk Group Number (0~100, 0 = No Route) If Service Type 2 (in 26-02): F-Route Time Schedule Not Used = 0~500 (F-Route Table Number). Refer to Program 44-05: ARS/F-Route Table  F-Route Time Schedule Used = 0~500 (F-Route Selection Number). Refer to Program 44-04: ARS/F-Route Selection for Time Schedule. (default = 0)	✓		
26-02-04	<b>Dial Analysis Table for ARS – ARS Class of Service</b>	For each Dial Analysis Table (1~800), set the Automatic Route Selection (ARS) Class of Service (0~16).	0~16 (default = 0)	✓		
26-02-05	<b>Dial Analysis Table for ARS – Dial Treatment for ARS</b>	For each Dial Analysis Table (1~800), set the Automatic Route Selection (ARS) Dial Treatment (0~15) to be used.	0~15 (default = 0)	✓		
26-02-07	<b>Dial Analysis Table for ARS – Network Specified Parameter Table</b>	For each Dial Analysis Table (1~800), set the Automatic Route Selection (ARS) Network Specified Parameter Table (0~16) to be used.	0~16 (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-03-01	<b>ARS Dial Treatments – Treatment Code</b>	<p>Assign the Dial Treatments (1~15) for automatic ARS dialing translation. Assign Dial Treatments to Service Numbers (Trunk Groups) in Program 26-02. The ARS Dial Treatment options are:</p> <p><b>3</b> - Delete the NPA if dialed as part of the initial call. This requires at least eight digits in the ARS table (Program 26-02-01).</p> <p><b>2</b> - Delete the leading digit if dialed as part of the initial call. This requires at least eight digits in the ARS table (Program 26-02-01).</p> <p><b>1</b> - Add a leading 1 if not dialed as part of the initial call. This requires at least eight digits in the ARS table (Program 26-02-01).</p> <p><b>INPA</b> - Insert the NPA specified by NPA.</p> <p><b>DNN</b> - Outdial the NN number of digits or execute the code that follows. For example, D041234 out-dials 124. Valid entries are 0~9, #, *, Wnn (wait nn seconds) and P (pause). Each digits code counts as a digit. So for example, if a P was added for a pause, the entry would look like: D05P1234. This Dial Treatment can only be added from telephone programming.</p> <p><b>Wnn</b> - Wait nn seconds.</p> <p><b>P</b> - Pause in analog trunk.</p> <p><b>R</b> - Redial the initially dialed number, including any modifications.</p> <p><b>E</b> - End of Dial Treatment. All Dial Treatments must end with the E code.</p> <p><b>X</b> - When ARS is enabled, X must be entered in the Dial Treatment for the system to output the extension number of the call originator to the black box for the E911 feature.</p>	24 characters maximum (default not assigned)		✓	
26-04-01	<b>ARS Class of Service</b>	Set an extension ARS Class of Service (0~16). Automatic Route Selection uses ARS Class of Service when determining how to route extension calls.	Day/Night Mode: 1~8 Class = 0~16 (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-11-01	<b>Transit Network ID Table – Transmit Network ID (Carrier ID)</b>	Enter the Transit Network Selection information element to be added to an ARS call using an ISDN trunk. This information element identifies a requested transit network.	0000~9999 (Fixed four digits) (default not assigned)		✓	
44-01-01	<b>System Options for ARS/F-Route – ARS/F-Route Time Schedule</b>	Select whether the ARS/F-Route feature should use the time schedule (0=not used, 1=used). If this option is set to 0, the F-Route table selected is determined only by the digits dialed without any relation to the day or time of the call. If this option is set to 1, the system first refers to Program 44-10. If there is a match, the pattern defined in that program is used. If not, the F-Route pattern in Program 44-09 and time setting in Program 44-08 are used.	0 = Not Used 1 = Used (default = 0)		✓	
44-02-01	<b>Dial Analysis Table for ARS/F-Route Access – Dial</b>	Set the Dial digits for the Pre-Transaction Table for selecting ARS/F-Route (eight digits max: 1~9, 0 * #, @). To enter a wild card/don't care digit, press Line Key 1 to enter an @ symbol.	Up to eight digits (Use line key 1 for a 'Don't Care' digit, @) (default not assigned)		✓	
44-02-02	<b>Dial Analysis Table for ARS/F-Route Access – Service Type</b>	Set the Service Type (0~3) for the Pre-Transaction Table for selecting ARS/F-Route.	0 = No Setting (None) 1 = Extension Call (Own) 2 = ARS/F-Route Table (F-Route) 3 = Dial Extension Analyze Table (Option) (default = 0)		✓	
44-02-03	<b>Dial Analysis Table for ARS/F-Route Access – Additional Data</b>	If a Service Type is set to F-Route in Program 44-02-02, set which F-Route table to use.	1=Delete Digit = 0~255 (255 : Delete All Digits) 2=0~500 (0 = No Setting) 3=Dial Extension Analyze Table Number = 0~4 (0 = No Setting) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-02-04	<b>Dial Analysis Table for ARS/F-Route Access – Dial Tone Simulation</b>	Determine if the Dial Tone Simulation is On (1) or Off (0) for the Pre-Transaction Table for selecting ARS/F-Route. If enabled, this option sends dial tone to the calling party once the routing is determined. This may be required if the central office at the destination does not send dial tone.	0 = Off 1 = On (default = 0)		✓	
44-03-01	<b>Dial Analysis Extension Table – Dial</b>	Set the Dial digits (24 digits max: 1~9, 0 * #, @) to be used for the Dial Extension Analysis Table. When Program 44-02-02 is set to type 3, this program sets the dial extension analysis table. These tables are used when the analyzed digits must be more than eight digits. To enter a wild card/don't care digit, press Line Key 1 to enter an @ symbol.	Up to 24 digits Digits = 1~9, 0, *, #, @ (Press Line Key 1 for wild character @) (default not assigned)		✓	
44-03-02	<b>Dial Analysis Extension Table – ARS/F-Route Select Table Number (1~250)</b>	When dialed digits match the setting in Program 44-03-01, select the ARS/R-Route table number (0~500) to be used for the Dial Extension Analysis Table.	0~500 (ARS/F-Route Table Number) With Program 44-01 set to 0, Program 44-05 is checked. With Program 44-01 set to 1, Program 44-04 is checked. (default = 0)		✓	
44-03-03	<b>Dial Analysis Extension Table – ARS/F-Route Select Table Number (251)</b>	If the received digits are not identified in tables 1~250, the F-Route selection table number (0~500) defined in table 251 is used.	0~500 (ARS/F-Route Table Number) With Program 44-01 set to 0, Program 44-05 is checked. With Program 44-01 set to 1, Program 44-04 is checked. (default = 0)		✓	
44-03-04	<b>Dial Analysis Extension Table – Next Table Area Number (252)</b>	If the received digits do not match the digits set in tables 1~250, table number 252 is used to refer to the next Extension Table Area (1~4) to be searched.	0~4 (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-04-01	<b>ARS/F-Route Selection for Time Schedule</b>	Assign each ARS/F-Route Selection number (1~500) to an ARS/F-Route table number for each ARS/F-Route time mode. There are eight time modes for ARS/F-Route Access.	ARS/F-Route Time Mode: 1~8 ARS/F-Route Table Number = 0~500 (default = 0)		✓	
44-05-01	<b>ARS/F-Route Table – Trunk Group Number</b>	Select the trunk group number to be used for the outgoing ARS call.	0~100, 255 0 = No Setting 255 = Extension Call (default = 0)	✓		
44-05-02	<b>ARS/F-Route Table – Delete Digits</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Enter the number of digits to be deleted (0~255) from the dialed number.	0~255 (255 = Delete All) (default = 0)	✓		
44-05-03	<b>ARS/F-Route Table – Additional Dial Number Table</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Enter the table number (defined in Program 44-06) for additional digits to be dialed (0~1000).	0~1000 (default = 0)	✓		
44-05-04	<b>ARS/F-Route Table – Beep Tone</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select whether or not a beep is heard if a lower priority trunk group is used.	0 = Off (No Beep) 1 = On (Beep)s (default = 0)	✓		
44-05-05	<b>ARS/F-Route Table – Gain Table Number for Internal Call</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the gain table number to be used for internal calls (0~500).	0~500 0 = No Setting (default = 0)	✓		
44-05-06	<b>ARS/F-Route Table – Gain Table Number for Tandem Connections</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the gain table number to be used for the tandem call (defined in Program 44-07).	0~500 0 = No Setting (default = 0)	✓		
44-05-07	<b>ARS/F-Route Table – ARS Class of Service</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the Class of Service to be used for ARS (0~16). Extension ARS COS is determined in Program 26-04-01.	0~16 (default = 0)	✓		
44-05-08	<b>ARS/F-Route Table – Dial Treatment</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the Dial Treatment to be used (0~15). The Dial Treatments are defined in Program 26-03-01.	0~15 (default = 0)	✓		
44-05-09	<b>ARS/F-Route Table – Maximum Digit</b>	Set the maximum number of digits to send when using the F-Route.	0~24 (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-05-10	ARS/F-Route – CCIS over IP Destination Point Code	For each ARS/F-Route table (1~500). Set the CCIS over IP Destination Point Code (0~16367).	0~16367 (default = 0)	✓		
44-05-11	ARS/F-Route – Network Specified Parameter Table	For each ARS/F-Route table (1~500) assign the priority (1~4). Assign the Network Specified Parameter Table (0~16).	0~16 (default = 0)	✓		
44-06-01	Additional Dial Table	If an Additional Dial Number Table is entered in Program 44-05-03, define the additional dial table (1~1000) to add digits in front of the dialed ARS/F-Route number (24 digits max: 1-9, 0 * #, Pause). To enter a wild card/don't care digit, press Line Key 1 to enter a P (pause) symbol.	Up to 24 digits Enter: 1~9, 0, *, #, Pause (press line key 1 to enter a pause) (default not assigned)		✓	
44-07-01	Gain Table for ARS/F-Route Access – Incoming Transmit	Set the gain table to be used (1~500). If an extension dials ARS/F-Route number:	1~63 (-15.5 ~ +15.5dB) (default = 32 [0dB])		✓	
44-07-02	Gain Table for ARS/F-Route Access – Incoming Receive	The Extension Dial Gain Table is activated, which is assigned in Program 44-05. The Extension Dial Gain Table follows Outgoing transmit and Outgoing receive settings.	1~63 (-15.5 ~ +15.5dB) (default = 32 [0dB])		✓	
44-07-03	Gain Table for ARS/F-Route Access – Outgoing Transmit	If the incoming call is transferred to another line using ARS/F-Route:	1~63 (-15.5 ~ +15.5dB) (default = 32 [0dB])		✓	
44-07-04	Gain Table for ARS/F-Route Access – Outgoing Receive	The Tandem Gain Table is activated, which is assigned in Program 44-05. The Tandem Gain Table follows the Incoming transmit and Incoming receive settings for incoming line, and Outgoing transmit and Outgoing receive settings for the outgoing line. For ARS/F-Route calls, the CODEC gains defined in Program 14-01-02 and Program 14-01-03 are not activated.	1~63 (-15.5 ~ +15.5dB) (default = 32 [0dB])		✓	
44-08-01	Time Schedule for ARS/F-Route	Define the daily pattern of the ARS/F-Route feature. ARS/F-Route has 10 time patterns. These patterns are used in Program 44-09 and Program 44-10. The daily pattern consists of 20 time settings.	Time Number: 01~20 Start Time = 0000~2359 End Time = 0000~2359 Mode: 1~8 Default = All Schedule Patterns: 0:00 – 0:00, Mode 1		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-09-01	<b>Weekly Schedule for ARS/ F-Route</b>	Define a weekly schedule for using ARS/F-Route day numbers 1~7 (1 = Sun, 7 = Sat), pattern numbers (1~10). The pattern number is defined in Program 44-08-01.	1 = Sunday (Pattern 1~10) (default Pattern = 1) 2 = Monday (Pattern 1~10) (default Pattern = 1) 3= Tuesday (Pattern 1~10) (default Pattern = 1) 4 = Wednesday (Pattern 1~10) (default Pattern = 1) 5 = Thursday (Pattern 1~10) (default Pattern = 1) 6 = Friday (Pattern 1~10) (default Pattern = 1) 7 = Saturday (Pattern 1~10) (default Pattern = 1)		✓	
44-10-01	<b>Holiday Schedule for ARS/ F-Route</b>	Define a yearly schedule for ARS/F-Route. This schedule is used for setting special days such as national holidays (pattern numbers 1~10). The pattern number is defined in Program 44-08-01.	Date: 0101~1231 Schedule Pattern Number = 0~10 0 = No Setting (default = 0)		✓	
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Use Items 11~32 to set the criteria for dial tone detection for outgoing ARS calls.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1~5 = 0		✓	
80-03-02	<b>DTMF Tone Receiver Setup – Start Delay Time</b>	Define the start delay time for DTMF Tone Receiver.	0~255 (0.25ms~64ms) default: Type 1~5 = 0		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	DTMF Tone Receiver Setup – Min. Detect Level	Define the minimum detection level for DTMF Tone Receiver.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-04	<b>DTMF Tone Receiver Setup – Max. Detect Level</b>	Define the maximum detection level for DTMF Tone Receiver.	0~15 detect level 0: 0dBm(0) to -15dBm(15) detect level 1: -5dBm(0) to -20dBm(15) detect level 2: -10dBm(0) to -25dBm(15) detect level 3: -15dBm(0) to -30dBm(15) detect level 4: -20dBm(0) to -35dBm(15) detect level 5: -25dBm(0) to -40dBm(15) detect level 6: -30dBm(0) to -45dBm(15) detect level 7: -35dBm(0) to -50dBm(15) detect level 8: -40dBm(0) to -55dBm(15) detect level 9: -45dBm(0) to -60dBm(15) detect level 10: -50dBm(0) to -65dBm(15) detect level 11: -55dBm(0) to -70dBm(15) detect level 12: -60dBm(0) to -75dBm(15) detect level 13: -65dBm(0) to -80dBm(15) detect level 14: -70dBm(0) to -85dBm(15) detect level 15: -75dBm(0) to -90dBm(15) default: Type 1~5 = 2 (-2dBm)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-05	<b>DTMF Tone Receiver Setup – Forward Twist Level</b>	Define the forward twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1 = 5 (6dBm) Type 2 = 5 (6dBm) Type 3 = 5 (6dBm) Type 4 = 5 (6dBm) Type 5 = 5 (6dBm)		✓	
80-03-06	<b>DTMF Tone Receiver Setup – Backwards Twist Level</b>	Define the backwards twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1 = 0 (1dBm) Type 2 = 0 (1dBm) Type 3 = 0 (1dBm) Type 4 = 0 (1dBm) Type 5 = 0 (1dBm)		✓	
80-03-07	<b>DTMF Tone Receiver Setup – ON Detect Time</b>	Define the On detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1 = 1 (30ms) Type 2 = 1 (30ms) Type 3 = 1 (30ms) Type 4 = 1 (30ms) Type 5 = 1 (30ms)		✓	
80-03-08	<b>DTMF Tone Receiver Setup – OFF Detect Time</b>	Define the Off detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1 = 1 (30ms) Type 2 = 1 (30ms) Type 3 = 1 (30ms) Type 4 = 1 (30ms) Type 5 = 1 (30ms)		✓	

### Recognize Extension Location when Logging In with Netlink:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-01-01	<b>Automatic Route Selection Service – ARS Service</b>	Enable/Disable ARS.	0 = Disable (Off) 1 = Enable (On) (default = 0)	✓		
26-01-03	<b>Automatic Route Selection Service – ARS Misdialed Number Handling</b>	If a user dials a number not programmed in ARS, determine if the system should Route over trunk group 1 (0) or Play error tone (1).	0 = Route to Trunk Group 1 1 = Play Warning Tone to Dialer (default = 0)		✓	
26-01-06	<b>Automatic Route Selection Service – Class of Service Match Access</b>	With the ARS Class of Service Match Access feature, you can determine whether or not the system should allow a call based on the COS assigned to the Dial Analysis Table (Program 26-02). This change can be used to create a tenant-like application. It then uses the trunk group set in the Additional Entry in Program 26-02-03 to place the out-going call. When this feature is enabled, the calls are routed in sequential order, and forward – provided the Class of Service for the trunk groups match.	0 = Disable (Off) 1 = Enable (On) (default = 0)	✓		
26-01-08	<b>Automatic Route Selection Service – DT700 Multi Log-on for ARS</b>	Enable or Disable Recognize Extension Location when logging in with NetLink	0 = Disable (Off) 1 = Enable (On) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-02-01	Dial Analysis Table for ARS/LCR – Dial	<p>Enter the digits (16 digits maximum: 1~9, 0 *, #, @; 800 separate entries) for the Dial Analysis Table which is analyzed by ARS/LCR. This table is checked after any programmed F-Route operations have completed. The system then refers to Program 26-02-02 and Program 26-02-03 to determine the routing for the call. To enter a wild card/don't care digit, press Line Key 1 to enter an @ symbol. It is important to remember that the system checks the table numbers in numerical order. This means that entries for specific numbers should be entered first (such as your local area codes), then enter the items containing wild card digits. If the system sees an entry of 2@@, any table entries which follow are ignored.</p> <p>For example, if 268, 269, and 270 are local exchanges, these would be the first three table entries which route according to the settings made in Program 26-02-02 and Program 26-02-03 for each of the table entries. If the next entry is 2@@, the system checks no further in this program and routes all other 2xx numbers according to the entries made in Program 26-02-02 and Program 26-02-03 for this table entry.</p>	<p>Dial Digits (16 digits maximum) 1~9, 0, *, #, or for wild character (Press line key 1) (default not assigned)</p>	✓		
26-02-02	Dial Analysis Table for ARS – ARS Service Type	<p>For each Dial Analysis Table (1~800), select 0 for no ARS, 1 for Service Type 1 – Route to Trunk Group Number to have the number route to a trunk group [Refer to Program 26-02-03] or 2 for Service Type 2 – F-Route Selected to have the dialed number controlled by the F-Route table. If Service Type 2 is selected and F-Route operation is on, the F-Route table used is determined by Program 44-04. If F-Route operation is off, the routing is determined by Program 44-05.</p>	<p>0 = No Service (None) 1 = Route to Trunk Group 2 = Select F-Route Access (default = 0)</p>	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-02-03	<b>Dial Analysis Table for ARS – Additional Data/Service Number</b>	For each Dial Analysis Table (1~800), if Service Type 1 was selected in Program 26-02-02, enter the trunk group number (0~100, 0 = No Route).	If Service Type 1 (in 26-02): Select Trunk Group Number (0~100, 0 = No Route) If Service Type 2 (in 26-02): F-Route Time Schedule Not Used = 0~500 (F-Route Table Number). Refer to Program 44-05: ARS/F-Route Table  F-Route Time Schedule Used = 0~500 (F-Route Selection Number). Refer to Program 44-04: ARS/F-Route Selection for Time Schedule. (default = 0)	✓		
26-02-04	<b>Dial Analysis Table for ARS – ARS Class of Service</b>	For each Dial Analysis Table (1~800), set the Automatic Route Selection (ARS) Class of Service (0~16).	0~16 (default = 0)	✓		
26-02-05	<b>Dial Analysis Table for ARS – Dial Treatment for ARS</b>	For each Dial Analysis Table (1~800), set the Automatic Route Selection (ARS) Dial Treatment (0~15) to be used.	0~15 (default = 0)	✓		
26-02-07	<b>Dial Analysis Table for ARS – Network Specified Parameter Table</b>	For each Dial Analysis Table (1~800), set the Automatic Route Selection (ARS) Network Specified Parameter Table (0~16) to be used.	0~16 (default = 0)	✓		




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-03-01	<b>ARS Dial Treatments – Treatment Code</b>	<p>Assign the Dial Treatments (1~15) for automatic ARS dialing translation. Assign Dial Treatments to Service Numbers (Trunk Groups) in Program 26-02. The ARS Dial Treatment options are:</p> <p><b>3</b> - Delete the NPA if dialed as part of the initial call. This requires at least eight digits in the ARS table (Program 26-02-01).</p> <p><b>2</b> - Delete the leading digit if dialed as part of the initial call. This requires at least eight digits in the ARS table (Program 26-02-01).</p> <p><b>1</b> - Add a leading 1 if not dialed as part of the initial call. This requires at least eight digits in the ARS table (Program 26-02-01).</p> <p><b>INPA</b> - Insert the NPA specified by NPA.</p> <p><b>DNN</b> - Outdial the NN number of digits or execute the code that follows. For example, D041234 out-dials 124. Valid entries are 0~9, #, *, Wnn (wait nn seconds) and P (pause). Each digit's code counts as a digit. So for example, if a P was added for a pause, the entry would look like: D05P1234. This Dial Treatment can only be added from telephone programming.</p> <p><b>Wnn</b> - Wait nn seconds.</p> <p><b>P</b> - Pause in analog trunk.</p> <p><b>R</b> - Redial the initially dialed number, including any modifications.</p> <p><b>E</b> - End of Dial Treatment. All Dial Treatments must end with the E code.</p> <p><b>X</b> - When ARS is enabled, X must be entered in the Dial Treatment for the system to output the extension number of the call originator to the black box for the E911 feature.</p>	24 characters maximum (default not assigned)		✓	
26-04-01	<b>ARS Class of Service</b>	Set an extension ARS Class of Service (0~16). Automatic Route Selection uses ARS Class of Service when determining how to route extension calls.	Day/Night Mode: 1~8 Class = 0~16 (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-13-01	<b>ARS Class of Service for NetLink (DT700)</b>	Use to set an extension's ARS Class of Service when used for NetLink. Automatic Route Selection uses ARS Class of Service when determining how to route an extension's calls.	Day/Night Mode: 1~8 Class = 0~16 (default = 0)	✓		
44-05-01	<b>ARS/F-Route Table – Trunk Group Number</b>	Select the trunk group number to be used for the outgoing ARS call.	0~100, 255 0 = No Setting 255 = Extension Call (default = 0)	✓		
44-05-02	<b>ARS/F-Route Table – Delete Digits</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Enter the number of digits to be deleted (0~255) from the dialed number.	0~255 (255 = Delete All) (default = 0)	✓		
44-05-03	<b>ARS/F-Route Table – Additional Dial Number Table</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Enter the table number (defined in Program 44-06) for additional digits to be dialed (0~1000).	0~1000 (default = 0)	✓		
44-05-04	<b>ARS/F-Route Table – Beep Tone</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select whether or not a beep is heard if a lower priority trunk group is used.	0 = Off (No Beep) 1 = On (Beep)s (default = 0)	✓		
44-05-05	<b>ARS/F-Route Table – Gain Table Number for Internal Call</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the gain table number to be used for internal calls (0~500).	0~500 0 = No Setting (default = 0)	✓		
44-05-06	<b>ARS/F-Route Table – Gain Table Number for Tandem Connections</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the gain table number to be used for the tandem call (defined in Program 44-07).	0~500 0 = No Setting (default = 0)	✓		
44-05-07	<b>ARS/F-Route Table – ARS Class of Service</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the Class of Service to be used for ARS (0~16). Extension ARS COS is determined in Program 26-04-01.	0~16 (default = 0)	✓		
44-05-08	<b>ARS/F-Route Table – Dial Treatment</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the Dial Treatment to be used (0~15). The Dial Treatments are defined in Program 26-03-01.	0~15 (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-05-09	ARS/F-Route Table – Maximum Digit	Set the maximum number of digits to send when using the F-Route.	0~24 (default = 0)	✓		
44-05-10	ARS/F-Route – CCIS over IP Destination Point Code	For each ARS/F-Route table (1~500). Set the CCIS over IP Destination Point Code (0~16367).	0~16367 (default = 0)	✓		
44-05-11	ARS/F-Route – Network Specified Parameter Table	For each ARS/F-Route table (1~500) assign the priority (1~4). Assign the Network Specified Parameter Table (0~16).	0~16 (default = 0)	✓		
51-01-01	NetLink System Property Setting – NetLink System ID	This is the ID of each NetLink system. Set to insure that no overlap occurs between nodes.	0~50 (0 = No operation) (default = 0)	✓		
51-03-01	NetLink Internet Protocol Address List Setting – Internet Protocol Address List	The system seeks the Primary system based on this list. When there is no Primary system yet, or Fail Over occurs, Node List is referred to establish new link. This setting is necessary when Program 51-01-03 is 0, or Program 51-05-02 is other than 0. Once the system connects to the Primary System, this setting is updated by the Primary system when Program 51-13-01 is On. So, enter IP address of the systems which may become Primary at least.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		

## Operation

### To place a call using ARS:

- At the multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.  
 You hear normal Intercom dial tone.
- Dial **9**.  
 You hear a second, “stutter” dial tone.
- Dial the outside number.  
 If you hear another “stutter” dial tone, you must enter your extension ARS Authorization Code.

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# Background Music

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## Description

Background Music (BGM) sends music from a customer-provided music source to the speakers of the multiline telephone when the station is idle.

### Conditions

- An ACI [PGD(2)-U10 ADP] port must be used as an alternate External Music on Hold or Background Music source when different External MOH and BGM sources are required.
- Background Music stops while the multiline terminal is in use.
- Originating a call, answering a voice announcement, a ringing call, or internal paging interrupts Background Music.
- Background Music is not available on single line telephones.

### Default Settings

Background Music (BGM) is allowed

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

- Locally provided Background Music source (i.e., CD player, Radio, NEC Audio Emcee).
- PGD(2)-U10 ADP if different external MOH and BGM sources are required.

## Related Features

### Music on Hold

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-24-01	<b>Daylight Savings Setup – Daylight Savings Mode</b>	Enable/Disable the system ability to adjust the time for daylight savings/standard time.	0 = Disable 1 = Enable (default = 1)	✓		
10-38-01	<b>BGM Resource Setup – BGM Resource Type</b>	Configure the Background Music Source input (0) for CD-CP00-US or (1) for ACI Port.	0 = CD-CP00-US (MOH/IN) 1 = ACI Port (default = 0)	✓		
10-38-02	<b>BGM Resource Setup – ACI Port Number for BGM Source (only used if Program 10-38-01 is set to 1)</b>	Program the ACI Port to be used for BGM (0~96).	0~96 (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension to turn Background Music on and off.	0 = Deny 1 = Allow (default = 1 for COS 1~15)	✓		

## Operation

### To turn Background Music on or off:

1. Press idle **Speaker**.
2. Dial **725**.
3. Press **Speaker** to hang up.

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## Barge-In

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### Description

Barge-In permits an extension user to break into another extension user's established call, including Conference calls. This sets up a Conference-type conversation between the intruding extension and the parties on the initial call. With Barge-In, an extension user can get a message through to a busy co-worker right away.

There are two Barge-In modes: Monitor Mode (Silent Monitor) and Speech Mode. With Monitor Mode, the caller Barging In can listen to another user's conversation but cannot participate. With Speech Mode, the caller Barging In can listen and join another user's conversation.



*The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversation or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal or state laws. Legal advice should be sought prior to implementing any practice that monitors or records any telephone conversation. Some federal and state laws require some form of notification to all parties to a telephone conversation, such as using a beep tone or other notification methods or requiring the consent of all parties to the telephone conversation, prior to monitoring or recording the telephone conversation. Some of these laws incorporate strict penalties.*

### Conditions

- An extension user can barge-in on a conference.
- An extension user cannot barge-in on an Intercom call if one of the intercom callers is using Handsfree Answerback. Both Intercom parties must lift the handset or press Speaker.
- With Program 20-13-10 set to 0, a barged into call can be placed on hold by the originator of the outside call. Both the outside caller and the extension that barged into the call are placed on hold.
- With Program 20-13-10 set to 1, a call which is barged into can be placed on Park by the originator of the outside call, but only the outside caller is placed in Park. The extension which barged into the call is dropped.
- When Program 20-13-10 is set to 1 (Monitor), only one party can barge into the call.
- Privacy blocks Barge-In attempts.
- Function keys simplify the Barge-In operation.

- When Silent Monitor Mode is used, MIC or Feature + 1 can be used to activate speech path to the internal and external parties.
- With **Version 5000**, the Barge-In key has been enhanced to allow for additional data to be assigned to the key. The additional data can be set to:
  - Nothing (same as before).
  - Extension Number (when pressed it will Barge-In to that Extension).
  - \* (when pressed, it will Barge-In to the Extension that Call Forward Both Ring is set to. If no Forward Both Ring is set it will ask as though no additional data is set [Basic Barge-In Functionality]).
- When using Barge-In, the maximum number of conference ports supported is 32 (two original participants and a maximum of 30 Barge-In participants).

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Call Monitoring**

**Conference**

**Hold**

**Intercom**

**Off-Hook Signaling**

## Park

### Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-08	<b>Service Code Setup (for Service Access) – Barge-In</b>	Determine what the service code should be for an internal party to use the Barge-In feature.	MLT, SLT (default = 710)		✓	
11-16-02	<b>Single Digit Service Code Setup – Barge-In</b>	Set up Item 02 for single digit Barge-In. For example, you can assign Item 02 to use digit 5 for Barge-In. This allows you to program a function key with an extension number plus the Barge-In code (i.e., 5). This allows one-touch access to the Barge-In feature for extension.	(default not assigned)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Barge-In (code 34). Optional additional data can be assigned as extension number or * ( <b>Version 5000 or higher</b> required).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the extension Barge-In Mode to be Speech mode or Monitor mode.	0 = Speech 1 = Monitor (default: 0 for COS 1~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default: 0 for COS 1~15)	✓		
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default: 0 for COS 1~15)	✓		
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default: 1 for COS 1~15)		✓	
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow (1)/Deny (0) an extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default: 0 for COS 1~15)		✓	
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable (1)/Disable (0) a DISA or tie trunk user from using the Barge-In feature.	0 = Off 1 = On (default: 0 for COS 1~15)		✓	
20-18-07	<b>Service Tone Timers – Intrusion Tone Repeat Time</b>	After a user barges in, the system repeats the Barge-In tone after this time.	0~64800 (seconds) (default = 0)			✓
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	Program the time an extension must wait before using the Barge-In feature can be used on a call (this timer waits until it expires before putting a call in a talk state). This time also affects Voice Over.	0~64800 (seconds) (default = 5)			✓

## Operation

### To Barge-In after calling a busy extension:

 The time in Program 21-01-03 must expire before you can Barge-In.




1. Call a busy extension.
2. Press Barge-In key (Program 15-07-01 or SC 751: 34).



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### To Barge-In without first calling the busy extension:

1. Pick up the handset or press **Speaker**.
2. Dial **710**.  
- OR -  
Press Barge-In key (Program 15-07-01 or SC 751: 34).
3. Dial busy extension.
  -  *The extension user hears a warning tone.*
  -  *The DISA user is rerouted to the defined ring group.*
  -  *The Tie Line user hears a busy tone.*- OR -

### The following steps are not available for DISA or Tie Line trunks:

1. Dial the extension number of the busy internal party.
2. Dial the single digit service code or the service code **710**.

### To Barge-In to a Conference Call:

1. Pick up the handset or press **Speaker** and dial the service code (default = **710**).
  -  *If the telephone does not have the proper COS, a warning tone is sent. After the user hangs up, the system automatically places a callback to the extension.*
2. Dial the extension number or press a DSS key of a telephone in a conference call.  
When a new call is added to the conference, an intrusion tone is heard by all parties in the Conference, depending on system programming, and all display multiline terminals show the joined party. If a Conference is not possible:
  -  *The extension user hears a warning tone.*
  -  *The DISA user is rerouted to the defined ring group.*
  -  *The Tie Line user hears a busy tone.*

### **Not available for DISA or Tie Line trunks.**

- OR -
1. Dial the extension number of the internal party.
  2. Dial the single digit service code or the service code **710**.

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## Battery Backup – System Memory

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### Description

The battery on the CD-CP00-US retains the Clock/Calendar and Last Number Redial (LNR) buffers for each station when the CD-CP00-US encounters a power loss. With a fully charged battery, the settings are retained for approximately three years.

The system programmed memory (Customer Database) is stored in Nonvolatile Memory and can be erased only by performing a First Initialization.


 *For additional storage time, the database and Caller ID History can be copied to the Compact Flash card on the CD-CP00-US.*

### Conditions

- The battery on the CD-CP00-US should be removed during long term storage but must be installed (protection against loss of power) just before blade installation to provide battery backup for System Memory.
- When fully charged, the battery retains System Memory for approximately three years.
- You should replace the CD-CP00-US battery every three years.
- During normal operation, the battery is continually recharged using a built-in charging circuit from the CD-CP00-US.
- To prevent loss of the Caller ID History, you should save the database before storing the CD-CP00-US.
- Battery backup on the CD-CP00-US does not protect the following:
  - ❑ Callback
  - ❑ Off-line Status (for programming system or station assignments)
  - ❑ Repeat Redial
  - ❑ Trunk Queuing/Camp-On
  - ❑ Caller ID History

### Default Settings

None

 *The battery must be installed on the CD-CP00-US prior to programming a customer database.*

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## System Availability

### Terminals

None

### Required Component(s)

None

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## Related Features

### Battery Backup – System Power

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-03-01	Save Data	Save the programmed data on the SRAM and Flash ROM to the 16MB/32MB ATA removable Compact Flash memory card. This program should be used after changing the programmed data.	Dial 1 + Press <b>Hold</b> (default not assigned)	✓		

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## Operation

None

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## **Battery Backup – System Power**

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### **Description**

A built-in battery provides complete system operating power for approximately 30 minutes during commercial power outages. When optional (locally provided) batteries are connected and fully charged, full system operation can be maintained for an extended time. Actual time depends on system configuration, traffic conditions, and the capacity of the batteries.

### **Conditions**

- During normal operation, the batteries are continually recharged by a built-in charging circuit.
- The CD-CP00-US is equipped with batteries for system battery backup.
- An External Battery Pack can be connected to the system to provide extended time during a commercial power outage. Refer to the UNIVERGE SV8100 System Hardware Manual for further details.

### **Default Settings**

None

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### **System Availability**

#### **Terminals**

None

#### **Required Component(s)**

CD-CP00-US

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### **Related Features**

**Battery Backup – System Memory**

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**Programming**

None

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**Operation**

None

# Call Appearance (CAP) Keys

## Description

This feature automatically places an outside call on a Call Appearance key when the system is operated as a hybrid (Multifunction) system. These keys can be assigned on any multiline terminal or the same key can appear on multiple terminals. This feature allows efficient call handling when numerous CO calls are received and a limited number of CO line key appearances are available.

Once a Call Appearance (CAP) Key call is set up, the user can handle it like any other trunk call. For example, the user can place the call on hold, transfer it to a co-worker or send it to a park orbit. An incoming call is answered on the first available CAP key, beginning with the lowest numbered key. If keys 1~3 are Call Appearance (CAP) Keys, for example, the first incoming call is answered on key 1. If key 1 is busy, the next call is answered on key 2. If keys 1 and 2 are busy, the next call is answered on key 3. If all three keys are busy, additional incoming calls queue for the first available key.

## Conditions

- A trunk call that is originated or answered at a multiline terminal must appear on a line key. The line key can be assigned as the Trunk Key, or as a Call Appearance Key. A CAP is dynamic because it is used for any trunk call. An 8-button multiline terminal can have eight CAP keys that allow the telephone to process all trunks, eight trunks at a time.
- Multiline terminals can be assigned to the same CAP Key. Trunk calls that appear on the same CAP Key at multiple stations have the same visual appearance of the call (Busy or Hold).
- Any held call left on a CAP key for more than the programmed time recalls to the multiline terminal where the call was originally put on hold.
- When a multiline terminal (other than the one that originally initiated or received a call) is used to retrieve a held call, the SMDR records a transfer to the multiline terminal where the call was retrieved.
- Only outside lines use a CAP key.
- A multiline terminal can have multiple CAP keys assigned to it.
- Outside lines reside on the CAP key in the order of lowest to highest line key number on the station. For instance, when line keys 1, 2 and 3 are CAP keys, the first call resides on line key 1, the second call resides on line key 2 and third call resides on line key 3.

- All Flexible Line keys on a multiline terminal can be assigned as CAP keys in System Programming.
- A conference call involving two outside lines cannot reside on one Call Appearance key.
- For Call Appearance (CAP) Keys, trunks must be assigned to trunk group 1 or higher (Program 14-05-01). Trunk Group 0 means KF (Key Function) mode.
- CAP Keys can be programmed from 0001~9999. 0000 assigns the next available CAP Key.
- Trunk Group (\*02), Virtual Extension (\*03) and Call Appearance (CAP) Key (\*08), codes cannot be programmed on a DSS Console as the system does not allow entry of the additional data required.
- If you have both trunk line keys and Call Appearance (CAP) Keys, the line key has priority. An incoming call rings the trunk line key and when answered, the trunk line keys lights, not the CAP Key. When you access the trunk for an outgoing call, the Trunk line key lights, not the Call Appearance (CAP) Key.
- With **Version 4000 or higher** software, CAP keys can only be assigned or used if Program 20-02-03 is set to Original (0).
- A system can have only CAP keys or Loops keys.
- When SV telephones are installed, CAP key mode must be used. When UX telephones are installed, Loop key mode must be used.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

SV8100 Terminals only

### **Required Component(s)**

None





## **Related Features**

**Automatic Route Selection**

**Call Arrival (CAR) Keys**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Off-Hook Signaling**

**Programmable Function Keys**

**Secondary Incoming Extension**

**User Programming Ability**

**Virtual Extensions**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default) (*08 + XXXX = CAP key where XXXX is the CAP orbit number 0001-9999)	✓		
20-02-23	<b>System Options for Multiline Telephones – UX5000 Phone Operation Mode</b>	Selects the Loop Key operation like the UX5000 terminal, or the CAP Key operation like the SV8100 terminal.	0 = Original Operation Mode (CAP Key) 1 = UX5000 Special Operation Mode (Loop Key) (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow normal or extended Park (0 = Normal for Program 24-01-06, 1 = Extended for Program 24-01-07).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-01-01	<b>System Options for Hold – Hold Recall Time</b>	A call on Hold recalls the extension that placed it on Hold after this time. This time works with the Hold Recall Callback Time.	0~64800 (seconds) (default = 90)		✓	
24-01-02	<b>System Options for Hold – Hold Recall Callback Time</b>	A call that is parked longer than the programmed time recalls the extension where it was initially parked.	0~64800 (seconds) (default = 30)		✓	
24-01-03	<b>System Options for Hold – Exclusive Hold Recall Time</b>	A call left on Exclusive Hold recalls the extension that placed it on Hold after this time.	0~64800 (seconds) (default = 90)		✓	
24-01-04	<b>System Options for Hold – Exclusive Hold Recall Callback Time</b>	An Exclusive Hold Recall rings an extension for this time. If not picked up, the call goes back on System Hold.	0~64800 (seconds) (default = 30)		✓	
24-01-05	<b>System Options for Hold – Forced Release of Held Call</b>	Depending on the setting of Program 14-01-16, the system disconnects calls on Hold longer than this time.	0~64800 (seconds) (default = 1800)		✓	
24-01-06	<b>System Options for Hold – Park Hold Time - Normal</b>	Set the Park Hold Time. A call that is parked longer than the programmed time recalls the extension where it was initially parked. Refer to <a href="#">Flexible System Numbering on page 2-653</a> for setting Flexible Timeouts for Class of Service.	0~64800 (seconds) (default = 90)		✓	
24-01-07	<b>System Options for Hold – Park Hold Time - Extended (Recall)</b>	Set the Extended Park Hold Time. A call that is parked longer than the programmed time recalls the extension where it was initially parked.	0~64800 (seconds) (default = 300)		✓	

## Operation

### To place an outgoing call on hold and retrieve it using a multiline terminal:

1. Go off-hook using the handset and wait for internal dial tone.  
- OR -  
Press **Speaker** and wait for internal dial tone.
2. Dial the Trunk Access Code (default: **9**).
3. Dial the outside party (the Call Appearance key lights). Begin your conversation.
4. Press **Hold** (the Call Appearance key flashes).
5. Press the flashing **Call Appearance** key to retrieve the call.

### To receive an incoming call, put it on hold and then retrieve it using a multiline terminal:

1. Receive CO/PBX incoming ring.
2. Go off-hook using the handset, or press **Speaker** (the Call Appearance key lights). Talk with outside party.
3. Press **Hold** (the Call Appearance key flashes).
4. Press the flashing **Call Appearance** key to retrieve the call.

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## *Call Arrival (CAR) Keys*

### Enhancements

With <b>Version 3000 or higher</b> system software, the appropriate line key page automatically displays for incoming calls on the DTL-8LD-1 (DESI-Less) and ITL-320C-1 terminals.
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### Description

Call Arrival (CAR) Keys are software extensions available on the Basic and Expanded Port Packages. A Call Arrival Extension assigned to a line key, can appear and ring on an individual station or multiple stations. Call Arrival Keys are busy only when ringing and are not used during talking.

Call Arrival Keys are shared with the Virtual Extensions (VE). In virtual extension mode, the key acts as a secondary extension. Up to 256 CAR/VE keys are provided.

### Conditions

- CAR keys and virtual extensions share 256 available ports/extensions.
- The 256 available ports/extensions are assigned per extension for CAR key mode or virtual extension (VE) key mode.
- More than one extension can share a CAR key.
- An extension can have more than one CAR key assigned.
- Up to 32 incoming calls can be queued to busy CAR key.
- If multiple CAR/SIE/VE keys are ringing on a station at the same time, the CAR/SIE/VE key on the lowest Line Key is answered first.
- In **Version 3000 or higher** software, the system can be programmed to blink the page number of a DT300/DT700 DESI-Less terminal when it receives an incoming call, or switch to the page of the incoming call. Also, a default page can be defined for the DESI-Less terminal to change to when it goes idle or when it has answered a call.
- DT300/DT700 terminals installed in a SV8100 with the IPK/IPK II Migration system do not support the DESI-Less page switching and blinking.
- DESI-Less screen page switching only applies to idle terminals. If a terminal is not idle, the screen will not switch if another call comes in until the phone goes idle.

## Default Setting

None

## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

## Related Features

### Virtual Extensions


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	System Numbering – Service Code	Set system numbering plan.	Refer to UNIVERGE SV8100 System Program Manual	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-04-01	Virtual Extension Numbering	Assign virtual extension numbers.	Up to eight digits 1 201 2 202 3 203 ~ ~ 99 299 100 3601 ~ ~ 256 3857	✓		
15-01-01	Basic Extension Data Setup – Extension Name	Define the extension/virtual extension name.	Up to 12 characters Default: STA 101 = Ext 101 STA 102 = Ext 102, etc.		✓	
15-01-05	Basic Extension Data Setup – Restriction for Outgoing Disable on Incoming Line	Enable (1)/Disable (0) supervised dial detection for an extension.	0 = No 1 = Yes (default = 0)			✓
15-02-07	Multiline Telephone Basic Data Setup – Automatic Hold for CO Lines	Assign automatic hold (or disconnect) for CO lines.	0 = Hold 1 = Disconnect (Cut) (default = 1)			✓
15-02-21	Multiline Telephone Basic Data Setup – Virtual Extension Access Mode (when idle Virtual Extension key pressed)	Determine whether a Virtual Extension/Call Arrival Key (CAR) should function as a DSS key, a Virtual Extension, or a CAR key. When DSS (0) is selected, the key functions as a DSS key to the extension and for incoming calls to that extension. When Outgoing (1) is selected, the key functions as a virtual extension and can be used for incoming and outgoing calls. When Ignore (2) is selected, the key functions as a CAR key and can receive incoming calls only.	Virtual Extension Key Mode 0 = DSS 1 = Outgoing 2 = Ignore (default = 2)		✓	
15-07-01	Programmable Function Keys	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default) (*03 + ICM = VE or CAR where ICM is the extension number of the VE or CAR)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-08-01	<b>Incoming Virtual Extension Ring Tone Setup</b>	When an extension or a virtual extension is assigned to the function key on the key telephone, select the ring tone when receiving a call on that key. For ACD CAR keys, only tone pattern 1 (entry 0) can be used. The remaining patterns are not checked with this feature.	0 = Tone Pattern 1 1 = Tone Pattern 2 2 = Tone Pattern 3 3 = Tone Pattern 4 4 = Incoming Ring Tone Extension 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 (default = 0, Tone Pattern 1)		✓	
15-09-01	<b>Virtual Extension Ring Assignment</b>	Assign the ringing options for an extension Virtual Extension Key or Virtual Extension Group Answer Key which is defined in Program 15-07.	Day/Night Mode: 1~8 0 = No Ringing 1 = Ring (default = 0)	✓		
15-10-01	<b>Incoming Virtual Extension Ring Tone Order Setup</b>	When two or more virtual extensions are set on a function key on the telephone, and the tone pattern by which the sound of each extension differs, the priority of ring sound is set up.	0 = Tone Pattern 1 1 = Tone Pattern 2 2 = Tone Pattern 3 3 = Tone Pattern 4 4 = Incoming Extension Ring Tone 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 Order 1 Pattern 0 = Pattern 1 (default) Order 2 Pattern 1 = Pattern 2 (default) Order 3 Pattern 2 = Pattern 3 (default) Order 4 Pattern 3 = Pattern 4 (default)		✓	
15-11-01	<b>Virtual Extension Delayed Ring Assignment</b>	Assign the delayed ringing options for an extension Virtual Extension or Virtual Extension Group Answer keys (defined in Program 15-09).	Day/Night Mode: 1~8 0 = Immediate Ring 1 = Delayed Ring (default = 0)		✓	
15-18-01	<b>Virtual Extension Key Enhanced Options – Virtual Extension Key Operation Mode</b>	Define whether calls to a Virtual Extension Key land on the Virtual or on the extension / CAP / CO appearance.  <i>This is assigned for the Virtual Extension Key not the extension it resides on.</i>	0 = Release 1 = Land On the Key (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-18-02	<b>Virtual Extension Key Enhanced Options – Display Mode When Placing a Call on Virtual Extension Key</b>	Define if calls to or from a Virtual Extension Key display the Virtual Extension Key name or the name of the extension it resides on.	0 = Secondary Extension Name 1 = Actual Station Name (default = 0)		✓	
20-04-03	<b>System Options for Virtual Extensions – CAR/SIE/Virtual Extension Delay Interval</b>	CAR Keys/SIE Keys/Virtual Extensions set for Delayed Ringing (see Program 15-11) ring the extension after this time.	0~64800 (default = 10 seconds)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, a busy extension can be called, while someone is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be set to off for this option to work.	1 = Off 0 = On (default = 1 for COS 01~15)			✓
21-01-15	<b>System Options for Outgoing Calls – Outgoing Disable on Incoming Line (Toll Restriction)</b>	Enable/Disable the Outgoing Disable on Incoming Line feature.	0 = Disable (Off) 1 = Enable (On) (default = 0)			✓
23-04-01	<b>Ringling Line Preference for Virtual Extensions</b>	When an extension has a virtual extension assigned to a Programmable Function Key, program this option to determine the priority for automatically answering the ringing calls when the handset is lifted. If 0 or 00 is selected, when the user lifts the handset, the user answers a ringing call from any group.	00~64 (0 or 00=Don't Care) (default = 00)		✓	

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## Operation

### To answer a call ringing a Call Arrival (CAR) Key:

1. Press the flashing Call Arrival (CAR) Key.

### To place a call to a Call Arrival (CAR) Key:


1. Lift the handset, or press **Speaker**.
2. Dial the CAR key extension, or press the Call Arrival (CAR) Key.

 *The operation depends on the setting in Program 15-02-21.*

### To program a Call Arrival (CAR) Key on a telephone:

1. Press **Speaker**.
2. Dial **752**.
3. Press the key you want to program.
4. Dial **\*03**.
5. Dial the number of the extension you want to appear on the key.

6. Press **Hold** once for Immediate Ring

 *To set for Delayed Ring, skip to Step 8.*

7. Dial the Mode number in which the key rings.

1 = Day 1	5 = Day 2
2 = Night 1	6 = Night 2
3 = Midnight 1	7 = Midnight 2
4 = Rest 1	8 = Rest 2

8. Press **Hold** to set up Delayed Ring.

- OR -

Skip to Step 10.

9. Dial the mode number in which the key delay rings.

1 = Day 1	5 = Day 2
2 = Night 1	6 = Night 2
3 = Midnight 1	7 = Midnight 2
4 = Rest 1	8 = Rest 2

10. Press **Speaker**.

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## *Call Duration Timer*

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### **Description**

Call Duration Timer lets a multiline terminal with an LCD time their trunk calls on the telephone display. This helps users that must keep track of their time on the telephone. For incoming trunk calls, the Call Time begins as soon as the user answers the call.

### **Conditions**

- The Call Timer starts over each time the call is retrieved from Hold or Park.
- The Call Duration Timer (Program 20-13-36) is not displayed for inbound ACD calls.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals with Display

#### **Required Component(s)**

None

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### **Related Features**

**Alphanumeric Display**

## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminals LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)	✓		
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn Off or On a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)	✓		
21-01-03	<b>System Options for Outgoing calls – Trunk Interdigit Time (External)</b>	The system waits for this time to expire before starting the Call Timer.	0~64800 (seconds) (default = 5)	✓		

## Operation

### To time your trunk calls:

1. Place a trunk call.
  -  *The timer starts automatically.*

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## *Call Forwarding – Centrex*

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### **Description**

The Call Forwarding – Centrex feature allows a station to forward an incoming PBX/Centrex CO call to an outside location using the same PBX/Centrex CO line to free the line for additional use.

Call Forwarding – Centrex supports the following:

- Call Forward – Immediate
- Call Forward – Busy
- Call Forward – No Answer
- Call Forward – Busy/No Answer

### **Conditions**

- Call Forwarding – Centrex calls transferred from another station are forwarded when the transferred Trunk is assigned as PBX in Program 14-04-01.
- The following incoming calls follow Call Forwarding – Centrex when the incoming trunk is a PBX/Centrex trunk:
  - DIT/ANA
  - Station Transfer
  - Automated Attendant Transfer
  - DISA Calls
- Call Forwarding – Centrex is not supported for Call Forward Both Ring Split.
- A maximum of 24 digits can be assigned in the destination for Call Forwarding – Centrex.
- When a trunk is set to CTX/PBX, and is set for Call Forwarding – Centrex to an incorrect number, the call recalls and follow CO incoming ringing (i.e., DIL, Normal Ring Group Programming).
- When Call Forwarding – Centrex is set and all trunks are changed in Program 14-04-01 from PBX to Trunk, Call Forward is cleared from memory.
- When DND and any Call Forwarding – Centrex is set, the call forwards immediately.
- Call Forwarding – Centrex does not follow the Code Restriction of the stations.

## **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

PBX/Centrex CO line

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## **Related Features**

**Call Forwarding**

**Call Arrival (CAR) Keys**

**Code Restriction**

**Direct Inward Dialing (DID)**

**Do Not Disturb**

**Door Box**

**PBX Compatibility**

**Virtual Extensions**

**Voice Response System (VRS)**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Allocate the circuits on the CD-CP00-US ETUs for either DTMF receiving or dial tone detection. Program 14-01-13 Basic Trunk Data Setup – Loop Supervision Enable (1) loop supervision for each trunk that should be able to use Call Forwarding – Centrex.	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
11-11-45	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward All (Split)</b>	Assign the Call Forward All Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-46	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy (Split)</b>	Assign the Call Forward Busy Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-47	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward No Answer (Split)</b>	Assign the Call Forward No Answer Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-48	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy/No Answer (Split)</b>	Assign the Call Forward Busy No Answer Split Service Code.	MLT, SLT (default not assigned)		✓	
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	Enable/Disable loop supervision for the trunk.	0 = Disable (No) 1 = Enable (Yes) (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-04-01	Behind PBX Setup	Indicate if the trunk is installed behind a PBX (1) or not (0). There is one item for each Night Service Mode.	0 = Stand Alone (Trunk) 1 = Behind PBX (PBX) 2 = Not Used 3 = CTX assume 9 (default = 0)	✓		
20-09-01	Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&M Override	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller. <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-09-07	Class of Service Options (Incoming Call Service) – Call Queuing	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-05	Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling	Turn Off or On an extension ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)	Allow a busy extension ability to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
24-02-13	System Options for Transfer – Hook Flash Sending Timer When the System Answers Automatically	Set the time the system waits before sending the hookflash for the Centrex Transfer after answering the call.	0~64800 (seconds) (default = 2)		✓	
24-09-06	Call Forward Split Settings – Call Forwarding Destination for CTX/ PBX for All Call, No Answer	Assign Call Forwarding Type and the destination numbers for CTX/ PBX all call, no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-07	Call Forward Split Settings – Call Forwarding Destination for CTX/ PBX for Busy	Assign Call Forwarding Type and the destination numbers for CTX/ PBX busy calls.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		



## Operation

### To activate Call Forwarding – Centrex:

1. At a multiline terminal, press **Speaker**.  
- OR -  
At a single line telephone, lift the handset.
2. Dial the Call Forwarding Split Service Code (default not assigned).
3. Dial **3** (CTX/PBX).
4. Dial **1** (Set).
5. Dial number to Centrex Forward to.
6. Hang up.

### To cancel Call Forwarding – Centrex:

1. At a multiline terminal, press **Speaker**.  
- OR -  
At a single line telephone, lift the handset.
2. Dial the Call Forward Split Service Code (default not assigned).
3. Dial **0** (Cancel).
4. Dial **3** (CTX/PBX) or **0** (All).

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# *Call Forwarding*

## Enhancements

With <b>Version 3000 or higher</b> system software, the Desktop terminal and the Mobile Extension can both ring. If neither extension answers, the call is forwarded to Voice Mail.
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## Description


Call Forwarding permits an extension user to redirect their calls to another extension or an off-premise number. Call Forwarding ensures that the user's calls are covered when they are away from their work area. The types of Call Forwarding are:

- Call Forwarding when Busy or Unanswered  
Calls to the extension forward when busy or unanswered.
- Call Forwarding – Centrex  
When using PBX/Centrex trunks, calls to the extension perform a Centrex transfer using Immediate, Busy and No Answer Forwarding.
- Call Forwarding Immediate  
All calls forward immediately to the destination, and only the destination rings.
- Call Forwarding with both Ringing  
All calls forward immediately to the destination, and both the destination and the forwarded extension ring (not for Voice Mail).
- Call Forwarding when Unanswered  
Calls forward only if they are unanswered (Ring No Answer).
- Call Forwarding Follow Me  
Refer to [Call Forwarding with Follow Me on page 2-187](#) for more information.
- Live Monitor  
Allows the extension to emulate an answering machine. Refer to VM8000 InMail System Guide for more information.

Call Forwarding reroutes calls ringing an extension, including calls transferred from another extension. Call Forwarding can also be split, allowing internal and external calls to forward to different destinations. The extension user can enable Call Forwarding from their telephone. An extension user can also set the forwarding for another extension by using Call Forward for any Extension to Destination. To redirect calls while a user is at another telephone, use Call Forwarding with Follow Me. A periodic VRS announcement can remind users that their calls are forwarded.

## Conditions

- Virtual Extensions can be set to Call Forward. Program 15-02-21 must be set to a 1 to allow the Virtual Extension to place outgoing calls.
- If an extension in a call forward chain has Call Forward with Both Ring, calls do not continue routing to other extensions in the chain (**Version 2500 or lower** software).
- If an extension in a call forward chain has Call Forward with Follow Me set, calls do not continue routing to other extensions in the chain.
- If the extension has Call Forward-Both Ring set to another extension, it will only continue to forward if the *Both* ring location is forwarded (B/NA or NA) to VM and no where else (**Version 3000 or higher** software is required).
- Call Forwards can be chained allowing calls to forward from one extension to the next. Up to 32 extensions can be linked in a call forward chain.
- Periodic reminder message requires a PZ-VM21 daughter board for Voice Response System (VRS).
- Call Forwarding an extension in a Department Group prevents that extension from receiving Department Pilot Calls.
- Ring Groups do not follow Call Forwarding.
- Call Forward Split does not allow for Call Forward with Follow Me.
- If Call Forwarding off premise, a trunk access code must be included in the forwarding number.
- Call Forward with Follow Me allows for a single station to set follow me for multiple stations. When canceling Call Forward with Follow Me, the use must specify the station to cancel or cancel all.
- The telephone must be idle to enable call forwarding with a Programmable Function Key, or receiving dial tone to enable call forwarding with a service code.
- Call Forward for any Extension to Destination cannot be set or canceled from a Virtual Extension.
- Call Forwarding/Do Not Disturb Override allows for Overriding a Call Forwarding or DND setting at another extension.

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- 
- When a call is transferred because of Call Forwarding No Answer, Call Forwarding Busy, or DND, the Reason for Transfer option can display to the transferred extension why the call is ringing their telephone.
  - An extension user can forward their calls to a Department number.
  - A DSS key indicates a Call Forwarding indication for extensions.
  - When DND All and Call Forward are set on the same telephone, call forwarding works. If Busy and No Answer Forwarding are set to different locations, it follows the Busy forwarding.
  - Function keys simplify Call Forwarding operation.
  - If an extension Class of Service denies Call Forwarding (Program 20-11-01~Program 20-11-05, off), the extension can still dial the service code to Set/Cancel Call Forwarding, but it cannot set any data.
  - Call Forward Both Ring Split does not work to an off-premise destination.
  - If an IP telephone has forwarding set and then loses connection, it follows the forwarding.
  - If an IP phone has Busy and No Answer Forwarding set to different locations and it loses connection, it follows the Busy forwarding location.
  - When the following are done in sequence,
    - Call Forwarding Busy/No Answer is set to extension
    - Call Forwarding Immediate is set on extension
    - Call Forwarding Immediate is cancelled on extensionthen,  
Call Forwarding Busy/No Answer is set back on the extension.
  - When the following are done in sequence,
    - Call Forwarding No Answer is set to extension
    - Call Forwarding Immediate is set on extension
    - Call Forwarding Immediate is cancelled on extensionthen,  
all Call Forwarding is cancelled.
-  Any settings in Programs 24-09-04 and 24-09-05, copies the information to Programs 24-09-02 and 24-09-03 and is changed to Call Forwarding Busy/No Answer.

- When the following are done in sequence,
    - Call Forwarding Busy is set to extension
    - Call Forwarding Immediate is set on extension
    - Call Forwarding Immediate is cancelled on extension
- then,
- Call Forwarding Busy/No Answer is set back on the extension.
- The **@** and **P** characters are not supported in the call forward destination. These characters are only supported on a one touch/DSS key and in speed dial bins.
  - If the terminal is configured for Call Forward Both Ring and DND is activated, the calling station will receive a busy tone. Call Forward Both Ring is not followed.
  - With **Version 8000 or higher** software, if Program 20-11-30 is set to **0** (Off), the Call FWD setting is displayed on the terminal LCD screen when idle.

## Default Setting

Enabled

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## System Availability

### Terminals

All Terminals and Virtual Extensions

### Required Component(s)

None

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## Related Features

**Call Forwarding, Off-Premise**

**Call Forwarding with Follow Me**

**Call Forwarding/Do Not Disturb Override**

**Central Office Calls, Answering**

## Department Calling

### Direct Station Selection (DSS) Console

### Do Not Disturb

### Programmable Function Keys

### Voice Response System (VRS)

## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-06	<b>Service Code Setup (for System Administrator) – Setting the Automatic Transfer for Each Trunk Line</b>	Set the service code for setting automatic transfer for each trunk line.	MLT (default = 733)		✓	
11-10-07	<b>Service Code Setup (for System Administrator) – Canceling the Automatic Transfer for Each Trunk Line</b>	Set the service code for canceling automatic transfer for each trunk line.	MLT (default = 734)		✓	
11-10-08	<b>Service Code Setup (for System Administrator) – Setting the Destination for Automatic Trunk Transfer</b>	Set the service code for setting the destination for automatic trunk transfer.	MLT (default = 735)		✓	
11-10-18	<b>Service Code Setup (for System Administrator) – Off-Premise Call Forward by Door Box</b>	Set the service code for setting automatic transfer for each trunk line.	MLT (default = 722)		✓	
11-11-01	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – All</b>	Set the service code for setting call forwarding all calls.	MLT, SLT (default = 741)		✓	
11-11-02	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Busy</b>	Set the service code for setting call forwarding for busy calls.	MLT, SLT (default = 742)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-03	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – No Answer</b>	Set the service code for setting call forwarding for no answer.	MLT, SLT (default = 743)		✓	
11-11-04	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Busy/No Answer</b>	Set the service code for setting call forwarding for busy or no answer.	MLT, SLT (default = 744)		✓	
11-11-05	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Both Ring</b>	Set the service code for setting call forwarding for busy or no answer.	MLT, SLT (default = 745)		✓	
11-11-07	<b>Service Code Setup (for Setup/Entry Operation) – Call Forwarding – Follow Me</b>	Set the service code for setting call forwarding for follow me.	MLT, SLT (default = 746)		✓	
11-11-08	<b>Service Code Setup (for Setup/Entry Operation) – Do Not Disturb</b>	Set the service code for setting call forwarding for Do Not Disturb.	MLT, SLT (default = 747)		✓	
11-11-45	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward All (Split)</b>	Set or Cancel the call forward all split.	MLT, SLT (default not assigned)		✓	
11-11-46	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy (Split)</b>	Set or Cancel the call forward busy split.	MLT, SLT (default not assigned)		✓	
11-11-47	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward No Answer (Split)</b>	Set or Cancel the call forward no answer split.	MLT, SLT (default not assigned)		✓	
11-11-48	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy/No Answer (Split)</b>	Set or Cancel the call forward busy or no answer split.	MLT, SLT (default not assigned)		✓	
11-11-49	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Both Ring (Split)</b>	Set or Cancel the call forward the both ring split.	MLT, SLT (default not assigned)		✓	
11-11-52	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward All Destination (No Split)</b>	Set or Cancel the call forward all destination with no split.	MLT, SLT (default = 790)		✓	
11-11-53	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy Destination (No Split)</b>	Set or Cancel the call forward busy destination with no split.	MLT, SLT (default = 791)		✓	
11-11-54	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward No Answer Destination (No Split)</b>	Set or Cancel the call forward no answer destination with no split.	MLT, SLT (default = 792)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-55	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward Busy No Answer Destination (No Split)</b>	Set or Cancel the call forward busy or no answer destination with no split.	MLT, SLT (default = 793)		✓	
11-11-58	<b>Service Code Setup (for Setup/Entry Operation) – Call forward with Personal Greeting</b>	Set the service code for setting call forwarding with Personal Greeting.	MLT, SLT (default = 713)		✓	
11-12-01	<b>Service Code Setup (for Service Access) – Bypass Call</b>	Customize the Service Codes which are used for bypass calls.	MLT, SLT (default = 707)		✓	
11-16-06	<b>Single Digit Service Code Setup – DND/Call Forward Override Bypass</b>	Customize the one-digit Service Codes used when a busy or ring back signal is heard.	(default not assigned)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-01	<b>Class of Service Options (Hold/Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-02	<b>Class of Service Options (Hold/Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-03	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-04	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-05	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On the ability to set and cancel Call Forwarding for a CAR or Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-30	<b>Class of Service Options (Hold/Transfer Service) – Disable Call FWD Indication on LCD</b>	When set to On (1), Call FWD setting is not shown on the terminal LCD.	0 = Off 1 = On (default = 1)		✓	
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension to receive off-hook Signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension user to manually (0) or automatically (1) receive off-hook signals. An example of an off-hook signal is the tone heard when receiving a second call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	Set the Delayed Call Forwarding interval. For an unanswered call, Call Forward No Answer occurs after this interval.	0~64800 (seconds) (default = 10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type:</b>	Assign Call Forwarding Type and the destination numbers for each extension/virtual extension.	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)		✓	
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign CO Call Forwarding Destination for ring, all call and no answer.	1~9, 0, #, *, R, (Up to 24 digits) (default not assigned)		✓	
24-09-03	<b>Call Forward Split Settings – Intercom Call Forwarding Destination for Both ring, All Call, No Answer</b>	Assign Intercom Call Forwarding Destination for ring, all call and no answer.	1~9, 0, #, *, R, (Up to 24 digits) (default not assigned)		✓	
24-09-04	<b>Call Forward Split Settings – CO Call Forwarding Busy Destination</b>	Assign CO Call Forwarding for busy destinations.	1~9, 0, #, *, R, (Up to 24 digits) (default not assigned)		✓	
24-09-05	<b>Call Forward Split Settings – Intercom Call Forwarding Busy Destination</b>	Assign Intercom Call Forwarding for busy destinations.	1~9, 0, #, *, R, (Up to 24 digits) (default not assigned)		✓	
24-09-06	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/PBX for All Call, No Answer</b>	Assign Call Forwarding for CTX/PBX all call, no answer destinations.	1~9, 0, #, *, R, (Up to 24 digits) (default not assigned)		✓	
24-09-07	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/PBX for Busy</b>	Assign Call Forwarding destinations for busy CTX/PBX calls.	1~9, 0, #, *, R, (Up to 24 digits) (default not assigned)		✓	

## Operation

### To set Call Forward – Immediate at a forwarding station:

1. Pick up the handset or press **Speaker**.


2. Dial the Call Forward – Immediate Service Code (default: 741).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** Keys.  
(Program 15-07-01, 10 or SC 751, Key Code 10)

3. Dial **1** (Set).
4. Dial the destination extension or off-premise number.
5. Press **Speaker** or hang up.

 Refer to *Voice Response System (VRS) – Call Forwarding – Park and Page on page 2-2019*.

 The Call Forwarding Programmable Function Key lights.


#### To cancel Call Forward – Immediate at a forwarding station:

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward – Immediate Service Code (default: 741).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** keys.  
(Program 15-07-01, 10 or SC 751, Key Code 10)

3. Dial **0** (Cancel).
4. Press **Speaker** or hang up.

 The Call Forwarding Programmable Function Key turns off.

#### To set Call Forward – Busy/No Answer at a forwarding station:


1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward – Busy/No Answer Service Code (default: 744).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** keys.  
(Program 15-07-01, 13 or SC 751, Key Code 13)

3. Dial **1** (Set).
4. Dial the destination extension or off-premise number.
5. Press **Speaker** or hang up.

 Refer to *Voice Response System (VRS) – Call Forwarding – Park and Page on page 2-2019*.

 The Call Forwarding Programmable Function Key turns on.

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**To cancel Call Forward – Busy/No Answer at a forwarding station:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward – Busy/No Answer Service Code (default: 744).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** keys.  
(Program 15-07-01, 13 or SC 751, Key Code 13)

3. Dial **0** (Cancel).
4. Press **Speaker** or hang up.

 *The Call Forwarding Programmable Function Key turns off.*


**To set Call Forward – Both Ring at a forwarding station:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward – Both Ring Service Code (default: 745).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** keys.  
(Program 15-07-01, 14 or SC 751, Key Code 14)

3. Dial **1** (Set).
4. Dial the destination extension number.
5. Press **Speaker** or hang up.

 *The Call Forwarding Programmable Function Key turns on.*


**To cancel Call Forward – Both Ring at a forwarding station:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward – Both Ring Service Code (default: 745).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** keys.  
(Program 15-07-01, 14 or SC 751 Key Code 14)

3. Dial **0** (Cancel).
4. Press **Speaker** or hang up.

 *The Call Forwarding Programmable Function Key turns off.*


**To set Call Forward – Follow Me from the destination station:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward – Follow Me Service Code (default: 746).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** keys.  
(Program 15-07-01, 10 or SC 751, Key Code 15)

3. Dial **1** (Set).
4. Dial the station number to be forwarded and then the destination number.
5. Press **Speaker** or hang up.

 *The Call Forwarding Programmable Function Key goes on.*


**To cancel Call Forward – Follow Me from the destination station:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward – Follow Me Service Code (default: 746).

- OR -

At the multiline terminal only, press the **Call Forwarding Programmable Function** keys.  
(Program 15-07-01, 10 or SC 751, Key Code 15)

3. Dial **0** (Cancel).
4. Dial the station number, which is forwarded, or **0** to cancel all extensions.
5. Press **Speaker** or hang up.

 *The Call Forwarding Programmable Function Key turns off.*

**To set Call Forward Immediate for any Extension to Destination:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward Immediate for any Extension to Destination Service Code (Default: 790).
3. Dial **1** (Set).
4. Dial the extension number to be forwarded and then the destination number.
5. Press **Speaker** or hang up.

**To cancel Call Forward Immediate for any Extension:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward Immediate for any Extension to Destination Service Code (default: 790).
3. Dial **0** (Cancel).
4. Dial the station number which is forwarded.
5. Press **Speaker** or hang up.

**To set Call Forward Busy/No Answer for any Extension to Destination:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward Busy/No Answer for any Extension to Destination Service Code (default: 793).
3. Dial **1** (Set).
4. Dial the extension number to be forwarded and then the destination number.
5. Press **Speaker** or hang up.

**To cancel Call Forward Busy/No Answer for any Extension to Destination:**

1. Pick up the handset or press **Speaker**.
2. Dial the Call Forward Busy/No Answer for any Extension to Destination Service Code (default: 793).
3. Dial **0** (Cancel).
4. Dial the station number, which is forwarded.
5. Press **Speaker** or hang up.

**To set Call Forward – Immediate using a Virtual Extension:**

1. Press the idle **Virtual Extension** key.
2. Dial the Call Forward – Immediate Service Code (default: 741).
3. Dial **1** (Set).
4. Dial the destination extension or off-premise number.
5. Press **Speaker** or hang up.

 Refer to *Voice Response System (VRS) – Call Forwarding – Park and Page on page 2-2019*.

**To cancel Call Forward – Immediate at a forwarding station:**

1. Press the idle **Virtual Extension** key.
2. Dial the Call Forward – Immediate Service Code (default: 741).
3. Dial **0** (Cancel).
4. Press **Speaker** or hang up.

**To set Call Forward – Busy/No Answer using a Virtual Extension:**

1. Press the idle **Virtual Extension** key.
2. Dial the Call Forward – Busy/No Answer Service Code (Default: 744).
3. Dial **1** (Set).
4. Dial the destination extension or off-premise number.
5. Press **Speaker** or hang up.

 Refer to *Voice Response System (VRS) – Call Forwarding – Park and Page on page 2-2019*.

**To cancel Call Forward – Busy/No Answer using a Virtual Extension:**

1. Press the idle **Virtual Extension** key.
2. Dial the Call Forward – Busy/No Answer Service Code (default: 744).
3. Dial **0** (Cancel).
4. Press **Speaker** or hang up.



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## *Call Forwarding with Follow Me*

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### **Description**

While at a co-worker's desk, a user can have Call Forwarding with Follow Me redirect their calls to the co-worker's extension. This helps an employee who gets detained at a co-worker's desk longer than expected. To prevent losing important calls, the employee can activate Call Forwarding with Follow Me from the co-worker's telephone.

Call Forwarding with Follow Me reroutes calls from the destination extension. To reroute calls from the initiating (forwarding) extension, use Call Forwarding.

### **Conditions**

- Call Forwarding an extension in a Department Group prevents that extension from receiving Department Pilot Calls.
- Multiple Stations can set Call Forward Follow Me to one station.
- Calls to extensions with DND active do not follow Call Forwarding programming. DIL calls ring an idle Department Group member, then follow Program 22-08 programming then Program 22-05 programming.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

## Related Features

### Do Not Disturb

### Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-07	<b>Service Code Setup (for Setup/Entry Operation) – Call Forwarding – Follow Me</b>	Assign the service code of Call Forward Follow Me.	MLT, SLT (default = 746)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) (15 = Call Forward with Follow Me) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-11-05	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

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## Operation


### To activate Call Forward Follow Me from a multiline terminal:

1. At a multiline terminal, other than your own, press **Speaker** and dial Service Code (**746**, Program 11-11-07).

- OR -

Press the Call Forward Follow Me key (Program 15-07-01 or SC 751: Code 15).

2. Dial **1** to set.
3. Dial the Extension to forward.

 *The multiline terminal with display indicates on the display of the telephone which Call Forward Follow Me is set. Also, the Programmed Follow Me Flexible Line Key flashes (if assigned) when Follow Me is set.*

### To cancel Call Forward Follow Me from your own multiline terminal:

1. At your multiline terminal, press **Speaker** and dial Service Code (**746**, Program 11-11-07).

- OR -

Press the Call Forward Follow Me key (Program 15-07-01 or SC 751: Code 15).

2. Dial **0** to cancel.
3. Dial **0** (Cancel All Forward Follow Me).

- OR -

Dial the extension number with Follow Me set.

### To activate Call Forward Follow Me from a single line telephone:

1. At a single line telephone, other than your own, lift the handset and dial the Service Code (**746** Program 11-11-07).
2. Dial **1** to set.
3. Dial the extension to forward.

### To cancel Call Forward Follow Me from your own single line telephone:

1. At your single line telephone, lift the handset and dial Service Code (**746**, Program 11-11-07).
2. Dial **0** to cancel.
3. Dial **0** (Cancel All Forward Follow Me).

- OR -

Dial the extension number with Follow Me set.

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## *Call Forwarding, Off-Premise*

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### **Description**

Off-Premise Call Forwarding allows an extension user to forward their calls to an off-site location. By enabling Call Forward, Off-Premise, the user can stay in touch by having the system forward their calls while they are away from the office. The forwarding destination can be any telephone number the user enters, such as a mobile phone, home office, hotel or meeting room. Off-Premise Call Forwarding can route the off-site telephone number over a specific trunk or through a trunk group, Automatic Route Selection or Trunk Group Routing.

Off-Premise Call Forwarding reroutes the following types of incoming calls:

- Ringing intercom calls from co-worker's extensions
- Calls routed from the VRS or Voice Mail <sup>1</sup>
- Direct Inward Lines <sup>1</sup>
- DISA, DID and Tie Line calls to the forwarded extension <sup>1</sup>
- Transferred calls <sup>1</sup>

Off-Premise Call Forwarding does not reroute Call Arrival (CAR) Keys, Call Arrival (CAR) Keys, or Ring Group calls (i.e., trunk ringing according to Ring Group assignments made in Program 22-04 and Program 22-05).

### **Conditions**

- If a call that forwards Off-Premise goes out on a trunk assigned as TIE or DID, and the called party does not answer before the time in Program 34-07-05, the call recalls to the station that performed the transfer.
- Call Forwarding Off-Premise requires either loop start trunks with disconnect supervision or ground start trunks.
- The trunk access code and the outside telephone number combined cannot exceed 24 digits.
- Call Forwarding an extension in a Department Group prevents that extension from receiving Department Pilot Calls.
- If a Programmable Function key is not defined for Call Forwarding (10~17), the DND key flashes to indicate that the extension is call forwarded.

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1. Off-Premise Call Forwarding can reroute an incoming trunk call only if the outgoing trunk selected has disconnect supervision enabled (refer to the Programming section).

- DID calls to an extension with Off-Premise Call Forwarding set do not recall if there is no answer.
- Door Boxes must be programmed for the calls to be transferred Off-Premise.
- The outside number Call Forwarding dials can be only a number normally allowed by the forwarded extension Toll Restriction.
- In systems with a DSP daughter board for VRS, callers to an extension forwarded off-premise hear, "Please hold on, your call is being rerouted." This option can be disabled in Program 40-10-01 by setting it to disable.
- When a station is in DND and any Call Forwarding Off Premise is set, the call forwards immediately.
- Call Forwarding, Off-Premise is not supported when using Alternate Trunk Group Routing.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Call Arrival (CAR) Keys**

**Call Forwarding**

**Code Restriction**

**Direct Inward Dialing (DID)**

**Do Not Disturb**

**Door Box****Virtual Extensions****Voice Response System (VRS)****Guide to Feature Programming**

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Allocate the circuits on the CD-CP00-US ETUs for either DTMF receiving or dial tone detection. Program 14-01-13 Basic Trunk Data Setup – Loop Supervision Enable (1) loop supervision for each trunk that should be able to use Call Forwarding Off-Premise.	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign pilot numbers to each Department Group set up.	Up to eight digits (default not assigned)	✓		
11-11-01	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – All</b>	Assign the Call Forward All Service Code.	MLT, SLT (default = 741)		✓	
11-11-02	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Busy</b>	Assign the Call Forward Busy Service Code.	MLT, SLT (default = 742)		✓	
11-11-03	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – No Answer</b>	Assign the Call Forward No Answer Service Code.	MLT, SLT (default = 743)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-04	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Busy/No Answer</b>	Assign the Call Forward Busy No Answer Service Code.	MLT, SLT (default = 744)		✓	
11-11-05	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Both Ring</b>	Assign the Call Forward Both Ring Service Code.	MLT, SLT (default = 745)		✓	
11-11-45	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward All (Split)</b>	Assign the Call Forward All Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-46	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy (Split)</b>	Assign the Call Forward Busy Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-47	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward No Answer (Split)</b>	Assign the Call Forward No Answer Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-48	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy/No Answer (Split)</b>	Assign the Call Forward Busy No Answer Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-49	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Both Ring (Split)</b>	Assign the Call Forward Both Ring Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-52	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward All Destination (No Split)</b>	Assign the Call Forward All for any Extension Service Code.	MLT, SLT (default = 790)		✓	
11-11-53	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy Destination (No Split)</b>	Assign the Call Forward Busy for any Extension Service Code.	MLT, SLT (default = 791)		✓	
11-11-54	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward No Answer Destination (No Split)</b>	Assign the Call Forward No Answer for any Extension Service Code.	MLT, SLT (default = 792)		✓	
11-11-55	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy/No Answer Destination (No Split)</b>	Assign the Call Forward Busy No Answer for any Extension Service Code.	MLT, SLT (default = 793)		✓	
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	Enable/Disable loop supervision for the trunk.	0 = Disable (No) 1 = Enable (Yes) (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller. <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn Off or On setting up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension ability to receive off-hook Signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-03-01	<b>Trunk Group Routing for Trunks</b>	Used to set the Trunk Route Table for Automatic External Call Forward.	Day Night/Mode: 1~8 0~100 (0 = No setting) (default = 1)		✓	
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	Timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer, outgoing from trunk, Tandem Trunking). When this time expires, a warning tone is heard.	0~64800 (seconds) (default = 1800)		✓	
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type</b>	Assign Call Forwarding Type and destination numbers for each extension/virtual extension.	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)	✓		
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign CO Call Forwarding destination numbers for both ring, all call and no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-03	<b>Call Forward Split Settings – Intercom Call Forwarding Destination for both ring, All Call, No Answer</b>	Assign Intercom Call Forwarding destination numbers for both ring, all call and no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-04	<b>Call Forward Split Settings – CO Call Forwarding Busy Destination</b>	Assign CO Call Forwarding busy destination numbers.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-05	<b>Call Forward Split Settings – Intercom Call Forwarding Busy Destination</b>	Assign Intercom Call Forwarding busy destination numbers.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-06	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/PBX for All Call, No Answer</b>	Assign Call Forwarding destination numbers for CTX/PBX for all call and no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-07	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/PBX for Busy</b>	Assign Call Forwarding destination numbers for CTX/PBX for busy.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any Trunk-to-Trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine how long the system waits before disconnecting a DISA or any trunk-to-trunk (such as Tandem Trunking) call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	

### Trunk-to-Trunk Forwarding – Normal (0) Trunks:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-06	<b>Service Code Setup (for System Administrator) – Setting the Automatic Transfer for each Trunk Line</b>	Customize the service code to be used to set the Automatic Trunk Forwarding feature.	MLT (default = 733)		✓	
11-10-07	<b>Service Code Setup (for System Administrator) – Canceling the Automatic Transfer for each Trunk Line</b>	Customize the service code to be used to cancel the Automatic Trunk Forwarding feature.	MLT (default = 734)		✓	
11-10-08	<b>Service Code Setup (for System Administrator) – Setting the Destination for Automatic Trunk Transfer</b>	Customize the service code to be used to set the destination for the Automatic Trunk Forwarding feature.	MLT (default = 735)		✓	
13-01-01	<b>Speed Dialing Option Setup – Speed Dialing Auto Outgoing Call Mode</b>	Determine if dialing an Speed Dialing number will dial an outside number (seizing a trunk as assigned in Program 13-05) or an Intercom number (0 = Trunk Dialing Mode, 1 = Extension Dialing Mode).	0 = Trunk Outgoing Mode 1 = Intercom Outgoing Mode (default = 0)	✓		
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	Enter the Common and Group Speed Dialing numbers and names which are to be used for Trunk-to-Trunk Forwarding.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-26	<b>Basic Trunk Data Setup – Automatic Trunk-to-Trunk Transfer Mode</b>	Enable (1)/Disable (0) each trunk ability to use Step Transfer.	0 = Normal Transfer (Normal) 1 = Step Transfer (Step) (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-05	<b>Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
22-02-01	<b>Incoming Call Trunk Setup – Incoming Type</b>	Assign the incoming trunk type for each trunk. There is one item for each Mode. When using Trunk-to-Trunk Forwarding the trunks must be set for Normal (0).	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
24-02-11	<b>System Options for Transfer – No Answer Step Transfer</b>	Assign the amount of time each transfer destination rings before step transfer is performed.	0~64800 (seconds) (default = 10)	✓		
24-02-12	<b>System Options for Transfer – No Answer Trunk-to-Trunk Transfer</b>	Define the time that elapses before the automatic Trunk-to-Trunk Transfer is performed.	0~64800 (seconds) (default = 0)	✓		
24-04-01	<b>Automatic Trunk-to-Trunk Transfer Target Setup</b>	Assign the Speed Dialing number bin (0~1999) to a trunk and the mode which should be used as the destination of the Automatic Trunk-to-Trunk Forwarding.	0~1999 (default = 1999)	✓		


## Trunk-to-Trunk Forwarding – DID (3) Trunk Forwarding by Department Groups:


 Refer to *Departmental Calling* for additional Department Group programming.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign pilot numbers to the Extension (Department) Groups you set up in Program 16-02.	Up to eight digits (default not assigned)	✓		
11-11-25	<b>Service Code Setup (for Setup/Entry Operation) – Automatic Transfer Setup for Each Extension Group</b>	Customize the service code to be used to set the Automatic Trunk Forwarding feature for a Department Group.	MLT, SLT (default = 602)		✓	
11-11-26	<b>Service Code Setup (for Setup/Entry Operation) – Automatic Transfer Cancellation for Each Extension Group</b>	Customize the service code to be used to cancel the Automatic Trunk Forwarding feature for a Department Group.	MLT, SLT (default = 603)		✓	
11-11-27	<b>Service Code Setup (for Setup/Entry Operation) – Destination of Automatic Transfer Each Extension Group</b>	Customize the service code to be used to set the destination for the Automatic Trunk Forwarding feature for a Department Group.	MLT (default = 604)		✓	
13-01-01	<b>Speed Dialing Function Setup – Speed Dialing Auto Outgoing Call Mode</b>	Determine if dialing an Speed Dialing number will dial an outside number (seizing a trunk as assigned in Program 13-05) or an Intercom number (0 = Trunk Dialing Mode, 1 = Extension Dialing Mode).	0 = Trunk Outgoing Mode 1 = Intercom Outgoing Mode (default = 0)	✓		
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	Enter the Common and Group Speed Dialing numbers and names which are to be used for Trunk-to-Trunk Forwarding.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
14-01-04	<b>Basic Trunk Data Setup – Transmit Gain Level for Conference and Transfer Calls</b>	CODEC gain set at 0 dB [Program 14-01-04 = 32 (CODEC Gain Type 2)] can be used to set the transmit CODEC gain type for multiline Conference or transferred calls.	1~63(-15.5dB ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-05	<b>Basic Trunk Data Setup – Receive Gain Level for Conference and Transfer Calls</b>	CODEC gain set at 0 dB [Program 14-01-04 = 32 (CODEC Gain Type 2)] can be used to set the transmit CODEC gain type for multiline Conference or transferred calls.	1~63(-15.5dB ~ +15.5dB in 0.5dB intervals) [default = 16 (-8dB)]		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified).	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign an Automatic Forwarding at Department Group key (58) or a Delayed Forwarding at Department Group key (59) for an extension user.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
16-02-01	<b>Department Group Assignment for Extensions</b>	Set up the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in 23-02.	Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn On or Off an extension in a Department Group ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
24-05-01	<b>Department Group Transfer Target Setup</b>	Assign the Speed Dialing number bin to be used as the destination of the Department Group Trunk-to-Trunk Forwarding.	0~1999 (default = 1999)	✓		



## Trunk-to-Trunk Forwarding – DID (3) Trunk Forwarding Using DID Translation Table:

 Refer to Direct Inward Dialing (DID) for additional DID programming.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-11-05	DID Translation Table Number Conversion – Transfer Destination Number 1	For each DID Translation Table entry (1-2000), specify the first and second Transfer Destinations if the callers receives a busy or no answer (action defined in Program 22-11-04).  <i>If the Transfer Destinations are busy or receive no answer, those calls are transferred to the final transfer destination (Program 22-10).</i>	0 = No Setting 1~100 = Incoming Group 101 = (Not Used) 102 = In-Skin/External Voice Mail or InMail 201~264 = Extension Group 400 = Valid Extension Number 401 = DISA 501~548 = DISA/VRS Message 1000~999 = Speed Number (000~999) (default = 0)	✓		
22-11-06	DID Translation Table Number Conversion – Transfer Destination Number 2			✓		

## Operation



### To activate Call Forwarding Off-Premise non-split:

- At a multiline terminal, press **Speaker**.  
- OR -  
At a single line telephone, lift the handset.
- Dial the Call Forwarding Service Code.  
- OR -  
At a multiline terminal only, press the Call Forwarding Programmable Function keys (Program 15-07-01, Program 15-07-10~Program 15-07-15 or SC 751 Key Code 10~15).
- Dial **1** (Set).
- Dial the Trunk Access Code (default: 9) + Number (9+2142622000).  
 *Trunk access codes are 9 (ARS/Trunk Group Routing), 704 + Line Group (1~9, 01~99 or 001~100) or #9 + Line number (e.g., 05 or 005 for line 5).*  
 *Your DND or Call Forwarding (Device) Programmable Function key flashes.*



**To cancel Call Forwarding Off-Premise non-split:**

1. At a multiline terminal, press **Speaker**.  
- OR -  
At a single line telephone, lift the handset.
2. Dial the Call Forward Access Code (default not assigned).
3. Dial **0** (Cancel).


**To activate Call Forwarding Off-Premise Split:**

1. At a multiline terminal, press **Speaker**.  
- OR -  
At a single line telephone, lift the handset.
2. Dial the Call Forwarding Service Code.
3. Dial **1** (Set).
4. Dial **1** (Internal) or **0** (External).
5. Dial Trunk Access Code (default: 9) + number (9 + 2142622000).
  -  *Trunk access codes are 9 (ARS/Trunk Group Routing), 704 + Line Group (1~9, 01~99 or 001~100) or #9 + Line number (e.g., 05 or 005 for line 5).*
  -  *Your DND or Call Forwarding (Device) Programmable Function key flashes.*

**To cancel Call Forwarding Off-Premise Split:**

1. At the multiline terminal, press **Speaker**.  
- OR -
2. At a single line telephone, lift the handset.
3. Dial the Call Forward Access Code (default not assigned).
4. Dial **0** (Cancel).
  -  *If Internal and External are set both are canceled.*
  -  *Your DND or Call Forwarding (Device) Programmable Function key flashes.*

**Off-Premise Call Forwarding for Door Boxes**

-  *These operations are performed at the Door Box Ringing Extension only.*



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### To activate Call Forwarding Off-Premise for a Door Box:

 *This option only works for ISDN PRI or BRI Trunks.*


1. At the multiline terminal, press **Speaker** + dial SC **722**.  
- OR -  
At the multiline terminal only, press Call Forward (Device) key (Program 15-07-01 or SC 751, code 54).  
- OR -  
At the single line telephone, lift the handset + dial **722**.
2. Dial the Door Box number (**1~4**).
3. Dial the Speed Dialing number where the calls should be forwarded.
4. Press **Speaker** (or hang up at the single line telephone) to hang up.

### To cancel Call Forwarding Off-Premise for a Door Box:

1. At the multiline terminal, press **Speaker** + dial SC **722**.  
- OR -  
At the multiline terminal only, press Call Forward (Device) key (Program 15-07-01 or SC 751, code 54).  
- OR -  
At the single line telephone, lift the handset + dial **722**.
2. Dial **0** (Cancel).

### Trunk-to-Trunk Forwarding:


#### Set the Destination and Forward the Line:

1. Lift the handset.
2. Dial **735**.
3. Dial trunk port number (**001~200**) to be defined.
4. Select the mode (**1~8**) to be defined.
5. Enter the telephone number, which is the destination of the forwarded trunk.  
 *The number is stored in the Speed Dial bin number assigned in Program 24-04-01. This entry overwrites any existing number defined in the bin.*
6. Press **Hold** to accept the entry.
7. Repeat from Step 3 to define another mode entry or press **Speaker** to hang up.

**Cancel the Line Forwarding:**

1. Lift the handset.
2. Dial **735**.
3. Dial trunk port number (**7 001~200**) to be defined.
4. Select the mode (**1~8**) to be defined.
5. Press the **Exit** key.
6. Press **Speaker** to hang up.

**Automatic Trunk-to-Trunk Transfer (Step Transfer) (follows the predefined destination in Program 24-04-01) Set Automatic Trunk Forwarding:**

 *The Speed Dial bin must be defined in Program 13-04-01 for the line to forward.*


1. Lift the handset.
2. Dial **733**.
3. Dial trunk port number to be used (**001~200**).
4. Press **Speaker** to hang up.

**Cancel Automatic Trunk Forwarding:**

1. Lift the handset.
2. Dial **734**.
3. Dial trunk port number to be used (**001~200**).
4. Press **Speaker** to hang up.

**Department Group Line Forwarding:****Method 1****Set the Destination and Forward the Line:**

1. Lift the handset.
2. Dial **604**.
3. Dial the Department Group number (**01~64**) to be defined.
4. Select the time mode (**1~8**) to be defined.
5. Enter the telephone number, which is the destination of the forwarded trunk.


 *The number is stored in the Speed Dial bin number assigned in Program 24-04-01. This entry overwrites any existing number defined in the bin.*

6. Press **Hold** to accept the entry.
7. Repeat from Step 3 to define another time mode entry or press **Speaker** to hang up.

**Cancel the Line Forwarding:**

1. Lift the handset.
2. Dial **604**.
3. Dial the Department Group number (**01~64**) to be defined.
4. Select the time mode (**1~8**) to be defined.
5. Press the **Exit** key.
6. Press **Speaker** to hang up.

**Method 2 (follows the pre-defined destination in Program 24-05-01)****Set Automatic Trunk Forwarding:**

 *The Speed Dial bin must be defined in Program 13-04-01 for the line to forward.*

1. Lift the handset.
2. Dial **602**.
3. Dial the Department Group number (**01~64**) to be defined.
4. Press **Speaker** to hang up.

**Cancel Automatic Trunk Forwarding:**

1. Lift the handset.
2. Dial **603**.
3. Dial the Department Group number (**01~64**) to be defined.
4. Press **Speaker** to hang up.

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## *Call Forwarding/Do Not Disturb Override*

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### **Description**

An extension user can override Call Forwarding or Do Not Disturb at another extension. This is helpful, for example, to dispatchers and office managers that always need to get through.

#### **Conditions**

None

#### **Default Setting**

Disabled

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

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### **Related Features**

#### **Programmable Function Keys**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-01	<b>Service Code Setup (for Service Access) – Bypass Call</b>	Customize the Service Code which is to be used for Call Forwarding/DND Override.	MLT, SLT (default = 707)		✓	
11-16-06	<b>Single Digit Service Code Setup – DND/Call Forward Override Bypass</b>	Customize the 1-digit Service Code used for DND/Call Forward Override.	(default not assigned)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn On or Off the ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	



## Operation

### To override an extension Call Forwarding or Do Not Disturb:

1. Call the forwarded or DND extension.
2. Press the Override key (Program 15-07 or SC 751: 37).

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# Call Monitoring

## Enhancements

ACD Call Monitoring Enhancement: With **Version 9000 or higher** system software and the **V9000 Enhancement** license, users have the capability to enable ACD Call monitoring (\*15 Feature key) for any call. In previous software versions, ACD Call Monitor only worked when the system was configured for ACD and only ACD agent calls could be monitored. With Version 9000 software ACD Call Monitor will function even if the system is not configured for the ACD feature.

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## Description

Call Monitoring allows selected multiline terminal users to monitor another user's conversation without participating. A programmable audible alert tone can be sent to that station user. Without the audible alert (silent monitor), no indication is provided to either the monitored station or the outside party.



*The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversation or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal or state laws. Legal advice should be sought prior to implementing any practice that monitors or records any telephone conversation. Some federal and state laws require some form of notification to all parties to a telephone conversation, such as using a beep tone or other notification methods or requiring the consent of all parties to the telephone conversation, prior to monitoring or recording the telephone conversation. Some of these laws incorporate strict penalties.*

## Call Monitoring with Coaching Ability

Call Monitoring with Coaching Ability allows the transmit path to be opened only to the monitored station, to provide the Coaching ability for the person that is performing the Call Monitoring. Press the MIC key, or dial Feature + 1 to toggle the Coaching ability on and off.

## Conditions

- An extension set as an operator in Program 20-17-01 cannot be monitored using the ACD Call Monitor (\*15 Feature key) Enhancement.
- The ACD Call Monitor (\*15 Feature key) Enhancement feature requires **Version 9000 or higher** software and the **V9000 Enhancement** license.

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- While using the ACD Call Monitor (\*15 Feature key) Enhancement, if the monitored extension places the call on hold or transfers the call monitoring is stopped.
  - The ACD Call Monitoring (\*15 Feature key) Enhancement is supported on trunk calls and is not supported on internal calls.
  - If an extensions class of service has Program 20-13-06 or Program 20-09-07 enabled, the ACD Call Monitoring (\*15 Feature key) Enhancement does not work.
  - No alert tone is provided to callers when using the ACD Call Monitor (\*15 Feature key) Enhancement feature.
  - Speech path is not supported for the ACD Call Monitor (\*15 Feature key) Enhancement feature even when Program 20-13-10 is enabled.
  - A maximum of 32 extensions can be monitored using the ACD Call Monitor (\*15 Feature key) Enhancement feature.
  - Call Monitoring is allowed for internal calls.
  - An extension user cannot Monitor an Intercom call if one of the Intercom callers is using Hands-free Answerback. Both Intercom parties must lift the handset or press **Speaker**.
  - An extension user cannot monitor a conference, however an extension programmed for Call Monitor can barge In to a conference.
  - With Program 20-13-10 set to 0, a call, which has been barged into, can be placed on hold by the originator of the outside call. Both the outside caller and the extension, which is monitoring the call, are placed on hold.
  - The handset and microphone are muted during Call Monitoring.
  - Live Record does not work for Call Monitor calls.
  - While being monitored, an extension cannot receive Voice Over.
  - When a monitored extension places a call on hold, Call Monitor is automatically finished.
  - With Program 20-13-10 set to 1, a call which is being Monitored can be placed on park by the originator of the outside call, but only the outside caller is placed in park. The extension which is monitoring the call is dropped.
  - When Program 20-13-10 is set to 0 (OFF), coaching is not permitted. When Program 20-13-10 is set to 1 (On), Program 20-13-45 takes effect.
  - When Silent Monitor Mode is used, MIC or Feature + 1 can be used to activate speech path to the internal and external parties.

## Default Setting

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

ACD Call Monitor (\*15 Feature key) Enhancement requires:

- Version 9000 or higher system software
- V9000 Enhancement license

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## Related Features

**Barge-In**

**Conference**

**Hold**

**Intercom**

**Park**

**Programmable Function Keys**

**VM8000 InMail**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-08	<b>Service Code Setup (for Service Access) – Barge-In</b>	Determine what the service code should be for an internal party to use the Barge-In feature.	MLT, SLT (default = 710)		✓	
11-16-02	<b>Single Digit Service Code Setup – Barge-In</b>	Customize the one-digit Service Codes used for Barge-In.	(default not assigned)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-02-27	<b>System Options for Multiline Telephones – ACD Monitor for Business Mode</b>	Select whether or not ACD Call Monitor provided in the ACD Mode works in normal business mode.	0 = Off (ACD Mode) 1 = On (Business Mode) (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.  This setting must be Disabled (0) for the Call Monitoring Enhancement to function.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the extension Barge-In for Speech mode or Monitor mode (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)	✓		
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On an extension user ability to Barge-In at the receiving extension (i.e., Barge-In receive).  This setting must be Enabled (1) for the ACD Call Monitoring Enhancement to function.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow (1)/Deny (0) the extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-45	<b>Class of Service Options (Supplementary Service) – MIC Key Mode While Call Monitoring</b>	Set per class of service, when in Call Monitoring Mode determines if the monitored parties receives the barge in alert tone when Coaching Mode is enabled.	0 = Enable 1 = Disable (default = 1 for COS 1~15)		✓	
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable (1)/Disable (0) a DISA or tie trunk user from using the Barge-In feature.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Define the extension numbers which are to be used by operators.  Extensions defined in this program cannot be monitored using the Call Enhancement feature.	Up to eight digits (default = 101)		✓	
20-18-07	<b>Service Tone Timers – Intrusion Tone Repeat Time</b>	After a user Barges In, the system repeats the Barge-In tone after this time. Normally, you should disable this time by entering 0. (This time also affects any other type of call interruption features, such as Voice Mail Conversation Recording, Voice Over, etc.)	0~64800 (seconds) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	Program the time an extension must wait before using the Barge-In feature can be used on a call (this time expires before a call is put in a talk state). This time also affects Voice Over.	0~64800 (seconds) (default = 5)		✓	

## Operation

The call must be set up for about 10 seconds before it can be Monitored. Listen for busy/ring or busy tone.

### To Call Monitor after calling a busy extension:

1. Call a busy extension.
2. Press the Barge-In key (Program 15-07 or SC 751: 34).


- OR -

*The following steps are not available for DISA or Tie Line trunks.*

1. Dial the extension number of the busy internal party.
2. Dial the single digit service code or the service code **710**.

### To Call Monitor without first calling the busy extension:

1. Press **Speaker** or lift handset.
2. Dial **710** or press the Barge-In key (Program 15-07 or SC 751: 34).
3. Dial a busy extension.

 *If Monitoring is not possible:*

- the extension user hears a warning tone.*
- the DISA user is rerouted to the defined ring group.*
- the Tie Line user hears a busy tone.*

### To Call Monitor using Coaching Ability:

1. Call a busy extension.
2. Press the **Barge-In** key (Program 15-07 or SC 751:34).

3. Press **MIC** or **Feature + 1** to toggle Coaching Ability on and off to the monitored station.

- OR -

1. Dial the extension number of the busy party.
2. Dial the single digit service code or the service code **710**.
3. Press **MIC** or **Feature + 1** to toggle Coaching Ability on and off.

**To Call Monitor using Coaching Ability without first calling the busy extension:**

1. Press **Speaker** or lift the handset.
2. Dial **710** or press the **Barge-In** key (Program 15-07 or SC 751:34).
3. Dial a busy extension.
4. Press **MIC** or **Feature + 1** to toggle Coaching Ability on and off to the monitored station.

**To Call Monitor after calling a busy extension using ACD Call Monitor (Version 9000 or higher):**

1. Call a busy extension.
2. Press the ACD Terminal Speech Monitor key (Program 15-07 or SC 752:\*15).

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## *Call Redirect*

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### **Description**

Call Redirect allows a multiline terminal user to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call. This can be useful if you are on a call and another rings in to your extension. Press the Call Redirect key to transfer the call, allowing you to continue with your current call.

This feature works with the following calls:

- Normal trunk call
- DID
- DISA
- DIL
- E&M
- ICM

The following calls *cannot* be redirected with the feature:

- ACD
- Transferred
- Department Group (all ring mode)
- Door Box
- Virtual Extension

### **Conditions**

- After pressing the Call Redirect key, the call does not recall to the extension.
- The predefined destination must be an extension number or voice mail pilot number.
- When a call is Redirected to another phone it does not follow the forwarding on that phone.
- Call Redirect is not supported with AspireNet.
- A call cannot be redirected across a CCIS Network.
- Call Redirect is not supported when using UCB voice mail.

## Default Setting

Enabled

## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	Programmable Function Keys	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

## Operation

### To redirect a ringing call:

With an incoming call ringing your extension, press the Call Redirect key (Program 15-07 or SC 751: 49 + Destination Extension Number) without lifting the handset.

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## *Call Waiting/Camp-On*

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### **Description**

With Call Waiting, an extension user may call a busy extension and wait in line (Camp-On) without hanging up. When the user Camps-On, the system signals the busy extension with two beeps indicating the waiting call. The call goes through when the busy extension becomes free. Call Waiting helps busy extension users know when they have additional waiting calls. It also lets callers wait in queue for a busy extension without being forgotten.

### **Conditions**

- Call Arrival (CAR) Key (virtual extension) keys do not support Call Waiting/Camp-On Programmable Function keys (code 35).
- If an extension user Camps-On and then hangs up, the system converts the Camp-On to a callback.
- Off-Hook Signaling gives an extension the ability to block a caller from dialing 750 to Camp-On and/or DID callers from automatically camping on.
- Function keys simplify Call Waiting/Camp-On operation.
- An extension user may Transfer a call to a busy extension.
- Trunk Queuing lets an extension user camp-on to a trunk.
- Call Queuing must be disabled also to disable Call Waiting.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

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## Related Features

Callback

Off-Hook Signaling

Programmable Function Keys

Transfer

Trunk Queuing/Camp On

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-23	<b>Service Code Setup (for Setup/Entry Operation) – Second Call for DID/DISA/DIL</b>	This service code enables Second Call to each extension when Program 20-09-01 (Second Call) is set to 0 (disable).	MLT (default = 679)		✓	
11-12-04	<b>Service Code Setup (for Service Access) – Set Camp-On</b>	Customize the Service Code, which is to be used for setting Camp-On.	MLT, SLT (default = 750)		✓	
11-12-05	<b>Service Code Setup (for Service Access) – Cancel Camp-On</b>	Customize the Service Code, which is to be used for cancelling Camp-On.	MLT, SLT (default = 770)		✓	
11-12-47	<b>Service Code Setup (for Service Access) – Call Waiting Answer/Split Answer</b>	If required, use this program to change the code users dial to Split while on a call.	SLT (default = 794)		✓	
11-16-05	<b>Single Digit Service Code Setup – Camp-On</b>	Customize the 1-digit Service Code used for setting Camp-On.	(default = #)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-06	<b>Multiline Telephone Basic Data Setup – Hold Key Operating Mode</b>	Set the function of the Multiline Hold key. Hold can activate normal Hold or Exclusive Hold.	0 = Normal (Common) 1 = Exclusive Hold (default = 0)		✓	
15-02-12	<b>Multiline Telephone Basic Data Setup – Off-Hook Ringing</b>	Set the telephone off-hook signaling.	0 = Muted Off-Hook Ringing 1 = No Off-Hook Ringing 2 = Not Used 3 = Beep in Speaker (SP) 4 = Beep in Handset (HS) 5 = Speaker & Handset Beep (default = 5)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function for Camp-On (code 35). This key is also the Callback key.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-01-08	<b>System Options – Trunk Queuing Callback Time</b>	Set the Trunk Queuing callback time. A Trunk Queuing Callback rings an extension for this time.	0~64800 (seconds) (default = 15)		✓	
20-01-09	<b>System Options – Callback/ Trunk Queuing Cancel Time</b>	The system cancels an extension Callback or Trunk Queueing request after this time.	0~64800 (seconds) (default = 64800)		✓	
20-03-01	<b>System Options for Single Line Telephones – SLT Call Waiting for Answer Mode</b>	For a busy single line (500/2500 type) telephone, set the mode used to answer a camped-on trunk call.  For ESL sets, enabling this option (1) allows the user to dial Service Code for Voice Mail Conversation Record.	0 = Hookflash (Hooking) 1 = Hookflash + Service Code 654 (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DDI/ DIL/ E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller. <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook signaling</b>	Turn Off or On an extension ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension ability to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-18-06	<b>Service Tone Timers – Interval of Call Waiting Tone</b>	Set the time between call waiting tones. This timer also sets the interval between off-hook signaling alerts.	0~64800 (seconds) (default = 10)		✓	
21-01-18	<b>System Options for Outgoing Calls – Reset Dial After Failure of Trunk Access</b>	Enable/Disable an extension user ability to continue to dial codes or extensions after receiving Trunk Busy. This must be Enabled for this feature to work.	0 = Disable 1 = Enable (default = 1)	✓		




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## Operation




### To Camp-On a busy extension:

1. Call the busy extension.
2. Dial # or press the Camp-On key (Program 15-07 or SC 751: 35).
3. Do not hang up.
  -  To camp-on to a trunk, refer to [Trunk Queuing/Camp-On on page 2-1637](#).

### To cancel a Camp-On request:

1. Hang up.
2. At a multiline terminal, press **Speaker** and dial **770**.
  - OR -
  - At a multiline terminal, press the Camp-On key (Program 15-07 or SC 751: 35).
  - OR -
  - At the single line telephone, lift the handset and dial **770**.

### To Split (answer a waiting call) at a single line telephone:

-  Listen for Call Waiting Tones.
1. Hookflash and dial **794** to repeatedly split between the two calls.
    -  The operation depends on the setting in Program 20-03-01.
    -  This operation is valid only before the caller performs the camp-on operation (refer To Camp-On a busy extension – step 2).

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# Callback

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## Description

When an extension user calls a co-worker that does not answer or is busy, they can leave a Callback request for a return call. The user does not have to repeatedly call the unanswered extension back, hoping to find it idle.

The system processes Callback requests as follows:

1. Caller at extension A leaves a Callback at extension B.  
*✎ Caller can place or answer additional calls in the meantime.*
2. When extension B becomes idle, the system rings extension A. This is the Callback ring.
3. Once caller A answers the Callback ring, the system rings (formerly busy or unanswered) extension B.  
*✎ If caller A does not answer the Callback ring, the system cancels the Callback.*
4. As soon as caller B answers, the system sets up an Intercom call between A and B.

Callback Automatic Answer determines how an extension user answers the Callback ring. When Callback Automatic Answer is enabled, a user answers the Callback ring when they lift the handset. When Callback Automatic Answer is disabled, the user must press the ringing line appearance to answer the Callback ring.

## Conditions

- An extension can leave only one Callback request at a time.
- Call Arrival (CAR) Key (virtual extension) keys do not support Call Waiting/Camp-On Programmable Function keys (code 35).
- If an extension user initiates a Callback but does not hang up, their extension Camps-On to the busy extension.
- Function Keys simplify Callback operation.
- The Callback feature is not available when calling a busy station from a Wireless DECT (SIP) handset.

## Default Setting

Enabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

Call Waiting/Camp-On)

Programmable Function Keys

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.



- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-05	Service Code Setup (for Service Access) – Cancel Camp-On	If required, redefine the service code used cancel Camp-On.	MLT, SLT (default = 770)		✓	
11-12-44	Service Code Setup (for Service Access) – Callback Test for SLT	If required, redefine the service code used for SLT Callback Test.	SLT (default = 799)		✓	
11-16-05	Single Digit Service Code Setup – Camp-On	If required, redefine the service code used to set Camp-On.	(default = #)		✓	
15-02-11	Multiline Telephone Basic Data Setup – Callback Automatic Answer	Enable (1)/ Disable (0) Callback Automatic Answer.	0 = Off 1 = On (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-01-07	<b>System Options – Callback Ring Duration Time</b>	Set the time of the Callback ring.	0~64800 (seconds) (default = 15 seconds)		✓	
20-01-09	<b>System Options – Callback/ Trunk Queuing Cancel Time</b>	The system cancels Callback and Trunk Queuing requests after this time.	0~64800 (seconds) (default = 64800 seconds)		✓	

## Operation


### To place a Callback:

1. Call unavailable (busy or unanswered) extension.
2. Dial # or press the Callback key (Program 15-07 or SC 751: 35).
3. Hang up.
4. Lift the handset when busy extension calls you back.
  -  *If the unavailable extension was unanswered (not busy), the Callback goes through after your co-worker uses their telephone for the first time.*
  -  *If you have Callback Automatic Answer, you automatically place a call to the formerly busy extension when you lift the handset. If you do not have Callback Automatic Answer, you must press the ringing line appearance to place the call.*

### To cancel a Callback:

1. At the multiline terminal, press **Speaker** and Dial **770**.
  - OR -
At the multiline terminal, press Camp-On key (Program 15-07 or SC 751: 35).
  - OR -
At the single line telephone, lift the handset and dial **770**.

**To test Callback at a single line telephone:**

1. Lift the handset.
2. Dial **799**.
3. Hang up.
4. When the telephone rings, lift the handset.  
 *You hear the Hold tone.*
5. Hang up.

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## *Caller ID Call Return*

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### **Description**

The Caller ID Call Return feature allows the voice mail system to use Caller ID information captured with the message to call and connect the person that left the message with the voice mail user that is checking messages.

### **Conditions**

- A caller using a telephone without Softkeys, calling from outside the system, or from a remote system is prompted to hear Caller ID information and return a call.
- Return Call is available for subscriber messages and public messages.
- Return Call is accessible to a subscriber during and after message playback.
- Return Call is available for new and old messages.
- Return Call is accessible to a subscriber using Softkeys in Softkey mode or using DTMF in voice conversation Mode.
- On the UM8000 Mail, one minute before disconnecting the original caller, voice mail plays a warning prompt and immediately before disconnecting plays a prompt to indicate dropping the call.
- When a subscriber listens to a message from a Softkey equipped telephone, and Caller ID information is unavailable, the voice mail system leaves the second line of the LCD blank. When Caller ID is disabled on the system, voice mail displays the message count.
- On the UM8000 Mail, from the subscriber options Softkey menu, a subscriber can access a Softkey menu that allows selection of name or number to be displayed on the LCD during message playback. The default is name. Voice mail uses this setting to determine the initial display on the LCD during playback.
- Voice mail continues to display Caller ID on the LCD while the post-message playback menu is still displayed on a telephone equipped with Softkeys.
- On the UM8000 Mail, during return call, the voice mail port is in conference with the box owner and messages.
- When Centralized Voice Mail is used, the remote voice mail user gets only Caller ID number when voice mail answers incoming CO calls and performs an Await-Answer transfer to the remote user. A Call that forwards to voice mail from the remote system does not have Caller ID information.
- Live Record is not available when using Return Call.

- A Telephone used as an ACD Plus agent or supervisor station should not have mailboxes that support Softkeys. Softkeys can be disabled per mailbox in Access Codes Options by enabling Hands Free Play for a particular station.
- On the UM8000 Mail, the Return Call feature is enabled per mailbox in Subscriber/Access Options and can be enabled for internal numbers only or for both internal and external numbers.
- To use this feature for long distance calls, ARS must be programmed for the voice mail ports set to dial out. Refer to the UNIVERGE SV8100 Programming Manual for detailed programming instructions.
- On the UM8000 Mail, the Return Call parameter must be entered on the Integration Options line of System/Switch/Switch Information Screen to enable this voice mail feature. Default is RCV=6,10 where 6 is the number of rings voice mail tries when returning a call, and 10 is the number of minutes a returned call can last.
- On the UM8000 Mail, a trunk access code must be entered on the Return call outdial access code line of System/Switch/Dialing Codes screen so the Return Call feature can access a trunk to return the call. When this is not entered, the mailbox user is not prompted to return the call even when Caller ID information is available.
- Use Program 14-01-22 Caller ID to Voice Mail to enable or disable per trunk the ability to send the Caller ID digits to voice mail.
- After the call is ended by either party, the voice mail user is disconnected.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

- UM8000 Mail
- VM8000 InMail



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## Related Features

UM8000 Mail

VM8000 InMail

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-22	<b>Basic Trunk Data Setup – Caller ID to Voice Mail</b>	Enable/Disable the system ability to send the Caller ID digits to voice mail.	Trunks 1~200 0 = Disable 1 = Enable (default = 0)	✓		
14-02-10	<b>Analog Trunk Data Setup – Caller ID</b>	Enable (1)/Disable (0) a trunk to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-02-04	<b>Multiline Telephone Basic Data Setup – Redial (Speed Dial) Control</b>	Control the function of the extension Redial key when used with Speed Dialing. The Redial key can access either the Common or Group Speed Dialing numbers.	0 = Common and Individual Speed Dialing 1 = Group Speed Dialing (default = 0)	✓		


## Operation

### To return call from the UM8000 Mail:

1. While listening to a message with CID information press **More, More** then **Call** softkeys.  
- OR -  
Dial #, **0**.
2. To exit from the call, hang up.

### To return call from the VM8000 InMail:

1. While listening to a message with CID information press **More, More** then **Call** softkeys.  
- OR -  
Dial **6, 2 (MC)**.
2. To exit from the call, hang up.

 *If you hear “Your call cannot go through,” your system Caller ID is not properly set up. You will be returned to the listen mode for the message you were listening to when you tried the Make Call.*

## Caller ID

### Enhancements

Pressing the **Left Cursor Key** twice (on equipped terminals) displays the Incoming Call History (**Version 3000 or higher** software).


With **Version 4000 (4.01 or higher)** software, calls to a busy extension or busy tones returned to the caller are logged in the Caller ID List. When a busy call is logged, the Caller ID List key flashes the same as it does with a new missed call.

#### Memo Display Function

With **Version 4000 or lower** software, the SV8100 can display matching Caller ID but is limited to 12 characters. With **Version 5000 or higher** software, it can display up to 28 Characters per line and up to three lines of information for a total of 84 characters (Maximum 28 digits x 3 lines). If needed, the system can be set to use any one of three available display lines. Additionally, the original CID information can be seen while on the call by pressing the right cursor button on the phone. The Memo Display Function requires **Version 5000 or higher** software and the **Version 5000 Enhancement** license.

### Description

Caller ID allows a display terminal to show an incoming caller's telephone number (called the Directory Number or DN) and optional name. The Caller ID information is available as pre-answer display. With the pre-answer display, the user previews the caller's number before picking up the ringing line.

 *On the CD-CP00-US for Caller ID (also used for DTMF receivers and Call Progress Tone Detection) 32 resources are available. The PZ-BS10 provides an additional 64 resources.*

### Second Call Display

While busy on a call, the telephone display can show the identity of an incoming trunk or Intercom call. For incoming trunk calls, the display shows the Caller ID or ANI data or the trunk name if Caller ID or ANI are not installed. (Refer to [T1 Trunking \(with ANI/DNIS Compatibility\) on page 2-1561](#) for more information on ANI compatibility.) For incoming Intercom calls, the display shows the calling extension name.

Caller ID supports the Telco Called Number Identification (CNI) and Called Number Delivery (CND) service, when available. These services provide the Caller ID information (i.e., messages) between the first and second ring burst of an incoming call. Two types of Caller ID message formats are currently available: Single Message Format and Multiple Message Format. With Single Message Format, the Telco sends only the caller's telephone number (DN). The DN has seven or 10 digits. In Multiple Message Format, the Telco sends the DN and the caller's name. The DN for this format also has seven or 10 digits, and the name provided consists of up to 15 ASCII characters.

The telephone display can show up to 12 Caller ID digits (for non-ACD calls).

Once installed and programmed, Caller ID is enabled for all trunk calls, including:

- Ring Group calls
- Calls transferred from another extension
- Calls transferred from the VRS
- Calls transferred from Voice Mail (unscreened)
- Direct Inward Lines (DILs)

Caller ID temporarily stores 50 calls (total of abandoned and answered/unanswered). New calls replace old calls when the buffer fills.

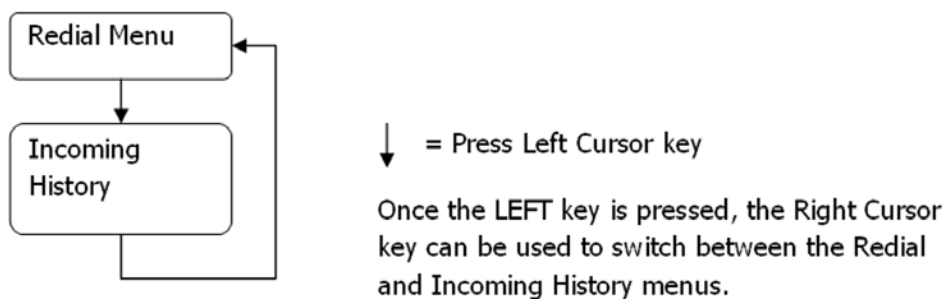
### Temporary Memory

An unanswered call causes the Call History key (Program 15-07 or SC 751: 08) to flash, to indicate a new call was placed in the temporary memory. If enabled in programming, the telephone display shows CHECK LIST.

This Caller ID data from the temporary memory can be saved in either Speed Dial bins or in One-Touch keys making them available for placing future calls.

### Cursor Key Operation

By pressing the Left Cursor Key the user can access the Redial and Incoming Call History menus. The flow chart below shows the menu access sequence. If the terminal is not allowed to have the Dial Preview feature, these menus cannot be accessed.



**Figure 2-1 Left Cursor Key Operation Flow Chart**

### Outputting Caller ID Data

The system includes the Caller ID data on the SMDR report. The report provides the incoming call DN in the DIALED NUMBER field. The CLASS field shows PIN (just like all other incoming calls).

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Caller ID data can also output to a PC or other type of computer through the 1st-Party TAPI driver. This allows for off-line database lookups. In a customer service department, for example, the computer could search for a caller's records and display their account status even before a customer service representative picked up the telephone.

### **Caller ID Digits to Voice Mail**

A Caller ID/ANI trunk can send Remote Log-On Protocol with Caller ID digits to the voice mail. When a trunk 001 receives the Caller ID as 12345, the protocol becomes **\*\*\*60001\*12345\***.

### **Display Reason for No Caller ID Information**

With Caller ID enabled, the system provides information for analog calls that do not detect the Caller ID information. If the Caller ID information is restricted, the telephone display shows PRIVATE. If the system cannot provide Caller ID information because Telco information is not detected, the display shows NO CALLER INFO.

### **Calling Party Number Information**

When using the Wireless DECT (SIP) telephone, the system can provide the Caller ID information for an external call if it is provided by the Telco.

### **Option to Enable Caller ID Name for SLT**

System programming provides an option for single line telephones to display Caller ID.

### **Add Trunk Access Code to Caller ID with Wireless DECT (SIP) – Phones**

UNIVERGE SV8100 SIP DECT Phones on the UNIVERGE SV8100 can hold incoming call history. This history is created based on the Caller ID information element contained in the call Setup message which is transmitted from the UNIVERGE SV8100. This information allows users to return calls dialing the number stored.

The stored number, however, does not contain the trunk access code. Without this code, the system may not be able to seize an outside line to complete the call.

With this feature, when an Wireless DECT (SIP) user receives an incoming trunk call, the trunk access code defined in programming can be added to the Caller ID. This allows the system to seize an outside line and then dial the stored number.

- This function is applied only to incoming ISDN calls. It does not apply to incoming extension calls.
- Caller ID must be available for this feature to work.
- The maximum number of Caller ID digits is 20. If the total number of digits [trunk access code (Program 10-02-05) and Caller ID] is over 20, the remaining Caller ID digits are not dialed.

For example:

Trunk Access Code (Program 10-02-05): 123456##\* (eight digits)

Incoming Caller ID: 12345678901234567890 (20 digits)

UNIVERGE SV8100 Wireless Dials: 123456##\*123456789012

- An additional digit (such as 1) may be required to complete the call (Program 10-02-04).

For example:

Incoming Caller ID shows: 2125551212.

If your area code is NOT 212, define a 1 in Program 10-02-04. When callback is executed, the system prefixes 1 on the digits dialed string.

### **Caller ID Sender Queuing Added**

The UNIVERGE SV8100 system can provide Caller ID (calling party number) to a single line telephone with a display.

The system can queue incoming calls to the single line telephone if the system Caller ID sender resources are busy. Refer to Program 20-19-05 in the *Electra Elite IPK II Programming Manual*.

If the single line telephone user lifts their handset while an incoming call is waiting in queue, they hear silence (no dial tone) and cannot dial out. When the single line telephone user goes back on-hook, the system immediately sends the queued call to the single line telephone without Caller ID.

### **Option Available for FSK or DTMF Type for Single Line Telephone**

An option (Program 15-03-11) is available for the Caller ID which allows you to select either FSK or DTMF as the Caller ID type to be received by a single line telephone.

### **Option Available for FSK or DTMF Type from Analog Trunk**

An option (Program 14-02-16) is available for the Caller ID which allows you to select the type of Caller ID signal from an analog trunk – FSK or DTMF.

## **Conditions**

- To have pre-answer Caller ID from the voice mail, the call must be an unscreened transfer.
- Caller ID is provided by the CD-CP00-US. The PZ-BS10 blade, which plugs into the chassis, can provide additional resources for Caller ID if needed.
- Caller ID Name can display up to 12 characters.
- Caller ID Number can display up to 11 characters.
- A Caller ID Number with more than 12 digits follows Program 20-19-01 (first 10 or the last 10 digits).
- Caller ID information can be stored in Speed Dialing or One-Touch bins.
- Caller ID can be displayed for incoming calls and transferred calls.
- ARS can block outgoing Caller ID information call-by-call. To do this, insert the Caller ID block code (e.g., .67) in the ARS Dial Treatments.

- 
- 
- Trunks with Privacy Release enabled display Caller ID until the call is answered. To view it after the call has been picked up, press the line key, which sets the call to private mode. To keep the call on Privacy Release, press the Help + Exit keys.
  - An extension user can display the Caller ID information for a call in Park if Automatic Handsfree in Program 15-02-08 is set to 0 (Preselect).
  - An extension user can display the Caller ID information for multiple incoming calls without answering the call by pressing the line key if Automatic Handsfree in Program 15-02-08 is set to 0 (Pre-select).
  - Caller ID information outputs on the SMDR report.
  - ANI/DNIS can use the Caller ID tables for routing. Refer to [T1 Trunking \(with ANI/DNIS Compatibility\) on page 2-1561](#) for more information.
  - The system can send Caller ID digits to the voice mail if allowed in Program 14-02-10.
  - When more than 20 characters are set in Program 20-20 : Message Setup for Non-Caller ID Data, either the first or last character is missing (based on the entry in Program 20-19-01).
  - If Program 20-09-06: Class of Service Options (Incoming Call Service): Incoming Time Display is set to 1 (On), the first line displays the time and date.
  - When you shut down the system, incoming history data is cleared. But you can back up the history data by pressing **Speaker + # \* # 9**.
  - Program 15-07-01 button (63) when enabled, removes the CPN from the setup message when making an outbound ISDN call, this is a toggle enable/disable button and can be used on a Call-by-Call basis. Programs 14-01-20, 14-01-21 and 20-08-15 are used for copper trunks only and can be set only per trunk/Class of Service.
  - SLT users cannot block an incoming call based on the incoming Caller ID information on a station-by-station basis.
  - The CD-CP00-US has 32 resources for DTMF receiving and Dial Tone detection. When a PZ-BS10 is installed there are 64 resources available.
  - When Program 10-09-01 is set to 0 (Common) and Program 14-02-10 (Caller ID) is set to 1 (Yes), all DTMF/Dial Tone Detection resources are always allocated to analog trunks, not analog extensions. However, if Program 14-02-10 (Caller ID) is set to 0 (No), all DTMF/Dial Tone Detection resources can be used for both analog trunks and analog extensions.
  - For the Caller ID List to show calls to a station that received a busy tone, Program 15-02-57 must be set to 1 (On).
  - When Program 15-02-57 is set to 1 (On) and Program 15-02-34 is set to 0 (Trunk), only outside calls are shown in the Caller ID List.

## Memo Display Function

With **Version 4000 or lower** software, the SV8100 can display matching Caller ID but is limited to 12 characters. With **Version 5000 or higher** software, it can now display up to 28 Characters per line and up to three lines of information for a total of 84 characters (Maximum 28 digits x 3 lines). If needed, the system can be set to use any one of three available display lines. Additionally, the original CID information can be seen while on the call by pressing the right cursor button on the phone.

### Conditions

- The Memo Display Function requires **Version 5000 or higher** software and the **Version 5000 Enhancement** license.
- In a CCIS network the Memo Display Function is only supported for DID calls directed across CCIS to a remote system.
- Calls forwarded or transferred across CCIS do not support the Memo Display Function.
- Memo information cannot be programmed via telephone programming or service access code, only via Web Pro and PC Pro.
- The Memo Display function is only supported on Multiline terminals.
- The Memo Display function is only supported for incoming trunk calls with Caller ID information.
- The destination station must be idle for the Memo Display function to work.
- The Memo Display function will only search the Common Speed Dial bins, it will not search Group or Station speed dial bins.
- Find the abbreviation area the side of incoming system when trunk incoming via networking.
- When calls are directed to a virtual extension, the virtual extension must be set to ring for the Memo Display function to work.
- Pressing the right Cursor key on the telephone toggles the display between the actual incoming Caller ID information and the Memo Display settings for that incoming Caller ID information.
- When a call is on hold, pressing the Feature Key and the line key the call resides on displays the actual incoming Caller ID information.

### Default Setting

Disabled



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## System Availability

### Terminals

All Multiline Terminals with Display and Single Line Telephones equipped to receive Caller ID.

### Required Component(s)

- CD-4COTB with PZ-4COTF Daughter Board
- CD-2BRIA with PZ-2BRIA Daughter Board
- CD-PRTA

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## Related Features

**Automatic Route Selection**

**Call Arrival (CAR) Keys**

**Caller ID Call Return**

**Conference, Voice Call/Privacy Release**

***D<sup>term</sup>* Cordless II/*D<sup>term</sup>* Cordless Lite II Telephones**

**Park**

**Speed Dial – System/Group/Station**

**Station Message Detail Recording**



**T1 Trunking (with ANI/DNIS Compatibility)**

**VM8000 InMail**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-02-04	Location Setup – Area Code	Enter the local area code.	(default not assigned)		✓	
10-02-05	Location Setup – Trunk Access Code	Enter the trunk access code digits required to place an outgoing call.	Dial up to eight digits 0~9, *, # (default not assigned)		✓	
10-09-01	DTMF and Dial Tone Circuit Setup	<p>Allocate the circuits (1~16 or 1~64) on the CD-CP00-US for either DTMF receiving or dial tone detection.</p> <p> <i>The CD-CP00-US has 32 resources for DTMF receiving and Dial Tone detection. When a PZ-BS10 is installed there are 64 resources available.</i></p> <p> <i>When Program 10-09-01 is set to 0 (Common) and Program 14-02-10 (Caller ID) is set to 1 (Yes), all DTMF/Dial Tone Detection resources are always allocated to analog trunks, not analog extensions. However, if Program 14-02-10 (Caller ID) is set to 0 (No), all DTMF/Dial Tone Detection resources can be used for both analog trunks and analog extensions.</i></p>	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available.		✓	
11-15-03	Service Code Setup, Administrative (for Special Access) – Backup Data Save	<p>This service code is used to back up the programmed data on the SRAM and Call History to the Flash ROM.</p> <p>While saving the database, it may cause system lock up.</p>	MLT # * # 9		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-20	<b>Basic Trunk Data Setup – Block Outgoing Caller ID</b>	Enable/Disable the system from automatically blocking outgoing Caller ID information when a user places a call. If allowed (i.e. block, enabled), the system automatically inserts the Caller ID block code (defined in 14-01-21) before the user dialed digits. If prevented (i.e., block disabled), the system outdials the call just as it was dialed by the user.	Trunks 1~200 0 = Disable 1 = Enable (default = 0)		✓	
14-01-21	<b>Basic Trunk Data Setup – Caller ID Block Code</b>	Enter the code, up to eight digits, that should be used as the Caller ID Block Code. This code is automatically inserted before dialed digits if Program 14-01-20 is set to '1'.	Trunks 1~200 Dial (up to eight digits) *67		✓	
14-01-22	<b>Basic Trunk Data Setup – Caller ID to Voice Mail</b>	Enable/Disable the system ability to send the Caller ID digits to voice mail.	Trunks 1~200 0 = Disable 1 = Enable (default = 0)		✓	
14-02-10	<b>Analog Trunk Data Setup – Caller ID</b>	Enable (1) or Disable (0) a trunk to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-02-08	<b>Multiline Telephone Basic Data Setup – Automatic Handsfree</b>	Set whether pressing a key accesses a One-Touch Key (1) or preselects the key (0).	0 = Preselect 1 = One-Touch (Automatic Handsfree) (default = 1)		✓	
15-02-15	<b>Multiline Telephone Basic Data Setup – Storage of Caller ID for Answered Call</b>	Enable (1) or Disable (0) ability of extension to store Caller ID for answered calls.	0 = Disable 1 = Enable (default = 1)	✓		
15-02-40	<b>Multiline Telephone Basic Data Setup – Additional Dial for Caller ID Call Return</b>	Enter the digits to be dialed in front of the Caller ID when using Caller ID Call Return.	Up to four digits (0, 1~9, #, *) (default not assigned)		✓	
15-02-57	<b>Multiline Telephone Basic Data Setup – Caller Log on Busy</b>	When a call to a station returns busy to the caller, turn On or Off if the call should be logged in the Call history log as a busy call.	0 = Off 1 = On (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-03-09	<b>Single Line Telephone Basic Data Setup – Caller ID Function – For External Module</b>	Enable/Disable the Caller ID FSK signal for an external Caller ID module or a 3rd-Party vendor telephone with Caller ID display. If voice mail is used, this setting must be disabled or the system integration codes for disconnect are incorrect. For Caller ID Sender Queuing, set this option to "1".	0 = Disable 1 = Enable (default = 0)		✓	
15-03-10	<b>Single Line Telephone Basic Data Setup – Caller ID Name</b>	Determine whether or not a single line telephone should display the Caller ID name.	0 = Disable 1 = Enable (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-02-08	<b>System Options for Multiline Telephones – LCD Display Holding Time</b>	Determine the time a user display shows Caller ID for a second incoming call.	0~64800 (seconds) (default = 5 seconds)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turns Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-04	<b>Class of Service Options (Incoming Call Service) – Notification for Incoming Call List Existence</b>	Determine whether or not the CHECK LIST message is displayed to indicate a missed call.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-19-01	<b>System Options for Caller ID – Caller ID Displaying Format (If displaying digits are more than 12 digits)</b>	Determine whether the first 10 digits or last 10 digits should be displayed when Caller ID exceeds 12 digits.	0 = First 10 digits (Upper) 1 = Last 10 digits (Lower) (default = 0)		✓	
20-19-05	<b>System ID Options for Caller ID – Caller ID Sender Queuing Time (Sender Wait)</b>	With the Caller ID Sender Queuing option, determine the time an incoming call waits in queue for a DSP resource to become available. If a resource becomes available during this time, the call immediately rings the single line telephone with Caller ID. If the time expires before a resource becomes available, the system rings the single line telephone without Caller ID (until the queuing time expires, the single line telephone does not ring). If the queuing timer is set to 0, the system does not queue the incoming call.	0~64800 (seconds) (default = 0)		✓	
20-20-01	<b>Message Setup for Non-Caller ID Data – Private Call</b>	Enter the text to be displayed for Caller ID when a user receives a call which is classified as a private call.	24 Alphanumeric Characters (default = PRIVATE)		✓	
20-20-02	<b>Message Setup for Non-Caller ID Data – Call from Out of Service Area</b>	Enter the text to be displayed for Caller ID when a user receives a call which is classified as an out-of-service area call.	24 Alphanumeric Characters (default = OUT OF AREA)		✓	
20-20-03	<b>Message Setup for Non-Caller ID Data – Call Information with Error</b>	Enter the text to be displayed for Caller ID when a user receives a call which is classified as a call with a CID error.	24 Alphanumeric Characters (default = NO CALLER INFO)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-03-01	Save Data	Save the programmed data on the SRAM and Flash ROM to the 16MB/32MB ATA removable Compact Flash memory card. Also, used to save stored Caller ID if permanently saved with service code ##9 (11-15-03).	Dial 1 + press <b>Transfer</b> (Press <b>Transfer</b> to cancel.)		✓	
90-04-01	Load Data	Load the system data from the inserted Compact Flash Memory to the SRAM and Flash ROM in the system. Also, used to load stored Caller ID.	Dial 1 + press <b>Transfer</b> (Press <b>Transfer</b> to cancel.)		✓	

### Memo Display Function:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-01-03	Speed Dialing Option Setup – Number of Common Speed Dialing Bins	Designate the bins the system uses for System Speed Dialing.	0~2000 0 = No Common Speed Dialing (default = 1000)		✓	
13-04-01	Speed Dialing Number and Name – Speed Dialing Data	Enter the System and Group Speed Dialing numbers and names.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
13-04-08	Speed Dialing Number and Name – Memo Display 1	This can only be set using Web Pro or PC Pro and determines what will be displayed on line 1 of the multiline telephone when Program 15-02-58 is set to memo.	Maximum of 28 characters (default not assigned)	✓		
13-04-09	Speed Dialing Number and Name – Memo Display 2	This can only be set using Web Pro or PC Pro and determines what will be displayed on line 2 of the multiline telephone when Program 15-02-58 is set to memo.	Maximum of 28 characters (default not assigned)		✓	
13-04-10	Speed Dialing Number and Name – Memo Display 3	This can only be set using Web Pro or PC Pro and determines what will be displayed on line 3 of the multiline telephone when Program 15-02-58 is set to memo.	Maximum of 28 characters (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-58	Multiline Telephone Basic Data Setup – Display Mode of Incoming Trunk	Determines if the incoming CID or the Memo 1/2/3 setting will be displayed for a matching CID number.	0 = CID 1 = Memo Information (default = 0)	✓		

## Operation

### Storing a Number:

#### To store a Caller ID number in an Speed Dial bin:

1. With a multiline terminal idle, the display shows:

```

1-01 FRI 09:00AM
301          STA 301
LIST DIR ICM PROG
    
```

2. Press the **LIST** Softkey.

- OR -

Press the **Left Cursor Key** twice and skip step 3. The display shows:

```

LIST MENU
Redial CID
    
```

3. Press the **CID** Softkey (Caller ID). The display shows:

```

##:          xxxxxxxxxxxx
          mm-dd hh:mm
↑   ↓       Store  DEL
    
```

**##** = List Number

**xx** = Caller ID number

mm-dd hh:mm = incoming date and time

↑ = Preview List

↓ = Next List

**Store** = Store in List

**DEL** = Delete from List

4. Press the **STORE** Softkey. The display shows:

##:	XXXXXXXXXXXX
	mm-dd hh:mm
STA	SYS


## = List Number  
 xx = Caller ID number  
 mm-dd hh:mm = incoming date and time  
 STA = Store in Station Speed Dial bin.  
 SYS - Store in System Speed Dial bin.

5. Press the **STA** or **SYS** Softkey. The display shows:

Store to SYS: COMMON
ENTER BIN

6. Dial the Speed Dial bin in which the number is to be stored. If you press **Hold**, the next available Speed Dial bin is used. The display shows:

SYS XXXX:
XXXXXXXXXXXX

 If all Speed Dial bins are used, the display shows *TABLE IS FULL*.

7. Press **HOLD**. The display shows:

SYS XXXX
-

8. Enter the name to be associated with the stored number.

**Table 2-8 Keys for Entering Names**

Use this keypad digit . . .	When you want to . . .
1	Enter characters: 1 @ [ ¥ ] ^ _ ` {   } Æ " Á À Â Ã Ç É Ê Ì Ó
2	Enter characters: <b>A-C, a-c, 2.</b>
3	Enter characters: <b>D-F, d-f, 3.</b>
4	Enter characters: <b>G-I, g-i, 4.</b>
5	Enter characters: <b>J-L, j-l, 5.</b>
6	Enter characters: <b>M-O, m-o, 6.</b>
7	Enter characters: <b>P-S, p-s, 7.</b>
8	Enter characters: <b>T-V, t-v, 8.</b>
9	Enter characters: <b>W-Z, w-z, 9.</b>



Table 2-8 Keys for Entering Names (Continued)

Use this keypad digit . . .	When you want to . . .
<b>0</b>	Enter characters: 0 ! “ # \$ % & ’ ( ) ô Õ ú ä ö ü α ε θ
<b>*</b>	Enter characters: * + , - . / : ; < = > ? π Σ σ Ω □ ¢ £
<b>#</b>	<b>#</b> = Accepts an entry (only required if two letters on the same key are needed - ex: TOM). Pressing <b>#</b> again = Space. (In system programming mode, use the right arrow Softkey instead to accept and/or add a space.)
<b>CONF</b>	Clear the character entry one character at a time.
<b>HOLD</b>	Clear all the entries from the point of the flashing cursor and to the right.

9. Press **Transfer**. The display shows:

SET SYS
---------

10. Press **Speaker**.

 The telephone returns to idle.

### To store a Caller ID number in a One-Touch key:

1. With a telephone idle, the display shows:

1-01 FRI 09:00AM
301 STA 301
LIST DIR ICM PROG

2. Press the **LIST** Softkey.

- OR -

Press the **Left Cursor Key** twice and skip step 3. The display shows:

LISTiMENU
Redial CID

3. Press the **CID** Softkey (Caller ID). The display shows:

<b>##:</b>	XXXXXXXXXXXX
	mm-dd hh:mm
↑	↓
Store	DEL

**##** = List Number

**xx** = Caller ID number

**mm-dd hh:mm** = incoming date and time

↑ = Preview List

↓ = Next List

**Store** = Store in List

**DEL** = Delete from List

4. Press the **STORE** Softkey. The display shows:

<b>##:</b>	XXXXXXXXXXXX
	mm-dd hh:mm
STA	SYS

**##** = List Number

**xx** = Caller ID number

**mm-dd hh:mm** = incoming date and time

**STA** = Store in Station Speed Dial bin.


**SYS** = Store in System Speed Dial bin.

5. Press the **STA** Softkey. The display shows:

Store to ONE-TOUCH
ENTER BIN

6. Press the **One-Touch** key in which the number is to be stored or dial **1~9, 0**. If you press **Hold**, the next available One-Touch key is used. The display shows:

Key ##:	XXXXXXXXXXXX
---------	--------------

 If all One-Touch keys are used, the display shows *TABLE IS FULL*.

7. Press **Hold**. The display shows:

KEY ##	-
--------	---

8. Enter the name to be associated with the stored number. Refer to [Table 2-8 Keys for Entering Names on page 2-250](#).

9. Press **Hold**. The display shows:

<b>KEY PROG</b>	<b>ONE TOUCH</b>
-----------------	------------------

10. Press **Speaker**.

 *The telephone returns to idle.*


#### Temporary Memory

An unanswered call causes the Call History key (Program 15-07 or SC 751: 08) to flash, indicating a new call was placed in the temporary memory. If enabled in programming, the telephone display shows CHECK LIST.


1. Press the **Call History** key (Program 15-07 or SC 751: 08), press the **LIST** Softkey and CID.

- OR -


Press the **Left Cursor Key** twice.

 *The last addition to the list is displayed.*

2. Press the **ARROW DOWN** Softkey to scroll through the list of numbers in memory.
3. Press the **DEL** Softkey to delete the entry and scroll to the next entry.
4. The **Call History** key remains on as long as entries remain in memory.
5. To place a call back to a number in the temporary memory list, with the number to be dialed displayed, press a line key or **Speaker**. (Refer to [Table 2-8 Keys for Entering Names on page 2-250.](#))

 *The outgoing call is placed.*

#### **To display Caller ID for a call in Park:**

 *Program 15-02-08 is set to 0 (preselect) for this feature.*

1. *With Program 15-02-08 set to 0 (preselect) and a call in park, press the **PARK** key. (Program 15-07 or SC 752: \*04.*

*With Program 15-02-08 set to 1 (One-Touch) and a call in park, press **RECALL** then the **PARK** key (Program 15-07 or SC 752 \*04).*

#### **Checking your Answered/Unanswered Caller ID Calls:**


#### **To review the last 50 outside calls your extension received:**


1. At a display multiline terminal, press the **LIST** Softkey.

- OR -

Press the **Left Cursor Key** twice and skip step 2.

**2. Press CID.**

 *The first row of your display shows the Caller ID number. If there is an “\*” next to the call record number in the left-hand corner, this indicates that it is a call you missed (unanswered). The second row shows the date and time of the call.*

 *Press the up and down softkeys to see the list of calls available in the buffer.*

3. If the Caller ID includes a name, you can press the **HELP** key to view the number of the caller.

4. To call the displayed number, press a **line/Call Appearance (CAP) Key**.

**- OR -**

To erase the displayed number without returning the call, press the **DEL** Softkey.

5. Press **Speaker** to hang up.

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## *Caller ID – Flexible Ringing*

### Enhancements

Flexible Ringing by Caller ID feature added with **Version 3000 or higher** software.

With **Version 8000 or higher software**, the number of Tone Patterns has increased from four to eight.

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### Description

The Caller ID – Flexible Ringing feature provides several different options for rerouting calls based on the Caller ID received.

#### Reject/Reroute “Private” Caller ID Calls

When an analog or ISDN trunk call is received with “Private” Caller ID information, the SV8100 can reject the call by playing a VRS message or it can route the call to an alternative extension or incoming ring group programmed in Program 22-18-01.

#### Reject/Reroute Based on Entry in SPD Table

When an analog, ISDN or IP trunk call is received with regular Caller ID information, the SV8100 can reject the call by playing a VRS message if the Caller ID number matches the Speed Dial group number programmed in Program 22-16-01 and Speed Dial entry in Programs 13-02-01 and 13-04-01. The analog, ISDN or IP trunk call can also be routed to an alternative extension or incoming ring group if the Caller ID number matches the common or group Speed Dial table (Program 13-04).

This option can block calls on all trunks or it can be set on a per-trunk basis.

#### Programming Examples for Flexible Ringing by Caller ID:

- To refuse the “Private” Caller ID incoming call:
  - Program 14-01-27: 1 (reject)
  - Program 20-07-24: 1 (Enable for COS)
  - Program 22-18-01: 0 (no transfer)
  - Program 40-10-06: 2 (VRS message 2)

then,

Turn on the Private Call Refuse mode using the service code (Program 11-10-32) or Programmable Function Key (code 86).

- To transfer the “Private” Caller ID incoming call to extension 301 as ring pattern 2:  
Program 14-01-27: 1 (reject)  
Program 22-18-01: 1 (extension number)  
Program 22-18-02: 301 (extension 301)  
Program 22-18-03: 2 (ring pattern 2)

then,

Turn on the Private Call Refuse mode using the service code (Program 11-10-32) or Programmable Function Key (code 86).

- To transfer the “Private” Caller ID incoming call to incoming ring group 2 as ring pattern 3:  
Program 14-01-27: 1 (reject)  
Program 22-18-01: 2 (incoming ring group)  
Program 22-18-02: 2 (group 2)  
Program 22-18-03: 3 (ring pattern 3)

then,

Turn on the Private Call Refuse mode using the service code (Program 11-10-32) or Programmable Function Key (code 86).

- To reject the call with “2142622000” Caller ID incoming call:  
Program 14-01-27: 1 (reject)  
Program 20-07-25: 1 (Enable for COS)  
Program 22-16: 64 (Speed Dial group 64)  
Program 13-02; Group 64: 1000 - 1099  
Program 13-04-01; Table 1000: 2142622000

then,

Turn on the Caller ID Refuse mode using the service code (Program 11-10-34) or Programmable Function Key (code 87).

- To transfer the call with “2142622000” Caller ID incoming call to extension 301 as ring pattern 1:  
Program 13-04-01: 2142622000  
Program 13-04-03: 1 (extension number)  
Program 13-04-04: 301 (extension 301)  
Program 13-04-05: 1 (tone pattern 1)
- To transfer the call with “2142622000” Caller ID incoming call to incoming ring group 2 as ring pattern 2:  
Program 13-04-01: 2142622000  
Program 13-04-03: 2 (incoming ring group)  
Program 13-04-04: 2 (group 2)  
Program 13-04-05: 2 (tone pattern 2)

## Conditions


- Caller ID Matching.  
The UNIVERGE SV8100 compares the Caller ID and programmed Speed Dial and allows/denies as indicated below.
- The Speed Dial table is searched from the starting number and the first match result is used.
- The maximum number of VRS message channels that can be used simultaneously is 16. These channels are also shared with the voice mail.
- This feature does not work with incoming trunk calls via networking (from another system). In this case, the refuse/routing program must be programmed in the system that has those trunks. Routing to the other system's extension is available.
- When Program 13-04 is used; it will override the setting in Program 22-02-01: Incoming Call Trunk Setup.
- Program 13-04 will follow Common or Group Speed Dial numbers.
- With **Version 8000 or higher** software, the number of Tone Patterns increased from four to eight. After setting new system data (Tone Patterns 5 - 8), downgrading to **Version 7000 or lower** may cause incoming rings to not function properly.

### Caller ID Matching Rule:

The system compares the Caller ID and programmed Speed Dial with these rules below.

**Table 2-9 Caller ID Matching Rule**

Caller ID	Speed Dial	Result
2142622000	2142622000	Matched
2142622000	21426220009	Matched
2142622000	214	Matched
2622000	2142622000	Unmatched
2142622000	2622000	Unmatched

 *The Speed Dial table is searched from the starting number and the first match result is used.*

### Default Setting

None

## System Availability

### Terminals

All Terminals

### Required Component(s)

SV8100 main software Version 3000 or higher

## Related Features

Central Office Calls, Answering

Direct Inward Dialing (DID)


UM8000 Mail

Voice Response System (VRS)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

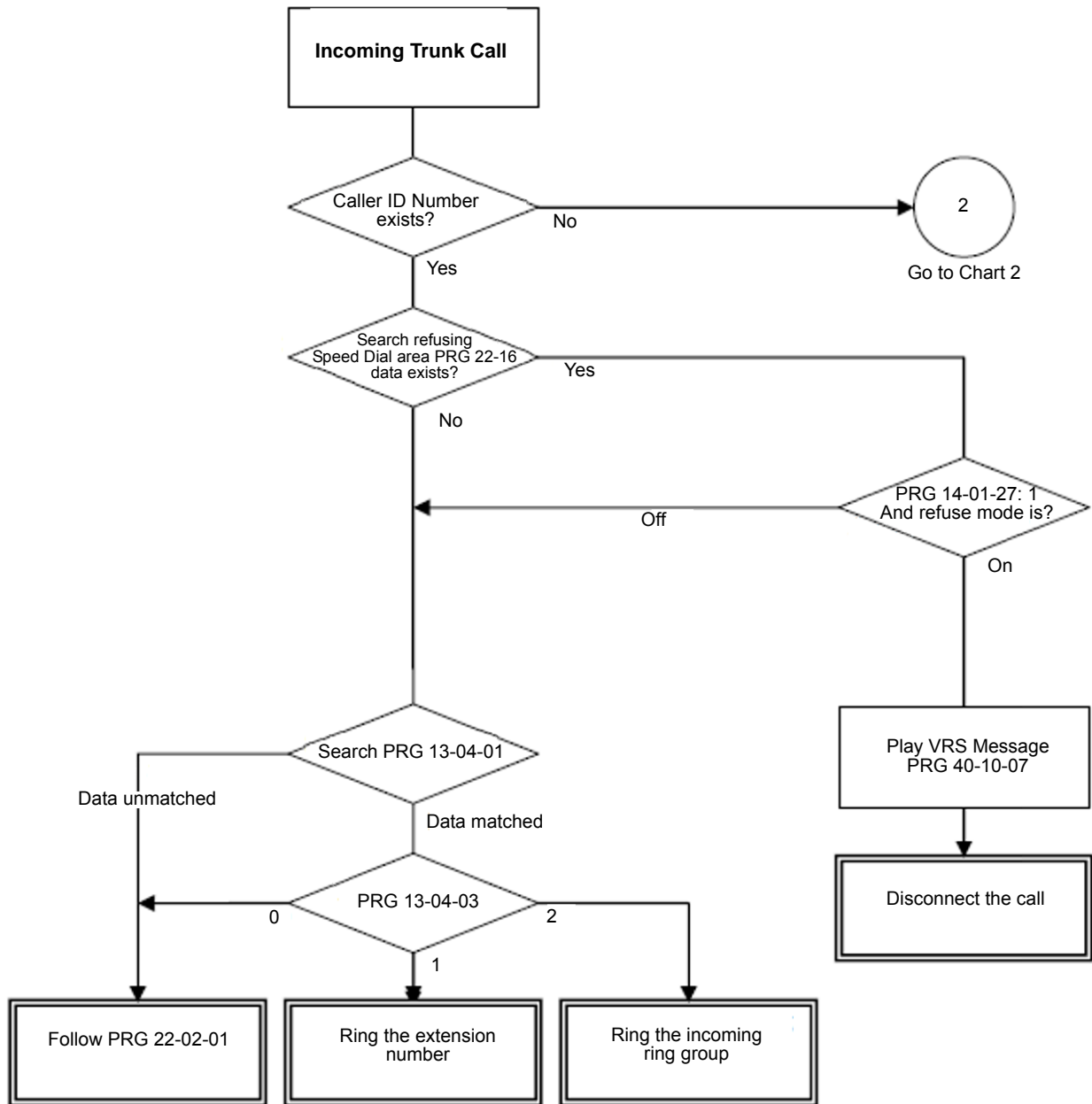
Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-32	Service Code Setup (for System Administrator) – Set Private Call Refuse	Enable/Disable the Private Call Refuse (trunks) which are set in Program 14-01-27.	MLT, SLT (default not assigned)		✓	
11-10-33	Service Code Setup (for System Administrator) – Entry Caller ID Refuse	Add/Delete the Caller ID to refuse.  <i>This operation must be performed from a Keypad.</i>	MLT (default not assigned)	✓		

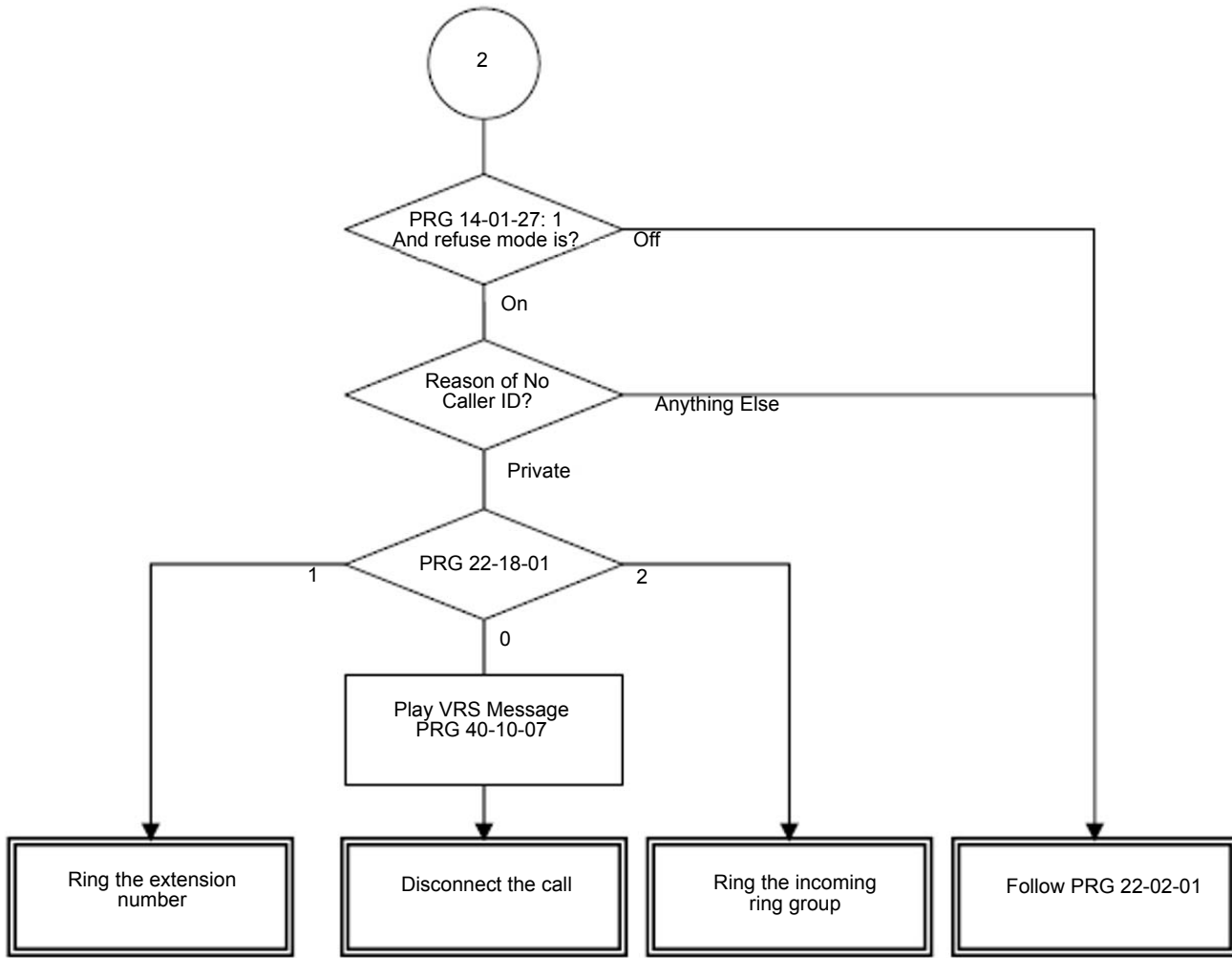


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-34	<b>Service Code Setup (for System Administrator) – Set Caller ID Refuse</b>	Enable/Disable the Caller ID number (trunks) which are set in Program 14-01-27.	MLT, SLT (default not assigned)	✓		
13-02-01	<b>Group Speed Dialing Bins</b>	Designate the starting bin number the system uses for Group Speed Dialing.	01~64 (default not assigned)	✓		
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	Enter the System and Group Speed Dialing numbers and names.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
13-04-03	<b>Speed Dialing Number and Name – Transfer Mode</b>	When the incoming caller ID matches the number programmed in the speed dial bin, this setting determines the destination of the call.	0 = Not Used 1 = Internal Dial 2 = Incoming Ring Group (IRG) (default = 0)	✓		
13-04-04	<b>Speed Dialing Number and Name – Transfer Destination Number</b>	When the incoming caller ID matches the number programmed in the speed dial bin, this setting determines the destination of the call.	If Transfer mode is (Refer to 13-04-03): 1 = Internal Dial Mode 1~9, 0, *, #, P, R, @ (Maximum 24 Characters) 2 = Incoming Ring Group 0~100 (IRG Number) P=Pause R=Recall @= Additional Digits when using ISDN functionality (default not assigned)	✓		
13-04-05	<b>Speed Dialing Number and Name – Incoming Ring Pattern</b>	Define the ring tone for the caller ID routed call.	Incoming Ring Pattern 0 = Normal Pattern 1~4 = Tone Pattern (1~4) 5~9 = Scale Pattern (1~5) 10~13 = Tone Patterns (5~8) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-27	<b>Basic Trunk Data Setup – Caller ID Refuse Setup</b>	Define if the trunk will reject the call by playing the VRS message based on the Caller ID information.	0 = Disable (No) 1 = Internal Dial 2 = Enable (Yes) (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign function key 86 (Set Private Call Refuse) to Enable/Disable trunks which are set in Program 14-01-27 to "1". Assign function key 87 (Set Caller ID Refuse) to Enable/Disable the Caller ID Refusal (trunks) which is set in Program 14-01-27 to "1".	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable (1) or Disable (0) an extension user ability to set or cancel Private Call Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension ability to set or cancel Caller ID Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
40-10-06	<b>Voice Announcement Service Option – Set VRS Message for Private Call Refuse (VRS Msg Private Call)</b>	Assign the VRS Message number used as Private Call Refuse. When Fixed message is set, VRS message guidance is: Service finished. Disconnect the line, please.	0~101 (0 = No message) (101 = Fixed message) (default = 0)		✓	

The Caller ID – Flexible Ringing Flowchart below helps define programming:





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## Operation

None

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# *Central Office Calls, Answering*

## Enhancements

With **Version 3000 or higher** system software, the appropriate line key page automatically displays for incoming calls on the DTL-8LD-1 (DESI-Less) and ITL-320C-1 terminals.

With **Version 7000 or higher** software, the Side Tone Auto Setup feature has been added.

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## Description

The system provides flexible routing of incoming CO (trunks) calls to meet the exact site requirements. This lets trunk calls ring and be answered at any combination of system extensions. A maximum of 200 trunks are available. For additional information on making trunks ring, refer to [Ring Groups on page 2-1271](#).

### Delayed Ringing

Extensions in a Ring Group can have delayed ringing for trunks. If the trunk is not answered at its original destination, it rings the DIL No Answer Ring Group (this ring group applies to DIL or non-DIL trunks). This could help a secretary that covers calls for their boss. If the boss does not answer the call, it rings the secretary's telephone after a programmable interval.

### Universal Answer

Universal Answer allows an employee to answer a call by going to any multiline terminal and dialing a unique Universal Answer code. The employee does not have to know the trunk number or dial any other codes to pick up the ringing trunk. You normally set up Universal Answer along with Universal Night Answer (refer to [Night Service on page 2-1133](#)). When a Universal Night Answer call rings the External Paging, an employee can answer the call from the first available telephone. You might also want to use Universal Answer in a noisy warehouse or machine shop where the volume of normal telephone ringing is not adequate. After hearing the ringing over the Paging, an employee can then easily pick up the call from a shop telephone.

The Automatic Off-Hook Answer of Universal Answer Call options (Program 20-10-07) determines whether or not the extension has the Auto Answer feature for ringing calls. This option allows a user to lift the handset to answer a ringing call; dialing the service code is unnecessary.

### Additional Trunk Ring Tones

Various ring tone patterns and melodies for incoming calls are available (Program 22-03-11); Ring Tone Patterns 1~4 and Melodies 1~5.

## Sidetone Volume Setup

This option allows system programming for the multiline terminal side tone volume. There are two levels, based on whether the connected trunk is a digital trunk or analog trunk.


## Side Tone Auto Setup

Per each analog trunk (or all analog trunks) the most suitable Codec Filter setting for Program 81-07 and Program 81-17 can be automatically adjusted using Programs 90-68-01 and 90-68-02.

During the trunk measurement process, the following LCD indications are provided:

- During measurement: Measurement (x/4)  
x = number of measurements
- Measure complete: Complete  
Error condition: Error  
Trunk busy: Busy

After successful measurement, the option to copy the same settings to all analog trunks is shown.

 *Side Tone Auto Setup available when the system is in an idle condition.*

## Conditions

- The incoming ring group assignment programmed in Program 41-03-01 overrides the setting in Program 22-05-01.
- Ringing calls can be picked up regardless of access map programming.
- An extension user can answer an outside call just by lifting the handset.
- Long Conversation Cutoff can disconnect incoming and outgoing CO calls after a set time period. Using the Warning Tone for Long Conversation feature allows users on outgoing calls to hear a warning tone prior to the call disconnecting.
- Line keys and Call Appearance (CAP) Keys simplify answering outside calls.
- If the Absent text message was set by the originating extension, the destination extension displays the assigned text message instead of the Reason for Transfer message.
- If an extension is assigned to a Trunk Access Map that has no access for a trunk, the extension can still retrieve parked calls on that trunk. The extension can also Group Call Pickup and Direct Call Pickup calls ringing another extension on that trunk.
- In **Version 3000 or higher** software the system can be programmed to blink the page number of a DT300/DT700 DESI-Less terminal when it receives an incoming call, or switch to the page the incoming call is on. Furthermore, a default page can be defined for the DESI-Less terminal to change to when it goes idle or when it has answered a call.

- DT300/DT700 terminals installed in a SV8100 with the IPK/IPK II Migration system do not support the DESI-Less page switching and blinking.
- DESI-Less screen page switching only applies to idle terminals. If a terminal is not idle, the screen will not switch if another call comes in until the phone goes idle.
- To adjust for proper audio quality, refer to Programs 81-07 and 81-17.
- For any incoming call (internal or external), only one MH240 wireless handset can be assigned to ring for the incoming call.

### **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

Any Trunk Blade (i.e., CD-4COTB, CD-2BRIA, CD-PRTA, etc.)

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## **Related Features**

**Automatic Call Distribution (ACD)**

**Call Forwarding**

**Direct Inward Dialing (DID)**

**Direct Inward Line (DIL)**

**Direct Inward System Access (DISA)**

**Directed Call Pickup**

**Do Not Disturb**

**Group Call Pickup**

**ISDN Compatibility****Line Preference****Long Conversation Cutoff****Night Service****Programmable Function Keys****Selectable Display Messaging****Warning Tone for Long Conversation**

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**Guide to Feature Programming**

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-XX	ETU Setup	Use program 10-03-XX to setup and confirm the basic configuration data for each blade. This program represents different data depending on the blade installed in the slot. Please refer the SV8100 Programming Manual for a more detailed description of this program.	The assigned data varies depending on the blade installed in the slot. Please refer to the SV8100 Programming Manual for a more detailed description of the 10-03-XX programs.		✓	
11-11-13	Service Code Setup (for Setup/Entry Operation) – Display Language Selection for Multiline Terminal	Select the service code which can be used at an extension to change the displayed language on a multiline terminal display.	MLT (default = 678)		✓	
11-12-30	Service Code Setup (for Service Access) – Specified Trunk Answer	If required, redefine the service code used to answer a specific trunk which is either ringing or on hold.	MLT, SLT (default = 672)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-02	<b>Basic Trunk Data Setup – Transmit Level</b>	Customize the transmit and receive levels of the CODEC Gain Types for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-03	<b>Basic Trunk Data Setup – Receive Level</b>	Customize the transmit and receive levels of the CODEC Gain Types for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-02-02	<b>Analog Trunk Data Setup – Ring Detect Type</b>	Set Extended Ring Detect or Immediate Ring Detect for the trunk. For T1 loop/ground start trunks, this option must be set to 1 for the trunks to ring and light correctly.	Trunks 1~200 0 = Normal/delayed 1 = Immediate Ringing (default = 1)		✓	
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to trunk groups then go to Program 14-06-01 below to set up Trunk Group Routing.	Trunks 1-200 Trunk Groups 1-100 Default = Trunks 1-200 assigned to trunk group 1 with priorities equal to the trunk number. Trunk 1 = Priority 1 Trunk 200 = Priority 200.		✓	
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified).		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	Set up the Trunk Access Maps. This sets the access options for trunks. Ring Group programming overrides Access Map programming.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-01-05	<b>Basic Extension Data Setup – Restriction for Outgoing Disable on Incoming Line</b>	Enable (1)/Disable (0) supervised dial detection for an extension.	0 = No 1 = Yes (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-01	<b>Multiline Telephone Basic Data Setup – Display Language Selection</b> (To select options 8~10, press either 8 or Recall, then press line keys 1~3. Key 1 is option 8, Key 2 is option 9, and Key 3 is option 10.)	Define the display language for multiline terminals. (To select options 8~10, press either 8 or Recall, then press line keys 1~3. Key 1 is option 8, Key 2 is option 9, and Key 3 is option 10.)	0 = Japanese 1 = English 2 = German 3 = French 4 = Italian 5 = Spanish 6 = Dutch 7 = Portuguese 8 = Norwegian 9 = Danish 10 = Swedish 11 = Turkish 12 = Latin American Spanish 13 = Romanian 14 = Polish (default = 1)		✓	
15-02-02	<b>Multiline Telephone Basic Data Setup – Trunk Ring Tone</b>	Set the tone (pitch) of the incoming trunk ring for the extension port you are programming.	1 = High 2 = Medium 3 = Low 4 = Ring Tone 1 5 = Ring Tone 2 6 = Ring Tone 3 7 = Ring Tone 4 8 = Ring Tone 5 (default = 2)		✓	
15-02-22	<b>Multiline Telephone Basic Data Setup – Multiple Incoming From Intercom and Trunk</b>	When this option is disabled, incoming calls to an extension indicate on any Hotline key for that extension as solid (busy). When this option is enabled, lighting is determined by the setting of Program 22-01-01 Incoming Call Priority. If set to trunk priority (1), the Hotline key lights solid when a trunk call rings in. If set to intercom priority (0), the Hotline key does not light for incoming trunk calls, but lights solid for intercom calls.	0 = Disable 1 = Enable (default = 1)		✓	
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign Trunk Access Maps to extensions.	Trunks 1~200 (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-25-01	<b>DESI-less Page Setup – Incoming Call Notify Event</b>	Enable/Disable the ability of a DESI-Less terminal to blink the page number that has an incoming call on one of the keys.	0 = Disable 1 = Enable (default = 1)		✓	
15-25-02	<b>DESI-less Page Setup – Incoming Call Automatic Screen Switching</b>	Enable/Disable the ability of a DESI-Less terminal to switch to the page that has an incoming call on one of the keys.	0 = Disable 1 = Enable (default = 1)		✓	
15-25-03	<b>DESI-less Page Setup – Idle Automatic Screen Switching</b>	Define or Disable the page to be automatically displayed when a DESI-Less terminal becomes idle.	0 = Disable 1 = Display page 1 2 = Display page 2 3 = Display page 3 4 = Display page 4 (default = 0)		✓	
15-25-04	<b>DESI-less Page Setup – Answer Automatic Screen Switching</b>	Define or Disable the page to be automatically displayed when a DESI-Less terminal answers a call.	0 = Disable 1 = Display page 1 2 = Display page 2 3 = Display page 3 4 = Display page 4 (default = 0)		✓	
20-02-09	<b>System Options for Multiline Telephones – Disconnect Supervision</b>	Enable/Disable disconnect supervision for the system trunks.	0 = Disable 1 = Enable (default = 1)		✓	
20-02-15	<b>System Options for Multiline Telephones – Caller ID Display Mode</b>	Define the Caller ID display mode for multiline terminals.	0 = Name and Number (Both) 1 = Name 2 = Number (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension user ability to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
21-01-15	<b>System Options for Outgoing Calls – Outgoing Disable on Incoming Line (Toll Restriction)</b>	Enable/Disable the Outgoing Disable on Incoming Line feature.	0 = Disable 1 = Enable (default = 0)		✓	
21-01-16	<b>System Options for Outgoing Calls – Supervise Dial Detection Timer</b>	With the Outgoing Disable on Incoming Line feature, if dial tone is not detected after the extension answers an incoming line, the system determines the call is unable to complete and releases the DTMF receiver.	0~64800 (seconds) (default = 20)		✓	
21-01-17	<b>System Options for Outgoing Calls – Restriction Digit in Outgoing Disable on Incoming Line</b>	With the Outgoing Disable on Incoming Line feature, determine the number of digits (0~9) to be dialed before the call should be disconnected.	Digits 0~9 (default = 4)		✓	
22-01-01	<b>System Options for Incoming Calls – Incoming Call Priority</b>	Determine if Intercom calls or trunk calls have answer priority when both are ringing simultaneously.	0 = Intercom call priority 1 = Trunk call priority (default = 1)		✓	
22-01-02	<b>System Options for Incoming Calls – Incoming Call Ring No Answer Alarm</b>	Enable/Disable the Incoming Call RNA Alarm. If enabled, the ring cadence changes for a call that rings longer than the interval set in Program 22-01-03.	0 = Disable 1 = Enable (default = 0)		✓	
22-01-03	<b>System Options for Incoming Calls – Ring No Answer Alarm Time</b>	Set the Ring No Answer Alarm time. If a trunk rings a multiline terminal longer than this time, the system changes the ring cadence.	0~64800 (seconds) (default = 60)		✓	
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this interval diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Set the feature type for the trunk you are programming.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-03-01	<b>Trunk Ring Tone Range – Ring Tone Pattern</b>	Assign Ring Tone Ranges to trunks. Trunks ring extensions according to the Ring Tone Range selected in Program 22-03-0 and the settings made with either Service Code 720 or Program 15-02-02.	0~12 (Ring Tone Pattern 1~4) (Melody 1~ Melody 5) (Ring Tone Pattern 5~8) (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions to ring groups.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	To have the trunks ring extensions, assign trunks to a Ring Group. The incoming ring group assignment programmed in Program 41-03-01 overrides the setting in this program.	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
22-06-01	<b>Normal Incoming Ring Mode</b>	Indicate whether the trunks in the Ring Group assigned in Program 22-04-01 should ring or not ring.	0 = No Ring 1 = Ring (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-07-01	<b>DIL Assignment</b>	Assign the destination extension for each DIL incoming trunk (001~200).  For this selection to work, set Program 22-02-01 to 4 (DIL).	Extension Number (maximum eight digits) (default not assigned)		✓	
22-08-01	<b>DIL/IRG No Answer Destination</b>	If an incoming trunk call rings longer than the DIL No Answer Time (Program 22-01-04), it routes to the destination you specify in this option. Determine if the destination should be a Ring Group, In-Skin/External Voice Mail, or Central Voice Mail.	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) (default = 1)		✓	
23-03-01	<b>Universal Answer/Auto Answer</b>	Use this program to let an extension user automatically answer trunk calls that ring other extensions. When the user lifts the handset, they automatically answer the ringing calls based on Trunk Group Routing programming (defined in Program 14-06).	Maximum eight digits Day/Night Mode 1~8 Route Table Number 0~100 (default = 0)		✓	
82-08-01	<b>Sidetone Volume Setup</b>	Adjust of the multiline terminal side tone volume. There are two levels, based on whether the connected trunk is a digital trunk or analog trunk.	Input (0~9) Digital Sidetone Level (second column) Analog Sidetone Level (third column) 0 -54 (dB) -54 (dB) 1 -48 (dB) -54 (dB) 2 -42 (dB) -54 (dB) 3 -36 (dB) -48 (dB) 4 -30 (dB) -42 (dB) 5 -24 (dB) -36 (dB) 6 -18 (dB) -30 (dB) 7 -12 (dB) -24 (dB) 8 -12 (dB) -18 (dB) 9 -12 (dB) -12 (dB)		✓	

## Operation

### To answer an incoming trunk call:

1. Lift the handset.

### To use Universal Answer to answer a call ringing over the Paging system:

1. Go off-hook.
  -  Depending on system programming, this may answer the call and you can skip Step 2.
2. Dial **#0**.
  -  If you hear error tone, your extension Class of Service prevents Universal Answer.

### To listen to the incoming trunk ring choices:

1. Press **Speaker**.
2. Dial **711 + 2**.
3. Select the ringing (**1~8**) and tone range (**1~4**) you want to check.
4. Go back to step 3 to listen to additional choices or press **Speaker** to hang up.

### To change the ringing of your incoming trunk:

1. Press **Speaker**.
2. Dial **720 + 2**.
3. Select the ringing (**1~8**).
4. Press **Speaker** to hang up.



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## Central Office Calls, Placing

### Enhancements

With <b>Version 7000 or higher</b> software, the Side Tone Auto Setup feature has been added.
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### Description

The system provides flexibility in the way each extension user can place outgoing trunk calls. This lets you customize the call placing options to meet site requirements and each individual's needs. To place a call the user can:

- Press Line Keys
- Press a Trunk Group Key
- Press a Trunk Group Routing (dial 9) Key
- Dial a code for a specific trunk (#9 + the trunk number)
- Dial a code for a Trunk Group (704 + group number)
- Dial a code for Trunk Group Routing or ARS (9)
- Dial an Alternate Trunk Route Access Code (which you must define)
- Press or Use a Speed Dial bin

There are 200 available trunks.

### Trunk Port Disable

The system provides a service code (default: 645) which can be used by an extension user to block a trunk for outgoing calls. The user which busied out the trunk still has access to it. All other users are blocked from seizing it to place an outgoing call. The trunk, however, can still be answered by any user programmed with the trunk access.

### Sidetone Volume Setup

Allows the system programming for the multiline terminal side tone volume. There are two levels, based on whether the connected trunk is a digital trunk or analog trunk.


### Side Tone Auto Setup

Per each analog trunk (or all analog trunks) the most suitable Codec Filter setting for Program 81-07 and Program 81-17 can be automatically adjusted using Programs 90-68-01 and 90-68-02.

During the trunk measurement process, the following LCD indications are provided:

- During measurement: Measurement (x/4)  
x = number of measurements
- Measure complete: Complete  
Error condition: Error  
Trunk busy: Busy

After successful measurement, the option to copy the same settings to all analog trunks is shown.

 *Side Tone Auto Setup available when the system is in an idle condition.*

## Conditions

- If the trunk name seize display is enabled in programming, the Call Timer starts automatically after the user places a trunk call. Disabling the trunk name seize display also disables the Call Timer.
- The system can automatically select the correct line to use based on the number dialed and the time.
- With Automatic Handsfree, an extension user can press a line key to place a trunk call without lifting the handset or pressing Speaker. Users without Automatic Handsfree can preselect a line key before lifting the handset or pressing Speaker.
- Long Conversation Cutoff can disconnect incoming and outgoing CO calls after a set time. Using the Warning Tone for Long Conversation feature allows users on outgoing calls to hear a warning tone prior to the call disconnecting.
- An extension Toll Class of Service may prevent dialing certain numbers.
- Dialing 9 or any other trunk access code after dialing an extension, terminates the intercom call and seizes a trunk.
- Phones that have an APR/APA installed do not pass voice to a trunk until the interdigit time expires (Program 21-01-03).
- Setting Program 14-02-11 to On may cause a slight delay in dial tone while loop current is returned.
- When Account Codes are enabled, the user must press the \* three times before the \* character is passed to the telco. The system recognizes the initial \* as the beginning of an Account Code entry, the second \* as the end of an Account Code entry, and the third \* will be passed to telco.
- To adjust for proper audio quality, refer to Programs 81-07 and 81-17.

## **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

Any Trunk Blade (i.e., CD-4COTB, CD-2BRIA, CD-PRTA, etc.)

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## **Related Features**

**Alphanumeric Display**

**Automatic Route Selection**

**Call Appearance (CAP) Keys**

**Code Restriction**

**Dial Tone Detection**

**Handsfree Answerback/Forced Intercom Ringing**

**Long Conversation Cutoff**

**Microphone Cutoff**

**Programmable Function Keys**

**Trunk Group Routing**

**Trunk Groups**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-XX	ETU Setup	Use program 10-03-XX to setup and confirm the basic configuration data for each blade. This program represents different data depending on the blade installed in the slot. Please refer the SV8100 Programming Manual for a more detailed description of this program.	The assigned data varies depending on the blade installed in the slot. Please refer to the SV8100 Programming Manual for a more detailed description of the 10-03-XX programs.		✓	
11-01-01	System Numbering	Set system numbering plan.	Refer to UNIVERGE SV8100 Programming Manual.		✓	
11-09-01	Trunk Access Code	If required, change the single-digit Trunk Access Code (normally 9). If you change this code, you must also review the settings in Program 11-01-01 for the new code selected.	Dial (up to four digits) (default = 9)		✓	
11-09-02	Trunk Access Code – 2nd Trunk Route Access Code	Assign the Service Code set up in Program 11-01-01 for Alternate Trunk Route Access.	Dial (up to four digits) (default not assigned)		✓	
11-10-27	Service Code Setup (for System Administrator) – Trunk Port Disable for Outgoing Calls	Define the service code which should be used by an extension user to block a trunk from being used for outgoing calls.	MLT, SLT (default = 645)		✓	
11-11-13	Service Code Setup (for Setup/Entry Operation) – Display Language Selection for Multiline Terminal	Select the service code which can be used at an extension to change the displayed language on a multiline terminal display.	MLT (default = 678)		✓	
11-12-01	Service Code Setup (for Service Access) – Bypass Call	Define the service code for Activating Call Forwarding/Do Not Disturb Override. This code is available only if you disable the voice mail Single Digit dialing code in Program 11-16-09.	MLT, SLT (default = 707)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-14	<b>Service Code Setup (for Service Access) – Trunk Group Access</b>	Define the service code which should be used by an extension user to select outgoing Trunk Group.	MLT, SLT (default = 704)		✓	
14-01-01	<b>Basic Trunk Data Setup – Trunk Name</b>	Set the names for trunks. The trunk name displays on a multiline terminal for incoming and outgoing calls.	Up to 12 Characters Line 001 Line 002 Line 003 : Line 200		✓	
14-01-02	<b>Basic Trunk Data Setup – Transmit Level</b>	Customize the transmit and receive levels of the CODEC Gain Types for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-03	<b>Basic Trunk Data Setup – Receive Level</b>	Customize the transmit and receive levels of the CODEC Gain Types for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-07	<b>Basic Trunk Data Setup – Outgoing Calls</b>	Allow or Deny outgoing calls on the trunk you are programming.	0 = Deny (No) 1 = Allow (Yes) (default = 1)		✓	
14-01-10	<b>Basic Trunk Data Setup – DTMF Tones for Outgoing Calls</b>	For each trunk, Enable/Disable the ability to hear the DTMF of the digits dialed when placing the outgoing call.	0 = Disable 1 = Enable (default = 0)		✓	
14-02-05	<b>Analog Trunk Data Setup – Dial Tone Detection for Manually Accessed Trunks</b>	Enable/Disable dial tone detection for directly accessed trunks. If disabled, the system outdials on the trunks without monitoring for dial tone.	0 = Dial Tone Detection Not Used 1 = Dial Tone Detection Used (default = 0)		✓	
14-02-11	<b>Analog Trunk Data Setup – Next Trunk in Rotary if No Dial Tone</b>	Enable/Disable the system ability to skip over a trunk if dial tone is not detected. This option pertains to calls placed using Call Appearance (CAP) Keys, Speed Dial, Automatic Route Selection (ARS), Last Number Redial or Save Number dialed. It does not pertain to line key or Direct Trunk Access calls.	0 = Disable 1 = Enable (default = 0)		✓	
14-02-14	<b>Analog Trunk Data Setup – Loop Start/Ground Start</b>	Select Loop start or Ground start for the trunk.	0 = Loop Start (Loop) 1 = Ground Start (Ground) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to Trunk Groups. You can also assign the outbound priority for trunks within the group. When users dial up the trunk group, they seize the trunks in the order you specify in the outbound priority entry. Ⓨ <i>At default, all group are assigned to Trunk Group 1.</i>	Trunk Group Number: 0~100  Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order)	✓		
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	Set up the Trunk Access Maps. This sets the access options for trunks. Ring Group programming overrides Access Map programming.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold)		✓	
15-02-01	<b>Multiline Telephone Basic Data Setup – Display Language Selection</b> (To select options 8~10, press either 8 or Recall, then press line keys 1~3. Key 1 is option 8, Key 2 is option 9, and Key 3 is option 10.)	Define the display language for multiline terminals.	0 = Japanese 1 = English 2 = German 3 = French 4 = Italian 5 = Spanish 6 = Dutch 7 = Portuguese 8 = Norwegian 9 = Danish 10 = Swedish 11 = Turkish 12 = Latin American Spanish 13 = Romanian 14 = Polish (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-08	<b>Multiline Telephone Basic Data Setup – Automatic Handsfree</b>	Set whether pressing a key accesses a One-Touch Key or Preselects the key.	0 = Preselect 1 = One-Touch (Automatic Handsfree) (default = 1)		✓	
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign Trunk Access Maps to extensions.	Trunks 1~200 (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-02-06	<b>System Options for Multiline Telephones – Preselection Time</b>	Set the preselection time When a multiline terminal user preselects a line key, the system remembers the preselection for this time.	0~64800 (seconds) (default = 5 seconds)		✓	
20-02-09	<b>System Options for Multiline Telephones – Disconnect Supervision</b>	Enable/Disable disconnect supervision for the system trunks.	0 = Disable 1 = Enable (default = 1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On an extension ability to use the Trunk Port Disable feature.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turns Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
21-01-15	<b>System Options for Outgoing Calls – Outgoing Disable on Incoming Line (Toll Restriction)</b>	Enable/Disable the Outgoing Disable on Incoming Line feature.	0 = Disable 1 = Enable (default = 0)		✓	
21-01-16	<b>System Options for Outgoing Calls – Supervise Dial Detection Timer</b>	With the Outgoing Disable on Incoming Line feature, if dial tone is not detected after the extension answers an incoming line, the system determines the call is unable to complete and releases the DTMF receiver.	0~64800 (seconds) (default = 20)		✓	
21-01-17	<b>System Options for Outgoing Calls – Restriction Digit in Outgoing Disable on Incoming Line</b>	With the Outgoing Disable on Incoming Line feature, determine the number of digits (0~9) to be dialed before the call should be disconnected.	Digits 0~9 (default = 4)		✓	
21-02-01	<b>Trunk Group Routing for Extensions</b>	Assign Program 14-06 routes to extensions.	0~100 (0 = No Setting) (default = 1)		✓	
21-15-01	<b>Individual Trunk Group Routing for Extensions</b>	Designate the trunk route accessed when a user dials the Alternate Trunk Route Access Code. Refer to Trunk Group Routing to set up outbound routing.	0~100 (0 = No Setting) (default = 0)		✓	
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	Timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer, outgoing from trunk, Tandem Trunking). When this time expires, a warning tone is heard.	0~64800 (seconds) (default = 1800)		✓	
24-02-10	<b>System Options for Transfer – Disconnect Trunk to Trunk Timer</b>	Timer starts after the Warning Tone is heard (24-02-07). When time expires, the trunk is disconnected.	0~64800 (seconds) (default = 0)			


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
82-08-01	Sidetone Volume Setup	Adjust the multiline terminal side tone volume. There are two levels, based on whether the connected trunk is a digital trunk or analog trunk.	0-9 Digital Sidetone Level 0 = -54 (db) 1 = -48 (db) 2 = -42 (db) 3 = -36 (db) 4 = -30 (db) 5 = -24 (db) 6 = -18 (db) 7 = -12 (db) 8 = -12 (db) 9 = -12 (db) Analog Sidetone Level 0 = -54 (db) 1 = -54 (db) 2 = -54 (db) 3 = -48 (db) 4 = -42 (db) 5 = -36 (db) 6 = -30 (db) 7 = -24 (db) 8 = -18 (db) 9 = -12 (db)		✓	

## Operation

### To place a call over a trunk group:

1. Go off-hook.
  2. Dial **704**.
  3. Dial trunk group number (**001~100**).
  4. Dial the number.
- OR -
1. At the multiline terminal, press the **trunk group** key (Program 15-07-01 or SC 751: \*02 + group).
  2. Dial the number.


**To place a call using Trunk Group Routing:**

1. Go off-hook.
2. Dial **9**.  
 *If your system has an Alternate Trunk Route Access code, you may dial that instead.*
3. Dial the number.  
**- OR -**
  1. At the multiline terminal, press the **Trunk Group Routing** key (Program 15-07-01 or SC 752: \*02 plus trunk group).
  2. Dial the number.

**To place a call over a specific trunk:**

1. Dial **#9**.
2. Dial the line number (e.g., 005 for line 5).
3. Dial the number.  
**- OR -**
  1. At the multiline terminal, press line key (Program 15-07-01 or SC 752: \*01 001 to 200).
  2. Dial the number.

**To busy out a trunk from outbound usage:**

1. Press **Speaker + 645 + Trunk Number (001~200) + 1**.  
 *The user which busied out the trunk still has access to it. All other users are blocked from seizing it to place an outgoing call. The trunk, however, can still be answered by any user programmed with the trunk access.*

**To Remove a Trunk from a Busied Out State:**

1. Press **Speaker + 645 + Trunk Number (001~200) + 0**.

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## *Class of Service*

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### **Description**

Class of Service (COS) sets various features and dialing options (called items) for extensions. The system allows any number of extensions to share the same Class of Service. An extension can have a different Class of Service for each of the Night Service modes. This lets you program a different set of dialing options for daytime operation, nighttime operation and even during lunch breaks. An extension Class of Service can be changed in system programming or via a Service Code (normally 677). There are 15 available Classes of Service.

### **Conditions**

- Before assigning a new COS, make sure the new COS matches the old COS or you may enable options, which the extension should not have or remove options, which it should have.
- An extension can have a different Class of Service for each Service mode. At default, the Mode names are assigned as follows:
  - Mode 1 = No setting
  - Mode 2 = Night
  - Mode 3 = Midnight
  - Mode 4 = Rest
  - Mode 5 = Day2
  - Mode 6 = Night2
  - Mode 7 = Midnight2
  - Mode 8 = Rest2
- If a user dials a number not programmed in ARS, Program 26-01-03 determines if the system should route over the trunk group settings defined in Program 21-02 or play an error tone.
- When using ARS Class of Service, with Program 26-01-03 set to (1) "Play Warning Tone", any trunk (except a CCIS trunk) pointed or transferred to a virtual that is Call Forward Off-Premise will not complete. For a virtual to Call Forward Off-Premise, Program 26-01-03 must be set to "Route to trunk group" and the call will follow the trunk group settings of the trunk, assigned in Program 21-03.
- When using ARS Class of Service, with Program 26-01-03 set to (1) "Play Warning Tone", a CCIS trunk pointed or transferred to a virtual that is Call Forward Off-Premise will always follow ARS Class 1 routing properties.

## Default Setting

- The attendant (extension 101) has Class of Service 15 in all Night Service modes. All other extensions have Class of Service 1 in all Night Service modes.

If changing Class of Service via Service Code:

- An extension can use Service Code 677 to change another extension Class of Service (Program 20-13-28 = 1).
- An extension can automatically block another extension attempt to change their Class of Service via Service Code 677 (Program 20-13-28 = 0).
- The default Service Code for this option is 677 (Program 11-11-24 = 677).

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

### Night Service

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-24	<b>Service Code Setup (for Setup/Entry Operation) – Change Station Class of Service</b>	If required, change the Service Code a user dials to change an extension Class of Service.	MLT (default = 677)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-01	<b>Class of Service Options (Administrator Level) – Manual Night Service Enabled</b>	Turn Off or On an extension ability to manually Switch the Night Mode (Service Code 718). This option must be enabled for an extension to be able to display the Night indication.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-02	<b>Class of Service Options (Administrator Level) – Changing the Music on Hold Tone</b>	Turn Off or On an extension user ability to change the Music on Hold tone.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-03	<b>Class of Service Options (Administrator Level) – Time Setting</b>	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-07-04	<b>Class of Service Options (Administrator Level) – Storing Speed Dialing Entries</b>	Turn Off or On an extension to store System or Group Speed Dialing numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-05	<b>Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On an extension user ability to use the Trunk Port Disable feature.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase and listen to VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Determine if the Accumulated Extension Data is included in the SMDR printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Determine if the Department Group (STG) Data is included in the SMDR printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Determine if the Accumulated Account Code Data is included in the SMDR printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-23	<b>Class of Service Options (Administrator Level) – CO Message Waiting Indication Callback Number Programming</b>	Enable (1)/Disable (0) an extension ability to receive CO Message Waiting Indication.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable (1) or Disable (0) an extension user ability to set or cancel Private Call Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension ability to set or cancel Caller ID Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/Disable an extension user ability to set or cancel dial-in mode switch.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-27	<b>Class of Service Options (Administrator Level) – Do-Not-Call Administrator</b>	Enable/Disable an extension user ability to set or cancel do not call administrator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-30	<b>Class of Service Options (Administrator Level) – Date Setting</b>	Enable/Disable an extension user ability to set the Date using the service code defined in 11-10-41.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-03	<b>Class of Service Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-04	<b>Class of Service Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-05	<b>Class of Service Options (Outgoing Call Service) – Dial Number Preview (Preset Dial)</b>	Turn Off or On extension user ability to use Dial Number Preview.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-07	<b>Class of Service Options (Outgoing Call Service) – Repeat Redial</b>	Turn Off or On an extension user ability to use Repeat Redial.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension user ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Ringdown Extension for extensions with this COS.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-10	<b>Class of Service Options (Outgoing Call Service) – Signal/Voice Call</b>	Turn Off or On an extension allowing it to force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enabling this option prevents callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators are to be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-14	<b>Class of Service Options (Outgoing Call Service) – Call Address Information</b>	Enable/ Disable Call Address Information for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On an extension ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-19	<b>Class of Service Options (Outgoing Call Service) – Hotline for SPK</b>	Turn Off or On an extension user ability to activate hotline or ringdown when pressing the Speaker key.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-20	<b>Class of Service Options (Outgoing Call Service) – Hot Key Pad</b>	Turn Off or On an extension user ability to make a call by just dialing the number without first going off-hook.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-21	<b>Class of Service Options (Outgoing Call Service) – Automatic Trunk Seizing by Pressing Speaker Key</b>	Enable/Disable the ability to access trunks when going off-hook by pressing the speaker key for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-22	<b>Class of Service Options (Outgoing Call Service) – Voice Over to busy Virtual Extension</b>	Enable/Disable the ability to make voice over to a busy virtual extension for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a line or Call Appearance (CAP) Keys available for the second call and a previous call is ringing the extension but has not been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-03	<b>Class of Service Options (Incoming Call Service) – Sub Address Identification</b>	Define whether or not an extension displays the Caller Sub-Address.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-04	<b>Class of Service Options (Incoming Call Service) – Notification for Incoming Call List Existence</b>	Determine whether or not the CHECK LIST message is displayed to indicate a missed call.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminals LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-08	<b>Class of Service Options (Incoming Call Service) – Calling Party Information</b>	Turn Off or On and extension user ability to display calling party information on CCIS calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Turn Off or On Group Call Pickup for calls ringing an extension Pickup Group as well as ring group calls (Service Code *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension ability to pick up a call ringing into a Pickup Group (Service Codes *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-10-09	<b>Class of Service Options (Answer Service) – Call Pickup Callback</b>	Turn Off or On an extension user ability to use Call Pickup to Pick up Callback calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-10	<b>Class of Service Options (Answer Service) – Answer Preset</b>	Enable/Disable Answer Preset for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-01	<b>Class of Service Options (Hold/Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-02	<b>Class of Service Options (Hold/Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-03	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-04	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-05	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-06	<b>Class of Service Options (Hold/Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-07	<b>Class of Service Options (Hold/Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an extension incoming Transfer pre-answer display.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension ability to initiate a Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension ability to pick up a call on Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn Off or On an extension user ability to set up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension ability to have a call which recalls from hold transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turns Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to or erase the Personal Greeting Message.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On the ability of an extension in a Department Group to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	Allow (0)/Deny (1) answered Transferred calls from recalling the originating extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow normal or extended Park (0 = Normal for Program 24-01-06, 1 = Extended for Program 24-01-07).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension ability to receive Callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem/conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-22	<b>Class of Service Options (Hold/Transfer Service) – Restricted Unsupervised Conference</b>	Allow/Deny an extension user to initiate a Trunk-to-Trunk Transfer (Tandem Trunking).	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On an extension user ability to set and cancel Call Forwarding for a CAR or Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)		✓	
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn On or Off an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-27	<b>Class of Service Options (Hold/Transfer Service) – Call Park Automatically Search</b>	Turn Off or On using the Call Park Automatically Search option.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-12-02	<b>Class of Service Options (Charging Cost Service) – Advice of Charge</b>	ISDN-AOC Turn Off or On a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-12-03	<b>Class of Service Options (Charging Cost Service) – Cost Display (TTU)</b>	ISDN billing information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn Off or On the ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn On or Off the ability of an extension to receive Off-Hook Signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension ability to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On an extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-09	<b>Class of Service Options (Supplementary Service) – Privacy Release</b>	Turn Off or On an extension user ability to initiate a Voice Call Conference.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enables the extension Barge-In Mode to be Speech mode or Monitor mode (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension user ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On the extension ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-18	<b>Class of Service Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-19	<b>Class of Service Options (Supplementary Service) – Selectable Display Messaging (Text Messaging)</b>	Turn Off or On an extension user ability to use Selectable Display Messaging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program the name.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On the ability to display the detail state of called party.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Turn Off or On a user ability to press a line key to barge into an outside call. The Barge-In feature must be enabled if this option is used.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, you can call a busy extension which is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be set to off for this option to work.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On the ability of an extension COS to be changed via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension user to turn Background Music on and off.	0 = Deny 1 = Allow (default = 1 for COS 1~15)		✓	
20-13-31	<b>Class of Service Options (Supplementary Service) – Connected Line Identification (COLP)</b>	Define the supplementary feature availability for each extension Class of Service (COS).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Turn Off or On an extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor's Position Enhancement</b>	This option must be on for the operator to use service codes in Program 11-13-10 through Program 11-13-13.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn Off or On a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-38	<b>Class of Service Options (Supplementary Service) – Headset Ringing for SLT</b>	Turn Off or On an extension user ability to use the Headset ringing.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension Class of Service. Any extension which has this option enabled also hears the queue alarm.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-41	<b>Class of Service Options (Supplementary Service) – Voice Mail Message Indication on DSS</b>	Turn Off or On the Voice Mail Message Indication for an extension on a DSS console.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension user ability to use the Station Relocation feature.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-44	<b>Class of Service Options (Supplementary Service) – Live Monitor Enabling</b>	Turn Off or On an extension ability to use Live Monitor.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-45	<b>Class of Service Options (Supplementary Service) – MIC Key Mode While Call Monitoring</b>	Set per class of service, when in Call Monitoring Mode determines if the monitored parties receives the barge in alert tone when Coaching Mode is enabled.	0 = Enable 1 = Disable (default = 1 for COS 1~15)		✓	
20-13-47	<b>Class of Service Options (Supplementary Service) – Station Number Display</b>	Determine if a station Number is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Number is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	








Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-50	<b>Class of Service Options (Supplementary Service) – AIC Agent display which call is from</b>	Determine if the station logged in via AIC codes shows which queue the call is coming from.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name appear in the directory</b>	Determine if an extension name and number are listed (On) or unlisted (Off) in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-52	<b>Class of Service Options (Supplementary Service) – VoIP All DSP Busy Display</b>	Enable/Disable the All DSP Busy alarm displayed on the LCD when the caller makes an IP call and there is no VoIP DSP resource.	0 = Disable 1 = Enable (default = 1 for COS 1~15)		✓	
20-14-01	<b>Class of Service Options for DISA/E&amp;M – First Digit Absorption (Delete First Digit Dialed)</b>	For Tie Lines, Enable/Disable the ability to absorb (ignore) the first incoming digit. Use this to make the tie trunk compatible with 3- and 4-digit Tie Line service. This option does not apply to DISA.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-02	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Routing/ARS Access</b>	Enable/Disable a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-03	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Access</b>	Enable/Disable a DISA or tie trunk caller ability to access trunk groups for outside calls (Service Code 704).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-04	<b>Class of Service Options for DISA/E&amp;M – Outgoing System Speed Dial</b>	Enable/Disable a DISA or tie trunk caller's ability to use System Speed Dialing.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-05	<b>Class of Service Options for DISA/E&amp;M – Operator Calling</b>	Enable/Disable a DISA or tie trunk caller ability to dial 0 for the telephone system operator.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-06	<b>Class of Service Options for DISA/E&amp;M – Internal Paging</b>	Enable/Disable a DISA or tie trunk caller's ability to use the telephone system Internal Paging.	0 =Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-14-07	Class of Service Options for DISA/E&M – External Paging	Enable/Disable a DISA or tie trunk caller ability to use the telephone system External Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-08	Class of Service Options for DISA/E&M – Direct Trunk Access	Enable/Disable a DISA or tie trunk caller ability to use Direct Trunk Access (Service Code 715).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-09	Class of Service Options for DISA/E&M – Forced Trunk Disconnect <Not for ISDN T-point>	Enable/Disable a tie trunk caller ability to use Forced Trunk Disconnect (Service Code *26). This option is not available to DISA callers.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-10	Class of Service Options for DISA/E&M – Call Forward Setting by Remote via DISA	Enable/Disable a DISA callers ability to use the Call Forward service codes (Program 11-11-01 through Program 11-11-05).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-11	Class of Service Options for DISA/E&M – DISA/Tie Trunk Barge-In	Enable/Disable a DISA or tie trunk user from using the Barge-In feature.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-12	Class of Service Options for DISA/E&M – Retrieve Park Hold	Turn Off or On the ability for a DISA caller to retrieve parked or held calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To change an extension Class of Service (via Service Code 677):

- Press **Speaker**.
- Dial **677**.
- Dial the extension number you want to change.
  -  *You see: MODE1:nn*  
Press **Hold** to leave the current value unchanged.  
*The extension you dial may be set to block your attempt to change their Class of Service.*
- Enter the Day 1 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
  -  *You see: MODE2:nn*  
Press **Hold** to leave the current value unchanged.

- 
- 
5. Enter the Night 1 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
    -  *You see: MODE3:nn*  
*Press **Hold** to leave the current value unchanged.*
  6. Enter the Midnight 1 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
    -  *You see: MODE4:nn*  
*Press **Hold** to leave the current value unchanged.*
  7. Enter the Rest 1 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
    -  *You see: MODE5:nn*  
*Press **Hold** to leave the current value unchanged.*
  8. Enter the Day 2 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
    -  *You see: MODE6:nn*  
*Press **Hold** to leave the current value unchanged.*
  9. Enter the Night 2 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
    -  *You see: MODE7:nn*  
*Press **Hold** to leave the current value unchanged.*
  10. Enter the Midnight 2 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
    -  *You see: MODE8:nn*  
*Press **Hold** to leave the current value unchanged.*
  11. Enter the Rest 2 Mode Class of Service for the extension you selected in step 3 and press **Hold**.
    -  *You see: ICM Dial*
  12. Go to step 3 and enter another extension number.
    - OR -
    - Press **Speaker** to hang up.

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## *Clock/Calendar Display*

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### **Description**

The system uses Clock/Calendar Display for:

- |   |   |
|---|---|
| <input type="checkbox"/> Central Office Calls (Access Maps) | <input type="checkbox"/> Station Message Detail Recording |
| <input type="checkbox"/> Class of Service (Class)           | <input type="checkbox"/> System Reports                   |
| <input type="checkbox"/> Direct Inward Lines                | <input type="checkbox"/> Toll Restriction (Class)         |
| <input type="checkbox"/> Display Telephones                 | <input type="checkbox"/> Trunk Group Routing              |
| <input type="checkbox"/> Night Service (Automatic)          | <input type="checkbox"/> Voice Mail                       |
| <input type="checkbox"/> Programmable Trunk Parameters      | <input type="checkbox"/> Voice Response System            |
| <input type="checkbox"/> Ring Groups                        |   |

Using the Daylight Savings Setup program, you can determine whether the system should automatically adjust the system time for daylight savings time/standard time changes.

### **Clock Adjustment**

The system can be programmed to automatically adjust the system clock on a nightly basis. This feature allows you to make adjustments should the system cabinet regularly lose or gain time.

### **Conditions**

- The system retains the Clock/Calendar Display after a power failure or system reset.
- Changing the time may change the current Class of Service (COS) service depending on the COS mode setup.
- You can program the system to automatically switch modes.
- Single line telephones cannot set the time and date.
- Changing the system time automatically changes the VM8000 InMail time.

### **Default Setting**

Enabled

## System Availability

### Terminals

All Multiline Terminals with Display

### Required Component(s)

None

## Related Features

**Class of Service**

**Night Service**

**Single Line Telephones, Analog 500/2500 Sets**

**VM8000 InMail**

**Voice Mail Integration (Analog)**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-01-01	Time and Date – Year	Enter two digits (00~99) for the year.	00~99 (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-01-02	Time and Date – Month	Enter two digits (01~12) for the month.	01~12 (default not assigned)	✓		
10-01-03	Time and Date – Day	Enter two digits (01~31) for the day.	01~31 (default not assigned)	✓		
10-01-04	Time and Date – Week	Enter the digit (1 = Sunday, 7 = Saturday) to indicate the day of the week.	1 = Sunday, 7 = Saturday (default not assigned)	✓		
10-01-05	Time and Date – Hour	Enter two digits (00~23) for the hour.	00~23 (default not assigned)	✓		
10-01-06	Time and Date – Minute	Enter two digits (00~59) for the minutes.	00~59 (default not assigned)	✓		
10-01-07	Time and Date – Second	Enter two digits (00~59) for the seconds.	00~59 (default not assigned)	✓		
10-24-01	Daylight Savings Setup – Daylight Savings Mode	Enable/Disable the system ability to adjust the time for daylight savings/standard time.	0 = Disable 1 = Enable (default = 1)		✓	
10-24-02	Daylight Savings Setup – Time for Daylight Savings	Enter the time of day the system should adjust for daylight savings time (0000~2359).	00:00~23:59 (default = 02:00)		✓	
10-24-03	Daylight Savings Setup – Start of Month (Summer Time)	Enter the month of system should adjust the time for daylight savings time (01~12).	01~12 1 = Jan 2 = Feb, etc. (default = 3)		✓	
10-24-04	Daylight Savings Setup – Start of Week	Enter the week of the month the system should adjust the time for daylight savings time.	0~5 0 = Last Week of Month (default = 2)		✓	
10-24-05	Daylight Savings Setup – Start of Week Day	Enter the day of the week the system should adjust the time for daylight savings time.	1~7 (1 = Sun, 2 = Mon, etc.) (default = 1)		✓	
10-24-06	Daylight Savings Setup – End of Month	Enter the month of system should adjust the time for standard time.	01~12 (default = 11)		✓	
10-24-07	Daylight Savings Setup – End of Week	Enter the week of the month the system should adjust the time for standard time.	0~5 0 = Last Week of the Month (default = 1)		✓	
10-24-08	Daylight Savings Setup – End of Week Day	Enter the day of the week the system should adjust the time for daylight savings time.	1~7 (1 = Sun, 2 = Mon, etc.) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-07	<b>System Options for Multiline Telephones – Time and Date Display Mode</b>	Select the display mode (type 1~8) for Time and Date (i.e., time and date format).	1~8 Type 1 = (12 hour) 10 MAR TUE 3:15PM Type 2 = (12 hour) 3:15PM MAR 10 TUE Type 3 = (12 hour) 3-10 TUE 3:15 PM Type 4 = (12 hour) 3:15PM TUE 10 MAR Type 5 = (24 hour) 10 MAR TUE 15:15 Type 6 = (24 hour) 15:15 MAR 10 TUE Type 7 = (24 hour) 3-10 TUE 15:15 Type 8 = (24 hour) 15:15 TUE 10 MAR (default = 3)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-07-03	<b>Class of Service Options (Administrator Level) – Time Setting</b>	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

*The date must be set in system programming (10-01).*

### To set the system Time:

1. Press **Speaker**.
2. Dial **728**.
3. Dial two digits for the hour (24 hour clock, 13 = 1:00 PM).
4. Dial two digits for the minutes (00~59).
5. Press **Speaker** to hang up.

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## *CO Message Waiting Indication*

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### **Description**

This feature provides a Message Waiting indication when Voice Mail from the Central Office is used. The CO provides this feature using Visual Message Waiting Indication (VMWI) standards. Visual Message Waiting Indication alerts a user that a message is present in their voice mail box. When VMWI is provided, the UNIVERGE SV8100 provides a flashing LED on a line key assigned with the trunk appearance.

The VMWI standard supported by the UNIVERGE SV8100 includes:

- Type 1 Caller ID, FSK without power ringing using the MDMF protocol
- Type 1 Caller ID, FSK without power ringing using the SDMF protocol

### **Conditions**

- When a new message is stored in the CO Voice Mail system, the LED flashes green (0.5 sec ON, 0.5 sec OFF) on the Direct Trunk Appearance line key at stations assigned for this feature.
- When the Direct Trunk Appearance line key is used by other ports during green blink (flutter), the line key becomes in use and LED is turned on red.
- When the station is using a DTL-8LD telephone, <> flashes on the LCD of a Direct Trunk appearance line key to indicate a new message is stored in the CO voice mail system.
- A local Voice Mail system and this feature can be supported in the same system.
- When power outage or some other reason causes the Central Office – Message Waiting Indication (CO-MWI) to be out of synchronization with the system, an Attendant Position can clear the CO-MWI per CO line.
- The CO-MWI Callback Speed Dial number uses System Speed Dial Area.
- This feature is supported at multiline terminals and DSS Consoles assigned with a direct line key appearance of the CO/PBX line key supporting this feature and with proper Class of Service assignment.
- When additional digits (e.g., for password) are included in the CO Message Waiting Indication System Speed Dial buffer, they must be separated by pauses to allow connection to the CO Voice Mail system.
- A Single Line Telephone or Wireless DECT (SIP) Handset cannot indicate the CO-MWI.
- The Message Display Board does not support the CO-MWI.

## **Default Setting**

None

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

CD-4COTB Blade with PZ-4COTF Daughter Board

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## **Related Features**

**Battery Backup – System Power**

**Message Waiting**

**Speed Dial – System/Group/Station**

**VM8000 InMail**

**Voice Mail Integration (Analog)**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-17-01	<b>CO Message Waiting Indication – LED Flash Assignment</b>	Set the message waiting LED Flash assignment on each CO line.	0 = LED Off 1 = LED On (default = 0)	✓		
20-02-08	<b>System Options for Multiline Telephones – LCD Display Holding Time</b>	This time determines how long a user's display shows Caller ID for a second incoming call.	0~64800 (seconds) (default = 5)			✓
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1			✓
20-07-23	<b>Class of Service Options (Administrator Level) – CO Message Waiting Indication Callback Number Programming</b>	Enable/Disable an extension ability to receive CO Message Waiting Indication.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
21-22-01	<b>CO Message Waiting Indication – Call Back Settings – CO MWI Call Back Enabling</b>	Enable/Disable CO MWI Call Back.	0 = Disable VMWI Service 1 = Enable VMWI Service (default = 0)	✓		
21-22-02	<b>CO Message Waiting Indication – Call Back Settings – CO-MWI Call Back Number Area Setting</b>	Define the Speed Dial Bin number for MWI Call Back.	0000~1999 1999	✓		

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## Operation



### To program the CO Message Waiting Callback Speed Dial Bin from an Attendant Position:

1. Press **Feature**.
2. Dial **28**.
3. Press the **CO line**.
4. Dial Speed Dial bin (default = 1999).  
 *The valid range is 0000~1999 and depends on system programming.*
5. Press **Feature**.

### To program the Central Office – Message Waiting Indication callback number from an Attendant Position:

1. Press **Feature**.
2. Dial **29**.
3. Press the **CO line**.
4. Dial the Central Office – Message Waiting Indication callback number.  
 *The Exit key is used to clear all digits.*
5. Press **Feature**.  
 *This operation updates data in Program 13-04-01, a user can also edit the dial digits in Program 13-04-01 from handset-programming or PCPro/WebPro.*

### To retrieve a Central Office – Message Waiting Indication:

1. Press **Feature**.
2. Dial **27**.
3. Press the **CO line** key.  
 *The LCD indicates 'ERROR' if the CO Line is not flashing for a CO Message Waiting.*
4. Listen to the message.  
 *The operation for deletion is based on the remote voice mail system.*
5. Hang up.



**To clear the Central Office – Message Waiting Indication from an Attendant Position:**

1. Press **Feature**.
2. Dial **20**.
3. Press the **CO line** key.

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## *Code Restriction*

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### **Description**

Code Restriction limits the numbers an extension user may dial. By allowing extensions to place only certain types of calls, you can better control long distance costs. The system applies Code Restriction according to the Code Restriction Class. The system allows for up to 15 Code Restriction Classes and 416 extensions.

### **Conditions**

- If a Code Restriction Class has the same entries in both a permit and restriction table, the system does not restrict the call.
- Code Call Digit counting may prevent users from taking advantage of long distance automated services like ACD and automated Technical Service.
- Code Restriction is applied when accessing ARS.
- If Program 21-01-10 is programmed with an entry other than 0, a call cannot have a talk path unless the user dials at least the number of digits entered in this option when placing an out going call. This means that an entry of 4 or higher in this program causes a problem when dialing 911. Since it is only a 3-digit number, the call does not have a talk path, preventing the emergency dispatcher from hearing the caller. This option should be kept at its default setting of 0 to prevent any problem with dialing 911.

- Common Permit Code Table

Use the Common Permit Code Table when you have numbers you want all Code Restriction Classes to dial. To let all users dial 911, for example, put 911 in the Common Permit Code Table. The Common Permit Code Table overrides the Restrict Code and Common Restrict Code Tables. The system provides 10 tables, with 10 entries in each table. Each code is four digits maximum, using 0~9, #, \* and Recall (as a wild card).

- Common Restrict Code Table

The Common Restrict Code Table lets you globally restrict certain numbers for all Code Restriction Classes. To prevent all users from dialing directory assistance (411), for example, put 411 in the Common Restrict Code Table. Be sure you do not allow the codes you want to restrict in the Permit Code Table or the Common Permit Code Table. The system provides 10 tables, with 10 entries in each table. Each code is four digits maximum, using 0~9, #, \* and Recall (as a wild card).

- Restrict Code Table

When you want Code Restriction to allow most calls and restrict only selected calls, use the Restrict Code Table. To block only 1-900 calls, for example, enter 1900 in the Restrict Code Table. (If the same Code Restriction Class has both Permit and Restrict Code Tables, the system restricts calls that you enter only in the Restrict Code Table. Calls entered in both tables are not restricted.) The system provides four tables, with 60 entries (restricted codes) in each table. A restricted code is 12 digits maximum, using 0~9, #, \* and Recall (as a wild card).

- Permit Code Table

The Permit Code Table lets you set up Code Restriction so that users can dial only selected (permitted) telephone numbers. Use this table when you want to restrict most calls. To allow all users to dial only area code 203, for example, enter 1203 in the Permit Code Table. 1 + 203 + NNX + nnnn are the only numbers users can dial. (If the same Code Restriction Class has both Permit and Restrict Code Tables, the system restricts calls that you enter only in the Restrict Code Table. Calls entered in both tables are not restricted.) The system provides four tables, with 200 entries (permitted codes) in each table. A permitted code is 12 digits maximum, using 0~9, #, \* and Recall (as a wild card).

- International Call Restriction

International Call Restriction lets you limit the international calls an extension user may dial. You can build a restrict table to prevent only certain calls, or you can build a permit table to allow only certain calls. To allow most international calls, use the International Call Restrict Table. To prevent most international calls, use the International Call Allow Table. The system provides 10 International Call Restrict tables with up to four digits in each table entry and 20 International Call Allow tables, with up to six digits in each table entry. Valid entries are 0~9, #, \* and Recall (as a wild card).

- Code Restriction for Speed Dialing

Speed Dialing can bypass or follow Code Restriction. If you allow many users to program Speed Dialing, consider code restricting the numbers they dial. If only administrators can program Speed Dialing, Code Restriction may not be necessary. You can separately restrict Group and Common Speed Dialing.

- Toll Digit Counting

Use Call Digit Counting to limit the number of digits local callers can dial. You can use this option to prevent users from accessing local dial-up services. For example, set the Maximum Number of Digits in Local Calls to seven to limit local callers to dialing the exchange code (NNX) and local address (nnnn) only. The system provides four tables in which you can make entries for this option. The range is 4~30 digits.

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- Code Call Digit Counting

With Code Call Digit Counting, you can limit the number of digits long distance callers can dial. This lets you prevent callers from dialing extensively into long distance dial-up services. You can make four entries (4~30 digits).

- Toll Free Trunks

Certain trunks can be completely unrestricted, such as the company president's Private Line. Users can place calls on Code Free Trunks anytime – to anywhere, without inadvertently being Code restricted.

- PBX Call Restriction

Code Restriction programming lets you enable/disable PBX Call Restriction and enter PBX access codes. You only need to do this if your system is behind a PBX and you have trunks programmed for behind PBX operation. Refer to [PBX Compatibility on page 2-1197](#) feature for the specifics.

- Additional Default Entries For Common Permit Code Table

Additional entries have been added to the default Common Permit Code Table. The default setting is as follows:

- Table 1: 911
- Table 2: 1800
- Table 3: 1888
- Table 4: 1822
- Table 5: 1833
- Table 6: 1844
- Table 7: 1855
- Table 8: 1866
- Table 9: 1877

- Tie Line Code Restriction Enhanced

In Program **34-01-05: E&M Tie Line Basic Setup – System Code Restriction**, if this option is set to 0, the system follows the setting in Program **21-05-13: Code Restriction Class – Restriction of Tie Line Calls** to determine whether or not the Code restriction setting in Program 34-08 is to be followed. If this option is set to 1, the system follows the system Code restriction settings defined in Program 21-05-01 through Program 21-05-13.

- A user can temporarily override extension Code Restrictions.
- The system allows or denies outgoing access to trunks depending on Code Restriction.
- If the system detects the call is answered by detecting reversal in an analog trunk this restores both – way voice paths immediately.
- When using DISA or Tie Lines, additional programming is required for Code Restriction (DISA, refer to Program 25-10; Tie Lines, refer to Program 34-04).
- A user can temporarily block their extension Code Restriction access, preventing unwanted calls from being placed on their telephone while they are away from their desk.

- Each phone and trunk have a Restriction Class. The higher class applies for outgoing calls.

For example:

- When trunk class is 01 and station class 02, Toll Restriction Class 02 is applied.
- When trunk class is 15 and station class 03, Toll Restriction Class 15 is applied.

## **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Central Office Calls, Placing**

**Code Restriction Override**

**Code Restriction, Dial Block**

**Direct Inward System Access (DISA)**

**PBX Compatibility**

**Multiple Trunk Types**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-08	<b>Basic Trunk Data Setup – Toll Restriction</b>	For each trunk, enter 1 to Enable Toll Restriction; enter 0 to Disable Code Restriction.	0 = Restriction Disabled (No) 1 = Restriction Enabled (Yes) (default = 1)	✓		
15-02-30	<b>Multiline Telephone Basic Data Setup – Toll Restriction Class</b>	Select the Toll Restriction Class to be used when placing a call from a virtual extension.	0 = Vir. Ext. (Virtual Extension Class) 1 = Real Ext. (Real Extension Class) (default = 1)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-01-10	<b>System Options for Outgoing Calls – Dial Digits for Toll Restriction Path</b>	If this option is programmed with an entry other than 0, a call does not have a talk path unless the user dials at least the number of digits entered in this option when placing an outgoing call.  This means that an entry of 4 or higher in this program causes a problem when dialing 911. Since it is only a 3-digit number, the call does not have a talk path, preventing the emergency dispatcher from hearing the caller. This option should be kept at its default setting of 0 to prevent any problem with dialing 911. If the system detects the call is answered, by detecting Reversal in analog trunks, this restores both – way voice paths immediately.	0~24 (default = 0)	✓		
21-01-15	<b>System Options for Outgoing Calls – Outgoing Disable on Incoming Line (Toll Restriction)</b>	Enable or Disable the Incoming Line feature system wide. When enabled applies code restriction when hook flash is sent on inbound trunk followed by dialed digits.	0 = Disable 1 = Enable (default = 0)		✓	
21-01-16	<b>System Options for Outgoing Calls – Supervise Dial Detection Timer</b>	With the Outgoing Disable on Incoming Line feature, if dial tone is not detected after the extension answers an incoming line, the system determines the call is unable to complete and releases the DTMF receiver.	0~64800 (seconds) (default = 20)		✓	
21-01-17	<b>System Options for Outgoing Calls – Restriction Digit in Outgoing Disable on Incoming Line</b>	With the Outgoing Disable on Incoming Line feature, determine the number of digits (0~9) to be dialed before the call should be disconnected.	Digits 0~9 (default = 4)		✓	
21-04-01	<b>Toll Restriction Class for Extensions</b>	Assign a Toll Restriction class to an extension for modes 1-8.	Day/Night Mode 1~9 (9 = Power Failure Mode) 1~15 (default = 2)	✓		
21-05-01	<b>Toll Restriction Class – International Call Restriction Table</b>	For the Toll Restriction Class you select, Assign or Unassign the International Call Restrict Table (Program 21-06-01).	0 = Unassign (No) 1 = Assign (Yes) default: 1, 6~15 = 0 2~5 = 1	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-05-02	<b>Toll Restriction Class – International Call Permit Code Table</b>	For the Toll Restriction Class you select, Assign or Unassign the International Call Permit Table (Program 21-06-02).	0 = Unassign 1 = Assign default: 1, 3~15 = 0 2 = 1	✓		
21-05-04	<b>Toll Restriction Class – Maximum Number of Digits Table Assignment</b>	Select the table (defined in Program 21-06-03) to be used to determine the maximum number of digits allowed for outgoing calls.	1~4 = Table 0 = Disable (None) Default: 1, 2, 6~15 = 0 3 = 1 4 = 2 5 = 3	✓		
21-05-05	<b>Toll Restriction Class – Common Permit Code Table</b>	Choose whether the table set up by Program 21-06-04 is referred to, or not referred to.	0 = Unassigned 1 = Assigned Default: 1, 8~15 = 0 2~7 = 1	✓		
21-05-06	<b>Toll Restriction Class – Common Restriction Table</b>	Choose whether the table set up by Program 21-06-05 is referred to, or not referred to.	0 = Unassigned 1 = Assigned Default: 1, 6~15 = 0 2~5 = 1	✓		
21-05-07	<b>Toll Restriction Class – Permit Code Table</b>	Set the tables 1~4 when referring to the table set up by Program 21-06-06.	1~4 = Table 0 = Disable (None) Default: 1, 2, 6~15 = 0 3 = 1 4 = 2 5 = 3	✓		
21-05-08	<b>Toll Restriction Class – Restriction Table</b>	Set the tables 1~4 when referring to the table set up by Program 21-06-07.	1~4 = Table 0 = Disable (None) Default: 1, 2, 6~15 = 0 3 = 1 4 = 2 5 = 3	✓		
21-05-09	<b>Toll Restriction Class – Restriction for Common Speed Dials</b>	For the Code Restriction Class you select, Enable (1) or Disable (0) Code Restriction for Common Speed Dialing numbers.	0 = Does Not Restrict 1 = Following Restriction Check (default =0)		✓	
21-05-10	<b>Toll Restriction Class – Restriction for Group Speed Dials</b>	For the Toll Restriction Class you select, Enable (1) or Disable (0) Code Restriction for Group Speed Dialing numbers.	0 = Does Not Restrict 1 = Following Restriction Check (default =0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-05-11	<b>Toll Restriction Class – Intercom Call Restriction</b>	For the Toll Restriction Class you select, Enable or Disable Intercom Call Restriction. If enabled, extensions cannot place or receive Intercom calls.	0 = Disable 1 = Enable (default = 0)		✓	
21-05-12	<b>Toll Restriction Class – PBX Call Restriction</b>	For the Toll Restriction Class you select, Enable or Disable PBX Call Restriction.	0 = Disable (No) 1 = Enable (Yes) Default: 1~6, 8~15 = 0 7 = 1		✓	
21-05-13	<b>Toll Restriction Class – Restriction of Tie Line Calls</b>	Select whether the Toll Restriction set up in Program 34-08-01 is Enabled or Disabled.	0 = Disable 1 = Enable (default = 0)		✓	
21-06-01	<b>Toll Restriction Table Data Setup – International Call Restriction Table</b>	Enter the international dialing codes you want to restrict.	Dial (Up to four digits) default: Tables 1~10 = No Setting	✓		
21-06-02	<b>Toll Restriction Table Data Setup – International Call Permit Code Table</b>	Enter the international dialing codes you want to permit.	Dial (Up to six digits) Default: Tables 1~20 = No Setting	✓		
21-06-03	<b>Toll Restriction Table Data Setup – Maximum Number of Digits Table Assignment</b>	Select the maximum number of digits allowed in outgoing calls for each table (4~30).	4-30 default: Tables 1~4 = 30	✓		
21-06-04	<b>Toll Restriction Table Data Setup – Common Permit Code Table</b>	Program codes into the Common Permit Code Table.	Dial (Up to four digits) default: Table 1 = 911 Table 2 = 1800 Table 3 = 1888 Table 4 = 1822 Table 5 = 1833 Table 6 = 1844 Table 7 = 1855 Table 8 = 1866 Table 9 = 1877 Table 10 = No Setting	✓		
21-06-05	<b>Toll Restriction Table Data Setup – Common Restriction Table</b>	Program codes into the Common Restrict Code Table.	Dial (Up to 12 digits) default: Table 1 = 900 Table 2 = 1900 Table 3 = 976 Tables 4~10 = No Setting	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-06-06	<b>Toll Restriction Table Data Setup – Permit Code Table</b>	Program codes into the Permit Code Tables.	Dial (Up to 12 digits) default: Table 1~4 = No Setting	✓		
21-06-07	<b>Toll Restriction Table Data Setup – Deny Restriction Table</b>	Program codes into the Restrict Code Tables (200 codes per table maximum).	Dial (Up to 12 digits) default: Table 1~4 = No Setting	✓		
21-06-08	<b>Toll Restriction Table Data Setup – PBX Access Code</b>	The system allows up to four tables for PBX access codes. PBX Access Codes can have up to two digits, using 0~9, #, * and LINE KEY 1 (don't care). Refer to the PBX Compatibility feature for the specifics.	Dial (Up to two digits) default: Table 1~4 = No Setting	✓		
21-21-01	<b>Toll Restriction for Trunks (Seized Trunk Basis Setting) – Restriction Class</b>	Enter the Toll Restriction Class for the selected trunk.	1~15 (default = 1)		✓	
34-01-05	<b>E&amp;M Tie Line Basic Setup – System Toll Restriction</b>	Determine if an incoming Tie Line call should be subject to Toll Restriction.	0 = No (Off) 1 = Yes (On) (default = 0)		✓	
34-08-01	<b>Toll Restriction Data for E&amp;M Tie Lines</b>	Define the Toll Restriction data for E&M Tie Lines. This data should be defined if Tie Line Code Restriction is enabled in Program 21-05-13.	Up to 10 digits (0~9, *, #) (default not assigned)		✓	
35-02-01	<b>SMDR Output Options – Toll Restricted Call</b>	SMDR can include or exclude calls blocked by Toll Restriction.	0 = Not Displayed 1 = Displayed (default = 1)		✓	

## Operation

### To place a trunk call if your system is Code Restricted:

1. Place call normally.

 *If your Code Restriction Class does not allow the number you dial, your call is cut off.*

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## *Code Restriction Override*

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### Description

Code Restriction Override lets a user temporarily bypass the Code Restriction for an extension. This helps a user that must place an important call that Code Restriction normally prevents. For example, you could set up Code Restriction to block 900 calls and then provide a Code Restriction Override code to your attendant and executives. When the attendant or executive needs to place a 900 call, they just:

- Press **Speaker**, dial a service code, and enter their override code.
- Press **Speaker** and dial a trunk access code (e.g., 9 or #9 002).
- Place the 900 call without restriction.

You can assign a different Code Restriction Override code to each extension. Or, extensions can share the same override code.

Code Restriction Override bypasses *all* Code Restriction programming. Walking Code Restriction allows you to assign a Code Restriction level for each user. When a call is placed using Walking Code Restriction, the restriction for the call is based on the Code Restriction level defined in Programs 21-05-xx and Programs 21-06-xx.

### Conditions

- Off-Premise notification and external extensions require access to outside lines.
- In the Class heading in the SMDR report, POTA indicates that the call was placed using Temporary Code Restriction Override.
- Code Restriction Override and Walking Code Restriction temporarily overrides an extension Code Restriction.
- If the system has VRS, users hear, "Your call cannot go through. Please call the operator" when they dial a number that Code Restriction prevents.

### Default Setting

Disabled

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### Related Features

**Central Office Calls, Placing**

## Code Restriction

### Station Message Detail Recording

### Voice Response System (VRS)


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-34	<b>Service Code Setup (for Setup/Entry Operation) – Temporary Toll Restriction Override</b>	If required, change the service code (775) for Temporary Toll Restriction Override.	MLT, SLT (default = 775)		✓	
11-11-36	<b>Service Code Setup (for Setup/Entry Operation) – Toll Restriction Override</b>	If required, change the service code (663) for Toll Restriction Override.	MLT, SLT (default = 663)		✓	
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
21-01-07	<b>System Options for Outgoing Calls – Toll Restriction Override Time</b>	Set the Toll Restriction Override Time. After dialing the Toll Restriction Override codes, the system removes Toll Restriction for this Time.	0~64800 (seconds) (default = 10)	✓		
21-07-01	<b>Toll Restriction Override Password Setup</b>	Assign Toll Restriction Override codes to extensions. Each code must have four digits, using any combination of 0~9, # and *. Each extension can have a separate code, or many extensions can share the same override code.	Maximum four digits (0~9, #, *) (default not assigned)	✓		
21-14-01	<b>Walking Toll Restriction Password Setup – User ID</b>	Enter the Walking Toll Restriction Override User ID codes (six digits) into tables. Up to 500 different override codes can be entered.	Dial (Six digits) (default not assigned)	✓		

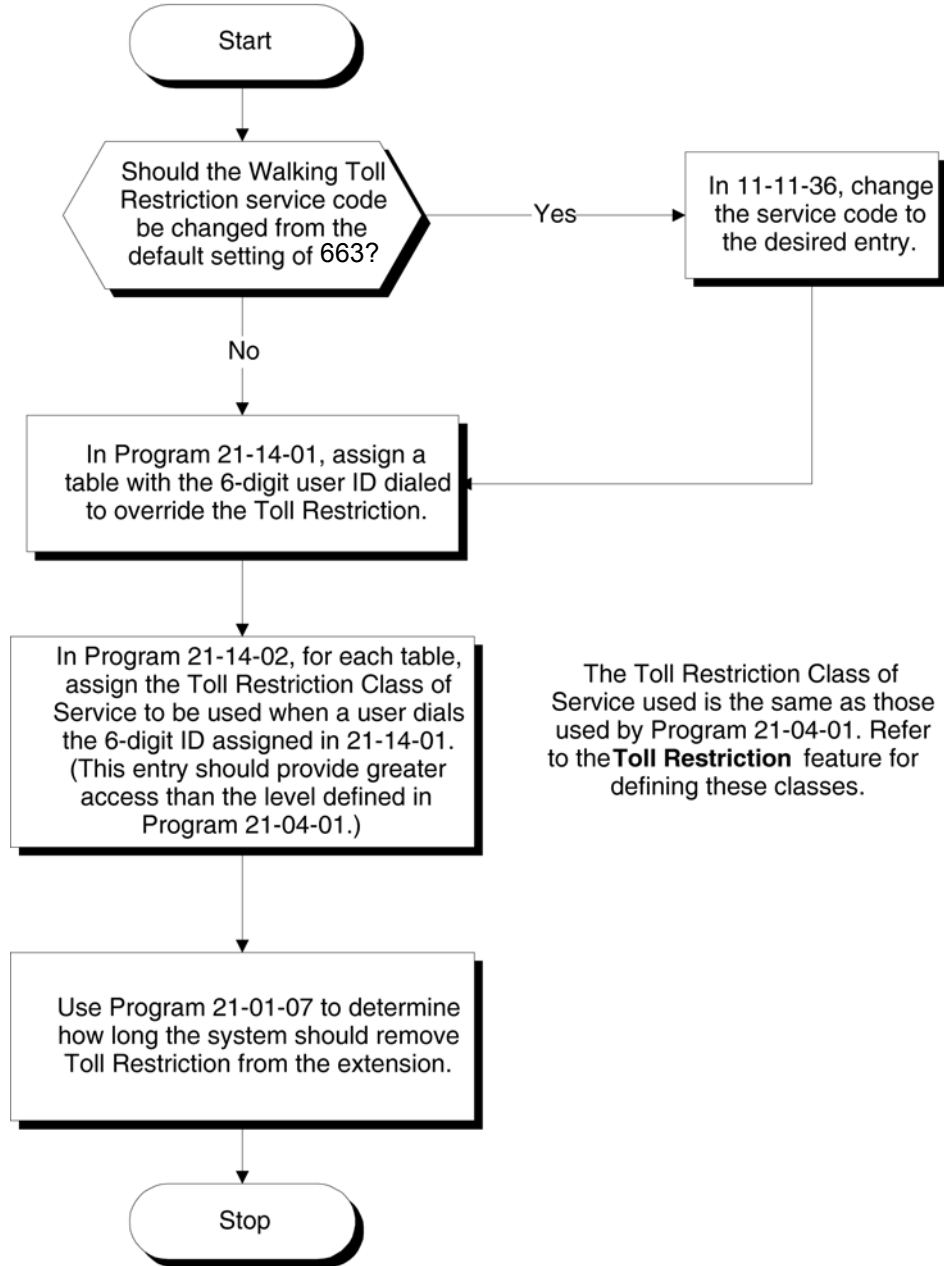
Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-14-02	<b>Walking Toll Restriction Password Setup – Walking Toll Restriction Class Number</b>	Enter the Walking Toll Restriction Class of Service (1~15) to be used for each table number assigned in Program 21-14-01.	1~15 (default = 1)	✓		
35-02-01	<b>SMDR Output Options – Toll Restricted Call</b>	SMDR can include or exclude calls blocked by Toll Restriction.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-02	<b>SMDR Output Options – PBX Calls</b>	When the system is behind a PBX, SMDR can include all calls or just calls dialed using the PBX trunk access code.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-03	<b>SMDR Output Options – Trunk Number or Name</b>	Select whether the system should display the trunk Name (0) or the Number (1) on SMDR reports. <i>If this option is set to 0, Program 35-02-14 must be set to 0.</i>	0 = Name 1 = Number (default = 1)		✓	
35-02-04	<b>SMDR Output Options – Summary (Daily)</b>	Set this option to (1) to have the SMDR report provide a daily summary (at midnight every night).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-05	<b>SMDR Output Options – Summary (Weekly)</b>	Set this option to (1) to have the SMDR report provide a weekly summary (every Saturday at midnight).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-06	<b>SMDR Output Options – Summary (Monthly)</b>	Set this option to (1) to have the SMDR report provide a monthly summary (at midnight on the last day of the month).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-07	<b>SMDR Output Options – Toll Charge Cost</b>	Set this option to (1) have the SMDR report include toll charges.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-08	<b>SMDR Output Options – Incoming Call</b>	Enable this option (1) to have the SMDR report include incoming calls. If you disable this option (0), incoming calls do not print.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-09	<b>SMDR Output Options – Extension Number or Name</b>	Set this option (1) to have the SMDR report include extension numbers. Set this option (0) to have the SMDR report include extension names.	0 = Name 1 = Number (default = 1)		✓	
35-02-10	<b>SMDR Output Options – All Lines Busy (ALB) Output</b>	Determine if the All Lines Busy (ALB) indication should be displayed.	0 = Not Displayed 1 = Displayed (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-12	<b>SMDR Output Options – DID Table Name Output</b>	Determine if the DID table name should be displayed.	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-13	<b>SMDR Output Options – CLI Output When DID to Trunk</b>	Determine if the CLI output should be displayed for DID.	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-14	<b>SMDR Output Options – Date</b>	Determine whether the date should be displayed on SMDR reports.  <i>This option must be set to 0 if the trunk name is set to be displayed in Program 35-02-03.</i>	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-15	<b>SMDR Output Options – CLI/DID Number Switching</b>	Determine whether or not the CLI/DID Number Switching should be displayed.	0 = CLI (CLIP) 1 = DID Calling Number 2 = Caller ID Name (default = 0)		✓	
35-02-16	<b>SMDR Output Options – Trunk Name or Received Dialed Number</b>	Determine how the SMDR should print incoming calls on ANI/DNIS or DID trunks. If set to (1), ANI/DNIS trunks can print DNIS digits. If set to (0) trunk names are printed instead.	0 = Trunk Port Name 1 = Received Dialed Number 2 = Both (default = 0)		✓	
35-02-17	<b>SMDR Output Options – Print Account Code or Caller Name of Incoming Call</b>	Determine if SMDR should print Account Code or Caller Name of Incoming Call.	0 = ACC 1 = CNAME (default = 0)		✓	
35-02-18	<b>SMDR Output Options – Print Mode for Caller Name of Incoming Call</b>	Determine how SMDR should print Caller Name of Incoming Call.	0 = Normal 1 = Line Feed (default = 0)		✓	



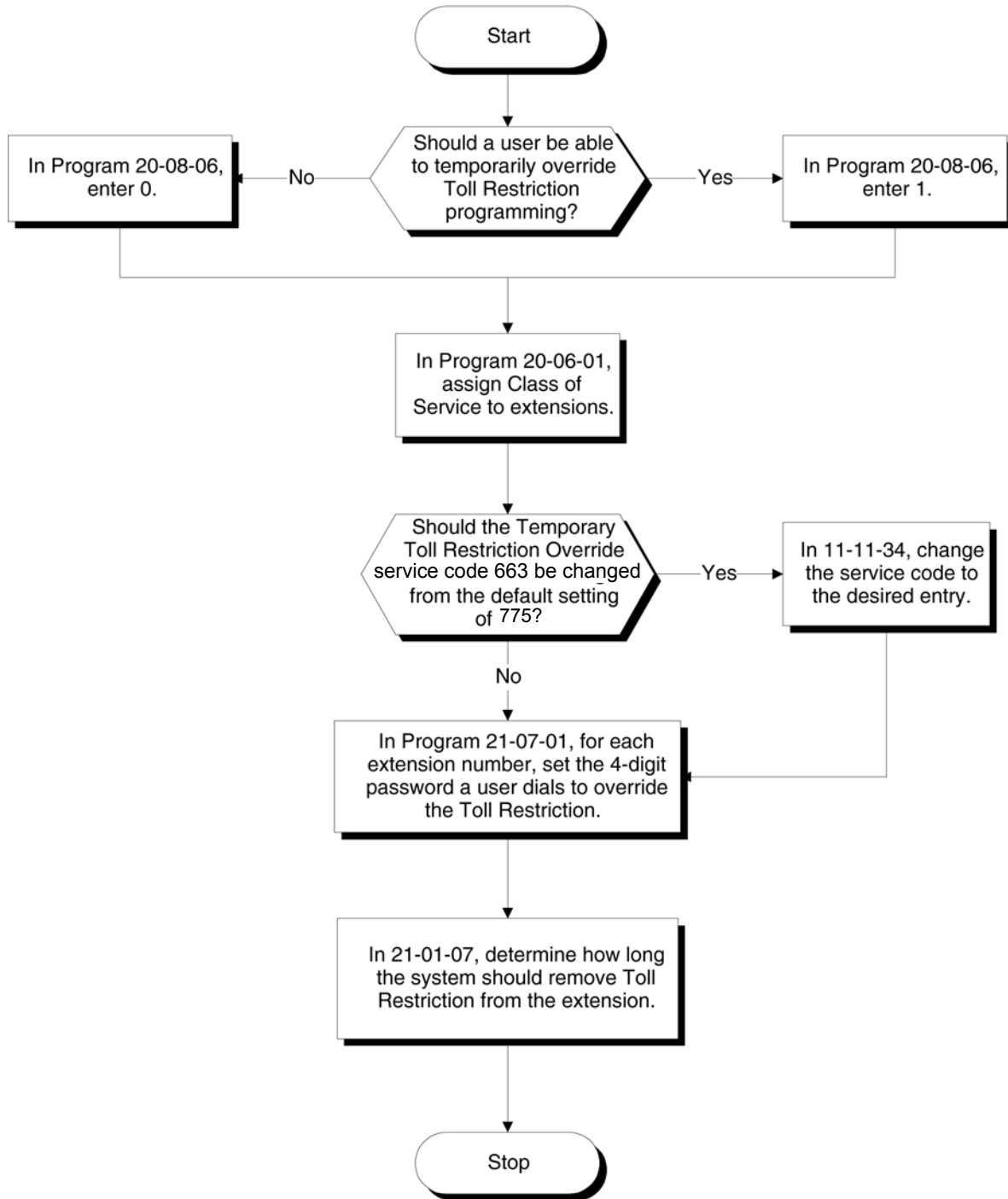
### Walking Code Restriction

#### Walking Toll Restriction



### Temporary Code Restriction Override

#### Temporary Toll Restriction Override




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## Operation

### To temporarily override a restricted extension Code Restriction:


 *You can override restriction for only one call at a time.*


1. At the multiline terminal, press **Speaker**.

- OR -

At single line telephone, lift the handset.


2. Dial **775**.
3. Dial the 4-digit Code Restriction Override code.

 *If you wait too long before going to the next step, you may have to repeat the procedure. After dialing the service code, the display indicates the override codes as they are being entered. As the last digit is entered, the display is cleared and ICM dial tone is heard.*

 *You hear error tone if you dial your code incorrectly.*

4. Press idle line key or dial trunk access code.
5. Dial the number without any restriction.

### To use your Walking Code Restriction level at an extension:


 *You can override restriction for only one call at a time.*


1. At the multiline terminal, press **Speaker**.

- OR -


At the single line telephone, lift the handset.

2. Dial **663** and dial the 6-digit Walking Toll Restriction Class of Service code.

 *After dialing the service code, the display indicates the override codes as they are being entered. As the last digit is entered, the display is cleared and ICM dial tone is heard.*

 *You hear error tone if you dial your code incorrectly.*

3. Press idle line key or dial trunk access code.
4. Dial the number.

 *The call is allowed or denied based on the user's Toll Restriction Class of Service level.*

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## *Code Restriction, Dial Block*

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### **Description**

Code Restriction, Dial Block lets a user temporarily block dialing on an extension. This helps a user block his or her phone from being used by another person while they are away from their desk. A user must enter a 4-digit personal code to enable/disable this feature.

Dial Block can also be set by the supervisor's access code. If Dial Block is set by an extension user, the supervisor cannot release it. If Dial Block is set by the supervisor's code, the extension user cannot release it.

*Important:* This function works by password and Class of Service control (the supervisor is not an assigned extension). If Dial Block is available for all Classes of Service, everyone may become a supervisor if they know the Dial Block password.

### **Conditions**

- If the system is reset by a first initialize, the Dial Block feature is cleared.
- This feature is not available for ISDN S-Bus extensions.
- Both Program 21-09-01 (Code Restrict Class) and Program 21-10 (Dial Block Restriction Class per Extension) can be set at the same time. However the system gives priority to the setting in Program 21-10.
- Dial Block can temporarily block an extension Code Restriction setting by changing to a predefined table that has more restrictions.

### **Default Settings**

Disabled

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### **System Availability**

#### **Terminals**

None

#### **Required Component(s)**

None

## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-17	<b>Service Code Setup (for System Administration) – Dial Block by Supervisor</b>	Assign a service code used by the supervisor to set Dial Block for another extension.	MLT (default = 601)		✓	
11-11-33	<b>Service Code Setup (for Setup/Entry Operation) – Dial Block</b>	Assign a service code to use for Dial Block.	MLT, SLT (default = 600)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension user ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
21-09-01	<b>Dial Block Setup – Toll Restriction Class with Dial Block</b>	Assign a Code Restriction COS (1~15) when the Dial Block feature is used.	1~15 (default = 15)	✓		
21-09-02	<b>Dial Block Setup – Supervisor Password</b>	Assign a 4-digit password used by the supervisor to enable or disable Dial Block for other extensions.	0~9, *, # (4-digit fixed) (default not assigned)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-10-01	Dial Block restriction Class per Extension	Assign the Code Restriction COS (1~15) used by an extension when the Dial Block feature is enabled. If this data is 0, Code Restriction COS follows Program 21-09-01.	0, 1~15 (0 = No Setting) (default = 0)	✓		
90-19-01	Dial Block Release	Enter the extension number to release from the Dial Block Restriction. This program can be used when a password is forgotten by the user.	[Release?]: Dial 1+ press <b>Transfer</b> (Press <b>Transfer</b> to cancel.)		✓	

## Operation


### To set Dial Block:

- At the multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
- Dial **600** (default).
- Dial the 4-digit Dial Block Code (as set in programming).
- Dial **1**.  
 Confirmation tone is heard.
- Press **Speaker** or replace the handset to hang up.


### To release Dial Block:

- At the multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
- Dial **600**.
- Dial the 4-digit Dial Block code.
- Dial **0**.  
 Confirmation tone is heard.
- Press **Speaker** or replace the handset to hang up.

**To set Dial Block from another extension:**

1. At the multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
2. Dial **601** (default).
3. Dial the 4-digit Dial Block code (as set in programming).
4. Dial the extension number to blocked.
5. Dial **1**.  
 *Confirmation tone is heard.*
6. Press **Speaker** or replace the handset to hang up.

**To release Dial Block from another extension:**

1. At the multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
2. Dial **601**.
3. Dial the 4-digit Dial Block code.
4. Dial the extension number to be released from Dial Block.
5. Dial **0**.  
 *Confirmation tone is heard.*
6. Press **Speaker** or replace the handset to hang up.



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# Conference


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## Description

Conference lets an extension user add additional inside and outside callers to their conversation. With Conference, a user can set up a multiple-party telephone meeting without leaving the office. The CD-CP00-US provides 64 conference ports, to allow any number of internal or external parties to be conferenced together for a limit of 32 parties. This means that one extension can conference up to 31 internal and/or external parties together (the originator would be the 32nd party reaching the maximum of 32). While this Conference call is active, another user can initiate a separate Conference also for a limit of 32 parties, or any number of conferences can be initiated with any number of parties (up to 32) until all 64 Conference ports are busy.

-  *64 conference ports are available with a PZ-ME50-US mounted on the CD-CP00-US and a second cabinet installed. Without the second cabinet and PZ-ME50-US installed, the CD-CP00-US provides a maximum of 32 conference ports.*

## Conditions

- An ADA module is required for speech recording.
- Split allows a user to alternate (i.e., switch) between their callers in Conference. This allows a dispatcher, for example, to control a telephone meeting between themselves, a customer and a service technician. The dispatcher can meet together with all parties, privately set up a service strategy with the technician and then meet again to set the schedule.
- Split cycles through the Conference in the same order in which the Conference was initially set up. If a user places an outside call, conferences extension 101 followed by extension 102, Split cycles from the trunk, to 101 and finally to 102. The Split cycle then repeats.
- If a user's extension has Barge-In enabled, they can also Barge-In on an established Conference. This permits, for example, an attendant or supervisor to join a Conference in an emergency. It also allows a co-worker to leave a conference – and then rejoin the telephone meeting when it is convenient to do so.
  -  *If a user's extension has Barge-In monitor enabled (Program 20-13-10), they can Silent Monitor a conference already in progress (Program 99-01-49 option 49 must be set to 1).*
- A Class of Service option is available which allows or denies an extension user from automatically setting up a Conference/Tandem Trunking call upon hanging up the telephone.
- An extension with Barge-In enabled can Transfer a call to an existing Conference. This allows, for example, an attendant to locate co-workers and then Transfer them to an existing telephone meeting. There is no need for the attendant to locate all the parties at the same time and sequentially add them into the Conference. Transfer Call Into Conference Code (624).

- An option is available which allows an extension Conf key (SC 751: 07) to be programmed for Conference or for Transfer. When set for Transfer, the user places a call on hold, dials the extension to which it should be transferred, and presses Conf. The call is then transferred. When set for Conference, with an active call, the user presses Conf, places a second call, then presses Conf twice. All the calls are then connected.
- Users can Barge-In on a Conference call if allowed in programming.
- Define the outgoing call options for each trunk and user.
- Set up a Conference with a co-worker in your immediate work area.
- DISA and Tie Line users may use the Barge-In feature on a Conference call if they know the service code and are permitted in their DISA/Tie Line Class of Service.
- Meet Me Conference lets an extension user set up a Conference via Paging.
- Meet Me Paging lets an extension user set up a two-party meeting via Paging.
- A user can set up an Unsupervised Trunk-to-Trunk Conference and then drop out of the call, allowing the remaining parties to continue the conversation. Establish two trunk calls, press Hold and dial #8.
- You can optionally program Conf (Transfer) for Transfer. In this case, the multiline terminal must have a Conference function key. The system also allows a call to be transferred into a Conference call.
- When the Conference Originator hangs up with a conference on Hold, or when trying to add another caller, all internal calls are dropped.
- Conferencing when talking on a Virtual Extension:
  - ❑ While talking on a Virtual Extension, if the station has an internal call on Hold, a conference call cannot be established.
  - ❑ While talking on a Virtual Extension, if the station receives an intercom call (call to its actual station number), a conference call cannot be established.
  - ❑ While talking on a Virtual Extension, if the station has a call on Hold, a conference call cannot be established.

## Default Setting

Enabled

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## System Availability

### Terminals

All Terminals

## Required Component(s)

None

## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-08	<b>Service Code Setup (for Service Access) – Barge-In</b>	Determine what the service code should be for an internal party to use the Barge-In feature.	MLT, SLT (default = 710)		✓	
11-12-47	<b>Service Code Setup (for Service Access) – Call Waiting Answer/ Split Answer</b>	If required, change the code users dial to Split while on a call.	SLT (default = 794)		✓	
11-12-57	<b>Service Code Setup (for Service Access) – Tandem Trunking</b>	With two trunks in Conference press Hold and dial <b>#8</b> and the Conference/Tandem happens.	MLT, SLT (default = <b>#8</b> )		✓	
11-12-58	<b>Service Code Setup (for Service Access) – Transfer Into Conference</b>	If required, change the service code used to transfer a call into a Conference call.	MLT, SLT (default = 624)		✓	
11-16-02	<b>Single Digit Service Code Setup – Barge-In</b>	Customize the one-digit Service Codes used for Barge-In.	(default not assigned)		✓	
14-01-04	<b>Basic Trunk Data Setup – Transmit Gain Level for Conference and Transfer Calls</b>	Select the CODEC gain type used by the trunk when it is part of an unsupervised conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 32 (0dB)]			✓






Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-24	<b>Multiline Telephone Basic Data Setup – Conference Key Mode</b>	Allow an extension Conf key to be programmed for Conference or for Transfer. When set for Transfer, the user places a call on hold, dials the extension to which it should be transferred, then presses the Conf key. The call is then transferred. When set for Conference, with an active call, the user presses the Conf key, places a second call, then presses the Conf key twice. All the calls are then connected.	0 = Conference 1 = Transfer (default = 0)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension users's ability to set up a tandem/conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)	✓		
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On an extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the Barge-In Speech Mode or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable (1)/Disable (0) a DISA or tie trunk user from using the Barge-In feature.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

## Operation

### To establish a Conference:

#### Multiline Terminal

- Establish intercom or trunk call.
- Press **Conf** or **Conf** softkey (Program 15-07 or SC 751: 07).
- Dial the extension you want to add.
  - OR -
  - Access outside call.
  - OR -
  - Retrieve call from Park orbit.
  -  *To get the outside call, you can either press a line key or press the Speaker key and dial 9, the Trunk Access Code + the trunk number (default #9). You can optionally go back to step 2 to add more parties to your Conference.*
- When called party answers, press the **Add** softkey or **Conf** twice.
  -  *If you cannot add additional parties to your Conference, you have exceeded the system Conference limit.*
  -  *If the call being added is busy/unanswered:  
With an outside call, press the line or Call Appearance (CAP) key for a call previously added to the Conference. The unanswered call drops and the initiator is back into the Conference call.*
  -  *Adding an Intercom call to an outside Conference call: Press the **Conf** softkey on the multiline terminal display or **Conf** twice to re-establish the Conference. If using a non-display telephone, press **Conf** twice.*
  -  *With only Intercom calls in the Conference: Press **Conf** twice to re-establish the Conference. If the voice mail answers, there is no way to drop that extension out. You must drop the Conference call.*
- Repeat steps 2~4 to add more parties.

**Single Line Telephone**

1. Establish Intercom or trunk call.
2. Hookflash and dial **#1**.
3. Dial extension you want to add.  
    - OR -  
    Access trunk call.  
    - OR -  
    Retrieve call from Park orbit.
4. Hookflash and repeat step 3 to add more parties.  
    - OR -  
    Hookflash twice to set up the Conference.

**To Split (alternate) between the parties in Conference:**Multiline Terminal

1. Press **Conf (Transfer)** or **Conference** key (Program 15-07 or SC 751: 07).
2. Dial Split service code (**794**).  
    📎 *Repeat this procedure to alternate between the remaining parties in the Conference. Press the **Conf** softkey or press **Conf** twice to set up the Conference again.*

Single Line Telephone

1. Hookflash and dial **794**.  
    📎 *Repeat this procedure to alternate between the remaining parties in the Conference. Hookflash twice to set up the Conference again.*

**To drop an outside call from the Conference:**


1. Press **Hold** to place the conference call on hold.
2. Hang up.  
    📎 *The lines involved in the Conference ring back separately to the telephone.*
3. Answer and disconnect the unwanted outside call.
4. To re-establish the Conference, answer the remaining call by pressing **Conf** after each call is answered. Press **Conf** twice when all calls have been answered.

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## To exit a Conference with internal and outside conference members without affecting the other parties:

### Multiline Terminal

1. Hang up.
  -  *If you press Hold while on a call with two outside callers, the outside callers hear what is programmed in Program 10-04-01.*

### Single Line Telephone

1. Hang up.
  -  *If you are not permitted to use Tandem Trunking, outside callers may hear Music on Hold.*

## To exit a Conference when all conference members are outside parties without affecting the other parties:



### Multiline Terminal

1. Press Hold key.
2. Dial # 8.
3. Hang up.

### Single Line Telephone

1. Hookflash and dial # 8.
2. Hang up.

## To Barge-In to Conference Call:

1. Pick up the handset or press **Speaker** and dial the service code (default = **710**).
  -  *If the telephone does not have the proper COS, a warning tone is sent. After the user hangs up, the system automatically places a Callback to the extension.*
2. Dial the extension number or press a **DSS** key of a telephone within a Conference call.
  -  *When a new call is added to the conference, an intrusion tone is heard by all parties in the Conference, depending on system programming, and all display multiline terminals show the joined party. If a Conference is not possible:*
    - the extension user hears a warning tone*
    - the DISA user is rerouted to the defined ring group*
  - OR -**
  - the Tie Line user hears a busy tone.*

**The following steps are not available for DISA or Tie Line trunks:**

1. Dial the extension number of the internal party.
2. Dial the single digit service code, if programmed.
  - ✎ *Instead of the single digit service code, the service code 710 can also be dialed at this point.*

**To Transfer a Call into a Conference:**

1. While on a call, press **Hold**.
2. Dial the Transfer to Conference service code (default = **624**).
  - ✎ *If the telephone does not have the proper COS, a warning tone is sent. After the user hangs up, the system automatically places a Callback to the extension.*
  - ✎ *The display shows the line Number, Number/Name and Extension Name/Number.*
3. Dial the extension number or press a **DSS** key of a telephone in a Conference call.
  - ✎ *If an error tone is heard, Barge-In is not enabled for the extension and the call cannot go through. Retrieve the call by pressing the flashing line or Call Appearance (CAP) Key or hang up and the call recalls the extension.*
  - ✎ *When the call is transferred into the Conference, an intrusion tone is heard by all parties in the conference, depending on the entries in Program 20-13-17 and Program 80-01, and all display multiline terminals show the joined party.*
  - ✎ *To cancel the transfer, press the flashing line or Call Appearance (CAP) Key to retrieve the call.*
4. Hang up.



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# *Conference, Voice Call/Privacy Release*

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## **Description**

Voice Call Conference lets extension users in the same work area join in a trunk Conference. To initiate a Voice Call Conference, an extension user just presses the Meet-Me Conference key and tells their co-workers to join the call. The system releases the privacy on the trunk, and other users can just press the trunk line key to join the call. Line keys assigned for the trunk blink indicating that privacy has been released, and others can join the current call.

Voice Call Conference does not use the telephone system features to announce the call. The person initiating the Voice Call Conference just announces it verbally. A tone, indicating others have joined the conference, can be provided.

The CD-CP00-US provides 64 Conference circuits, to allow two groups of internal or external parties to be conferenced together up to a limit of 32.

## **Privacy Mode Toggle Option**

The Privacy Mode Toggle option allows an extension user to quickly change an outside call from the non-private mode to the private mode. If the outside call is on a line key, the user just presses the line key to switch from non-private mode to private mode. For systems using the Privacy Mode Toggle option, trunks initially have the privacy released. The remainder of the call is private. If the call is on a Call Appearance (CAP) Key, the user presses their Meet-Me Conference function key instead. Unlike pressing the line key, pressing the Meet-Me Conference key toggles back and forth between private and non-private mode for the call.

## **Conditions**

- Call Arrival (CAR) Keys and Virtual Extensions do not support Voice Call Conference Programmable Function keys.
- Voice Call Conference requires a Meet-Me Conference function key and trunk line keys.
- This feature is not available on single line telephones.
- With Caller ID enabled, a call with Privacy Release shows the Caller ID until the call is answered. It can be viewed again by pressing the line key, though this sets the call to Private mode. To keep the call on Privacy Release, press the Help + Exit keys.

## **Default Setting**

Disabled

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

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## Related Features

Caller ID

Conference

Programmable Function Keys

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.



- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-19	Basic Trunk Data Setup – Privacy Mode Toggle Option	Determine if a trunk should be able to be toggled to a private/non-private line (0 = Disabled, 1 = Enabled). This option is not required for Voice Call Conference.	0 = Disable (No) 1 = Enable (Yes) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-09	<b>Class of Service Options (Supplementary Service) – Privacy Release</b>	Turn Off or On an extension user ability to initiate a Voice Call Conference.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
31-01-04	<b>System Options for Internal/ External Paging – Privacy Release Time</b>	Set the interval users have to join a Voice Call Conference after it is announced. (Note that this interval is also used for Meet Me Conference.)	0~64800 (seconds) (default = 90)		✓	

## Operation

### To join a Voice Call Conference (if invited):

- After Conference request, press indicated line key.
  -  A **Conf** indication is displayed on both telephones.
  -  A trunk with privacy release or Voice Call Conference blinks.

### To exit a Voice Call Conference without affecting the other parties:

- Press **Speaker** to hang up.

**To toggle between Private and Non-Private mode:**

1. Press the Meet-Me Conference key (Program 15-07-01, SC 751: 32).

**- OR -**

Press the Trunk Line Key. (This toggles from Non-Private to Private. To go back to Non-Private, the Meet-Me Conference Key above must be pressed.)

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## *Continued Dialing*

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### **Description**

Continued Dialing allows an extension user to dial a call, wait for the called party to answer, and then dial additional digits. This helps users that need services like Voice Mail, automatic banking and Other Common Carriers (OCCs).

Two types of Continued Dialing are available:

#### **Continued Dialing for Intercom Calls**

Depending on an extension Class of Service, a multiline terminal user may dial additional digits after their Intercom call connects. In systems with Voice Mail, for example, Continued Dialing lets extension users dial the different options after the Voice Mail answers. Without Continued Dialing, extension users cannot access these Voice Mail options.

#### **Continued Dialing for Trunk Calls**

Continued Dialing gives a user access to outside services like automatic banking, an outside Automated Attendant, bulletin boards and Other Common Carriers (OCCs). After the outside service answers, the user can dial digits for whatever options the services allow. Without Continued Dialing, the system Toll Restriction cuts off the call after a specific number of dialed digits. See [Guide to Feature Programming on page 2-352](#) for additional information.



*Continued Dialing may make the system more susceptible to toll fraud.*

### **Conditions**

- The ability to use Continued Dialing on trunk calls is set by Toll Restriction programming.
- Continued Dialing for intercom calls only applies to calls made to analog devices.
- With Pulse to Tone Conversion, users can place calls to services over Dial Pulse trunks – then dial DTMF digits after the service answers.
- When Account Codes are enabled, the user must press the \* three times before the \* character is passed to the telco. The system recognizes the initial \* as the beginning of an Account Code entry, the second \* as the end of an Account Code entry, and the third \* will be passed to telco.

## Default Setting

Enabled

## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

## Related Features

### Pulse to Tone Conversion

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-03-03	Single Line Telephone Basic Data Setup – Terminal Type	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
21-04-01	<b>Toll Restriction Class for Extensions</b>	Assign a Toll Restriction Class (1~15) to an extension.	Day/Night Mode 1~9 (9 = Power Failure Mode) 1~15 (default = 2)	✓		
21-05-04	<b>Toll Restriction Class – Maximum Number of Digits Table Assignment</b>	Select the table (defined in Program 21-06-03) to be used to determine the maximum number of digits allowed for outgoing calls.	1~4 = Table 0 =Disable (None) Default: 1, 2, 6~15 = 0 3 = 1 4 = 2 5 = 3	✓		
21-06-03	<b>Toll Restriction Table Data Setup – Maximum Number of Digits Table Assignment</b>	Set the Maximum Number of digits dialed for each table.	4-30 default: Tables 1~4 = 30	✓		

## Operation

### To use Continued Dialing:

1. Place an intercom or trunk call.
2. Continue dialing after the call connects.

 *Toll Restriction and Class of Service programming may limit Continued Dialing.*

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## *Cordless DECT Terminals*

### Enhancements

With **Version 4000 or higher software**, a Flash (Recall) key can be placed on a line key.

With **Version 4000 or higher software**, the door strike relay can be activated from the MH240 or Cordless DECT terminal by a Flash Key assigned to a line key in Program 15-07 (751: 62).

### Description

The Cordless DECT Terminals may be used with the UNIVERGE SV8100 KTS. The DTL-8R-1 TEL uses 1.9 GHz DECT 6.0 FM Technology and is connected in tandem to a multiline terminal. The ITL-8R-1 TEL uses 1.9 GHz DECT 6.0 FM Technology and is connected using the local network to the SV8100 as a stand alone terminal. Refer to the ITL-8R-1 Cordless IP DECT Manual for more information.

Press the applicable key on the Base Unit to Switch between Cordless operation and multiline terminal operation.

Feature	Cordless DECT Terminals (DTL-8R-1 and ITL-8R-1)
Digital Technology	1.9 GHz 6.0
LCD	2-line, 24-digit LCD Display
Silent Alarm	Yes
Dedicated Keys	TALK, TRANSFER, HOLD, CONF, SPEAKER, REDIAL, MUTE, R/VOL
Programmable Line Keys	8
Operational Range *	50~150 feet (expandable with repeaters)
Message Waiting Indication	Yes (Icon)
Headset Connection	Yes
Channels	5 channels by 12 time slots

\* Determined by environmental conditions. These are cordless RF devices and, therefore, some interference may take place when operating in the same environment as other wireless devices which operate within the same frequency spectrum.

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## Conditions

- The ITL-8R-1 does not support the Manual or Automatic registration modes to the SV8100.
- The ITL-8R-1 does support the Plug and Play registration mode to the SV8100.
- If using the Base Switching option, Cordless DECT Terminal programmable keys:
  - ❑ 1~4 can be set as a Programmable Function key such as Trunk Line Keys
  - ❑ 5 and 6 can be set as One-Touch keys
  - ❑ 7 and 8 are reserved for Base Switching and cannot be programmed
- If the Base Switching option is **not** used, programmable keys 1~8 can be programmed as Programmable Function Keys such as Trunk Line Keys.
- The DTL-8R-1 Cordless DECT Terminals can be used in conjunction with the UNIVERGE SV8100, and DTL Digital Multiline Telephones.
- The ITL-8R-1 Cordless IP DECT Terminal can only connect directly to the SV8100 and be used as a stand alone terminal.
- The ITL-8R-1 DECT IP Cordless – cannot be connected with DT300 or DT700 terminals.
- Battery Capacity is 910 mAh, 2.4V with a Talk Mode of 16 hours (typical) and a Standby Mode of seven days (typical).
- The battery can be hot swapped while on a call. The battery must be replaced with another charged battery pack within 20 seconds, otherwise the connection is lost.
- The handset has visual and audible indicators to warn of a low battery condition.
- When a message is received, the message icon is displayed.
- Synchronous Ringing does not apply to the cordless terminals.
- A beep indicates when the cordless terminal receives off-hook ringing.
- A spare battery is available as an Optional Available Part. A second battery is not shipped with the product.
- The battery can be charged when it is installed in the handset or in the base charging unit and the handset is in the charger. A stand-alone battery charger is not available.
- Environments with many metal parts, metal shelves, or metal buildings are known to reduce telephone performance.
- When multiple cordless telephones are used in your office, they must operate on different channels and be at least 20 feet apart (including the base unit and the telephones).
- *D<sup>term</sup>* cordless and DECT telephones do not ring when receiving a doorbox call. Notification is shown in the display.
- *D<sup>term</sup>* cordless and Cordless DECT telephones can activate the door strike relay using a Recall key assigned in the phone configuration or, by a Flash Key assigned to one of the line keys in Program 15-07 (751: 62) (**Version 4000 or higher** software is required).

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- Under certain conditions, HOLD and TRANSFER have the same behavior. To prevent an unwanted transfer after placing a call on hold and calling another user, the Line Key for the call on hold must be pressed to retrieve the call from hold, otherwise the call is transferred when the Cordless Terminal is placed in idle.
  - *D<sup>term</sup>* Cordless telephones do not support the Caller ID List feature.
  - The DTL-8R-1 DECT Cordless – only supports connection with DT300 terminals.
  - DTH-4R-1/2 Cordless – only supports connection with Series i terminals (DTH/DTR).
  - DTR-4R-1/2 Cordless – only supports connection with Series i terminals (DTH/DTR).
  - NEC recommends ITL-8R-1 Cordless IP DECT Terminals be assigned to their own VLAN.

### Restrictions

- Manual registration mode is not supported for ITL-8R- DECT IP Cordless phones.
- Authentication Password is not supported for ITL-8R- DECT IP Cordless phones.
- Multiple SIP server registration is not supported for ITL-8R- DECT IP Cordless phones.
- Network Address Translation (NAT) transversal mode is not supported for ITL-8R- DECT IP Cordless phones.
- Back Ground Music (BGM) is not supported for ITL-8R- DECT IP Cordless phones.
- Cordless terminals cannot receive voice announcements when idle.
- The ITL-8R-1 Cordless IP DECT Terminal can only be powered using a POE hub/switch or POE injector.
- The ITL-8R-1 DECT IP Cordless – cannot be connected with DT300 or DT700 terminals.
- Voice announce is not supported for ITL-8R-1 terminals. If the SV8100 is set to 0 (Voice) in Program 20-02-12 each ITL-8R-1 Cordless IP DECT Terminal must be set to signal only using the dial access code 723. Failure to set the ITL-8R-1 terminal ring either with Program 20-02-12 or dial access code allows users who call that phone to hear conversations without the called party's knowledge.
- The ITL-8R-1 Cordless IP DECT Terminal only supports port side VLANs.
- The ITL-8R-1 Cordless IP DECT Terminal only supports G.711.

### Default Setting

None

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## System Availability

### Terminals

DTL-8R-1 TEL

ITL-8R-1 TEL

### Required Component(s)

- CD-8DLCA Blade with PZ-8DLCB Daughter Board
- CD-CP00-US with PZ-32/64/128IPLA or PZ-32/64/128IPLB Daughter board
- SIP telephone licenses

**-OR-**

CD-16DLCA

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## Related Features

### Cordless Telephone Connection

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Setup and confirm the Basic Configuration data for terminal type (B1).	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)		✓	
10-03-02	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B1)</b>	Use to setup and confirm the Basic Configuration data for logical port number (B1).	0 = Not set 1 = Multiline Terminal (1~256) 2 = SLT Adapter (1~256) 6 = PGD(2)-U10 ADP (Paging) (1~8) 7 = PGD(2)-U10 ADP (for Tone Ringer) (1~8) 8 = PGD(2)-U10 ADP (for Door Box) (1~8) 9 = PGD(2)-U10 ADP (for ACI) (1~96) 10 = DSS (1~32) 11 = -- Not Used -- (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-04	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 1 (Only Applies to DTH/DTR telephones)</b>	Use to setup and confirm the Basic Configuration data for optional installed Unit 1.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-05	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 2</b>	Use to setup and confirm the Basic Configuration data for optional installed Unit 2.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Setup and confirm the Basic Configuration data for terminal type.	0 = Not set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)		✓	
10-03-07	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B2)</b>	Use to setup and confirm the Basic Configuration data for logical port number (B2).	0 = Not Set 6 = PGD(2)-U10 ADP (Ext. Speaker) 7 = PGD(2)-U10 ADP (Paging/Tone Ringer = 1~8) 8 = PGD(2)-U10 ADP (for Door Box = 1~8) (ACI) = (1~96) 9 = PGD(2)-U10 ADP 12 = APR (for B2 Mode) (193~512) (default = 0)		✓	
10-03-08	<b>ETU Setup (DLCA PKG Setup) – Multiline Telephone Type</b>	Read only program that shows the type of multiline terminal connected to the port.	0 = DT3** 1 = Dterm8 2 = Dterm7 (default = 0)		✓	
10-03-09	<b>ETU Setup (DLCA PKG Setup) – Side Option Information</b>	Read only command that shows the type of side module connected to the terminal.	0 = No Option 1 = 8LK Unit 2 = 16LK Unit 3 = 24ADM (default = 0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-10	<b>ETU Setup (DLCA PKG Setup) – Bottom Option Information (Only applies to DTL style telephones)</b>	Shows optional adapter information.	0 = No option 1 = APR 2 = ADA 3 = BHA (default = 0)		✓	
10-03-11	<b>ETU Setup (DLCA PKG Setup) – Handset Option Information</b>	Shows optional adapter information.	0 = No option 1 = PSA/PSD 2 = Bluetooth Cordless Handset (default = 0)		✓	
11-11-16	<b>Service Code Setup (for Setup/ Entry Operation) – Enable Force Ringing of Incoming Intercom Calls</b>	Allows a telephone to be manually set to ring when called if the system is set to voice announce in Program 20-02-12	MLT, SLT (default = 775)		✓	
20-07-01	<b>Class of Service Options (Administrator Level) – Manual Night Service Enabled</b>	Turn Off or On an extension for manually Switching the Night Mode (Service Code 718). This option must be enabled for an extension to be able to display the Night indication.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-03	<b>Class of Service Options (Administrator Level) – Time Setting</b>	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-07-05	<b>Class of Service Options (Administrator Level) – Set/ Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On the ability of an extension to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On the extension ability to use the Trunk Port Disable feature.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase and listen to VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Define if Accumulated Extension Data is included in the SMDR Printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Define if Department Group (STG) Data is included in the SMDR Printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Define if Accumulated Account Code Data is included in the SMDR Printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-23	<b>Class of Service Options (Administrator Level) – CO Message Waiting Indication Callback Number Programming</b>	Enable/Disable an extension ability to receive CO Message Waiting Indication.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable/Disable an extension user ability to set or cancel Private Call Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension user ability to set or cancel Caller ID Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/Disable an extension user ability to set or cancel dial-in mode switch.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-27	<b>Class of Service Options (Administrator Level) – Do-Not-Call Administrator</b>	Enable/Disable an extension user ability to set or cancel do not call administrator.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-03	<b>Class of Service Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-04	<b>Class of Service Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-07	<b>Class of Service Options (Outgoing Call Service) – Repeat Redial</b>	Turn Off (0) or On (1) an extension to use Repeat Redial.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Ringdown Extension for extensions with this COS.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-10	<b>Class of Service Options (Outgoing Call Service) – Signal/Voice Call</b>	Turn Off or On an extension allowing it to force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enabling this option prevents callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators are to be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-14	<b>Class of Service Options (Outgoing Call Service) – Call Address Information</b>	Enable/Disable Call Address Information for each Class Of Service.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On an extension ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-22	<b>Class of Service Options (Outgoing Call Service) – Voice Over to busy Virtual Extension</b>	Enable/Disable an extension ability to voice over to a busy virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turns Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-03	<b>Class of Service Options (Incoming Call Service) – Sub Address Identification</b>	Define whether an extension displays the Caller Sub-Address.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-04	<b>Class of Service Options (Incoming Call Service) – Notification for Incoming Call List Existence</b>	Determine whether or not the CHECK LIST message is displayed to indicate a missed call.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminal LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-08	<b>Class of Service Options (Incoming Call Service) – Calling Party Information</b>	Turn Off or On and extension ability to display calling party information on CCIS calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Turn Off or On Group Call Pickup for calls ringing an extension Pickup Group as well as ring group calls (Service Code *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension ability to pick up a call ringing into a Pickup Group (Service Codes *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turns Off or On an extension to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turns Off or On an extension to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turns Off or On an extension ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)			✓
20-10-09	<b>Class of Service Options (Answer Service) – Call Pickup Callback</b>	Turn off or on an extension ability to use Call Pickup to Pick up Callback calls.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-01	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-02	<b>Class of Service Options (Hold/Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-03	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-04	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-05	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-06	<b>Class of Service Options (Hold/Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-07	<b>Class of Service Options (Hold/Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an extension incoming Transfer pre-answer display.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension user ability to initiate a Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension user ability to pick up a call on Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn Off or On setting up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension ability to have a call which recalls from hold transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to or erase the Personal Greeting Message.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On an extension user in a Department Group ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	Allow (0)/Deny (1) answered Transferred calls from recalling the originating extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow normal (0) or extended Park (1).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension ability to receive Callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem/conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)			✓
20-11-22	<b>Class of Service Options (Hold/Transfer Service) – Restricted Unsupervised Conference</b>	Allow/Deny an extension user ability to initiate a Trunk-to-Trunk Transfer (Tandem Trunking).	0 = Allow 1 = Deny (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On an extension user ability to set and cancel Call Forwarding for a CAR or Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)			✓
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn Off or On an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn On or Off the ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On an extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-09	<b>Class of Service Options (Supplementary Service) – Privacy Release</b>	Turn Off or On an extension user ability to initiate a Voice Call Conference.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the Barge-In Speech Mode) or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)			✓
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to Barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-18	<b>Class of Service Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-19	<b>Class of Service Options (Supplementary Service) – Selectable Display Messaging (Text Messaging)</b>	Turn Off or On an extension user ability to use Selectable Display Messaging.	0 = Off 1 = On (default = 1 for COS 1~15)			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program the name.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On the ability to display the detail state of called party.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension user should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Turn Off or On an extension user ability to press a line key to barge into an outside call. The Barge-In feature must be enabled if this option is to be used.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, a busy extension can be called, while someone is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be set to off for this option to work.	1 = On 0 = Off (default = 1 for COS 01~15)			✓
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On the ability of an extension COS to be changed via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension user from turning Background Music on and off.	0 = Deny 1 = Allow (default = 1 for COS 1~15)			✓





Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-31	<b>Class of Service Options (Supplementary Service) – Connected Line Identification (COLP)</b>	Define the supplementary feature availability for each extension Class of Service (COS).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow (1)/Deny (0) the extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor's Position Enhancement</b>	This option must be On for the operator to use service codes in Program 11-13-10 through Program 11-13-13.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn Off or On a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)			✓
20-13-38	<b>Class of Service Options (Supplementary Service) – Headset Ringing for SLT</b>	Turn Off or On an extension user ability to use the Headset ringing.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension Class of Service. Any extension with this option enabled also hears the queue alarm.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-41	<b>Class of Service Options (Supplementary Service) – Voice Mail Message Indication on DSS</b>	Turn Off or On the Voice Mail Message Indication for an extension on a DSS console.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension user ability to use the Station Relocation feature.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-44	<b>Class of Service Options (Supplementary Service) – Live Monitor Enabling</b>	Turn Off or On an extension user ability to use Live Monitor.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-45	<b>Class of Service Options (Supplementary Service) – MIC Key Mode While Call Monitoring</b>	Set per class of service, when in Call Monitoring Mode determines if the monitored parties receives the barge in alert tone when Coaching Mode is enabled.	0 = Enable 1 = Disable (default = 1 for COS 1~15)			✓
20-13-47	<b>Class of Service Options (Supplementary Service) – Station Number Display</b>	Determine if a station Number is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Name is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-50	<b>Class of Service Options (Supplementary Service) – AIC Agent Display which Call is From</b>	Determine if the station logged in via AIC codes shows which queue the call is coming from.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name Appear in the Directory</b>	Determine if an extension name and number are listed (On) or unlisted (Off) in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

## Operation

### To set up and program the Cordless DECT Terminals (DTL-8R-1):

1. Press and hold down \* and #, then press **TALK**. The F1 LED flashes red and F1=LK01 is displayed on the LCD.
2. Press **Ring/Vol** repeatedly to scroll through the line key (LK) and feature options for function key **F1**.

3. Press **On/Off MUTE** to select the displayed line key or feature.
4. When a Line key is assigned, press **MUTE** once to enter the Off-Hook Ringing ON or OFF Mode. Press **Ring/Vol** to toggle between TALK for On or NO TALK for Off.
  -  *TALK is selected when the F1~F8 function keys are programmed for CO or Call Appearance Keys. NO TALK is selected when F1~F8 function keys are programmed for functions not requiring an off-hook state (e.g., Log On/Off or DND.)*
5. Press **On/Off MUTE** to advance to the next function key (F2 ~ F8).
6. After programming F4, press **On/Off MUTE** to advance to Global Off-Hook Ringing Assignment.
7. Press **Ring/Vol** to turn Global Off-Hook Ringing On or Off (LCD indicates ON or OFF as appropriate).
8. Press **TALK** to exit.
  -  *Function keys F1 ~ F8 can be programmed as Line Keys 1~16, Redial (LNR/SPD), Answer (ANS), Feature (FNC), or Recall. When assigned, these keys operate the same as on an NEC multiline terminal.*
  -  *When initially installed, function keys F1~F8 default to Line keys 1~8 respectively and Off-Hook Ringing defaults to ON.*
  -  *Global Off-Hook Ringing must be ON (default) for any function key to operate with off-hook ringing.*

### Switching Between the Desktop Multiline Telephone and the Cordless DECT Terminals Using the Base Unit:

When the Cordless DECT Terminals is associated with a multiline telephone the following is applicable:

- Switching between the cordless mode and desk mode must be done while both telephones are idle.
- A call in progress cannot be switched between the Cordless DECT Terminals and the associated multiline telephone.
- Switching held calls between the Cordless DECT Terminals and the associated multiline telephone is not recommended because line key LED indications are not provided.

### Switching from multiline telephone and *D<sup>term</sup>* Cordless Lite Telephone:

1. Press the Cordless button on the base unit.

### To switch from *D<sup>term</sup>* Cordless Lite II Telephone to multiline telephone:

1. Press the *DESK* button on the base unit.

For additional Operating Procedures, refer to the Cordless DECT Terminals (DTL-8R-1) Owner's Guide.

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## *Cordless Telephone Connection*

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### **Description**

Using an AP(R)-R/AP(A)-R Unit for DTH/DTR telephones or an APR-L for DTL telephones a cordless telephone (2500-type) can be connected to a multiline terminal.

The CD-4LCA with PZ-4LCA Daughter Board, CD-8LCA with PZ-8LCE Daughter Board and the SLTII(1)-U( ) ADP also support cordless telephones, but this feature refers to multiline terminal cordless connection.

### **Conditions**

- A voice announced internal call to the multiline terminal does not ring the cordless telephone.
- Only one cordless single line telephone can be connected to an APR-L, AP(R)-R, or AP(A)-R Unit.
- When CO Prime Line is assigned to the associated multiline terminal, internal dial tone cannot be transferred to the cordless telephone.
- The cordless telephone requires a PBR circuit while dialing. When all PBR circuits are busy, a busy tone is heard when the phone goes off-hook.
- Depending on your environment, the maximum number of cordless devices used without interference varies.
- This feature works with 2500-type cordless single line telephones.
- The multiline terminal user and the associated cordless telephone user cannot talk to each other.
- An APR-L, AP(A)-R or AP(R)-R Unit with hookflash enabled follows the same operating procedures as a single line terminal connected to a CD-4LCA with PZ-4LCA Daughter Board or CD-8LCA with PZ-8LCE Daughter Board.
- The multiline terminal LCD displays normal information for multiline terminal when a cordless terminal is used.
- When the multiline terminal user goes off-hook before the cordless single line telephone user, a PBR circuit is not connected for the cordless single line telephone.
- The cordless telephone must be installed within 10 feet of the AP(R)-R, AP(A)-R Unit or APR-L Unit.

- The following features are supported by an APR-L AP(R)-R or AP(A)-R:
  - Initiate conference
  - Change station name
  - Privacy release by pressing line key
  - Group Listen
  - DSS/BLF indication
  - Headset Ringing
- The APR-L AP(R)-R and AP(A)-R only support DTMF signaling, DP (Dial Pulse) is not supported.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

- Any DTH/DTR terminal with an AP(A)-R or AP(R)-R Unit except the DTR-2DT-1 TEL
- Any DTL terminal with an APR-L Unit except the DTL-2DT-1 TEL

### **Required Component(s)**

2500-type cordless Single Line Telephone

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## **Related Features**


**Ancillary Device Connection**

**Class of Service**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Setup and confirm the Basic Configuration data for terminal type (B1).	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)		✓	
10-03-02	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B1)</b>	Use to setup and confirm the Basic Configuration data for logical port number (B1).	0 = Not set 1 = Multiline Terminal (1~256) 2 = SLT Adapter (1~256) 6 = PGD(2)-U10 ADP (Paging) (1~8) 7 = PGD(2)-U10 ADP (for Tone Ringer) (1~8) 8 = PGD(2)-U10 ADP (for Door Box) (1~8) 9 = PGD(2)-U10 ADP (for ACI) (1~96) 10 = DSS (1~32) 11 = -- Not Used -- (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-04	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 1 (Only Applies to DTH/DTR telephones)</b>	Use to setup and confirm the Basic Configuration data for optional installed Unit 1.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-05	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 2</b>	Use to setup and confirm the Basic Configuration data for optional installed Unit 2.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Use to setup and confirm the Basic Configuration data for terminal type.	0 = Not set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)		✓	
10-03-07	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B2)</b>	Use to setup and confirm the Basic Configuration data for logical port number (B2).	0 = Not Set 6 = PGD(2)-U10 ADP (Ext. Speaker) 7 = PGD(2)-U10 ADP (Paging/Tone Ringer = 1~8) 8 = PGD(2)-U10 ADP (for Door Box = 1~8) (ACI) = (1~96) 9 = PGD(2)-U10 ADP 12 = APR (for B2 Mode) (193~512) (default = 0)		✓	
10-03-08	<b>ETU Setup (DLCA PKG Setup) – Multiline Telephone Type</b>	Read only program that shows the type of multiline terminal connected to the port.	0 = DT3** 1 = Dterm8 2 = Dterm7 (default = 0)		✓	
10-03-09	<b>ETU Setup (DLCA PKG Setup) – Side Option Information</b>	Read only command that shows the type of side module connected to the terminal.	0 = No Option 1 = 8LK Unit 2 = 16LK Unit 3 = 24ADM (default = 0)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-10	ETU Setup (DLCA PKG Setup) – Bottom Option Information (Only applies to DTL style telephones)	Shows optional adapter information.	0 = No option 1 = APR 2 = ADA 3 = BHA (default = 0)		✓	
10-03-11	ETU Setup (DLCA PKG Setup) – Handset Option Information	Shows optional adapter information.	0 = No option 1 = PSA/PSD 2 = Bluetooth Cordless Handset (default = 0)		✓	
15-07-01	Programmable Function Keys	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-07-02	Class of Service Options (Administrator Level) – Changing the Music on Hold Tone	Turn Off or On an extension user ability to change the Music on Hold tone.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-03	Class of Service Options (Administrator Level) – Time Setting	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-07-04	Class of Service Options (Administrator Level) – Storing Speed Dialing Entries	Turn Off or On an extension to store System or Group Speed Dialing numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-07-05	Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-10	Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-07-11	Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On an extension user ability to use the Trunk Port Disable feature.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase and listen to VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Define the Class of Service (COS) for the SMDR printout of accumulated extension data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Define the Class of Service (COS) for the SMDR printout of department group (STG) data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Define the Class of Service (COS) for the SMDR printout of accumulated account code data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable/Disable an extension user ability to set or cancel Private Call Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension user ability to set or cancel Caller ID Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/Disable an extension user ability to set or cancel dial-in mode switch.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-27	<b>Class of Service Options (Administrator Level) – Do-Not-Call Administrator</b>	Enable/Disable an extension user ability to set or cancel do not call administrator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-03	<b>Class of Service Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-04	<b>Class of Service Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension user ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-10	<b>Class of Service Options (Outgoing Call Service) – Signal/Voice Call</b>	Turn Off or On allowing an extension to force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enabling this option prevents callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators are to be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-14	<b>Class of Service Options (Outgoing Call Service) – Call Address Information</b>	Define the Class of Service (COS) for call address information.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On an extension ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-22	<b>Class of Service Options (Outgoing Call Service) – Voice Over to busy Virtual Extension</b>	Define the Class of Service (COS) for voice over to busy virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/ Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-08	<b>Class of Service Options (Incoming Call Service) – Calling Party Information</b>	Turn Off or On and extension ability to display calling party information on CCIS calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Turn Off or On Group Call Pickup for calls ringing an extension Pickup Group as well as ring group calls (Service Code *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension user ability to pick up a call ringing into a Pickup Group (Service Codes *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	






Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-10-09	<b>Class of Service Options (Answer Service) – Call Pickup Callback</b>	Turn Off or On an extension user ability to use Call Pickup to pick up Callback calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-01	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-02	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-03	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-04	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-05	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-06	<b>Class of Service Options (Hold/ Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension user ability to initiate a Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension user ability to pick up a call on Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn Off or On user setting up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension ability to have a call which recalls from hold transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to or erase the Personal Greeting Message.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On an extension user in a Department Group ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	Allow (0)/Deny (1) answered Transferred calls from recalling the originating extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow normal or extended Park (0 = Normal for Program 24-01-06, 1 = Extended for Program 24-01-07).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension ability to receive Callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension users ability to set up a tandem/conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On an extension user ability to set and cancel Call Forwarding for a CAR or Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension user.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)		✓	
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn Off or On an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-12-03	<b>Class of Service Options (Charging Cost Service) – Cost Display (TTU)</b>	ISDN billing information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn Off or On the ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On the ability of an extension to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension ability to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the Barge-In Speech Mode or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension user ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program the name.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On the ability to display the detail state of called party.  <i>This applies only to the multiline terminal.</i>	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).  <i>This only applies to the multiline terminal.</i>	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Turn Off or On an extension user ability to press a line key to barge into an outside call. The Barge-In feature must be enabled if this option is to be used.  <i>This applies only to the multiline terminal.</i>	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.  <i>This applies only to the multiline terminal.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, a busy extension can be called, while someone is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be set to off for this option to work.	1 = On 0 = Off (default = 1 for COS 01~15)		✓	
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On the ability of an extension COS to be changed via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.  <i>This applies only to the multiline terminal.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension user to turn Background Music on and off.  <i>This applies only to the multiline terminal.</i>	0 = Deny 1 = Allow (default = 1 for COS 1~15)		✓	
20-13-31	<b>Class of Service Options (Supplementary Service) – Connected Line Identification (COLP)</b>	Define the supplementary feature availability for each extension Class of Service (COS).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Turn Off or On an extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor's Position Enhancement</b>	This option must be on for the operator to use service codes in Program 11-13-10 through Program 11-13-13.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension Class of Service. Any extension which has this option enabled also hears the queue alarm.  <i>This applies only to the multiline terminal.</i>	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension ability to use the Station Relocation feature.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-44	<b>Class of Service Options (Supplementary Service) – Live Monitor Enabling</b>	Turn Off or On an extension user ability to use Live Monitor.  <i>This applies only to the multiline terminal.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Number is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone. <i>This applies only to the multiline terminal.</i>	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-50	<b>Class of Service Options (Supplementary Service) – AIC Agent Display which call is from</b>	Determine if the station logged in via AIC codes shows which queue the call is coming from.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name appear in the directory</b>	Determine if an extension name and number are listed (On) or unlisted (Off) in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To make a call using a cordless single line telephone:

1. Go off-hook.
2. Dial the station number or dial the Trunk Access Code and telephone number.

### To answer a call using a cordless single line telephone:

When the multiline terminal is ringing, the incoming call can be answered by the cordless single line telephone user by going off-hook, when ringing line preference is assigned for the multiline terminal.

### To transfer a call from a cordless single line telephone to its associated multiline terminal:

1. The multiline terminal user goes off-hook.
2. The single line telephone user goes on-hook (at this time, the call is automatically connected to the multiline terminal).

**To transfer a call from a multiline terminal to its associated cordless single line telephone:**

1. The single line telephone user goes off-hook (at this time, the call is automatically connected to the single line telephone).
2. The multiline terminal user goes on-hook.

**To use Hookflash:**

Refer to the operation for Single Line Telephone Access.

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# Data Line Security

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## Description

Data Line Security protects any station port from receiving audible tones (such as Camp-On or Override) and denies a station from barging in while busy to prevent disruption of data transmission when using a modem or facsimile machine.

### Conditions

- When a multiline terminal and a single line telephone are assigned for Data Line Security, Tone Override/Voice Override and Call Alert notification tone are not heard over the handset speaker.
- Data Line Security protects a station from Barge-In, even when Barge-In is allowed in Class of Service.
- When any multiline terminal or single line telephone calls a station with Data Line Security, a constant busy tone is heard.

### Default Setting

None

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminal LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension ability to receive off-hook signals. <i>20-09-07 must be set to 0 also for this to be effective.</i>	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension user to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

## Operation

None



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## *Delayed Ringing*

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### **Description**

Delayed Ringing allows programmed secondary answering positions to ring on incoming calls after a programmed time. This feature applies to CO/PBX lines, Secondary Incoming Extensions, Virtual Extensions, and Call Arrival Keys.

### **Conditions**

- An extension user can answer an outside call just by lifting the handset (depending on programming).
- Terminals must have a CAP or CO line appearance for a trunk call to be answered on the telephone.

### **Default Settings**

None

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

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### **Related Features**

**Call Arrival (CAR) Keys**

**Central Office Calls, Answering**

**Secondary Incoming Extension**

## Virtual Extensions

### Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	Set up the Trunk Access Maps. This sets the access options for trunks. Ring Group programming overrides Access Map programming.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).			✓
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign Trunk Access Maps to extensions.	Trunks 1~200 (default = 1)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign CAR/SIE/VE function keys (code *03 + extension number) or CO function keys (Code *01 + trunk port) on multiline terminals.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-09-01	<b>Virtual Extension Ring Assignment</b>	Individually program an extension Virtual Extension key(s) to either Ring or Not Ring.	Mode 1: 0 = Not Ring 1 = Ring (default = 0)	✓		
15-11-01	<b>Virtual Extension Delayed Ring Assignment</b>	Assign the delayed ringing options for an extension Virtual Extension or Virtual Extension Group Answer keys (defined in Program 15-09).	KY01 Mode 1: 0 = Immediate Ring 1 = Delayed Ring (default = 0)	✓		
20-04-03	<b>System Options for Virtual Extensions – CAR/SIE/Virtual Extension Delay Interval</b>	CAR Keys/SIE Keys/Virtual Extensions set for Delayed Ringing (see Program 15-11) ring the extension after this time.	0~64800 (seconds) (default = 10)		✓	
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this time diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)	✓		
22-02-01	<b>Incoming Call Trunk Setup</b>	Set the feature type for the trunk you are programming.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-08-01	<b>DIL/IRG No Answer Destination</b>	If an incoming trunk call rings longer than the DIL No Answer Time (Program 22-01-04), it routes to the destination you specify in this option. Determine if the destination should be a Ring Group, In-Skin/External Voice Mail, or Central Voice Mail.	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)	✓		

## Operation

### To answer Delay Ringing calls:

1. Go off-hook.  
- OR -  
Press **Answer**.  
- OR -  
Press the flashing key.  
 *Either Trunk key or CAR/SIE/VE key.*

### To program a CAR/SIE/VE key on a phone:

1. Press **Speaker**.
2. Dial **752**.
3. Press the key you want to program.
4. Dial **\*03**.
5. Dial the number of the extension you want to appear on the key.
6. Press **Hold** once for Immediate Ring (skip to step 8 for Delayed Ring).
7. Dial the mode number in which the key rings.  
1 = Day 1  
2 = Night 1  
3 = Midnight 1  
4 = Rest 1  
5 = Day 2  
6 = Night 2  
7 = Midnight 2  
8 = Rest 2
8. Press **Hold** for a second time for Delayed Ring, or Skip to step 10.

9. Dial the mode number in which the key delay rings.

1 = Day 1

2 = Night 1

3 = Midnight 1

4 = Rest 1

5 = Day 2

6 = Night 2

7 = Midnight 2

8 = Rest 2

10. Press **Speaker**.

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# Department Calling

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## Description

With Department Calling, an extension user can call an idle extension in a programmed Department Group (64 Department Groups available) by dialing the group pilot number. For example, this would let a caller dial the Sales department just by knowing the Sales department pilot number. The caller does not have to know any Sales department extension number.

Two types of routing are available with Department Calling: Priority Routing and Circular Routing. With Priority Routing, an incoming call routes to the highest priority extensions first. Lower priority extensions ring only if all higher priority extensions are busy. With Circular Routing, each call rings a new extension.

## Overflow Routing

Department Calling also provides overflow routing for extensions in the group. If a user directly dials a busy extension in a Department Group, the system can optionally route the call to the first available group member. The system follows Program 22-15-01~22-15-07 for playing the periodic VRS message.

Department Calling also allows each Department group to transfer calls to a predefined Speed dial bin (Program 24-05-01) immediately or after a Delayed time (Program 24-02-08). Internal and transferred calls are not supported for Delayed transfer.

## DID and Overflow Routing

Three types of Overflow are supported for DID calls:

Immediate Transfer:

This feature can be enabled or disabled by using a (58) key programmed in Program 15-07. It can also be done by using the service codes in Program 11-11-25 (set) and Program 11-11-26 (cancel). When this feature is activated, any DID calls pointed directly to the Pilot Number go immediately to the transfer destination and do not ring anyone in the group. To set up the destination you use Program 24-05 and Program 13-04. Once these programs are set, the access code assigned in Program 11-11-27 can be used to change the destination as needed.

Delay:

This feature can be enabled or disabled by using a (59) key programmed in Program 15-07. It can also be done by using service codes assigned in Program 11-11-28 (set) and Program 11-11-29 (cancel). When this feature is activated, any DID call pointed directly to the Pilot follows one of the two patterns:

- If all available members are busy or logged out, the call goes immediately to the transfer destination.
- If agents are logged in and not busy, the call comes in and hunts through the idle members until the time in Program 24-02-08 expires. Once this time expires, the call is routed to the transfer destination assigned in Program 24-05 and Program 13-04. After these programs are assigned, the access code assigned in Program 11-11-27 can be used to change the destination as needed.

 DND:

This feature can be enabled by using a (60) key programmed in Program 15-07 or by using service codes assigned in Program 11-11-30 (set) and Program 11-11-31 (cancel). When this feature is activated any DID pointed directly to the Pilot gets a busy tone and the call does not route.

### User Log Out/Log In

An extension user can log out and log in to a Department Calling Group. By logging out, the user removes their extension from the group. Once logged out, Department Calling bypasses their extension. When they log back in, Department Calling routes to their extension normally. All users can dial a code to log in or log out of their Department Calling Group. A multiline terminal can optionally have a function key programmed to login/logout.

### Enhanced Hunting

Department Calling is enhanced with expanded hunting abilities. Hunting sets the conditions under which calls to a Department Group pilot number cycle through the members of the group. The hunting choices are:

 Busy

A call to the pilot number hunts past only a busy group member to the first available extension.

 Not Answered

A call to the pilot number cycles through the idle members of a Department Calling group. The call continues to cycle until it is answered or the calling party hangs up. If the Department Group has Priority Routing enabled, and the highest priority member is busy, the call does not hunt to the next available extension.

 Busy or Not Answered

A call to the pilot number cycles through the idle members of a Department Calling group. The call continues to cycle until it is answered or the calling party hangs up.



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If all members of the Department Group are busy, an incoming or transferred call to the group pilot number queues for an available member. Each group has a queue that can hold any number of waiting calls. If a display telephone is waiting in queue, the user sees: *WAITING (group name)*. If a transferred call in queue is an outside call, and the system has a DSP daughter board installed with the VRS, the queued caller hears, *"Please hold on. All lines are busy. Your call will be answered when a line becomes free."*

The VRS also can transfer calls to Department Groups. Refer to [Voice Response System \(VRS\) on page 2-1973](#) for information on setting up the VRS.

The system prevents hunting to a Department Group extension if it is:

- Busy on a call
- In Do Not Disturb
- Call Forwarded
- Logged Out

### Conditions

- When a DIL rings to a Department Group, the DIL may follow overflow programming (Program 22-01-04 and Program 22-08-01).
- If all agents are logged out and an intercom call is made to the Department Group, the caller hears a busy signal.
- Extensions in a Department Group which have Call Forwarding enabled are not included in the call hunt. The extension to which the user is forwarded does not receive the hunted calls. When you use the automatic Department Step calling (Program 16-01-03) it hunts only to members with the same or lower priority.
- Easily step call to an idle Department Group member if the member called is busy.
- A virtual extension can be programmed to receive multiple calls which can camp-on to the extension – no analog port is required.
- An extension user can Transfer a call to a Department Group Pilot number. If unanswered, the call recalls (depending on programming) the transferring extension after the Transfer Recall Time (Program 24-02-04).
- Voice mail uses one Department Group for voice mail.
- When Program 16-01-05 is set to (1) Automatic, all telephones in the Department group Ring for ICM calls & DID calls Directed to the Department Group Pilot Number only.
- The Overflow feature is supported only for DID calls pointed directly to the Pilot Number. POTS lines and transferred DIDs ignore the Overflow settings.

- When a Department Group is assigned as the VM Department Group in Program 45-01-01 it only works as priority mode no matter what Program 16-01-02 is set to for that Department Group.
- Program 16-01-05 (Extension Group All Ring Mode Operation) does not work to a Secondary Department Group.
- Department Queuing will not work to Secondary Group Extensions.

### Default Setting

Disabled

### Priority Routing

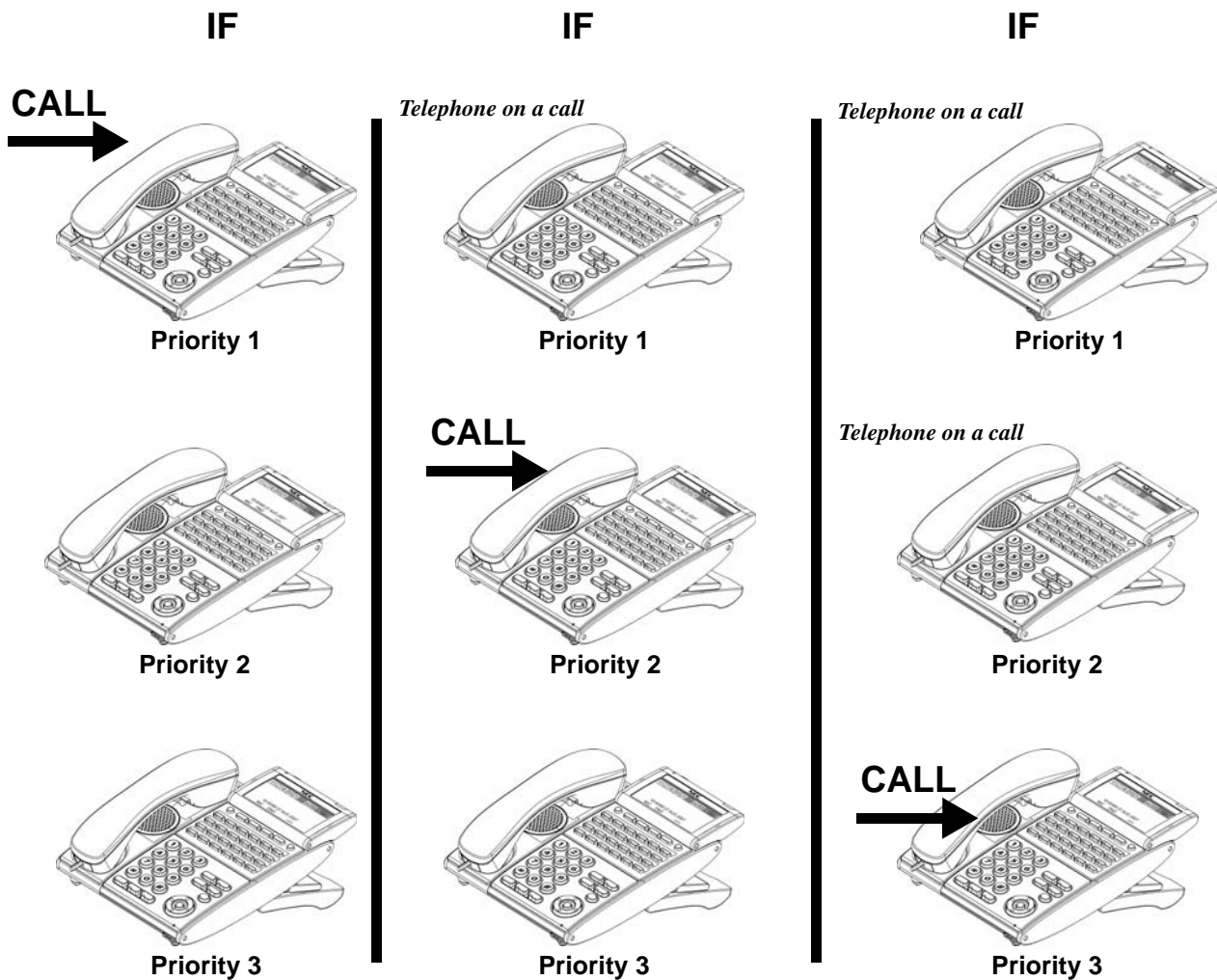
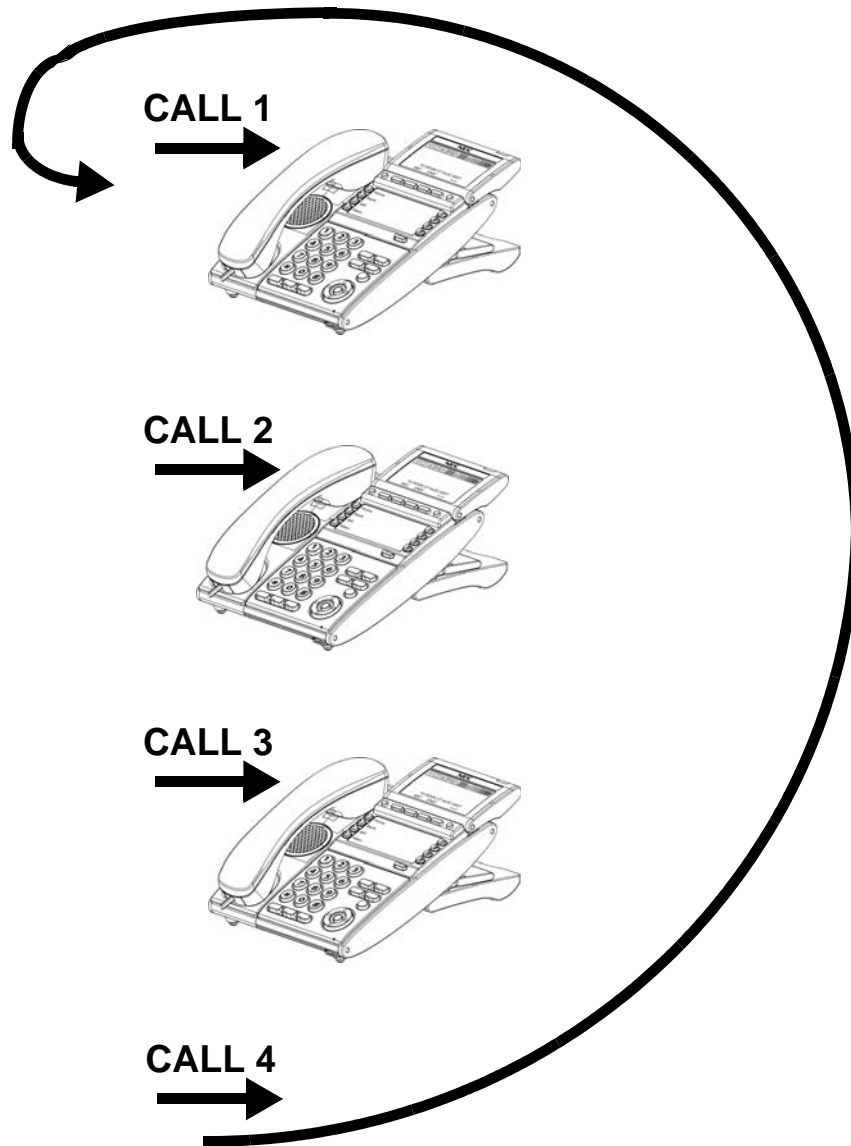


Figure 2-2 Department Calling Priority Call Routing

**Circular Routing**



**Figure 2-3 Department Calling Circular Routing**

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**System Availability**

**Terminals**

All Terminals

## Required Component(s)

VRS for Messaging

## Related Features

Call Arrival (CAR) Keys

Call Forwarding

Department Step Calling

Transfer

VM8000 InMail

Voice Response System (VRS)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-07-01	Department Group Pilot Numbers – Dial	Assign pilot numbers to each Department Group set up.	Up to eight digits (default not assigned)	✓		
11-11-25	Service Code Setup (for Setup/Entry Operation) – Automatic Transfer Setup for Each Extension Group	Set the service code to activate immediate automatic transfer for ICM and transferred calls to Department Groups.	MLT, SLT (default = 602)		✓	
11-11-26	Service Code Setup (for Setup/Entry Operation) – Automatic Transfer Cancellation for Each Extension Group	Set the service code to deactivate immediate automatic transfer for ICM and transferred calls to Department Groups.	MLT, SLT (default = 603)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-27	<b>Service Code Setup (for Setup/Entry Operation) – Destination of Automatic Transfer Each Extension Group</b>	Set the service code for setting the destination for immediate automatic transfer for ICM and transferred calls to Department Groups.	MLT (default = 604)		✓	
11-11-28	<b>Service Code Setup (for Setup/Entry Operation) – Delayed Transfer for Every Extension Group</b>	Set the delayed transfer destination Department Group.	MLT, SLT (default = 605)		✓	
11-11-29	<b>Service Code Setup (for Setup/Entry Operation) – Delayed Transfer Cancellation for Each Extension Group</b>	Cancel the delayed transfer destination Department Group.	MLT, SLT (default = 606)		✓	
11-12-09	<b>Service Code Setup (for Service Access) – Change to STG (Department Group) All Ring</b>	Set the service code for ringing all members of a Department Group.	MLT, SLT (default not assigned)		✓	
11-16-10	<b>Single Digit Service Code Setup – (Department) STG All Ring Mode</b>	Assign the Single Digit (post-dialing) Service Code for All Member Ring.	(default not assigned)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a Department Calling key (46) so extension users can install or remove themselves from the Department Calling Group. Additional keys can also be assigned for Department Group features immediate calling destination (58), delayed calling destination (59) and DND destination (60).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Assign a name to the Extension (Department) Groups.	Maximum 12 characters (default not assigned)		✓	
16-01-02	<b>Department Group Basic Data Setup – Department Calling Cycle</b>	Set the routing cycle for calls into a department (i.e., when a user dials the department pilot number). The system can ring the highest priority extension available (Priority Routing, 0) or cycle in circular order to a new idle extension for each new call (Circular Routing, 1).	0 = Normal Routing (Priority) 1 = Easy – UCD Routing (Circular) (default = 0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-03	<b>Department Group Basic Data Setup – Department Routing When Busy (Auto Step Call)</b>	Set how the system routes an Intercom call to a busy Department Group member. The caller can hear busy tone (0) or overflow to the first available Department Group member (1). This option is for Intercom calls to an extension, not a pilot number.	0 = Normal (Intercom caller to busy department member hears busy) 1 = Circular (Intercom callers to busy department member routes to idle member) (default = 0)		✓	
16-01-04	<b>Department Group Basic Data Setup – Hunting Mode</b>	Set if an unanswered call should hunt once stopping at the last member tried (0) or continually hunt through the idle members (1).	0 = Last extension is called and hunting is stopped 1 = Circular (default = 0)		✓	
16-01-05	<b>Department Group Basic Data Setup – Extension Group All Ring Mode Operation</b>	Set if all members of the group should ring Automatically or use the service code defined in Program 11-12-09. Selecting automatic overrides the settings of Programs 16-01-03 and 16-01-04.	0 = Manual 1 = Automatic (default = 0)		✓	
16-01-06	<b>Department Group Basic Data Setup – STG Withdraw Mode</b>	Set the STG withdraw mode for each department group.	0 = Disable (Camp On) 1 = Enable (Overflow Mode) (default = 0)		✓	
16-01-07	<b>Department Group Basic Data Setup – Call Recall Restriction for STG</b>	Determine whether or not an unanswered call transferred to a Department Group should recall the extension from which it was transferred.	0 = Disable (Recall) 1 = Enable (No Recall) (default = 0)		✓	
16-01-09	<b>Department Group Basic Data Setup – Department Hunting No Answer Time</b>	Set the time a call rings a Department Group extension before hunting occurs.	64800 (seconds) (default = 15)		✓	
16-01-10	<b>Department Group Basic Data Setup – Enhanced Hunt Type</b>	Set the type of hunting for each Extension (Department) Group.	0 = No queuing 1 = Hunting When Busy 2 = Hunting When Not Answered 3 = Hunting When Busy or No Answer (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-02-01	<b>Department Group Assignment for Extensions</b>	Set up the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in 23-02.	Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256	✓		
16-03-01	<b>Secondary Department Group</b>	Assign extensions to multiple Department Groups and set the priority assignment. Each Secondary Department Group can have up to 16 extensions assigned.	Extension Number Maximum eight digits Priority Order 0~999 (default not assigned)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On an extension user in a Department Group ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup – Incoming Type</b>	If you want a trunk to be a DIL to a Department Group, assign Service Type 4 for each Night Service Mode. Refer to Program 22-07-01.	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-07-01	<b>DIL Assignment</b>	For each trunk assigned Service Type 4 in Program 22-02-01 above, assign the DIL destination as the Department Group pilot number (as assigned in Program 11-07-01).	Extension Number (maximum eight digits) (default not assigned)		✓	
24-02-05	<b>System Options for Transfer – Message Wait Ring Interval Time</b>	For Single Line Telephones (SLTs) without message waiting lamps, this is the time between intermittent ringing. If this value is set to 0, the system rings once.	0~64800 (seconds) (default = 30)		✓	
24-02-08	<b>System Options for Transfer – Delayed Transfer Timer for All Department Groups</b>	Determine the time a call should ring a Department Group before transferring the call.	0~64800 (seconds) (default = 10)		✓	
24-05-01	<b>Department Group Transfer Target Setup</b>	Assign the Speed Dial bin to each Department Group to hold the destination for the immediate automatic transfer of ICM and transferred calls to the Department Group feature.	0~1999 (default = 1999)		✓	

## Operation

### To call a department group:

- Go off-hook.
- Dial department extension number.
  -  *The system routes the call to the first free telephone in the department group.*
- Optional:** To manually ring all members of the group, dial the single digit service code assigned for All Member Ring (Program 11-16-10).



**To log out of your Department Calling Group:**


 While you are logged out, Department Calling cannot route calls to your extension.

1. Press **Speaker**


2. Dial **650 + 1**.

- OR -

Press **Department Calling Log In** key (Program 15-07-01 or SC 751: 46).

 The key lights while you are logged out.

**To log back in to your Department Calling Group:**


 When you log back in, Department Calling routes calls to your extension.

1. Press **Speaker**.

2. Dial **650 + 0**.

- OR -

Press **Department Calling Log In** key (Program 15-07-01 or SC 751: 46).

 The key goes out when you log back in.

**To change the Department Group Overflow Destination:**

1. Press **Speaker**.

2. Dial **604 + Department Group** (01 ~ 64).

3. Dial **01 ~ 08** (Refer to Program 24-05).

4. Dial the destination the calls **route to**.

5. Press **Hold**.

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## *Department Step Calling*

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### **Description**

After calling a busy Department Calling Group member, an extension user can have Department Step Calling quickly call another member in the group. The caller does not have to hang up and place another Intercom call if the first extension called is unavailable. Department Step Calling also allows an extension user to cycle through the members of a Department Group.

### **Conditions**

- If required, use this option to change the Department Step Calling Single Digit Service Code (default code = 2).
- A function key for Department Step Calling can be assigned (code 36).
- In Program 20-08-12, enable (1) or disable (0) an extension user ability to use Department Step Calling.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

---

### **Related Features**

**Department Calling**

**Programmable Function Keys**

## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-07	<b>Service Code Setup (for Service Access) – Step Call</b>	If required, customize the Step Call service code used by an extension user.	MLT, SLT (default = 708)		✓	
11-16-01	<b>Single Digit Service Code Setup – Step Call</b>	If required, change the Department Step Calling Single Digit Service Code.	(default = 2)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key Department Step Calling (code 36).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

## Operation

### To make a Step Call:

1. Place a call to a busy Department Group member.  
- OR -  
Place a call to a Department Group pilot number.
2. Dial Department Step Code (2) to call the next available Department Group member.
3. Repeat step 2 to call other Department Group members.  
 *You step through Department Groups set in Program 16-02-01.*

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## *Dial Pad Confirmation Tone*

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### **Description**

For an extension with Dial Pad Confirmation Tone enabled, the user hears a beep each time they press a key. This is helpful for Intercom calls and Dial Pulse trunk calls, since these calls provide no Call Progress tones.

### **Conditions**

- Dial Pad Confirmation Tone does not apply to single line telephones or Wireless DECT (SIP) Terminals.
- Dial Pad Confirmation Tone is not canceled when dialing in handset mode.
- Dial Pad Confirmation Tone is canceled when dialing in handsfree mode, but only for internal calls. The tone is still heard for external dialing.

### **Default Setting**

Disabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

None

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### **Related Features**

None

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-19	<b>Service Code Setup (for Setup/Entry Operation) – Key Touch Tone On/Off</b>	If required, change the service code to enable or disable the Key Touch Tone.	MLT (default = 724)		✓	

---

## Operation

### To enable/disable Dial Pad Confirmation Tone:

1. Pick up the handset or press **Speaker**.
2. Dial **724**.



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## *Dial Tone Detection*

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### **Description**

If a trunk has Dial Tone Detection enabled, the system monitors for dial tone from the Telco or PBX when a user places a call on that trunk. If the user accesses the trunk directly (by pressing a line key or dialing # 9 and the trunk number), the system drops the trunk if dial tone does not occur. If the user accesses the trunk via a Trunk Group (by dialing a trunk group code or automatically using a feature like Last Number Redial), the system can drop the trunk or optionally skip to the next trunk in the group. Refer to the chart under Programming for more information.

### **Conditions**

None

### **Default Setting**

Disabled for manually dialed calls; enabled for automatically dialed calls.

---

### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

---

### **Related Features**

**Automatic Route Selection**

**Call Appearance (CAP) Keys**

**Central Office Calls, Placing**

**Last Number Redial****Save Number Dialed****Speed Dial – System/Group/Station****T1 Trunking (with ANI/DNIS Compatibility)****Trunk Group Routing****Trunk Groups****Guide to Feature Programming**

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	If dial tone detection is enabled, be sure to allocate at least one circuit for dial tone detection [ICM/Trunk (0) or Trunk (2)].	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
14-02-05	<b>Analog Trunk Data Setup – Dial Tone Detection for Manually Accessed Trunks</b>	Enable/Disable dial tone detection for directly accessed trunks. If disabled, the system outdials on the trunks without monitoring for dial tone.	0 = Dial Tone Detection Not Used 1 = Dial Tone Detection Used (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-11	<b>Analog Trunk Data Setup – Next Trunk in Rotary if No Dial Tone</b>	If Enabled, the system skips over a trunk if dial tone is not detected. This option pertains to calls placed using Call Appearance (CAP) Keys, Speed Dial, ARS, Last Number Redial or Save Number Dialed. It does not pertain to line key or Direct Trunk Access calls.	0 = Disable 1 = Enable (default = 0)		✓	
21-01-04	<b>System Options for Outgoing Calls – Dial Tone Detection Time</b>	If dial tone detection is Enabled, the system waits this time for the Telco to return dial tone. When the time expires, the system assumes dial tone is not present. To disable this time (and have the system wait continuously), enter 0.	0~64800 (seconds) (default = 5)		✓	
21-01-05	<b>System Options for Outgoing Calls – Disconnect Time When Dial Tone Not Detected</b>	If 14-02-11 is Enabled, the system skips over a trunk if dial tone is not detected. This option pertains to calls placed using Speed Dial, ARS, Last Number Redial or Save Number dialed. It does not pertain to line key or Direct Trunk Access calls.	0~64800 (seconds) (default = 3)		✓	
21-01-06	<b>System Options for Outgoing Calls – Dial Pause at First Digit</b>	If Dial Tone Detection is Disabled, the system waits this time before sending dialed digits. If using Dial Tone Detection, this time should be set longer than the time set in Program 21-01-05, otherwise, if this time is set shorter than Program 21-01-05, Dial Tone Detection is satisfied and Program 21-01-05 is disregarded (not used).	0~64800 (seconds) (default = 1)		✓	

Table 2-10 Dial Tone Detection Program Interaction

Method	14-02-05	14-02-11	Result if dial tone not present . . .
Press a line key - or - Dial #9+ Trunk number	0	0	Trunk hangs (does not disconnect)
	0	1	Trunk hangs (does not disconnect)
	1	0	Trunk drops
	1	1	Trunk drops
Dial a Trunk Group code - or - Automatically through a feature	0	0	Trunk hangs (does not disconnect)
	0	1	Trunk reroutes after time-out
	1	0	Trunk drops
	1	1	Trunk reroutes after time-out

## Operation

Dial Tone Detection is automatic if enabled in programming.

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## *Dialing Number Preview*

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### Description

Dialing Number Preview lets a display multiline terminal user dial and review a number before the system dials it. Dialing Number Preview helps the user avoid dialing errors.

### Conditions

- An extension user cannot edit the displayed number.
- To place an outgoing call, an extension user must have outgoing access to a line, CAP or trunk group key.
- If the system has VRS or VM8000 InMail installed, you must press \* to preview a number (**Version 3000 or lower** software).
- With **Version 4000 ~ Version 6000** software, you must press \* to preview a number.
- With **Version 7000 or higher** software, pressing \* to preview a number is not required.

### Default Setting

Enabled

---

### System Availability

#### Terminals

All Multiline Terminals with Display

#### Required Component(s)

None

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## Related Features

Central Office Calls, Placing

Voice Response System (VRS)

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	Class of Service for Extensions	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-08-05	Class of Service Options (Outgoing Call Service) – Dial Number Preview (Preset Dial)	Turn Off or On an extension user ability to use Dial Number Preview.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

---

## Operation

### To use Dial Number Preview to place a call (multiline terminal only):

1. Do not lift the handset or press **Speaker**.
2. Dial \*.  
  -  Skip to step 3 if at **Version 3000 and lower** and a VRS or VM8000 InMail is not installed or, **Version 7000 or higher**.

3. To preview *any number*, dial the number you want to call.  
To preview a Speed Dial – System/Group number, press **Redial** and dial the Speed Dial – System/Group bin number you want to call.  
 *The number is displayed.*
4. To dial out the displayed trunk number, press a Line/Trunk Group key.  
 *If the previewed number as a trunk access code (e.g., 9), you can press **Speaker** instead.*  
- OR -  
To dial an Intercom number, press **Speaker**.  
- OR -  
To cancel the number without dialing it out, press **Hold**.

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# Digital Trunk Clocking

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## Description

The UNIVERGE SV8100 CD-CP00-US has a built-in clock source for all digital trunk blades. Digital trunk blades are connected via an internal PLO (Phase Locked Oscillator) to derive Primary Clock from the network in priority order. If priority is set up incorrectly, or if two primary clocks are coming in, slips may occur causing improper data synchronization. The PLO, equipped with the UNIVERGE SV8100 CD-CP00-US is the timing source for all digital trunk blades in the system. The PLO synchronizes the system and clocks signals from another office. When the UNIVERGE SV8100 is a clock receiver office, the PLO generates the clock signal according to the source clock signals received from the source office in the network. The source clock signals are extracted from digital trunk blades and are supplied to the PLO.

The PLO synchronization source priorities are as follows:

1. CD-PRTA
2. CD-CCTA (External)
3. CD-2BRIA
4. CD-CP00-US

## Conditions

- If multiple PRIs exist, the system chooses the first one that synchronized with the carrier.
- If there are multiple PRIs and the one being used for the source goes down, the system begins to count forward in slot numbers looking for the next available PRI.
- If multiple BRIs exist and no CD-PRTA or CD-CCTA (External) exists, the SV8100 CD-CP00-US chooses the first BRI that synchronized with the carrier.
- If there is one CD-PRTA and the one being used for the source goes down, the SV8100 CD-CP00-US looks to see if there are any BRIs installed in the system. If there are no BRIs, the SV8100 CD-CP00-US becomes the new synchronization source. The reason for this is when a CD-PRTA is installed in the system, all T1s must be assigned as (INTERNAL). T1 (INTERNAL) is not a clocking priority.

## Default Setting

None

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## System Availability

### Terminals

None

### Required Component(s)

- CD-CP00-US
- CD-2BRIA

**-OR-**

CD-PRTA, CD-CCTA

---

## Related Features

### ISDN Compatibility

### K-CCIS – T1

### T1 Trunking (with ANI/DNIS Compatibility)

---

## Feature Examples

Digital Trunk Clocking Examples:

If multiple PRIs exist, the first one that synchronized with the carrier is chosen. In this example, the PRI in 02 was the first to synchronize with the carrier; therefore, it is the PLO synchronization source.

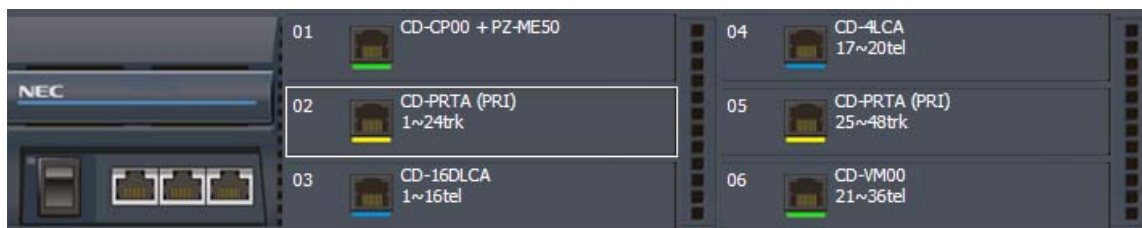


Figure 2-4 Digital Trunk Clocking Example 1

If there are multiple PRIs and the one being used for the source goes down, the system begins to count forward in slot numbers looking for the next available PRI. In this example, the PRI in 02 went down, so the system now begins looking forward in slot numbers for the next PRI to use as the clock source.

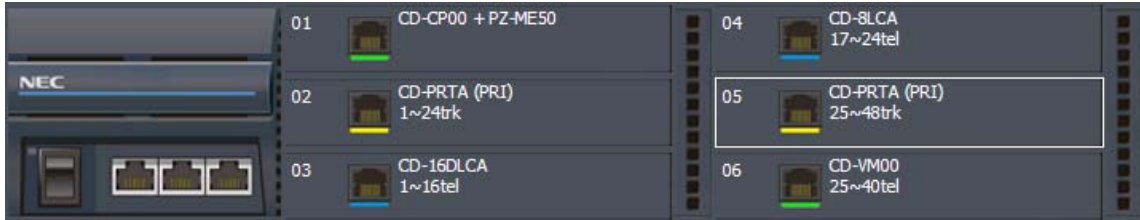


Figure 2-5 Digital Trunk Clocking Example 2

In this example, the PRI in 05 was the first to synchronize with the carrier and became the PLO synchronization source. The PRI in 05 then went down and the system began looking forward in slot numbers to find the next PLO source. In this case, the PRI in 02 was the next source because after it looks through the rest of the slots in the system, it starts over with 01.

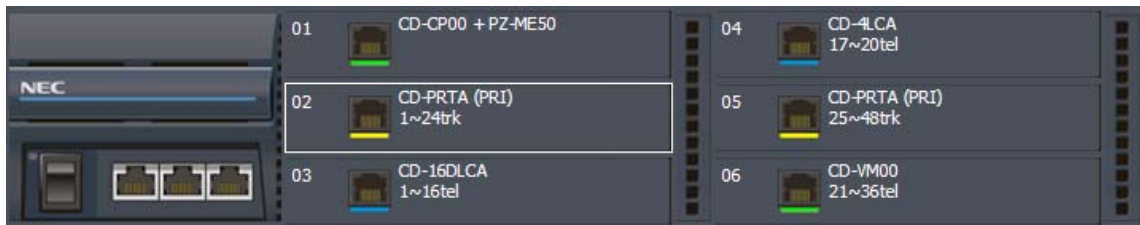


Figure 2-6 Digital Trunk Clocking Example 3

In this example, there are multiple T1 circuits in the system. There can only be one T1 circuit assigned as EXTERNAL in the system, so the T1 assigned as EXTERNAL is the PLO synchronization source.

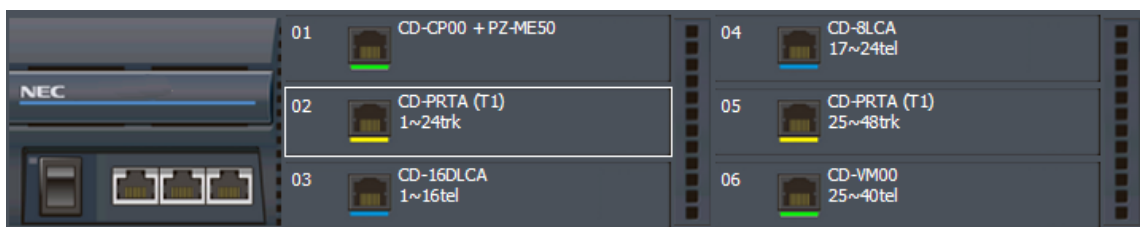
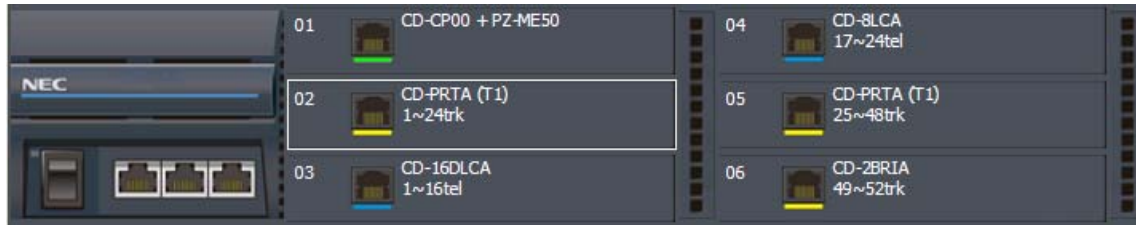


Figure 2-7 Digital Trunk Clocking Example 4

In this example, there are multiple T1 circuits and a BRI circuit. Since the T1 assigned as EXTERNAL has higher priority than a BRI, the T1 EXTERNAL is the PLO synchronization source.



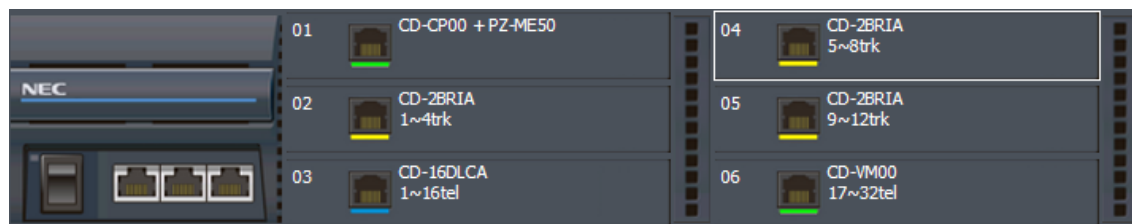
**Figure 2-8 Digital Trunk Clocking Example 5**

In this example, there is a PRI, multiple T1s, and a BRI. The PRI was the PLO synchronization source until it went down. The BRI then becomes the PLO synchronization source because when a PRI is in the system, T1s cannot be assigned as EXTERNAL, which are not in the PLO synchronization source priority list.



**Figure 2-9 Digital Trunk Clocking Example 6**

If multiple BRIs exist but no PRI or T-1 EXTERNAL exists, the system chooses the first BRI that synchronized with the carrier. In this example, the BRI in 04 synchronized with the carrier first and became the PLO synchronization source.



**Figure 2-10 Digital Trunk Clocking Example 7**

In this scenario, the PRI was the clocking source until it went down. There are no other PRIs, T1 (Externals), or BRIs in the system. The CD-CP00-US now becomes the PLO synchronization source.



Figure 2-11 Digital Trunk Clocking Example 8

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## Guide to Feature Programming

Refer to the related features for programming.

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## Operation

Refer to the related features for details.

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## *Direct Inward Dialing (DID)*

### Enhancements


With **Version 7000 or higher** system software, more flexible schedule settings in the DID Conversion table are provided

- Direct Inward Dialing supports day of week and time of day scheduling.
- The Dial-In Conversion table can support a maximum of 500 tables.
- V7000 Enhancement License (0036)** required.

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### Description

Direct Inward Dialing (DID) lets outside callers directly dial system extensions. DID saves time for callers who know the extension number they wish to reach. To place a DID call, the outside caller dials the local exchange (NNX) and additional digits to ring the telephone system extension. For example, DID number 926-5400 can directly dial extension 400. The caller does not have to rely on attendant or secretary call screening to complete the call.

 *Direct Inward Dialing (DID) requires DID service from Telco.*

In addition to direct dialing of system extensions, DID provides:

- DID Dialed Number Translation
- Flexible DID Service Compatibility
- DID Intercept
- DID Camp-On

There are 20 DID Translation tables that can be divided between 2000 entries.

#### **DID Dialed Number Translation**

DID allows different tables for DID number translation. This gives you more flexibility when buying DID service from Telco. If you cannot buy the exact block of numbers you need (e.g., 301~556), use the translation tables to convert the digits received. For example, a translation table could convert digits 501~756 to extension numbers 301~556.

The UNIVERGE SV8100 system has 2000 DID Translation Table entries that you can allocate among the 20 DID Translation Tables. One translation is made in each entry. For a simple installation, you can put all 2000 entries in the same table. For more flexibility, you can optionally distribute the 2000 entries among the 20 tables.

In addition to number conversion, each DID Translation Table entry can have a name assigned to it. When the DID call rings the destination extension, the programmed name is displayed.

### **Flexible DID Service Compatibility**

With three-digit service, the Telco sends three digits to the system for translation. Be sure to program your system for compatibility with the provided Telco service. For example, if the Telco sends four digits, make sure you set up the translation tables to accept four digits.

The system is compatible with Dial Pulse (DP) and DTMF DID signaling. DID trunks can be either wink start, immediate start, 2nd Dial or Delay.


### **DID Camp-On**

DID Camp-On sets what happens to DID calls to busy extensions when you have Busy Intercept disabled. With DID Camp-On enabled, a call to a busy extension camps-on for the DID Ring No Answer Time. It then diverts to the programmed DID Intercept extension ring group or Voice Mail. Without DID Camp-On, the caller to the busy extension hears only busy tone.

### **DID Routing Through the VRS**

DID calls can optionally route through the VRS. The DID caller hears an initial Automated Attendant Greeting explaining their dialing options. If the caller misdials, they hear a second greeting with additional instructions. For example, the first Automated Attendant Greeting can be, "Thank you for calling. Please dial the extension number you wish to reach or dial 0 for the operator." If the caller inadvertently dials an extension that does not exist, they could hear, "The extension you dialed is unavailable. Please dial 0 for assistance or dial # to leave a message so we can call you back."

You assign Automated Attendant greetings (i.e., VRS Messages) to the numbers in each Translation Table. This provides you with extensive flexibility when determining which greetings the system should play for which dialed numbers. You could, for example, set up 926 5401 through 926 5449 to route to extensions 401~449, and have 926 5450 route to the automated attendant.

 *If you translate a DID so that it hits a specific VRS message, you must disable Program 25-01-02. Otherwise, the outside caller waits while hearing the DISA dial tone.*

The system allows an extension to be defined as a 1-digit number that can be dialed by the outside caller on a DID/DISA trunk using the VRS. The outside caller can access the desired extension/department group by dialing only one digit after the system answers the call. If the same number is used as the first digit of an extension number and the 1-digit access code for DID/DISA, the outside caller cannot access the extension.

#### **EXAMPLE:**

If 2 is defined as a 1-digit access code to department group 300, outside callers cannot access extensions 200~299 directly.



### **SMDR Includes Dialed Number**

The SMDR report can optionally print the trunk name (entered in system programming) or the number the incoming caller dialed (i.e., the dialed DID digits). This allows you to analyze the SMDR report based on the number your callers dial. (This option also applies to an ISDN trunk.)

### **DID Intercept**

DID Intercept automatically reroutes DID calls under certain conditions. There are three DID Intercepts:

Vacant Number Intercept

If a caller dials an extension that does not exist or misdials, Vacant Number Intercept can reroute the call to the programmed DID Intercept extension ring group or Voice Mail. Without Vacant Number Intercept, the caller hears error tone after misdialing.

Busy Intercept

Busy Intercept determines DID routing when a DID caller dials a busy extension. If Busy Intercept is enabled, the call immediately routes to the programmed DID Intercept extension ring group or Voice Mail. If Busy Intercept is disabled, the call follows DID Camp-On programming.

Ring-No-Answer Intercept

Ring-No-Answer Intercept sets the routing options for DID calls that ring unanswered at the destination extension. With Ring-No-Answer Intercept enabled, the unanswered call reroutes to the DID Intercept extension ring group or Voice Mail after the DID Ring-No-Answer Time. If Ring-No-Answer Intercept is disabled, the unanswered call rings the destination until the outside caller hangs up.

### **Delayed DID**

Delayed DID allows a user a programmed time to answer a call. If the call is not answered in this time, the system automatically answers the call. An outside party hears a voice message, music, or dial tone according to the following conditions:

If VRS is installed, the system sends a recorded message from the VRS.


If a customer-provided audio system (example: tape recorder) is connected, an error message or music can be played for the caller.

If equipment is not connected for an announcement, the system sends a unique dial tone to the outside caller.

This feature is not available for the normal incoming call on ISDN trunks.

## DID Intercept Destination for Each DID Number

With this feature the system allows you to program a DID Intercept destination for a DID number which receives no answer or busy call. The system can be programmed to use a trunk ring group, the VRS or the voice mail as the programmed destination. Each vacant number intercept for a DID number can have two destinations. The first destination is for an invalid DID number, busy or no answer extension. The second destination is for a no answer trunk ring group.

 *If the first programmed destination is a Ring Group and the second Destination is Voice Mail, the call does not forward to VoiceMail.*


For busy or no answer intercept calls, a third destination can be defined in Program 22-12. If the first and third destinations are programmed but the second destination is not, the incoming call goes to the third destination after the first destination. If the first and second destinations are not programmed, but the third destination is, the call goes directly to the third destination.


This feature works for DID trunks with a trunk service type 3 in Program 22-02. Other types of trunks may use the DID table, but the DID intercept feature is not yet supported.

With the DID Intercept for each DID number feature, when the primary destination (Program 22-11-05) is set to Voice Mail, the Voice Mail protocol is:

1. Busy Intercept = Forward Busy
2. Ring-No-Answer Intercept = Forward RNA

When the secondary destination (Program 22-11-06) is set to Voice Mail, the Voice Mail protocol is based on the first destination routing. When the incoming call is forwarded to the first destination by a busy intercept, the Voice Mail protocol forwards busy calls. When the incoming call is routed to the first destination by a ring-no-answer intercept, the protocol forwards ring-no-answer. The Voice Mail transfers the calls to the mailbox number defined in Program 22-11-02.

 *Any valid DID number must be entered in the DID table (Program 22-11 or Program 22-17-01). If a valid DID number is not entered, there is no ring destination for any incoming call to that number (the calls do not ring any extension in the system).*

 *If the first programmed destination is a Ring Group and the second Destination is Voice Mail, the call does not forward to VoiceMail.*

## Calls Can Follow Ring Group Programming for Transferring Calls

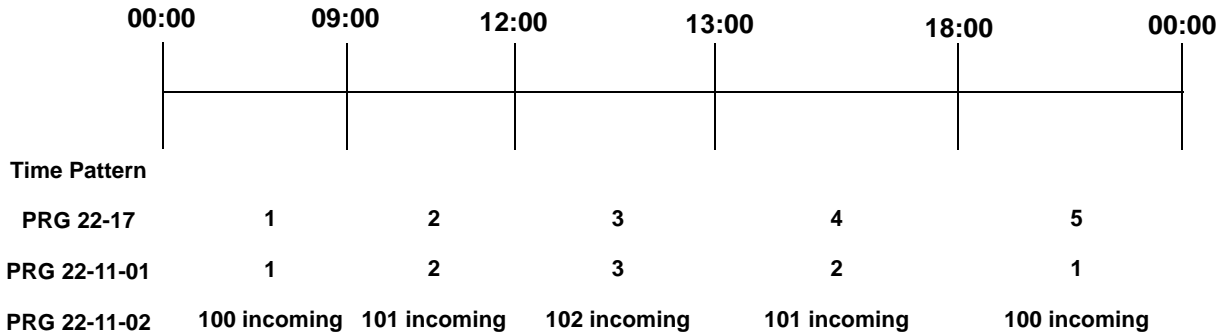
An option was added to Program 22-11 which allows you to determine if the DID routing should use the programmed ring group entry in Program 22-12-01 when transferring calls from a busy or no answer number.

If DID digits match the conversion table but there is no extension, no Voice Mail, or Voice Mail did not boot up, use Program 22-11-11 to decide what to do with the incoming call. Go to (1) normal ring (default) or (0) caller hears a Busy Tone.

**DID Call by Time Schedule**

DID Call by Time Schedule allows for 100 (**Version 6000 or lower**) or 500 (**Version 7000 or higher**) programmed DID Conversion table entries (**Program 22-17-01**) that can be routed based on Time Patterns. Each DID Conversion table has a maximum of eight programmable Time Patterns and each Time Pattern can reference one of the 2000 different Dial-In Conversion table entries in **Program 22-11-01**.

**Example 1 (Automatic Change)**



Program 22-11-01 and Program 22-11-02		
Table No.	Receive Dial	Transfer Dial
1	No setting	100
2	No setting	101
3	No setting	102

Program 22-17					
Table No.	Receive Dial	Time Pattern	Start Time	End Time	PRG 22-11
1~100	1111	1	00:00	09:00	1
		2	09:00	12:00	2
		3	12:00	13:00	3
		4	13:00	18:00	2
		5	18:00	00:00	1
		6	00:00	00:00	0
		7	00:00	00:00	0

Program 22-17 (Continued)					
		8	00:00	00:00	0

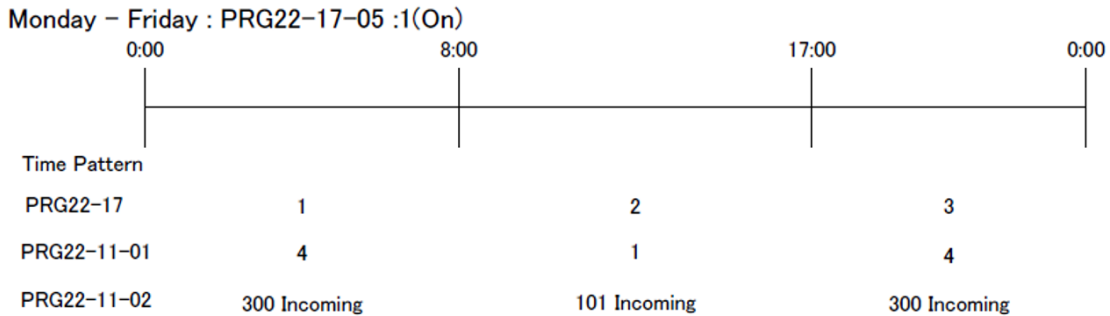
**Table 2-11 Example 2 (Manual Change)**

Program 22-17					
Table No.	Receive Dial	Time Pattern	Start Time	End Time	PRG 22-11
1~100	1111	1	00:00	00:00	1
		2	00:00	00:00	2
		3	00:00	00:00	3
		4	00:00	00:00	0
		5	00:00	00:00	0
		6	00:00	00:00	0
		7	00:00	00:00	0
		8	00:00	00:00	0

**DID Call by Day of Week Schedule (Version 7000 or higher)**

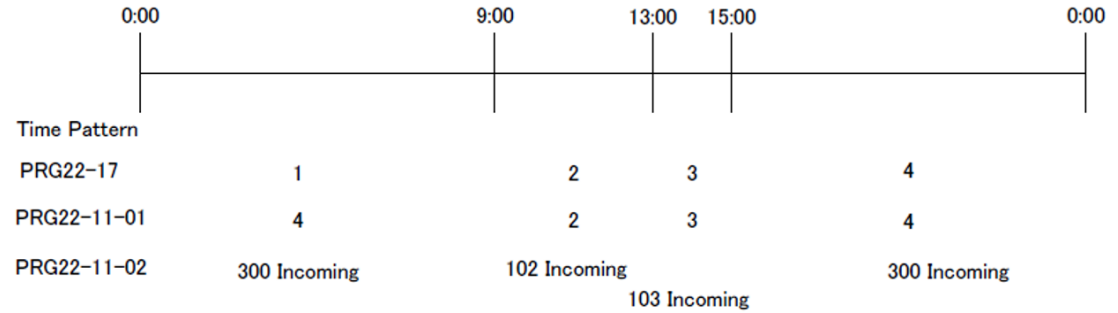
DID Call by weekly schedule allows for 500 programmed DID Conversion table entries (Program 22-17-01 and Program 22-17-05) that can be routed based on Day of Week Patterns. Each DID Conversion table has a maximum of eight programmable Time Patterns and Day of Week Pattern can reference one of the 2000 different Dial-In Conversion table entries in Program 22-11-01.

**Example 1 (Monday - Friday)**



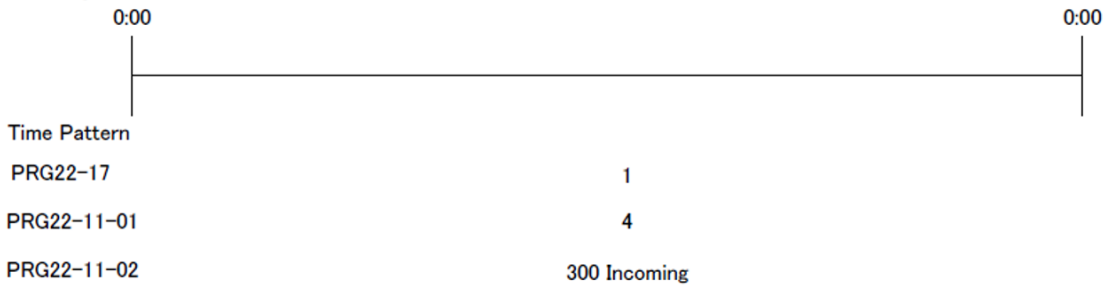
**Example 2 (Saturday)**

Saturday : PRG22-17-05 :1(On)



**Example 3 (Sunday)**

Sunday : PRG22-17-05 :1(On)



Program 22-11-01 and Program 22-11-02		
Table No.	Receive Dial	Transfer Dial
1	None	101
2	None	102
3	None	103
4	None	300

Table 2-12 Example 1 – Monday ~ Friday

Program 22-17						
Table No.	Receive Dial	Time Pattern	02: Start Time	03: End Time	04: PRG 22-11	05: Day
1	734	1	00:00	08:00	4 (Ext. 300)	Mon-Fri: 1 (On)
	734	2	08:00	17:00	1 (Ext. 101)	
	734	3	17:00	00:00	4 (Ext. 300)	

Table 2-13 Example 2 – Saturday

Program 22-17						
Table No.	Receive Dial	Time Pattern	02: Start Time	03: End Time	04: PRG 22-11	05: Day
2	734	1	00:00	09:00	4 (Ext. 300)	Sat: 1 (On)
	734	2	09:00	13:00	2 (Ext. 102)	
	734	3	13:00	15:00	3 (Ext. 103)	
	734	4	15:00	00:00	4 (Ext. 300)	

Table 2-14 Example 3 – Sunday

Program 22-17						
Table No.	Receive Dial	Time Pattern	02: Start Time	03: End Time	04: PRG 22-11	05: Day
3	734	1	00:00	00:00	4 (Ext. 300)	Sun: 1 (On)

### Federal Communications Commission DID Requirements

Allowing this equipment to operate without providing proper answer supervision signaling violates Part 68 rules.

This equipment returns answer supervision to the Public Switched Telephone Network when the DID trunk is:

- Answered by the called station.
- Answered by the attendant.
- Routed to a recorded announcement that can be administered by the CPE user.
- Routed to a dial prompt.

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This equipment returns answer supervision on all DID calls forwarded back to the Public Switched Telephone Network. Permissible exceptions are when:

- A call is unanswered.
- A busy tone is received.
- A reorder tone is received.

When ordering DID service, provide the Telco with the following information:

UNIVERGE SV8100	KF = US:NIFKF07B
	MF = US:NIFMF07B
	PF = US:NIFPF07B
DID Facility Interface Code	02RV2-T
DID Service Order Code	9.0F
DID Answer Supervision Code	A S.2
DID USOC Jack Type	RJ21X

## Conditions

- Analog DID requires the installation of a CD-4DIOPA Blade (provides four DID ports). Depending on programming, the system may assign both trunk and extension ports (if OPX is selected in Program 10-03-01) when this blade is installed.
- DID service must be purchased from your local telephone company.
- DID Intercept for each DID number works for DID trunks with a trunk service type 3 in Program 22-02. Other types of trunks may use the DID table, but the DID intercept feature for each DID number is not yet supported.
- When a call is transferred because of Call Forwarding No Answer, Call Forwarding Busy, or DND, the reason for Transfer option can display to the transferred extension when the call is ringing to their telephone.
- Direct Inward Lines (DILs) also provide a way for outside callers to dial a system extension, virtual extension, or Department Group directly.
- DISA also allows outside callers to dial system extensions directly.
- The Off-Hook Signaling provide DID calls with signaling options. Refer to Off-Hook Signaling for specific details.
- DID trunks do not ring external page speakers. Only trunks defined as normal in Program 22-02-01 ring external page speakers.
- To simplify answering DID calls, assign function keys as line keys for the DID trunks.
- SMDR can print trunk port names or received dialed number for ANI/DNIS or DID trunks. If enabled, DNIS digits can be printed on the SMDR reports instead of the trunk name.

- Transferred calls on DISA, DID, DIL, ISDN trunks, or from the VRS can display the reason a call is being transferred (Call Forward, Busy, No Answer, or DND).
- When defining trunks as DID or DID Mode in Program 22-02-01, DID translation (Program 22-11 or Program 22-17) must be used, even if the incoming digits match the extension number.
- When using DID Call by Time Schedule and breaking out the Time Patterns, set the start time to 00:00 and end time to 00:00 for this feature to operate correctly. Refer to [DID Call by Time Schedule on page 2-437](#) for more details.
- DID Call by Time Schedule Priority is given to the pattern that is set **manually**. However, when a time pattern changes with the time schedules set in Program 22-17, the pattern applied by the Manual change is canceled and the Time Pattern is given priority.
- When Transfer Operation Mode is set to busy, call queuing must be turned off for it to work.
- Incoming calls on T1/ANI trunks can only follow Program 22-11-01. They do not follow Programs 22-11-05 and 22-11-06.
- When a name is assigned to a DID in Program 22-11-03, the name is displayed during a ringing DID call. When the call is transferred or forwarded, the name is not displayed until the call is answered.

## Default Setting

Disabled

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## Related Features

**Central Office Calls, Answering**

**Direct Inward Line (DIL)**

**Direct Inward System Access (DISA)**

**Off-Hook Signaling**

**Paging, External**

**Programmable Function Keys**

**Station Message Detail Recording**

**Transfer**




## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup</b>	Set up and confirm the basic configuration data for each blade. This program represents different data depending on the blade installed in the slot. Please refer the SV8100 Programming Manual for a more detailed description of this program.	The assigned data varies depending on the blade installed in the slot. Please refer to the SV8100 Programming Manual for a more detailed description of the 10-03-XX programs.	✓		
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	If the system has DTMF DID trunks, be sure to reserve at least one circuit for analog trunk DTMF reception (type 0 or 2). There must be an available receiver for each DTMF DID trunk. Use the following as a guide when allocating DTMF receivers: In light traffic sites, allocate one DTMF receiver for every 10 devices that use them. In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available.			✓
14-05-01	<b>Trunk Group – Trunk group Number</b>	Put DID trunks in the same trunk group (other than group 1). If you have different types of DID trunks, put each type in a separate trunk group.	Trunks 1-200 Trunk Group 1-100 Priority 1-200 Default = All trunks in Trunk Group 1 with priority in trunk order. Trunk 1 priority = 1 Trunk 200 priority = 200.	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign line or Call Appearance (CAP) Keys for DID trunks (Trunks: 1~200).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
21-01-02	<b>System Options for Outgoing Calls – Intercom Interdigit Time</b>	Set the time-out time for DID callers that do not dial. After this time, the DID call routes according to Vacant Number Intercept programming.	0~64800 (seconds) (default = 10)		✓	
22-01-06	<b>System Options for Incoming Calls – DID Ring-No-Answer Time</b>	Set the DID Ring No Answer (RNA) Intercept time. In systems with RNA Intercept, the DID call rings the destination extension for this time, and then rings Intercept Ring Group.	0~64800 (seconds) (default = 20)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	For each Night Service Mode, enter service type 3 when the trunk should be a DID trunk.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions to Ring Groups. Calls ring the extensions according to programming in Program 22-06.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-09-01	<b>DID Basic Data Setup – Expected Number of Digits</b>	For each DID Translation Table (1~20), enter the number of digits the table expects to receive from the CO (eight maximum). For example, for a table used with 3-digit DID service, enter 3.	1~8 (default = 4)	✓		
22-09-02	<b>DID Basic Data Setup – Received Vacant Number Operation</b>	Enable/Disable Vacant Number Intercept.	0 = Disconnect 1 = Transfer (default = 0)		✓	
22-10-01	<b>DID Translation Table Setup</b>	Assign the start and end range of DID Translation Table entries (1~2000) to each DID Translation Table (1~20).	0~2000 (0 = No Setting) default: 1st: 1 Start – 1, End – 100 2 Start – 101, End – 200 3 Start – 201, End – 300 4 Start – 301, End – 400 5~20 Start – 0, End – 0 2nd: 1~20 Start – 0, End – 0		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-11-01	<b>DID Translation Number Conversion – Received Number</b>	For each DID Translation Table entry (1~2000), specify the digits received by the system.	Maximum eight digits (default not assigned)	✓		
22-11-02	<b>DID Translation Number Conversion – Target Number</b>	For each DID Translation Table entry (1~2000), specify the extension the system dials after translation.	Maximum 24 digits (default not assigned)	✓		
22-11-03	<b>DID Translation Number Conversion – DID Name</b>	For each DID Translation Table entry (1~2000), specify the name that should show on the dialed extension display when it rings.	Maximum 12 digits (default not assigned)		✓	
22-11-04	<b>DID Translation Number Conversion – Transfer Operation Mode</b>	For each DID Translation Table entry (1~2000), specify the condition required to transfer the call to the destination defined in Program 22-11-05 and Program 22-11-06.	0 = No Transfer 1 = Busy 2 = No Answer 3 = Both (default = 0)		✓	
22-11-05	<b>DID Translation Table Number Conversion – Transfer Destination Number 1</b>	Define the 1st transfer destination for each tables received number.	0 = No Setting 1~100 = Incoming Group 101 = (Not Used) 102 = In-Skin/External Voice Mail or InMail 201~264 = Extension Group 400 = Valid Extension Number 401 = DISA 501~548 = DISA/VRS Message 1000~999 = Speed Number (000~999) (default = 0)		✓	
22-11-06	<b>DID Translation Table Number Conversion – Transfer Destination Number 2</b>	400 = Allows the outside party to dial a different extension number in the translation table (for example, ring no answer to a dialed number, the caller then hears a dial tone, allowing them to enter another Valid Extension Number). 401 = Provides the caller with DISA dialing options (requires using the DISA password). Note: This applies to 22-11-05 and 22-11-06.  <i>If the Transfer Destinations are busy or receive no answer, those calls are transferred to the final transfer destination (Program 22-10).</i>			✓	
22-11-07	<b>DID Translation Number Conversion – Call Waiting</b>	For each DID Translation Table entry (1~2000), specify whether or not Call Waiting should be allowed.	0 = Disable (No) 1 = Enable (Yes) (default = 0)		✓	
22-11-08	<b>DID Translation Number Conversion – Maximum Number of DID Calls</b>	For each DID Translation Table entry (1~2000), specify the maximum number of DID calls.	0~200 (0 = No Limit) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-11-09	<b>DID Translation Number Conversion – Music On Hold Source</b>	For each DID Translation Table entry (1~2000), specify the source of music to be used for DID trunks.	0 = IC/MOH Port 1 = BGM Port 2 = ACI Port (default = 0)		✓	
22-11-10	<b>DID Translation Number Conversion – ACI Music Source Port</b>	For each DID Translation Table entry (1~2000), if item 2 is selected in Program 22-11-09, specify the port to be used for the source of music heard on DID trunks.	When a sound source type is 2 in above : (0~96) (default = 0)		✓	
22-11-11	<b>DID Translation Number Conversion – Ring Group Transfer</b>	Enable/Disable each conversion table to follow the Ring Group programming defined in Program 22-12-01 : DID Intercept Ring Group. If Program 22-11-05 : DID Translation Number Conversion, Transfer Destination Number 1 and Program 22-11-06 : DID Translation Number Conversion, Transfer Destination Number 2 are set, the priority of transferring is in this order: Program 22-11-05 then Program 22-11-06 then if Program 22-11-11 is enabled, Program 22-12-01.	0 = Disable (Caller hears Ringback) 1 = Enable (Go to normal ring) (default = 1)		✓	
22-12-01	<b>DID Intercept Ring Group</b>	For each DID Translation Table, program the DID Intercept destination. The destination can be a Ring Group, In-Skin/External Voice Mail, or Centralized Voice Mail. This program is used when there is no destination programmed in Program 22-11-05. It is unrelated to Program 22-11-06 and Program 22-11-07.	0 (No Setting) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) (default = 1)		✓	
22-13-01	<b>DID Trunk Group to Translation Table Assignment</b>	Assign the DID trunk groups to translation tables. If all the DID trunks use the same type of DID service, you may have only one DID trunk group and one DID Translation Table (with many entries).	0~20 (0 = No Setting) (default = 1)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-01-01	<b>VRS/DISA Line Basic Data Setup – VRS/DISA Dial-In Mode</b>	Determine whether the system should use option 0 or option 1 (Use dial conversion table) for calls.	0 = Extension Number Service Code Specify (Intercom) 1 = Use Dial Conversion Table (default = 0)		✓	
25-01-03	<b>VRS/DISA Line Basic Data Setup – VRS/DISA Transfer Alarm</b>	Determine whether the system should use option 0 or option 1 for calls.	0 = Normal 1 = Alarm (default = 0)		✓	
25-02-01	<b>DID/DISA VRS Message</b>	For each trunk port and each night mode, select the message source (0 = No Message, 1 = VRS, 2 = ACI, 3 =S LT), assign the VRS message number to be used as the Automated Attendant Message for each trunk, which is assigned as VRS/DISA [with VRS = 01~48 (VRS message number), with ACI = 1~4 or 01~16 (ACI group number), with SLT = 1~8 or 01~64 (Department Group number)].	0 = No Message 1 = VRS (01~100 VRS Message Number) 2 = ACI (01~04 ACI Group Number) 3 = Department Groups (01~64 Extension Group Number) (default = 0)		✓	
25-03-01	<b>VRS/DISA Transfer Ring Group With Incorrect Dialing</b>	For each trunk port, set what happens to a call when the DISA or Automated Attendant caller dials incorrectly or waits too long to dial. The call can either disconnect (0) or Transfer to an alternate destination (a ring group, In-Skin/External, Centralized). When setting the DISA and DID Operating Mode, you make an entry for each Night Service mode.	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-04-01	<b>VRS/DISA Transfer Ring Group With No Answer/Busy</b>	For each trunk port (001~200), set the operating mode of each DISA trunk. This sets what happens to the call when the DISA or Automated Attendant caller calls a busy or unanswered extension. The call can either disconnect (0) or Transfer to an alternate destination (a ring group, In-Skin/ External, Centralized). When setting the DISA and DID Operating Mode, you make an entry for each Night Service mode.	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)		✓	
25-05-01	<b>VRS/DISA Error Message Assignment</b>	For each trunk that is answered by the VRS, enter the VRS message (1~48) the outside caller hears if they dial incorrectly after answer. If you enter 0, the call reroutes according to Program 25-03 and Program 25-04. Make one entry for each Night Service mode.	0~100 (0 = No Setting) (default = 0)		✓	
25-06-02	<b>VRS/DISA One-Digit Code Attendant Setup – Destination Number</b>	Set up single digit dialing for Automated Attendant callers. For each VRS Message programmed to answer outside calls, specify: <ul style="list-style-type: none"> <li>○ The digit the Automated Attendant caller dials (1~12, where 10 = 0, 11 =* and 12 = #). (Keep in mind that if you assign destinations to digits three and four, outside callers cannot dial system extensions that begin with that digit.)</li> <li>○ The destination reached (four digits maximum) when the caller dials the single digit code.</li> </ul>	Up to eight digits (default not assigned)		✓	
25-07-01	<b>System Timers for VRS/DISA – VRS/DISA Dial Tone Time</b>	After answering a VRS/DISA trunk, the system waits this time for the caller to dial the first digit of the DISA password. If the caller fails to dial in this time, the system drops the call.	0~64800 (seconds) (default = 10)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-02	<b>System Timers for VRS/DISA – VRS/DISA No Answer Time</b>	A VRS/DISA caller can ring an extension for this time before the system sets the call as a Ring No Answer. After this time expires, the call follows the programmed Ring No Answer routing (set in Program 25-03 and Program 25-04).	0~64800 (seconds) (default = 0)		✓	
25-07-04	<b>System Timers for VRS/DISA – Calling Time to Automatic Answering Telephone Set</b>	Set the answering waiting time of the automatic answering extension when an incoming DID trunk call is received.	0~64800 (seconds) (default = 10)		✓	
25-07-05	<b>System Timers for VRS/DISA – Duration Time for Guidance Message by Automatic Answering Telephone Set</b>	Set the announcement time of the automatic answering extension before an incoming DID trunk caller is disconnected.	0~64800 (seconds) (default = 10)		✓	
25-07-06	<b>System Timers for VRS/DISA – Duration Time for Guidance Message by ACI</b>	Set the announcement time by the ACI before an incoming DID trunk caller is disconnected.	0~64800 (seconds) (default = 10)		✓	
25-07-11	<b>System Timers for VRS/DISA – VRS/DISA Answer Delay Time</b>	Set the time the system waits after receiving an incoming VRS/DISA call before the system automatically answers the call.	0~64800 (seconds) (default = 0)		✓	
25-07-13	<b>System Timers for VRS/DISA – VRS/DISA Busy Tone Interval</b>	If a DISA caller dials a busy extension (and Program 25-04-01 is set to 0), the system plays busy tone for this time before disconnecting.	0~64800 (seconds) (default = 5)		✓	
25-07-14	<b>System Timers for VRS/DISA – Delayed VRS Answer Time</b>	Assign the delay time from switching from a normal incoming status to DID mode. If this time is set to 0, the call switches to DID mode immediately.	0~64800 (seconds) (default = 10)		✓	
34-01-01	<b>E&amp;M Tie Line Basic Setup – DID/ E&amp;M Start Signaling</b>	Set the start signaling mode for DID and tie trunks. DID and tie trunks can use either immediate start or wink start signaling.	0 = 2nd Dial Tone 1 = Wink (default) 2 = Immediate 3 = Delay (default = 1)	✓		
34-01-02	<b>E&amp;M Tie Line Basic Setup – Receive Dial Type for E&amp;M Tie Line</b>	For DID and tie trunks, set the trunks signaling type.	0 = DP 1 = DTMF 2 = MF (default = 1)	✓		



**Direct Call by Time Schedule:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-35	<b>Service Code Setup (for Administrator) – Dial-In Mode Switching</b>	Assign the service code Dial-In Mode Switching.	MLT, SLT (default not assigned)	✓		
12-04-01	<b>Holiday Night Service Switching</b>	Define a yearly schedule of holiday night-switch settings. This schedule is used for the setting of special days when the company is expected to be closed, such as a national holiday.	Night Mode Service Group No. 01-32 Days and Months 0101~1231 Time Pattern No. 0~10 0 = No Setting (default not assigned)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for one-touch access to the Dial-In Mode Switching setup code (Code 88).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00~*99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/ Disable an extension user ability to manually change Dial-In Modes.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
22-02-01	<b>Incoming Call Trunk Setup</b>	For each Night Service Mode, enter service type 8 when the trunk should be a DID (DDI) Mode Switching trunk.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-11-02	<b>DID Translation Number Conversion – Target Number</b>	For each DID Translation Table entry (1~2000), specify the extension the system dials after translation.  Do not assign Received Digits in Program 22-11-01 when using DID Call by Time Schedule.	Maximum 24 digits (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-17-01	Dial-In Conversion Table Area Setup for Time Pattern – Received Dial	Define the received numbers for each Dial-In Conversion Table (Program 22-17-02, 22-17-03 and 22-17-04).	Up to eight digits (default not assigned)	✓		
22-17-02	Dial-In Conversion Table Area Setup for Time Pattern – Start of Time	Define the Starting Time for each DID Translation table in Program 22-17-01.	0000~2359 (Time) (default = 0000)	✓		
22-17-03	Dial-In Conversion Table Area Setup for Time Pattern – End of Time	Define the Ending Time for each DID Translation table in Program 22-17-01.	0000~2359 (Time) (default = 0000)	✓		
22-17-04	Dial-In Conversion Table Area Setup for Time Pattern – Dial-In Conversion Table Number	Assign each time pattern to a DID Translation Table Entry in Program 22-11.	0~2000 (default = 0)	✓		
22-17-05	Dial-In Conversion Table Area Setup for Time Pattern – Day of Week	Assign day of week for each DID conversion table.	1-8 1: Sunday 2: Monday 3: Tuesday 4: Wednesday 5: Thursday 6: Friday 7: Saturday 8: Holiday (default = 1: On (1-8))		✓	

## Operation

DID calls ring extensions like normal trunk calls.

### To Activate DID Call by Time Schedule:

- At any display multiline terminal, press **Speaker**.
- Dial the Dial-In Mode Switching Service Code (Default = Not assigned).

- OR -

Press the Dial-In Mode Switching Programmable Function key (Program 15-07-01, 88, or SC 751 Key Code 88).

- Dial **1~100 (Version 6000 or lower)/ 500 (Version 7000 or higher)** (table number).

- 
- 
4. Dial the Time Pattern 1~8.

**Table 2-15 LED Flash Patterns**

<b>Time Pattern</b>	<b>LED Appearance</b>
<b>Pattern 1</b>	<b>Off</b>
<b>Pattern 2</b>	<b>On</b>
<b>Pattern 3</b>	<b>Slow Flash</b>
<b>Pattern 4</b>	<b>Fast Flash</b>
<b>Patterns 5~8</b>	<b>Off</b>

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## *Direct Inward Line (DIL)*

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### Description

A Direct Inward Line (DIL) is a trunk that rings an extension, virtual extension or Department Group directly. Since DILs only ring one extension or group (i.e., the DIL destination), employees always know which calls are for them. For example, a company operator can have a Direct Inward Line for International Sales Information. When outside callers dial the DIL telephone number, the call rings the operator on the International Sales line key. The DIL does not ring other extensions.

There are 200 available trunks, 64 Department Groups, 512 extensions and 256 virtual extensions.

### DIL Delayed Ringing

Extensions in a Ring Group can have delayed ringing for another extension DIL. If the DIL is not answered at its original destination, it rings the DIL No Answer Ring Group. This could help a Technical Service department, for example, that covers calls for an Inside Sales department. If the Inside Sales calls are not answered, they ring to the Technical Service department.

### Conditions

- If unanswered, a DIL without delayed ringing rings an extension until the outside party hangs up.
- If a DIL rings a Department Group and all agents are busy, the system routes the call as follows:
  1. The trunk rings the overflow destination assigned in Program 22-08.
  2. If there is no 22-08 assignment, the call rings according to the Ring Group assignments in Program 22-04 and Program 22-05.
  3. If none of the destinations in steps 1~2 above are available, the call continues to ring until a destination becomes free.
- The DIL follows call forwarding programming, even to voice mail.
- When a call is transferred by Call Forwarding – No Answer, Call Forwarding – Busy, or DND, the Reason for Transfer can display at the transferred extension.
- You can place DILs in trunk groups to make outgoing DIL calls easier.
- If a DIL destination extension is in DND, an incoming call rings according to Ring Group programming (Program 22-08 then Program 22-05).
  - *If a user puts the telephone in Do Not Disturb, calls routed to the telephone in DND **do not** follow call forwarding.*
- A user can activate Group Call Pickup to intercept a DIL ringing another extension.

- Program a name for a DIL in Program 14-01-01. This makes it easier to identify the incoming call.
- If a multiline terminal is busy, a second incoming DIL call provides Call Alert Notification, depending on chassis programming. The second DIL call waits in line for the user to answer the call. The outside caller hears ringback tone while this occurs.
- If an extension has a line key for a DIL, the call rings the key. If not, the call rings an available line appearance. For other extensions, the DIL indicates busy.
- A DIL rings its assigned extension without Ring Group programming. A DIL only rings its assigned extension. It does not ring other extensions in a Ring Group.
- Transferred calls on DISA, DID, DIL, ISDN trunks, or from the VRS can display the reason a call is being transferred (Call Forward, Busy, No Answer, or DND).

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Call Forwarding**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Department Calling**

**Do Not Disturb**

**Group Call Pickup****Name Storing****Off-Hook Signaling****Paging, External****Programmable Function Keys****Ring Groups****Transfer**



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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	To have the DIL ring a key, program a line key for the DIL trunk.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this time diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)		✓	
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign each DIL Service Type 4. Make an entry for each Night Service mode.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign the extensions that should receive the overflow to the ring group programmed in Program 22-08. Set the ringing in Program 22-06.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-07-01	DIL Assignment	Set the destination extension number for each DIL – for each Night Service mode. The destination can be an extension port, virtual extension number, or Department Group pilot number (as assigned in Program 11-07-01).	Extension Number (maximum eight digits) (default not assigned)	✓		
22-08-01	DIL/IRG No Answer Destination	For each DIL with delayed ringing, enter the DIL No Answer Ring Group. An unanswered DIL rings this group after the DIL No Answer Time. Make an entry for each Night Service mode.	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	

## Operation

### To answer a call on your Direct Inward Line:

1. Lift the handset.
2. Press the flashing line key for DIL on the multiline terminal.
  - Press the flashing Answer Key to put the first call on hold and answer the second incoming call. This can be repeated until all incoming calls are answered.
  - If you have Ringing Line Preference, lift the handset to answer the call.
  - If you do not answer the call, it may ring other extensions (i.e., the DIL No Answer Ring Group).

### To place a call on your Direct Inward Line:

1. Lift the handset.
2. At the multiline terminal, press the line key for DIL.
  - OR -
  - Dial # **9** and the DIL trunk number (e.g., 005).
  - OR -
  - Dial **704** and the DIL trunk group number (e.g., 05).
  - OR -
  - Dial **9** for Trunk Group Access.
3. Dial the number.

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## *Direct Inward System Access (DISA)*

### Enhancements

With **Version 3000 or higher** system software, if an outside caller dials an invalid extension number when connected to the VRS Automated Attendant or calling in on a DISA trunk, the following new options are available to route these calls:

- Extension Number (e.g., operator)
- F-Route Dial (e.g., outside phone number)

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### Description

DISA permits outside callers to directly dial system extensions, trunks and selected features. This could help an employee away from the office that wants to directly dial co-workers or use the company trunks for long distance calls. To use DISA, the employee:

- Dials the telephone number that rings the DISA trunk
- Waits for the DISA trunk to automatically answer with a unique dial tone
- Dials the 6-digit DISA password (access code)
- Waits for a second unique dial tone
- Accesses a system trunk, uses a selected feature or dials a system extension

DISA calls ring system extensions like other outside calls. If an extension has a line key for the DISA trunk, the call rings that key. If the extension does not have a line key, the extension must have a Call Appearance (CAP) key to answer the call.

You can set DISA operation differently for each Night Service mode. For example, a trunk can be a normal trunk during the day and a DISA trunk at night. You can also set the routing for DISA trunks when the caller dials a busy or unanswered extension, dials incorrectly or forgets to dial.

DISA allows 15 users, 15 DISA Classes of Service and 200 trunks.

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## DISA Class of Service

DISA Class of Service provides features and dialing restrictions for DISA callers. This allows you to control the ability of the DISA callers dialing into your system. When a DISA caller first accesses the system, they can be prompted to enter a DISA password before proceeding. The system associates the password entered with a specific user number, which in turn has a Class of Service. If the Class of Service allows the action (such as making outgoing trunk calls), the call goes through. If the DISA Class of Service does not allow the action, the system prevents the call. The DISA Class of Service options are:

Trunk Group Routing/ARS Access

When a DISA caller dials into the system, they may be able to dial 9 and place outside calls. Any toll charge is incurred by the system. The call follows the system Trunk Group Access or Automatic Route Selection – whichever is enabled.

Trunk Group Access

DISA callers may access a specific trunk group for outgoing calls through the system. To access a Trunk Group, the user dials Service Code 704 followed by the Trunk Group number (Trunk Groups 1~100). This allows the DISA caller to place an outgoing call over the selected group. Trunk Group Access bypasses the system Trunk Group Routing/ARS/Trunk Access Maps. As with dial 9 access, toll charges are incurred by the system.

Speed Dial – System/Group/Station

The System Speed Dial dialing bins may be available to DISA callers. This could save the DISA caller time when dialing. To access the System Speed Dialing bins, the caller dials Service Code #2 and the System Speed Dial Bin number.

Operator Calling

A DISA caller may dial 0 for the system operator.

Paging

Internal and External Paging may be available to DISA callers. This allows co-workers in adjacent facilities, for example, to broadcast announcements to each other.

Direct Trunk Access

DISA callers may select a specific trunk for outgoing calls through the system. To directly access a trunk, the user dials Service Code #9 followed by the trunk number (e.g., 001). This allows the DISA caller to place an outgoing call over the selected trunk. Direct Trunk Access bypasses the system Trunk Group Routing/ARS/Trunk Access Maps. As with dial 9 access, any toll charges are incurred by the system.

Call Forward

DISA callers can set Call Forwarding to redirect extension calls to another extension. Call Forwarding ensures that the user's calls are covered when they are away from their work area.

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## DISA/Tie Trunk Barge-In

The DISA/Tie Trunk Barge-In option allows a DISA/Tie Line caller to break into another extension user's established call. This sets up a three-way conversation between the intruding party and the two parties on the initial call.

## **DISA Toll Restriction**

The digits a DISA caller dials for an outgoing call may be subject to the system Toll Restriction. For example, Toll Restriction can prevent users from dialing a 1-900 service. When an incoming DISA caller tries to use system trunks to dial 1-900, Toll Restriction denies the call.

## **DISA Operating Modes**

The DISA Operating Modes determine what happens when a DISA caller forgets to dial, calls a busy or unanswered extension or dials incorrectly. The system can either drop the call or send it to a preset Ring Group (called the DISA Transfer Destination).

## **Department Calling with Overflow Message**

If a DISA caller dials a busy Department Calling Group, the system can periodically play the voice prompt, *"Please hold on. All lines are busy. Your call will be answered when a line becomes free."* while the caller waits. The interval between the voice prompts is the VRS Waiting Message Interval Time. When an extension in the Department Group becomes available, the call automatically goes through. If the Department Calling Group remains busy past the DISA No Answer Time, the DISA call routes to the overflow destination or disconnects. (What happens to the unanswered call is set by the DISA Operating Mode). The Overflow Message requires a VRS.

## **Warning Tone for Long DISA Calls**

You can set up the system to provide a warning tone to DISA callers that have been on a call too long. The warning tone can be just a reminder (which the caller can ignore) or can be followed by a forced disconnect of the call. When the DISA caller hears the warning tone, they have the option of dialing a code to continue the conversation or disconnect.

## **Trunk Continue/Disconnect Codes**

Users can use a Continue or Disconnect service code. The Continue service code extends the conversation for a programmed time. If the user enters the Disconnect service code, the call is immediately disconnected.

### **EXAMPLE:**

The following example indicates how a call will be handled with the system programmed as follows:

- Program 14-01-25: 1
- Program 20-28-01: #

- Program 20-28-02: **No Setting**
  - Program 20-28-03: **180**
  - Program 24-02-07: **600** (Used only with manually transferred Tandem Trunk calls)
  - Program 24-02-10: **30** (Used only with manually transferred Tandem Trunk calls)
  - Program 25-07-07: **600** (Used only with automatically transferred Tandem Trunk calls or DISA calls)
  - Program 25-07-08: **30** (Used only with automatically transferred Tandem Trunk calls or DISA calls)
1. An external call connects to an external number (either by transferring with Tandem Trunking or by DISA caller).
  2. After 10 minutes (Tandem Trunking = Program 24-02-07 or DISA = Program 25-07-07), a warning tone is heard and the user dials # (Program 20-28-01) to extend the conversation.
  3. After three minutes (Program 20-28-03), the warning tone is heard again. After 30 seconds (Tandem Trunking = Program 24-02-10 or DISA = Program 25-07-08), the call is disconnected.

## Conditions

- The DISA caller must use an analog (DTMF) telephone. DISA is compatible with calling devices that meet the DTMF signaling requirements of EIA Specification RS-464. DISA trunks must be ground start or supervised loop start.
- The Continue/Disconnect code must be DTMF.
- With an analog trunk, the Continue/Disconnect code may work using DTMF sounds from the opposite side trunk. With an ISDN trunk, Program 14-01-25 must be enabled to detect the Continue/Disconnect code.
- The Continue/Disconnect code is not accepted while dialing a trunk.
- Continue/Disconnect codes do not work if all DTMF receivers are busy.
- When used with the Networking feature, both systems must be programmed the same.
- In a system with ARS enabled:  
When a DISA caller dials 9 for an outside call (if allowed), the system routes the call via ARS.
- In a system with ARS disabled:  
When a DISA caller dials 9 for an outside call (if allowed), the system uses the routes programmed for Trunk Group Routing.
- Transferred calls on DISA, DID, DIL, ISDN trunks, or from the VRS can display the reason a call is being transferred (Call Forward, Busy, No Answer or DND).
- Long conversation cutoff is controlled separately for manually transferred Tandem Trunk calls, automatically transferred Tandem Trunk calls, and DISA calls.
- Tandem Trunking also uses the Continue/Disconnect codes DISA uses.

- Department Calling with Overflow Message requires a DSP daughter board for VRS.
- DISA can only be set to call forward to another extension. Call Forward Off-Premise is not supported.
- When the DISA/VRS Ring Group Transfer (Programs 25-03 and 25-04) are set to 104 (Speed Dial Bin), the Speed dial is treated as an internal call no matter what Program 13-01-01 is set to. If an outside number is required, the trunk access code must be put into the speed dial bin.

## **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

Remote Analog DTMF (2500 type) telephones

### **Required Component(s)**

CPU Daughter Board PZ-VM21 and VM8000 InMail (for Announcements)

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## **Related Features**

**Automatic Route Selection**

**Central Office Calls, Answering**

**Direct Inward Dialing (DID)**

**Direct Inward Line (DIL)**

**Long Conversation Cutoff**

**Tandem Trunking (Unsupervised Conference)**

**Transfer**

**Voice Response System (VRS)**


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Reserve at least one circuit for DTMF reception (entry 0 or 2). Use the following as a guide when allocating DTMF receivers: <ul style="list-style-type: none"> <li>○ In light traffic sites, allocate one DTMF receiver for every 10 devices that use them.</li> <li>○ In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.</li> </ul>	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available			✓
11-01-01	<b>System Numbering</b>	Define the system numbering plan.	Refer to UNIVERGE SV8100 System Programming Manual			✓
11-09-02	<b>Trunk Access Code – 2nd Trunk Route Access Code</b>	Assign the Service Code set up in Program 11-01 for 2nd (Alternate) Trunk Route Access.	Dial (up to four digits) (default not assigned)			✓
14-01-02	<b>Basic Trunk Data Setup – Transmit Level</b>	Customize the transmit and receive levels of the CODEC Gain Types for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-03	<b>Basic Trunk Data Setup – Receive Level</b>	Customize the transmit and receive levels of the CODEC Gain Types for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	If DISA caller can place outgoing calls through the system (refer to Program 20-14 in the <i>Electra Elite IPK II Programming Manual</i> ), Enable loop supervision for the DISA trunk. If DISA caller cannot use the system trunks for outgoing calls, enter Disable.	0 = Disable 1 = Enable (default = 1)		✓	
20-01-05	<b>System Options – DTMF Receive Active Time</b>	After answering the call, the system attaches a DTMF receiver to the DISA trunk for this time.	0~64800 (seconds) (default = 10)			✓
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-01	<b>Class of Service Options for DISA/E&amp;M – First Digit Absorption (Delete First Digit Dialed)</b>	For tie lines, enable/disable the ability to ignore the first incoming digit. Use this to make the tie trunk compatible with 3- and 4-digit tie line service. This option does not apply to DISA.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-14-02	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Routing/ARS Access</b>	Enable/Disable a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection (ARS).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-14-03	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Access</b>	Enable/Disable a DISA or tie trunk caller ability to access trunk groups for outside calls (Service Code 704).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-14-04	<b>Class of Service Options for DISA/E&amp;M – Outgoing System Speed Dial</b>	Enable/Disable a DISA or tie trunk caller ability to use System Speed Dialing.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-14-05	<b>Class of Service Options for DISA/E&amp;M – Operator Calling</b>	Enable/Disable a DISA or tie trunk caller ability to dial 0 for the telephone system operator.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-14-06	<b>Class of Service Options for DISA/E&amp;M – Internal Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use the telephone system Internal Paging.	0 =Off 1 = On (default = 1 for COS 1~15)	✓		
20-14-07	<b>Class of Service Options for DISA/E&amp;M – External Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use the telephone system External Paging.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-14-08	<b>Class of Service Options for DISA/E&amp;M – Direct Trunk Access</b>	Enable/Disable a DISA or tie trunk caller ability to use Direct Trunk Access (Service Code #9).	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-14-09	<b>Class of Service Options for DISA/E&amp;M – Forced Trunk Disconnect &lt;Not for ISDN T-point&gt;</b>	Enable/Disable a tie trunk caller ability to use Forced Trunk Disconnect (Service Code 3). This option is not available to DISA callers.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-14-10	<b>Class of Service Options for DISA/E&amp;M – Call Forward Setting by Remote via DISA</b>	Enable/Disable a DISA caller ability to use the Call Forward service codes (Programs 11-11-01 ~11-11-05).	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable/Disable a DISA or tie trunk user ability to use the Barge-In feature.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-15-01	<b>Individual Trunk Group Routing for Extensions</b>	Designate the trunk route accessed when a user dials the Alternate Trunk Route Access Code. Refer to Trunk Group Routing to set up outbound routing.	0~100 (0 = No Setting) (default = 0)		✓	
22-01-11	<b>System Options for Incoming Calls – VRS Waiting Message Interval Time</b>	Set up the duration time between announcing the VRS Waiting Message for Auto – Attendant & Queuing. The message is repeatedly sent out in the specified time.	0~64800 (seconds) (default = 20)		✓	
22-02-01	<b>Incoming Call Trunk Setup</b>	For DISA operation, set the trunk service type to 2. You can have a different service type for each Night Service mode.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign the extensions that should receive the overflow. Set the ringing in Program 22-06.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
25-01-01	<b>VRS/DISA Line Basic Data Setup – VRS/DISA Dial-In Mode</b>	Select whether the DISA trunk uses Extension number/Service code specify or Dial Conversion Table.	0 = Extension Number Service Code Specify (Intercom) 1 = Use Dial Conversion Table (default = 0)		✓	
25-01-02	<b>VRS/DISA Line Basic Data Setup – DISA User ID</b>	Select whether or not the DISA User ID should be used.	0 = Off 1 = On (default = 1)	✓		
25-01-03	<b>VRS/DISA Line Basic Data Setup – VRS/DISA Transfer Alarm</b>	Select whether or not the DISA transfer alarm should be used.	0 = Normal 1 = Alarm (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-02-01	<b>DID/DISA VRS Message</b>	Assign the source and VRS message number to be used as the Automated Attendant Message for each trunk (001~200) which is assigned as a VRS/DISA.	0 = No Message 1 = VRS (01~100 VRS Message Number) 2 = ACI (01~04 ACI Group Number) 3 = Department Groups (01~64 Extension Group Number) (default = 0)	✓		
25-03-01	<b>VRS/DISA Transfer Ring Group With Incorrect Dialing</b>	Set the operating mode of each DISA trunk. This sets what happens to the call when the DISA caller dials incorrectly. The call can either Disconnect (0), transfer to an alternate ring group destination, or transfer to In-Skin/ External Voice Mail, or Centralized Voice Mail.	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)	✓		
25-04-01	<b>VRS/DISA Transfer Ring Group With No Answer/Busy</b>	Set the operating mode of each DISA trunk. This sets what happens to the call when the DISA caller calls a busy or unanswered extension. The call can either Disconnect (0), or transfer to an alternate ring group destination, In-Skin/External Voice Mail, or Centralized Voice Mail.	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-05-01	<b>VRS/DISA Error Message Assignment</b>	Assign the VRS message number to be used as the Automated Attendant error message. For each VRS/DISA trunk that the VRS answers, enter the VRS message (1~100) the outside caller hears if they dial incorrectly. If you enter 0 (i.e., no error message), the call reroutes according to Program 25-03 and Program 25-04. For each trunk, you make a separate entry for each Night Service mode.	0~100 (0 = No Setting) (default = 0)	✓		
25-06-01	<b>VRS/DISA One-Digit Code Attendant Setup – Next Attendant Message Number</b>	Set up single digit dialing through the VRS. This gives VRS callers single-key access to extensions, the company operator, Department Calling Groups and Voice Mail. For each VRS message set to answer outside calls (see Program 25-02 and Program 25-05), you specify: <ul style="list-style-type: none"> <li>○ The digit the VRS caller dials (0~9, *, #). (Keep in mind that if you assign destinations to digits, outside callers cannot dial system extensions, starting with that digit.</li> <li>○ The destination reached (eight digits maximum) when the caller dials the specified digit. The destination can be an extension, a Department Calling pilot number or the Voice Mail master number. A one-digit code can be assigned for each Automated Attendant message.</li> </ul>	0~100 (0 = No Setting) 101 = Voice MAIL Answers 104 = Refer to 25-04: VRS/DISA Transfer Ring Group with No Answer/ Busy 105 = Dial the other extension (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-06-02	<b>VRS/DISA One-Digit Code Attendant Setup – Destination Number</b>	Set up single digit dialing for Automated Attendant callers. For each VRS Message programmed to answer outside calls, specify: <ul style="list-style-type: none"> <li>○ The digit the Automated Attendant caller dials (1~12, where 10 = 0, 11 =* and 12 = #). (Keep in mind that if you assign destinations to digits three and four, outside callers cannot dial system extensions that begin with that digit.)</li> <li>○ The destination reached (four digits maximum) when the caller dials the single digit code.</li> </ul>	Up to eight digits (default not assigned)	✓		
25-07-01	<b>System Timers for VRS/DISA – VRS/DISA Dial Tone Time</b>	After answering the DISA trunk, the system waits this time for the caller to dial the first digit of the DISA password. If the caller fails to dial during this time, the system drops the call.	0~64800 (seconds) (default = 10)		✓	
25-07-02	<b>System Timers for VRS/DISA – VRS/DISA No Answer Time</b>	A DISA caller can ring an extension for this time before the system sets the call as a Ring No Answer. After this time expires, the call follows the programmed Ring No Answer routing (set in Program 25-03 and 25-04).	0~64800 (seconds) (default = 0)		✓	
25-07-03	<b>System Timers for VRS/DISA – Disconnect after VRS/DISA retransfer to IRG</b>	From DISA trunk, when the call may go to Incoming Ring Group (IRG) of Program 25-03/25-04. This setting determines the time the call is ringing in the IRG.	0~64800 (seconds) (default = 60)		✓	
25-07-04	<b>System Timers for VRS/DISA – Calling Time to Automatic Answering Telephone Set</b>	Set the answering waiting time of the automatic answering extension when an incoming DID trunk call is received.	0~64800 (seconds) (default = 10)		✓	
25-07-05	<b>System Timers for VRS/DISA – Duration Time for Guidance Message by Automatic Answering Telephone Set</b>	Set the announcement time of the automatic answering extension before an incoming DID trunk caller is disconnected.	0~64800 (seconds) (default = 10)		✓	
25-07-06	<b>System Timers for VRS/DISA – Duration Time for Guidance Message by ACI</b>	Set the announcement time by the ACI after which an incoming DID trunk caller is disconnected.	0~64800 (seconds) (default = 10)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any automatically transferred trunk-to-trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA or any automatically transferred trunk-to-trunk (such as Tandem Trunking) call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	
25-07-09	<b>System Timers for VRS/DISA – DISA Internal Paging Time</b>	Set the maximum time of an Internal Page placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call.	0~64800 (seconds) (default = 30)		✓	
25-07-10	<b>System Timers for VRS/DISA – DISA External Paging Time</b>	Set the maximum time an External Page is placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call.	0~64800 (seconds) (default = 30)		✓	
25-07-11	<b>System Timers for VRS/DISA – VRS/DISA Answer Delay Time</b>	Set the time the system waits after receiving an incoming VRS/DISA call before the system automatically answers the call (0~64800 seconds).	0~64800 (seconds) (default = 0)		✓	
25-07-13	<b>System Timers for VRS/DISA – VRS/DISA Busy Tone Interval</b>	If a DISA caller dials a busy extension (and Program 25-04 = 0), the system plays busy tone for this time before disconnecting.	0~64800 (seconds) (default = 5)		✓	
25-07-14	<b>System Timers for VRS/DISA – Delayed VRS Answer Time</b>	Assign the delay time from switching from a normal incoming status to DID Mode. If this time is set to 0, the call switches to DID immediately.	0~64800 (seconds) (default = 10)			
25-08-01	<b>DISA User ID Setup – Password</b>	For each DISA user, set the 6-digit password.	Dial (Six digits fixed) (0~9, *, #) (default not assigned)	✓		
25-09-01	<b>Class of Service for DISA Users</b>	Assign a DISA Class of Service for each user. Assign the DISA Class of Service options in Program 20-14. The DISA Class of Service cannot be 0. Program 20-06 cannot be used to assign Class of Service to DISA trunks.	Day/Night Mode = 1~8 Function Class = 1~15 (default = 1)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-10-01	<b>Trunk Group Routing for DISA</b>	Assign the Trunk Group Route chosen when a user places a DISA call to the system and dials 9. Set Trunk Group Routing in Program 14-06. Enable or disable DISA caller ability to dial 9 in Program 20-14-02. Assign a route to each DISA Class of Service (1~15). The system assigns a DISA Class of Service to a call based on the password the DISA caller dials.	Day/Night Mode = 1~8 Route Table Number = 0~100 (0 = No Setting) (default = 1)		✓	
25-11-01	<b>DISA Toll Restriction Class</b>	If the system uses Toll Restriction, enter a Toll Restriction Class (1~15) for each DISA user (1~15). The system uses the Toll Restriction Class you enter in Program 21-05 and 21-06. The Toll Restriction Class assigned to a DISA call is based on the DISA Class of Service and user, which is determined by the password the caller dials. Program 21-04 cannot be used to assign Toll Restriction to DISA trunks.	Day/Night Mode = 1~8 Toll Restriction Class = 1~15 (default = 2)		✓	
25-12-01	<b>Alternate Trunk Group Routing for DISA</b>	Assign the trunk route that DISA Callers access if they dial the Alternate Trunk Route Access Code. Refer to <a href="#">Central Office Calls, Placing on page 2-275</a> for more information on setting up Alternate Trunk Route Access.	Day/Night Mode = 1~8 Route Table Number = 0~100 (0 = No Setting) (default = 1)		✓	
25-15-01	<b>DISA Transfer Target Setup – DISA Transfer Target Area at Wrong Dial</b>	Used to assign a speed dial number when the wrong number is received.	Speed Dial bin number 0~1999 (default = 1999) Version 3000 software or higher is required	✓		
25-15-02	<b>DISA Transfer Target Setup – DISA Transfer Target Area at No Answer or Busy</b>	Used to assign a speed dial number when a dial tone times out and the target extension does not answer or is busy.	Speed Dial bin number 0~1999. (default = 1999) Version 3000 software or higher is required.	✓		



**Trunk Continue/Disconnect Codes:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-25	<b>Basic Trunk Data Setup – Continued/Discontinued Trunk-to-Trunk Conversation</b>	When Program 24-02-10 is set to disconnect a trunk after the defined time, determine whether or not a user should be able to use the continue/disconnect code.	0 = Disable (No) 1 = Enable (Yes) (default = 0)		✓	
20-28-01	<b>Trunk to Trunk Conversation – Conversation Continue Code</b>	When Program 14-01-25 is enabled, determine the 1-digit code the user should dial (0~9, *, #) to extend the conversation for the time defined in Program 20-28-03. If the Continue and Disconnect codes are programmed the same (e.g., #), the system follows the Continue operation. Using the Continue code before the warning tone is heard has no action.	0~9, #, * (default not assigned)		✓	
20-28-02	<b>Trunk to Trunk Conversation – Conversation Disconnect Code</b>	When Program 14-01-25 is enabled, determine the 1-digit code the user should dial (0~9, *, #) to immediately disconnect their call. Using the Disconnect code before the warning tone is heard disconnects the call.	0~9, #, * (default not assigned)		✓	
20-28-03	<b>Trunk to Trunk Conversation – Conversation Continue Time</b>	When Program 14-01-25 is enabled, determine the time a call is extended when the user dials the Continue code (defined in Program 20-28-01).	0~64800 (seconds) (default = 0)		✓	
22-07-01	<b>DIL Assignment</b>	Assign the master/pilot number of the voice mail group from Program 11-07-01 as the DIL destination. If all Voice Mail ports are in the same unique Extension (Department) Group (see Program 16-02 above), the DIL rings another Voice Mail port if its assigned port is busy.	Extension Number (maximum eight digits) (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	<p>This timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer/Tandem Trunking). When this time expires, a warning tone is heard. If Program 24-02-10 is set, the conversation disconnects after that time expires. This timer is set again when the external digit time expires. One of the trunks used must be an analog trunk (or leased line).</p> <p> <i>This applies to manually transferred Tandem Trunk and DISA calls.</i></p>	0~64800 (seconds) (default = 1800)		✓	
24-02-10	<b>System Options for Transfer – Disconnect Trunk-to-Trunk</b>	<p>Determine the time a conversation continues after the time in Program 24-02-07 expires. If this option is set to 0, the conversation is disconnected immediately. This program has no affect if Program 24-02-07 is set to 0. One of the trunks used must be an analog trunk (or leased line).</p> <p> <i>This applies to manually transferred Tandem Trunk and DISA calls.</i></p>	0~64800 (seconds) (default = 0)		✓	
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	<p>Determine the time the system waits before disconnecting a DISA or any automatically transferred trunk-to-trunk (such as Tandem Trunking) call after the Long Conversation tone is heard. If Program 25-07-08 is set to 0, the call is disconnected after the time expires. This timer is set again when the external digit time expires.</p> <p> <i>This applies to automatically transferred Tandem Trunk and DISA calls.</i></p>	0~64800 (seconds) (default = 3600)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA or any automatically transferred trunk-to-trunk (such as Tandem Trunking) call after the Long Conversation tone is heard. This program has no affect if Program 25-07-07 is set to 0.  <i>This applies to automatically transferred Tandem Trunk and DISA calls.</i>	0~64800 (seconds) (default = 10)		✓	

## Operation

### To place a DISA call into the system (from any 2500 type telephone):

1. Dial the telephone number that rings the DISA trunk.
2. Wait for the DISA trunk to automatically answer with a unique dial tone.
3. Dial the 6-digit DISA password (access code).
4. Wait for a second unique dial tone.
5. Dial an extension.
  - OR -
  - Dial **9** for Trunk Group Routing or ARS.
  - OR -
  - Dial Alternate Trunk Route Access Code (if enabled).
  - OR -
  - Dial **704** + a trunk group number (**1~100**) for an outside call.
  - OR -
  - Dial **#9** + a trunk number (**1~200**) for an outside call.
  - OR -
  - Dial **#2** + System Speed Dialing bin number.
  - OR -
  - Dial **0** for the operator.
  - OR -
  - Dial **701** + an Internal Paging Zone number (**0, 1~9, 00, 01~64**).
  - OR -

Dial **703** + an External Paging Zone number (**1~8** or **0** for All Call).

- OR -

Dial **710** + a busy extension number to barge in to a call.

**To forward extension calls using a DISA call into the system (from any 2500 type telephone):**

1. Dial the telephone number that rings the DISA trunk.
2. Wait for the DISA trunk to automatically answer with a unique dial tone.
3. Dial the 6-digit DISA password (access code).
4. Wait for a second unique dial tone.
5. Dial the Call Forward service code (as defined in Program 11-11-01 through Program 11-11-05).
6. Dial the number of the extension to be forwarded.
7. Dial **1** to set Call Forwarding or **0** to cancel Call Forwarding.
8. Dial the extension number to which the calls will be forwarded.

**To use the Continue code to extend a DISA call:**

1. An external call connects to an external number (either by transferring with Tandem Trunking or by DISA caller).
2. After the programmed time (Program 25-07-07), a warning tone is heard and the user dials the Continue code (Program 20-28-01) to extend the conversation.
3. After the programmed time (Program 20-28-03), the warning tone is heard again. After the programmed time (Program 25-07-08), the call is disconnected if the Continue code is not dialed again.

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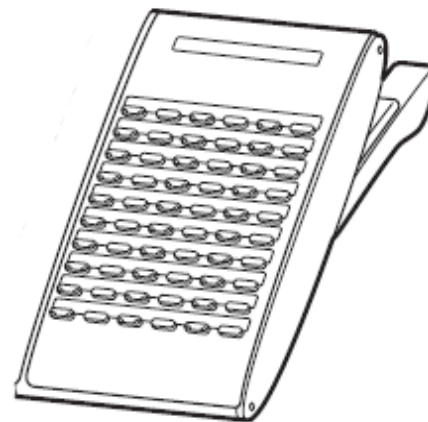
## *Direct Station Selection (DSS) Console*

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### **Description**

The DSS Console gives a multiline terminal user a Busy Lamp Field (BLF) and one-button access to extensions, trunks, and system features. This saves time for users that do a lot of call processing (e.g., attendants, operators, or dispatchers). The DSS Console simplifies:

- Calling extensions and door boxes
- Placing, answering and transferring outside calls
- Making an External or Internal Page
- Switching the Night Service mode
- Activating DSS Console Alternate Answer



The DSS Console also provides DSS Console Alternate Answer. This lets a multiline terminal user with a DSS Console quickly reroute their calls to a co-worker. Transferred and dial 0 calls ring both DSS Consoles and, if the VRS is installed, the main operator hears the message, "Your calls have been forwarded". Central office calls ring both consoles and no message is heard by the operator.

You can also program the DSS Console keys to store Service Codes (up to 29 digits long). This provides the DSS Console user with many of the features available on One-Touch and Programmable Feature Keys. The DSS Console keys can optionally store additional associated digits after the Service Code. For example, storing 70401 under a DSS Console key accesses Trunk Group 1 when the console user presses the key.

The maximum number of consoles allowed per system is 32. If a Digital Port Connection is used, one telephone can support a maximum of 32 DSS Consoles. If connected to an IP phone as a side option, a maximum of one DSS Console is supported per telephone.

### **DSS Lamp Table Changed to Apply to DSS/Hotline Keys for Multiline Terminals**

Using Programs 30-05-02~30-05-21 DSS Console Lamp Table, you can assign LED flash patterns for DSS and Hotline keys on multiline terminals and DSS Consoles.

### **ACD/Non-ACD Agent DSS Lamping Available**

With the UNIVERGE SV8100 system, Programs 30-05-02~30-05-21 allow a non-ACD DSS console to light indicating the status of both non-ACD agents and ACD agents, but ACD agents do not show ACD status (Logged In/Out, etc.), only idle, busy, etc.

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## Conditions

- Changing flash patterns for DSS Consoles also changes them for Hotline keys.
- When installing a DSS, the system must auto-detect the console for the LEDs to function correctly. When connecting the DSS to an extension previously defined with another circuit type, undefine the circuit type (enter 00 in Program 10-03-01 for the extension number), then connect the DSS Console.
- Programmable Function Keys for ACD codes (\*10, \*12, \*13, \*14, \*15, \*16, \*17, \*18, \*19) cannot be programmed on a DSS Console.
- Programmable Function keys for Trunk Group (\*02), Virtual Extension (\*03), and Call Appearance (CAP) Key (\*08) cannot be programmed on a DSS Console as the system does not allow entry of the additional data required for these keys.
- A user can use the One-Touch Programmable Function Key (code 01) to have DSS Console keys for Personal Speed Dial and common and group Speed Dial.
- Lighting status for ACD agents and non-ACD agents does not appear on the same console type. For ACD agent's lighting status, a DSS Console must be programmed as an ACD console in Program 30-01-01. For non-ACD agents, the console must be programmed as a business console.
- A DSS key indicates only a Call Forwarding indication for extensions forwarded with Immediate Call Forwarding.
- A DSS Console can have line keys for placing and answering calls.
- The DSS Console provides one-touch calling and a Busy Lamp Field for Door Boxes. Refer to [Door Box on page 2-515](#) when programming Door Boxes.
- The DSS Console provides one-touch Night Service switching. Refer to [Night Service on page 2-1133](#) when programming Night Service options.
- Like a One-Touch Key, a user can have DSS Console keys for Direct Station Selection, Trunk Calling, Personal Speed Dial, Speed Dialing, and Service Code access.
- The DSS Console provides one-touch External and Internal Page zone access. Refer to [Paging, External on page 2-1169](#) and [Paging, Internal on page 2-1181](#).
- You can program the DSS Console keys with service codes to provide the functions of many of the Programmable Function keys. The stored service code can have up to three digits, but it can have additional option codes added (e.g. to set Immediate Call Forward for all calls. Trunk Group (\*02), Virtual Extension (\*03), and Call Appearance (CAP) Key (\*08) codes can not be programmed on a DSS Console as the system does not allow entry of the additional data required.
- The capacity of a console can be expanded by assigning a Page key (shift key). The Page key (shift key) must be assigned on keys 55~60.
- The expanded capacity for DSS Consoles (two pages), is not supported for DSS Consoles in the ACD Monitor Mode.

- When a multiline terminal user is on a call, they can transfer to another station by pressing a DSS key for that station. It is not necessary to press Transfer to transfer to another station using a DSS key.
  - ✎ *When a multiline terminal user is on a call, they must press Transfer to transfer a call off site with a DSS key.*
- Pauses can be entered in the dial string of a DSS/One Touch button. The pause is entered as P in the dial string and causes the system to wait three seconds before sending the rest of the digits that follow the P (pause). Multiple pauses can be entered.
- The @ can be entered in the dial string of a DSS/One Touch button. The @ only applies to ISDN and Intercom calls. When using the @, the system waits for the destination to answer (answer supervision), and then sends the rest of the digits.
- Entering a P (pause) in a DSS/One Touch dial string can be used for CO calls, Intercom calls, or after the @ for ISDN calls.
- When the system has the Hotel Motel license (0007), the Message Waiting Indication (MWI) on a DSS Console for an extension is a Green LED. Without the Hotel Motel license the MWI on a DSS Console for an extension is a Red LED.

### Default Setting

- No DSS Consoles assigned (in Program 30-02-01).
- All DSS Console key ranges are ports 1~200.
- Once a DSS Console is enabled, the console keys are DSS keys (Program 30-03-01).

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

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## **Related Features**

**Automatic Call Distribution (ACD)**

**Call Forwarding**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Door Box**

**Night Service**

**One-Touch Calling**

**Paging, External**

**Paging, Internal**

**Programmable Function Keys**


**Speed Dial – System/Group/Station**



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 The items highlighted in gray are read only and cannot be changed.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Set up and confirm the Basic Configuration data for terminal type (B1).	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)	✓		
15-02-08	<b>Multiline Telephone Basic Data Setup – Automatic Handsfree</b>	Set to 1 for a DSS Console to have one-touch operation. If set to 0, the user must lift the handset before pressing a DSS key for the call to complete.	0 = Preselect 1 = One-Touch (Automatic Handsfree) (default = 1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension user to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Define the extension numbers which are to be used by operators.	Up to eight digits (default = 101)		✓	
30-01-01	<b>DSS Console Operating Mode</b>	Set the mode of the system DSS Consoles. The available options are Regular (Business) Mode (0), Hotel Mode (1), ACD Monitor Mode (2) or Business/ACD Mode (3).	0 = Business Mode 1 = Hotel Mode 2 = ACD Monitor Mode 3 = Business/ACD Mode (default = 0)		✓	
30-02-01	<b>DSS Console Extension Assignment – Extension Number</b>	Enter the extension number for the multiline terminal connected with the DSS console (up to eight digits).	Up to eight digits. (default not assigned)	✓		
30-03-01	<b>DSS Console Key Assignment</b>	Customize DSS Console keys to function as DSS keys, Service Code keys, Programmable Function Keys, and One-Touch Calling keys. The key [when defined as a DSS/One-Touch key (code 01)] can have any function up to four digits (e.g., extension number or Service Code). The function information (such as extension number or Service Code) would then be entered as the additional data.	Key Number 001~500 0~99 (General Functional Level) 97 = Door Box Access key (additional data: 1~8 Door Box No.) * 00 ~ * 99 (Appearance Functional Level)	✓		
30-04-01	<b>DSS Console Alternate Answer</b>	Define the DSS Console Alternate answer number.	Alternate DSS No. 01~32 Default: 0 = No Setting		✓	
30-05-02	<b>DSS Console Lamp Table – Busy Extension</b>	Define the LED patterns for busy extensions on the DSS consoles.	0~7 [default = 7 (On)]		✓	
30-05-03	<b>DSS Console Lamp Table – DND Extension</b>	Define the LED patterns for busy DND extensions on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-04	<b>DSS Console Lamp Table – ACD Agent Busy</b>	Define the LED patterns for busy ACD agents on the DSS consoles.	0~7 [default = 7 (On)]		✓	
30-05-05	<b>DSS Console Lamp Table – Out of Schedule (ACD DSS)</b>	Define the LED patterns for out of schedule (ACD/DSS) on the DSS consoles.	0~7 [default = 0 (Off)]		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-05-06	<b>DSS Console Lamp Table – ACD Agent Log Out (ACD DSS)</b>	Define the LED patterns for ACD agents that are logged out on the DSS consoles.	0~7 [default = 5 (IL)]		✓	
30-05-07	<b>DSS Console Lamp Table – ACD Agent Log In (ACD DSS)</b>	Define the LED patterns for ACD agents that are logged in on the DSS consoles.	0~7 [default = 4 (IR)]		✓	
30-05-08	<b>DSS Console Lamp Table – ACD Agent Emergency (ACD DSS)</b>	Define the LED patterns for ACD agent using emergency on the DSS consoles.	0~7 [default = 6 (IW)]		✓	
30-05-09	<b>DSS Console Lamp Table – Hotel Status Code 1 (Hotel DSS)</b>	Define the LED patterns for hotel status code 1 on the DSS consoles.	0~7 [default = 7 (On)]		✓	
30-05-10	<b>DSS Console Lamp Table – Hotel Status Code 2 (Hotel DSS)</b>	Define the LED patterns for hotel status code 2 on the DSS consoles.	0~7 [default = 1 (FL)]		✓	
30-05-11	<b>DSS Console Lamp Table – Hotel Status Code 3 (Hotel DSS)</b>	Define the LED patterns for hotel status code 3 on the DSS consoles.	0~7 [default = 2 (WK)]		✓	
30-05-12	<b>DSS Console Lamp Table – Hotel Status Code 4 (Hotel DSS)</b>	Define the LED patterns for hotel status code 4 on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-13	<b>DSS Console Lamp Table – Hotel Status Code 5 (Hotel DSS)</b>	Define the LED patterns for hotel status code 5 on the DSS consoles.	0~7[(default = 5 (IL)]		✓	
30-05-14	<b>DSS Console Lamp Table – Hotel Status Code 6 (Hotel DSS)</b>	Define the LED patterns for hotel status code 6 on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-15	<b>DSS Console Lamp Table – Hotel Status Code 7 (Hotel DSS)</b>	Define the LED patterns for hotel status code 7 on the DSS consoles.	0~7[(default = 6 (IW)]		✓	
30-05-16	<b>DSS Console Lamp Table – Hotel Status Code 8 (Hotel DSS)</b>	Define the LED patterns for hotel status code 8 on the DSS consoles.	0~7 [default = 4 (IR)]		✓	
30-05-17	<b>DSS Console Lamp Table – Hotel Status Code 9 (Hotel DSS)</b>	Define the LED patterns for hotel status code 9 on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-18	<b>DSS Console Lamp Table – Hotel Status Code 0 (Hotel DSS)</b>	Define the LED patterns for hotel status code 0 on the DSS consoles.	0~7 [default = 0 (Off)]		✓	
30-05-19	<b>DSS Console Lamp Table – Hotel Status Code * (Hotel DSS)</b>	Define the LED patterns for hotel status code * on the DSS consoles.	0~7 [default = 4 (IR)]		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-05-20	<b>DSS Console Lamp Table – Hotel Status Code # (Hotel DSS)</b>	Define the LED patterns for hotel status code # on the DSS consoles.	0~7 [default = 5 (IL)]		✓	
30-05-21	<b>DSS Console Lamp Table – VM Message Indication</b>	Define the LED patterns for VM message indications on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-10-01	<b>DSS Console IP Terminal Setup – MAC Address</b>	Read Only program that displays the MAC address of the IP terminal associated with a DSS console.	00-00-00-00-00-00 ~ FF-FF-FF-FF-FF-FF (Default = 00-00-00-00-00-00)		✓	

## Operation

### Calling an extension from your DSS Console:

- Press the **DSS Console** key.
  - If the call voice-announces, you can make it ring by dialing 1.*
  - If you do not have Handsfree, you must lift the handset to speak.*

Extension Busy Lamp Field	
When the DSS key is...	The assigned extension is...
On	Busy on a call
Off	Idle
Flashing Fast	In Do Not Disturb


### Answering a trunk call from your DSS Console:

- Press the flashing **DSS Console** key assigned to the trunk.
  - If you do not have Handsfree, you must lift the handset to speak.*

### Transferring a call using your DSS Console:


- Place or answer the call.
- Press **Transfer** to transfer the call.
- Press the DSS key for the extension to receive the transfer.


- (Optional) Announce the call.

 *If called party does not want the call, press the flashing line key to retrieve it.*

### Making an External Page using your DSS Console:

- Press the **DSS Console External Page** zone key (1~8).


 *If the zone you want is busy, try again later.*

 *If you do not have Handsfree, lift the handset to make your announcement.*

External Page Busy Lamp Field	
When the DSS key is...	The External Page zone is...
On	Busy
Off	Idle

### Making an Internal Page using your DSS Console:

- Press the **DSS Console Internal Page** zone key (Group key 1~64).

 *If the zone you want is busy, try again later.*

 *If you do not have Handsfree, lift the handset to make your announcement.*



Internal Page Busy Lamp Field	
When the DSS key is...	The Internal Page zone is...
On	Busy
Off	Idle

### Switching the Night Service mode from your DSS Console:

- Press the Night Service key.

Night Service Busy Lamp Field	
When this key is ON...	The system is in the...
DAY	Day 1 Mode
NIGHT	Night 1 Mode
BREAK	Break 1 Mode
NIGHT 2	Night 2 Mode

**Using a DSS Console key as a One-Touch or Programmable Function Key:**

-  *A user can have DSS Console keys programmed as One-Touch Keys. These keys can be used for Direct Station Selection, Trunk Calling, Personal Speed Dial, Speed Dialing, and Service Code access. The stored service code cannot be longer than three digits.*
1. Press the **DSS Console** key for function.
    -  *For example, you can forward your calls by pressing **DSS** key + 1 + destination. Your DSS key must have been previously programmed for Call Forward.*

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## *Directed Call Pickup*

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### **Description**

Directed Call Pickup permits an extension user to intercept a call ringing another extension. This allows a user to conveniently answer a call for a co-worker from their own telephone. With Directed Call Pickup, an extension user can pick up:

- Trunk calls (i.e., Ring Group calls)
- Direct Inward Lines
- Transferred trunk calls
- Transferred Intercom calls
- Ringing and voice-announced Intercom calls

### **Conditions**

- Calls which were on hold or transferred which recall the extension can be answered using Directed Call Pickup.
- Personal Park also uses the Directed Call Pickup code.
- Voice Mail Park and Page also uses the Directed Call Pickup code.
- Directed Call Pickup cannot be used to pick up a call ringing at an ACD agent.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

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## Related Features

Call Arrival (CAR) Keys

Department Calling

Group Call Pickup

Hold

Hotline

Park

Secretary Call Pickup

Secondary Incoming Extension

Transfer

Virtual Extensions

VM8000 InMail

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-25	Service Code Setup (for Service Access) – Direct Call Pickup - Own Group	Customize the Service Codes for direct call pickup – own group.	MLT, SLT (default = 756)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-26	<b>Service Code Setup (for Service Access) – Call Pickup for Specified Group</b>	Customize the Service Codes for call pickup for specified group.	MLT, SLT (default = 768)		✓	
11-12-27	<b>Service Code Setup (for Service Access) – Call Pickup</b>	Customize the Service Codes for call pickup.	MLT, SLT (default = **)		✓	
11-12-28	<b>Service Code Setup (for Service Access) – Call Pickup for Another Group</b>	Customize the Service Codes for call pickup for another group.	MLT, SLT (default = 769)		✓	
11-12-29	<b>Service Code Setup (for Service Access) – Direct Extension Call Pickup</b>	Customize the Service Codes for direct extension call pickup.	MLT, SLT (default = **)	✓		
11-12-30	<b>Service Code Setup (for Service Access) – Specified Trunk Answer</b>	Customize the Service Codes for specified trunk answer.	MLT, SLT (default = 672)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service to extensions (1~15).	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

## Operation

### To use Directed Call Pickup to intercept a call to a co-worker's extension:

1. Pick up the handset or press **Speaker**.
2. Dial **\*\***.
3. Dial number of extension whose call you want to intercept.

 *If more than one call is coming in, the system sets the priority for which call it answers first.*

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# Directory Dialing

## Enhancements

Directory Dialing with main CPU software **Version 3000 or higher** provides the following enhancements:

- Pressing the **Right Cursor Key** twice (on equipped terminals) displays the Common/Group Speed Dial directory.
- Pressing the **Right Cursor Key** three times (on equipped terminals) displays the Extension Name directory.

---

## Description

Directory Dialing allows a multiline terminal user to select a co-worker or outside caller from a list of names, rather than dialing the telephone number. Four types of Directory Dialing are available:

- SPD – Speed Dials
- EXT – co-worker's Extensions
- STA – Personal Speed Dials
- TELBK – Telephone Book

## Conditions

- Directory Dialing sorts and searches directory names in alphabetical order (based on all characters entered of the name) when the system starts up or reboots. The system resorts extension names when:
  - You change Program 15-01-01 (Extension Numbers and Names).
  - Any user dials 700 and changes their extension name.
- Directory Dialing follows all the programmed options and conditions for Speed Dial - System/Group/Station, Intercom Calling and One-Touch Calling.
- Extension Directory only shows a telephones/VEs that are connected and have a name assigned in Program 15-01-01.

## Default Setting

Enabled

## System Availability

### Terminals

All Multiline Terminals with Display and Softkeys

### Required Component(s)

None

## Related Features

Last Number Redial

Name Storing

Speed Dial – System/Group/Station

Softkeys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name Appear in the Directory</b>	Determine if an extension name and number should be listed (1) or unlisted (0) in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-01-02	<b>System Options for Outgoing Calls – Intercom Interdigit Time</b>	If a user waits longer than this time between Directory Dialing steps, Directory Dialing automatically cancels.	0~64800 (seconds) (default = 10)	✓		

## Operation

### To use Directory Dialing from a multiline terminal with an LCD:

1. Press the **Dir** softkey.
 

**-OR-**

 Press the **Right Cursor** key.
2. Press the **softkey** for the Directory Dialing type:
  - SPD–Speed Dials
  - EXT–co-worker’s Extensions
  - STA–Personal Speed Dials
  - TELBK–Telephone Book

*Directory Dialing follows any feature restrictions that your system may have enabled. For example, if your extension cannot normally use Speed Dial – System/Group/Station, Directory Dialing can not access it either.*
3. Dial letter/number range for the party you want to call (e.g., dial 2 for A, B, C or 2).
  - You can enter several letters to help narrow the search.*
  - Press # to enter additional letters on the same key (ex: TOM = 8666#6).*
4. Press the **Down Arrow** softkey to jump to that section.
5. Press the Volume **▲** or **▼** key to scroll through the list.
  - If you wait too long between your selections, Directory Dialing automatically cancels.*
6. Lift the handset or press the **DIAL** softkey, or press **Speaker** to place the selected call.
  - If you selected an outside call, it routes according to your system Trunk Group Routing/ARS setup.*

### To cancel Directory Dialing:

Press the **Exit** key.

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# *Distinctive Ringing, Tones and Flash Patterns*

## Enhancements

With **Version 8000 or higher software**, the number of Tone Patterns has increased from four to eight.

## Description

Distinctive Ringing, Tones and Flash Patterns provide extension users with audible and visual call status signals. This lets users tell the type of calls by listening to the ringing/tones and watching the keys. It also helps users monitor the progress of their calls. In addition, Distinctive Ringing lets multiline terminal users customize their Intercom and trunk call ringing. This is helpful for users that work together closely. For example, if several co-workers set their multiline terminals to ring at different pitches, each co-worker can always tell which calls are for them. You can also customize the tones the system uses for splash tone, confirmation tone, trunk ring tone, Intercom ring tone and Alarm ring tone. Refer to the UNIVERGE SV8100 Programming Manual for more details.

**Table 2-16 Distinctive Ringing: Tones and Flash Patterns**

Program	Description
80-01-01~04 Service Tone Setup	Set the frequency of the system splash tone. This is the tone the system uses, for example, to alert the user of an incoming voice-announced Intercom call.
30-05-02~21 DSS Console Lamp Table	Set the DSS and Hotline key flash rates for busy, idle, DND, ACD Agent status, and hotel options.

## Conditions

- Single line telephone users cannot listen to or hear the pitch of the telephone incoming ring.
- If Program 22-03-01 is set to 0~3 or 9~12 and Program 15-02-02 is set to 1~3, trunk calls follow the ring pattern in Program 22-03-01 and the pitch in Program 15-02-02.
- If Program 22-03-01 is set to 4~8 and Program 15-02-02 is set to 1~3, trunk calls follow the ring pattern in Program 22-03-01.
- If Program 22-03-01 is set to 0~12 and Program 15-02-02 is set to 4~8, trunk calls follow the ring pattern in Program 15-02-02.

- If Program 15-08 : Incoming Virtual Extension Ring Tone Setup is set to Incoming Ring Tone Extension, then Program 15-10 : Incoming Virtual Extension Ring Tone Order Setup must have one of the priorities set to Incoming Ring Tone Extension.
- The following voice mail features require system tones be changed in Program 80-01-02 to work. Refer to the Programming section of the VM8000 InMail feature for details.
  - Call Holding
  - Busy Greeting
  - Call Screening
  - Await Answer Transfer
- When a ring group call rings a Single Line Station, the BLF indication shows busy.
- The priority of the Large LED is as follows:
  1. CO Call Ringing
  2. Message Waiting Received
  3. VM Message Waiting
  4. Message Waiting Set
- Program 15-08 is only effective for Virtual Extensions appearing on a station when the station is set for patterns 1~3 in Program 15-02-02. When Program 15-02-02 for the station is set to patterns 4~8, Program 15-08 for Virtual Extensions is not used.



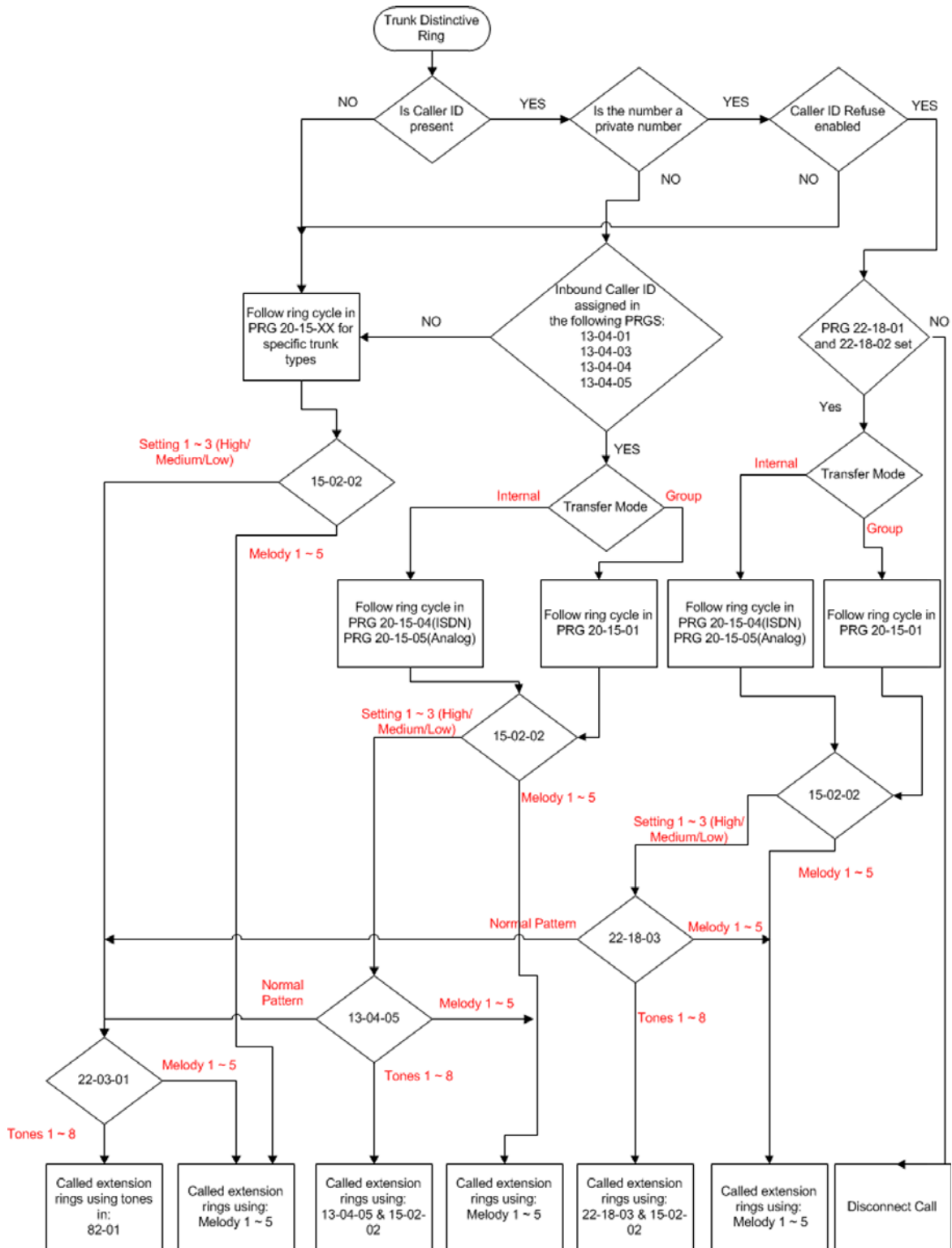


Figure 2-12 Trunk Distinctive Ringing Flow Chart

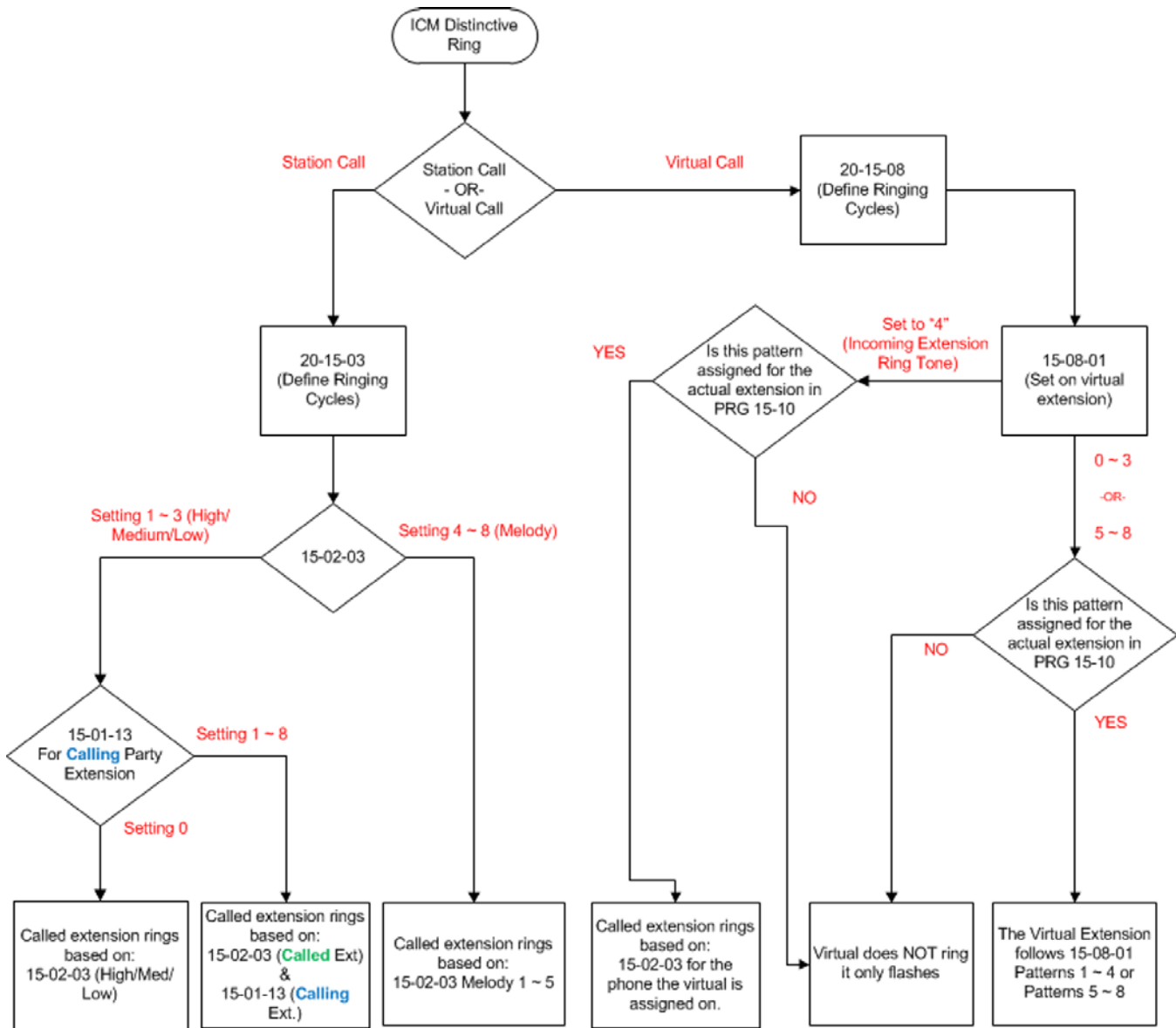


Figure 2-13 ICM Distinctive Ringing Flow Chart

### Default Setting

Enabled

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

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## Related Features

Call Arrival (CAR) Keys

Single Line Telephones, Analog 500/2500 Sets

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-02	Multiline Telephone Basic Data Setup – Trunk Ring Tone	From the range specified in Program 22-03-01, select the multiline terminal extension trunk ring tone.	1 = High 2 = Medium 3 = Low 4 = Ring Tone 1 5 = Ring Tone 2 6 = Ring Tone 3 7 = Ring Tone 4 8 = Ring Tone 5 (default = 2)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-03	<b>Multiline Telephone Basic Data Setup – Extension Ring Tone</b>	Select the extension intercom ring tone.	1 = High 2 = Medium 3 = Low 4 = Ring Tone 1 5 = Ring Tone 2 6 = Ring Tone 3 7 = Ring Tone 4 8 = Ring Tone 5 (default = 8)		✓	
15-02-35	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Cycle for Calling Extension</b>	Select the cycle method that the Large LED flashes when the extension has set Message Waiting.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 7)		✓	
15-02-36	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Cycle for Called Extension</b>	Select the cycle method that the Large LED flashes when the extension has Message Waiting set to the extension.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 3)		✓	
15-02-37	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Color</b>	Set up various message wait lamp cycle options for lamp color.	0 = Green 1 = Red (default = 1)		✓	
15-02-38	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Cycle</b>	Select the cycle method that the Large LED flashes when the extension has a VM Message Waiting set to the extension.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 3)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-08-01	<b>Incoming Virtual Extension Ring Tone Setup</b>	Assign a ring tone range (0~8) to incoming virtual extensions assigned to a Virtual Extension key (Program 15-07).	ICM Tone Pattern, 0 = Pattern 1 1 = Pattern 2 2 = Pattern 3 3 = Pattern 4 4 = Incoming Extension Ring Tone 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 (default = 0)			✓
15-10-01	<b>Incoming Virtual Extension Ring Tone Order Setup</b>	When two or more virtual extensions are set on a function key on the telephone, and the tone pattern by which the sound of each extension differs, the priority of ring sound is set up.	0 = Tone Pattern 1 1 = Tone Pattern 2 2 = Tone Pattern 3 3 = Tone Pattern 4 4 = Incoming Extension Ring Tone 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 Order 1 Pattern 0 = Pattern 1 (default) Order 2 Pattern 1 = Pattern 2 (default) Order 3 Pattern 2 = Pattern 3 (default) Order 4 Pattern 3 = Pattern 4 (default)			✓
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-15-01	<b>Ring Cycle Setup – Normal Incoming Call on Trunk</b>	Define the ringing cycle for Normal Incoming Trunk calls.	Ringing Cycle = 1~13 (default = 2)		✓	
20-15-02	<b>Ring Cycle Setup – PBX, CES Incoming Call</b>	Define the ringing cycle for PBX, CES incoming calls.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-03	<b>Ring Cycle Setup – Incoming Internal Call</b>	Define the ringing cycle for incoming Internal Calls.	Ringing Cycle = 1~13 (default = 12)		✓	
20-15-04	<b>Ring Cycle Setup – DID/DISA/VRS</b>	Define the ringing cycle for DID/DISA/VRS Calls.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-05	<b>Ring Cycle Setup – DID/DDI</b>	Define the ringing cycle for DID/DDI calls.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-06	<b>Ring Cycle Setup – Dial-In in the E&amp;M Tie Line</b>	Define the ringing cycle for Dial-In and E&M Tie Line calls.	Ringing Cycle = 1~13 (default = 12)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-15-07	Ring Cycle Setup – Door Box Ringing for SLT	Define the ringing cycle for Door Box ringing for single line telephone.	Ringling Cycle = 1~13 (default = 8)		✓	
20-15-08	Ring Cycle Setup – Virtual Extension Ring	Define the ringing cycle for Virtual Extension Ringing.	Ringling Cycle = 1~13 (default = 8)		✓	
20-15-09	Ring Cycle Setup – Callback	Define the ringing cycle for Callback.	Ringling Cycle = 1~13 (default = 11)		✓	
20-15-10	Ring Cycle Setup – Alarm for SLT	Define the ringing cycle for Alarm for single line telephone.	Ringling Cycle = 1~13 (default = 5)		✓	
20-15-11	Ring Cycle Setup – VRS Waiting Message Incoming Call	Define the ringing cycle for Incoming VRS Waiting Message.	Ringling Cycle = 1~13 (default = 6)		✓	
22-03-01	Trunk Ring Tone Range	Set the ring tone range (1~9) for each trunk.	0~12 (Ring Tone Pattern 1~4) (Melody 1~ Melody 5) (Ring Tone Pattern 5~8) (default = 0)		✓	
80-01-01	Service Tone Setup – Repeat Count	Customize the system basic tones and system service tones. You need to reset for the changes to take effect.	0~255 (0 = until On-Hook)			✓
80-01-02	Service Tone Setup – Basic Tone Number	The following features require that the system tones listed below be changed to match the table. After changing these settings the chassis must be reset for the changes to take effect. <ul style="list-style-type: none"> <li>○ Call Screening</li> <li>○ Call Holding</li> <li>○ Busy Greeting</li> <li>○ Await Answer Transfer</li> </ul>	1~33 (0 = No Tone) (33 = Default Time Slot) Refer to <a href="#">Table 2-17 Basic Tone Table – Tone 06 on page 2-505</a>			✓
80-01-02 (14)	Service Tone Setup – Basic Tone Number	The following features require that the system tones listed below be changed to match the table. After changing these settings the chassis must be reset for the changes to take effect. <ul style="list-style-type: none"> <li>○ Call Screening</li> <li>○ Call Holding</li> <li>○ Busy Greeting</li> <li>○ Await Answer Transfer</li> </ul>	Refer to <a href="#">Table 2-18 Basic Tone Table – Tone 14 on page 2-505</a>			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-01-02 (39)	Service Tone Setup – Basic Tone Number	The following features require that the system tones listed below be changed to match the table. After changing these settings the chassis must be reset for the changes to take effect. <input type="radio"/> Call Screening <input type="radio"/> Call Holding <input type="radio"/> Busy Greeting <input type="radio"/> Await Answer Transfer	Refer to <a href="#">Table 2-19 Basic Tone Table – Tone 39</a> on page 2-506			✓

Table 2-17 Basic Tone Table – Tone 06

Tone 06			
Unit	Basic Tone	Duration	Gain Level
1	11~480/620Hz -13/-13dB	300ms	32
2	0 - No Tone	300ms	32
3	0 - No Tone	0ms	
4	0 - No Tone	0ms	
5	0 - No Tone	0ms	
6	0 - No Tone	0ms	
7	0 - No Tone	0ms	
8	0 - No Tone	0ms	

Table 2-18 Basic Tone Table – Tone 14

Tone 14			
Unit	Basic Tone	Duration	Gain Level
1	10~440/480Hz -13/-13dB	1000ms	32
2	0 - No Tone	2100ms	32
3	0 - No Tone	0ms	
4	0 - No Tone	0ms	
5	0 - No Tone	0ms	
6	0 - No Tone	0ms	

Table 2-18 Basic Tone Table – Tone 14 (Continued)

Tone 14			
7	0 - No Tone	0ms	
8	0 - No Tone	0ms	

Table 2-19 Basic Tone Table – Tone 39

Tone 39			
Unit	Basic Tone	Duration	Gain Level
1	12~440/620Hz -16dB	500ms	32
2	0 - No Tone	500ms	32
3	0 - No Tone	0ms	
4	0 - No Tone	0ms	
5	0 - No Tone	0ms	
6	0 - No Tone	0ms	
7	0 - No Tone	0ms	
8	0 - No Tone	0ms	

## Operation

### To listen to the incoming ring choices:

1. Press **Speaker**.
2. Dial **711**.
3. Dial **1** to check ringing for intercom calls.  
- OR -  
Dial **2** to check ringing for trunk calls.
4. For Intercom calls, select the pitch you want to check (1~8).  
- OR -  
For trunk calls, select the pitch (1~8) and the tone (1~4) you want to check.
5. Go back to step 4 to listen to additional choices or press **Speaker** to hang up.



**To change the pitch of your incoming ring (multiline terminal only):**

1. Press **Speaker**.
2. Dial **720**.
3. Dial **1** to change ringing for Intercom calls.  
    - OR -  
    Dial **2** to change ringing for trunk calls.
4. Select the pitch (1~8).
5. Press **Speaker** to hang up.

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## *Do Not Disturb*

### Enhancements

With **Version 8000 or higher** software, when a call is ringing on an extension and Do Not Disturb (DND) is set, the DND can be enforced immediately or on the next call.

---

### Description

Do Not Disturb blocks incoming calls and Paging announcements. DND permits an extension user to work by the telephone undisturbed by incoming calls and announcements. The user can activate DND while their telephone is idle or while on a call. Once activated, incoming trunk calls still flash the line keys. The user may use the telephone in the normal manner for placing and processing calls.

Five Do Not Disturb options are available at each extension. These options can be accessed via multiline terminal Softkeys, DND feature key or DND system access code.

- 1 = Incoming trunk calls blocked.
- 2 = Paging, incoming Intercom, Call Forwards and transferred trunk calls blocked.
- 3 = All calls blocked.
- 4 = Incoming Call Forwards blocked.
- 0 = Do Not Disturb canceled.

Multiline Line Terminals display the following to indicate the type of DND that is set.

- 1 = DND EXTERNAL
- 2 = DND INTERCOM
- 3 = DND ALL
- 4 = DND TRANSFER

### Conditions

- Do Not Disturb access code is programmable via Program 11-11-08.
- If there is no Call Forwarding key (Program 15-07: 10~17), the DND key blinks when the extension is forwarded.

- 
- 
- Call Arrival (CAR) Key/ Virtual Extension (VE) do not support DND Programmable Function keys.
  - Multiline terminal users can activate or deactivate Do Not Disturb while on a call. This option is not available for single line telephones.
  - When DND and Call Forward are set on the same telephone, call forwarding works. If Busy and No Answer Forwarding are set to different locations, it follows the Busy forwarding.
  - If an extension already receiving forwarded calls activates DND option 4, callers to the forwarded extension hear DND tone.
  - If an extension activates DND option 4, other extensions can still forward calls to it, but the callers hear DND tone.
  - An extension user can override Call Forwarding or Do Not Disturb at another extension using any of the following methods:
    1. Program 11-12-01 Service Code Setup (for Service Access) – Bypass Call (default: 707)
    2. Program 11-16-06 Single Digit Service Code Setup – DND/Call Forward Override Bypass (default: No Setting)
    3. OVRD Softkey
  - When a call is transferred because of Call Forwarding No Answer, Call Forwarding Busy, or DND, the Reason for Transfer option can display to the transferred extension while the call is ringing to the user telephone.
  - DND modes 1~3 causes calls to follow Program 22-08 programming, then Program 22-05 programming even if the extension is forwarded.
  - When Selectable Display Messaging is set as DND All, all other DND modes are canceled when Selectable Display Messaging is canceled.
  - When DND and any Call Forwarding is set, the call forwards immediately.
  - DND settings are not saved in a PC Pro database.
  - If the terminal is configured for Call Forward Both Ring and DND is activated, the calling station will receive a busy tone. Call Forward Both Ring is not followed.
  - With **Version 7000 or lower** software, when a call is ringing on an extension and DND is set, the DND is not enforced until the next call.
  - With **Version 8000 or higher** software, when a call is ringing on an extension and Do Not Disturb (DND) is set, the DND can be enforced immediately or on the next call based on Program 20-09-13.

## Default Settings

Enabled

---

## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

---

## **Related Features**

**Call Forwarding**

**Call Forwarding/Do Not Disturb Override**

**Central Office Calls, Answering**

**Direct Inward Line (DIL)**

**Distinctive Ringing, Tones and Flash Patterns**

**Selectable Display Messaging**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-08	<b>Service Code Setup (for Setup/Entry Operation) – Do Not Disturb</b>	Assign Service Code for DND.	MLT, SLT (default = 747)		✓	
11-12-01	<b>Service Code Setup (for Service Access) – Bypass Call</b>	Assign Service Code for DND.	MLT, SLT (default = 707)		✓	
11-16-06	<b>Single Digit Service Code Setup – DND/Call Forward Override Bypass</b>	If a single digit service code is to be used, assign an available code number.	(default not assigned)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys (DND = 3).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-09-13	<b>Class of Service Options (Incoming Call Service) – DND Active While Ringing</b>	Assign when the DND will be enforced (set at same time a call is ringing or for next call).	0 = Immediate 1 = Next (default = 0 for all COS)		✓	
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn Off or On an extension user ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

To activate or deactivate Do Not Disturb while your extension is idle:

### Multiline Terminal Using Softkeys

1. Do not lift handset.
2. Press **Program** softkey.
3. Press **DND** softkey.
4. Press **Set** softkey.
5. Choose from the following softkeys:  
Ext ICM ALL Cfwto  
Ext=Incoming Trunk Calls Blocked  
ICM=Incoming Intercom, Paging, call forwards and Transferred Trunk Calls Blocked.  
ALL=All Calls Blocked  
Cfwto=Call Forwards Blocked  
To Cancel DND – Heading
6. Do not lift handset.
7. Press **Program** softkey.
8. Press **DND** softkey.
9. Press **Cncl** softkey.

### Multiline Terminal Using Feature Key or Access Code

1. Do not lift the handset.
2. Press the **DND** feature key programmed in (Program15-07-01 or SC:751:03).  
- OR -  
Press **Speaker** and dial **747**.

3. Dial the DND option code.
  - 0** = Cancel DND
  - 1** = Incoming Trunk Calls Blocked
  - 2** = Paging, incoming Intercom, Call Forwards and Transferred Trunk Calls Blocked
  - 3** = All Calls Blocked
  - 4** = Call Forwards Blocked

### **Single Line Telephone**

1. Lift the handset.
2. Dial **747**.
3. Dial the DND option code.
  - 0** = Cancel DND
  - 1** = Incoming Trunk Calls Blocked
  - 2** = Paging, Incoming Intercom, Call Forwards and Transferred Trunk Calls Blocked
  - 3** = All Calls Blocked
  - 4** = Call Forwards Blocked



## Door Box

### Description

The Door Box is a self-contained Intercom unit typically used to monitor an entrance door. A visitor at the door can press the Door Box call button (like a door bell). The Door Box then sends chime tones to all extensions programmed to receive chimes. To answer the chime, the called extension user just lifts the handset. This lets the extension user talk to the visitor at the Door Box. The Door Box is convenient to have at a delivery entrance, for example. It is not necessary to have company personnel monitor the delivery entrance; they answer the Door Box chimes instead. Any number of system extensions can receive Door Box chime tones.

Each Door Box has a pair of normally open relay contacts that can connect to an electric door strike. Use these contacts to remotely control the entrance door. After answering the Door Box chimes, a multiline terminal user can press the Recall key to activate the Door Box contacts. This in turn releases the electric strike on the entrance door. The device connected to the Door Box contacts cannot exceed the contact ratings shown in the following table:

Door Box Specifications	
Contact Configuration	Normally Open
Maximum Load	60mA @30 VDC
	10mA @90 VDC
Maximum Initial Contact Resistance	50m Ohms

The system can have up to eight Door Boxes. Six chime tones are available.

### Conditions

- The Door Box Feature Requires a PGD(2)-U10 ADP. A maximum of 56 PGD(2)-U10 ADP units can be installed in an UNIVERGE SV8100 system. Refer to the UNIVERGE SV8100 System Hardware Manual for more information.
- If a PGD(2)-U10 ADP circuit has a Door Box (doorphone) connected, you cannot use that circuit for External Paging.
- Door Boxes can ring multiline, single line, and wireless telephones. Refer to specific device features for wireless telephone support of Door Box calls.
- A Door Box cannot ring a virtual extension.
- External Call forward by Doorphone can forward Doorphone calls Off-Premise while a user is away. This feature only works for ISDN lines.

- Off-hook signaling is available for Door Boxes. If an extension user is on the telephone, the Large LED flashes indicating the Door Box ringing, and the display shows a call from the door box.
- Each channel in the PGD(2)-U10 ADP has a jumper which must be set for Door Box operation. Refer to the UNIVERGE SV8100 System Hardware Manual for additional details.
- A Single Line Telephone (SLT), connected to an APR does not ring when the Door Phone rings the multiline telephone.
- *D<sup>term</sup>* cordless and DECT telephones do not ring when receiving a doorbox call. Notification is shown in the display.
- *D<sup>term</sup>* cordless and Cordless DECT telephones can activate the door strike relay using a Recall key assigned in the phone configuration or, by a Flash Key assigned to one of the line keys in Program 15-07 (751: 62) (**Version 4000 or higher** software is required).
- The door strike relay can be activated from a MH240 terminal by a Flash Key assigned to a line key in Program 15-07 (751: 62).
- The door strike relay can be activated from the recall key on a multiline phone.
- The door strike cannot be activated when a door box is forwarded off-premise.
- Internal calls to or from a door phone are not included in the SMDR output.

## Default Setting

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

PGD(2)-U10 ADP

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## Related Features

### ISDN Compatibility

## Paging, External

### Single Line Telephones, Analog 500/2500 Sets

#### Wireless DECT (SIP)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01 (1)	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Set up and confirm the Basic Configuration data for terminal type (B1).	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)		✓	
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Set up and confirm the Basic Configuration data for terminal type. For DLC package support, set the terminal type to 8 [PGD (for Door Box)]. First set 10-03-01 to 0 with no device plugged into that port, then plug the device in and the system should recognize it as a door box and then set Program 10-03-06.	0 = Not set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)	✓		
11-12-36	<b>Service Code Access (for Service Access) – Door Box Access</b>	If the service code for Doorphone Access is not acceptable, change it here.	MLT, SLT (default = 702)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for External Call Forward by Doorphone (Code 54).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
32-01-01	<b>Door Box Timers – Door Box Answer Time</b>	Set the time a user has to answer the Door Box chimes.	0~64800 (seconds) (default = 30)		✓	
32-01-02	<b>Door Box Timers – Door Lock Cancel Time</b>	Set the time the Door Box strike stays open when the single line telephone user hookflashes or a multiline terminal user presses Recall.	0~64800 (seconds) (default = 10)		✓	
32-01-03	<b>Door Box Timers – Off-Premise Call Forward by Door Box Disconnect Timer</b>	Define the conversation time for an Off-Premise Call Forward by Door Box call. When this timer expires, the caller hears busy tone for 3 seconds (fixed time), and the call is then disconnected.	0~64800 (seconds) (default = 60)		✓	
32-02-01	<b>Door Box Ring Assignments</b>	Determine which Door Box should ring which extension by entering the extension number. Each Door Box can be programmed to ring up to 32 extensions and an extension can be programmed to ring for multiple Door Boxes.	Maximum eight digits (default not assigned)	✓		
32-03-01	<b>Door Box Basic Setup – Chime Pattern</b>	Set the chime pattern (0~6) for each Door Box.	0 = None 1 = Door Box Ring 1 2 = Door Box Ring 2 3 = Door Box Ring 3 4 = Door Box Ring 4 5 = Door Box Ring 5 6 = Door Box Ring 6 default: Door Box 1 = 1 Door Box 2 = 2 Door Box 3 = 3 Door Box 4 = 4 Door Box 5 = 5 Door Box 6 = 6 Door Box 7 = 1 Door Box 8 = 1		✓	
32-03-02	<b>Door Box Basic Setup – CODEC Transmit Gain Setup</b>	Set the Transmit Gain for each Door Box.	1~63 (-15.5dB ~ +15.5dB) (default = 32)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
32-03-03	<b>Door Box Basic Setup – CODEC Receive Gain Setup</b>	Set the Receive Gain for each Door Box.	1~63 (-15.5dB ~ +15.5dB) (default = 32)			✓
32-04-01	<b>Door Box Name Setup – Door Box Name</b>	Define the name of each Doorphone.	Up to 12 characters (default not assigned)		✓	

## Operation

### To call a Door Box:

#### Multiline Terminal

1. Press **Speaker**.
2. Dial **702**.
3. Dial Door Box Number (**1~8**).

#### Single Line Telephone

1. Lift the handset.
2. Dial **702**.
3. Dial Door Box Number (**1~8**).

### To activate the Door Box strike:

#### Multiline Terminal

1. While talking to the Door Box, press **Recall**.

#### Single Line 500/2500 Telephone

1. While talking to the Door Box, hookflash.

### To answer a Door Box chime:


1. Lift the handset or press **Speaker**.

## To Answer a Door Box call while busy on another call:

### Multiline Terminal

If you are busy on a call, the display shows the incoming Door Box call and the large LED flashes.

1. Press **Hold** to place your active call on hold.
2. When you hear dial tone, dial the door box access code (**702** by default) plus the door box number (**1~8**) to answer the Door Box call.

 To retrieve the original call, hang up with the door box and press *Conf*.


### Single Line Telephone

If you are busy on a call, an off-hook signal is heard indicating the incoming Door Box call.

1. Press the **Flash** key or hookflash to place your active call on hold.
2. Dial the door box access code (**702** by default) plus the door box number (**1~8**) to answer the Door Box call.

 To retrieve the original call, hang up. The original call rings the single line telephone.

## To activate Call Forwarding, Off-Premise for a Door Box:

 This option only works for ISDN PRI or BRI Trunks.

1. At the multiline terminal, press **Speaker** + dial **SC 722**.

- OR -

At the multiline terminal only, press the External Forward by Doorphone key (Program 15-07-01 or SC 751, code 54).

- OR -

At the single line telephone, lift the handset + dial **722**.

2. Dial the Door Box number (**1~4**).
3. Dial the Speed Dialing number where the calls should be forwarded.
4. Press **Speaker** (or hang up at the single line telephone) to hang up.

**To cancel Call Forwarding Off-Premise for a Door Box:**

1. At the multiline terminal, press **Speaker** + dial SC **722**.  
- OR -  
At the multiline terminal only, press External Forward by Doorphone key (Program 15-07-01 or SC **751**, code **54**).  
- OR -  
At the single line telephone, lift the handset + dial **722**.
2. Dial **0** for Cancel.

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## *Drop Key*

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### **Description**

The Drop Key abandons a call while retaining the PBX/Centrex line to originate another call. The Drop Key is provided by programming a Function Key. This feature allows Recall to be used to provide a hookflash to the PBX or Central Office. A single line telephone user can use the Drop Key function with an access code.

### **Conditions**

- The Drop Key provides a timed disconnect signal on CO/PBX lines.
- The Drop Key cannot be used for internal, DID, or Tie line calls.

### **Default Setting**

None

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

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### **Related Features**

**Flash**

**PBX Compatibility**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-42	<b>Service Code Setup (for Service Access) – Flash on Trunk lines</b>	Customize the flash on trunk lines Service Codes.	SLT (default = #3)		✓	
11-12-59	<b>Service Code Setup (for Service Access) – Trunk Drop Operation for SLT</b>	Customize the trunk drop operation for single line telephone Service Codes.	SLT (default not assigned)	✓		
14-02-03	<b>Analog Trunk Data Setup – Flash Type</b>	Select the flash type.	0 = Open Loop Flash 1 = Ground <b>Always</b> set this option for Open Loop Flash (0) (default = 0)	✓		
14-02-04	<b>Analog Trunk Data Setup – Hooking Type</b>	Use Flash for Timed Flash (Program 81-01-14) or Disconnect (Program 81-01-15). (A user can press the FLASH key while on a trunk call to implement Flash.)	0 = Timed Flash (Hooking) 1 = Disconnect (Cut) (default = 0)		✓	
15-02-05	<b>Multiline Telephone Basic Data Setup – Transfer Key Operation Mode</b>	If the Conf key should access Flash, enter 2. Otherwise, enter 0 or 1.	0 = Transfer 1 = Call back 2 = Hook (default = 0)		✓	
15-03-04	<b>Single Line Telephone Basic Data Setup – Flashing</b>	Enable/Disable Flash for single line (500/2500 type) telephones.	0 = No 1 = Yes (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Drop Key (code 84) if required.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
81-10-07	<b>COI Initial Data Setup – Hookflash Time Selection 1</b>	Set the Flash duration (20ms~5.0 sec) for analog trunk [COI( )-U( ) ETU] circuits.	0 = 20ms 1 = 40ms 2 = 60ms 3 = 80ms 4 = 100ms 5 = 140ms 6 = 160ms 7 = 200ms 8 = 400ms 9 = 600ms 10 = 800ms 11 = 1.0 seconds 12 = 1.5 seconds 13 = 2.0 seconds 14 = 3.0 seconds 15 = 5.0 seconds [default = 9 (600ms)]			✓
81-10-08	<b>COI Initial Data Setup – Hookflash Time Selection 2</b>	Set the open loop disconnect duration (20ms~5.0 sec) for analog trunk [COI( )-U( ) ETU] circuits.	0 = 20ms 1 = 40ms 2 = 60ms 3 = 80ms 4 = 100ms 5 = 140ms 6 = 160ms 7 = 200ms 8 = 400ms 9 = 600ms 10 = 800ms 11 = 1.0 seconds 12 = 1.5 seconds 13 = 2.0 seconds 14 = 3.0 seconds 15 = 5.0 seconds [default = 14 (3.0 seconds)]			✓

## Operation

### To use the Drop Key from a multiline terminal with a CO/PBX call in progress:

1. Press the **Function** key programmed as a Drop Key.
2. Receive the new CO/PBX dial tone.
3. Dial the desired number.

### To use Feature plus Recall from a multiline terminal with a CO/PBX call in progress:

1. Press **Feature**.
2. Press **Recall**.  
 *Receive the new CO/PBX dial tone.*
3. Dial the desired number.


### To use the Drop Key feature from a single line telephone with a CO/PBX call in progress:

1. Hookflash.
2. Receive internal dial tone.
3. Dial the Service Code (Program 11-12-59, default not assigned).
4. Receive the new CO/PBX dial tone.
5. Dial the desired number.


## D<sup>term</sup> Cordless II Terminal

### Description

The NEC *D<sup>term</sup>* Cordless II Terminal may be used with the UNIVERGE SV8100 KTS. The DTR-4R-1 TEL uses 900 MHz Digital Spread Spectrum (DSS) Technology and must be connected in tandem to a multiline terminal.




 *The Dterm Cordless II cannot be used as standalone.*

Press the applicable key on the Base Unit to Switch between cordless operation and multiline terminal operation.

Feature	<i>D<sup>term</sup></i> Cordless II (DTR-4R-1)
Digital Technology	900 MHz Spread Spectrum
LCD	2-line, 16-digit LCD Display
Silent Alarm	Yes
Dedicated Keys	TALK, TRANSFER, HOLD, CONF, CHAN, REDIAL, MUTE, R/VOL
Programmable Line Keys	4
Operational Range *	50~350 feet
Message Waiting Indication	 Icon
Headset Connection	Yes
Channels	10

\* Determined by environmental conditions

### Conditions

- When a message is received the  icon is displayed.
- When the RING OFF/ON switch on the right side is down the  OFF icon is displayed.
  - When the battery is low, the  icon is displayed.
- When there is no transmission between the Base Unit and the handset for about five minutes, there are no LCD or LED indications on the cordless terminal handset. Ringing off-hook or pressing keys resumes LCD and LED indications.
- The ring pattern for the cordless terminal can be selected by system programming and multiline terminals.

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- When a cordless terminal is ringing, press the flashing function key programmed for DSS to answer the call.
  - Synchronous Ringing does not apply to the cordless terminals.
  - A beep indicates when the cordless terminal receives off-hook ringing.
  - Depending on your environment, the maximum number of cordless devices used without interference varies.
  - Multiple Base Units and handset units should not be closer than 20 feet anytime.
  - Radio interference causes interruptions in conversation. When this happens, your unit is not defective. When noise continues, move to a different location while you talk. (You might even need to move the base unit.) When the situation persists, contact NEC Unified Solutions, Inc., National Technical Assistance Center (NTAC).
  - Environments with many metal parts, metal shelves, or metal buildings have been found to reduce telephone performance.
  - *D<sup>term</sup>* cordless and DECT telephones do not ring when receiving a doorbox call. Notification is shown in the display.
  - *D<sup>term</sup>* cordless and Cordless DECT telephones can activate the door strike relay using a Recall key assigned in the phone configuration or, by a Flash Key assigned to one of the line keys in Program 15-07 (751: 62) (**Version 4000 or higher** software is required).
  - The Dterm Cordless Lite II can be used in conjunction with the UNIVERGE SV8100 and Series i Digital Multiline Telephones.
  - Under certain conditions, HOLD and TRANSFER have the same behavior. To prevent an unwanted transfer after placing a call on hold and calling another user, the Line Key for the call on hold must be pressed to retrieve the call from hold, otherwise the call is transferred when the Cordless Terminal is returned to idle.
  - Dterm Cordless telephones do not support the Caller ID List feature.
  - The DTL-8R-1 DECT Cordless – only supports connection with DT300 terminals.
  - DTH-4R-1/2 Cordless – only supports connection with Series i terminals (DTH/DTR).
  - DTR-4R-1/2 Cordless – only supports connection with Series i terminals (DTH/DTR).

## Default Setting

None

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## System Availability

### Terminals

DTR-4R-1 TEL

### Required Component(s)

CD-8DLCA

**-OR-**

CD-8DLCA with PZ-8DLCB Daughter Board

**-OR-**

CD-16DLCA

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-02	ETU Setup (DLCA PKG Setup) – Logical Port Number (B1)	Set up and confirm the Basic Configuration data for logical port number (B1).	0 = Not set 1 = Multiline Terminal (1~256) 2 = SLT Adapter (1~256) 6 = PGD(2)-U10 ADP (Paging) (1~8) 7 = PGD(2)-U10 ADP (for Tone Ringer) (1~8) 8 = PGD(2)-U10 ADP (for Door Box) (1~8) 9 = PGD(2)-U10 ADP (for ACI) (1~96) 10 = DSS (1~32) 11 = -- Not Used -- (default = 0)		✓	
10-03-04	ETU Setup (DLCA PKG Setup) – Optional Installed Unit 1 (Only Applies to DTH/DTR telephones)	Set up and confirm the Basic Configuration data for optional installed Unit 1.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-05	ETU Setup (DLCA PKG Setup) – Optional Installed Unit 2	Set up and confirm the Basic Configuration data for optional installed Unit 2.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Set up and confirm the Basic Configuration data for terminal type.	0 = Not set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)		✓	
10-03-07	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B2)</b>	Set up and confirm the Basic Configuration data for logical port number (B2).	0 = Not Set 6 = PGD(2)-U10 ADP (Ext. Speaker) 7 = PGD(2)-U10 ADP (Paging/Tone Ringer = 1~8) 8 = PGD(2)-U10 ADP (for Door Box = 1~8) (ACI) = (1~96) 9 = PGD(2)-U10 ADP 12 = APR (for B2 Mode) (193~512) (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a Department Calling key (46) so extension users can install or remove themselves from the Department Calling Group. Additional keys can also be assigned for Department Group features immediate calling destination (58), delayed calling destination (59) and DND destination (60).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-07-01	<b>Class of Service Options (Administrator Level) – Manual Night Service Enabled</b>	Turn Off or On an extension user ability to manually Switch the Night Mode (Service Code 718). This option must be enabled for an extension to display the Night indication.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-03	<b>Class of Service Options (Administrator Level) – Time Setting</b>	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-05	<b>Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On an extension user ability to use the Trunk Port Disable feature.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase or listen to VRS Messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Define the COS for the SMDR printout of accumulated extension data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Define the COS for the SMDR printout of department group (STG) data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Define the COS for the SMDR printout of accumulated account code data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-23	<b>Class of Service Options (Administrator Level) – CO Message Waiting Indication Callback Number Programming</b>	Enable/Disable an extension ability to receive CO Message Waiting Indication.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable/Disable an extension user ability to set or cancel Private Call Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension user ability to set or cancel Caller ID Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/Disable an extension user ability to set or cancel dial-in mode switch.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-27	<b>Class of Service Options (Administrator Level) – Do-Not-Call Administrator</b>	Enable/Disable an extension user ability to set or cancel do not call administrator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-03	<b>Class of Service Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-04	<b>Class of Service Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-07	<b>Class of Service Options (Outgoing Call Service) – Repeat Redial</b>	Turn Off or On an extension user ability to use Repeat Redial.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension user ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Ringdown Extension for extensions with this COS.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-10	<b>Class of Service Options (Outgoing Call Service) – Signal/Voice Call</b>	Turn Off or On an extension allowing force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enable this option to prevent callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators should be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-14	<b>Class of Service Options (Outgoing Call Service) – Call Address Information</b>	Define the COS for call address information.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On an extension user ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-22	<b>Class of Service Options (Outgoing Call Service) – Voice Over to busy Virtual Extension</b>	Define the COS for voice over to busy virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy in order for a second DNIS caller to ring through. If the destination extension does not have a line or Call Appearance (CAP) Keys available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-03	<b>Class of Service Options (Incoming Call Service) – Sub Address Identification</b>	Define whether or not an extension displays the Caller Sub-Address.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-04	<b>Class of Service Options (Incoming Call Service) – Notification for Incoming Call List Existence</b>	Determine whether or not the CHECK LIST message is displayed to indicate a missed call.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminal LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-08	<b>Class of Service Options (Incoming Call Service) – Calling Party Information</b>	Turn Off or On and extension ability to display calling party information on CCIS calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Turn Off or On Group Call Pickup for calls ringing an extension Pickup Group and ring group calls (Service Code *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension user ability to pick up a call ringing in a Pickup Group (Service Codes * #).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension user ability to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-10-09	<b>Class of Service Options (Answer Service) – Call Pickup Callback</b>	Turn Off or On an extension user ability to use Call Pickup to Pick up Callback calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-01	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-02	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-03	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-04	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-05	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-06	<b>Class of Service Options (Hold/ Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-07	<b>Class of Service Options (Hold/Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an extension incoming Transfer pre-answer display.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension user ability to initiate a Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension user ability to pick up a call on Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn Off or On an extension user ability to set up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension user ability to have a call which recalls from hold transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to or erase the Personal Greeting Message.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On an extension user ability in a Department Group to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	Allow (0)/ Deny (1) answered Transferred calls from recalling the originating extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow normal (0) for Program 24-01-06, or extended Park (1) for Program 24-01-07).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension ability to receive Callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem/ conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-11-22	<b>Class of Service Options (Hold/Transfer Service) – Restricted Unsupervised Conference</b>	Allow/Deny an extension user ability to initiate a Trunk-to-Trunk Transfer (Tandem Trunking).	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On an extension user ability to set and cancel Call Forwarding for a CAR or Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)		✓	
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn Off or On an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn Off or On an extension user ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On an extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-09	<b>Class of Service Options (Supplementary Service) – Privacy Release</b>	Turn Off or On an extension user ability to initiate a Voice Call Conference.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the Barge-In Speech Mode or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off (0) or On (1) an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-18	<b>Class of Service Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-19	<b>Class of Service Options (Supplementary Service) – Selectable Display Messaging (Text Messaging)</b>	Turn Off or On an extension user ability to use Selectable Display Messaging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program the name.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On an extension user ability to display the detail state of called party.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension user should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Turn Off or On an extension user ability to press a line key to barge into an outside call. Barge-In must be enabled if this option is used.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, a busy extension can be called, while someone is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be off for this option to work.	1 = On 0 = Off (default = 1 for COS 01~15)		✓	
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On an extension user ability to change an extension COS via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension user ability to turn Background Music on and off.	0 = Deny 1 = Allow (default = 1 for COS 1~15)		✓	
20-13-31	<b>Class of Service Options (Supplementary Service) – Connected Line Identification (COLP)</b>	Define the supplementary feature availability for each extension Class of Service (COS).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow/Deny the extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor's Position Enhancement</b>	Set this option on for the operator to use service codes in Program 11-13-10 through Program 11-13-13.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn Off or On a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-38	<b>Class of Service Options (Supplementary Service) – Headset Ringing for SLT</b>	Turn Off or On an extension user ability to use the Headset ringing.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension Class of Service. Any extension which has this option enabled also hears the queue alarm.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-41	<b>Class of Service Options (Supplementary Service) – Voice Mail Message Indication on DSS</b>	Turn Off or On the Voice Mail Message Indication for an extension on a DSS console.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension user ability to use the Station Relocation feature.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-44	<b>Class of Service Options (Supplementary Service) – Live Monitor Enabling</b>	Turn Off or On an extension user ability to use Live Monitor.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-45	<b>Class of Service Options (Supplementary Service) – MIC Key Mode While Call Monitoring</b>	Set per class of service, when in Call Monitoring Mode determines if the monitored parties receives the barge in alert tone when Coaching Mode is enabled.	0 = Enable (Off) 1 = Disable (On) (default = 1 for COS 1~15)		✓	
20-13-47	<b>Class of Service Options (Supplementary Service) – Station Number Display</b>	Determine if a station Number is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Number is Displayed (On) or Not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-50	<b>Class of Service Options (Supplementary Service) – AIC Agent display which call is from</b>	Determine if the station logged in via AIC codes shows which queue the call is coming from.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name appear in the directory</b>	Determine if an extension name and number are Listed (1) or Unlisted (0) in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	


## Operation

### To program the *D<sup>term</sup>* Cordless II:

1. Press and hold down \* and #, then press **TALK**. The F1 LED flashes red.
2. Press **R/VOL** repeatedly to scroll through the line key (LK) and feature options for function key *F1*.
3. Press **MUTE** to select the displayed line key or feature.
4. When a Line Key is assigned, press MUTE once to enter the Off-Hook Ringing ON or OFF Mode. Press R/VOL to toggle between /TALK for ON or /NO TALK for OFF.
5. Press **MUTE** to advance to the next function key (*F2~F4*).
6. After programming *F4*, press **MUTE** to advance to Global Off-Hook Ringing Assignment.
7. Press **R/VOL** to turn Global Off-Hook Ringing ON/OFF (LCD indicates ON or OFF).
8. Press **TALK** to exit.

-  *Function keys F1~F4 can be programmed as Line Keys 1~16, Redial (LNR/SPD), Answer (ANS), Feature (FNC), or Recall. When assigned, these keys operate the same as on an NEC multiline terminal.*
-  *When initially installed, function keys F1~F4 default to Line Keys 1~4 respectively and Off-Hook Ringing defaults to ON.*
-  *Global Off-Hook Ringing must be ON (default) for any Function key to work with Off-Hook Ringing.*

### To place an internal call:

1. Press **TALK**.  icon is displayed.
2. Dial the Station Number.  
- OR -  
Press (**F1~F4**), programmed for Direct Station Selection (DSS).

3. Announce the call after tone burst or wait for call to be answered.



#### To place an outside call:

1. Press **TALK**. X icon is displayed.
2. Dial trunk access code and number

**-OR-**


Select trunk appearance and dial number.  
Wait for call to be answered.

#### To answer an Incoming Ringing Call:

1. When the handset is in the charger, lift it.  icon is displayed.
2. When the handset is out of the Base Unit, press **TALK** if ringing line preference is assigned.  icon is displayed.
3. Talk.

#### To place a call on Hold (internal or outside):

With a call in process, press **HOLD**.

 *To retrieve a held call, press flashing F1~F4.*

 *After a programmed time, the held call recalls to the originating terminal.*

#### To redial a number:

1. Press **REDIAL**.
2. The previously dialed number is called.

#### To transfer a call:

1. With a call in process, press **TRANSFER**.
2. Dial Station Number.  
**- OR -**  
Press (**F1~F4**) programmed for Direct Station Selection (DSS).
3. Announce call (optional).
4. Press **TALK** to complete transfer.

**To place a conference call:**

1. With a call in progress, press **CONF**.
2. Place second internal or external call.
3. Announce conference.
4. Press **CONF** again. A 3-party conference is established. When any party hangs up, the conference still includes the remaining parties.

**To adjust ring volume:**

While the telephone is not being used, press **R/VOL** (upper key on left side) repeatedly to select desired setting display:

- Ring Type A High
- Ring Type A Low
- Ring Type B High
- Ring Type B Low
- Ring Type C High
- Ring Type C Low
- Ring Off (Vibration)

**To adjust receive volume level:**


1. With a call in progress, press **R/VOL** to decrease volume.
2. Press **R/VOL** to restore normal volume.

**To Mute the microphone:**

1. Press the **MUTE** key (lower key on left side).  
Microphone is muted.
2. Press the **MUTE** key again to activate microphone.

**To use the Charging Unit:**

1. Place handset and/or spare battery in the charging slots.
2. The Charge 1 LED is on red during and after charging the handset.
3. The Charge 2 LED is on red while charging the spare battery and turns off after charging is complete.

 *If the handset is placed in the charger without an installed battery, the Charge 1 LED flashes.*



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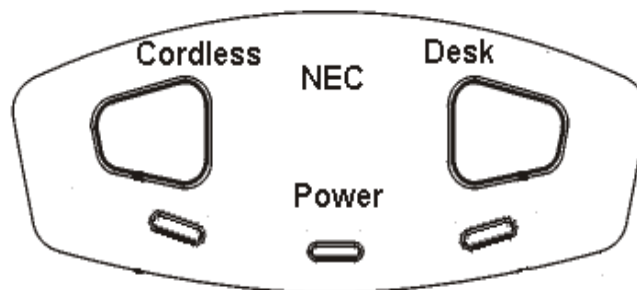
**To Switch from Cordless to Desk Using Base Unit:**

1. When Cordless II is associated with a terminal, use the Base Unit to switch between Cordless II and the multiline terminal. Refer to Cordless II Base Unit Controls illustration on the next page.
2. Press **Cordless** to select  $D^{term}$  Cordless II.


**-OR-**

3. Press **Desk** to select multiline terminal.

-  *Switching must be accomplished while both terminals are idle.*
-  *A call in progress cannot be switched. When tried, it is dropped.*
-  *Switching held calls is not recommended because LED indications are not provided.*
-  *The Power LED and the applicable position LED are on to indicate selection.*

**Cordless II Base Unit Controls****To switch from Desk to Cordless using the Redial Key:**

1. Verify that the Base Unit is in Desk mode.
2. Remove the battery.
3. Press and hold \* and # on the handset.
4. Install the battery while holding these keys.
5. After the handset beeps one time, release the keys.
6. The handset is in Setup mode.
7. Press **HOLD** to display the current mode (Digital/Redial).
8. Press **F2** and then **HOLD**.

9. The handset displays Digital (F8), and changes **REDIAL** program to Desk/Cordless Softkey Switching mode.
10. Press **TALK** to restore standby mode.
11. Press **REDIAL** to test this feature.
12. The Base Unit automatically changes from Desk to Cordless.  
 *This is a one time operation, but one of the F1~F4 keys can be programmed for the redial function.*
13. To restore the normal redial function, enter setup mode, and press **F3** and **HOLD** to display Digital (Redial).
14. Press **TALK** to restore standby mode.

## *D<sup>term</sup>* *Cordless Lite II Terminal*

### Description

The NEC *D<sup>term</sup>* Cordless II Lite Terminal may be used with the UNIVERGE SV8100 system. The DTH-4R-1 TEL uses 900 MHz FM with ADPCM (digital) Technology and is connected in tandem to a multiline terminal.

Press the applicable key on the Base Unit to switch between Cordless operation and multiline terminal operation.

Feature	<i>D<sup>term</sup></i> Cordless Lite II (DTH-4R-1)
Digital Technology	900 MHz FM with ADPCM (digital)
LCD	2-line, 16-digit LCD Display
Silent Alarm	Yes
Dedicated Keys	TALK, TRANSFER, HOLD, CONF, CHAN, REDIAL, MUTE, R/VOL
Programmable Line Keys	4
Operational Range *	50~150 feet
Message Waiting Indication	Yes (Icon)
Headset Connection	Yes
Channels	30

\* Determined by environmental conditions. These are cordless RF devices and, therefore, some interference may take place when operating in the same environment as other wireless devices which operate within the same frequency spectrum.

### Conditions

- The *D<sup>term</sup>* Cordless Lite II can be used in conjunction with the UNIVERGE SV8100, and Series i Digital Multiline Telephones.
- Battery Capacity is 700 mAh, 3.6V with a Talk Mode of six hours (typical) and a Standby Mode of five days (typical).
- The battery can be hot swapped while on a call. The battery must be replaced with another charged battery pack within 20 seconds, otherwise the connection is lost.
- The handset has visual and audible indicators to warn of a low battery condition.
- When a message is received, the message icon is displayed.

- Synchronous Ringing does not apply to the cordless terminals.
- A beep indicates when the cordless terminal receives off-hook ringing.
- A spare battery is available as an Optional Available Part. A second battery is not shipped with the product.
- The battery can be charged only when it is installed in the handset and the handset is in the charger. A stand-alone battery charger is not available.
- Environments with many metal parts, metal shelves, or metal buildings are known to reduce telephone performance.
- When multiple cordless telephones are used in your office, they must operate on different channels and be at least 20 feet apart (including the base unit and the telephones).
- *D<sup>term</sup>* cordless and DECT telephones do not ring when receiving a doorbox call. Notification is shown in the display.
- *D<sup>term</sup>* cordless and Cordless DECT telephones can activate the door strike relay using a Recall key assigned in the phone configuration or, by a Flash Key assigned to one of the line keys in Program 15-07 (751: 62) (**Version 4000 or higher** software is required).
- Under certain conditions, HOLD and TRANSFER have the same behavior. To prevent an unwanted transfer after placing a call on hold and calling another user, the Line Key for the call on hold must be pressed to retrieve the call from hold, otherwise the call is transferred when the Cordless Terminal is placed in idle.
- *D<sup>term</sup>* Cordless telephones do not support the Caller ID List feature.
- The DTL-8R-1 DECT Cordless – only supports connection with DT300 terminals.
- DTH-4R-1/2 Cordless – only supports connection with Series i terminals (DTH/DTR).
- DTR-4R-1/2 Cordless – only supports connection with Series i terminals (DTH/DTR).

## Default Setting

None

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## System Availability

### Terminals

DTH-4R-1 TEL

### Required Component(s)

CD-8DLCA

**-OR-**

CD-8DLCA with PZ-8DLCB Daughter Board

**-OR-**

CD-16DLCA


### Related Features

**Cordless Telephone Connection**

### Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Set up and confirm the Basic Configuration data for terminal type (B1).	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-02	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B1)</b>	Set up and confirm the Basic Configuration data for logical port number (B1).	0 = Not set 1 = Multiline Terminal (1~256) 2 = SLT Adapter (1~256) 6 = PGD(2)-U10 ADP (Paging) (1~8) 7 = PGD(2)-U10 ADP (for Tone Ringer) (1~8) 8 = PGD(2)-U10 ADP (for Door Box) (1~8) 9 = PGD(2)-U10 ADP (for ACI) (1~96) 10 = DSS (1~32) 11 = -- Not Used -- (default = 0)		✓	
10-03-04	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 1 (Only Applies to DTH/DTR telephones)</b>	Set up and confirm the Basic Configuration data for optional installed Unit 1.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-05	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 2</b>	Set up and confirm the Basic Configuration data for optional installed Unit 2.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Set up and confirm the Basic Configuration data for terminal type.	0 = Not set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-07	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B2)</b>	Set up and confirm the Basic Configuration data for logical port number (B2).	0 = Not Set 6 = PGD(2)-U10 ADP (Ext. Speaker) 7 = PGD(2)-U10 ADP (Paging/Tone Ringer = 1~8) 8 = PGD(2)-U10 ADP (for Door Box = 1~8) (ACI) = (1~96) 9 = PGD(2)-U10 ADP 12 = APR (for B2 Mode) (193~512) (default = 0)		✓	
10-03-08	<b>ETU Setup (DLCA PKG Setup) – Multiline Telephone Type</b>	Read only program that shows the type of multiline terminal connected to the port.	0 = DT3** 1 = Dterm8 2 = Dterm7 (default = 0)		✓	
10-03-09	<b>ETU Setup (DLCA PKG Setup) – Side Option Information</b>	Read only command that shows the type of side module connected to the terminal.	0 = No Option 1 = 8LK Unit 2 = 16LK Unit 3 = 24ADM (default = 0)		✓	
10-03-10	<b>ETU Setup (DLCA PKG Setup) – Bottom Option Information (Only applies to DTL style telephones)</b>	Shows optional adapter information.	0 = No option 1 = APR 2 = ADA 3 = BHA (default = 0)		✓	
10-03-11	<b>ETU Setup (DLCA PKG Setup) – Handset Option Information</b>	Shows optional adapter information.	0 = No option 1 = PSA/PSD 2 = Bluetooth Cordless Handset (default = 0)		✓	
20-07-01	<b>Class of Service Options (Administrator Level) – Manual Night Service Enabled</b>	Turn Off or On an extension user ability to manually Switch the Night Mode (Service Code 718). This option must be enabled for an extension to display the Night indication.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-03	<b>Class of Service Options (Administrator Level) – Time Setting</b>	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-07-05	<b>Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On an extension user ability to use the Trunk Port Disable feature.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase or listen to VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Define if Accumulated Extension Data is included in the SMDR Printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Define if Department Group (STG) Data is included in the SMDR Printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Define if Accumulated Account Code Data is included in the SMDR Printout for each Class of Service.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-23	<b>Class of Service Options (Administrator Level) – CO Message Waiting Indication Callback Number Programming</b>	Enable/Disable an extension ability to receive CO Message Waiting Indication.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable/Disable an extension user ability to set or cancel Private Call Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension user ability to set or cancel Caller ID Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/Disable an extension user ability to set or cancel dial-in mode switch.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-27	<b>Class of Service Options (Administrator Level) – Do-Not-Call Administrator</b>	Enable/Disable an extension user ability to set or cancel do not call administrator.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-03	<b>Class of Service Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-04	<b>Class of Service Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-07	<b>Class of Service Options (Outgoing Call Service) – Repeat Redial</b>	Turn Off or On an extension user ability to use Repeat Redial.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension user ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Ringdown Extension for extensions with this COS.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-10	<b>Class of Service Options (Outgoing Call Service) – Signal/Voice Call</b>	Turn Off or On an extension to force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enable this option to prevent callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators should be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-14	<b>Class of Service Options (Outgoing Call Service) – Call Address Information</b>	Enable/Disable Call Address Information for each Class Of Service.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On an extension ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-22	<b>Class of Service Options (Outgoing Call Service) – Voice Over to busy Virtual Extension</b>	Enable/Disable an extension user ability to voice over to a busy virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-03	<b>Class of Service Options (Incoming Call Service) – Sub Address Identification</b>	Define whether or not an extension displays the Caller Sub-Address.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-04	<b>Class of Service Options (Incoming Call Service) – Notification for Incoming Call List Existence</b>	Determine whether or not the CHECK LIST message is displayed to indicate a missed call.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminal LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-08	<b>Class of Service Options (Incoming Call Service) – Calling Party Information</b>	Turn Off or On and extension ability to display calling party information on CCIS calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Turn Off or On Group Call Pickup for calls ringing an extension Pickup Group and ring group calls (Service Code *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension user ability to pick up a call ringing into a Pickup Group (Service Codes *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension user ability to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)			✓
20-10-09	<b>Class of Service Options (Answer Service) – Call Pickup Callback</b>	Turn Off or On an extension user ability to use Call Pickup to Pick up Callback calls.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-01	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-02	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-03	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-04	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-05	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-06	<b>Class of Service Options (Hold/ Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-07	<b>Class of Service Options (Hold/ Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an extension incoming Transfer pre-answer display.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension user ability to initiate a Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension user ability to pick up a call on Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn On or Off setting up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension user ability to have a call which recalls from hold transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to or erase the Personal Greeting Message.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On an extension user ability in a Department Group to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	Allow/Deny answered Transferred calls from recalling the originating extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow normal (0) for Program 24-01-06 or Extended (1) for Program 24-01-07).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension ability to receive Callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem/conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)			✓
20-11-22	<b>Class of Service Options (Hold/Transfer Service) – Restricted Unsupervised Conference</b>	Allow/Deny an extension user ability to initiate a Trunk-to-Trunk Transfer (Tandem Trunking).	0 = Allow 1 = Deny (default = 0 for COS 1~15)			✓
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On an extension user ability to set and cancel Call Forwarding for a CAR or Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)			✓
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn On or Off an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn On or Off an extension user ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On an extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-09	<b>Class of Service Options (Supplementary Service) – Privacy Release</b>	Turn Off or On an extension user ability to initiate a Voice Call Conference.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the Barge-In Speech or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)			✓
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-18	<b>Class of Service Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-19	<b>Class of Service Options (Supplementary Service) – Selectable Display Messaging (Text Messaging)</b>	Turn Off or On an extension user ability to use Selectable Display Messaging.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program the name.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On an extension user ability to display the detail state of called party.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension user should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Turn Off or On an extension user ability to press a line key to barge into an outside call. The Barge-In feature must be enabled if this option is used.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, a busy extension can be called, while someone is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be off for this option to work.	1 = On 0 = Off (default = 1 for COS 01~15)			✓
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On an extension user ability to change COS via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension user ability to turn Background Music on and off.	0 = Deny 1 = Allow (default = 1 for COS 1~15)			✓
20-13-31	<b>Class of Service Options (Supplementary Service) – Connected Line Identification (COLP)</b>	Define the supplementary feature availability for each extension Class of Service (COS).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow/Deny an extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor's Position Enhancement</b>	Set this option to on for the operator to use service codes in Program 11-13-10 through Program 11-13-13.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn On or Off a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)			✓
20-13-38	<b>Class of Service Options (Supplementary Service) – Headset Ringing for SLT</b>	Turn Off or On an extension user ability to use Headset ringing.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension Class of Service. Any extension with this option enabled also hears the queue alarm.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-41	<b>Class of Service Options (Supplementary Service) – Voice Mail Message Indication on DSS</b>	Turn Off or On the Voice Mail Message Indication for an extension on a DSS console.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension user ability to use Station Relocation.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-44	<b>Class of Service Options (Supplementary Service) – Live Monitor Enabling</b>	Turn Off or On an extension user ability to use Live Monitor.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-45	<b>Class of Service Options (Supplementary Service) – MIC Key Mode While Call Monitoring</b>	Set per class of service, when in Call Monitoring Mode determines if the monitored parties receives the barge in alert tone when Coaching Mode is enabled.	0 = Enable 1 = Disable (default = 1 for COS 1~15)			✓
20-13-47	<b>Class of Service Options (Supplementary Service) – Station Number Display</b>	Determine if a station Number is Displayed or Not displayed in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Name should be Displayed or Not displayed in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-50	<b>Class of Service Options (Supplementary Service) – AIC Agent Display which Call is From</b>	Determine if the station logged in via AIC codes shows which queue the call is coming from.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name Appear in the Directory</b>	Determine if an extension name and number are Listed or Unlisted in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

## Operation

### To set up and program the *D<sup>term</sup>* Cordless Lite II (DTH-4R-1):

- Press and hold down \* and #, then press **TALK**. The F1 LED flashes red and F1=LK01 is displayed on the LCD.
- Press **Ring/Vol** repeatedly to scroll through the line key (LK) and feature options for function key **F1**.
- Press **On/Off MUTE** to select the displayed line key or feature.
- When a Line key is assigned, press **MUTE** once to enter the Off-Hook Ringing ON or OFF Mode. Press **Ring/Vol** to toggle between TALK for On or NO TALK for Off.
  - TALK is selected when the F1~F4 function keys are programmed for CO or Call Appearance Keys. NO TALK is selected when F1~F4 function keys are programmed for functions not requiring an off-hook state (e.g., Log On/Off or DND.)*
- Press **On/Off MUTE** to advance to the next function key (F2~F4).
- After programming F4, press **On/Off MUTE** to advance to Global Off-Hook Ringing Assignment.
- Press **Ring/Vol** to turn Global Off-Hook Ringing On or Off (LCD indicates ON or OFF as appropriate).
- Press **TALK** to exit.
  - Function keys F1~F4 can be programmed as Line Keys 1~16, Redial (LNR/SPD), Answer (ANS), Feature (FNC), or Recall. When assigned, these keys operate the same as on an NEC multiline terminal.*
  - When initially installed, function keys F1~F4 default to Line keys 1~4 respectively and Off-Hook Ringing defaults to ON.*
  - Global Off-Hook Ringing must be ON (default) for any function key to operate with off-hook ringing.*

### Switching Between the Desktop Multiline Telephone and the *D<sup>term</sup>* Cordless Lite Telephone Using the Base Unit:

When the *D<sup>term</sup>* Cordless Lite II is associated with a multiline telephone the following is applicable:

- Switching between the cordless mode and desk mode must be done while both telephones are idle.

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- ❑ A call in progress cannot be switched between the *D<sup>term</sup>* Cordless Lite II and the associated multiline telephone.
  - ❑ Switching held calls between the *D<sup>term</sup>* Cordless Lite II Telephone and the associated multiline telephone is not recommended because line key LED indications are not provided.

#### **Switching from multiline telephone and *D<sup>term</sup>* Cordless Lite Telephone:**

1. Press the Cordless button on the base unit.

**- OR -**

Press *REDIAL* from the *D<sup>term</sup>* Cordless Lite II handset. \*

\* This applies only if *REDIAL* is programmed to perform desk to cordless switching.

#### **To switch from *D<sup>term</sup>* Cordless Lite II Telephone to multiline telephone:**

1. Press the *DESK* button on the base unit.  
For additional Operating Procedures, refer to the *D<sup>term</sup>* Cordless Lite II (DTH-4R-1) Owner's Guide.

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## *DTPlusWare*

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### Description

DTPlusWare is a server based XML application that allows NEC IP display phones (DT710/730/750) access to the following features and options:

- View list of received, missed and outgoing calls.
- Send and receive Instant Messages to other DTPlusWare client phones.
- For the DT750 phone:
  - Store and display photos.
  - Store a photo to be used as a screen saver.
  - View Calendar one month at a time.
- Set Presence status for other DTPlusWare client phones to see (requires SV8100 TAPI license).
- View list of contacts set in DTPlusWare and on Corporate Active Directory if available.
- View current weather for any US city.
- Receive bulletins broadcast from DTPlusWare server.
- Display World Clock for predefined cities.
- When system is equipped with the SMB8000 Multimedia Conference Bridge you can create, view and change conferences from a client IP desk phone and iPhone.
- Change DTPlusWare client login password.
- For iPhone users DTPlusWare is available via a local Wi-Fi connection with the following features:
  - Uses same login credentials as desk phone.
  - Set Presence status.
  - View list of contacts set in DTPlusWare and on Corporate Active Directory.
  - Receive bulletins broadcast from DTPlusWare server.
  - View list of received, missed and outgoing calls.
  - Send Instant Messages to other DTPlusWare client phones.
  - Call the office desk phone.
  - Change DTPlusWare login password.

- ☐ Refer to [Table 2-20 DTPlusWare OAI/TAPI License Feature Matrix](#) for a listing of supported functionality depending on whether the SV8100 is licensed for the minimum OAI or includes the optional TAPI license.

**Table 2-20 DTPlusWare OAI/TAPI License Feature Matrix**

Feature	DTPlusWare with SOAI License (0123)	DTPlusWare with SOAI (0123) and 3rd Party TAPI (0112)
Basic Functionality	Available	Available
Basic Presence (Vacation, Sick, etc.)	Yes	Yes
Enhanced Presence (On Call, Phone Busy State, etc.)	Yes	Yes
iPhone Support	Yes	Yes
Call Event Monitoring	By SOAI	By TAPI
Call Control	By SOAI	By SOAI
Support for Mobile Extension Monitoring Events	No	Yes, via TAPI
Incoming Call Popup When Both-Ring Enabled	Not Available	Available
Licensing	Need SOAI License Only	Need SOAI and 3rd Party CTI License
Desktop Suite	Available	Not Available
UCB (Unified Communications for Business)	Available	Not Available

## Conditions

- After a DTPlusWare sets Call Forward Both Ring from their desk phone technicians will not be able to log into Web Pro, PC Pro or Telephone programming for two minutes. This is because DTPlusWare logs into system programming to set this forwarding.
- Main **SV8100 software Version 5.00 or higher** is required to support DTPlusWare v2.0.
- If using the Presence feature before installing the CSTA Server you must install the appropriate **4.0.0 or higher TAPI driver** for the PC the CSTA server will be installed on. Refer to the NTAC Download site for a list of available drivers and installation instructions.
- Before installing the CSTA Server you must install the appropriate NEC SV8100 Connector software on the PC the CSTA server will be installed on.
- All IP Terminals used for DTPlusWare must have firmware **Version 4.x.x.x or higher** installed.
- Predefined instant messages can only be sent from DT750/Sophisticated telephones.



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- Up to 12 Predefined Instant Message Templates are supported per DT750/Sophisticated user.
  - For Contact Database pop up to occur on incoming trunk calls Caller ID information must be provided.
  - **DTPlusWare Version 1.xx** does not provide a contact pop-up for caller ID that is restricted or not provided. This type of call does not allow re-direct to be selected during contact pop-up.
  - The DTPlusWare interface supports event monitoring for a maximum of 200 ports.
  - While **SV8100 V4.xx or higher** supports time zones for DT700 series terminals when an IP terminal is in XML mode the time shown will be from the DTPlusWare server.
  - A maximum of five Redirect Numbers are supported per DTPlusWare Client.
  - If the extension range is changed in SV8100 programming and DTPlusWare has an existing user database, then the users will need to be deleted and new users matching the new extension range added in DTPlusWare.
  - The Extension number (User Name) cannot be changed as it is read only. The user must be deleted and a New User added.
  - Mobile Extension Feature: To be answered automatically and provided internal dial tone from your extension, the Caller ID must be sent from Mobile Phone to SV8100 for authentication purposes.
  - IIS Web server by default responds to HTTP (Hyper Text Transfer Protocol) URL's which are not secure when accessed externally over the internet. It is recommended that any access via Web/iPhone client over the internet use a secure communication channel (SSL/HTTPS). Enabling SSL/HTTPS can be changed in the IIS server manager. For instructions on How to enable HTTPS Service in IIS, refer to Microsoft documentation.
  - The telephone dial pad may stop responding when a XML graphic popup appears. Under this condition hang up on the attempted call and redial again.

## Restrictions

- All trunks used for the System Calling feature must be in trunk group 1.
- Trunks not in trunk group 1 cannot be used for the System Calling feature.
- All trunks used for the System Calling feature must have answer supervision.
- Viewing contacts in the Corporate Active Directory requires LDAP be setup on the Exchange server.
- An iPhone cannot receive Instant Messages (IM) from other DTPlusWare client phones.
- During incoming call pop-up, Redirect does not work with a voice call.
- When using Desktop Suite and DTPlusWare in the same system, DTPlusWare must have the TAPI option disabled in configuration.

- When using Desktop Suite and DTPlusWare in the same system, DTPlusWare Mobile Extension Event Monitoring is not supported.
- Windows XP IIS server supports a maximum of 10 concurrent external access users. If more than 10 concurrent external access users are required, Windows Server 2003 must be used.
- NEC CSTA middleware will constantly reinitialize if a SV8100 server connection is not established. This is normal operation for the purpose of initialization. While NEC CSTA middleware reinitializes, CSTA Web client Admin access is only available for configuration.
- DTPlusWare **Version 2.xx** supports a generic “Private” contact pop-up for caller ID that is restricted or not provided. The pop-up does not contain any caller information, but does provide the ability to select the redirect during the pop-up.
- Windows 7 (32-bit / 64-bit) and Windows 2008 server are not supported for DTPlusWare server installations.

## Default Setting

None

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## System Availability

### Terminals

All Multiline Terminals

### Required Software

None

### Minimum PC Requirements:

The following minimum requirements are necessary for setting up and configuring the DTPlusWare.

- PC CPU: Pentium 4 or higher
- RAM: 1 GB
- Hard Disk Space: 20GB
- Free Disk Space: 500 MB
- Network: 100 MB NIC

- Operating System
  - Windows XP Professional with SP2 (Supports a maximum of 10 concurrent users).
  - Windows 2003 server (supports over 10 concurrent users, use Win 2003 server if more than 10 concurrent users are required).

- IIS 5.1 or higher

**SV8100 Requirements:**

- The SV8100 should have Version 5.00 or higher software.
- The SV8100 should have available SIP station licenses for client phones (5101).
- The SV8100 should have the appropriate number of DTPlusWare client licenses (0141).
- The SV8100 should have the SOAI Interface license (0123).
- Depending on desired features the SV8100 should have the Third Party TAPI license (0112) installed. Refer to [Table 2-20 DTPlusWare OAI/TAPI License Feature Matrix on page 2-570](#).

**Supported Internet Browsers:**

- Because the DTPlusWare Web Client is a web-based application, an internet browser is required to access the Web Client Administration/User settings. The following Internet browsers are supported: Windows Internet Explorer 8.x, FireFox 3.x.x and Safari 3.x.x.

**Internet Access:**

- If Dynamic DNS is not used then an Internet Connection with a Static public IP address or registered DNS name is required to host the DTPlusWare Application Web Server.
- An iPhone can use the Wi-Fi network to access DTPlusWare Web Client services.

**QoS for DTPlusWare:**

The following IP QoS methods (depending on switch's QoS capability) should be configured to ensure proper performance:

- Port based QoS: program a fixed QoS value for switch port
- IP & ACL & QoS rewrite
- Application layer information and QoS rewrite

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## Related Features

### IP Multiline Station (SIP)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-20-01	<b>LAN Setup for External Equipment – TCP Port</b>	Define the TCP port (0~65535) when communicating to the SMDR (type 5).	0~65535 default: External Device 1 (CTI Server) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service ) = 0	✓		
11-16-02	<b>Single Digit Service Code Setup – Barge-In</b>	Set one digit Barge In code as 3. Set up Item 02 for single digit Barge-In. This allows you to program a function key with an extension number plus the Barge-In code (i.e., 3). This allows one-touch access to the Barge-In feature for an extension.	(default not assigned)	✓		
15-07-01	<b>Programmable Function Keys</b>	Program Call Redirect key (code 49) on DTPlusWare client phones.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-09	<b>System Options for Multiline Telephones – Disconnect Supervision</b>	Set to Enable (1) for DTPlusWare. Enable/Disable disconnect supervision for the system trunks.	0 = Disable 1 = Enable (default = 1)		✓	
20-02-12	<b>System Options for Multiline Telephones – Forced Intercom Ring (ICM Call Type)</b>	Set to Signal (1) for DTPlusWare. Enable/Disable Forced Intercom Ringing. If enabled, incoming Intercom calls normally ring. If disabled, Intercom calls voice-announce.	0 = Disable (Voice) 1 = Enable (Signal) (default = 0)	✓		
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Set to Off (0) for DTPlusWare. Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Set to Off (0) for DTPlusWare. Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-12	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Set to On (1) for DTPlusWare. Turn Off or On setting Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Set to Off (0) for DTPlusWare. Turn Off or On an extension user ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Set to Off (0) for DTPlusWare. Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Set to Off (0) for DTPlusWare. Enable Barge-In Speech or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default: 0 for COS 1~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Set to On (1) for DTPlusWare. Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default: 0 for COS 1~15)	✓		
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Set to On (1) for DTPlusWare. Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default: 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Set to On (1) for DTPlusWare. Turn Off or On an extension user ability to press a line key to barge into an outside call. Barge-In must be enabled if this option is used.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-17-01	<b>Operator Extension – Operator’s Extension Number</b>	DTPlusWare client cannot be set as operator. Designate an extension operator. This setting determines which phone will show the message notification for outside caller messages.	Up to eight digits (default = ext. 101)		✓	
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	Set to 30 seconds for analog trunks only. The system waits for this time to expire before placing the call in a talk state (Call Timer starts after time expires. Voice Over and Barge-In are not allowed until after time expires).	0~64800 (seconds) (default = 5)	✓		
21-01-18	<b>System Options for Outgoing Calls – Reset Dial After Failure of Trunk Access</b>	Set to Enable (1) for DTPlusWare. Enable/Disable an extension user ability to continue to dial codes or extensions after receiving Trunk Busy. This must be Enabled for this feature to work.	0 = Disable 1 = Enable (default = 1)	✓		

## Operation

For operation instructions, refer to the user guide for the appropriate telephone.

## Enhancements

This feature added with **Version 7000**.

## Description

Environmental issues, such as global warming or ecology are one of the most important themes in today's world. The following energy saving features are implemented in this system:

Power Cut Off Mode:


Based on Day/Night mode switching, the system can automatically cut power to pre-programmed multiline terminals resulting in the system consuming less power. This feature can also be activated/deactivated via service codes. When the system cuts the power to the terminal it cannot be used again until power is restored.

Power Saving Mode:

Based on a configurable system timer, pre-programmed multiline terminals can dim the brightness of all line keys and feature keys using less power. This feature does not affect the multiline terminal display.

Power Failure Saving Mode:

If the SV8100 loses system power, this feature can be programmed to cut the power to selected terminals while running on the backup battery. Cutting the power to specific terminals will help extend battery backup run time. This feature is programmed on a per station basis and is NOT enabled by default.

 *When a terminal is in the Power Cut off/Power Failure mode, a user cannot dial any number including an emergency number (i.e., 911) from the station. The terminal is unusable until it returns from the power cutoff state.*

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## Conditions

### Power Cut Off Mode

- **Version 7000 or higher** main software is required for this feature.
- If the V7000 Enhancement License (0036) expires while in power cut off mode, power does not automatically recover. If this is expected to occur, disable the Ecology mode before license expiration, or reboot the system to restore power to the telephones.
- The system can cut power to digital (TDM) Multiline Terminals by using power save groups. A maximum of 16 Power Save groups are supported.
- The Power Cut Off mode can be set to **On** or **Off** on a per group basis. However, Digital Station port 1 cannot be set for power cutoff. This keeps the terminal powered on for emergency calls, etc.
- If some terminals are on a call when the Power Cut Off mode is enabled, the system will wait until all extensions on the blade become idle before cutting power to the slot.
- Power Cut Off mode can be set to **On** or **Off** using one or a combination of the following methods:
  - Night mode time schedule/Manual Night Mode selection
  - Service Code
  - Function Key
- If the system is reset during the Power Cut Off mode, power to all phones is restored when the phone system comes back on line.
- When a phone has entered Power Cut Off mode, any direct calls to the terminal will follow the stations call forwarding. If the phone is part of a chain call forwarding scenario, the chain call forwarding will not process while the phone is in Power Cut Off mode.
- When a terminal is set to Power Cut Off mode, the DSS/BLF status on keys or the console will not display any status; including Hotel/Motel and Call Forward/DND.
- When a terminal is in the Power Cut Off mode, Callback requests or Camp-On cannot be set until terminal power is restored.
- Call Forward Follow Me settings are not followed when the terminal loses power from the Power Cut Off mode.
- If the terminal has Call Forward Both set and then enters the Power Cut Off mode, any calls directed to the terminal do not follow the Call Forward settings.
- Caller ID history is not updated for a terminal in a Power Cut Off mode. Once power to the terminal is restored, the Caller ID history will start functioning again.
- If the system cuts the power via the Power Cut Off mode while a user is on a call, the call is not lost. If the user places the caller on hold or park, the user's phone then switches to Power Cut Off mode and the call is lost.



- 
- 
- If the Power Cut Off mode is manually set to **On** during a scheduled power **Off** time, power cut remains in the **On** state until the next power cut off time, or until the Power Cut Off mode is manually set to **Off**.

### **Power Saving Mode**

- If the Multiline Terminal is idle or receives no incoming calls for the programmed period, system activates the Power Saving mode. The Line Key and feature key LED's on the Multiline Terminal will darken. This feature does not affect the terminal display.
- The Power Saving mode can be individually set for each terminal.
- Any key operation or incoming call at the terminal ends the Power Saving mode and all LEDs will return to normal brightness.

### **Power Failure Saving Mode**

- The same conditions as Power Cut Off mode exists with the following exceptions:
  - When the system is in the Power Failure Saving mode, power must be restored to the system before restoring power to the phones. When in a Power Failure Saving mode, a system reset will not restore power to the multiline terminals.
  - Multiline Terminals can be assigned to cut power on a per station basis when the system enters the Power Failure Saving mode. This feature does not support power save groups.

### **Default Settings**

None

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## **System Availability**

### **Terminals**

- Multiline Terminal (DT300/ Dterm85)

### **Required Component(s)**

- CD-8DLCA/ CD-16DLCA or PZ-8DLCB or CD-LTA
- V7000 Enhancement License (0036)

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## **Related Features**

### **Night Service**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-51	<b>Service Code Setup (for System Administrator) – Power Saving for Power Save Group</b>	Use to determine the Service Code setting for the Power Save feature (On/ Off) in the Power Saving Group.	MLT, SLT (default = 731 (NA)/ 746 (OT))	✓		
12-02-01	<b>Automatic Night Service Patterns – Start Time</b>	Defines the daily pattern of the automatic mode switching. Each mode group has 10 patterns. These patterns are used in Programs 12-03 and 12-04. The daily pattern consists of 20 timer settings. This option defines the start time.	0000~2359 Refer to the SV8100 Programming Manual for default settings.		✓	
12-02-02	<b>Automatic Night Service Patterns – End Time</b>	Defines the daily pattern of the automatic mode switching. Each mode group has 10 patterns. These patterns are used in Programs 12-03 and 12-04. The daily pattern consists of 20 timer settings. This option defines the end time.	0000~2359 Refer to the SV8100 Programming Manual for default settings.		✓	
12-02-03	<b>Automatic Night Service Patterns – Operation Mode</b>	Defines the daily pattern of the automatic mode switching. Each mode group has 10 patterns. These patterns are used in Programs 12-03 and 12-04. The daily pattern consists of 20 timer settings. This option defines the operation mode the system should be in during each time number.	1~8 (default = 1 or 2 depending on the time pattern and time number)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
12-03-01	<b>Weekly Night Service Switching</b>	Assign one of the 10 Time Patterns programmed in Program 12-02-01 to each day of the week.	Night Mode Service Group Numbers: 01~32 Time Schedule Pattern Number: 1~10 Day of Week: 01 = Sunday (default = Time Pattern 2) 02 = Monday (default = Time Pattern 1) 03 = Tuesday (default = Time Pattern 1) 04 = Wednesday (default = Time Pattern 1) 05 = Thursday (default = Time Pattern 1) 06 = Friday (default = Time Pattern 1) 07 = Saturday (default = Time Pattern 2)S			✓
12-04-01	<b>Holiday Night Service Switching</b>	Assign one of the 10 Time Patterns to holidays.	Days and Months: 0101~1231 (e.g. 0101 = Jan. 1; 1231 = Dec. 31) Time Pattern Number: 0~10 (0 = No Setting) (default not assigned)			✓
15-02-18	<b>Multiline Telephone Basic Data Setup – Power Saving Mode</b>	Enable/disable the ability of each terminal to cut power when the system is running on battery backup following a loss of power.	0 = Normal Mode 1 = Power Saving Mode (Eco-Mode) (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key as a Power Saving key (code #6) 01 - 16: Power Saving Group Number 00: All Groups	Line Key 1~48 0~99, #00 ~ #07 (Normal Function Code 751 by default)		✓	
15-27-02	<b>Power Save Setup – Power Off When Power Failure</b>	Assign power cut or no power cut for each extension when the system loses power and runs on battery backup.	Up to eight digits 0 = Disable 1 = Enable (Power Cut) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-10	<b>System Options for Multiline Telephones – Time Before Shifting to Power Saving Mode</b>	System-wide timer that determines how long a multiline terminal is idle before shifting into the Power Saving mode.	0 = Disable 1 = 1 minute 2 = 2 minutes 3 = 4 minutes 4 = 8 minutes 5 = 16 minutes 6 = 32 minutes 7 = 64 minutes (default = 0)		✓	
20-53-01	<b>Night Mode Group Assignment for Power Save Group – Night Mode Service Group Number</b>	Assigns the Night Mode Service group number into the Power Save group.	Power Save Group Number 1~16 Night Mode Service group number 1~32 (default = 1)		✓	
20-54-01	<b>Power Supply Mode for Each Power Save Group – Power Saving Mode</b>	Assign the Power Saving mode in each Power Saving group and Night mode.	Power Save Group Number 1~16 Night Mode 1~8 0 = Power Cut 1 = Power Supply (default = 1)	✓		
90-02-02	<b>Programming Password Setup – Password</b>	Configure the administrator accounts that are used when Power cut to the Power Save group.	Up to eight digits. Refer to the SV8100 Programming Manual for default settings.	✓		

## Operation

### Power Cut Off Mode

**To cut the power for Power Save Group 2 during the night time (19:00-6:00):**

< Program >

Program 20-53-01: Power Save Group 2 Set 1 for Night mode Service Group Number

Program 20-53-01: Power Save Group 3 Set 1 for Night mode Service Group Number

Program 20-54-01: Power Save Group 2

Night Mode 1: Power Saving Mode 1 (Power Supply)

Night Mode 2: Power Saving Mode 0 (Power cut)

Program 20-54-01: Power Save Group 3

Night Mode 1: Power Save Mode 1 (Power Supply)

Night Mode 2: Power Save Mode 1 (Power cut)

Program 15-27-01:

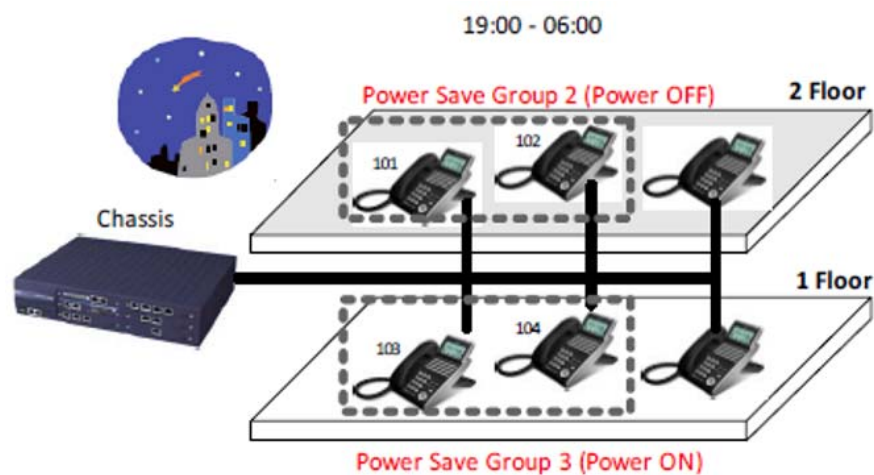
TEL 101: Power Save Group 2

TEL 102: Power Save Group 2  
 TEL 103: Power Save Group 3  
 TEL 104: Power Save Group 3

**Table 2-21 Program 12-02: Automatic Night Service Patterns**

Night Group Mode	Time Pattern	Set Time Number	Start	End	Night Mode
1	1	1	0000	0600	2
1	1	2	0600	1900	1
1	1	3	1900	0000	2

The power to TEL 101 and TEL 102 cuts at night.



**Figure 2-14 Automatic Night Service**

### Settings Using Service Codes



< Program >

Program 15-27-01:

TEL 101: Power Save Group 2

TEL 102: Power Save Group 2



Power Off for Power Save Group 2

1. Press **Speaker** and dial (Service Code 731).
2. Dial **02**, Group 2
3. Dial **1**, Power Off
4. Enter the Password (Default: 0000)
  -  *Power supply to the system is cut when all terminals of Power Save group 2 are in an Idle state.*
  -  *Password is set in Program 90-02-02 (User ID3).*
5. Press Speaker to set Power Off for Power Save Group 2.

Power On for Power Save Group 2

1. Press **Speaker** and dial (Service Code 731).
2. Dial **02**, Group 2
3. Dial **0**, Power On
4. Press Speaker to set Power On for Power Save Group 2.

Power Off for the Entire Power Save Group

1. Press **Speaker** and dial (Service Code 731).
2. Dial **00**, Entire Group
3. Dial **1**, Power Off
4. Enter the Password (Default: 0000)
  -  *Power supply to the system is cut when all terminals of Entire Power Save Group are in an Idle state.*
  -  *Password is set in Program 90-02-02 (User ID3).*
5. Press Speaker to set Power Off for Entire Power Save Group.

Power On for the Entire Power Save Group

1. Press **Speaker** and dial (Service Code 731).
2. Dial **00**, Entire Group
3. Dial **0**, Power On
4. Press Speaker to set Power On for Entire Power Save Group.

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## Settings Using Function Keys

### Power Off for Power Save Group 2

1. Assign Power Save key (SC751 code #06) with additional data 02.
2. Press the Power Save key.
3. Enter the Password (set in Program 90-02-02 User ID3).
4. The key turns red.

### Power On for Power Save Group 2

1. Assign Power Save key (SC751 code #06) with additional data 02.
2. Press the Power Save key.
3. The key is turned **Off**.

### Power Off for the Entire Power Save Group

1. Assign Power Save key (SC751 code #06) with additional data 00.
2. Press the Power Save key.
3. Enter the Password (set in Program 90-02-02 User ID3).
4. The key turns red.

### Power On for the Entire Power Save Group

1. Assign Power Save key (SC751 code #06) with additional data 00.
2. Press the Power Save key.
3. The key is turned **Off**.

## Power Saving Mode

< Program >

Program 15-02-18: TEL 200: 1

Program 20-02-10: 1 minute

1. Idle state at TEL200.

2. One minute later, LED areas highlighted in red darken at TEL200.

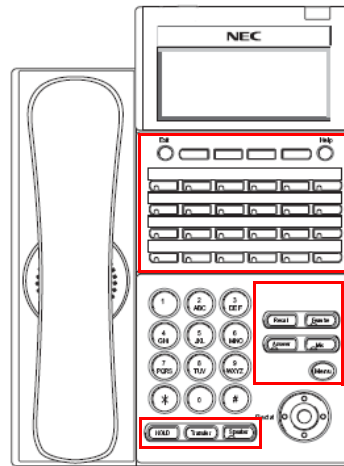


Figure 2-15 Multiline Terminal Darkens

### Power Failure Saving Mode

Set Program 15-27-02 to **1** for extensions to have the power cut when the system loses power and runs on battery backup.

Example

< Program >

Program 15-27-02:

TEL 101: set to a 1

TEL 102: set to a 1

TEL 103: set to a 0

TEL 104: set to a 0

TEL 101 TEL 102 will be powered **Off** when a power failure occurs.



## *E911 Compatibility*

### Enhancements

With **Version 4000 or higher** system software, the 911 Cut Through feature works when dialing trunk Access+911.

With **Version 4000 or higher** system software, the Calling Party Number (CPN) sent out has been enhanced.

### Description

<b>IMPORTANT - PLEASE NOTE THE FOLLOWING!</b>	
1.	<b><i>When ARS is NOT enabled and the system allows trunk access by dialing 9</i></b> , single line telephones disregard Program 20-03-03 – System Options for Single Lines Telephones – SLT DTMF Dial to Trunk Lines. This prevents the system from connecting to a trunk until all the digits are dialed. This can be avoided by using either 8 or 9x (but not 91) as the trunk access code. Be aware that this change requires additional programming changes.
2.	<b><i>Do not use * in a PBX access code if the Account Code feature is used.</i></b> With the Account Code feature enabled, if this is used in the access code, the trunk stops sending digits to the central office after the * is sent.
3.	<b><i>Finally, but most importantly, TEST - TEST - TEST!!</i></b> Due to the nature of the E911 feature, it is imperative that when programming this, or any other feature, to be aware of the consequences. Make sure to test the extensions with the E911 feature to confirm that other features do not prevent the call from being completed. When using external equipment, make sure the dial treatment tables are working properly.

E911 Compatibility ensures that emergency calls always get through. If an emergency occurs, a user goes to any telephone, lifts the handset and dials 911. The system built-in E911 Compatibility places the emergency call even if the user forgets to dial an access code or press a line key. The E911 abilities include:

**Attendant Notification**

The attendant receives a notification each time a co-worker dials an emergency 911 call. This notification is the co-worker's name and number display optionally accompanied by an audible alarm. Notification occurs regardless of whether the attendant is idle or busy on a call. You can optionally extend this ability to other supervisory extensions as well.

## Emergency Routing

When an extension user dials 911, the system can automatically find a trunk for the call. The system can choose a route to which the user normally does not have access. If all normal routes are busy, the system can even disconnect an active call and place the emergency call. E911 Compatibility uses the flexibility of the Automatic Route Selection Call Route Options to route 911 emergency calls (even in systems in which ARS is not enabled).

### E911 Outgoing Dialing

The E911 call follows the trunk group route programming. It is possible to use the flexibility of the Automatic Route Selection Call Route Options for additional routing options.

### Forced Disconnect Follows Timer to Disconnect Call

When all lines in the programmed route are busy and the system must drop a call to place a 911 call, the system waits the time set in Program 81-01 before disconnecting the call.

## Calling Party Identification

With ISDN installed, the system can provide the Calling Party Number (CPN) Presentation from Station. No additional customer-provided 911 equipment is required.

## Uninstalled Trunks in Trunk Group Prevent Call from Dialing Out

By system default, all trunks in Program 14-05-01 Trunk Group are in group 1. When placing a 911 call, the system tries to access the trunks defined in the group. If the trunks do not exist, the call does not dial out. For E911 to function correctly, remove any uninstalled trunks from the trunk group.

If Program 21-01-12 : System Options for Outgoing Calls, Dial 911 Routing Without Trunk Access is set to 0 (trunk access code required), when using the Dial Number Preview feature and dialing 9+911, if all trunks are busy, the user hears a busy signal and the call does not dial out.

If option Program 21-01-12 is set to 1 (trunk access code not required) and using Dial Number Preview, 911 is dialed, the system disconnects a trunk and dials the call.

Dial Number Preview is when a telephone number is first dialed (previewing the number in the display) then Speaker or a line key is pressed to place the call.

## Conditions

- If Program 21-01-10 is programmed with an entry other than 0, a call does not have a talk path unless the user dials at least the number of digits entered in this option when placing an outgoing call. This means that an entry of 4 or higher in this program causes a problem when dialing 911. Since it is only a 3-digit number, the call does not have a talk path, preventing the emergency dispatcher from hearing the caller. This option should be kept at its default setting of 0 to prevent any problem with dialing 911.
- CAMA Trunks are not supported.
- If a 911 call originates from a Virtual Extension, the system sends the Virtual Calling Party Number (CPN) Presentation from Station (**Version 3000 and lower** software).

- The 911 Cut Through feature does not work when dialing trunk Access+911 (**Version 3000 and lower** software).
- The 911 Cut Through feature works when dialing trunk Access+911 (**Version 4000 and higher** software).

### Calling Party Number (CPN)

CPN sent when making a normal trunk call from a terminal.

**Table 2-22 CPN for Standard Calls**

PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	CPN: PRG
Off	Off	Not Assigned	Not Assigned	None *
			Assigned	None *
		Assigned	Not Assigned	21-12-01
			Assigned	21-12-01
	On	Not Assigned	Not Assigned	None *
			Assigned	21-13-01
		Assigned	Not Assigned	21-12-01
			Assigned	21-13-01
On	Off	Not Assigned	Not Assigned	None *
			Assigned	None *
		Assigned	Not Assigned	21-12-01
			Assigned	21-12-01
	On	Not Assigned	Not Assigned	None *
			Assigned	21-13-01
		Assigned	Not Assigned	21-12-01
			Assigned	21-13-01

\* The CPN provided is from the service provider.

CPN sent when making a normal trunk call from a Virtual Extension (VE).

**Table 2-23 CPN for VE Standard Calls**

PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		CPN: PRG
			Terminal	VE	
Off	Off	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	None *
			Assigned	Not Assigned	None *
			Assigned	Assigned	None *
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-12-01
			Assigned	Not Assigned	21-12-01
			Assigned	Assigned	21-12-01
	On	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	None *
			Assigned	Assigned	21-13-01 (VE)
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-12-01
			Assigned	Assigned	21-13-01 (VE)
On	Off	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	None *
			Assigned	Assigned	21-13-01 (VE)
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-12-01
			Assigned	Assigned	21-13-01 (VE)
	On	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	None *
			Assigned	Assigned	21-13-01 (VE)
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-12-01
			Assigned	Assigned	21-13-01 (VE)
On	On	Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-12-01
			Assigned	Assigned	21-13-01 (VE)

\* The CPN provided is from the service provider.

CPN sent when making a 911 call from a terminal.

**Table 2-24 CPN for 911 Calls**

<b>PRG 99-01-58</b>	<b>PRG 20-08-13</b>	<b>PRG 21-12-01</b>	<b>PRG 21-13-01</b>	<b>CPN: PRG</b>
Off	Off	Not Assigned	Not Assigned	None *
			Assigned	None *
		Assigned	Not Assigned	21-12-01
			Assigned	21-12-01
	On	Not Assigned	Not Assigned	None *
			Assigned	21-13-01
		Assigned	Not Assigned	21-12-01
			Assigned	21-13-01
On	Off	Not Assigned	Not Assigned	None *
			Assigned	21-13-01
		Assigned	Not Assigned	21-12-01
			Assigned	21-13-01
	On	Not Assigned	Not Assigned	None *
			Assigned	21-13-01
		Assigned	Not Assigned	21-12-01
			Assigned	21-13-01

\* The CPN provided is from the service provider.

CPN sent when making a 911 call from a Virtual Extension (VE).

**Table 2-25 CPN for VE 911 Calls**

PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		CPN: PRG
			Terminal	VE	
Off	Off	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	None *
			Assigned	Not Assigned	None *
			Assigned	Assigned	None *
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-12-01
			Assigned	Not Assigned	21-12-01
			Assigned	Assigned	21-12-01
	On	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	None *
			Assigned	Assigned	21-13-01 (VE)
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-12-01
			Assigned	Assigned	21-13-01 (VE)
On	Off	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-13-01 (Terminal)
			Assigned	Assigned	21-13-01 (Terminal)
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-13-01 (Terminal)
			Assigned	Assigned	21-13-01 (Terminal)
	On	Not Assigned	Not Assigned	Not Assigned	None *
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-13-01 (Terminal)
			Assigned	Assigned	21-13-01 (Terminal)
		Assigned	Not Assigned	Not Assigned	21-12-01
			Not Assigned	Assigned	21-13-01 (VE)
			Assigned	Not Assigned	21-13-01 (Terminal)
			Assigned	Assigned	21-13-01 (Terminal)

\* The CPN provided is from the service provider.

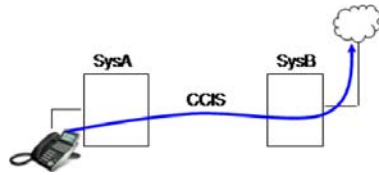


Figure 2-16 CCIS Standard Calls

CPN sent when making a normal trunk call across CCIS trunks from a terminal.

Table 2-26 CPN for CCIS Standard Calls

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24		
Off	Off	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
						On	None *	None *
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
				On	Not Assigned	Off	None *	None *
						On	None *	None *
			Assigned		Off	21-12-01 (SysB)	21-12-01 (SysB)	
			Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)		
			Assigned	Off	Not Assigned	Off	None *	None *
						On	None *	None *
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
		On		Not Assigned	Off	None *	None *	
					On	None *	None *	
			Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)		
		Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)			
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						On	21-12-01 (SysA)	21-12-01 (SysA)
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
				Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
				On	Not Assigned	Off	None *	21-12-01 (SysA)
						On	21-12-01 (SysA)	21-12-01 (SysA)
			Assigned		Off	21-12-01 (SysB)	21-12-01 (SysA)	
			Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)		
Assigned	Off		Not Assigned	Off	None *	21-12-01 (SysA)		
				On	21-12-01 (SysA)	21-12-01 (SysA)		
			Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)		
	Assigned		On	21-12-01 (SysA)	21-12-01 (SysA)			
	On	Not Assigned	Off	None *	21-12-01 (SysA)			
			On	21-12-01 (SysA)	21-12-01 (SysA)			
Assigned		Off	21-12-01 (SysB)	21-12-01 (SysA)				
Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)					

Table 2-26 CPN for CCIS Standard Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24		
Off	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
					Assigned	On	None *	None *
				Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					On	21-12-01 (SysB)	21-12-01 (SysB)	
				On	Not Assigned	Off	None *	None *
					Assigned	On	None *	None *
			Assigned	Off	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					On	21-12-01 (SysB)	21-12-01 (SysB)	
				On	Not Assigned	Off	None *	None *
					Assigned	On	None *	None *
				Off	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					On	21-12-01 (SysB)	21-12-01 (SysB)	
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
					Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
				On	Off	21-12-01 (SysB)	21-13-01 (SysA)	
					On	21-13-01 (SysA)	21-13-01 (SysA)	
				On	Not Assigned	Off	None *	21-13-01 (SysA)
					Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
			Assigned	Off	Off	21-12-01 (SysB)	21-13-01 (SysA)	
					On	21-13-01 (SysA)	21-13-01 (SysA)	
				On	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
				Off	Off	21-12-01 (SysB)	21-12-01 (SysA)	
					On	21-12-01 (SysA)	21-12-01 (SysA)	
Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)			
		Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)			
	On	Off	21-12-01 (SysB)	21-12-01 (SysA)				
		On	21-12-01 (SysA)	21-12-01 (SysA)				
	Off	Not Assigned	Off	None *	21-13-01 (SysA)			
		Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			
On	Not Assigned	Off	None *	21-13-01 (SysA)				
	Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)				



Table 2-26 CPN for CCIS Standard Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24		
On	Off	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
					Assigned	On	None *	None *
				Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
				Not Assigned	Off	None *	None *	
				Assigned	On	None *	None *	
			Assigned	Off	Not Assigned	Off	None *	None *
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
				On	Not Assigned	Off	None *	None *
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
				Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
				Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
				On	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
			Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
				Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
				On	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
				Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	

Table 2-26 CPN for CCIS Standard Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher		
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24				
On	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *		
					Assigned	On	None *	None *		
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)		
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)			
				On	Not Assigned	Off	None *	None *		
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)		
			Assigned		On	21-12-01 (SysB)	21-12-01 (SysB)			
			Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)	
				On	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
		Assigned				Off	21-12-01 (SysB)	21-13-01 (SysA)		
		Assigned	Not Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
							Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
				On	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
							Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
			Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)	
				On	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
Assigned	Off					21-12-01 (SysB)	21-13-01 (SysA)			
Assigned	Not Assigned	Off	Not Assigned	Not Assigned	Off	None *	21-13-01 (SysA)			
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			

\* The CPN provided is from the service provider.

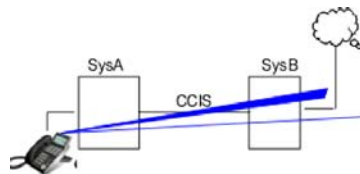


Figure 2-17 CCIS VE Standard Calls

CPN sent when making a normal trunk call across CCIS trunks from a Virtual Extension (VE).

**Table 2-27 CPN for CCIS VE Standard Calls**

System A					System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01	PRG 14-01-24			
			Terminal	VE						
Off	Off	Not Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *	
						On	None *	None *		
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					On	21-12-01 (SysB)	21-12-01 (SysB)			
					On	Not Assigned	Off	None *	None *	
						On	None *	None *		
			Assigned	Off		21-12-01 (SysB)	21-12-01 (SysB)			
			On	21-12-01 (SysB)	21-12-01 (SysB)					
			Assigned	Off	Not Assigned	Off	None *	None *		
					On	None *	None *			
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)		
				On	21-12-01 (SysB)	21-12-01 (SysB)				
		On		Not Assigned	Off	None *	None *			
				On	None *	None *				
			Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)				
		On	21-12-01 (SysB)	21-12-01 (SysB)						
		Assigned	Not Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	None *
							On	None *	None *	
							Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)
				On	21-12-01 (SysB)	21-12-01 (SysB)				
				On	Not Assigned	Off	None *	None *		
					On	None *	None *			
			Assigned		Off	21-12-01 (SysB)	21-12-01 (SysB)			
			On	21-12-01 (SysB)	21-12-01 (SysB)					
Assigned	Off		Not Assigned	Assigned	Off	Not Assigned	Off	None *	None *	
						On	None *	None *		
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
	On		21-12-01 (SysB)	21-12-01 (SysB)						
	On	Not Assigned	Assigned	Assigned	On	Not Assigned	Off	None *	None *	
						On	None *	None *		
Assigned						Off	21-12-01 (SysB)	21-12-01 (SysB)		
On	21-12-01 (SysB)	21-12-01 (SysB)								

Table 2-27 CPN for CCIS VE Standard Calls (Continued)

System A					System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01	PRG 14-01-24		
			Terminal	VE					
Off	Off	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
					Not Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
					Not Assigned	Off	None *	21-12-01 (SysA)	
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
				Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
					On	Not Assigned	Off	None *	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)	
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
				On	Not Assigned	Off	None *	21-12-01 (SysA)	
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
			Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)	
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
				On	Not Assigned	Off	None *	21-12-01 (SysA)	
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	

**Table 2-27 CPN for CCIS VE Standard Calls (Continued)**

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher			
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24		
			Terminal	VE							
Off	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *			
						On	None *	None *			
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)			
						On	21-12-01 (SysB)	21-12-01 (SysB)			
					On	Not Assigned	Off	None *	None *		
							On	None *	None *		
				Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)				
					On	21-12-01 (SysB)	21-12-01 (SysB)				
				Assigned	Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
								On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
							Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)	
						On		21-13-01(SysA:VE)	21-13-01(SysA:VE)		
		On	Not Assigned			Not Assigned	Off	None *	21-13-01(SysA:VE)		
							On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
				Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)				
		On	21-13-01(SysA:VE)		21-13-01(SysA:VE)						
		Assigned	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *	
								On	None *	None *	
							Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
						On		21-12-01 (SysB)	21-12-01 (SysB)		
						On	Not Assigned	Not Assigned	Off	None *	None *
									On	None *	None *
				Assigned	Off			21-12-01 (SysB)	21-12-01 (SysB)		
					On	21-12-01 (SysB)	21-12-01 (SysB)				
Assigned	Assigned			Off	Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)		
							On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
						Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)		
				On	21-13-01(SysA:VE)		21-13-01(SysA:VE)				
		On	Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
Assigned	Off			21-12-01 (SysB)	21-13-01(SysA:VE)						
	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)								

Table 2-27 CPN for CCIS VE Standard Calls (Continued)

System A					System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01	PRG 14-01-24		
			Terminal	VE					
Off	On	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
					Assigned	Off	None *	21-12-01 (SysA)	
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
				Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysB)	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
					On	Not Assigned	Off	None *	21-13-01(SysA:VE)
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
			Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
					On	Not Assigned	Off	None *	21-12-01 (SysA)
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
				Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
					On	Not Assigned	Off	None *	21-13-01(SysA:VE)
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)

**Table 2-27 CPN for CCIS VE Standard Calls (Continued)**

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24
			Terminal	VE					
On	Off	Not Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
						Assigned	On	None *	None *
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
						On	21-12-01 (SysB)	21-12-01 (SysB)	
					On	Not Assigned	Off	None *	None *
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)
			Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
				On	Not Assigned	Off	None *	21-13-01(SysA:VE)	
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
				Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)		
					On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *	
					Assigned	On	None *	None *	
				On	Not Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
				Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
			Assigned	On	Not Assigned	Off	None *	21-13-01(SysA:VE)	
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	

Table 2-27 CPN for CCIS VE Standard Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24
			Terminal	VE					
On	Off	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						On	21-12-01(SysA)	21-12-01 (SysA)	
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
					On	21-12-01(SysA)	21-12-01 (SysA)		
					Not Assigned	Off	None *	21-12-01 (SysA)	
					On	21-12-01(SysA)	21-12-01 (SysA)		
				Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)
						On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
						Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)
					On	Not Assigned	Off	None *	21-13-01(SysA:VE)
						On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
						Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)
			Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
						On	21-12-01(SysA)	21-12-01 (SysA)	
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
					On	Not Assigned	Off	None *	21-12-01 (SysA)
						On	21-12-01(SysA)	21-12-01 (SysA)	
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
				Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)
						On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
						Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)
					On	Not Assigned	Off	None *	21-13-01(SysA:VE)
						On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
						Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)
Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		On	21-13-01(SysA:VE)	21-13-01(SysA:VE)					
		Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)				
	On	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		On	21-13-01(SysA:VE)	21-13-01(SysA:VE)					
		Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)				
Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		On	21-13-01(SysA:VE)	21-13-01(SysA:VE)					
		Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)				
	On	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		On	21-13-01(SysA:VE)	21-13-01(SysA:VE)					
		Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)				



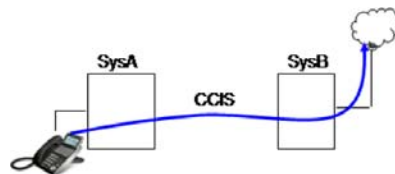
**Table 2-27 CPN for CCIS VE Standard Calls (Continued)**

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24
			Terminal	VE					
On	On	Not Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
						Assigned	On	None *	None *
						Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)
					On	Not Assigned	Off	None *	None *
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)
						Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)
		Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
			On	Not Assigned	Off	None *	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
	Not Assigned	Not Assigned	Not Assigned	Assigned	Off	Not Assigned	Off	None *	None *
						Assigned	On	None *	None *
						Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)
			On		Not Assigned	Off	None *	None *	
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
		Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
			On	Not Assigned	Off	None *	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		

**Table 2-27 CPN for CCIS VE Standard Calls (Continued)**

System A					System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01	PRG 14-01-24			
			Terminal	VE						
On	On	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)	
						Assigned	On	21-12-01(SysA)	21-12-01 (SysA)	
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
					Assigned	On	21-12-01(SysA)	21-12-01 (SysA)		
					Not Assigned	On	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned		On	21-12-01(SysA)	21-12-01 (SysA)	
				Assigned	Off		21-12-01 (SysB)	21-12-01 (SysA)		
				Assigned	Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)
				Assigned			On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
				Assigned			Off	21-12-01 (SysB)	21-13-01(SysA:VE)	
				Assigned		On	Not Assigned	Off	None *	21-13-01(SysA:VE)
				Assigned			On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
			Assigned	Off			21-12-01 (SysB)	21-13-01(SysA:VE)		
			Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)	
						Assigned	On	21-12-01(SysA)	21-12-01 (SysA)	
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
					Assigned	On	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned		On	21-12-01(SysA)	21-12-01 (SysA)	
					Assigned		Off	21-12-01 (SysB)	21-12-01 (SysA)	
				Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
						Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)	
					On	Not Assigned	Off	None *	21-13-01(SysA:VE)	
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
Assigned	Off	21-12-01 (SysB)				21-13-01(SysA:VE)				
Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)					
		Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)					
		Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)					
	On	Not Assigned	Off	None *	21-13-01(SysA:VE)					
		Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)					
		Assigned	Off	21-12-01 (SysB)	21-13-01(SysA:VE)					

\* The CPN provided is from the service provider.



**Figure 2-18 CCIS 911 Calls**

CPN sent when making a 911 call across CCIS trunks from a terminal.

**Table 2-28 CPN for CCIS 911 Calls**

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24		
Off	Off	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
					Assigned	On	None *	None *
				Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)	
				Not Assigned	Off	None *	None *	
				Not Assigned	On	None *	None *	
			Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
					Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)	
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)	
				Not Assigned	Off	None *	21-13-01 (SysA)	
				Not Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)	
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
				Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
				Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
				Not Assigned	Off	None *	21-12-01 (SysA)	
				Not Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
			Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
					Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)	
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)	
				Not Assigned	Off	None *	21-13-01 (SysA)	
				Not Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)	

Table 2-28 CPN for CCIS 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher		
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24				
Off	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *		
					Assigned	On	None *	None *		
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)		
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)			
				On	Not Assigned	Off	None *	None *		
					Assigned	On	None *	None *		
			Assigned		Off	21-12-01 (SysB)	21-12-01 (SysB)			
			Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
							Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)
				On	Not Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
		Assigned					Off	21-12-01 (SysB)	21-13-01 (SysA)	
		Assigned	Not Assigned	Off	Not Assigned	Not Assigned	Off	None *	21-12-01 (SysA)	
						Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)	
						Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
				On	Not Assigned	On	Not Assigned	Off	None *	21-12-01 (SysA)
							Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
							Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
			Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
							Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)
				On	Not Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)
							Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
Assigned	Off						21-12-01 (SysB)	21-13-01 (SysA)		
Assigned	Off	Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)			
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			
	On	Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)			
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			
Assigned	Off	Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)			
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			
	On	Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)			
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			
Assigned	Off	Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)			
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			
	On	Assigned	On	Not Assigned	Off	None *	21-13-01 (SysA)			
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)			
				Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			

Table 2-28 CPN for CCIS 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24		
On	Off	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
					Assigned	On	None *	None *
				Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					On	21-12-01 (SysB)	21-12-01 (SysB)	
				On	Not Assigned	Off	None *	None *
					Assigned	On	None *	None *
			Assigned	Off	Off	21-12-01 (SysB)	21-12-01 (SysB)	
					On	21-12-01 (SysB)	21-12-01 (SysB)	
				On	Not Assigned	Off	None *	21-13-01 (SysA)
					Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
				Off	Not Assigned	Off	21-13-01 (SysA)	21-13-01 (SysA)
					Assigned	On	21-12-01 (SysB)	21-13-01 (SysA)
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)
					Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
				On	Not Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)
					Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)
				Off	Not Assigned	Off	21-12-01 (SysA)	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
			Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
				On	Not Assigned	Off	None *	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
				Off	Not Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)
					Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)
On	Not Assigned	Off	None *	21-13-01 (SysA)				
	Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)				

Table 2-28 CPN for CCIS 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	PRG 20-08-13	PRG 21-12-01	PRG 14-01-24			
On	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *	
						On	None *	None *	
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysB)	
				Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)		
				On	Not Assigned	Off	None *	None *	
						On	None *	None *	
			Assigned		Off	21-12-01 (SysB)	21-12-01 (SysB)		
			Assigned	On	21-12-01 (SysB)	21-12-01 (SysB)			
			Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA)	
						On	21-13-01 (SysA)	21-13-01 (SysA)	
					Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)	
				Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)		
		On		Not Assigned	Off	None *	21-13-01 (SysA)		
					On	21-13-01 (SysA)	21-13-01 (SysA)		
			Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			
		Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)				
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01 (SysA)	21-12-01 (SysA)
						On	21-12-01 (SysA)	21-12-01 (SysA)	
					Assigned	Off	21-12-01 (SysB)	21-12-01 (SysA)	
				Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)		
				On	Not Assigned	Off	None *	21-12-01 (SysA)	
						On	21-12-01 (SysA)	21-12-01 (SysA)	
			Assigned		Off	21-12-01 (SysB)	21-12-01 (SysA)		
			Assigned	On	21-12-01 (SysA)	21-12-01 (SysA)			
Assigned	Off		Not Assigned	Off	None *	21-13-01 (SysA)			
				On	21-13-01 (SysA)	21-13-01 (SysA)			
			Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA)			
	Assigned		On	21-13-01 (SysA)	21-13-01 (SysA)				
	On	Not Assigned	Off	None *	21-13-01 (SysA)				
			On	21-13-01 (SysA)	21-13-01 (SysA)				
Assigned		Off	21-12-01 (SysB)	21-13-01 (SysA)					
Assigned	On	21-13-01 (SysA)	21-13-01 (SysA)						

\* The CPN provided is from the service provider.

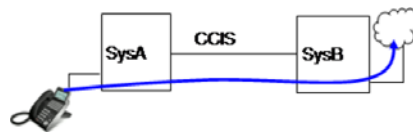


Figure 2-19 CCIS VE 911 Calls

CPN sent when making a 911 call across CCIS trunks from a Virtual Extension (VE).

**Table 2-29 CPN for CCIS VE 911 Calls**

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24
			Terminal	VE					
Off	Off	Not Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *
						Assigned	On	None *	None *
						Assigned	Off	21-12-01(SysB)	21-12-01(SysB)
					Assigned	On	21-12-01(SysB)	21-12-01(SysB)	
					Not Assigned	Off	None *	None *	
					Assigned	On	None *	None *	
			Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
				On	Not Assigned	Off	None *	21-13-01(SysA:VE)	
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
		Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *	
					Assigned	On	None *	None *	
					Assigned	Off	21-12-01(SysB)	21-12-01(SysB)	
				On	Not Assigned	Off	None *	None *	
					Assigned	On	None *	None *	
					Assigned	Off	21-12-01(SysB)	21-12-01(SysB)	
			Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
				On	Not Assigned	Off	None *	21-13-01(SysA:VE)	
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
		Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
	On	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
		Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
		Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
	On	Not Assigned	Off	None *	21-13-01(SysA:VE)				
		Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
		Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				

Table 2-29 CPN for CCIS VE 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher			
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24		
			Terminal	VE							
Off	Off	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01(SysA)		
						Assigned	On	21-12-01(SysA)	21-12-01(SysA)		
						Assigned	Off	21-12-01(SysB)	21-12-01(SysA)		
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
					Not Assigned	Off	None *	21-12-01(SysA)			
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
			Assigned	Off	Assigned	Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)	
							Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
							Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
				Assigned	On	Assigned	Assigned	Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
								Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)
								Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
		Assigned	Not Assigned		Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01(SysA)
								Assigned	On	21-12-01(SysA)	21-12-01(SysA)
								Assigned	Off	21-12-01(SysB)	21-12-01(SysA)
				Assigned			On	21-12-01(SysA)	21-12-01(SysA)		
				Not Assigned			Off	None *	21-12-01(SysA)		
				Assigned			On	21-12-01(SysA)	21-12-01(SysA)		
			Assigned	Off	Assigned	Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)	
							Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
							Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
				Assigned	On	Assigned	Assigned	Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
								Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)
								Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)



Table 2-29 CPN for CCIS VE 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher				
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24			
			Terminal	VE								
Off	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *				
					Assigned	Off	21-12-01(SysB)	21-12-01(SysB)				
					Assigned	On	21-12-01(SysB)	21-12-01(SysB)				
					Not Assigned	Off	None *	None *				
					Not Assigned	On	None *	None *				
					Assigned	Off	21-12-01(SysB)	21-12-01(SysB)				
				Assigned	Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)		
							Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
							Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)		
						On	Not Assigned	Off	None *	21-13-01(SysA:VE)		
							Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
							Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)		
		Assigned	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *		
							Assigned	On	None *	None *		
							Assigned	Off	21-12-01(SysB)	21-12-01(SysB)		
						On	Not Assigned	Off	None *	None *		
							Not Assigned	On	None *	None *		
							Assigned	Off	21-12-01(SysB)	21-12-01(SysB)		
				Assigned	Assigned	Off	Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)
									Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
									Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)
						On		Not Assigned	Off	None *	21-13-01(SysA:VE)	
								Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
								Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
Assigned	Assigned	Assigned	Assigned	On	Not Assigned	Off	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
				On	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				

Table 2-29 CPN for CCIS VE 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher				
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24			
			Terminal	VE								
Off	On	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01(SysA)			
						Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
						Assigned	Off	21-12-01(SysB)	21-12-01(SysA)			
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)				
					Not Assigned	On	Not Assigned	Off	None *	21-12-01(SysA)		
					Assigned		On	21-12-01(SysA)	21-12-01(SysA)			
				Assigned	Off		21-12-01(SysB)	21-12-01(SysA)				
				Assigned	Off	Assigned	Assigned	Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)
									Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
									Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)
					On	Assigned		Not Assigned	Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
									Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)
		Assigned	On						21-13-01(SysA:VE)	21-13-01(SysA:VE)		
		Assigned	Not Assigned	Not Assigned	Assigned	Off	Not Assigned	Off	None *	21-12-01(SysA)		
							Assigned	On	21-12-01(SysA)	21-12-01(SysA)		
							Assigned	Off	21-12-01(SysB)	21-12-01(SysA)		
						On	Assigned	Not Assigned	Not Assigned	Off	None *	21-12-01(SysA)
									Assigned	On	21-12-01(SysA)	21-12-01(SysA)
									Assigned	Off	21-12-01(SysB)	21-12-01(SysA)
				Assigned	Off	Assigned	Assigned	Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)
									Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
									Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)
					On	Assigned		Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)
									Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
Assigned	Off								21-12-01(SysB)	21-13-01(SysA:VE)		
Assigned	Off	Assigned	Assigned	Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
	On	Assigned		Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
Assigned	Off	Assigned	Assigned	Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
	On	Assigned		Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
Assigned	Off	Assigned	Assigned	Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				
	On	Assigned		Not Assigned	Not Assigned	Off	None *	21-13-01(SysA:VE)				
					Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)				
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)				

Table 2-29 CPN for CCIS VE 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher				
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24			
			Terminal	VE								
On	Off	Not Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *			
							On	None *	None *			
						Assigned	21-12-01(SysB)	21-12-01(SysB)				
				Assigned	On	Not Assigned	Off	None *	None *			
							On	None *	None *			
						Assigned	21-12-01(SysB)	21-12-01(SysB)				
			Assigned	Not Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
									On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
						Assigned	21-12-01(SysB)	21-13-01(SysA:VE)				
				Assigned	On	Not Assigned	Not Assigned	On	Not Assigned	Off	None *	21-13-01(SysA:VE)
										On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
						Assigned	21-12-01(SysB)	21-13-01(SysA:VE)				
			Assigned	Not Assigned	On	Not Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:terminal)	
									On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)	
						Assigned	21-12-01(SysB)	21-13-01(SysA:terminal)				
				Not Assigned	On	Not Assigned	Not Assigned	On	Not Assigned	Off	None *	21-13-01(SysA:terminal)
										On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)
						Assigned	21-12-01(SysB)	21-13-01(SysA:terminal)				
			Assigned	Not Assigned	Off	Not Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:terminal)	
									On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)	
						Assigned	21-12-01(SysB)	21-13-01(SysA:terminal)				
				Assigned	On	Not Assigned	Not Assigned	On	Not Assigned	Off	None *	21-13-01(SysA:terminal)
										On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)
						Assigned	21-12-01(SysB)	21-13-01(SysA:terminal)				
			Assigned	On	Assigned	Assigned	On	Assigned	Off	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)	
									On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)	

Table 2-29 CPN for CCIS VE 911 Calls (Continued)

System A					System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher		
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01	PRG 14-01-24				
			Terminal	VE							
On	Off	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01(SysA)		
						Assigned	On	21-12-01(SysA)	21-12-01(SysA)		
						Assigned	Off	21-12-01(SysB)	21-12-01(SysA)		
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
					Not Assigned	Off	None *	21-12-01(SysA)			
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
			Assigned	Off	Not Assigned	Off	None *	21-12-01(SysB)	21-12-01(SysA)		
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
				On	Not Assigned	Off	None *	21-12-01(SysB)	21-12-01(SysA)		
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
					Assigned	On	21-12-01(SysA)	21-12-01(SysA)			
		Assigned	Not Assigned	Off	Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
							Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
							Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)	
				On		Not Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)		
			Assigned	Off	Not Assigned	Off	Off	Not Assigned	Off	None *	21-13-01(SysA:terminal)
								Assigned	On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)
								Assigned	Off	21-12-01(SysB)	21-13-01(SysA:terminal)
				On		Not Assigned	On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)		
						Assigned	Off	21-12-01(SysB)	21-13-01(SysA:terminal)		
						Assigned	On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)		
Assigned	Off	Assigned	Off	Off	Not Assigned	Off	None *	21-13-01(SysA:terminal)			
					Assigned	On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)			
					Assigned	Off	21-12-01(SysB)	21-13-01(SysA:terminal)			
	On		Not Assigned	On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)					
			Assigned	Off	21-12-01(SysB)	21-13-01(SysA:terminal)					
			Assigned	On	21-13-01(SysA:terminal)	21-13-01(SysA:terminal)					

Table 2-29 CPN for CCIS VE 911 Calls (Continued)

System A				System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01			PRG 14-01-24
			Terminal	VE					
On	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	None *	
						On	None *	None *	
					Assigned	Off	21-12-01(SysB)	21-12-01(SysB)	
						On	21-12-01(SysB)	21-12-01(SysB)	
					On	Not Assigned	Off	None *	None *
						Assigned	Off	21-12-01(SysB)	21-12-01(SysB)
				On	Assigned	On	21-12-01(SysB)	21-12-01(SysB)	
				Assigned	Off	Not Assigned	Off	None *	21-13-01(SysA:VE)
							On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
						Assigned	Off	21-12-01(SysB)	21-13-01(SysA:VE)
					On	Not Assigned	Off	None *	21-13-01(SysA:VE)
							On	21-13-01(SysA:VE)	21-13-01(SysA:VE)
		Assigned	Off			21-12-01(SysB)	21-13-01(SysA:VE)		
		On	Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)			
		Assigned	Not Assigned	Off	Not Assigned	Not Assigned	Off	None *	21-13-01 (SysA:terminal)
							On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)
						Assigned	Off	21-12-01(SysB)	21-13-01 (SysA:terminal)
				On			21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)	
				On		Not Assigned	Off	None *	21-13-01 (SysA:terminal)
							On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)
			Assigned		Off	21-12-01(SysB)	21-13-01 (SysA:terminal)		
			Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA:terminal)	
						On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)	
					Assigned	Off	21-12-01(SysB)	21-13-01 (SysA:terminal)	
On	Not Assigned			Off	None *	21-13-01 (SysA:terminal)			
				On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)			
	Assigned	Off		21-12-01(SysB)	21-13-01 (SysA:terminal)				
On	Assigned	On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)					

Table 2-29 CPN for CCIS VE 911 Calls (Continued)

System A					System B			CPN: PRG V3000 and Lower	CPN: PRG V4000 and Higher	
PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01		PRG 20-08-13	PRG 21-12-01	PRG 14-01-24			
			Terminal	VE						
On	On	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-12-01(SysA)		
						On	21-12-01(SysA)	21-12-01(SysA)		
					Assigned	Off	21-12-01(SysB)	21-12-01(SysA)		
						On	21-12-01(SysA)	21-12-01(SysA)		
					On	Not Assigned	Off	None *	21-12-01(SysA)	
						Assigned	On	21-12-01(SysA)	21-12-01(SysA)	
				Assigned	Off	Not Assigned	Off	None *	21-12-01(SysA)	
						Assigned	On	21-12-01(SysB)	21-12-01(SysA)	
					On	Not Assigned	Off	None *	21-12-01(SysA)	
						Assigned	On	21-12-01(SysA)	21-12-01(SysA)	
					Off	Not Assigned	Off	None *	21-13-01(SysA:VE)	
						Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)	
		Assigned	On	Not Assigned	Off	None *	21-13-01(SysA:VE)			
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)			
			Off	Not Assigned	Off	None *	21-13-01(SysA:VE)			
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)			
			On	Not Assigned	Off	None *	21-13-01(SysA:VE)			
				Assigned	On	21-13-01(SysA:VE)	21-13-01(SysA:VE)			
		Assigned	Assigned	Not Assigned	Not Assigned	Off	Not Assigned	Off	None *	21-13-01 (SysA:terminal)
							On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)	
							Assigned	Off	21-12-01(SysB)	21-13-01 (SysA:terminal)
						On	Not Assigned	Off	None *	21-13-01 (SysA:terminal)
							Assigned	On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)
							Assigned	Off	21-12-01 (SysB)	21-13-01 (SysA:terminal)
Assigned	Off			Not Assigned	Off	None *	21-13-01 (SysA:terminal)			
				Assigned	On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)			
				Assigned	Off	21-12-01(SysB)	21-13-01 (SysA:terminal)			
	On			Not Assigned	Off	None *	21-13-01 (SysA:terminal)			
				Assigned	On	21-13-01 (SysA:terminal)	21-13-01 (SysA:terminal)			
				Assigned	Off	21-12-01(SysB)	21-13-01 (SysA:terminal)			

\* The CPN provided is from the service provider.

CPN sent when making a 911 call from a terminal by pressing a CO Line Key and then dialing 911.

**Table 2-30 CPN for Line Key+911 Calls**

PRG 99-01-58	PRG 20-08-13	PRG 21-12-01	PRG 21-13-01	CPN: PRG
Off	Off	Not Assigned	Not Assigned	None *
			Assigned	None *
		Assigned	Not Assigned	21-12-01
			Assigned	21-12-01
	On	Not Assigned	Not Assigned	None *
			Assigned	21-13-01
		Assigned	Not Assigned	21-12-01
			Assigned	21-13-01
On	Off	Not Assigned	Not Assigned	None *
			Assigned	None *
		Assigned	Not Assigned	21-12-01
			Assigned	21-12-01
	On	Not Assigned	Not Assigned	None *
			Assigned	21-13-01
		Assigned	Not Assigned	21-12-01
			Assigned	21-13-01

\* The CPN provided is from the service provider.

## Default Setting

Disabled

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## System Availability

### Terminals

None

## Required Component(s)

None

## Related Features

Automatic Route Selection

Central Office Calls, Placing

T1 Trunking (with ANI/DNIS Compatibility)

ISDN Compatibility

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-56	<b>Service Code Setup (for Service Access) – E911 Alarm Shut Off</b>	Select the Service Code (normally 786) that an extension user can dial to shut off the E911 Alarm Ring.	MLT (default = 786)		✓	
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign the outbound trunks you want to use for E911 service to the same Trunk Group.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified).	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service to an extension (1~15).	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On an extension ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
21-01-12	<b>System Options for Outgoing Calls – Dial E911 Routing Without Trunk Access</b>	If Enabled (1), an extension user can dial 911 without first dialing a trunk access code or pressing a line key. If Disabled (0), an extension user must dial a trunk access code (e.g., 9) or press a line key before dialing 911. If enabled, dialing 9+911 # still dials out.	0 = Trunk Access Code Required 1 = Trunk Access Code Not Required (default = 1)		✓	
21-01-13	<b>System Options for Outgoing Calls – Alarm Ring Timer (E911)</b>	Set the duration of the E911 Alarm Ring Time. If set to 0, the E911 Alarm does not ring.	0~64800 (seconds) (default = 0)		✓	
21-02-01	<b>Trunk Group Routing for Extensions</b>	Assign the routes set in Program 14-06 to extensions. This program and Program 14-06 are the minimum required if E911 must seize a line to dial.	1~100 (Trunk Groups) 0~100 (0 = No Setting) (default = 1)	✓		

**Calling Party Number Presentation:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-05	<b>ETU Setup (PRTA Pkg Setup) – CLIP Information</b>	Based on this setting, the system includes a Presentation Allowed (1) or Presentation Restricted (0) in the Setup message to allow/deny the Calling Party Number. Program 15-01-04 must also be set to 1 if this option is enabled.	0 = Disable 1 = Enable (default = 1)		✓	
15-01-04	<b>Basic Extension Data Setup – ISDN Caller ID</b>	If both Program 15-01-04 and Program 10-03-05 are Enabled, the system includes Caller ID in the Setup message as Presentation Allowed. If these options are Disabled, it is Presentation Restricted.	0 = Disable 1 = Enable (default = 1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators should be allowed.	0 = Off 1 = On (default = 0)	✓		
21-12-01	<b>ISDN Calling Party Number Setup for Trunks</b>	Assign Calling Party Numbers for each trunk (maximum 16 digits per entry). When a call is made by an extension which does not have an Extension Calling Number assigned (Program 21-13), the system sends the calling number for the ISDN trunk defined in 21-12. If the Calling Party Number is assigned in both Program 21-12 and Program 21-13, the system sends the data in Program 21-13.	(maximum 16 digits) 1-0, *, # Default: (All trunks = No setting)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-13-01	<b>ISDN Calling Party Number Setup for Extensions</b>	Assign each extension a Calling Party Number (maximum 16 digits per entry). The calling number is the subscriber number of the dial-in number. When a call is made by an extension which does not have an Extension Calling Number assigned (Program 21-12), the system sends the calling number for the ISDN trunk defined in Program 21-13. If a Calling Party Number is assigned in both Program 21-12 and Program 21-13, the system sends the data in Program 21-13.	0~9, *, # (Maximum 16 digits) (default not assigned)	✓		

## Operation

### To place an emergency 911 call:


#### When Dial 911 Routing Without Trunk Access is enabled

1. Go to any telephone.
2. Lift the handset or press **Speaker**.
3. Dial **911**.

#### When Dial 911 Routing Without Trunk Access is disabled

1. Go to any telephone.
2. Lift the handset or press **Speaker**.
3. Dial a trunk access code (e.g., 9) or press a line key.
4. Dial **911**.

**To turn off the E911 Alarm at your telephone:**

1. Lift the handset or press **Speaker**.
2. Dial **786**.
  -  *The alarm goes off.*
  - **OR** - (if you have a display telephone)
1. Press the **Exit** key once to turn off the alarm.
2. Press the **Exit** key again to clear the alarm display.

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## *Electra Elite IPK Terminals*

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### Description

The Electra Elite IPK Terminals provide ergonomic form and user-friendly functions. With advanced digital circuitry, the IPK Terminals consist of distinct models to meet diverse user telephone terminal needs.

The UNIVERGE SV8100 system allows a maximum of 240 Electra Elite IPK Terminals to be attached to the system.

### Conditions

- The UNIVERGE SV8100 does not support the *D<sup>term</sup>* SeriesE DTP/DTU style phones. Connecting a *D<sup>term</sup>* SeriesE DTP/DTU style phone to the UNIVERGE SV8100 may cause damage to the CD-( )DLC blade.



***To avoid damage to equipment, do not install the *D<sup>term</sup>70* on the SV8100 system. The *D<sup>term</sup>70* (DTU/DTP) terminal uses -24V and has no protection from the -48V power supply used by the SV8100 system.***

- The Electra Elite IPK Terminals, with an adjustable display, offer softkey operation. The LCD panel has three lines of display, each with 24 characters. Standard features include headset jacks, wall mount units, and adjustable-base units.
- The Electra Elite IPK Terminals support dedicated function keys to provide easy one-touch access to the most common telephone operations. These keys include: Feature, Recall, Conference, Redial, Hold, Transfer, Answer, Speaker, Microphone, Directory, and Message.
- The dial pad is detachable to allow easy customization for a foreign language (French or Spanish), or for Automatic Call Distribution (ACD) applications.
- All Electra Elite IPK Terminals are Class B devices and comply with U.S. FCC regulations for office and residential use. They also comply with requirements of the Canadian Interference-Causing Equipment Regulations.
- With the DTH-16LD-1 TEL, the 16-Line Keys are labeled by the LCD by assignment in system data. The LCD also supports the LED status for trunks, Call Appearance (CAP) Keys, DSS/BLF keys, and select Feature keys/Feature Access keys. Program 15-02-01 does not support language conversion entered in Program 15-20.
- Use Program 15-20 (LCD Line Key Name Assignment) to assign a name to each LCD Line Key of the DTH/DTR-16LD-1/2 Telephone. Up to eight characters can be assigned.

- The LCD of the UNIVERGE SV8100 Terminal provides a volume bar indication, while adjusting the following volume levels or controls:
  - Speaker Volume
  - Handset/Headset Volume
- BGM Volume
- Ring Volume/Off-Hook Ring Volume
- LCD Contrast
- ☞ *Only English displays are provided (SPEAKER, HANDSET, RING, LCD).*
- MIC controls the built-in microphone during speakerphone mode and controls the handset mute feature during handset/headset operation.
- The MSG Key acts as a VM access key to call the VM pilot number (Feature selection Program 15-02-26).
- The distance from the chassis for IPK multiline terminals (DTH type) can be extended when local AC power is provided. When the IPK Terminal is powered by a local AC-R Unit (AC Adapter), a built-in Long Line Adapter allows these telephones to be connected up to a distance of 2000 feet by Twisted 1-Pair Cable at 24 AWG.
- For compatibility of Adapter Units and Terminals, refer to the following table:

Adapter Unit	Terminal				
	DTH-16LD-1	DTH-32D-1	DTH-16D-1	DTH-8D-1	DTH-8-1
AD(A)-R	X	X	X	X	X
AP(A)-R	X	X	X	X	X
AP(R)-R	X	X	X	X	X
HF-R	X	X	X	X	X
<b>Button Units</b>					
BS(F)-R( ) UNIT	X	X	X	X	X
BS(S)-R( ) UNIT	X	X	X	X	X
<b>Other</b>					
WM-R UNIT	X	X	X	X	X
AC-R UNIT	X	X	X	X	X

X = Compatible  
 - = Not comparable

- With non-IP Electra Elite IPK Terminals, up to two adapters can be installed in a telephone. For compatibility of multiple adapter units, refer to the following table:

	AD(A)-R	AP(A)-R	AP(R)-R	HF-R
AD(A)-R		X	X	X
AP(A)-R	X		–	X
AP(R)-R	X	–		X
HF-R	X	X	X	

X = Compatible  
 – = Not compatible

- An AC-2R Unit/AC-3R Unit (AC Adapter) is required when any of the following adapters is installed in an IPK Terminal:
  - AP(R)-R Unit
  - HF-R Unit
  - DCR-60-1 Console
- The WM-R Unit (Wall Mount Unit) is required when any adapter is installed in an Electra Elite Terminal and the terminal is to be wall mounted.

## Default Settings

None

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## System Availability

### Terminals

- DTH-16LD-1 TEL
- DTH-32D-1 TEL
- DTH-16D-1 TEL
- DTH-8D-1 TEL
- DTH-8-1 TEL
- DCR-60-1 CONSOLE

**Required Component(s)**

- CD-8DLCA Blade
- PZ-8DLCB Daughter Board
- CD-16DLCA Blade

**Optional Component(s)**

- AD(A)-R UNIT (Adapter for Call Recording)
- AP(A)-R UNIT (Analog Port Adapter [without Ringer])
- AP(R)-R UNIT (Analog Port Adapter [with Ringer])
- HF-R UNIT (Adapter for Full Duplex Handsfree)
- BS(F)-R UNIT (French Button Unit)
- BS(S)-R UNIT (Spanish Button Unit)
- WM-R UNIT (Wall Mount Unit)
- AC-2R Unit (AC Adapter)
- AC-3R Unit (AC Adapter, PC Type)

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**Related Features****Ancillary Device Connection****Station Name – User Programmable****Off-Hook Signaling****Softkeys****User Programming Ability**



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Set up and confirm the Basic Configuration data for terminal type (B1).	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)		✓	
10-03-02	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B1)</b>	Set up and confirm the Basic Configuration data for logical port number (B1).	0 = Not set 1 = Multiline Terminal (1~256) 2 = SLT Adapter (1~256) 6 = PGD(2)-U10 ADP (Paging) (1~8) 7 = PGD(2)-U10 ADP (for Tone Ringer) (1~8) 8 = PGD(2)-U10 ADP (for Door Box) (1~8) 9 = PGD(2)-U10 ADP (for ACI) (1~96) 10 = DSS (1~32) 11 = -- Not Used -- (default = 0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-04	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 1 (Only Applies to DTH/DTR telephones)</b>	Set up and confirm the Basic Configuration data for optional installed Unit 1.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-05	<b>ETU Setup (DLCA PKG Setup) – Optional Installed Unit 2</b>	Set up and confirm the Basic Configuration data for optional installed Unit 2.	0 = None 1 = APR Module 2 = APA Module 3 = ADA Module 4 = CTA/CTU Module (default = 0)		✓	
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Set up and confirm the Basic Configuration data for terminal type.	0 = Not set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)		✓	
10-03-07	<b>ETU Setup (DLCA PKG Setup) – Logical Port Number (B2)</b>	Set up and confirm the Basic Configuration data for logical port number (B2).	0 = Not Set 6 = PGD(2)-U10 ADP (Ext. Speaker) 7 = PGD(2)-U10 ADP (Paging/Tone Ringer = 1~8) 8 = PGD(2)-U10 ADP (for Door Box = 1~8) (ACI) = (1~96) 9 = PGD(2)-U10 ADP 12 = APR (for B2 Mode) (193~512) (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-01	<b>Class of Service Options (Administrator Level) – Manual Night Service Enabled</b>	Turn Off or On an extension for manual Night Service Switching (Service Code 718). This option must be enabled for an extension to display the Night indication.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-02	<b>Class of Service Options (Administrator Level) – Changing the Music on Hold Tone</b>	Turn Off or On an extension user ability to change the Music on Hold tone.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-03	<b>Class of Service Options (Administrator Level) – Time Setting</b>	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-07-04	<b>Class of Service Options (Administrator Level) – Storing Speed Dialing Entries</b>	Turn Off or On an extension to store System or Group Speed Dialing numbers.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-07-05	<b>Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.	0 = Off 1 = On (default = 1 for COS 01~15)			✓
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On an extension user ability to use Trunk Port Disable.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase or listen to VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Define the COS for the SMDR printout of accumulated extension data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Define the COS for the SMDR printout of department group (STG) data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Define the COS for the SMDR printout of accumulated account code data.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)			✓
20-07-23	<b>Class of Service Options (Administrator Level) – CO Message Waiting Indication Callback Number Programming</b>	Enable/Disable an extension ability to receive CO Message Waiting Indication.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable/Disable an extension user ability to set or cancel Private Call Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension user ability to set or cancel Caller ID Refuse.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/Disable an extension user ability to set or cancel dial-in mode switch.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-07-27	<b>Class of Service Options (Administrator Level) – Do-Not-Call Administrator</b>	Enable/Disable an extension user ability to set or cancel do not call administrator.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-03	<b>Class of Service Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-04	<b>Class of Service Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-05	<b>Class of Service Options (Outgoing Call Service) – Dial Number Preview (Preset Dial)</b>	Turn Off or On an extension user ability to use Dial Number Preview.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-07	<b>Class of Service Options (Outgoing Call Service) – Repeat Redial</b>	Turn Off or On an extension user ability to use Repeat Redial.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension user ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Ringdown Extension for extensions with this COS.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-10	<b>Class of Service Options (Outgoing Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enable this option to prevent callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators should be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-14	<b>Class of Service Options (Outgoing Call Service) – Call Address Information</b>	Define the COS for call address information.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user COS from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On extension ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-19	<b>Class of Service Options (Outgoing Call Service) – Hotline for SPK</b>	Turn Off or On an extension user ability to activate hotline or ringdown when pressing Speaker.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-20	<b>Class of Service Options (Outgoing Call Service) – Hot Key Pad</b>	Turn Off or On an extension user ability to make a call by dialing the number without first going off-hook.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-21	<b>Class of Service Options (Outgoing Call Service) – Automatic Trunk Seizing by Pressing Speaker Key</b>	Define the COS for automatic trunk seizing by pressing Speaker.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-08-22	<b>Class of Service Options (Outgoing Call Service) – Voice Over to busy Virtual Extension</b>	Define the COS for voice over to busy virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-09-03	<b>Class of Service Options (Incoming Call Service) – Sub Address Identification</b>	Define whether or not an extension displays the Caller Sub-Address.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-09-04	<b>Class of Service Options (Incoming Call Service) – Notification for Incoming Call List Existence</b>	Determine whether or not the CHECK LIST message is displayed to indicate a missed call.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminal LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)			✓
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-09-08	<b>Class of Service Options (Incoming Call Service) – Calling Party Information</b>	Turn Off or On an extension ability to display calling party information on CCIS calls.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Turn Off or On Group Call Pickup for calls ringing an extension Pickup Group and ring group calls (Service Code *#).	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension user ability to pick up a call ringing into a Pickup Group (Service Codes *#).	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension user ability to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)			✓
20-10-09	<b>Class of Service Options (Answer Service) – Call Pickup Callback</b>	Turn Off or On an extensions ability to us Call Pickup to Pick up Callback calls.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-10-10	<b>Class of Service Options (Answer Service) – Answer Preset</b>	Define the COS for answer preset.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-01	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-02	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-03	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-04	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-05	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-06	<b>Class of Service Options (Hold/ Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-07	<b>Class of Service Options (Hold/ Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an extension incoming Transfer preanswer display.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension user ability to initiate a Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension user ability to pick up a call on Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn Off or On setting up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension user ability to have a call which recalls from hold transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to or erase the Personal Greeting Message.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On an extension user ability in a Department Group to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	No Recall set to allow does not stop transferred calls from recalling from a virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine if an extension COS should allow normal (0) or extended Park (1).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension ability to receive Callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem/conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)			✓
20-11-22	<b>Class of Service Options (Hold/Transfer Service) – Restricted Unsupervised Conference</b>	Allow/Deny an extension user ability to initiate a Trunk-to-Trunk Transfer (Tandem Trunking).	0 = Allow 1 = Deny (default = 0 for COS 1~15)			✓
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On an extension user ability to set and cancel Call Forwarding for a CAR or Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension user.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)			✓
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn Off or On an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-12-02	<b>Class of Service Options (Charging Cost Service) – Advice of Charge</b>	ISDN-AOC Turn Off or On a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-12-03	<b>Class of Service Options (Charging Cost Service) – Cost Display (TTU)</b>	ISDN billing information.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn Off or On an extension user ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension ability to receive Off-Hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On an extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-09	<b>Class of Service Options (Supplementary Service) – Privacy Release</b>	Turn Off or On an extension user ability to initiate a Voice Call Conference.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable Barge-In Speech or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)			✓
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-18	<b>Class of Service Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-19	<b>Class of Service Options (Supplementary Service) – Selectable Display Messaging (Text Messaging)</b>	Turn Off or On an extension user ability to use Selectable Display Messaging.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program the name.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On an extension ability to display the detail state of called party.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to the extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Turn Off or On an extension user ability to press a line key to barge into an outside call. The Barge-In feature must be enabled if this option is used.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, a busy extension can be called, while someone is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be off for this option to work.	1 = On 0 = Off (default = 1 for COS 01~15)			✓
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On an extension user ability to change an extension COS via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension user to turn Background Music on and off.	0 = Deny 1 = Allow (default = 1 for COS 1~15)			✓
20-13-31	<b>Class of Service Options (Supplementary Service) – Connected Line Identification (COLP)</b>	Define the supplementary feature availability for each extension COS.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow/Deny the extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor’s Position Enhancement</b>	Set this option to on for the operator to use service codes in Program 11-13-10 through Program 11-13-13.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn Off or On a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)			✓
20-13-38	<b>Class of Service Options (Supplementary Service) – Headset Ringing for SLT</b>	Turn Off or On an extension user ability to use Headset ringing.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension COS. Any extension with this option enabled also hears the queue alarm.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-41	<b>Class of Service Options (Supplementary Service) – Voice Mail Message Indication on DSS</b>	Turn Off or On the Voice Mail Message Indication for an extension on a DSS console.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension user ability to use Extension Data swap.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-44	<b>Class of Service Options (Supplementary Service) – Live Monitor Enabling</b>	Turn Off or On an extension user ability to use Live Monitor.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-45	<b>Class of Service Options (Supplementary Service) – MIC Key Mode While Call Monitoring</b>	Set per class of service, when in Call Monitoring Mode determines if the monitored party receives the barge in alert tone when Coaching Mode is enabled.	0 = Enable 1 = Disable (default = 1 for COS 1~15)			✓
20-13-47	<b>Class of Service Options (Supplementary Service) – Station Number Display</b>	Determine if a station Number is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Name is displayed (On) or not displayed (Off) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station lights when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-50	<b>Class of Service Options (Supplementary Service) – AIC Agent display which call is from</b>	Determine if the station logged in via AIC codes shows which queue the call is coming from.	0 = Unlisted 1 = Listed (default = 1 for COS 1~15)			✓
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name appear in the directory</b>	Determine if an extension name and number are listed (On) or unlisted (Off) in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-14-01	<b>Class of Service Options for DISA/E&amp;M – First Digit Absorption (Delete First Digit Dialed)</b>	For Tie Lines, enable/disable the ability to absorb (ignore) the first incoming digit. Use this to make the tie trunk compatible with 3- and 4-digit Tie Line service. This option does not apply to DISA.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-14-02	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Routing/ARS Access</b>	Enable/Disable a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-14-03	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Access</b>	Enable/ Disable a DISA or tie trunk caller ability to access trunk groups for outside calls (Service Code 704).	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-14-04	<b>Class of Service Options for DISA/E&amp;M – Outgoing System Speed Dial</b>	Enable/Disable a DISA or tie trunk caller ability to use System Speed Dialing.	0 = Off 1 = On (default = 0 for COS 1~15)			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-14-05	<b>Class of Service Options for DISA/E&amp;M – Operator Calling</b>	Enable/Disable a DISA or tie trunk caller ability to dial 0 for the telephone system operator.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-14-06	<b>Class of Service Options for DISA/E&amp;M – Internal Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use the telephone system Internal Paging.	0 =Off 1 = On (default = 1 for COS 1~15)			✓
20-14-07	<b>Class of Service Options for DISA/E&amp;M – External Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use the telephone system External Paging.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-14-08	<b>Class of Service Options for DISA/E&amp;M – Direct Trunk Access</b>	Enable/Disable a DISA or tie trunk caller ability to use Direct Trunk Access (Service Code 715).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-14-09	<b>Class of Service Options for DISA/E&amp;M – Forced Trunk Disconnect &lt;Not for ISDN T-point&gt;</b>	Enable/Disable a tie trunk caller ability to use Forced Trunk Disconnect (Service Code *26). This option is not available to DISA callers.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-14-10	<b>Class of Service Options for DISA/E&amp;M – Call Forward Setting by Remote via DISA</b>	Enable/Disable a DISA caller ability to use the Call Forward service codes (Program 11-11-01 through Program 11-11-05).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable/Disable a DISA or tie trunk caller ability to use Barge-In.	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-14-12	<b>Class of Service Options for DISA/E&amp;M – Retrieve Park Hold</b>	Turn Off or On the ability of a DISA caller to retrieve parked or held calls.	0 = Off 1 = On (default = 1 for COS 1~15)			✓

## Operation

Refer to individual features for details.

**Table 2-31 Electra Elite IPK Telephone Specifications**

	DTH-16LD-1	DTH-32D-1	DTH-16D-1	DTH-8D-1	DTH-8-1
Dedicated Function Keys	11	11	11	11	11
Line/Feature Access/ Programmable Feature Access Key	16	32*	16	8	8
LCD (3x24)	Yes	Yes	Yes	Yes	No
Call/Message Indicator	Yes	Yes	Yes	Yes	Yes
Adjustable Base	Yes	Yes	Yes	Yes	Yes
Built-in Wall Mount	Yes	Yes	Yes	Yes	Yes
Headset Jack (Built-in)	Yes	Yes	Yes	Yes	Yes
DESI Label by LCD	Yes	No	No	No	No
Receiver Volume Control for:					
Handset	Yes	Yes	Yes	Yes	Yes
Speakerphone	Yes	Yes	Yes	Yes	Yes
Headset	Yes	Yes	Yes	Yes	Yes
Ring Volume Control	Yes	Yes	Yes	Yes	Yes
LCD Contrast Control	Yes	Yes	Yes	Yes	No
Housing Color	White or Black	White or Black	White or Black	White or Black	White or Black
Softkeys	Yes	Yes	Yes	Yes	No

\* A maximum of 32 keys may be programmed as Function Keys.

# Facsimile CO Branch Connection

## Description

The UNIVERGE SV8100 system provides branch connection of locally provided facsimile machines to CO/PBX lines. Additional dedicated CO/PBX lines are not required for a facsimile to operate. The facsimile shares any CO/PBX line on the COI Package and Power Failure (PF) circuit.

## Conditions

- This function requires a CD-4COTB Blade to connect a facsimile in branch to a direct CO/PBX line.
- A PF circuit is required. The CD-4COTB has PF circuits on the first two ports.
- PF and FAX branch connection do not work together at the same port. Select either way in Program 14-02-21.
- For the FAX Branch Line, Incoming Group or DIL should be programmed.
- The systems cannot distinguish between an incoming facsimile call and a CO/PBX call. Incoming call may be automatically answered by FAX Machine. Ringing assignments should be turned off for fax lines.
- When the facsimile is used, the associated CO line key indicates Busy LED on a multiline terminal.
- When the facsimile is not used, the FAX Branch CO/PBX line can be used as an outside line.
- Code restriction does not apply to outgoing calls from the FAX machine.
- Connection of the facsimile machine does not require extra system ports.
- The PZ-4COTF daughter board does not contain any Power Fail or FAX Branch Exchange circuits.
- Power Fail and FAX CO Branch Connection cannot be used on the same CO port at the same time.
- Program 14-02-21 must be used to set a CO port to use this feature.

## Default Settings

None

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## System Availability

### Terminals

None

### Required Component(s)

CD-4COTB

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## Related Features


None

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-14	<b>Analog Trunk Data Setup – Loop Start/Ground Start</b>	Select Loop start or Ground start for the trunk.	0 = Loop Start (Loop) 1 = Ground Start (Ground) (default = 0)		✓	
14-02-21	<b>FAX Branch Connection</b>	Set CO for Fax Branch Connection.  <i>If FAX Branch is selected, Program 14-10 Power Failure Telephone Setting is NOT valid.</i>	0 = No 1 = Yes (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-05-01	<b>Trunk Group</b>	Assign trunks to trunk groups (1~100).	Trunk Group Number: 0~100 Priority Number: 1~200 (Default trunks 1~200 = Priority 1~200)		✓	
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this time, diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions to ring groups.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	To have the trunks ring extensions, assign trunks to a Ring Group. The incoming ring group assignment programmed in Program 41-03-01 overrides the setting in this program.	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
22-08-01	<b>DIL/IRG No Answer Destination</b>	A DIL that rings its programmed destination longer than this time. diverts to the DIL No Answer Ring Group (set in Program 22-08).	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	

## Operation

None

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## Flash

### Enhancements

With **Version 4000 or higher software**, a Flash (Recall) key can be placed on a line key.

With **Version 4000 or higher software**, the door strike relay can be activated from the MH240 or Cordless DECT terminal by a Flash Key assigned to a line key in Program 15-07 (751: 62).

### Description

Flash allows an extension user to access certain CO and PBX features by interrupting the trunk loop current. Flash lets an extension user take full advantage of whatever features the connected Telco or PBX offers. You must set the Flash parameters for compatibility with the connected Telco or PBX.

#### Conditions

The system does not provide a ground flash.

#### Default Setting

Enabled

### System Availability

#### Terminals

All Terminals

#### Required Component(s)

None

## Related Features

Drop Key

PBX Compatibility

VM8000 InMail

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-42	<b>Service Code Setup (for Service Access) – Flash on Trunk Lines</b>	Customize the Service Codes for flash on trunk lines.	SLT (default = #3)		✓	
14-02-03	<b>Analog Trunk Data Setup – Flash Type</b>	Make sure this item is set for open loop Flash.	0 = Open Loop Flash 1 = Ground (default = 0)			✓
14-02-04	<b>Analog Trunk Data Setup – Hooking Type</b>	For each trunk, select Timed Flash or open loop Disconnect.	0 = Timed Flash (Hooking) 1 = Disconnect (Cut) (default = 0)		✓	
14-04-01	<b>Behind PBX Setup</b>	For each trunk, indicate if the trunk is installed behind a PBX.	0 = Stand Alone (Trunk) 1 = Behind PBX (PBX) 2 = Not Used 3 = CTX assume 9 (default = 0)		✓	
15-02-05	<b>Multiline Telephone Basic Data Setup – Transfer Key Operation Mode</b>	For the Cordless Lite/Cordless Lite II telephone user to use the flash function, this option must be set to 2. This changes the Transfer key to a Flash key.	0 = Transfer 1 = Call back 2 = Hook (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-03-04	<b>Single Line Telephone Basic Data Setup – Flashing</b>	Enable/Disable Flash for single line (500/2500 type) telephones.	0 = No 1 = Yes (default = 1)		✓	
81-10-07	<b>COT Initial Data Setup – Hookflash Time Selection 1</b>	Set the Flash duration (16~4080ms) for analog trunk CD-4COTB circuits in Program 81-10-07.	0 = 20ms 1 = 40ms 2 = 60ms 3 = 80ms 4 = 100ms 5 = 140ms 6 = 160ms 7 = 200ms 8 = 400ms 9 = 600ms 10 = 800ms 11 = 1.0 seconds 12 = 1.5 seconds 13 = 2.0 seconds 14 = 3.0 seconds 15 = 5.0 seconds [default = 9 (600ms)]			✓
81-10-08	<b>COT Initial Data Setup – Hookflash Time Selection 2</b>	Set the open loop disconnect duration (16~4080ms) for analog trunk CD-4COTB circuits Program 81-10-08.	0 = 20ms 1 = 40ms 2 = 60ms 3 = 80ms 4 = 100ms 5 = 140ms 6 = 160ms 7 = 200ms 8 = 400ms 9 = 600ms 10 = 800ms 11 = 1.0 seconds 12 = 1.5 seconds 13 = 2.0 seconds 14 = 3.0 seconds 15 = 5.0 seconds [default = 14 (3.0 seconds)]			✓

## Operation

### To flash the trunk you are on:

#### From a Multiline Terminal

1. Press **Recall**.

#### From a Single Line Telephone

1. Hookflash.
2. Dial **#3**.

## *Flexible System Numbering*

### Description

Flexible System Numbering lets you reassign the system port-to-extension assignments. This allows an employee to retain their extension number if they move to a different office. In addition, factory technicians can make comprehensive changes to your system number plan. You can have factory technicians:

- Set the number of digits in internal (Intercom) functions. For example, extension numbers can have up to eight digits.
- Change your system Service Code numbers.
- Assign single digit access to selected Service Codes.

Talk to your sales representative to find out if this program is available to you.

You can also use Flexible System Numbering to change the system Trunk Group Routing code. Although the default code of 9 is suitable for most applications, you can alter the code if needed.

The system provides a completely flexible system numbering plan. Refer to the chart below and the UNIVERGE SV8100 Programming Manual for more details.

<b>Flexible System Numbering</b>	
<b>Program</b>	<b>Description</b>
11-01-01 System Numbering	Set the system internal (Intercom) numbering plan. The numbering plan includes the digits an extension user must dial to access features and other extensions.
11-09-01 Trunk Access Code	Assign the single-digit trunk access code (normally 9). This is the code users dial to access Automatic Route Selection or Trunk Group Routing.
11-20-01 Dial Extension Analyze Table	Use tables 01~128 to assign the digits to be dialed using the Dial Extension Analyze Tables. These tables are used when Program 11-01-01 is set to option 9 = Dial Extension Analyze. (Up to eight digits can be assigned and the valid entries are: 0, 1 ~ 9, #, *)
11-20-02 Dial Extension Analyze Table	Assign the Type of Dial for the Dial Extension Analyze Table from Program 11-20-01. (Svc Code, Intercom, Operator, or F-Route)

<b>Flexible System Numbering (Continued)</b>	
<b>Program</b>	<b>Description</b>
11-10 Service Code Setup (for System Administrator) 11-11 Service Code Setup (for Setup/Entry Operation) 11-12 Service Code Setup (for Service Access) 11-13 Service Code Setup (for ACD) 11-14 Service Code Setup (for Hotel) 11-15 Service Code Setup, Administrative (for Special Access)	Customize the Service Codes.
11-16 Single Digit Service Code Setup	Assign the Single Digit Service Codes. these are the post-dialing codes a user can dial after placing an Intercom call to a co-worker.

## Conditions

- Programming follows a telephone extension number, not the port number in most cases. If you relocate a telephone, you may need to change additional programming. For example, if you change the extension assigned to a port in Program 11-02, the line key programming does not follow. However, if you move the extension using the Station Relocation Feature, the line key programming does follow.
- Since making changes in Program 11-01 does not automatically make any other changes in any other program, changing the number plan after the system is in operation may cause problems in the following programs:

<b>Program 11-01 Type 2 (Extension Number)</b>				<b>Program 11-01 Type 1 (Service Codes)</b>		
11-02	11-08	15-12	22-11	11-10	11-14	21-11
11-04	11-17	16-01-01	25-06	11-11	11-15	30-03
11-06	15-01-01	15-14	30-03	11-12	15-07	
11-07	15-07	21-11		11-13	15-14	
0507, 0515, 0516, 0920, 1207, 2402, 2902, 2905, 2908				2402		

- Any feature which requires dialing a code or extension number can be affected.
- When the system searches the Dial Extension Analyze Table (Program 11-20-01), the system uses prefix searching, giving the lower table number the higher priority. For example, the user programs 211 in table 1 and 2113 in table 2, then dials 2113, the system selects table 1.

**Example for 310X****Example for 3100X**

10s Group (4-digit)	100s Group (5-digit)
11-01-01 = Dial 3 31 Digit 4 = (9)Dial Extension Analyze Table	11-01-01 = Dial 3 31 Digit 7 = (9)Dial Extension Analyze Table
11-20-01 Table 1 = Dial 310	11-20-01 Table 1 = Dial 3100
11-20-02 Table 1 = Intercom	11-20-02 Table 1 = Intercom

**Example for 31000X****Example for 310000X**

1000s Group (6-digit)	10,000s Group (7-digit)
11-01-01 = Dial 3 31 Digit 4 = (9)Dial Extension Analyze Table	11-01-01 = Dial 3 31 Digit 7 = (9)Dial Extension Analyze Table
11-20-01 Table 1 = Dial 31000	11-20-01 Table 1 = Dial 310000
11-20-02 Table 1 = Intercom	11-20-02 Table 1 = Intercom

**Default Setting**

Extensions and Virtuals are numbered in the following order:

Program 11-02-01 and Program 11-04-01

Physical Extensions:

- Extn Port 1 = 101 ~ Extn Port 99 = 199
- Extn Port 100 = 3101 ~ Extn Port 256 = 3257

Virtual Extensions/CAR Keys:

- VE Port 1 = 201 ~ VE Port 99 = 299
- VE Port 100 = 3301 ~ VE Port 256 = 3457

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

None

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	<b>System Numbering – Service Code</b>	Customize the system internal (Intercom) numbering plan.	Refer to UNIVERGE SV8100 System Program Manual.	✓		
11-02-01	<b>Extension Numbering</b>	Assign extension numbers to extension ports. The telephone programming identity follows the port number – not the extension number.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-04-01	Virtual Extension Numbering	Assign virtual extension numbers.	Up to eight digits 1 201 2 202 3 203 ~ ~ 99 299 100 3601 ~ ~ 256 3857	✓		
11-06-01	ACI Extension Numbering	Define the virtual extension number to be used for the ACI extension numbering.	ACI Ports: 1~96 (default not assigned)		✓	
11-07-01	Department Group Pilot Numbers – Dial	Assign pilot numbers to each Department Group set up.	Up to eight digits (default not assigned)	✓		
11-08-01	ACI Group Pilot Number – Dial	Assign the pilot number to the ACI Groups set in Program 33-02.	Up to eight digits ACI Groups: 1~16 (default not assigned)		✓	
11-09-01	Trunk Access Code	If required, change the single-digit Trunk Access Code (normally 9). If you change this code, you must also review the settings in Program 11-01-01 for the new code selected.	Dial (up to four digits) (default = 9)		✓	
11-09-02	Trunk Access Code – 2nd Trunk Route Access Code	Assign the Service Code set up in Program 11-01-01 for Alternate Trunk Route Access.	Dial (up to four digits) [default not assigned]]		✓	
11-10-01	Service Code Setup (for System Administrator) – Night Mode Switching	Customize the night mode switching Service Codes for the System Administrator.	MLT,SLT (default = 718)		✓	
11-10-03	Service Code Setup (for System Administrator) – Setting the System Time	Customize the system time Service Codes for the System Administrator.	MLT (default = 728)		✓	
11-10-04	Service Code Setup (for System Administrator) – Storing Common Speed Dialing Numbers	Store common speed dialing Service Codes for the System Administrator.	MLT (default = 753)		✓	
11-10-05	Service Code Setup (for System Administrator) – Storing Group Speed Dialing Numbers	Store group speed dialing numbers for the System Administrator.	MLT (default = 754)		✓	
11-10-06	Service Code Setup (for System Administrator) – Setting the Automatic Transfer for Each Trunk Line	Set the service code for setting automatic transfer for each trunk line.	MLT (default = 733)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-07	<b>Service Code Setup (for System Administrator) – Canceling the Automatic Transfer for Each Trunk Line</b>	Set the service code for canceling automatic transfer for each trunk line.	MLT (default = 734)		✓	
11-10-08	<b>Service Code Setup (for System Administrator) – Setting the Destination for Automatic Trunk Transfer</b>	Set the service code for setting the destination for automatic trunk transfer.	MLT (default = 735)		✓	
11-10-12	<b>Service Code Setup (for System Administrator) – Night Mode Switching for Other Group</b>	Customize the night mode switching for other group Service Codes for the System Administrator.	MLT (default = 618)		✓	
11-10-16	<b>Service Code Setup (for System Administrator) – Leaving Message Waiting (Requires CPU to be licensed for Hotel/Motel)</b>	Customize the leave message waiting Service Codes for the System Administrator (requires CPU to be licensed for Hotel/Motel).	MLT (default = 626)		✓	
11-10-17	<b>Service Code Setup (for System Administrator) – Dial Block by Supervisor</b>	Customize the supervisor dial block Service Codes for the System Administrator.	MLT (default = 601)		✓	
11-10-18	<b>Service Code Setup (for System Administrator) – Off-Premise Call Forward by Door Box</b>	Customize the night mode switching Service Codes for the System Administrator.	MLT (default = 722)		✓	
11-10-20	<b>Service Code Setup (for System Administrator) – VRS - Record/ Erase Message</b>	Customize the night mode switching Service Codes for the System Administrator.	MLT, SLT (default = 616)		✓	
11-10-21	<b>Service Code Setup (for System Administrator) – VRS - General Message Playback</b>	Customize the VRS general message playback for the System Administrator.	MLT, SLT (default = 611)		✓	
11-10-22	<b>Service Code Setup (for System Administrator) – VRS - Record or Erase General Message</b>	Customize the VRS record or erase general message for the System Administrator.	MLT, SLT (default = 612)		✓	
11-10-23	<b>Service Code Setup (for System Administrator) – SMDR - Extension Accumulated Printout Code</b>	Customize the SMDR extension accumulated printout codes for the System Administrator.	MLT (default = 621)		✓	
11-10-24	<b>Service Code Setup (for System Administrator) – SMDR - Group Accumulated Printout Code</b>	Customize the SMDR group accumulated printouts for the System Administrator.	MLT (default = 622)		✓	
11-10-25	<b>Service Code Setup (for System Administrator) – Account Code Accumulated Printout Code</b>	Customize the account code accumulated printout Service Codes for the System Administrator.	MLT (default = 623)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-26	<b>Service Code Setup (for System Administrator) – Forced Trunk Disconnect</b>	Customize the forced trunk disconnect Service Codes for the System Administrator.	MLT, SLT (default not assigned)		✓	
11-10-27	<b>Service Code Setup (for System Administrator) – Trunk Port Disable for Outgoing Calls</b>	Define the service code which should be used by an extension user to block a trunk from being used for outgoing calls.	MLT, SLT (default = 645)		✓	
11-10-32	<b>Service Code Setup (for System Administrator) – Set Private Call Refuse</b>	Customize the set private call refuse Service Codes for the System Administrator.	MLT, SLT (default not assigned)		✓	
11-10-33	<b>Service Code Setup (for System Administrator) – Entry Caller ID Refuse</b>	Customize the entry caller ID Service Codes for the System Administrator.	MLT (default not assigned)		✓	
11-10-34	<b>Service Code Setup (for System Administrator) – Set Caller ID Refuse</b>	Customize the set caller ID refuse Service Codes for the System Administrator.	MLT, SLT (default not assigned)		✓	
11-10-35	<b>Service Code Setup (for System Administrator) – Dial-In Mode Switching</b>	Customize the forced trunk disconnect Service Codes for the System Administrator.	MLT, SLT (default not assigned)		✓	
11-10-36	<b>Service Code Setup (for System Administrator) – Change the Guidance Message Number on Voice Mail Auto Attendant</b>	Change the guidance message number on voice mail auto attendant Service Codes for the System Administrator.	MLT, SLT (default not assigned)		✓	
11-11-01	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – All</b>	Set the service code for setting call forwarding all calls.	MLT, SLT (default = 741)		✓	
11-11-02	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Busy</b>	Set the service code for setting call forwarding for busy calls.	MLT, SLT (default = 742)		✓	
11-11-03	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – No Answer</b>	Set the service code for setting call forwarding for no answer.	MLT, SLT (default = 743)		✓	
11-11-04	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Busy/No Answer</b>	Set the service code for setting call forwarding for busy or no answer.	MLT, SLT (default = 744)		✓	
11-11-05	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward – Both Ring</b>	Set the service code for setting call forwarding for busy or no answer.	MLT, SLT (default = 745)		✓	
11-11-07	<b>Service Code Setup (for Setup/Entry Operation) – Call Forwarding – Follow Me</b>	Set the service code for setting call forwarding for follow me.	MLT, SLT (default = 746)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-08	<b>Service Code Setup (for Setup/Entry Operation) – Do Not Disturb</b>	Set the service code for setting call forwarding for Do Not Disturb.	MLT, SLT (default = 747)		✓	
11-11-09	<b>Service Code Setup (for Setup/Entry Operation) – Answer Message Waiting</b>	Customize the answer message waiting used for registration and setup.	MLT, SLT (default = *0)		✓	
11-11-10	<b>Service Code Setup (for Setup/Entry Operation) – Cancel All Messages Waiting</b>	Cancel all messages waiting used for registration and setup.	MLT, SLT (default = 773)		✓	
11-11-11	<b>Service Code Setup (for Setup/Entry Operation) – Cancel Message Waiting</b>	Cancel message waiting used for registration and setup.	MLT, SLT (default = 771)		✓	
11-11-12	<b>Service Code Setup (for Setup/Entry Operation) – Alarm Clock</b>	Customize the alarm clock used for registration and setup.	MLT, SLT (default = 727)		✓	
11-11-13	<b>Service Code Setup (for Setup/Entry Operation) – Display Language Selection for Multiline Terminal</b>	Customize the display language for multiline terminal used for registration and setup.	MLT (default = 678)		✓	
11-11-14	<b>Service Code Setup (for Setup/Entry Operation) – Text Message Setting</b>	Customize the text message setting used for registration and setup.	MLT (default not assigned)		✓	
11-11-15	<b>Service Code Setup (for Setup/Entry Operation) – Enable Handsfree Incoming Intercom Calls</b>	Customize the enable handsfree incoming intercom calls used for registration and setup.	MLT (default = 721)		✓	
11-11-16	<b>Service Code Setup (for Setup/Entry Operation) – Force Ringing of Incoming Intercom Calls</b>	Customize the force ringing of incoming intercom calls used for registration and setup.	MLT (default = 723)		✓	
11-11-17	<b>Service Code Setup (for Setup/Entry Operation) – Programmable Function Key Programming (2-Digit Service Codes)</b>	Set the service code (default 751) to assign 2-digit function codes to the Function keys.	MLT (default = 751)		✓	
11-11-18	<b>Service Code Setup (for Setup/Entry Operation) – BGM On/Off</b>	Customize the BGM On/Off used for registration and setup.	MLT (default = 725)		✓	
11-11-19	<b>Service Code Setup (for Setup/Entry Operation) – Key Touch Tone On/Off</b>	Customize the key touch tone Off/On used for registration and setup.	MLT (default = 724)		✓	
11-11-20	<b>Service Code Setup (for Setup/Entry Operation) – Change Incoming CO and ICM Ring Tones</b>	Customize the change incoming CO and ICM ring tones used for registration and setup.	MLT (default = 720)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-21	<b>Service Code Setup (for Setup/Entry Operation) – Check Incoming Ring Tones</b>	Check incoming ring tones used for registration and setup.	MLT (default = 711)		✓	
11-11-22	<b>Service Code Setup (for Setup/Entry Operation) – Extension Name Programming</b>	Customize the Extension name programming used for registration and setup.	MLT (default = 700)		✓	
11-11-23	<b>Service Code Setup (for Setup/Entry Operation) – Second Call for DID/DISA/DIL</b>	Customize the second call of DID/DISA/DIL used for registration and setup.	MLT (default = 679)		✓	
11-11-24	<b>Service Code Setup (for Setup/Entry Operation) – Change Station Class of Service</b>	Allow an extension user to change the COS of another extension. Must be allowed in Program 20-13-28.	MLT (default = 677)		✓	
11-11-25	<b>Service Code Setup (for Setup/Entry Operation) – Automatic Transfer Setup for Each Extension Group</b>	Customize the service code used to set the Automatic Trunk Forwarding feature for a Department Group.	MLT, SLT (default = 602)		✓	
11-11-26	<b>Service Code Setup (for Setup/Entry Operation) – Automatic Transfer Cancellation for Each Extension Group</b>	Customize the service code used to cancel the Automatic Trunk Forwarding feature for a Department Group.	MLT, SLT (default = 603)		✓	
11-11-27	<b>Service Code Setup (for Setup/Entry Operation) – Destination of Automatic Transfer Each Extension Group</b>	Customize the service code used to set the destination for the Automatic Trunk Forwarding feature for a Department Group.	MLT (default = 604)		✓	
11-11-28	<b>Service Code Setup (for Setup/Entry Operation) – Delayed Transfer for Every Extension Group</b>	Customize the delayed transfer for every extension group used for registration and setup.	MLT, SLT (default = 605)		✓	
11-11-29	<b>Service Code Setup (for Setup/Entry Operation) – Delayed Transfer Cancellation for Each Extension Group</b>	Customize the delayed transfer cancellation for each extension group used for registration and setup.	MLT, SLT (default = 606)		✓	
11-11-30	<b>Service Code Setup (for Setup/Entry Operation) – DND Setup for Each Extension Group</b>	Customize the Service Codes which are used for registration and setup.	MLT, SLT (default = 607)		✓	
11-11-31	<b>Service Code Setup (for Setup/Entry Operation) – DND Cancellation for Each Extension Group</b>	Customize the DND cancellation for each extension group used for registration and setup.	MLT, SLT (default = 608)		✓	
11-11-33	<b>Service Code Setup (for Setup/Entry Operation) – Dial Block</b>	Customize the dial block used for registration and setup.	MLT, SLT (default = 600)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-34	<b>Service Code Setup (for Setup/Entry Operation) – Temporary Toll Restriction Override</b>	Customize the temporary toll restriction override used for registration and setup.	MLT, SLT (default = 775)		✓	
11-11-35	<b>Service Code Setup (for Setup/Entry Operation) – Pilot Group Withdrawing</b>	Customize the Service Codes which are used for registration and setup.	MLT, SLT (default = 650)		✓	
11-11-36	<b>Service Code Setup (for Setup/Entry Operation) – Toll Restriction Override</b>	Customize the toll restriction override used for registration and setup.	MLT, SLT (default = 663)		✓	
11-11-37	<b>Service Code Setup (for Setup/Entry Operation) – Ring Volume Set</b>	Customize the ring volume set used for registration and setup.	MLT (default = 729)		✓	
11-11-38	<b>Service Code Setup (for Setup/Entry Operation) – Programmable Function Key Programming (3-Digit Service Codes)</b>	Set the service code (default 752) to assign 3-digit function codes to the Function keys.	MLT (default = 752)		✓	
11-11-39	<b>Service Code Setup (for Setup/Entry Operation) – Station Speed Dial Number Entry</b>	Customize the station speed dial entry used for registration and setup.	ML, SLT (default = 755)		✓	
11-11-41	<b>Service Code Setup (for Setup/Entry Operation) – Tandem Ringing</b>	Customize the tandem ringing used for registration and setup.	MLT, SLT (default not assigned)		✓	
11-11-43	<b>Service Code Setup (for Setup/Entry Operation) – Headset Mode Switching</b>	Customize the headset mode switching used for registration and setup.	MLT, SLT (default = 688)		✓	
11-11-44	<b>Service Code Setup (for Setup/Entry Operation) – Auto Attendant</b>	Customize the auto attendant used for registration and setup.	MLT, SLT (default not assigned)		✓	
11-11-45	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward All (Split)</b>	Assign the Call Forward All Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-46	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy (Split)</b>	Assign the Call Forward Busy Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-47	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward No Answer (Split)</b>	Assign the Call Forward No Answer Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-48	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy No Answer (Split)</b>	Assign the Call Forward Busy No Answer Split Service Code.	MLT, SLT (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-49	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Both Ring (Split)</b>	Assign the Call Forward Both Ring Split Service Code.	MLT, SLT (default not assigned)		✓	
11-11-50	<b>Service Code Setup (for Setup/Entry Operation) – Set Message Waiting Indication</b>	Customize the set message waiting indication used for registration and setup.	SLT Up to eight digits		✓	
11-11-51	<b>Service Code Setup (for Setup/Entry Operation) – Cancel Message Waiting Indication</b>	Customize the cancel message waiting indication used for registration and setup.	SLT Up to eight digits		✓	
11-11-52	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward All Destination (No Split)</b>	Assign the Call Forward All for any Extension Service Code.	(default = 790)		✓	
11-11-53	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward Busy Destination (No Split)</b>	Assign the Call Forward Busy for any Extension Service Code.	MLT, SLT (default = 791)		✓	
11-11-54	<b>Service Code Setup (for Setup/Entry Operation) – Set/Cancel Call Forward No Answer Destination (No Split)</b>	Assign the Call Forward No Answer for any Extension Service Code.	MLT, SLT (default = 792)		✓	
11-11-55	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward Busy No Answer Destination (No Split)</b>	Set/Cancel the call forward busy or no answer destination with no split.	MLT, SLT (default = 793)		✓	
11-11-57	<b>Service Code Setup (for Setup/Entry Operation) – Set Do Not Call Table</b>	Customize the set do not call table used for registration and setup.	MLT, SLT (default not assigned)		✓	
11-11-58	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward with Personal Greeting</b>	Set the service code for setting call forwarding with Personal Greeting.	MLT, SLT (default = 713)		✓	
11-12-01	<b>Service Code Setup (for Service Access) – Bypass Call</b>	Set the service code for Activating Call Forwarding/Do Not Disturb Override. This code is available only if you disable the voice mail Single Digit dialing code in Program 11-16-09.	MLT, SLT (default = 707)		✓	
11-12-02	<b>Service Code Setup (for Service Access) – Conference</b>	Customize the conference Service Codes used for service access.	MLT, SLT (default = #1)		✓	
11-12-03	<b>Service Code Setup (for Service Access) – Override (Off-Hook Signaling)</b>	Customize the override (off-hook signaling) used for service access.	MLT, SLT (default = 709)		✓	
11-12-04	<b>Service Code Setup (for Service Access) – Set Camp-On</b>	Customize the Service Code, used for setting Camp-On.	MLT, SLT (default = 750)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-05	<b>Service Code Setup (for Service Access) – Cancel Camp-On</b>	Customize the Service Code, used for cancelling Camp-On.	MLT, SLT (default = 770)		✓	
11-12-06	<b>Service Code Setup (for Service Access) – Switching of Voice Call and Signal Call</b>	Customize the switching of voice call and signal call used for service access.	MLT, SLT (default = 712)		✓	
11-12-07	<b>Service Code Setup (for Service Access) – Step Call</b>	Customize the step call used for service access.	MLT, SLT (default = 708)		✓	
11-12-08	<b>Service Code Setup (for Service Access) – Barge-In</b>	Determine what the service code should be for an internal party to use the Barge-In feature.	MLT, SLT (default = 710)		✓	
11-12-09	<b>Service Code Setup (for Service Access) – Change to STG (Department Group) All Ring</b>	Set the service code for ringing all members of a Department Group.	MLT, SLT (default not assigned)		✓	
11-12-10	<b>Service Code Setup (for Service Access) – Station Speed Dialing</b>	Assign Service code for accessing System Speed Dial bins.	MLT, SLT (default = #2)		✓	
11-12-11	<b>Service Code Setup (for Service Access) – Group Speed Dialing</b>	Customize the group speed dialing Service Codes used for service access.	MLT, SLT (default = #4)		✓	
11-12-12	<b>Service Code Setup (for Service Access) – Last Number Dial</b>	Assign a service code to use Last Number Dial.	MLT, SLT (default = #5)		✓	
11-12-13	<b>Service Code Setup (for Service Access) – Saved Number Dial</b>	Customize the service code used for dialing a saved number.	MLT, SLT (default = 715)		✓	
11-12-14	<b>Service Code Setup (for Service Access) – Trunk Group Access</b>	Customize the Service Codes used for service access.	MLT, SLT (default = 704)		✓	
11-12-15	<b>Service Code Setup (for Service Access) – Specified Trunk Access</b>	Customize the Service Codes used for specified trunk access.	MLT, SLT (default = #9)		✓	
11-12-16	<b>Service Code Setup (for Service Access) – Trunk Access Via Networking</b>	Customize the Service Codes used for trunk access via networking.	MLT, SLT (default not assigned)		✓	
11-12-17	<b>Service Code Setup (for Service Access) – Clear Last Number Dialing Data</b>	Assign a service code to clear the Last Number Dial.	MLT, SLT (default = 776)		✓	
11-12-18	<b>Service Code Setup (for Service Access) – Clear Saved Number Dialing Data</b>	Define the service code for Clear Save Number Dialing List if it is not acceptable.	MLT, SLT (default = 785)		✓	
11-12-19	<b>Service Code Setup (for Service Access) – Internal Group Paging</b>	Define the service code for accessing an internal paging group.	MLT, SLT (default = 701)		✓	
11-12-20	<b>Service Code Setup (for Service Access) – External Paging</b>	External paging access code. Service code setup.	MLT, SLT (default = 703)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-21	<b>Service Code Setup (for Service Access) – Meet-Me Answer to Specified Internal Paging Group</b>	Customize the Service Codes used for meet-me answer to specified internal paging group service access.	MLT, SLT (default = 764)		✓	
11-12-22	<b>Service Code Setup (for Service Access) – Meet-Me Answer to External Paging</b>	Customize the Service Codes used for meet-me answer to external paging service access.	MLT, SLT (default = 765)		✓	
11-12-23	<b>Service Code Setup (for Service Access) – Meet-Me Answer in Same Paging Group</b>	Customize the Service Codes used for meet-me answer in same paging group service access.	MLT, SLT (default = 763)		✓	
11-12-24	<b>Service Code Setup (for Service Access) – Combined Paging</b>	Combined paging, internal/ external access code. Service code setup.	MLT, SLT (default = *1)		✓	
11-12-25	<b>Service Code Setup (for Service Access) – Direct Call Pickup - Own Group</b>	Customize the Service Codes for direct call pickup – own group which are used for service access.	MLT, SLT (default = 756)		✓	
11-12-26	<b>Service Code Setup (for Service Access) – Call Pickup for Specified Group</b>	Customize the Service Codes for call pickup for specified group which are used for service access.	MLT, SLT (default = 768)		✓	
11-12-27	<b>Service Code Setup (for Service Access) – Call Pickup</b>	Customize the Service Codes for call pickup which are used for service access.	MLT, SLT (default = *#)		✓	
11-12-28	<b>Service Code Setup (for Service Access) – Call Pickup for Another Group</b>	Customize the Service Codes for call pickup for another group which are used for service access.	MLT, SLT (default = 769)		✓	
11-12-29	<b>Service Code Setup (for Service Access) – Direct Extension Call Pickup</b>	Customize the Service Codes for direct extension call pickup which are used for service access.	MLT, SLT (default = * *)		✓	
11-12-30	<b>Service Code Setup (for Service Access) – Specified Trunk Answer</b>	If required, redefine the service code used to answer a specific trunk which is either ringing or on hold.	MLT, SLT (default = 672)		✓	
11-12-31	<b>Service Code Setup (for Service Access) – Park Hold</b>	Set the service code which should be used for placing a call in Park.	MLT, SLT (default: #6)		✓	
11-12-32	<b>Service Code Setup (for Service Access) – Answer for Park Hold</b>	Set the service code which should be used for answering a call in Park.	MLT, SLT (default: *6)		✓	
11-12-33	<b>Service Code Setup (for Service Access) – Group Hold</b>	If required, redefine the service code used to answer a specific trunk which is either ringing or on hold.	MLT, SLT (default = 732)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-34	<b>Service Code Setup (for Service Access) – Answer for Group Hold</b>	If required, redefine the service code used to answer a specific trunk which is either ringing or on hold.	MLT, SLT (default = 762)		✓	
11-12-35	<b>Service Code Setup (for Service Access) – Station Park Hold</b>	Set the service code used for placing a call in a Personal Park.	MLT, SLT (default = 757)		✓	
11-12-36	<b>Service Code Setup (for Service Access) – Door Box Access</b>	If the service code for Doorphone Access is not acceptable, change it here.	MLT, SLT (default = 702)		✓	
11-12-37	<b>Service Code Setup (for Service Access) – Common Canceling Service Code</b>	Customize the Service Codes used for common canceling service code access.	MLT, SLT (default = 620)		✓	
11-12-38	<b>Service Code Setup (for Service Access) – General Purpose Indication</b>	Customize the Service Codes used for general purpose indication access.	MLT (default = 783)		✓	
11-12-40	<b>Service Code Setup (for Service Access) – Station Speed Dialing</b>	Customize the station speed access Service Codes.	MLT, SLT (default = #7)		✓	
11-12-41	<b>Service Code Setup (for Service Access) – Voice Over</b>	The service code used for the Voice Over feature.	MLT (default = 690)		✓	
11-12-42	<b>Service Code Setup (for Service Access) – Flash on Trunk lines</b>	Customize the Service Codes used for flash on trunk lines.	SLT (default = #3)		✓	
11-12-43	<b>Service Code Setup (for Service Access) – Answer No-Ring Line (Universal Answer)</b>	Customize the service code used to manually answer a Universal Night Answer.	MLT, SLT (default = #0)		✓	
11-12-44	<b>Service Code Setup (for Service Access) – Callback Test for SLT</b>	If required, redefine the service code used for single line telephone Callback Test.	SLT (default = 799)		✓	
11-12-45	<b>Service Code Setup (for Service Access) – Enabled On Hook When Holding (SLT)</b>	Customize the Service Codes used for the enabled on hook when holding (single line telephone).	SLT (default = 749)		✓	
11-12-46	<b>Service Code Setup (for Service Access) – Answer On Hook When Holding (SLT)</b>	Customize the Service Codes used for the answer on hook when holding (single line telephone).	SLT (default = 759)		✓	
11-12-47	<b>Service Code Setup (for Service Access) – Call Waiting Answer/ Split Answer</b>	If required, use this program to change the code users dial to Split while on a call.	SLT (default = 794)		✓	
11-12-48	<b>Service Code Setup (for Service Access) – Account Code</b>	Use to customize the Service Codes used for the account code.	SLT (default = # #)		✓	
11-12-50	<b>Service Code Setup (for Service Access) – General Purpose Relay</b>	Define the service code used for turning the general purpose relay on and off.	MLT, SLT (default = 780)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-51	<b>Service Code Setup (for Service Access) – VM Access (SV8100 InMail and VMS)</b>	Customize the Service Codes used for the VM access (InMail and VMS).	MLT, SLT (default = *8)		✓	
11-12-52	<b>Service Code Setup (for Service Access) – Live Monitoring (SV8100 InMail)</b>	Define access code used for InMail Live Monitoring (VRS). At default this program is not set.	MLT (default not assigned)		✓	
11-12-53	<b>Service Code Setup (for Service Access) – Live Recording at SLT</b>	Customize the Service Codes used for live recording at single live telephone.	MLT, SLT (default = 654)		✓	
11-12-54	<b>Service Code Setup (for Service Access) – VRS Routing for ANI/DNIS</b>	Define the service code to use when setting up ANI/DNIS Routing to the VRS Automated Attendant. Using the Transfer feature, this also allows a call to be transferred to the VRS.	MLT, SLT (default = 782)		✓	
11-12-56	<b>Service Code Setup (for Service Access) – E911 Alarm Shut Off</b>	Select the Service Code that an extension user can dial to shut off the E911 Alarm Ring.	MLT (default = 786)		✓	
11-12-57	<b>Service Code Setup (for Service Access) – Tandem Trunking</b>	With two trunks in Conference press the Hold key and dial and the Conference/Tandem happens.	MLT, SLT (default = #8)		✓	
11-12-58	<b>Service Code Setup (for Service Access) – Transfer Into Conference</b>	If required, change the service code used to transfer a call into a Conference call.	MLT, SLT (default = 624)		✓	
11-12-59	<b>Service Code Setup (for Service Access) – Trunk Drop Operation for SLT</b>	Customize the trunk drop operation for SLT Service Codes which are used for service access.	SLT (default not assigned)		✓	
11-13-01	<b>Service Code Setup (for ACD) – ACD Login/Log Out (for KTS)</b>	Assign for multiline terminals and single line telephones.	MLT, SLT (default = * 5)		✓	
11-13-02	<b>Service Code Setup (for ACD) – ACD Log Out (for SLT)</b>	Assign for single line telephones.	SLT (default = 655)		✓	
11-13-03	<b>Service Code Setup (for ACD) – Set ACD Wrap-Up Time (for SLT)</b>	Assign for single line telephones.	SLT (default = 656)		✓	
11-13-04	<b>Service Code Setup (for ACD) – Cancel ACD</b>	Assign for single line telephones.	SLT (default = 657)		✓	
11-13-05	<b>Service Code Setup (for ACD) – Set ACD Off Duty (for SLT)</b>	Assign for single line telephones.	SLT (default = 658)		✓	
11-13-06	<b>Service Code Setup (for ACD) – Cancel ACD Off Duty (for SLT)</b>	Assign for single line telephones.	SLT (default = 659)		✓	
11-13-08	<b>Service Code Setup (for ACD) – Agent ID Code Login</b>	Assign to allow an AIC Agent to log into a group.	MLT (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-13-09	<b>Service Code Setup (for ACD) – Agent ID Code Logout</b>	Assign to allow an AIC Agent to log out of a group.	MLT (default not assigned)		✓	
11-13-10	<b>Service Code Setup (for ACD) – ACD Agent Login by Supervisor</b>	Assign to allow an ACD Supervisor to log into a group.	MLT (default = 667)		✓	
11-13-11	<b>Service Code Setup (for ACD) – ACD Agent Logout by Supervisor</b>	Assign to allow an ACD Supervisor to log out of a group.	MLT (default = 668)		✓	
11-13-12	<b>Service Code Setup (for ACD) – Change Agent ACD Group by Supervisor</b>	When using service code 669 to change an agent ACD group, the supervisor must enter a 2-digit number for the group. For example, to change to ACD group 4, the entry would be 669 04.	MLT (default = 669)		✓	
11-13-13	<b>Service Code Setup (for ACD) – ACD Agent Changing Own ACD Group</b>	When this service code is used, an ACD Agent can reassign themselves to another ACD Group.	MLT (default = 670)		✓	
11-14-01	<b>Service Code Setup (for Hotel) – Set DND for Own Extension</b>	Customize the set DND for own extension used with the Hotel/Motel feature.	MLT, SLT (default = 627)		✓	
11-14-02	<b>Service Code Setup (for Hotel) – Cancel DND for Own Extension</b>	Customize the cancel DND for own extension used with the Hotel/Motel feature.	MLT, SLT (default = 628)		✓	
11-14-03	<b>Service Code Setup (for Hotel) – Set DND for Other Extension</b>	Customize the set DND for other extension used with the Hotel/Motel feature.	MLT, SLT (default = 629)		✓	
11-14-04	<b>Service Code Setup (for Hotel) – Cancel DND for Other Extension</b>	Customize the cancel DND for other extension used with the Hotel/Motel feature.	MLT, SLT (default = 630)		✓	
11-14-05	<b>Service Code Setup (for Hotel) – Set Wake Up Call for Own Extension</b>	Customize the set wake up call for own extension used with the Hotel/Motel feature.	MLT, SLT (default = 631)		✓	
11-14-06	<b>Service Code Setup (for Hotel) – Cancel Wake Up Call for Own Extension</b>	Customize the cancel wake up call for own extension used with the Hotel/Motel feature.	MLT, SLT (default = 632)		✓	
11-14-07	<b>Service Code Setup (for Hotel) – Set Wake Up Call for Other Extension</b>	Customize the set wake up call for other extension used with the Hotel/Motel feature.	MLT, SLT (default = 633)		✓	
11-14-08	<b>Service Code Setup (for Hotel) – Cancel Wake Up Call for Other Extension</b>	Customize the cancel wake up call for other extension used with the Hotel/Motel feature.	MLT, SLT (default = 634)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-14-09	<b>Service Code Setup (for Hotel) – Set Room to Room Call Restriction</b>	Customize the set room to room call extension used with the Hotel/Motel feature.	MLT, SLT (default = 635)		✓	
11-14-10	<b>Service Code Setup (for Hotel) – Cancel Room to Room Call Restriction (Hotel)</b>	Customize the cancel room to room call restriction (hotel) used with the Hotel/Motel feature.	MLT, SLT (default = 636)		✓	
11-14-11	<b>Service Code Setup (for Hotel) – Change Toll Restriction Class for Other Extension</b>	Customize the change toll restriction class for other extension used with the Hotel/Motel feature.	MLT, SLT (default = 637)		✓	
11-14-12	<b>Service Code Setup (for Hotel) – Check-In</b>	Customize the check-in Service Codes used with the Hotel/Motel feature.	MLT, SLT (default = 638)		✓	
11-14-13	<b>Service Code Setup (for Hotel) – Check-Out</b>	Customize the check-out Service Codes used with the Hotel/Motel feature.	MLT, SLT (default = 639)		✓	
11-14-14	<b>Service Code Setup (for Hotel) – Room Status Change for Own Extension</b>	Customize the room status change for own extension Service Codes used with the Hotel/Motel feature.	MLT, SLT (default = 640)		✓	
11-14-15	<b>Service Code Setup (for Hotel) – Room Status Change for Other Extension</b>	Customize the room status change for other extension Service Codes used with the Hotel/Motel feature.	MLT, SLT (default = 641)		✓	
11-14-16	<b>Service Code Setup (for Hotel) – Room Status Output</b>	Customize the room status output Service Codes used with the Hotel/Motel feature.	MLT (default = 642)		✓	
11-14-17	<b>Service Code Setup (for Hotel) – Hotel Room Monitor</b>	Customize the hotel room monitor Service Codes used with the Hotel/Motel feature.	MLT, SLT (default = 675)		✓	
11-14-18	<b>Service Code Setup (for Hotel) – Set Hotel PMS Code Restriction</b>	Customize the set hotel PMS code restriction Service Codes used with the Hotel/Motel feature.	MLT (default = 666)		✓	
11-15-01	<b>Service Code Setup, Administrative (for Special Access) – Remote Maintenance</b>	Customize the remote maintenance Service Codes used by the administrator in the Hotel/Motel feature.	(default = 730)		✓	
11-15-02	<b>Service Code Setup, Administrative (for Special Access) – ACD Access in Dial-In Conversion Table</b>	Customize the ACD access in dial-in conversion table Service Codes used by the administrator in the Hotel/Motel feature.	(default = 760)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-15-03	<b>Service Code Setup, Administrative (for Special Access) – Backup Data Save</b>	This service code is used to back up the programmed data on the SRAM and Call History to the Flash ROM. While saving the database, it may cause system lock up.	MLT (default = # * # 9)		✓	
11-15-05	<b>Service Code Setup, Administrative (for Special Access) – System Programming Mode, Log-On</b>	Customize the system programming mode, log-on Service Codes used by the administrator in the Hotel/Motel feature.	MLT (default = # * # *)		✓	
11-15-06	<b>Service Code Setup, Administrative (for Special Access) – Wake on LAN to APSU Unit</b>	Customize the wake on LAN to APSU unit Service Codes.	MLT (default not assigned)		✓	
11-15-09	<b>Service Code Setup, Administrative (for Special Access) – Transfer to Incoming Ring Group</b>	When a call is transferred using this service code, it is transferred to the ring group destination for that incoming trunk. For example, trunk 2 is in Ring Group 4. When the call is transferred using this service code, the trunk rings all extensions programmed for Ring Group 4 or ring the External Paging Group for Ring Group 4, depending on how the system is programmed.	(default not assigned)		✓	
11-15-11	<b>Service Code Setup, Administrative (for Special Access) – Ethernet Port Reset</b>	Customize the ethernet port reset Service Codes.	(default not assigned)		✓	
11-15-12	<b>Service Code Setup, Administrative (for Special Access) – Extension Data Swap</b>	Ext. Data Swap = xxx (service code in accordance with Program 11-01).	MLT (default not assigned)		✓	
11-15-13	<b>Service Code Setup, Administrative (for Special Access) – Remote Access from DISA</b>	Customize the service code for Remote Access for DISA.	(default not assigned)		✓	
11-15-14	<b>Service Code Setup, Administrative (for Special Access) – Modem Access</b>	Assign the service code used to access the internal modem on the CD-CP00-US.	(default = 740)		✓	
11-16-01	<b>Single Digit Service Code Setup – Step Call</b>	Assign the Single Digit (post-dialing) Service Codes.	(default = 2)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-16-02	<b>Single Digit Service Code Setup – Barge-In</b>	Set up Item 02 for single digit Barge-In. For example, you can assign Item 02 to use digit 5 for Barge-In. This would allow you to program a function key with an extension number plus the Barge-In code (i.e., 5). This allows one-touch access to the Barge-In feature for extension.	(default not assigned)		✓	
11-16-03	<b>Single Digit Service Code Setup – Switching of Voice/Signal Call</b>	Customize the switching of Voice/Signal call Service Codes used when a busy or ring back signal is heard.	(default = 1)		✓	
11-16-04	<b>Single Digit Service Code Setup – Intercom Off-Hook Signaling</b>	Assign a one-digit service code to be used for off-hook Signaling.	(default = *)		✓	
11-16-05	<b>Single Digit Service Code Setup – Camp-On</b>	Customize the 1-digit Service Code used for setting Camp-On.	(default = #)		✓	
11-16-06	<b>Single Digit Service Code Setup – DND/Call Forward Override Bypass</b>	Customize the 1-digit Service Code used for DND/Call Forward Override.	(default not assigned)		✓	
11-16-07	<b>Single Digit Service Code Setup – Message Waiting</b>	Customize the message waiting Service Codes used when a busy or ring back signal is heard.	(default = 0)		✓	
11-16-08	<b>Single Digit Service Code Setup – Voice Over</b>	Service code used for the Voice Over feature.	(default = 6)		✓	
11-16-09	<b>Single Digit Service Code Setup – Access to Voice Mail</b>	Customize the access to voice mail Service Codes used when a busy or ring back signal is heard.	(default = 8)		✓	
11-16-10	<b>Single Digit Service Code Setup – (Department) STG All Ring Mode</b>	Assign the Single Digit (post-dialing) Service Code for All Member Ring.	(default not assigned)		✓	
11-16-11	<b>Single Digit Service Code Setup – Station Park Hold</b>	Customize the one-digit service code used when placing a call in Personal Park.	(default not assigned)		✓	
11-20-01	<b>Dial Extension Analyze Table – Dial Digits</b>	Use tables 01~128 to assign the digits to be dialed using the Dial Extension Analyze Tables. These tables are used when Program 11-01-01 is set to option 9 = Dial Extension Analyze. Up to eight digits can be assigned.	Dial (Up to eight digits: 0, 1~9, #, *, @)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-20-02	Dial Extension Analyze Table – Type of Dials	Assign the Type of Dial for the Extension Analyze Table from Program 11-20-01.	Type of Dials: 0 = Not used 1 = Service Code 2 = Extension Number 5 = Operator Access 6 = F-Route Access (default not assigned)	✓		

## Operation

None

## *Flexible Timeouts*

### Description

The Flexible Timeouts feature provides a variety of timers in the Resident System Program to allow the system to operate without initial programming. The system timers can be changed to meet customer needs according to the system application requirements.

A Timer Class is used to allow terminals and trunks to have different timers for the same feature. There are 16 timer Classes (0~15). The following table shows the Programs that are used depending on the Timer Class used:

Timer Class 0	Timer Class 1~15	Title	Comment
20-01-08	20-31-01	Trunk Queuing Callback Time	Trunk Queuing callback rings an extension for this time. Station Timer Class is referred by the station that sets trunk queuing.
20-01-09	20-31-02	Callback / Trunk Queuing Cancel Time	The system cancels an extension Callback or Trunk Queuing request after this time. Station Timer Class is referred by the station that sets an extension Callback or Trunk Queuing.
20-04-03	20-31-03	CAR/SIE/Virtual Extension Delay Interval	If CAR/VE is set for Delayed Ringing (Program 15-11-01), ring the covering extension after this time. Station Timer Class is referred by the station assigned to CAR/VE.
21-01-02	20-31-04	Intercom Interdigits Time	When placing Intercom calls, users must dial each digit in this time. Station Timer Class is referred by stations. Trunk Timer Class is referred by DID/ Automatic Answer Trunk/E&M trunks.
21-01-03	20-31-05	Trunk Interdigits Time	When placing CO calls, users must dial each digit in this time. Station Timer Class is referred by stations. Trunk Timer Class is referred by DID/ Automatic Answer Trunk/E&M trunks.
21-01-09	20-31-06	Hotline Time Start Time	A Ringdown extension automatically calls its programmed destination after this time. Station Timer Class is referred by the stations which sets Hotline.
22-01-03	20-31-07	Ring No Answer Alarm Time	If a trunk rings a key telephone longer than this time, the system changes the ring cadence. This indicates to the user that the call was ringing too long. Trunk Timer Class is referred by the trunk.

Timer Class 0	Timer Class 1~15	Title	Comment
22-01-04	20-31-08	DIL No Answer Recall Time	A DIL that rings its programmed destination longer than this time diverts to the DIL No Answer Ring Group (Program 22-08-01). Trunk Timer Class is referred by the trunk.
22-01-06	20-31-09	DID Ring-No-Answer Time	In systems with DID Ring No Answer Intercept, this time sets the Ring No Answer time. This time is how long a DID call rings the destination extension before rerouting to the intercept ring group. Trunk Timer Class is referred by DID trunk.
24-01-01	20-31-10	Hold Recall Time (Non Exclusive Hold)	A call on Hold recalls the extension that placed it on Hold after this time. Station Timer Class is referred by held call.
24-01-02	20-31-11	Hold Recall Callback Time (Non Exclusive Hold)	A Hold recall rings an extension for this time. Station Timer Class is referred by held call.
24-01-03	20-31-12	Exclusive Hold Recall Time	A call on Hold recalls the extension that placed it on Hold after this time. Station Timer Class is referred by held call.
24-01-04	20-31-13	Exclusive Hold Recall Callback Time	An Exclusive Hold Recall rings an extension for this time. If not picked up, the call goes back on Non exclusive Hold. Station Timer Class is referred by held call.
24-01-06	20-31-14	Park Hold Time – Normal	A call left parked longer than this time recalls the extension that initially parked it. Trunk or Station Timer Class is referred by held call.
24-02-03	20-31-15	Delayed Call Forwarding Time	If activated at an extension, No Answer Call Forwarding occurs after this time. Station Timer Class is referred by the station sets No Answer Call Forward.
24-02-04	20-31-16	Transfer Recall Time	A transferred call recalls to the extension that initially transferred it after this time. Station Timer Class is referred by transferred call.
25-07-02	20-31-17	VRS/DISA No Answer Time	After this time expires, the call follows the programmed Ring No Answer routing (Program 25-03 and 25-04-01). Trunk Timer Class is referred.
25-07-03	20-31-18	Disconnect after VRS/DISA Re-transfer to IRG	Disconnect after re-transfer to Incoming Ring Group. Trunk Timer Class is referred.
25-07-07	20-31-19	Long Conversation Warning Tone Time	Determine the time trunk-to-trunk conversation can talk before the Long Conversation tone is heard. Trunk Timer Class is referred.



Timer Class 0	Timer Class 1~15	Title	Comment
25-07-08	20-31-20	Long Conversation Disconnect Time	This timer determines how long the system waits before disconnecting a trunk-to-trunk conversation call after the Long Conversation tone is heard. Trunk Timer Class is referred.
25-07-09	20-31-21	DISA Internal Paging Time	This is the maximum length of an Internal Page placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call. Trunk Timer Class is referred.
25-07-10	20-31-22	DISA External Paging Time	This is the maximum length of an External Page placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call. Trunk Timer Class is referred.
31-01-02	20-31-23	Page Announcement Duration	This timer sets the maximum length of External Page announcements. Station or Trunk Timer Class is referred by the caller makes announcement.

### Conditions

- Timer Classes are also used for CAR/VE.
- When Timer Class is set to 0 it uses the system-wide timers.
- All stations and trunks are assigned to Timer Class 0 at default.
- Both system-wide timers (Timer Class 0) and Timer Class timers (Timer Class 1~15) can be used in the same system.

### Default Setting

Timer Class set to 0 for all trunks and extensions.

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## System Availability

### Terminals

All Multiline Terminals

## Required Component(s)

None

## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-01-08	<b>System Options – Trunk Queuing Callback Time</b>	Set the Trunk Queuing callback time. A Trunk Queuing Callback rings an extension for this interval.	0~64800 (seconds) (default = 15)		✓	
20-01-09	<b>System Options – Callback/ Trunk Queuing Cancel Time</b>	The system cancels an extension Callback or Trunk Queueing request after this interval.	0~64800 (seconds) (default = 64800)		✓	
20-04-03	<b>System Options for Virtual Extensions – CAR/SIE/Virtual Extension Delay Interval</b>	CAR Keys/SIE Keys/Virtual Extensions set for Delayed Ringing (see Program 15-11) ring the extension after this interval.	0~64800 (seconds) (default = 10)		✓	
20-29-01	<b>Timer Class for Extensions</b>	Assign the timer class (0~15) to each extension for each Night mode. This entry includes virtual extension number.	0~15 0 = Not assigned (default = 0)		✓	
20-30-01	<b>Timer Class for Trunks</b>	Assign the timer class (0~15) to each trunk for each Night mode.	0~15, #, * 0 = Not assigned (default = 0)		✓	
20-31-01	<b>Timer Class Timer Assignment – Trunk Queuing Callback Duration Time</b>	Trunk Queuing Callback rings an extension for this time.	0~64800 (seconds) (default = 15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-31-02	<b>Timer Class Timer Assignment – Callback / Trunk Queuing Cancel Time</b>	The system cancels an extension Callback or Trunk Queueing request after this time.	0~64800 (seconds) (default = 64800)		✓	
20-31-03	<b>Timer Class Timer Assignment – CAR/SIE/Virtual Extension Delay Interval</b>	CAR Keys/SIE Keys/Virtual Extensions set for Delayed Ringing (refer to <a href="#">15-11: Virtual Extension Delayed Ring Assignment</a> ) ring the extension after this time.	0~64800 (seconds) (default = 10)		✓	
20-31-04	<b>Timer Class Timer Assignment – Intercom Interdigits Time (Intercom I/D Timer)</b>	When placing Intercom calls, extension users must dial each digit during this time.	0~64800 (seconds) (default = 10)		✓	
20-31-05	<b>Timer Class Timer Assignment – Trunk Interdigits Time (Trunk I/D Timer)</b>	The system waits for this time to expire before placing the call in a talk state (Call Timer starts after time expires, Voice Over and Barge-In are not allowed until after time expires).	0~64800 (seconds) (default = 5)		✓	
20-31-06	<b>Timer Class Timer Assignment – Hotline Time Start Time (Hotline Start)</b>	A Ringdown extension automatically calls its programmed destination after this time.	0~64800 (seconds) (default = 5)		✓	
20-31-07	<b>Timer Class Timer Assignment – Ring No Answer Alarm Time</b>	If a trunk rings a multiline telephone longer than this time, the system changes the ring cadence. This indicates to the user that the call has been ringing too long.	0~64800 (seconds) (default = 60)		✓	
20-31-08	<b>Timer Class Timer Assignment – DIL/Incoming Ring Group No Answer Time</b>	A DIL that rings its programmed destination longer than this time diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)		✓	
20-31-09	<b>Timer Class Timer Assignment – DID Ring-No-Answer Time</b>	In systems with DID Ring-No-Answer Intercept, this time sets the Ring-No-Answer time. This is the time a DID call rings the destination extension before rerouting to the intercept ring group.	0~64800 (seconds) (default = 20)		✓	
20-31-10	<b>Timer Class Timer Assignment – Hold Recall Time (Non Exclusive Hold)</b>	A call on Hold recalls the extension that placed it on Hold after this time. This time works with the Hold Recall Callback Time (Program 24-01-02).	0~64800 (seconds) (default = 90)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-31-11	<b>Timer Class Timer Assignment – Hold Recall CallBack Time (Non Exclusive Hold)</b>	A trunk recalling from Hold or Park rings an extension for this time. This time works with Hold Recall Time or Park Hold Time. After this time, the system invokes the Hold Recall Time again. Cycling between time Program 24-01-01 and 24-01-02 and Program 24-01-06 and 24-01-07 continues until a user answers the call.	0~64800 (seconds) (default = 30)		✓	
20-31-12	<b>Timer Class Timer Assignment – Exclusive Hold Recall Time</b>	A call on Exclusive Hold recalls the extension that placed it on Hold after this time.	0~64800 (seconds) (default = 90)		✓	
20-31-13	<b>Timer Class Timer Assignment – Exclusive Hold Recall Callback Time</b>	An Exclusive Hold Recall rings an extension for this time. If not picked up, the call goes back on System Hold.	0~64800 (seconds) (default = 30)		✓	
20-31-14	<b>Timer Class Timer Assignment – Park Hold Time – Normal</b>	A call left parked longer than this time, recalls the extension that initially parked it.	0~64800 (seconds) (default = 90)		✓	
20-31-15	<b>Timer Class Timer Assignment – Delayed Call Forwarding Time (Call Forward No Answer)</b>	If activated at an extension, Delayed Call Forwarding occurs after this time. This also sets how long a Transferred call waits at an extension forwarded to Voice Mail before routing to the called extension mailbox.	0~64800 (seconds) (default = 10)		✓	
20-31-16	<b>Timer Class Timer Assignment – Transfer Recall Time</b>	An unanswered transferred call recalls after this time to the extension that initially transferred it.	0~64800 (seconds) (default = 30)		✓	
20-31-17	<b>Timer Class Timer Assignment – VRS/DISA No Answer Time (Disconnect or IRG or VM)</b>	A VRS/DISA caller can ring an extension for this time before the system sets the call as a Ring No Answer. After this time expires, the call follows the programmed Ring No Answer routing (set in Program 25-03 and 25-04).	0~64800 (seconds) (default = 0)		✓	
20-31-18	<b>Timer Class Timer Assignment – Disconnect after Re-transfer to IRG</b>	Assign Disconnect after Re-transfer to IRG time.	0~64800 (seconds) (default = 60)		✓	
20-31-19	<b>Timer Class Timer Assignment – Long Conversation Warning Tone Time (Trunk to Trunk)</b>	Determine the time a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation can last before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-31-20	<b>Timer Class Timer Assignment – Long Conversation Disconnect (Trunk to Trunk)</b>	Determine the time the system waits before disconnecting a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	
20-31-21	<b>Timer Class Timer Assignment – DISA Internal Paging Time</b>	Set the maximum time of an Internal Page placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call.	0~64800 (seconds) (default = 30)		✓	
20-31-22	<b>Timer Class Timer Assignment – DISA External Paging Time</b>	Set the maximum time of an External Page placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call.	0~64800 (seconds) (default = 30)		✓	
20-31-23	<b>Timer Class Timer Assignment – Page Announcement Duration</b>	Set the maximum time for Page announcements. (Affects External Paging only).	0~64800 (seconds) (default = 1200)		✓	
21-01-02	<b>System Options for Outgoing Calls – Intercom Interdigit Time</b>	Set the time-out time for DID callers that do not dial. After this time, the DID call routes according to Vacant Number Intercept programming.	0~64800 (seconds) (default = 10)		✓	
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	Program the time an extension user must wait before the Barge-In feature can be used on a call (this time expires before a call is put in a talk state). This time also affects Voice Over.	0~64800 seconds (default = 5)		✓	
21-01-09	<b>System Options for Outgoing Calls – Ringdown Extension Timer (Hotline Start)</b>	After the user lifts the handset, the extension automatically calls the ringdown destination after this time. A setting of 0 immediately rings the programmed extension. Any other setting delays the ringdown the time programmed.	0~64800 seconds (default = 5)		✓	
22-01-03	<b>System Options for Incoming Calls – Ring No Answer Alarm Time</b>	Set the Ring No Answer Alarm time. If a trunk rings a multiline terminal longer than this time, the system changes the ring cadence.	0~64800 (seconds) (default = 60)		✓	
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this time, diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-01-06	<b>System Options for Incoming Calls – DID Ring-No-Answer Time</b>	Set the DID Ring No Answer (RNA) Intercept time (0~64800 seconds). In systems with RNA Intercept, the DID call rings the destination extension for this time, and then rings Intercept Ring Group.	0~64800 (seconds) (default = 20)		✓	
24-01-01	<b>System Options for Hold – Hold Recall Time</b>	Set the Hold Recall Time. A call on Hold recalls the extension that placed it on Hold after this time.	0~64800 (seconds) (default = 90)		✓	
24-01-02	<b>System Options for Hold – Hold Recall Callback Time</b>	Set the Hold Recall Callback Time. A trunk recalling from Hold rings an extension for this time.	0~64800 (seconds) (default = 30)		✓	
24-01-03	<b>System Options for Hold – Exclusive Hold Recall Time</b>	Set the Exclusive Hold Recall Time. A call on Exclusive Hold recalls the extension that placed it on Hold after this time.	0~64800 (seconds) (default = 90)		✓	
24-01-04	<b>System Options for Hold – Exclusive Hold Recall Callback Time</b>	Set the Hold Recall Time. A trunk recalling from Hold rings an extension for this time. If still unanswered, the call changes to System Hold.	0~64800 (seconds) (default = 30)		✓	
24-01-06	<b>System Options for Hold – Park Hold Time - Normal</b>	Set the Park Hold Time (0~64800 seconds). A call that is parked longer than the programmed time recalls the extension where it was initially parked. Refer to <a href="#">Flexible System Numbering on page 2-653</a> for setting Flexible Timeouts for Class of Service.	0~64800 (seconds) (default = 90)		✓	
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	Set the Delayed Call Forwarding time. For an unanswered call, Call Forward No Answer occurs after this time.	0~64800 (seconds) (default = 10)		✓	
24-02-04	<b>System Options for Transfer – Transfer Recall Time</b>	Set the Transfer Recall Time. An unanswered transferred call recalls to the extension that initially transferred it after this time. This also sets the time a transferred call camps-on to a busy extension.	0~64800 (seconds) (default = 30)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-02	<b>System Timers for VRS/DISA – VRS/DISA No Answer Time</b>	A VRS/DISA caller can ring an extension for this time before the system sets the call as a Ring No Answer. After this time expires, the call follows the programmed Ring No Answer routing (set in Program 25-03 and Program 25-04).	0~64800 (seconds) (default = 0)		✓	
25-07-03	<b>System Timers for VRS/DISA – Disconnect after VRS/DISA retransfer to IRG</b>	Define the system timers which affect DID and DISA after VRS/DISA retransfer to IRG.	0~64800 (seconds) (default = 60)		✓	
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	
25-07-09	<b>System Timers for VRS/DISA – DISA Internal Paging Time</b>	Set the maximum time for an Internal Page placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call.	0~64800 (seconds) (default = 30)		✓	
25-07-10	<b>System Timers for VRS/DISA – DISA External Paging Time</b>	Set the maximum time for an External Page placed by a DISA caller. If the Page continues longer than this time, the system terminates the DISA call.	0~64800 (seconds) (default = 30)		✓	
31-01-02	<b>System Options for Internal/ External Paging – Page Announcement Duration</b>	Set the maximum allowable time for a Paging announcement.	0~64800 (seconds) (default = 1200)		✓	

## Operation

Please refer to the feature for the operation.

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# *Forced Trunk Disconnect*

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## Description

Forced Trunk Disconnect allows an extension user to disconnect (release) another extension active outside call. The user can then place a call on the released trunk. Forced Trunk Disconnect lets a user access a busy trunk in an emergency, when no other trunk is available. Maintenance technicians can also use Forced Trunk Disconnect to release a trunk on which there is no conversation. This can happen if a trunk does not properly disconnect when the outside party hangs up.



*Forced Trunk Disconnect abruptly terminates the active call on the line. Only use this feature in an emergency and when no other lines are available.*

## Conditions

This feature only works on an analog trunk. ISDN and IP trunks do not have the Forced Trunk Disconnect available.

## Default Setting

- COS 15 = Enabled
- COS 1~14 = Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

Analog Trunks

## Related Features

### Central Office Calls, Placing

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-26	<b>Service Code Setup (for System Administrator) – Forced Trunk Disconnect</b>	Assign the Service Code.	MLT, SLT (default not assigned)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (COS) to an extension. There are 15 Classes of Service that can be assigned. Assign eight entries, one for each Night Service Mode.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension ability to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)	✓		
21-01-18	<b>System Options for Outgoing Calls – Reset Dial After Failure of Trunk Access</b>	Enable/Disable an extension user ability to continue to dial codes or extensions after receiving Trunk Busy. This must be Enabled for this feature to work.	0 = Disable 1 = Enable (default = 1)	✓		




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## Operation

### To disconnect a busy trunk:

#### Multiline Terminal

1. Press line key for trunk.  
- OR -  
Dial trunk access code (**#9** + trunk number).  
 *You hear busy tone. Trunk numbers are 001~200.*
2. Dial the Service Code (not set at default).  
 *You hear confirmation beeps as the system disconnects the trunk.*  
 *You can now place a call on the free trunk.*
3. Press the line key for the trunk disconnected in Step 2.  
- OR -  
Dial the trunk access code (**#9** + trunk number) for the trunk disconnected in Step 2.

#### Single Line Telephone

1. Dial trunk access code (**#9** + trunk number).  
 *You hear busy tone. Trunk numbers are 001~200.*
2. Dial Service Code (not set at default).  
 *You hear confirmation beeps as the system disconnects the line.*
3. Hookflash.  
 *You can now place a call on the free line.*
4. Dial the trunk access code (**#9** + trunk number) for the trunk disconnected in Step 2.

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# General Purpose Relay

## Description

The system allows up to eight general purpose relays using PGD(2)-U10 ADP's (four relays per PGD unit) and one general purpose relay built into the CD-CP00-US for a maximum of nine relays. These relays are normally opened and can be closed by dialing an access code on any terminal or pressing a pre programmed function key on any multiline terminal.

The relays can then be set back to an open state by dialing an access code on any terminal or by pressing a pre programmed function key on any multiline terminal. A relay can also be set back to an open state after a drive timer expires. Each relay can have a separate drive timer, when the relay is in a closed state, and this timer expires, the relay is automatically placed back into an open state.

**Table 2-32 General Purpose Relay Specifications**

General Purpose Relay Specifications	
Contact Configuration	Normally Open
Maximum Load	500mA @24 VDC
Maximum Initial Contact Resistance	50m Ohms

## Conditions

- When relays 5 & 6 of a PGD(2)-U10 are assigned as General Purpose Relays, they cannot be used for Door Box/Page Relays. Therefore it is recommended to first use relays 7 & 8 for General Purpose Relay function allowing relays 5 & 6 to be used for Door Box/Page Relays.
- With **SV8100 CPU Version 7000 and higher** all General Purpose Relays can now be programmed with a drive timer. The drive timer allows the relay to return to the normally opened position after a timer expires not requiring a user to dial a service code or press a line key to set the relay back to the open position.
- The drive timer on a General Purpose Relay can be bypassed by dialing an access code on any terminal or pressing a pre programmed line key on any multi line terminal.
- Multiline telephones can activate the General Purpose Relay while in a talking state (call must be answered not just a voice announce) by pressing a pre-programmed line key. All other terminal types cannot activate the relay while a call is in progress.

- The General Purpose Relay cannot be activated by DISA.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Multiline Terminals (using access code)

Multiline Terminal (using line key)

### **Required Component(s)**

PGD(2)-U10 ADP

CD-CP00-US

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## **Related Features**

**Analog Communications Interface (ACI)**

**Door Box**

**Paging, External**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01 (1)	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	Set up and confirm the Basic Configuration data for terminal type (B1).  When using a PGD-U10 for general purpose relay functionality the digital port must be set to one of the valid PGD settings.	0 = Not Set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Door Box) 9 = PGD (ACI) 10 = DSS Console 11 = --Not Used-- (default = 0)	✓		
10-03-06	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B2)</b>	Set up and confirm the Basic Configuration data for terminal type (B2).  When using a PGD-U10 for general purpose relay functionality the digital port must be set to one of the valid PGD settings.	0 = Not Set 6 = PGD(2)-U10 ADP (Paging) 7 = PGD(2)-U10 ADP (Tone Ringer) 8 = PGD(2)-U10 ADP (Door Box) 9 = PGD(2)-U10 ADP (ACI) 12 = APR (B2 Mode) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-05-01	<b>General Purpose Relay Setup – Slot No. Physical Port of DLCA Sensor Circuit No.</b>	<p>Define which relay circuits (5~8) on the PGD(2)-U10 ADP are used for General Purpose Relays.</p> <p>A maximum of (8) general purpose relay can be assigned using PGD's. Relay Circuits 5~8 can be assigned on multiple PGD's.</p> <p>Ex. PGD 1 has relay circuits 5~8 assigned to system Relay 1~4. PGD 2 can have relay circuits 5~8 assigned to system Relay 5~8.</p>	<p>Slot No: 0~24 DCLA Port: 0~16 Relay No: 0, 5~8</p> <p><i>After each entry, press Transfer to advance to the next entry.</i> (default = 0 - 0 - 0)</p>	✓		
10-05-02	<b>General Purpose Relay Setup – Drive Timer Setup</b>	<p>With <b>Version 7000 or higher</b> software, the drive timer controls how long the relay is in a closed state before automatically changing back to an open state.</p>	<p>0–64800 0 = No drive timer 1 = 0.1 seconds 2 = 0.2 seconds 3 = 0.3 seconds . . 64800 = 6480 (seconds) (default = 0)</p>		✓	
10-21-05	<b>CD-CP00-US Hardware Setup – General Purpose Relay Switch on CD-CP00-US</b>	<p>Used to enable/disable the General Purpose Relay that is built into the CD-CP00-US.</p>	<p>0 = Off 1 = Relay 1 on CPU 2 = Relay 2 on CPU (default = 0)</p>		✓	
10-21-06	<b>CD-CP00-US Hardware Setup – Drive Timer Setup on CD-CP00-US</b>	<p>With <b>Version 7000 or higher</b> software, the drive timer controls how long the relay is in a closed state before automatically changing back to an open state.</p>	<p>0–64800 0 = No drive timer 1 = 0.1 seconds 2 = 0.2 seconds 3 = 0.3 seconds . . 64800 = 6480 (seconds) (default = 0)</p>		✓	
11-12-50	<b>Service Code Setup (for Service Access) – General Purpose Relay</b>	<p>This is the access code to enable/disable the General Purpose relays.</p> <p>After dialing the service code the user must then dial the relay (0~8) to enable/disable the relays. 0 = Relay on CD-CP00 1~8 = Relay assigned on PGD</p>	<p>MLT, SLT (default = 780)</p>		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	Programmable Function Keys	Assign a function key for General Purpose Relay (Code 51 Add; Relay number 0 ~ 8).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	


## Operation

### To Activate a Relay:

#### Multiline Terminal

1. Press **Speaker**.
  2. Dial **780**.
  3. Dial Relay Number (**0~8**).  
 *0 is for the relay on the CD-CP00-US, 1~8 are relays on the PGD(2)-U10 ADP.*
- OR -**
1. Press the Line Key assigned as a General Purpose Relay (the key is lit).

#### Single Line Telephone

1. Lift the handset.
2. Dial **780**.
3. Dial Relay Number (**0~8**).  
 *0 is for the relay on the CD-CP00-US, 1~8 are relays on the PGD(2)-U10 ADP.*

### To Cancel a Relay:

#### Multiline Terminal

1. Press **Speaker**.
2. Dial **780**.

3. Dial Relay Number (**0~8**).

 *0 is for the relay on the CD-CP00-US, 1~8 are relays on the PGD(2)-U10 ADP.*

- OR -

1. Press the Line Key assigned as a General Purpose Relay (the key is not lit).

- OR -

1. Wait for the drive timer to expire.

### Single Line Telephone

1. Press **Speaker**.

2. Dial **780**.

3. Dial Relay Number (**0~8**).

 *0 is for the relay on the CD-CP00-US, 1~8 are relays on the PGD(2)-U10 ADP.*

- OR -

1. Wait for the drive timer to expire.

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## *Group Call Pickup*

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### **Description**

Group Call Pickup allows an extension user to answer a call ringing another extension in a Pickup Group. This permits co-workers in the same work area to easily answer each other's calls. The user can dial a code or press a programmed Group Call Pickup key to intercept the ringing call. If several extensions in the group are ringing at the same time, Group Call Pickup intercepts the call based on the extension priority in the Pickup Group.

With Group Call Pickup, a user can intercept the following calls:

- A call ringing the user's own pickup group
- A call ringing another pickup group when the user knows the group number
- A call ringing another pickup group when the user does not know the group number

There are 64 Call Pickup Groups available.

### **Conditions**

- A Call Pickup Group cannot have an associated name.
- Group Call Pickup cannot be used to answer calls recalling from Hold or Park.
- Group Call Pickup cannot be used to answer calls ringing Call Arrival Keys or Virtual Extensions.
- Virtual Extensions can use Group Call Pickup to answer calls ringing a multiline terminal or single line telephone.
- Users can pickup calls regardless of their access map programming.
- Directed Call Pickup provides another way of answering a co-worker's call.
- Function keys simplify Group Call Pickup operation.

### **Default Setting**

Enabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

Central Office Calls, Answering

Directed Call Pickup

Programmable Function Keys

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-25	Service Code Setup (for Service Access) – Direct Call Pickup - Own Group	Customize the Service Codes for direct call pickup – own group.	MLT, SLT (default = 756)	✓		
11-12-26	Service Code Setup (for Service Access) – Call Pickup for Specified Group	Customize the Service Codes for call pickup for specified group.	MLT, SLT (default = 768)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-27	<b>Service Code Setup (for Service Access) – Call Pickup</b>	Customize the Service Codes for call pickup.	MLT, SLT (default = *#)	✓		
11-12-28	<b>Service Code Setup (for Service Access) – Call Pickup for Another Group</b>	Customize the Service Codes for call pickup for another group.	MLT, SLT (default = 769)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign Group Call Pickup keys: Code 24 for an extension Pickup Group and ring group calls (Service Code *#). Code 25 for a telephone ringing in another Pickup Group when the caller does not know the group number (Service Code 769). Code 26 (+ group) for a telephone ringing in another specific Pickup Group (Service Code 768).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Enable/Disable an extension user ability to pick up calls ringing their pickup group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension user ability to pick up a call ringing into a Pickup Group (Service Codes *#).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
23-02-01	Call Pickup Groups	Assign extensions to Pickup Groups. Also, assign an extension priority in a Pickup Group (Priority Number 1~999).	Call Pickup Groups: 1~9 or 01~64 (default = 1 – xxx)	✓		


## Operation

### To answer a call ringing another telephone in your Pickup Group:

1. Pick up the handset or press **Speaker**.
2. At multiline terminal only, press the **Group Call Pickup** key (Program 15-07 or SC 751: 24).

- OR -

Dial **756** or **\*#**.

 *Service Code **\*#** can pick up any call in the group, plus any Ring Group calls. Service Code 756 cannot pick up Ring Group calls.*

### To answer a call ringing a telephone in another Pickup Group when you do not know the group number:

1. Pick up the handset or press **Speaker**.
2. At multiline terminal only, press the **Group Call Pickup** key (Program 15-07 or SC 751: 25).

- OR -

Dial **769**.

### To answer a call ringing a telephone in another Pickup Group when you know the group number:

1. Pick up the handset or press **Speaker**.
2. At multiline terminal only, press the **Group Call Pickup** key (Program 15-07 or SC 751: 26 + group).

- OR -

Dial **768** and the group number (1~9 or 01~64).

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## *Group Listen*

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### **Description**

Group Listen permits a multiline terminal user to talk on the handset and have their caller's voice broadcast over the telephone speaker. This lets the multiline terminal user's co-workers listen to the conversation. Group Listen turns off the multiline terminal handsfree microphone so the caller does not pick the co-worker's voices during a Group Listen.

### **Conditions**

- An extension in the headset mode cannot use Group Listen.
- Group Listen is not available to single line telephones.

### **Default Setting**

Disabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

None

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### **Related Features**

#### **Handset Operation**

## Guide to Feature Programming



The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To initiate Group Listen:

1. Place or answer call using the handset.
2. Press **Speaker** twice (but do not hang up).
  -  *Speaker flashes slowly.*
  -  *You can talk to the caller through your handset. Your co-workers hear your caller's voice over your telephone speaker after pressing **Speaker** twice. Press **Speaker** a third time to turn off Group Listening.*


### To talk Handsfree after initiating Group Listen:

1. Hang up the handset.



**To cancel Group Listen (without hanging up your call):**

1. Do not hang up.
2. Press the flashing **Speaker**.

 *You can talk to the caller over the handset. Your co-workers can no longer hear the caller's voice.*

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# Handset Mute

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## Description

Handset Mute is provided to most terminals connected to the UNIVERGE SV8100 system. While talking on the multiline terminal handset, a station user can dial a feature code or press Mic to mute the transmit speech path. The station user can still hear the outside (or intercom) voice.

### Conditions

- The Mic key or Handset Transmission Cut Off key flashes when active.
- Two service set tones are heard when Handset Mute is activated or deactivated.
- The called party must have answered using handset or speakerphone for the mute feature to work.

### Default Setting

None

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

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## Related Features

### Programmable Function Keys



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Handset Transmission Cut Off (code 40).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
80-01-01	<b>Service Tone Setup – Repeat Count</b>	Customize the system basic tones and system service tones. The system must be reset for the changes to take effect.	Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a> .			✓
80-01-02	<b>Service Tone Setup – Basic Tone Number</b>	The following features require that the system tones listed below be changed to match the table. After changing these settings the system must be reset for the changes to take effect. <ul style="list-style-type: none"> <li>○ Call Screening</li> <li>○ Call Holding</li> <li>○ Busy Greeting</li> <li>○ Await Answer Transfer</li> </ul>	1~33 (0 = No Tone) (33=Default Time Slot) Refer to <a href="#">Table 2-34 Service Tone Setup, Program 80-01-02 on page 2-707</a> .			✓

Table 2-33 Service Tone Setup Defaults, Program 80-01-01

Service Tone No.	Service Tone	Repeat Count	Unit Count	Basic Tone No.	Duration	Gain Level (dB)
1	No Tone	0	Basic 1	0	10	32 (0dB)
2	Internal Dial Tone	0	Basic 1	9	10	32 (0dB)
3	Stutter Dial Tone	0	Basic 6	0 9 0 9 0 9	2 1 1 1 1 77	32 (0dB)
4	Internal Recall Dial Tone	2	Basic 2	9 0	1 1	32 (0dB) 32 (0dB)
5	Trunk Dial Tone	0	Basic 1	9	10	32 (0dB)
6	Internal Busy Tone	0	Basic 2	0 11	5 5	20 (-6dB) 20 (-6dB)
7	DND Busy Tone	0	Basic 2	0 1	2 2	32 (0dB) 32 (0dB)
8	B-Busy Tone	0	Basic 2	0 11	5 5	20 (-6dB) 20 (-6dB)
9	Internal Reorder Tone	0	Basic 2	11 0	3 2	20 (-6dB) 20 (-6dB)
10	Internal Interrupt Tone	0	Basic 2	0 1	1 1	32 (0dB) 32 (0dB)
11	Internal Confirmation Tone	3	Basic 2	0 6	5 1	32 (0dB) 32 (0dB)
12	Internal Hold Tone	0	Basic 0	0	0	32 (0dB)
13	External Hold Tone	0	Basic 0	0	0	32 (0dB)
14	Intercom Ringback Tone	0	Basic 2	9 0	10 20	32 (0dB) 32 (0dB)
15	Override Tone	1	Basic 1	12	5	32 (0dB)
16	Lock-Out Tone	0	Basic 2	0 6	1 1	32 (0dB) 32 (0dB)
17	Clock Alarm Tone	0	Basic 4	6 0 6 0	1 1 1 7	32 (0dB) 32 (0dB) 32 (0dB) 32 (0dB)
18	BGM	0	Basic 0	0	0	32 (0dB)

Table 2-33 Service Tone Setup Defaults, Program 80-01-01 (Continued)

Service Tone No.	Service Tone	Repeat Count	Unit Count	Basic Tone No.	Duration	Gain Level (dB)
19	Door Box Chime 1	3	Basic 6	4	2	38 (+3dB)
				4	2	26 (-3dB)
				2	3	38 (+3dB)
				2	4	26 (-3dB)
				2	6	14 (-9dB)
				0	5	32 (0dB)
20	Door Box Chime 2	3	Basic 6	7	2	38 (+3dB)
				7	2	26 (-3dB)
				5	3	38 (+3dB)
				5	4	26 (-3dB)
				5	6	14 (-9dB)
				0	5	32 (0dB)
21	Door Box Chime 3	3	Basic 6	8	2	38 (+3dB)
				8	2	26 (-3dB)
				6	3	38 (+3dB)
				6	4	26 (-3dB)
				6	6	14 (-9dB)
				0	5	32 (0dB)
22	Door Box Chime 4	3	Basic 6	4	1	38 (+3dB)
				4	1	26 (-3dB)
				2	2	38 (+3dB)
				2	2	26 (-3dB)
				2	3	14 (-9dB)
				0	2	32 (0dB)
23	Door Box Chime 5	3	Basic 6	7	1	38 (+3dB)
				7	1	26 (-3dB)
				5	2	38 (+3dB)
				5	2	26 (-3dB)
				5	3	14 (-9dB)
				0	2	32 (0dB)
24	Door Box Chime 6	3	Basic 6	8	1	38 (+3dB)
				8	1	26 (-3dB)
				6	2	38 (+3dB)
				6	2	26 (-3dB)
				6	3	14 (-9dB)
				0	2	32 (0dB)
25	Service Set Tone	3	Basic 2	0	1	32 (0dB)
				9	1	32 (0dB)
26	Service Clear Tone	3	Basic 2	0	1	32 (0dB)
				9	1	32 (0dB)
27	Talkback Tone	2	Basic 2	0	1	32 (0dB)
				6	1	32 (0dB)
28	Speaker Monitor Tone This tone is what the originator hears when placing a handsfree speaker ICM call.	1	Basic 2	0	1	32 (0dB)
				6	1	32 (0dB)
29	Door Relay Tone	1	Basic 2	0	1	32 (0dB)
				6	1	32 (0dB)

Table 2-33 Service Tone Setup Defaults, Program 80-01-01 (Continued)

Service Tone No.	Service Tone	Repeat Count	Unit Count	Basic Tone No.	Duration	Gain Level (dB)
30	Door Box Call Tone	1	Basic 2	0 6	1 1	32 (0dB) 32 (0dB)
31	Paging Tone	2	Basic 2	0 6	1 1	32 (0dB) 32 (0dB)
32	Splash Tone 1	1	Basic 2	0 6	1 1	32 (0dB) 32 (0dB)
33	Splash Tone 2	2	Basic 2	0 6	1 1	32 (0dB) 32 (0dB)
34	Splash Tone 3	3	Basic 2	0 6	1 1	32 (0dB) 32 (0dB)
35	1 Second Signal Tone	1	Basic 1	6	10	32 (0dB)
36	External Audible Ring Tone	0	Basic 2	7 0	2 2	32 (0dB) 32 (0dB)
37	External Reorder Tone	0	Basic 2	7 0	5 5	32 (0dB) 32 (0dB)
38	External Busy Tone	0	Basic 2	7 0	7 7	32 (0dB) 32 (0dB)
39	Special Audible Ring Busy Tone	0	Basic 6	0 11 0 11 10 0	5 5 5 5 10 20	32 (0dB) 32 (0dB) 32 (0dB) 32 (0dB) 32 (0dB) 32 (0dB)
40	Internal Call Waiting Tone	1	Basic 1	12	2	32 (0dB)
41	Intrusion Tone	1	Basic 1	12	5	32 (0dB)
42	Conference Tone	0	Basic 0	0	0	32 (0dB)
43	Intrusion Tone 2	0	Basic 1	2	8	32 (0dB)
44	External Dial Tone	0	Basic 1	9	1	26 (-3dB)
45	External Ring Back Tone	0	Basic 2	10 0	10 30	32 (0dB) 32 (0dB)
46	DID Error Tone	0	Basic 2	11 0	5 5	32 (0dB) 32 (0dB)
47	External Busy Tone	0	Basic 1	11	0	32 (0dB)
48	Voice Mail Message Indication Tone	0	Basic 2	9 0	1 1	32 (0dB) 32 (0dB)
49	--- Not Used ---					

Table 2-33 Service Tone Setup Defaults, Program 80-01-01 (Continued)

Service Tone No.	Service Tone	Repeat Count	Unit Count	Basic Tone No.	Duration	Gain Level (dB)
50	External Special Audible Ring Tone	0	3	10 12 0	10 2 30	32 (0dB) 32 (0dB) 32 (0dB)
51	External Intercept Tone	0	2	12 4	3 2	32 (0dB) 32 (0dB)
52	External Call Waiting Tone	1	1	12	3	32 (0dB)
53	External Executive Override Tone	1	1	12	10	32 (0dB)
54	Progress Tone	0	2	0 1	6 1	32 (0dB) 32 (0dB)
55	Generate tone for TAPI2.1	0	Basic 1	3	0	32 (0dB)
56	Warning Beep Tone Signaling	1	Basic 1	2	8	32 (0dB)
57	Headset Ear Piece Ringing Tone	0	Basic 5	0 2 0 2 0	2 1 1 1 20	32 (0dB) 32 (0dB) 32 (0dB) 32 (0dB) 32 (0dB)
58	Opening Chime Tone	1	Basic 8	2 2 14 14 15 15 16 16	2 2 2 2 2 2 6 4	32 (0dB) 26 (-3dB) 32 (0dB) 26 (-3dB) 32 (0dB) 26 (-3dB) 32 (0dB) 26 (-3dB)
59	Ending Chime Tone	1	Basic 8	20 20 19 19 18 18 17 17	2 2 2 2 2 2 6 4	32 (0dB) 26 (-3dB) 32 (0dB) 26 (-3dB) 32 (0dB) 26 (-3dB) 32 (0dB) 26 (-3dB)
60	Splash Tone 1 (Mute)	1	Basic 2	0 6	1 1	8 (-12dB) 8 (-12dB)
61	Splash Tone 2 (Mute)	2	Basic 2	0 6	1 1	8 (-12dB) 8 (-12dB)
62	Splash Tone 3 (Mute)	3	Basic 2	0 6	1 1	8 (-12dB) 8 (-12dB)
63	EXT SPK Ring-back Tone	0	Basic 2	10 0	10 30	32 (0dB) 32 (0dB)
64	Music on Hold (MOH)	0	0	0	0	32 (0dB)



Table 2-34 Service Tone Setup, Program 80-01-02

Item No.	Item	Repeat Count
02	Basic Tone Number	1~33 (0 = No Tone) (33=Default Time Slot)
03	Duration Count	1~255 (100~25500ms)
04	Gain Level (dB)	1~63 (-15.5 ~ +15.5)

---

## Operation

### While talking on a terminal handset:

1. Press **MIC**.  
- OR -
2. Press **Feature** + dial **1**.  
- OR -
3. Press the **Handset Transmission Cut-Off** key (Program15-07-01; Key 40 or SC 751 Key Code 40).

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## *Handsfree and Monitor*

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### **Description**

Handsfree allows a multiline terminal user to process calls using the speaker and microphone in the telephone instead of the handset. Handsfree is a convenience for workers who do not have a free hand to pick up the handset. For example, a terminal operator could continue to enter data with both hands while talking on the telephone.

Three variations of Handsfree are available:

**Handsfree**

The user can press Speaker to place and answer calls instead of using the handset.

**Automatic Handsfree**

The user can press a trunk line key or virtual extension key without lifting the handset or press Speaker. An extension can have Automatic Handsfree for outgoing calls or for both outgoing calls and incoming calls.

**Monitor**

User can place a call without lifting the handset, but must lift the handset to speak.

### **Conditions**

- Handsfree and Monitor are not available for single line telephones.
- Prime Line Selection affects how incoming and outgoing calls are handled and thus determines what happens when the user presses Speaker.
- Monitoring volume may be adjusted using the volume control on the multiline terminal.
- When a multiline terminal user lifts the handset, the monitoring condition is automatically released, and the Speaker LED goes off.
- A multiline terminal is considered off-hook by the system when this feature is used.

### **Default Setting**

Enabled

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

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## Related Features

Central Office Calls, Answering

Central Office Calls, Placing

Microphone Cutoff

Prime Line Selection

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-08	Multiline Telephone Basic Data Setup – Automatic Handsfree	Set whether pressing a key accesses a One-Touch Key or preselects the key.	0 = Preselect 1 = One-Touch (Automatic Handsfree) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-16	<b>Multiline Telephone Basic Data Setup – Handsfree Operation</b>	Enable/Disable an extension user ability to use the speakerphone on outside calls. When disabled, the user can hear the conversion, but cannot respond handsfree.	0 = Disable 1 = Enable (default = 1)		✓	
20-02-12	<b>System Options for Multiline Telephones – Forced Intercom Ring (ICM Call Type)</b>	Enable/Disable Forced Intercom Ringing. If enabled, incoming Intercom calls normally ring. If disabled, Intercom calls voice-announce.	0 = Disable (Voice) 1 = Enable (Signal) (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign Class of Service (1~15) for extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension ports = Class 1		✓	
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To talk Handsfree:

1. Press **Speaker**, **Trunk Line** key or **Virtual Extension** key.
2. Place the call.
3. Speak toward the telephone when the called party answers.

### To change a handset call to a Handsfree call:


1. Press **Speaker** and hang up the handset.
2. Press **Speaker** again to hang up.

### To change a Handsfree call to a handset call:

1. Lift the handset.

**To turn on/off Monitor:**

1. Press **MIC**, Feature + 1, or the Microphone Function Key (Program 15-07 or SC 751 : 02) to turn on or off the Microphone.

 *Monitor is off when **MIC LED** is lit, the Microphone Function Key is lit, or the handset is lifted.*

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# *Handsfree Answerback/Forced Intercom Ringing*

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## **Description**

Handsfree Answerback permits an extension user to respond to a voice-announced Intercom call by speaking toward the telephone, without lifting the handset. Like Handsfree, this is a convenience for workers who do not have a free hand to pick up the handset.

## **Conditions**

- Handsfree Answerback does not require the Speaker phone to be enabled (Program 15-02-16).
- A multiline terminal user can process calls using the speaker and microphone in the telephone (instead of the handset).
- With Microphone Cutoff enabled, Handsfree Answerback callers to an extension hear a single beep (instead of two).
- Incoming Intercom calls always ring single line telephones.
- The extension you are calling must be set to Voice for this feature to work.

## **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

## Related Features

### Handsfree and Monitor

### Microphone Cutoff

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-15	<b>Service Code Setup (for Setup/Entry Operation) – Enable Handsfree Incoming Intercom Calls</b>	If required, change the service code used for setting an extension to voice announce for incoming ICM calls.	MLT (default = 721)		✓	
11-11-16	<b>Service Code Setup (for Setup/Entry Operation) – Force Ringing of Incoming Intercom Calls</b>	If required, change the service code used for setting an extension to forced ringing for incoming ICM calls.	MLT (default = 723)		✓	
11-12-06	<b>Service Code Setup (for Service Access) – Switching of Voice Call and Signal Call</b>	If required, change the service code used for toggling an outgoing ICM call between a voice call and signal call.	MLT, SLT (default = 712)		✓	
15-02-16	<b>Multiline Telephone Basic Data Setup – Handsfree Operation</b>	Enable/Disable an extension user ability to use the speakerphone on outside calls. When disabled, the user can hear the conversion, but cannot respond handsfree.	0 = Disable 1 = Enable (default = 1)		✓	
20-02-12	<b>System Options for Multiline Telephones – Forced Intercom Ring (ICM Call Type)</b>	Enable/Disable Forced Intercom Ringing. If enabled, incoming Intercom calls normally ring. If disabled, Intercom calls voice-announce.	0 = Disable (Voice) 1 = Enable (Signal) (default = 0)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	Class of Service for Extensions	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension ports = Class 1		✓	
20-08-10	Class of Service Options (Outgoing Call Service) – Signal/Voice Call	Enable/Disable an extension user ability to toggle between Handsfree Answerback and Forced Intercom Ringing for outgoing Intercom calls (dial 1 or Service Code 712).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-05	Class of Service Options (Incoming Call Service) – Signal/Voice Call	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To enable Handsfree Answerback for your incoming Intercom calls:


1. Press idle **Speaker**.
2. Dial **721**.
3. Press **Speaker** to hang up.  
 *This disables Forced Intercom Ringing.*

### To enable Forced Intercom Ringing for your incoming Intercom calls:

1. Press idle **Speaker**.
2. Dial **723**.
3. Press **Speaker** to hang up.  
 *This disables Handsfree Answerback.*

**To change the way your Intercom call signals the extension you are calling:**

## 1. Dial 1.

-  *If ringing, your call voice-announces. If voice-announced, your call starts to ring the destination. This option is also available at single line telephones.*

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# *Headset Operation*

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## **Description**

A multiline terminal user can use a customer-provided headset in place of the handset. Like using Handsfree, using the headset frees up the user's hands for other work. However, Headset Operation provides privacy not available from Handsfree.

As the headset plugs in a separate jack on the bottom of the telephone, the handset can still be connected to the telephone. This gives you the option to use the handset, headset or the speakerphone for calls.

## **Conditions**

- While using the headset, the Headset function key becomes a release (disconnect) key and no dial tone is heard from the speaker.
- While in the headset mode, the hook switch is not functional.
- The Headset Programmable Function key (05) and Headset service code (688) are not available for the Electra Professional telephones.
- An extension with a headset can receive voice-announced Intercom calls and respond handsfree when idle.
- A Headset Function key is required to answer or place a call in headset mode.
- Headset Ring and Headset Off-Hook Ring (Programs 15-02-41 and 15-02-42) are not supported for the legacy DTR/DTH style terminals.

## **Default Setting**

Disabled

---

## **System Availability**

### **Terminals**

None

## Required Component(s)

Headset

## Related Features

Handsfree Answerback/Forced Intercom Ringing

Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-62	<b>Service Code Setup (for Setup/Entry Operation) – Headset Ring Volume Adjustment</b>	If needed, change the service code used to adjust the Headset Ring Volume.	MLT (default = 662)	✓		
15-02-41	<b>Multiline Telephone Basic Data Setup – Incoming Ring Setup</b>	Determine if incoming calls ring the speaker or headset.	0 = Speaker Normal Ring 1 = Headset Ring (default = 0)		✓	
15-02-42	<b>Multiline Telephone Basic Data Setup – Incoming Off-Hook Ring Setup</b>	Determine if incoming off-hook ringing rings the speaker or the headset.	0 = Speaker Off-Hook Ring 1 = Headset Off-Hook Ring (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-43	<b>Multiline Telephone Basic Data Setup – Headset Ring Duration</b>	If incoming ringing is set for headset, set the duration the call rings the headset before ringing the speaker.	0 = No Switch to Speaker Ring 1 = 10 seconds 2 = 20 seconds 3 = 30 seconds 4 = 40 seconds 5 = 50 seconds 6 = 1 minute (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Headset Operation (code 05).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-02-05	<b>System Options for Multiline Telephones – Headset Busy Mode</b>	Set the conditions under which a headset extension is busy to incoming callers: ○ The Headset extension is busy to incoming callers when only one extension appearance is busy (0). - OR - ○ Headset extension is busy to incoming callers only when both extension appearances are busy (1).	0 = No 1 = Yes (default = 0)		✓	
20-02-12	<b>System Options for Multiline Telephones – Forced Intercom Ring (ICM Call Type)</b>	Determine whether intercom calls should ring or voice-announce extensions.	0 = Disable (Voice) 1 = Enable (Signal) (default = 0)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To enable the headset:

1. Plug in the headset in the headset jack on the bottom of the telephone.
2. Program a **Headset** key (Program 15-07 or SC 751: 05).
  -  *You hear a confirmation beep.*

### To use the headset:

-  *The Headset key lights when on a call. To disconnect, press the Headset key.*
-  *You can use the handset for calls or respond to voice-announced Intercom calls with the headset plugged in. The headset only activates when the Headset key is pressed.*
- Press the **Headset** key to answer a ringing call.
  - OR -
- Press the **Headset** key and then a line key or press **Speaker** then **9** to make an outgoing call.
  - OR -
- Press the **Headset** key to get intercom dial tone.
  - OR -
- If on a call, press the **Headset** key to hang up.

# Hold

---

## Description

Hold lets an extension user put a call in a temporary waiting state. The caller on Hold hears silence or Music on Hold, not conversation in the extension user's work area. While the call waits on Hold, the extension user may process calls or use a system feature. Calls left on Hold too long recall the extension that placed them on Hold. Four types of Hold are available:

**System Hold**

An outside call a user places on Hold flashes the line key (if programmed) at all other multiline terminals. Any multiline terminal user with the flashing line key can pick up the call.

**Exclusive Hold**

When a user places a call on Exclusive Hold, only that user can pick up the call from Hold. The trunk appears busy to all other multiline terminals that have a key for the trunk. Exclusive hold is important if a user does not want a co-worker picking up their call on Hold.

**Group Hold**

If a user places a call on Group Hold, another user in the Department Group can dial a code to pick up the call. This lets members of a department easily pick up each other's calls.

**Intercom Hold**

A user can place an Intercom call on Hold. The Intercom call on Hold does not indicate at any other extension.

## Hold Recall to Operator

Hold Recall to Operator enhances how the system handles calls that are left on hold too long. With Hold Recall to Operator:

- A trunk call recalls the extension that placed it on Hold after the Hold/Exclusive Hold Recall Time.
- The recalling trunk rings the extension that placed it on Hold for the Hold/Exclusive Hold Recall Callback Time.
- After the Hold/Exclusive Hold Recall Callback Time, the trunk call rings the operator.

Hold Recall to Operator applies to trunk calls placed on System Hold, Exclusive Hold or Group Hold. It does not apply to Intercom calls.

## Conditions

- The called extension must lift the handset or press Speaker before the call can be placed on hold.
- Callers on Hold hear Music on Hold, if programmed.
- An extension can have function keys for System Hold and Exclusive Hold.
- Analog single line telephones can use only Exclusive Hold or Group Hold.
- If station A calls station B, and station A puts station B on hold and then calls station C, station C cannot transfer the call.
- For a station to retrieve a held ICM call, the station must have an ICM key assigned in Program 15-07 (\*00).
- The Exclusive Hold Recall Timer is used when an internal call from a Single Line Telephone or 3rd Party SIP telephone is placed on hold.
- On ACD extensions, **Hold Recall to Operator is not supported.**

## Default Setting

Enabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

Music on Hold

Programmable Function Keys

Single Line Telephones, Analog 500/2500 Sets



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-30	<b>Service Code Setup (for Service Access) – Specified Trunk Answer</b>	If required, redefine the service code used to answer a specific trunk which is either ringing or on hold.	MLT, SLT (default = 672)		✓	
11-12-33	<b>Service Code Setup (for Service Access) – Group Hold</b>	If required, redefine the service code used to answer a specific trunk which is either ringing or on hold.	MLT, SLT (default = 732)		✓	
11-12-34	<b>Service Code Setup (for Service Access) – Answer for Group Hold</b>	If required, redefine the service code used to answer a specific trunk which is either ringing or on hold.	MLT, SLT (default = 762)		✓	
14-01-16	<b>Basic Trunk Data Setup – Forced Release of Held Call</b>	Enable/Disable Forced Release of Held Call.	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	Set up the Trunk Access Maps. This sets the access options for trunks.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-02-06	<b>Multiline Telephone Basic Data Setup – Hold Key Operating Mode</b>	Set the function of the Multiline Hold key.	0 = Normal (Common) 1 = Exclusive Hold (default = 0)		✓	
15-02-07	<b>Multiline Telephone Basic Data Setup – Automatic Hold for CO Lines</b>	When talking on a CO call, and another line key is pressed, the original trunk is placed on Hold or disconnected.	0 = Hold 1 = Disconnect (Cut) (default = 1)		✓	
15-02-11	<b>Multiline Telephone Basic Data Setup – Callback Automatic Answer</b>	Enable/Disable Callback Automatic Answer.	0 = Disable 1 = Enable (default = 1)		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign Trunk Access Maps to extensions.	Trunks 1~200 (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Exclusive Hold (code 45). If an extension has its fixed Hold key reassigned in Program 15-02-06, assign a function key for System Hold (code 44).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
16-02-01	<b>Department Group Assignment for Extensions</b>	Set up the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in Program 23-02.	Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension ports = Class 1		✓	
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension user ability to initiate Group Hold (Service Code 732).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension user ability to pick up a call placed on Group Hold (Service Code 762).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension user ability to have a call, which recalls from Hold, transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Define the extension numbers used by operators.	Up to eight digits (default = 101)		✓	
24-01-01	<b>System Options for Hold – Hold Recall Time</b>	Set the Hold Recall Time. A call on Hold recalls the extension that placed it on Hold after this time.	0~64800 (seconds) (default = 90)		✓	
24-01-02	<b>System Options for Hold – Hold Recall Callback Time</b>	Set the Hold Recall Callback Time. A trunk recalling from Hold rings an extension for this time.	0~64800 (seconds) (default = 30)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-01-03	<b>System Options for Hold – Exclusive Hold Recall Time</b>	Set the Exclusive Hold Recall Time. A call on Exclusive Hold recalls the extension that placed it on Hold after this time.	0~64800 (seconds) (default = 90)		✓	
24-01-04	<b>System Options for Hold – Exclusive Hold Recall Callback Time</b>	Set the Hold Recall Time. A trunk recalling from Hold rings an extension for this time. If still unanswered, the call changes to System Hold.	0~64800 (seconds) (default = 30)		✓	
24-01-05	<b>System Options for Hold – Forced Release of Held Call</b>	Set the Forced Release of Held Calls time. If enabled in Program 14-01-16, the system disconnects a call if on Hold longer than this Time.	0~64800 (seconds) (default = 1800)		✓	

## Operation

### System Hold:

#### To place an outside call on System Hold:

Press **Hold**.

#### To pick up an outside call on System Hold:

Press the flashing **CAP** key.

- OR -

If you know the specific line number, dial **672** + Line number (**001~200**).

### Exclusive Hold:

#### To place an outside call on Exclusive Hold:

Press the **Exclusive Hold** key (Program 15-07-01 or SC 751: 45).

- OR -

Press **Feature + Hold**.

Single Line Telephone

1. Hookflash.
2. Dial **749**.

**To pick up an outside call on Exclusive Hold:**

Press flashing **CAP** key.

Single Line Telephone

Dial **759**.

**Group Hold:****To place a call on Hold so anyone in your Department Group can pick it up:**

1. Press **Hold**.
2. Dial **732**.
3. Press **Speaker** to hang up.

Single Line Telephone

1. Hookflash.
2. Dial **732**.
3. Hang up.

**To pick up a call on Group Hold:**

1. Press **Speaker**.
2. Dial **762**.

**Single Line Telephone:**

1. Lift the handset.
2. Dial **762**.

**Intercom Hold:****To place an Intercom call on Intercom Hold:**

1. Press **Hold**.
2. Press **Speaker** to hang up.

**To pick up an Intercom call on Intercom Hold:**

1. Press **Speaker**.
2. Press flashing ICM (\*00) or **Conf**.

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## *Hot Key-Pad*

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### **Description**

The Hot Key-Pad feature allows the user to place a call without lifting the handset or pressing Speaker. When the user dials another extension number on an idle telephone with Hot Key-Pad enabled, the Speaker lights and the internal call is made. When the user dials the trunk access code from a telephone with Hot Key-Pad enabled, Speaker lights, a trunk is seized and the outgoing call is made.

### **Conditions**

- When a user dials any digit on a station with Hot Key-Pad enabled, Speaker LED lights.
- After a user dials the trunk access code on a station with Hot Key-Pad enabled, a trunk is seized when dialing the first digit of the called party number.
- When both Hot Key-Pad and Dialing Number Preview are turned on, Hot Key-Pad has priority and Dialing Number Preview does not work.
- When both Hot Key-Pad and Hotline are turned on, Hot Key-Pad has priority and Hotline does not work.
- When placing an outgoing call with the Hot Key-Pad feature, the user must dial the trunk access code before dialing the called party number.
- The ARS feature can be used when placing outside calls with the Hot Key-Pad feature.
- When both Hot Key-Pad and VRS Fixed Messaging are turned on, VRS fixed messaging does not work.
- The Hot Key-Pad Feature also works when dialing service codes.
- Hot Key-Pad is not supported when using UCB.

### **Default Settings**

Disabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals

## Required Software

None

## Related Features

Central Office Calls, Placing

Class of Service

Dialing Number Preview

Hotline

Intercom

Voice Response System (VRS)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	Class of Service for Extensions	Assign a Class of Service to extensions (1~15). Any Class of Service assignments you change using Service Code 677 automatically update this program.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension ports = Class 1		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-20	<b>Class of Service Options (Outgoing Call Service) – Hot Key Pad</b>	Turn Off or On an extension user ability to make a call by dialing the number without going off-hook.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		

## Operation

### To place an intercom call using Hot Key-Pad:

1. The multiline terminal is idle. There is no need to press Speaker.
2. Dial the extension.
3. Dialed extension rings.

### To place a trunk call using Hot Key-Pad:

1. The multiline terminal is idle. There is no need to press Speaker.
2. Dial the trunk access code, **9** by default, and the external destination number you want to call.

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## Hotel/Motel

### Enhancements

PVA PMS replaces the PMS-U10 for the application blade for PMS integration to SV8100. This new blade provides the following features:

- Programming is supported using HTML interface.
- PVA PMS supports NEAX-90K, NEAX-60K, KTSi and KTSi w/ENQ protocols.
- The PVA PMS IP address is assigned in system programming, similar to other blades, and the CPU IP address is populated automatically.
- The Mask feature allows the masking of the following PMS messages if not supported by the PMS application:
  - Checkin
  - Checkout
  - Edit Room
  - Wakeup Call
  - Message Waiting Set/Cancel
  - DND Set/Cancel
  - Room Status
  - Room Restriction

With **Version 7000 or higher** software, the following features were added:

- View current room status in Web Pro and Phone Pro.
- The ability to change from any room status to any other room status.
- Automatically set room status on check out to any valid room status option.

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## Description

Your UNIVERGE SV8100 telephone system provides Hotel/Motel services in addition to the many features available to business users. These Hotel/Motel services help you run your facility more efficiently, save you time and money **and** provide your guests with more responsive service.

Hotel/Motel features include:

### Wake Up Call

Wake Up Call is like having an alarm clock in each room – with some unique advantages:

- Guests can set or cancel Wake Up Calls for themselves, or you can set and cancel Wake Ups for them.

- Unanswered Wake Up Calls can automatically call the operator and print on the Room Status Printout report.
- Use Wake Up Call as a meeting reminder (e.g., for convention attendees).
- When used with the VRS feature, the destination is a single line room telephone Wake Up call providing a pre-recorded greeting to the guest.

### **Single Digit Dialing**

Single Digit Dialing gives your guests one-touch access to your important Hotel/Motel services. They can lift the handset and press a single key for:

- Extensions such as the front desk, reservation services, housekeeping or the maitre d' of your restaurant.
- Feature Access Codes for one-button access to selected features and outside lines.
- Voice Mail, so your guests can leave requests even when your service providers are unavailable.

### **A Department Calling Group**

A Department Calling Group, allowing, for example, your guests to reach the first available agent in your reservation desk group.

### **Message Waiting**

If you call a guest while they are away from their room, leave them a Message Waiting. When the guest returns, they see the lamp on their phone flashing and can automatically call you back. You can use Message Waiting when you have parcels for a guest dropped off at your front desk. Do not keep redialing the guest if they are not in – just send them a Message Waiting. (Your DSS Console can show all the rooms that have messages waiting.)

### **PMS Integration**

The UNIVERGE SV8100 can support third party Property Management System (PMS) applications. This requires the use of either the PMS-U10 or PVA PMS blade, which serve as a gateway between the PMS application, the UNIVERGE SV8100 and UM8000 Mail voice mail. When using UM8000 Mail voice mail you must have the RJ11 to DB-9 serial adapter (stock number 1091014). When using the PVA PMS blade you must also have the USB to Serial Adapter (stock number 670545).

- When the SV8100 is interfaced with an external PMS application, the first operator extension set in Program 20-17-01 must be a physical phone connected to the phone system for all PMS features to work.
- The UNIVERGE SV8100 and UM8000 Mail must be licensed for Hotel/Motel for this feature to work.
- The supported PVA PMS protocols are NEAX 90-K, NEAX 60-K, KTSi and KTSi with ENQ.

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- The supported PMS-U10 protocols are NEAX 90-K, NEAX 90-K with NAK, NEAX 60-K, KTSi and KTSi with NAK.
  - SV8100 CPU software **Version 3100 (3.12 or higher)** is required for PVA PMS.
  - The chassis to PMS-U10 and PVA PMS connection is via the LAN and an IP port only (default is 5129).
  - The PMS-U10 and PVA PMS to voice mail connection is via serial port COM 2 only using a NULL MODEM or reverse cable.
  - The PMS-U10 to PMS System can be done via LAN or serial port COM 1 using a NULL MODEM or reverse cable or LAN ETH 0.
  - Room name can only be displayed on terminals set to 0 (Normal) in Program 42-02-01.
  - Both COM ports are fixed at 9600 bauds, eight data bits, one stop bit, and no parity.
  - The NEAX-90 with and without NAK protocol is compatible with property management systems that support NEAX-90 protocol. Note that not all messages or functionality supported by NEAX Model 90 protocol is implied or provided by the NEC PMS. The NEC PMS in conjunction with the UNIVERGE SV8100 provides a subset of features supported by NEAX Model 90 protocol.
  - The PMS-U10 Configurator software **Version 1.0.1.0 or higher** is required for Microsoft Vista 32-bit support. To check the version number (while the application is running) press ALT + V.

Refer to the UNIVERGE SV8100 Hotel/Motel Services Guide for complete programming information.

### **PMS-U10 Configurator Software**

The PMS Configurator is used to setup the PMS-U10 for LAN access and communication between it, the chassis and voice mail. The PMS Configurator software is supported on the following Operating Systems:

- Microsoft Windows XP (32-bit)
- Microsoft Vista 32-bit (**Version 1.0.1.0 or higher**)

### **Room to Room Calling Restriction**

Prevent guests in one room from calling guests in another – a handy feature for guests that want to maintain their privacy. If you need to, you can always allow inter-room calling (e.g., for families or groups that have separate rooms).

### **Toll Restriction (When Checked In)**

Control a guest's long distance dialing automatically when they check in. Use this feature to set up two different Toll Restriction modes. The first mode is for you and your staff when the room is checked out. The second mode is for your guests when they check in. You may want to restrict the outside numbers guests can dial, but allow your staff to call vendors and suppliers.

## Room Status

Your phone and DSS Console can set and monitor the status of all your guest rooms: *Checked In*, *Checked Out*, *Maid Required* and *Maid in Room*. Maximize room usage by coordinating your cleaning staff and reservation desk. For example, you can dial simple codes to set a room status.

## Room Status Printouts

The Room Status Printouts give you a concise overview of the status of all your guest rooms at a glance. The printouts provide up to the minute reports showing Room Status, Room Call Restriction, Do Not Disturb, Message Waiting and Wake Up Calls. If your cleaning staff needs to know which rooms to clean, for example, just print out the report showing Room Status. This printout requires a connection to the system using either a serial CTA adapter, USB CTU adapter or IP post on the CPU. Only DTH telephones are supported with CTA/CTU on SV8100.

## DSS Console Monitoring

Your DSS Console provides room monitoring abilities. You can see at a glance which rooms have Wake Up Calls set or messages waiting. In addition, you can still use your console for business mode features.

## Do Not Disturb

A guest can activate DND anytime they need privacy (for example, if they need to work uninterrupted). Do Not Disturb (DND) blocks the room telephone incoming calls and Paging announcements. This can be set from the room phone or attendant phone.

## Flexible Numbering Plan

To simplify dialing guests and services in your facility, customize your system to have room numbers match phone extension numbers. For example, if the rooms on the first floor are numbered 100~120, the corresponding room extensions should also be 100~120.

## Conditions

- The following features were added in **Version 7000 or higher** SV8100 software:
  - View current room status in Program 42-02-03 via Web Pro and Phone Pro.
  - Use Program 42-01-06 to enable (1) or disable (0) the ability to change any room status to another room status.
  - Set room status on check out using Programs 42-06-07 and 42-06-08.
- When setting room status automatically on check out, you cannot set a room to **Room Clean (Occupied)** from the room using access code 640. This status can only be changed from the front desk telephone (access code 641).
- When Program 42-01-06 is disabled, valid room status changes are limited. Refer to the PMS Developer Guide for information on valid status changes.

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- The current room status in Program 42-02-03 cannot be checked via PCPro.
  - When the system is configured for the VRS feature, Wake Up call greetings to single line room telephones are supported.
  - Wakeup calls to multiline room telephones do not provide a wake up call greeting.
  - Wake Up call greetings to single line room telephones require the VRS feature and licensing.
  - When the SV8100 is interfaced with an external PMS application, the first operator extension set in Program 20-17-01 must be a physical phone connected to the phone system for all PMS features to work.
  - The SV8100 supports only one CD-PVAA with the PVA PMS application.
  - The CD-PVAA is chassis specific. A UX5000 CD-PVAA cannot be used in a SV8100 chassis. Conversely, a SV8100 CD-PVAA cannot be used in a UX5000 chassis.
  - The PVA PMS web interface supports Windows Internet Explorer 8 run on any Windows 7 operating system.
  - Function codes 92 and 93 can be assigned only to a DSS Console that is in Hotel Mode. These features do not work when programmed on multiline telephone line keys or on a DSS Console in Business mode.
  - When multiple DSS Consoles are used for Hotel/Motel, function keys must be assigned to each DSS console for Wake Up Call Indication and Room Status Indication.
  - The Message Waiting status of a room cannot be seen when the console is in Wake Up Call or Room Status mode.
  - The BLF indication for each room is always available no matter what mode the console is in.
  - PMS-U10 Configurator software **Version 1.0.1.0 or higher** is required for Microsoft Vista 32-bit support. To check the version number (while the application is running) press ALT + V.
  - When installing the PMS-U10 Configurator on Windows XP, the support PC must have Microsoft.NET framework Version 1.1 installed. This is free software available from Microsoft. If installing the PMS Configurator on Windows Vista (32-bit), the Microsoft.NET framework is already included in the OS and does not need to be installed.

- The Hotel/Motel feature requires the CD-CP00-US be licensed for Hotel. The following dial access codes can be used only if the CD-CP00-US is licensed for the Hotel/Motel Feature:

<b>Dial Access Codes that Require CD-CP00-US Hotel License</b>		
<b>Program</b>	<b>Dial Access Code</b>	<b>Description</b>
11-10-16	626	Leaving Message Waiting (Requires CPU to be licensed for Hotel/Motel)
11-14-01	627	Set DND for Own Extension
11-14-02	628	Cancel DND for Own Extension
11-14-03	629	Set DND for Other Extension
11-14-04	630	Cancel DND for Other Extension
11-14-05	631	Set Wake Up Call for Own Extension
11-14-06	632	Cancel Wake Up Call for Own Extension
11-14-07	633	Set Wake Up Call for Other Extension
11-14-08	634	Cancel Wake Up Call for Other Extension
11-14-09	635	Set Room to Room Call Restriction
11-14-10	636	Cancel Room to Room Call Restriction (Hotel)
11-14-11	637	Change Toll Restriction Class for Other Extension
11-14-12	638	Check In
11-14-13	639	Check Out
11-14-14	640	Room Status Change for Own Extension
11-14-15	641	Room Status Change for Other Extension
11-14-16	642	Room Status Output
11-14-17	675	Hotel Room Monitor
11-14-18	666	Set Hotel PMS Code Restriction



- For SV8100 systems with **Version 4000 or higher** system software and has been migrated from a UX5000, [Table 2-35 Migration Supported Blades](#) defines the application blades supported in current system chassis.

**Table 2-35 Migration Supported Blades**

Blade	Color	CHS1U-US Blue 19” Chassis	CHS2U B-US Blue 9.5” Base Chassis	CHS2U E Blue 9.5” Exp Chassis	IP3NA- 6KSU-A1 White 19” Chassis	IP3NA-3KSU- B1 White 9.5” Base Chassis	IP3WW-3KSU- E1 White 9.5” Exp Chassis
CD-RTB	Blue	S	S	S	N/S	N/S	N/S
CD-ETIA	Blue	S	S	S	N/S	N/S	N/S
CD-PVAA	Blue	S	S	S	N/S	N/S	N/S
IP3WW-RTU-B1	White	N/S	N/S	N/S	S	S	S
IP3WW-GSWU-B1	White	N/S	N/S	N/S	S	S	S
LU-PVA-CONF- PORT8-LIC	White	N/S	N/S	N/S	S	S	S

S = Supported  
N/S = Not Supported

Refer to the tables below for valid status code changes when Program 42-01-06 is enabled or disabled.

**Table 2-36 Valid Room Status Changes when Program 42-01-06 is set to 1 (Enabled)**

Change Status	Code 1	Code 2	Code 3	Code 4	Code 5	Code 6	Code 7	Code 8	Code 9	Code 0	Code *	Code #
Original Status												
Code 1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 7	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 8	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 9	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 0	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code *	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code #	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

**Table 2-37 Valid Room Status Changes when Program 42-01-06 is set to 0 (Disabled)**

Change Status	Code 1	Code 2	Code 3	Code 4	Code 5	Code 6	Code 7	Code 8	Code 9	Code 0	Code *	Code #
Original Status												
Code 1	N	Y	N	N	Y	Y	Y	Y	Y	N	Y	Y
Code 2	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 3	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Code 4	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Code 5	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Code 6	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
Code 7	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y
Code 8	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y
Code 9	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Code 0	Y	Y	N	N	Y	Y	Y	Y	Y	N	Y	Y
Code *	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Code #	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N

## Default Settings

Not Enabled

## System Availability

### Terminals

All Terminals

### Required Component(s)

DSS Console

When using the PVA PMS the following licenses affect this feature:

- SV8100 Hotel/Motel License: LK-SYS-HM-LIC (Feature Code 0007)  
This license is required to enable the Hotel feature in the SV8100.
- SV8100 PVA PMS license: LK-SYS-PVA PMS-LIC (Feature Code 6201)  
This license is only required when using the PVA PMS for PMS integration.

- 
- 
- UM8000 Hotel/Motel license: LKS-UMS-Hotel-PMS-LIC (Feature Code 1407)  
This license is only required when using the UM8000 Mail hotel features such as PMS integration and Hotel Guest room mailboxes.

When using a PMS-U10 the following licenses affect this feature:

- SV8100 Hotel/Motel License: LK-SYS-HM-LIC (Feature Code 0007)  
This license is required to enable the Hotel feature in the SV8100.
- UM8000 Hotel/Motel license: LKS-UMS-Hotel-PMS-LIC (Feature Code 1407)  
This license is only required when using the UM8000 Mail hotel features such as PMS integration and Hotel Guest room mailboxes.

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## Related Features

**Code Restriction**

**Department Calling**


**Do Not Disturb**

**Flexible System Numbering**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-20-01	<b>LAN Setup for External Equipment – TCP Port</b>	Define the TCP port (0~65535) when communicating to the SMDR (type 5).	0~65535 default: External Device 1 (CTI Server) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service ) = 0		✓	
11-10-16	<b>Service Code Setup (for System Administrator) – Leaving Message Waiting (Requires CPU to be licensed for Hotel/Motel)</b>	Customize the leave message waiting Service Codes for the System Administrator (CD-CP00-US must be licensed for Hotel/Motel).	MLT (default = 626)		✓	
11-14-01	<b>Service Code Setup (for Hotel) – Set DND for Own Extension</b>	Customize the set DND for own extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 627)		✓	
11-14-02	<b>Service Code Setup (for Hotel) – Cancel DND for Own Extension</b>	Customize the cancel DND for own extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 628)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-14-03	<b>Service Code Setup (for Hotel) – Set DND for Other Extension</b>	Customize the set DND for other extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 629)		✓	
11-14-04	<b>Service Code Setup (for Hotel) – Cancel DND for Other Extension</b>	Customize the cancel DND for other extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 630)		✓	
11-14-05	<b>Service Code Setup (for Hotel) – Set Wake Up Call for Own Extension</b>	Customize the set wake up call for own extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 631)		✓	
11-14-06	<b>Service Code Setup (for Hotel) – Cancel Wake Up Call for Own Extension</b>	Customize the cancel wake up call for own extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 632)		✓	
11-14-07	<b>Service Code Setup (for Hotel) – Set Wake Up Call for Other Extension</b>	Customize the set wake up call for other extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 633)		✓	
11-14-08	<b>Service Code Setup (for Hotel) – Cancel Wake Up Call for Other Extension</b>	Customize the cancel wake up call for other extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 634)		✓	
11-14-09	<b>Service Code Setup (for Hotel) – Set Room to Room Call Restriction</b>	Customize the set room to room call extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 635)		✓	
11-14-10	<b>Service Code Setup (for Hotel) – Cancel Room to Room Call Restriction (Hotel)</b>	Customize the cancel room to room call restriction (hotel) used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 636)		✓	
11-14-11	<b>Service Code Setup (for Hotel) – Change Toll Restriction Class for Other Extension</b>	Customize the change toll restriction class for other extension used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 637)		✓	
11-14-12	<b>Service Code Setup (for Hotel) – Check-In</b>	Customize the check-in Service Codes which are used with the Hotel/Motel feature.	MLT, SLT (default = 638)		✓	
11-14-13	<b>Service Code Setup (for Hotel) – Check-Out</b>	Customize the check-out Service Codes used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 639)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-14-14	<b>Service Code Setup (for Hotel) – Room Status Change for Own Extension</b>	Customize the room status change for own extension Service Codes used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 640)		✓	
11-14-15	<b>Service Code Setup (for Hotel) – Room Status Change for Other Extension</b>	Customize the room status change for other extension Service Codes which are used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 641)		✓	
11-14-16	<b>Service Code Setup (for Hotel) – Room Status Output</b>	Customize the room status output Service Codes used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT (default = 642)		✓	
11-14-17	<b>Service Code Setup (for Hotel) – Hotel Room Monitor</b>	Customize the hotel room monitor Service Codes used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT, SLT (default = 675)		✓	
11-14-18	<b>Service Code Setup (for Hotel) – Set Hotel PMS Code Restriction</b>	Customize the set hotel PMS code restriction Service Codes used with the Hotel/Motel feature (CD-CP00-US must be licensed for Hotel/Motel).	MLT (default = 666)		✓	
15-03-01	<b>Single Line Telephone Basic Data Setup – SLT Signaling Type</b>	Determine the dialing type the connected telephone uses.	0 = DP 1 = DTMF (default = 1)		✓	
15-03-04	<b>Single Line Telephone Basic Data Setup – Flashing</b>	Enable/Disable Flash for single line (500/2500 type) telephones.	0 = No 1 = Yes (default = 1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension ports = Class 1	✓		
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)			✓
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
20-15-10	<b>Ring Cycle Setup – Alarm for SLT</b>	Define the ring cycle for Alarm for SLT terminals.	Ringing Cycle = 1~13 (default = 5)		✓	
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Define the extension numbers used by operators.	Up to eight digits (default = 101)		✓	
20-35-01	<b>Extension's Operator Setting</b>	Assign an extension to an operator group.	0~15 (default = 0)			✓
30-01-01	<b>DSS Console Operating Mode</b>	Set the mode of the system DSS Consoles. This option applies to all system DSS Consoles.	0 = Business Mode 1 = Hotel Mode 2 = ACD Monitor Mode 3 = Business/ACD Mode (default = 0)	✓		
30-02-01	<b>DSS Console Extension Assignment – Extension Number</b>	Define the extension number for the multiline terminal connected with the DSS console (up to eight digits).	Up to eight digits. (default not assigned)		✓	
30-03-01	<b>DSS Console Key Assignment</b>	Customize DSS Console keys to function as DSS keys, Service Code keys, Programmable Function Keys, and One-Touch Calling keys. The key [when defined as a DSS/One-Touch key (code 01)] can have any function up to four digits (e.g., extension number or Service Code). The function information (such as extension number or Service Code) would then be entered as the additional data.	Key Number 001~500 0~99 (General Functional Level) 97 = Door Box Access key (additional data: 1~8 Door Box No.) * 00 ~ * 99 (Appearance Functional Level)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
42-01-01	<b>System Options for Hotel/Motel – Answering Message Mode for Wake Up Call (Hotel Mode)</b>	Assign the answering message mode for wake up call options for Hotel/Motel Service.	0 = MOH (Hold Time) 1 = VRS Message 2 = VRS Message + Time (default = 0)		✓	
42-01-02	<b>System Options for Hotel/Motel – Wake Up Call Message Assignment</b>	VRS Message for Wake Up Calls. You must make an entry for this program if you have selected 1 or 2 in Item 1 above.	0~100 (0 = No Setting) (default = 0)		✓	
42-01-03	<b>System Options for Hotel/Motel – Wake Up Call No Answer</b>	Assign the wake up call no answer options for Hotel/Motel Service.	0 = No Transfer 1 = Transfer to the Operator (default = 0)		✓	
42-01-04	<b>System Options for Hotel/Motel – Setup Message Mode for Wake Up Call (Hotel Mode)</b>	Assign the setup message mode for wake up call (hotel mode) options for Hotel/Motel Service.	0 = Fixed Message 1 = VRS Message 2 = Time Information and VRS (default = 0)		✓	
42-01-05	<b>System Options for Hotel/Motel – Wake Up Call Message Assignment</b>	Assign the wake up call message assignment options for Hotel/Motel Service.	0~100 (0 = No Setting) (default = 0)		✓	
42-01-06	<b>System Options for Hotel/Motel – Flexible Room Status</b>	Use this option to enable (1) or disable (0) for the system to change from any status code to any other status code. Refer to <a href="#">Table 2-37</a> above and in the PMS Developer Guide for valid status code changes when this program is disabled.	0 = Disabled 1 = Enabled (default = 0)	✓		
42-02-01	<b>Hotel/Motel Telephone Setup – Hotel Mode</b>	If you want an extension to operate in the Hotel/Motel mode, enter 1. If you want the telephone to operate in the business mode, enter 0.	0 = Normal 1 = Hotel (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
42-02-02	<b>Hotel/Motel Telephone Setup – Toll Restriction Class When Check In</b>	Assign an extension Toll Restriction Class when it is checked in. The system has 15 Toll Restriction Classes (1~15). The entry you make in this option affects the telephone in all Night Service modes. (Refer to Programs 21-05 and 21-06 to set up the Toll Restriction dialing options.) When the extension is checked out, it uses the Toll Restriction Class set in Program 21-04.	1~15 (default = 1)		✓	
42-02-03	<b>Hotel/Motel Telephone Setup – Room Status</b>	This is a read only program that shows the current room status setting.	1 = Room Clean (Occupied) 2 = Maid Required 3 = Maid in Room 4 = Inspection Required 5 = Maintenance Request 6 = Out of Order 7 = Reserve 1 8 = Reserve 2 9 = Reserve 3 0 = Room Clean (Vacant) * = Reserve 5 # = Reserve 6			✓
42-03-01	<b>Class of Service Options (Hotel/Motel) – Check-In Operation</b>	Set the Hotel/Motel check-in operation COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-02	<b>Class of Service Options (Hotel/Motel) – Check-Out Operation</b>	Set the Hotel/Motel check-out operation COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-03	<b>Class of Service Options (Hotel/Motel) – Room Status Output</b>	Set the Hotel/Motel room status output COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-04	<b>Class of Service Options (Hotel/Motel) – DND Setting for Other Extension</b>	Set the Hotel/Motel DND setting for other extension COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
42-03-05	<b>Class of Service Options (Hotel/Motel) – Wake up Call Setting for Other Extension</b>	Set the Hotel/Motel wake up call setting for other extension COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-06	<b>Class of Service Options (Hotel/Motel) – Room Status Change for Other Extension</b>	Set the Hotel/Motel room status change for other extension COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-07	<b>Class of Service Options (Hotel/Motel) – Restriction Class Changing for Other Extension</b>	Set the Hotel/Motel restriction class changing for other extension COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-08	<b>Class of Service Options (Hotel/Motel) – Room to Room Call Restriction</b>	Set the Hotel/Motel room to room call restriction COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-09	<b>Class of Service Options (Hotel/Motel) – DND Setting for Own Extension</b>	Set the Hotel/Motel DND setting for own extension COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-10	<b>Class of Service Options (Hotel/Motel) – Wake Up Call Setting for Own Extension</b>	Set the Hotel/Motel wake up call setting for own extension COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-11	<b>Class of Service Options (Hotel/Motel) – Change Room Status for Own Extension</b>	Set the Hotel/Motel change room status for own extension COS options.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-12	<b>Class of Service Options (Hotel/Motel) – SLT Room Monitor</b>	Enable/Disable a single line telephone ability to use Room Monitor.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-13	<b>Class of Service Options (Hotel/Motel) – PMS Restriction Level</b>	Enable/Disable the attendant's ability to change the outgoing restriction class for hotel phones.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-04-01	<b>Hotel Mode One-Digit Service Codes</b>	Set up the Hotel Mode one-digit service codes assigned in Program 42-02-01.	1~64 (Calling Group) Up to eight digits 1~9, 0, *, # (default not assigned)			✓
42-05-01	<b>Hotel Room Status Printer – Output Port Type</b>	Set the LAN port to output the Hotel Data (Check-Out sheet, Room Status, etc.) and the output port type options for the Hotel/Motel feature.	0 = No Setting 1 = CTA 3 = LAN (default = 0)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
42-05-02	Hotel Room Status Printer – Output Destination Number	Set the LAN port to output the Hotel Data (Check-Out sheet, Room Status, etc.) and the output destination number options for the Hotel/ Motel feature.	Up to eight digits (Extension number which CTA/CTU is equipped) (default not assigned)			✓
42-05-03	Hotel Room Status Printer – Wake Up Call No Answer Data	Set the LAN port to output the Hotel Data (Check-Out sheet, Room Status, etc.) and the wake up call no answer data options for the Hotel/ Motel feature.	0 = Not Output 1 = Output (default = 0)			✓
42-05-04	Hotel Room Status Printer – Check-Out Sheet	Set the LAN port to output the Hotel Data (Check-Out sheet, Room Status, etc.) and the check-out sheet options for the Hotel/ Motel feature.	0 = Not Output 1 = Output (default = 0)			✓
42-06-01	PMS Service Setting – PMS Port Number	Set the PMS port number when using the PMS feature.	0~65535 (default = 5129)			✓
42-06-02	PMS Service Setting – 3:00 AM Auto Room Scan	Set maid required status for all checked-in rooms at 3:00 AM.	0 = Off 1 = On (default = 0)			✓
42-06-03	PMS Service Setting – CheckIn Message Type	Set the check-in message type when using the PMS feature.	0 = Off 1 = On (default = 0)	✓		
42-06-04	PMS Service Setting – CheckOut Auto Status Change	Set the checkout auto status change when using the PMS feature.	0 = Off 1 = On (default = 0)			✓
42-06-05	PMS Service Setting – AREYUTHHERE/LINETEST Send Timing	Set the AREYUTHHERE/LINETEST send timing when using the PMS feature.	1~128 (seconds) (default = 10)			✓
42-06-06	PMS Service Setting – AREYUTHHERE/LINETEST Send Count	Set the AREYUTHHERE/LINETEST send count when using the PMS feature.	0~20 (times) (default = 3)			✓
42-06-07	PMS Service Setting – Check-Out Auto Flexible Status Change	When Programs 42-06-07 and 42-06-04 are both enabled, the status programmed in Program 42-06-08 is set upon checkout regardless of the previous room status.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
42-06-08	<b>PMS Service Setting – Status for Check-Out Auto Flexible Status Change</b>	When Program 42-06-07 is enabled the status programmed in 42-06-08 is set upon checkout.	1 = Room Clean (Occupied) 2 = Maid Required 3 = Maid in Room 4 = Inspection Required 5 = Maintenance Request 6 = Out of Order 7 = Reserve 1 8 = Reserve 2 9 = Reserve 3 0 = Room Clean (Vacant) * = Reserve 5 # = Reserve 6 (default = 4)		✓	
42-07-01	<b>PMS Restriction Level Conversion Table</b>	Change the default Toll Restriction class on check in for a room (Program 42-02-02).	1~15 Default: Level 0 = 10 Level 1 = 11 Level 2 = 12 Level 3 = 13		✓	
42-09-01	<b>Flexible Setup for Room Status</b>	When Program 42-01-06 is enabled dial room status codes can be defined in this program. Note the code definitions only apply to the system itself, when sending room status messages to the PMS Application the status codes are always sent as defined in the PMS Developer Guide.	1 = Room Clean (Occupied) 2 = Maid Required 3 = Maid in Room 4 = Inspection Required 5 = Maintenance Request 6 = Out of Order 7 = Reserve 1 8 = Reserve 2 9 = Reserve 3 0 = Room Clean (Vacant) * = Reserve 5 # = Reserve 6 (default not assigned)		✓	

Refer to the UNIVERGE SV8100 Hotel/Motel Services Manual for complete programming information.

## Operation

Refer to the UNIVERGE SV8100 Hotel/Motel Services Manual for complete operation information.

## Hotline

### Description

Hotline gives a multiline terminal user one-button calling and Transfer to another extension (the Hotline partner). Hotline helps co-workers that work closely together. The Hotline partners can call or Transfer calls to each other just by pressing a single key.

Hotline has two applications.

- Hotline (Hotline partner)
- Ringdown Extension, Internal/External (Refer to [Ringdown Extension, Internal/External on page 2-1277.](#))

In addition, the Hotline key shows the status of the partner's extension.

When the key is . . .	The extension is . . .
Off	Idle
On	Busy or ringing
Fast Flash	DND – All calls (option 3) or Intercom calls (option 2)
Double Wink On	ACD Agent logged onto the group
Wink Off	ACD Agent logged off

There are 512 internal Hotline extensions available.

### Conditions

- An extension user cannot use Hotline to pick up a call ringing their partner's extension.
- If a station is an ACD agent, the Hotline key blinks to indicate the ACD agent's status.
- Hotline keys can be assigned to the DSS consoles.
- Hotline does not override Do Not Disturb.
- Hotline always follows the Handsfree Answerback/Forced Intercom Ringing mode set at the called extension. The Hotline caller can override the setting, if desired.
- External Hotline automatically dials a telephone number or Speed Dial – System/Group/Station number when the handset is lifted.
- If the partner's extension is busy, Hotline does not automatically activate Off-Hook Signaling.

- A Hotline is a uniquely programmed function key.

## **Default Setting**

Disabled

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## **Related Features**

**Automatic Call Distribution (ACD)**

**Distinctive Ringing, Tones and Flash Patterns**

**Direct Station Selection (DSS) Console**

**Do Not Disturb**

**Handsfree Answerback/Forced Intercom Ringing**

**Off-Hook Signaling**

**Programmable Function Keys**

**Ringdown Extension, Internal/External**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Hotline (code 01 + partner's extension number).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-02-22	<b>Multiline Telephone Basic Data Setup – Multiple Incoming From Intercom and Trunk</b>	When this option is Disabled, incoming calls to an extension indicate on any Hotline key for that extension as solid (busy). When this option is Enabled, lighting is determined by the setting of Program 22-01-01 Incoming Call Priority. If set to trunk (1), the Hotline key lights solid when a trunk call rings in. If set to intercom (0), the Hotline key does not light for incoming trunk calls, but lights solid for intercom calls.	0 = Disable 1 = Enable (default = 1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service to extensions (1~15).	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension ports = Class 1		✓	
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Hotline (Ringdown). If disabled in COS, the settings in Program 21-11 below have no effect.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-19	<b>Class of Service Options (Outgoing Call Service) – Hotline for SPK</b>	Turn Off or On an extension user ability to press Speaker to activate hotline or ringdown.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-06	<b>Class of Service Options (Hold/Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Program 20-02-03 and Program 20-13-06 set the conditions under which a Hotline, Reverse Voice Over or DSS Console key indicates that an extension is busy. With condition 1 in the following chart, the BLF LED is on only when both extension line appearances are busy. In conditions 2~4, the BLF LED is on when one line appearance is busy.	0 = Off 1 = On (default = 1 for COS 1~15) Refer to <a href="#">Table 2-38 Extension Busy Setup</a> on page 2-756		✓	
21-01-09	<b>System Options for Outgoing Calls – Ringdown Extension Timer (Hotline Start)</b>	A Ringdown extension automatically calls its programmed destination after this time.	0~64800 (default = 5)		✓	
21-11-01	<b>Extension Ringdown (Hotline) Assignment</b>	Define the Hotline destination number for each extension number.	(maximum 24 digits) 0, *, #, Pause, Hook Flash, @ (Code to wait for answer supervision) (default not assigned)	✓		
22-01-01	<b>System Options for Incoming Calls – Incoming Call Priority</b>	Determine if Intercom calls or trunk calls have answer priority when both are ringing simultaneously.	0 = Intercom call priority 1 = Trunk call priority (default = 1)		✓	
30-05-02	<b>DSS Console Lamp Table – Busy Extension</b>	Define the LED patterns for busy extensions on the DSS consoles.	0~7 [default = 7 (On)]		✓	
30-05-03	<b>DSS Console Lamp Table – DND Extension</b>	Define the LED patterns for DND extensions on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-04	<b>DSS Console Lamp Table – ACD Agent Busy</b>	Define the LED patterns for busy ACD agents function on the DSS consoles.	0~7 [default = 7 (On)]		✓	
30-05-05	<b>DSS Console Lamp Table – Out of Schedule (ACD DSS)</b>	Define the LED patterns for out of schedule (ACD/DSS) on the DSS consoles.	0~7 [default = 0 (Off)]		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-05-06	<b>DSS Console Lamp Table – ACD Agent Log Out (ACD DSS)</b>	Define the LED patterns for ACD agents that are logged out on the DSS consoles.	0~7 [default = 5 (IL)]		✓	
30-05-07	<b>DSS Console Lamp Table – ACD Agent Log In (ACD DSS)</b>	Define the LED patterns for ACD agents that are logged in the DSS consoles.	0~7 [default = 4 (IR)]		✓	
30-05-08	<b>DSS Console Lamp Table – ACD Agent Emergency (ACD DSS)</b>	Define the LED patterns for ACD agents in emergency on the DSS consoles.	0~7 [default = 6 (IW)]		✓	
30-05-09	<b>DSS Console Lamp Table – Hotel Status Code 1 (Hotel DSS)</b>	Define the LED patterns for hotel status code 1 on the DSS consoles.	0~7 [default = 7 (On)]		✓	
30-05-10	<b>DSS Console Lamp Table – Hotel Status Code 2 (Hotel DSS)</b>	Define the LED patterns for hotel status code 2 on the DSS consoles.	0~7 [default = 1 (FL)]		✓	
30-05-11	<b>DSS Console Lamp Table – Hotel Status Code 3 (Hotel DSS)</b>	Define the LED patterns for hotel status code 3 on the DSS consoles.	0~72 (WK) [default = 2 (WK)]		✓	
30-05-12	<b>DSS Console Lamp Table – Hotel Status Code 4 (Hotel DSS)</b>	Define the LED patterns for hotel status code 4 on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-13	<b>DSS Console Lamp Table – Hotel Status Code 5 (Hotel DSS)</b>	Define the LED patterns for hotel status code 5 on the DSS consoles.	0~7 [default = 5 (IL)]		✓	
30-05-14	<b>DSS Console Lamp Table – Hotel Status Code 6 (Hotel DSS)</b>	Define the LED patterns for hotel status code 6 on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-15	<b>DSS Console Lamp Table – Hotel Status Code 7 (Hotel DSS)</b>	Define the LED patterns for hotel status code 7 on the DSS consoles.	0~7 [default = 6 (IW)]		✓	
30-05-16	<b>DSS Console Lamp Table – Hotel Status Code 8 (Hotel DSS)</b>	Define the LED patterns for hotel status code 8 on the DSS consoles.	0~7 [default = 4 (IR)]		✓	
30-05-17	<b>DSS Console Lamp Table – Hotel Status Code 9 (Hotel DSS)</b>	Define the LED patterns for hotel status code 9 on the DSS consoles.	0~7 [default = 3 (RW)]		✓	
30-05-18	<b>DSS Console Lamp Table – Hotel Status Code 0 (Hotel DSS)</b>	Define the LED patterns for hotel status code 0 on the DSS consoles.	0~7 [default = 0 (Off)]		✓	
30-05-19	<b>DSS Console Lamp Table – Hotel Status Code * (Hotel DSS)</b>	Define the LED patterns for hotel status code * on the DSS consoles.	0~7 [default = 4 (IR)]		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-05-20	DSS Console Lamp Table – Hotel Status Code # (Hotel DSS)	Define the LED patterns for hotel status code # on the DSS consoles.	0~7 [default = 5 (IL)]		✓	
30-05-21	DSS Console Lamp Table – VM Message Indication	Define the LED patterns for VM message indication on the DSS consoles.	0~7 [default = 3 (RW)]		✓	


Table 2-38 Extension Busy Setup

	Program 20-13-06	Program 20-02-03	BLF <sup>1</sup> Status	Busy Status
1	1	0	Off	No
2	1	1	On	Yes
3	0	0	On	Yes
4	0	1	On	Yes


<sup>1</sup> BLF is on for extension receiving a voice announced Intercom call.

## Operation

### To place a call to your Hotline partner:

- Press the **Hotline** key (Program 15-07 or SC 751: 01 + partner's extension number).  
 *You can optionally lift the handset after this step for privacy.*

### To transfer your outside call to your Hotline partner:

- Press the **Hotline** key.
- Announce the call and hang up.  
**- OR -**  
 Hang up to have the call wait at your Hotline partner unannounced.  
 *If unanswered, the call recalls like a regular transferred call.*

### To answer a call from your Hotline partner:

- If you hear two beeps, speak toward the telephone.  
**- OR -**  
 If your telephone rings, lift the handset.

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## *Howler Tone Service*

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### **Description**

Howler Tone Service provides a Howler Tone when a station remains off-hook after a call is completed or when a station is off-hook and digits are not dialed in a programmed time.

### **Conditions**

Howler tone is generated 30 seconds after a call is disconnected and the telephone is left off-hook or the telephone is left off-hook without dialing.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

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### **Related Features**

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-18-02	<b>Service Tone Timers – Busy Tone Timer</b>	After getting Intercom dial tone, a telephone user has this time to dial the first digit of the Intercom call.	0~64800 (seconds) (default = 15)		✓	
80-01-01	<b>Service Tone Setup – Repeat Count</b>	Customize the system basic tones and system service tones. The system must be reset for the changes to take affect.	0~255 (0 = until On-Hook) Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01</a> on page 2-703		✓	
80-01-02	<b>Service Tone Setup – Basic Tone Number</b>	The following features require that the system tones listed below be changed to match the table. After changing these settings the system must be reset for the changes to take effect. <ul style="list-style-type: none"> <li>○ Call Screening</li> <li>○ Call Holding</li> <li>○ Busy Greeting</li> <li>○ Await Answer Transfer</li> </ul>	1~33 0 = No Tone 33=Default Time Slot (Default varies depending on tone number. Refer to SV8100 Programming manual for more descriptions)		✓	

## Operation

None

## Enhancements

With **Version 7000 or higher** software, a special ringtone is provided when a pre-assigned extension places an Intercom call.

## Description

Intercom gives extension users access to other extensions. This provides the system with complete internal calling ability.

### Handsfree Answerback/Forced Intercom Ringing

Handsfree Answerback permits an extension user to respond to a voice-announced Intercom call by speaking toward the telephone, without lifting the handset. Like Handsfree, this is a convenience for workers who do not have a free hand to pick up the handset. Refer to [Handsfree Answerback/Forced Intercom Ringing on page 2-713](#) feature for more information.

### Busy Status Display

When a display multiline terminal user places an Intercom call to a busy extension, the details of the busy status (who is talking to the extension or which line is in use by the extension) can be displayed. The details of the trunk busy status (the extension using the line) can be displayed after trying to access the trunk. This feature provides a user information which can determine whether they should use Barge-In for the extension or trunk. This information automatically displays for a multiline terminal once programmed.

## Conditions

- Preventing ICM calls does not affect dialing other service codes, including 911.
- Intercom calls can ring or be voice-announced at the called extension.
- Ringing Line Preference can automatically answer ringing Intercom or trunk calls when the user lifts the handset.
- An extension can have a name assigned that identifies the extension to callers.
- Dialing 9 or any other trunk access code after dialing a busy extension results in termination of the Intercom call and seizing a trunk.

- For a station to retrieve a held ICM call, the station must have an ICM key assigned in Program 15-07 (\*00).
- With **Version 7000 or higher** software, a special ringtone is provided when a pre-assigned extension places an Intercom call.
- The incoming ringtone from a pre-assigned extension (set in Program 15-01-13) is limited to calls to the actual extension, not the Virtual Extension. Incoming calls to the VE follows Program 15-08-1 settings.

### **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Handsfree Answerback/Forced Intercom Ringing**

**Intercom**

**Line Preference**

**Name Storing**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-13	<b>Service Code Setup (for Setup/Entry Operation) – Display Language Selection for Multiline Terminal</b>	Select the service code used at an extension to change the displayed language on a multiline terminal display.	MLT (default = 678)		✓	
15-01-13	<b>Basic Extension Data Setup – Special Ringtone Choice</b>	Use to select the special incoming ring tone for the extension. When called from this Program on the set extension, the called extension rings with the selected ring tone.	0 = Incoming Extension Ringtone 1 = Tone Pattern 1 2 = Tone Pattern 2 3 = Tone Pattern 3 4 = Tone Pattern 4 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 (default = 0)		✓	
15-02-01	<b>Multiline Telephone Basic Data Setup – Display Language Selection</b>	Select the language to be displayed on a multiline terminal display. (To select options 8~10, press either 8 or Recall, then press line keys 1~3. Key 1 is option 8, Key 2 is option 9, and Key 3 is option 10.)	0 = Japanese 1 = English 2 = German 3 = French 4 = Italian 5 = Spanish 6 = Dutch 7 = Portuguese 8 = Norwegian 9 = Danish 10 = Swedish 11 = Turkish 12 = Latin American Spanish 13 = Romanian 14 = Polish (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign Class of Service (1~15) for extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enable this option to prevent callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-07	<b>Class of Service Options (Hold/Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On an extension user ability to display the detailed state of the called party.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-17-01	<b>Operator Extension – Operator’s Extension Number</b>	Define the extension numbers used by operators.	Up to eight digits (default = 101)		✓	
20-18-01	<b>Service Tone Timers – Extension Dial Tone Time</b>	After getting Intercom dial tone, a multiline terminal user has this time to dial the first digit of the Intercom call.	0~64800 (seconds) (default = 30)		✓	
21-01-02	<b>System Options for Outgoing Calls – Intercom Interdigit Time</b>	When placing Intercom calls, an extension user must dial each digit during this time.	0~64800 (seconds) (default = 10)		✓	
82-01-01 (01)	<b>Incoming Ring Tone – Frequency 1</b>	Customize the Intercom ring tone.	1 = 520Hz 2 = 540Hz 3 = 660Hz 4 = 760Hz 5 = 1100Hz 6 = 1400Hz 7 = 2000Hz Default: Refer to <a href="#">Table 2-39 Default Incoming Ringing Tone</a> on page 2-764.		✓	
82-01-02	<b>Incoming Ring Tone – Frequency 2</b>	Customize the Intercom ring tone.	1 = 520Hz 2 = 540Hz 3 = 660Hz 4 = 760Hz 5 = 1100Hz 6 = 1400Hz 7 = 2000Hz Default: Refer to <a href="#">Table 2-39 Default Incoming Ringing Tone</a> on page 2-764.			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
82-01-03	Incoming Ring Tone – Modulation	Customize the Intercom Ring Tone modulation if desired.	0 = No Modulation 1 = 8Hz Modulation 2 = 16Hz Modulation 3 = Envelope (default = 2)			✓

### Handsfree Answerback/Forced Intercom Ringing:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-12	System Options for Multiline Telephones – Forced Intercom Ring (ICM Call Type)	Enable/Disable Forced Intercom Ringing. If enabled, Intercom calls normally ring. If disabled, intercom calls voice announce. For all NEC Cordless telephones, this option must be enabled since voice announce is not possible.	0 = Disable (Voice) 1 = Enable (Signal) (default = 0)		✓	
20-06-01	Class of Service for Extensions	Assign Class of Service (1~15) for extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-10	Class of Service Options (Outgoing Call Service) – Signal/Voice Call	Turn Off or On an extension ability to force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-05	Class of Service Options (Incoming Call Service) – Signal/Voice Call	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook Signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
80-01-01 (28)	Service Tone Setup – Tone 28 (Speaker Monitor Tone)	This tone changes the tone the originator of an ICM call hears. (The tone cannot be changed for what is heard by the user when receiving an ICM call.)	Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a> (Service Tone #28).		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-01-02	<b>Service Tone Setup – Basic Tone Number</b>	Define up to 64 Service Tones. Each service tone is defined by the combination of 32 Basic Tones.	1~33 (0 = No Tone) (33=Default Time Slot) Refer to <a href="#">Table 2-34 Service Tone Setup, Program 80-01-02 on page 2-707.</a>			✓
82-01-01	<b>Incoming Ring Tone – Frequency 1</b>	Customize the Intercom ring tone.	1 = 520Hz 2 = 540Hz 3 = 660Hz 4 = 760Hz 5 = 1100Hz 6 = 1400Hz 7 = 2000Hz Default: Refer to <a href="#">Table 2-39 Default Incoming Ringing Tone.</a>			✓

Table 2-39 Default Incoming Ringing Tone

Incoming Ring Tone Number	Tone Type	Frequency 1	Frequency 2	Modulation
Pattern 1 (Trunk Incoming)	High Mid Low	1100 660 520	1400 760 660	16Hz Modulation 16Hz Modulation 16Hz Modulation
Pattern 2 (Trunk Incoming)	High Mid Low	1100 660 520	1400 760 660	8Hz Modulation 8Hz Modulation 8Hz Modulation
Pattern 3 (Trunk Incoming)	High Mid Low	2000 1400 1100	760 660 540	16Hz Modulation 16Hz Modulation 16Hz Modulation
Pattern 4 (Trunk Incoming)	High Mid Low	2000 1400 1100	760 660 540	8Hz Modulation 8Hz Modulation 8Hz Modulation
Pattern 5 Intercom Incoming Pattern	High Mid Low	1100 660 520	1400 760 660	8Hz Modulation 8Hz Modulation 8Hz Modulation
Pattern 6 Alarm Sensor Pattern	High Mid Low	760 760 760	760 760 760	No Modulation No Modulation No Modulation
Pattern 7 (Trunk Incoming)	High Mid Low	1400 760 660	540 540 540	16Hz Modulation 16Hz Modulation 16Hz Modulation

Table 2-39 Default Incoming Ringing Tone (Continued)

Incoming Ring Tone Number	Tone Type	Frequency 1	Frequency 2	Modulation
Pattern 8 (Trunk Incoming)	High Mid Low	1400 760 660	540 540 540	8Hz Modulation 8Hz Modulation 8Hz Modulation
Pattern 9 (Trunk Incoming)	High Mid Low	2000 2000 1100	1100 540 760	16Hz Modulation 16Hz Modulation 16Hz Modulation
Pattern 10 (Trunk Incoming)	High Mid Low	2000 2000 1100	1100 540 760	8Hz Modulation 8Hz Modulation 8Hz Modulation

## Operation


### To place an Intercom call:


- At multiline terminal, press **Speaker**.

- OR -

At single line telephone, lift the handset.


- Dial extension number (or **0** for your operator).

 Your call may voice-announce or ring the called extension. Dial 1 to change the way your call alerts the called extension.

 If the extension you call is busy or does not answer, you can dial another extension without hanging up.

### To answer an Intercom call:

- If you hear two beeps, speak toward telephone.

 Your telephone picks up your voice.

- OR -


If your telephone rings, lift the handset.

### To check the extension data (multiline terminal only):

- Press the **Help** key.

- Dial the extension number.

 Your display shows your telephone extension number, port number and extension/Department Group.

 You can also check any other extension numbers information by pressing **Help** + the extension number.

- Press **Exit** to return the normal time/date display.

**To change how Intercom calls ring the extension:**

1. Press **Speaker** or lift the handset.
2. Dial **723** to have calls ring your extension.  
- OR -
3. Dial **721** to have calls voice announce to your extension.


## *IP Multiline Station (SIP)*

### Enhancements

The same user name and password can be assigned to IP Multiline Station, MH240 and Desktop ports when automatic or manual registration is used (**Version 3000 or higher** software).

With **Version 3000 or higher** system software, the Registration Override feature is enhanced to allow IP Multiline Stations (SIP) using 1st Party CTI application or Multiline Stations (SIP) in a system using 3rd Party CTI applications (Desktop Shared Services or UCB) to be overridden giving users access to their IP telephone from any location. By utilizing the override login function, users have the flexibility of logging into their IP Station in the office as well as remotely at the home office.

NAPT (Network Address Port Translation) - With **Version 3000 ~ Version 5000** system software, DT700 series terminals can be installed at remote locations, however Plug and Play is not supported. Some configuration in the **remote router is required**, and terminal firmware must be upgraded to **Version 3.0.0.0 or higher**.

 *Continue below for additional NAPT enhancements.*

When upgrading to **Version 3100 ~ Version 8000 (8.0)** software, four IP Terminal Basic licenses are provided. If a system with **Version 3000 (3.01 or lower)** is upgraded to **Version 3100 ~ Version 8000 (8.0)** software, the system gains four IP Terminal licenses as soon as it is upgraded.

With **Version 5.0.0.0 firmware**, the following features are supported.

- Link Layer Discovery Protocol (LLDP): Standard used to transmit and receive information about neighboring network devices using Layer 2 Multicast frames.
- XML Multi-Window Support – the multi-window service adds the following:
  - Multiple XML applications can be displayed and accessed through the NEC terminal XML menu.
  - Line key operation can be performed without closing the active XML application window.

Refer to the DT700 Resource manual for detailed information.

For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

With **Version 6000 or higher** the NAPT feature is enhanced. The remote side router may not require having port forwarding set up. However, due to the fact that many manufacturers are producing routers, port forwarding may still be needed. The **Version 3000 Enhancement** license is required for this feature and Program 15-05-45 must be enabled on a per station basis. This feature requires installation of a PZ-( )IPLB.

When installing the DT730G terminals (ITL-12CG-3 and ITL-12DG-3), **Version 7000 or higher** software is required.

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## Enhancements

When upgrading to **Version 8000 (8.01) or higher** software, four IP Terminal Advanced (5111) licenses are provided. If a system with **Version 3000 (3.01 or lower)** is upgraded to **Version 8000 (8.01) or higher** software, the system gains four IP Terminal Advanced (5111) licenses as soon as it is upgraded.

With **Version 9000 or higher** software, the NAPT feature is enhanced. Previously, when the DT700 connected to the system via NAPT, the intermediate router/firewall could possibly close the port due to inactivity for a period of time. The solution for this was to lower the Registration and Subscribe expiry timers. However, these timers were system wide and would affect all terminals (not just NAPT terminals), causing an increased network and CPU load. To correct for this issue, **Version 9000 or higher** added these timers on a per station basis. This way the NAPT terminals can lower the timers and not affect all of the Non NAPT terminals. No new licensing is required for this feature; all existing licenses are still required.

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## Description

The UNIVERGE SV8100 system supports IP extensions using a variety of multiline terminals. These telephones have the same look and functionality of typical multiline telephones, but they are connected to the CCPU via IP rather than by a hardwired connection to a DLC port.

The following DT700 IP multiline telephones (ITL) support IP extensions:

- ITL-2E-1 (BK) TEL
- ITL-6DE-1 (BK) TEL
- ITL-8LDE-1 (BK) TEL
- ITL-8LD-1 (BK) TEL/ITL-8LD-1 (WH) TEL
- ITL-12D-1 (BK) TEL/ITL-12D-1 (WH) TEL
- ITL-12CG-3 (BK) TEL – **Version 7000 or higher** CPU software required.
- ITL-12DG-3 (BK) TEL – **Version 7000 or higher** CPU software required.
- ITL-12PA-1 (BK) TEL
- ITL-24D-1 (BK) TEL/ITL-24D-1 (WH) TEL
- ITL-32D-1 (BK) TEL/ITL-32D-1 (WH) TEL
- ITL-320C-1 (BK) TEL

## IP to TDM Conversion

When an IP telephone calls a DT300 multiline telephone, a single line telephone or trunk, the speech must be converted from an IP to TDM (Time Division Multiplexing) technology. The PZ-32IPLA/IPLB, PZ-64IPLA/IPLB and PZ-128IPLA/IPLB daughter boards provide this function. Each PZ-32IPLA/IPLB, PZ-64IPLA/IPLB and PZ-128IPLA/IPLB has a number of DSP resources on the blade, each one can convert a speech channel from IP to TDM and vice versa. It is possible for DT700 IP telephones to talk directly to other DT700 IP telephones without using PZ-32IPLA/IPLB, PZ-64IPLA/IPLB and PZ-128IPLA/IPLB DSP resources.

## DT700 IP Multiline Telephones (ITL)

The IP multiline telephone operates the same way as a DT300 (DTL) digital multiline telephone. The DT700 has all of the features and flexibility you expect from a DT300 digital multiline telephone. The difference is that the DT700 IP telephone uses an RJ-45 for connection to the IP network, rather than an RJ-11 connection to a CD-8DLCA or CD-16DLCA.

## Power Save Adapter (PSA-L UNIT)

The Power Save Adapter is an add-on module for the IP (DT700) and digital (DT300) multiline telephones. The PSA-L UNIT allows connection to an analog trunk if the power or system connection were to fail, or the IP telephone loses connection to the UNIVERGE SV8100 system. No programming is required on the UNIVERGE SV8100 to support this adapter.

## Connecting to an IP Telephone

The Power Save Adapter connects to an analog PSTN (Public Switched Telephone Network) line. For example, at a small branch office this may be the same line that is used for faxes/modems/etc. The handset is also connected to the Power Save Adapter – You must unplug the handset from the IP telephone and reconnect it to the adapter. This allows the speech path to be redirected to the handset during network power failure.

## LAN Connection

The IP telephone has two RJ-45 connections on the back marked **PC** and **LAN**. This allows the IP telephone and a PC to share one cable run and switch port.

If installing an IP telephone at a location that has a PC connected to the data network, one of the following methods can be used:

- Using a different cable:
  - Leave the PC connected to the LAN.
  - Patch a switch port to the new cable run.
  - Connect a CAT 5 straight-through cable from the wall outlet to the **LAN** port on the IP telephone.
- Sharing the existing cable:
  - Unplug the cable from the PC Network Interface Card (NIC).

- Connect the cable to the **LAN** port on the IP telephone.
- Connect a new straight-through patch lead from the PC NIC to the **PC** port on the IP telephone.

### Powering the IP Telephone

Power can be provided to the IP telephone by one of the following methods:

#### Local Power

The IP telephone has a connector on the back for external power. This is supplied by an AC adapter that outputs +27VDC requiring a separate power outlet per IP telephone. Loss of power in the building will prevent the telephones from functioning.

 *Only use the NEC supplied power supply.*

#### Power over Ethernet (PoE)

The PoE switch (802.3 AF is only method supported) provides power over the spare pairs. The switch can be used with other devices than the IP telephones and detects whether or not power is needed. Using a PoE switch makes it easier to protect the IP telephones from loss of power (connection of the PoE switch to an UPS).

### LLDP

**Version 5.0.0.0 IP Phone firmware** added support for Link Layer Discover Protocol (LLDP) or IEEE 802.1AB is a vendor neutral Data link layer protocol used by network devices for advertising their identity, capabilities and interconnections on the IEEE 802 LAN network. LLDP performs functions similar to several proprietary protocols such as Cisco Discovery Protocol, Extreme Discovery protocol, Nortel Discovery Protocol (also known as SONMP) and Microsoft's Link Layer Topology Discover (LLTD). If enabled, the IP terminal takes longer to boot as it waits for an information packet. If no LLDP information is received within the RX Wait Time, the terminal continues a normal boot process.

This service supports the Link Layer Discovery Protocol (LLDP) standard and is used to transmit and receive **VLAN information ONLY** about neighboring network devices and IP Telephones. The following are a list of VLAN settings which can be received by the terminal during a LLDP session:

- LAN port Setting/ VLAN ID
- LAN port setting/VLAN Priority
- TOS Mode / RTP
- TOS mode /SIP

### Peer to Peer

An IP telephone can send and receive RTP packets to/from another IP telephone without using the DSP resources on the PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB Daughter Board. This operation only allows intercom calls between the IP telephones.



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If a DT700 IP multiline telephone, or trunk line is required, a DSP resource is needed and a PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB must be installed on the CPU. If, while on a peer to peer call, a conference call is initiated, the peer to peer connection is released and a new non peer to peer connection is created using the PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB. If the third party drops out of the conversation, the call reverts to a peer to peer call (silence may be heard while this conversion is made by the system).

Although the peer to peer feature is supported for IP Station-to-IP Station calls, the UNIVERGE SV8100 chassis must still have a registered PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB installed in the system.

With Barge-In, a short silence may be heard if the following occurs:

- A peer to peer call receives a Barge-In without a Barge-In tone.
- A peer to peer call receives a Barge-In with Monitor mode.
- When the established Barge-In is disconnected.
- Peer to peer is a programmable feature that may be enabled or disabled (Program 10-26-04).

### **System Tones and Ring Tones**

IP telephones do not use Program 80-01: Service Tone Setup entries. The tones are generated locally by the IP telephone. When a Door Box chime rings an IP telephone, the system activates the chimes using a ring command. Because of this, if the volume is adjusted while the door chime is sounding, the ringing volume of the IP telephone is also adjusted.

### **Music on Hold**

Music on Hold is also provided by the IP telephone. The settings in Program 10-04: Music on Hold Setup are ignored except to determine whether or not music should be provided. If Program 10-04-02 is set to **0**, music on hold is not heard. If Program 10-04-02 is set to **1** or **2**, music is provided by the IP telephone.

### **Registration Mode**

The SV8100 has three types of registration for IP terminals, Plug and Play, Automatic, and Manual programmed in 10-46-01:

- Plug and Play mode – when the phone boots up it reports the extension assigned in the phone or chooses the next available extension in the system. No password is required.
- Automatic mode – the SIP user name and password must be entered in the actual IP phone. The phone comes up as the extension associated with the user name and password is entered.

- ❑ Manual mode – when the phone boots up it prompts the user to enter a user ID and password before logging in. If a user ID and password are set in the SIP User settings of the phone, as with Automatic mode, the phone does not prompt for login. This allows some phones to come up automatically and some phones to prompt for login. In manual mode, the phones that do not have a user ID and password set in the phone are prompted to log in. A user can also logoff the IP phone to allow another user to login with their own user ID and password.

To logoff the IP phone:

*Press the **Down Arrow** Softkey, press the **Prog** Softkey, and then press the **LOGOFF** Softkey.*

## Multiple Logon

With **Version 3000 or higher** software, the same user name and password can be assigned to multiple extensions when using Automatic or Manual Registration. This makes it easier on the user by only having to remember one password. For example, if a user has an IP Multiline terminal, MH240 handset, and uses Desktop Applications with the Enhancement bundle controlling the IP Multiline, three different ports are used in the system. Prior to Version 3000, each IP port required a unique user name and password. With Version 3000 all three can be assigned the same user name and password.

## Registration Override

When Manual mode is used, Registration Override can be used. Registration Override allows a user to login at one phone, and later login at another phone and keep the same extension number. This is useful in the case where an office user has an IP multiline terminal at work and at home or a Softphone they use on the road. They log in at work to use the office terminal, and when they get home or are on the road they login the home terminal or Softphone. When this happens the office terminal is logged out and they have the same extension number at home or on the road.

Prior to Version 3000, Override was not supported in a SV8100 system that had a 3rd Party CTI connection to the CPU (i.e., Desktop Apps Shared Services, UCB) or to a terminal with a 1st Party CTI connection (i.e., Desktop Client and Softphone or 1st Party TAPI driver), and would show Rejected Override >>>CTI Link... in the display. With **Version 3000 or higher** software, Override with CTI is supported on a per station basis using Program 15-05-39 with certain restrictions.

## System IP Phones and Analog Trunks


Due to the nature of analog-to-digital conversion, considerable echo may be encountered when using Analog Trunks with IP Phones.

- ❑ Due to all Analog trunks being different, padding of the Analog Trunks in Programs 81-07 and 14-01 may be necessary. Even after the pad changes are made, an echo may still be present the first few seconds of the call while echo cancellers are learning the characteristics of the circuit on this call. With **Version 7000 and higher**, Program 90-68-01 can be used to automatically test the lines and auto assign the proper values in Program 81-07. It is recommended to use this program whenever analog trunks are involved.

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For best performance, it is recommended to use digital trunks when using IP phones.

 *Digital (ISDN, T-1, and SIP) trunks do not suffer from this problem.*

## Conditions

- The voice quality of VoIP depends on variables such as available bandwidth, network latency and Quality of Service (QoS) initiatives, all of which are controlled by the network and Internet service providers. Because these variables are not under its control, NEC cannot guarantee the performance of the user's IP-based remote voice solution. Therefore, NEC recommends connecting VoIP equipment through a local area network using a Private IP address.
- IP Multiline Stations must register with the IP address of the IPLA/IPLB. The IP Multiline stations registering via a URL is not supported.
- If an internal paging group has only IP Multiline Stations, multicast is used for the page. IP multiline terminals must have a gateway programmed to accomplish a multicast transmission. When an actual gateway device does not exist on the network, a dummy gateway address on the same subnet must be defined. If the paging group has any TDM stations or an external speaker, multicast is not used and the gateway is not required.
- The system sees terminal types 1 (Economy), 2 (Value), 3 (Desi-Less), 4 (Sophisticated) and 5 (Softphone) as the same terminal type.
- When using Multiple Logon, the same Personal ID index can be assigned to an ITL/Softphone, a CTI (Desktop), and an MH240 terminal type.
- Two ports of the same terminal type (Program 15-05-26) cannot be assigned to the same Personal ID index (Program 15-05-27).
- Program 10-46-01 must be set to 1 (Auto) or 2 (Manual) for Multiple Logon to work.
- When three ports are assigned the same Personal ID index in Program 15-05-27, if Program 15-05-26 is not set for those ports, the terminal types will be assigned based on order of login. If Program 15-05-26 is set, the login order does not matter and they will assign the correct port.
- The Override feature functions the same as single login.
- With **Version 4000 or higher** software, DT700 terminals and wireless IP terminals utilizing NAPT can be registered to the primary or a secondary system. Refer to the feature [SV8100 NetLink on page 2-1489](#) for additional details.
- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

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- When upgrading to **Version 3100 ~ Version 8000 (8.0)** software, four IP Terminal Basic licenses are provided. If a system with **Version 3000 (3.01 or lower)** is upgraded to **Version 3100 ~ Version 8000 (8.0)** software, the system gains four IP Terminal licenses as soon as it is upgraded.
  - When upgrading to **Version 8000 (8.01) or higher** software, four IP Terminal Advanced (5111) licenses are provided. If a system with **Version 3000 (3.01 or lower)** is upgraded to **Version 8000 (8.01) or higher** software, the system gains four IP Terminal Advanced (5111) licenses as soon as it is upgraded.
  - When downloading firmware for DT700 and the ITL-12CG/ITL-12DG terminals, the following apply:
    - ❑ **Version 7000** software – if you have both ITL-12CG/ITL-12DG and previously installed DT700 series terminals, firmware updates must be downloaded separately.
    - ❑ **Version 8000** software – firmware for both (previously installed DT700 and ITL-12CG/ITL-12DG terminals) can be downloaded at the same time.

## Restrictions

- When using DT700 IP phones, assigning the following features to a large number of phones (30 or more) is not recommended:
  - ❑ The same Trunk Line assignment (squared key system)
  - ❑ The same Virtual Extension assignment
  - ❑ Paging key with LED ON assignment
  - ❑ The same location Park key
  - ❑ The same location CAP key
  - ❑ The same BLF key assignment
  - ❑ Day Night Mode Change key assignment
  - ❑ The same VM Mail Box key assignment
  - ❑ Trunk Group key
  - ❑ Trunk Group All Line Busy Indication
- An SIP multiline terminal can override another SIP multiline terminal or a Softphone.
- A Softphone can override another Softphone or an SIP multiline terminal.
- Override does not support SIP multiline terminal with DSS console or Softphone with DSS Console.
- When using Override with an active CTI connection, Program 15-05-39 must be enabled for the extensions that will be overridden. The overriding terminal must be of the same type and number of line keys as the terminal to be overridden. If the types of terminals and number of keys are different between overriding and overridden phones, the Telephony Service Providers (1st Party and 3rd Party) may not function properly.

## Default Setting

None

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## System Availability

### Terminals

All IP Multiline Terminals

### Required Software

None

### Required Component(s)

CPU with PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB Daughter Board installed

## NAPT Traversal


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### Description


NAPT (**N**etwork **A**ddress **P**ort **T**ranslation), is a method by which a private address or addresses and their TCP/UDP ports are translated into a single public address and its TCP/UDP ports. The NAPT feature gives the SV8100 the ability to “traverse” its own subnet. With NAPT, the network administrator can place the CD-CP00-US and the IPLA/IPLB (VoIPDB) in the customers LAN while still making it accessible to users outside the local LAN. The NAPT Feature also allows the IP terminals to be placed in a local LAN in a remote network and be able to communicate back to the SV8100.

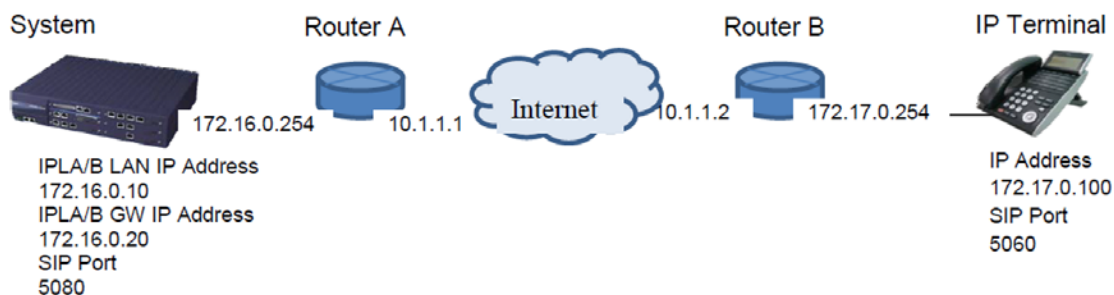
With **Version 3000 ~ Version 5000** software, Port forwarding statements are required in the router that the SV8100 resides behind as well as the router that the IP terminal/terminals resides behind. A PZ-( )IPLA or PZ-( )IPLB can be used for NAPT transversal. Refer to the SV8100 Networking Manual for detailed installation instructions on this feature.

With **Version 6000 or higher** software, improvements have been made to the NAPT feature. The router that the SV8100 resides behind still requires Port Forwarding statements. However the router that the IP terminal/terminals reside behind may not require any port forwarding. This feature is only available when using a PZ-( )IPLB (IPLA does not support this feature). Due to the fact that there are many manufacturers producing routers there may still be times when port forwarding is required. Refer to the SV8100 Networking Manual for detailed installation instructions on this feature.

 In all software versions, SIP ALG's (Application Level Gateway) or other SIP Applications **MUST** be disabled in all routers. If a SIP ALG or a similar SIP application is enabled, IP phone service **WILL** be interrupted.

With **Version 6000 or higher** software installed, the new NAPT feature is only effective when Program15-05-45 is set "1" (On). Refer to [Figure 2-20 Example – NAT Traversal](#) or an examples of the NAT Traversal network. [Table 2-40 Example – Required System Settings](#) and [Table 2-41 Example – Required IP Terminal Settings](#) on page 2-777 provide examples of required system and IP terminal settings. Refer to [Table 2-42 Example – SV8100 System Router A Port Forwarding Settings](#) on page 2-777 for Port Forwarding setting examples.

 Actual input data should be set according to the required system.



**Figure 2-20 Example – NAT Traversal**

**Table 2-40 Example – Required System Settings**

Index	Program	Default	Input Data	Remark
1	10-12-03	0.0.0.0	172.16.0.254	LAN IP address of Router A
2	10-12-07	0.0.0.0	10.1.1.1	WAN IP address of Router A
3	10-12-09	172.16.0.10	172.16.0.10	LAN IP address of VOIPDB
4	10-12-10	255.255.0.0	255.255.0.0	Subnet Mask of VOIPDB
5	10-46-14	0:OFF	1:ON	NAT Mode

**Table 2-40 Example – Required System Settings (Continued)**


Index	Program	Default	Input Data	Remark
6	15-05-45	0:OFF	1:ON	NAT RTP send port choice ( <b>Version 6000 or higher</b> required)
7	84-26-01	172.16.0.20	172.16.0.20	VOIP DSP IP Address

**Table 2-41 Example – Required IP Terminal Settings**

Index	Name	Default	Input Data
1	IP Address	0.0.0.0	172.17.0.100
2	Default Gateway	0.0.0.0	172.17.0.254
3	Subnet Mask	0.0.0.0	255.255.0.0
4	NAT Traversal Mode	1: Disable	2: Dynamic
5	WAN Mate IP Address	0.0.0.0	10.1.1.1
6	WAN SIP Mate Port	5060	5080

**Table 2-42 Example – SV8100 System Router A Port Forwarding Settings**

Port	IP Address Port is Forwarded To	Remarks
5080 (UDP)	172.16.0.10	Signaling port and must be forwarded to the IP Address assigned in Program 10-12-09.
5081 (UDP)	172.16.0.10	Secondary signaling port and must be forwarded to the IP Address assigned in Program 10-12-09.
10020 ~ 10083 (UDP)	172.16.0.20	Voice ports and must be forwarded to the IP Address assigned in Program 84-26-01.

 Port forwarding does not need to be assigned at the Remote Terminal location.

With **Version 9000 or higher** software, improvements have been made to the NAPT Feature. Previously, when the DT700 connected to the system via NAPT, the intermediate router/firewall could possibly close the port due to inactivity for a period of time. The solution for this was to lower the Registration and Subscribe expiry timers. However, these timers were system wide and would affect all terminals (not just NAPT terminals), causing an increased network and CPU load. To correct for this issue, **Version 9000 or higher** added these timers on a per station basis. This way the NAPT terminals can lower the timers and not affect all the Non NAPT terminals. No new licensing is required for this feature; all existing licenses are still required.

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## Conditions

- The router the SV8100 resides behind requires Port Forwarding statements.
- With **Version 6000 or higher** software, when Program 15-05-45 is set to “1” the manual table setting for port forwarding may not be required on the remote side Router B, but the router must support the NAT function setting itself. If Program 15-05-45 is set to “0” port forwarding at the Remote side router is required. This feature requires installation of a PZ-( )IPLB.
- With **Version 8000 or lower** software, the router may close the port being used if packet exchange is not performed during a certain time frame. In this occurs, change Program 84-23-01 and Program 84-23-02 to a shorter interval. With **Version 9000 or higher** software, change Programs 15-05-47 and 15-05-48 to a shorter interval. These programs are changed on a per station basis. Non NAPT phones will still use Programs 84-23-01 and 84-23-02 while only NAPT phones will use Programs 15-05-47 and 15-05-48.
- The SIP-ALG or similar SIP application function of all routers in the network **must** be disabled.
- The SV8100 Desktop Application does not support Network Address Translation (NAPT). If a user would like to connect the Desktop Application through an Internet Connection the use of a VPN is required.
- If excessive packet loss occurs on the network, IP phones will play a warning tone during conversations. To disable this tone set Program 15-05-31 to “0”.
- Multicast RTP is not supported.
- Peer to Peer is only possible on IP terminals within the same router.
- NAPT is only supported for NEC DT700 IP terminals. All other third party SIP terminals are **not** supported by this feature.
- After starting SIP negotiation for the call, if any RTP packet can't be received from the terminal within 10 seconds, the call is dropped and the IP Terminal displays the following:

```
1-4 FRI 8:53PM
Can' t send RTP packets
List Dir ICM Prog
```

- With **Version 9000 or higher** software, each NAPT terminal can have a separate Register and Subscribe expire timer. The load of the CPU will increase with each NAPT terminal using a short timer. Refer to [Table 2-43 NAPT Terminals – Minimum Timer Settings on page 2-779](#) to view the minimum timer settings based on the number of NAPT terminals using Programs 15-05-47 and 15-05-48.



**Table 2-43 NAPT Terminals – Minimum Timer Settings**

Program Number	Number of DT700 Terminals Using Programs 15-05-47 and 15-05-48			
	1 ~ 144 (terminals)	145 ~ 192 (terminals)	193 ~ 464 (terminals)	465 ~ 512 (terminals)
15-05-47 (minimum setting)	60 seconds	90 seconds	180 seconds	180 seconds
15-05-48 (minimum setting)	60 seconds	90 seconds	180 seconds	180 seconds

### Default Setting

None

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## System Availability

### Terminals

DT700 V3.0.0.0 or higher

### Required Software

Version 3000 or higher

### Required Component(s)

- PZ-32 IPLB, PZ-64 IPLB or PZ-128 IPLB Daughter Board installed
- LK-SYS-V3000 Enhancements-LIC or higher (US)
- LK-SYS-NAPT-LIC (Other)

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## Related Features


None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.




- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


### IP Multiline Station (SIP):

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	Assign the IP Address for the CPU NIC card. When an IPLA/IPLB card is installed in the system, it is recommended to set this Program to <b>0.0.0.0</b> .	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.  <i>The IP Address assigned in Program 10-12-01 cannot start with the same leading digits as the IP Address assigned here.</i>	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Set the subnet mask of the IPLA.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
10-26-04	IP System Operation Setup - DT700 Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.	0 = Off 1 = On (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-46-01	<b>DT700 Server Information Setup – Register Mode</b>	<p>Normal mode: When the phone boots up, it reports the ext. assigned in the phone or chooses the next available extension in the system. No password is required.</p> <p>Auto mode: If set to Auto, the SIP user name and password must be entered in the actual IP phone. These settings must match 84-22/15-05-27, for the phone to come on-line.</p> <p>Manual mode: When the phone boots up it prompts a user to enter a user ID and password before logging in. It checks the user ID/password against 84-22/15-05-27. If there is no match, the phone does not come on-line.</p>	0 = Normal 1 = Auto 2 = Manual (default = 0)		✓	
15-05-15	<b>IP Telephone Terminal Basic Data Setup – CODEC Type</b>	Set the registered IP Phone Codec type – Reference Program 84-24 DT700 Codec Basic Information.	1-Type 1 2-Type 2 3-Type 3 4-Type 4 5-Type 5 (default = 1)	✓		
15-05-26	<b>IP Telephone Terminal Basic Data Setup – DT700 Terminal Type</b>	Set the DT700 series terminal type.	0 = Not Set 1 = ITL-( )E-1D/IP-( )E-1 2 = ITL-( )D-1D/ITL-12BT-1D/ITL-12PA-1D [without 8LKI(LCD)-L] 3 = ITL-( )D-1D/ITL-12BT-1D/ITL-12PA-1D [with 8LKI(LCD)-L] 4 = ITL-320C-1 5 = Softphone 6 = CTI 7 = AGW 10 = ITL-12DG-3 11 = ITL-12CG-3 12 = ITL-0-1 (default = 0)			✓
15-05-39	<b>IP Telephone Terminal Basic Data Setup – CTI Override Mode</b>	Enable/Disable the ability of a station to be overridden when CTI is active.	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-10-01	ToS Setup – ToS Mode	When Input Data is set to 1, Protocol 7 is invalid. When Data is set to 2, Protocols 2~6 are invalid.	0 = Disable (Invalid) 1 = IP Precedence 2 = Diffserv (default = 0)		✓	
84-10-07	ToS Setup – Priority (D.S.C.P. - Differentiated Services Code Point)	DSCP (Differentiated Services Code Point).	0~63 (default = 0)		✓	
84-22-01	DT700 Multiline Logon Information Setup – User ID	Input the User ID for each Personal ID Index (1-512) when using auto or manual registration in 10-46-01.  <i>IP multiline terminals only support numerical user IDs, not alphanumeric.</i>	Up to 32 characters (default not assigned)		✓	
84-22-02	DT700 Multiline Logon Information Setup – Password	Input the Password for each Personal ID Index (1-512) when using manual or auto registration in 10-46-01.	Up to 16 characters (default not assigned)		✓	
84-22-03	DT700 Multiline Logon Information Setup – User ID Omission	Enable/Disable User ID Omission.  <i>Used when the registration mode (10-46-01) is set to manual. When the phone prompts for a login, the previous user ID appears so the user only has to enter the password.</i>	0 = Off 1 = On (default = 0)		✓	
84-22-04	DT700 Multiline Logon Information Setup – Log Off	When the registration mode (10-46-01) is set to manual, and the phone prompts for a login, the previous user ID appears so the user only has to enter the password. When enabled, the extension assigned to the Personal ID Index can be logged off or overridden by another IP multiline station or Softphone.  <i>In Manual mode a user can also logoff the IP phone to allow another user to login with their own user ID and password. To logoff the IP phone: Press the <b>Down Arrow</b> Softkey, press the <b>Prog</b> Softkey, and then press the <b>LOGOFF</b> Softkey.</i>	0 = Off 1 = On (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-22-05	<b>DT700 Multiline Logon Information Setup – Nick Name</b>	Input the Personal ID from terminal automatically when log on again.	Up to 32 characters (default not assigned)		✓	
84-24-28	<b>DT700 Multiline CODEC Basic Information Setup – Audio Capability Priority</b>	Assign the CODEC for the NEC DT700 IP Phone	0 = G.711 1 = G.729 2 = G.722 (default = 0)		✓	
84-26-01	<b>IPL Basic Setup – IP Address</b>	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW 1~8: 172.16.0.20~ 172.16.0.27	✓		
84-26-02	<b>IPL Basic Setup – RTP Port Number</b>	Assign the RTP port number to be used for each DSP on the IPLA/IPLB.  Only even numbered ports are supported.	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244	✓		

### IP Multiline Station (SIP) with NAPT:




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	<b>CD-CP00-US Network Setup – IP Address</b>	Assign the IP Address for the CPU NIC card. When an IPLA/IPLB card is installed in the system, it is recommended to set this Program to <b>0.0.0.0</b> .	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		
10-12-03	<b>CD-CP00-US Network Setup – Default Gateway</b>	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-07	CD-CP00-US Network Setup – NAPT Router IP Address (Default Gateway [WAN])	Assign the WAN address of the router that the CCPU is using for NAT.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB. <i>The IP Address assigned in Program 10-12-01 cannot start with the same leading digits as the IP Address assigned here.</i>	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Set the subnet mask of the IPLA/ IPLB.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-46-06	<b>DT700 Server Information Setup – Register Mode</b>	Assign the port number in which the SIP messages are sent on the IPLA/IPLB. This same port number must be assigned in the SIP multiline terminals. If this command is changed, it requires a CPU <b>reset</b> .	0~65535 (default = 5080)		✓	
10-46-13	<b>DT700 Server Information Setup – Subscribe Session Port</b>	Assign the port number to be used for subscription messages between the SV8100 and the DT700 terminals.	0~65535 (default = 5081)		✓	
10-46-14	<b>DT700 Server Information Setup – NAT Mode</b>	Turns On/Off the DT700 NAT mode of the system.	0 = Off 1 = On (default = 0)	✓		
10-58-01	<b>Network Address – Network Address</b>	<p>This program sets the IP or Network address for phones that are not to be routed through the NAPT translations.</p> <p>For example, if a system had multiple NAPT phones and another site, with multiple IP phones connected via a VPN connection, you would not want the phones connected over the VPN to use the NAPT feature. The network address (or single IP phone addresses) of the Remote location would be entered here. This is for the IP Phones at this location to not use the NAPT feature.</p>	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-58-02	Network Address – Subnet Mask	This program sets the netmask for the IP Addresses assigned in Program 10-58-01.	128.0.0.0 / 192.0.0.0 224.0.0.0 / 240.0.0.0 248.0.0.0 / 252.0.0.0 254.0.0.0 / 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)		✓	
15-05-45	IP Telephone Terminal Basic Data Setup – NAT Plug and Play	This program is valid when Program 10-46-14 is On (NAT feature activated). Select sending RTP port number to remote Router, use from negotiation result (0) or received RTP packet (1). SV8100 uses this program to decide a destination port of RTP transmitting packets from IPLB to a remote IP terminal. If "0:OFF" is selected, the destination port of RTP transmitting packets will be a SIP/SDP negotiation result.(same behavior as before). If you chose "1:ON", the destination port of RTP transmitting packet will be the same port of a source port of a receiving RTP packet on IPLB.	0 = Disable 1 = Enable (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-05-47	<b>IP Telephone Terminal Basic Data Setup – Registration Expire Timer for NAPT</b>	On a per station basis, this setting defines the SIP registration expiry timer. This setting only applies to DT700 stations connected via NAPT. If this value is set to 0, for a NAPT terminal, the value in Program 84-23-01 is applied.  <i>Version 9000 or higher required.</i>	0 = Disable 60~65535 (sec) (default = 180)		✓	
15-05-48	<b>IP Telephone Terminal Basic Data Setup – Subscribe Expire Timer for NAPT</b>	On a per station basis, this setting defines the SIP Subscribe expiry timer. This setting only applies to DT700 stations connected via NAPT. If this value is set to 0, for a NAPT terminal, the value in Program 84-23-02 is applied.  <i>Version 9000 or higher required.</i>	0 = Disable 60~65535 (sec) (default = 180)		✓	
84-26-01	<b>IPL Basic Setup – IP Address</b>	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW 1~8: 172.16.0.20~ 172.16.0.27	✓		
84-26-02	<b>IPL Basic Setup – RTP Port Number</b>	Assign the RTP port number to be used for each DSP on the IPLA/IPLB.  <i>Only even numbered ports are supported.</i>	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244		✓	
84-26-03	<b>IPL Basic Setup – RTCP Port Number (RTP Port Number + 1)</b>	Define the TCP port number for RTCP to use for each DSP.	0~65534 Defaults: VoIP GW1 = 10021 VoIP GW2 = 10053 VoIP GW3 = 10085 VoIP GW4 = 10117 VoIP GW5 = 10149 VoIP GW6 = 10181 VoIP GW7 = 10213 VoIP GW8 = 10245		✓	

In addition to the above programming, define the programming options as required for the system features. Refer to the UNIVERGE SV8100 Programming Manual and the UNIVERGE SV8100 Networking Manual for programming details.

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## **Operation**

Refer to the UNIVERGE SV8100 Networking Manual for detailed feature information.

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## *IP Multiline Station (SIP) – ML440 Cordless*

### Description

Many SMB businesses, understanding the impact of a mobile workforce, are rapidly defining their requirements for enabling effective communications and information access for mobile users. SMB Mobility will allow the individual staff member to be instantly accessible- thus becoming more productive.

The ML440 IP Wireless Handset is an ergonomically designed compact wireless handset for business users who are mobile in the office and want to make and receive wireless calls while in the office. The DECT protocol operates in the 1.9 GHz frequency band that has been cleared specifically for voice applications, thus avoiding any interference problems and delivering crystal clear and secure voice conversations.

The ML440 provides numerous features and conveniences for optimal comfort. Its illuminated graphic color LCD display enables use in poorly lit environments, while its internal loudspeaker provides Handsfree operation with excellent sound quality. Powerful encryption techniques ensure secure communication, and it can also provide the subscriber with most of the features available for a wired phone, in addition to its roaming and handover capabilities.

Unlike other in-building wireless solutions for the SV8100, the ML440 is an integrated multiline handset capable of supporting the key elements of a SMB mobile solution. A complete list of supported features can be found below.

### Basic Operation

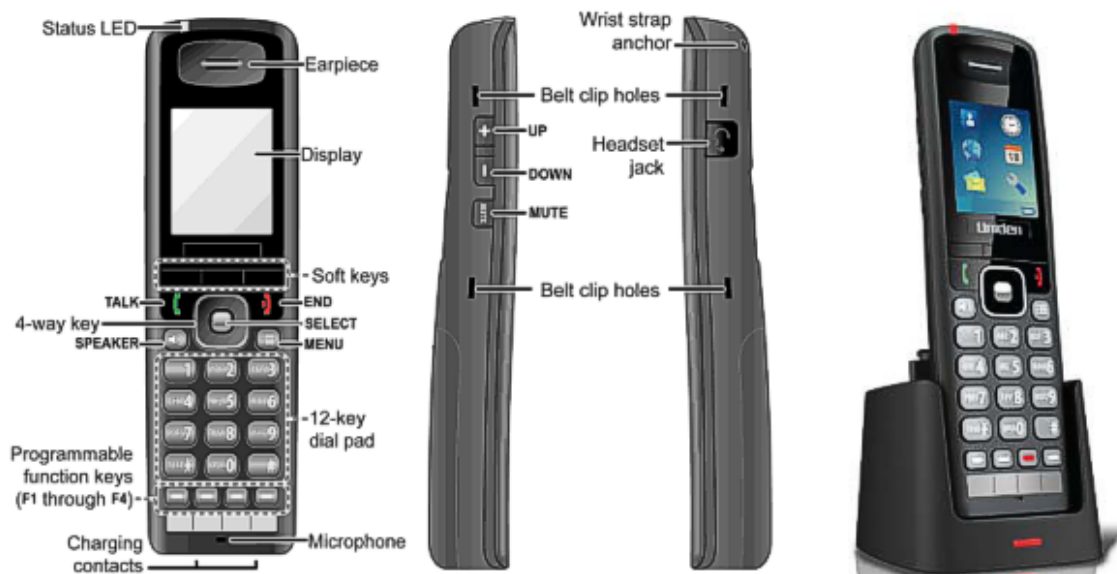


Figure 2-21 ML440 Cordless Handset

The ML440 has two sets of keys:

- Three soft keys that are dedicated depending on the state of the call and four programmable keys. The three dedicated soft keys are predefined depending on the state of the call. For example once a person is in conversation, these three keys are Hold / Conf./ Transfer. This makes it easy for end users to receive and move calls around.
- Four programmable keys on the base on the handset. The keys can be programmed for many of the same features that are supported on the DT7XXX desk sets.

Line key programming is flexible. The following is an example for the first three programmable keys:

- Line Keys 1 and 2 = CAP Keys
- Line Key 3 = Intercom Key

### Powering the AP20

The AP20 can only be powered using Power over Ethernet (PoE) 802.3af.

A PoE switch is a switched hub that also provides power over the spare pairs. The switch can be used with other devices than the IP telephones and detects whether or not power is needed. Using a PoE switch makes it easier to protect the IP telephones from loss of power (connection of the PoE switch to an UPS).

### Updating the AP20 and ML440 System Firmware

The firmware on base stations and handsets is updated remotely using the HTTP configuration interface to download firmware files from a TFTP server. Updating base station firmware involves an automatic reboot of the base station at the end of the firmware download. This will drop any active calls and in addition updating the handset firmware can take several hours. It is recommended updates are performed after normal business hours. Refer to the ML440 and AP20 System Installation Guide for detailed information.

### Handset Features

Local Features	ML440
Calling name/number, call logging	Yes
Programmable keys	Yes up to 4
Talk time/standby	20/220
Handset LCD display	262K TFT type Color LCD w/backlight. 176 x 220 pixel display
Built-in vibrator	Yes
Speakerphone mode	Yes
Bluetooth headset	No

Local Features	ML440
Headset	Yes
Backlit for keys	Yes
Volume key up/down	Yes
Mute key	Yes
Soft keys based on status call	Yes <input type="radio"/> Hold <input type="radio"/> Conference <input type="radio"/> Transfer
Centralized Directory	Yes

### Supported System Feature List

Feature Name	ML440	Comment
Account Code – Forced Verified/Unverified	Yes	
Account Code Entry	Yes	
Alarm	Yes	There is a system and ML-440 alarm available
Alarm Reports	N/A	
Alphanumeric Display	Yes	
Analog Communications Interface (ACI)	N/A	
Ancillary Device Connection	N/A	
Answer Hold	No	
Answer Key	N/A	
Applications	N/A	
Attendant Call Queuing	No	
Automatic Call Distribution (ACD)	Yes	
Automatic Release	N/A	
Automatic Route Selection	Yes	
Background Music	No	
Barge-In	Yes	Can monitor but cannot use the microphone toggle feature. The handset mute button is the only way to mute audio from handset during monitoring.
Call Appearance (CAP) Keys	Yes	
Call Arrival (CAR) Keys	Yes	
Call Duration Timer	No	
Call Forwarding	Yes	Can be programmed in 24-09-xx, through feature code from administrator desk set and from the phone using dial access codes.

Feature Name	ML440	Comment
Call Forwarding – Centrex	Yes	
Call Forwarding with Follow Me	Yes	
Call Forwarding with Park and Page	Yes	No recording beep is provided to handset user when setting up greetings.
Call Forwarding, All, BNA, Busy and Both Ring	Yes	Can be programmed in 24-09-xx, through feature code from administrator desk set and from the ML-440 using dial access codes.
Call Forwarding, Off-Premise	Yes	Can be programmed in 24-09-xx, through feature code from administrator desk set and from the ML-440 using dial access codes.
Call Forwarding/Do Not Disturb Override	Yes	
Call Monitoring	Yes	Can monitor but cannot use the microphone toggle feature. The handset mute button is the only way to mute audio from handset during monitoring.
Call Queuing	Yes	
Call Redirect	No	
Call Transfer	Yes	Supervised and Unsupervised.
Call Waiting/Camp-On	Yes	
Callback	Yes	
Caller ID	Yes	
Caller ID Return	Yes	
Central Office Calls, Answering	Yes	
Central Office Calls, Placing	Yes	
Class of Service	Yes	
Clock/Calendar Display	Yes	
CO Message Waiting Indication	No	
Code Restriction	Yes	
Code Restriction Override	Yes	
Code Restriction, Dial Block	Yes	No confirmation tone is heard on ML-440.
Computer Telephony Integration	No	
Conference Calls	Yes	
Conference, Voice Call/Privacy Release	Yes	
Cordless Telephone Connection	N/A	
Data Line Security	Yes	
Delayed Ringing	Yes	
Department Calling	Yes	
Department Step Calling	Yes	



Feature Name	ML440	Comment
DeskTop Suite	No	
Dial Pad Confirmation Tone	No	
Dial Tone Detection	No	
Dialing Number Preview	No	This is a function of the ML-440 Handset.
Dialing Inward Dialing (DID)	Yes	
Direct Inward Line (DIL)	Yes	
Direct Inward System Access (DISA)	N/A	
Direct Station Selection (DSS) Console	No	A DSS Console cannot be associated with a ML-440 Handset
Directed Call Pickup	Yes	
Directory Dialing	No	This is a function of the ML-440 Handset.
Distinctive Ringing, Tones and Flash Patterns	No	Ring tones can be changed on the ML-440 Handset only.
Do Not Disturb	Yes	Do Not Disturb (DND) can be set from the ML-440 using dial access codes or a function key.
Door Box	Yes	Door Box will not ring a ML-440 phone but will flash the large LED. A ML-440 can call a door box but cannot activate a relay to open the door.
Drop Key	Yes	
E911/911	Yes	
Electra Elite Terminal Migration	N/A	
Facsimile CO Branch Connection	N/A	
Flash	No	
Flexible System Numbering	Yes	
Flexible Timeouts	Yes	
Forced Trunk Disconnect	No	
Group Call Pickup	Yes	
Group Listen	No	
Hands free	No	This is a function of the ML-440 Handset.
Hands free Answerback/Forced Intercom	No	
Handset Mute	No	This is a function of the ML-440 Handset.
Headset Operation	No	This is a function of the ML-440 Handset.
Hold	Yes	
Hotel/Motel	No	
Hotline	Yes	
Howler Tone Service	No	

Feature Name	ML440	Comment
Intercom	Yes	
IP Multiline Station (SIP)	Yes	
IP Trunk – (SIP) Session Initiation Protocol	N/A	
IP Trunk – H.323	Yes	
ISDN Compatibility	Yes	
K-CCIS – IP	Yes	
K-CCIS – T1	Yes	
Last Number Redial	No	Call Redial function is a function of the ML-440 Handset.
Line Preference	No	
Long Conversation Cutoff	Yes	
Meet Me Conference	Yes	Can initiate a Meet Me Conference but cannot receive internal pages to join an Internal Meet Me Page.
Meet Me Paging	Yes	Can initiate a Meet Me Paging but cannot receive internal pages to respond to an Internal Meet Me Page.
Meet Me Paging Transfer	Yes	Can initiate a Meet Me Paging but cannot receive internal pages to respond to an Internal Meet Me Transfer Page.
Memo Dial	No	
Message Waiting Indication (MWI)	Yes	Only supports voice mail MWI.
Microphone Cutoff	Yes	This is a function of the ML-440 Handset.
Multiple Trunk Types	Yes	
Music on Hold	No	Callers to a ML440 hear SV8100 MOH. Calls made from ML440 handsets do not hear MOH.
Name Storing	No	
Netlink	Yes	
Night Service	No	
Off-Hook Signaling	No	
Off-Premise Extension	N/A	
One-Touch Calling	Yes	Must press Line Key then go Off-hook on ML-440 for stored number to be dialed.
Operator	No	A ML-440 should not be used as an operator phone.
Paging, External	Yes	A ML-440 can only initiate an Internal, External or All Call Page. It cannot receive either Internal or All Call pages or display page information.

Feature Name	ML440	Comment
Paging, Internal	Yes	A ML-440 can only initiate an Internal, External or All Call Page. It cannot receive either Internal or All Call pages or display page information.
Park	Yes	
PBX Compatibility	Yes	
PC Programming	Yes	
Personal Park	Yes	
Power Failure Transfer	No	
Prime Line Selection	Yes	Prime Line Selection can be assigned for a ML-440 however, when this is done the phone cannot access ICM dial tone. In addition the ML-440 does not follow program 20-08-21 settings.
Private Line	Yes	
Programmable Function Keys	Yes	
Programming from a Multiline Terminal	No	
Pulse to Tone Conversion	No	
Quick Transfer to Voice Mail	Yes	
Repeat Redial	No	
Reverse Voice Over	No	
Ring down Extension, Internal/External	Yes	A ML-440 can be a ring down destination but cannot originate a ring down call.
Ring Groups	Yes	
Room Monitor	No	A ML-440 can be monitored but cannot monitor other extensions.
Save Number Dialed	Yes	
Secondary Incoming Extension	Yes	
Secretary Call (Buzzer)	Yes	
Secretary Call Pickup	Yes	Voice announcement is not supported on ML-440 Handset
Selectable Display Messaging	Yes	
Selectable Ring Tones	No	Selectable Ring Tones is a function of the ML-440 and not the phone system.
Serial Call	Yes	
Single Line Telephones, Analog 500/2500 sets	N/A	
SLT Adapter	N/A	
SMB8000 Interactive Voice Response	Yes	
SMB8000 Conference Bridge	Yes	

Feature Name	ML440	Comment
Softkeys	No	ML-440 Handset Softkeys are fixed and do not follow SV8100 Softkey settings.
Speed Dial – Group	Yes	Group speed dial bins are only available using function line key (28).
Speed Dial – System	No	
Speed Dial – Station	No	
Station Hunt	Yes	
Station Message Detail Recording	Yes	
Station Name Assignment – User Programmable	Yes	ML-440 Handset power must be cycled for change to show on handset.
Station Relocation	Yes	No confirmation tone is heard. ML-440 Handset must have the power cycled to re-register with the AP20 base unit.
SV8100 Communications Analyst Enterprise	Yes	
SV8100 UC Desktop Suite Applications	No	
SV8100 PoE Gigabit Switch	Yes	
SV8100/SV8300 Terminals	N/A	
Synchronous Ringing	No	
T1 Trunking (with ANI/DNIS Compatibility)	Yes	
Tandem Ringing	No	
Tandem Trunking (Unsupervised Conference)	Yes	
TAPI Compatibility	No	
Tone Override	Yes	
Traffic Reports	No	
Transfer	Yes	
Trunk Group Routing	Yes	
Trunk Groups	Yes	
Trunk Queuing/Camp-On	No	
UCB (Unified Communications for Business)	No	<ol style="list-style-type: none"> <li>1. ML440 cannot be an Agent.</li> <li>2. ML440 cannot be used as a primary extension in Desktop or Executive Insight.</li> <li>3. ML440 can be used with UCB voice mail features.</li> </ol>
UM8000	Yes	Voice mail softkeys are not provided to the ML-440 Handset.
Uniform Call Distribution UCD)	Yes	
Uniform Numbering Network	Yes	
User Programming Ability	Yes	

Feature Name	ML440	Comment
Virtual Extension	Yes	
VM8000 InMail	Yes	Voice mail softkeys are not provided to the ML-440 Handset.
Voice Mail Integration (Analog)	Yes	
Voice Over	Yes	ML-440 can initiate voice over but cannot respond to voice from another extension.
Voice Over Internet Protocol (VoIP)	Yes	By nature, this is a SIP device.
Voice Response System (VRS) – Call	Yes	
Volume Controls	No	Volume control is a function of the ML-440 Handset and not the phone system.

### Conditions

- The ML440 requires SV8100 **Version 7000 or higher** system software.
- The maximum number of ML440 Handsets that can register to one AP20 Access Point is 30.
- The maximum number of ML440 Handsets supported in one SV8100 system is 200.
- The maximum number of AP20 Access Points supported on one SV8100 is 40.
- In a multi-cell system each AP20 supports a maximum of eight simultaneous voice paths.
- The ML440 does not support voice announce calls. If the SV8100 is set to voice in Program 20-02-12, each phone should dial use access code 723 to set the phone to ring on internal calls. The ML440 should also be put in their own class of service with Program 20-08-11 enabled.
- In a single base (AP20) system the AP20 supports a maximum of 10 simultaneous voice paths.
- The ML440 and AP20 system uses NEC i-SIP for SV8100.
- The ML440 and AP20 system supports the G.711 CODEC only.
- The ML440 Handset and AP20 Access Point are not supported in UX5000 or UX5000 Migration systems.
- The ML440 Handset and AP20 Access Point do not support peer to peer operation.
- The ML440 Handset does not support the Live Monitor feature.
- The line keys on the ML440 correspond to Line Keys 1-4 in Program 15-07-01 for that phones extension.
- The three dedicated soft keys are predefined depending on the state of the call.

- The ML440 will follow the ring no answer timing whenever the ML440 handset either is turned off or is out of range of an AP20.
- The SV8100 requires one IP Terminal license (5101) per ML440 handset.
- The ML440 and AP20 system software is upgraded over-the-air direct to handsets and access points.
- The AP20 can only be powered using Power over Ethernet (PoE) 802.3af.
- The ML440 and AP20 system supports seamless roaming between Base Units.
- The ML440 and AP20 system are not supported for use with UCB (Unified Communications for Business) and DeskTop Suite.
- The ML440 and AP20 system cannot be used on multiple SIP servers at the same time.
- NAT or NAPT is only supported on the DT700 series phones. NAT or NAPT is not supported on the ML440, MH240, the Wireless DECT (SIP), SP310 or third party SIP phones.
- For CID to appear in the call log of the ML440 for all trunk types, Programs 15-02-13 and 15-02-34 must be set for Extension/Trunk. Also, Program 15-05-28 must be set to On for the ML440 extensions.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

ML440 Handset

### **Required Component(s)**

AP20 Base Unit

SV8100 License IP Terminal Basic (5101)

SV8100 Version 7000 or higher system software

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## Related Features

### Call Appearance (CAP) Keys

### Intercom

### IP Multiline Station (SIP)

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## Guide to Feature Programming




The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	Assign the IP address.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)		✓	
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Set the subnet mask of the IPLA/ IPLB.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
10-13-01	DHCP Server Mode	Enable/Disable the built-in DHCP Server.	0 = Disable 1 = Enable (default = 0)		✓	
10-13-02	Lease Time	Lease time of the IP address to a client. Press the Transfer Key to increment to the next setting data.	Days 0~255 Hour 0~23  Default: 0 day 0 hour		✓	
10-13-05	Last DHCP Data	If 10-13-01 is enabled, this setting determines if DHCP resource is enabled or disabled.	0 = Disable 1 = Enable (default = 1)		✓	
10-26-04	IP System Operation Setup - DT700 Peer to Peer Mode	Use to Enable (1) or Disable (0) the Peer to Peer feature for SIP MLT and SIP IP stations.	0 = Off 1 = On (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign functions to multiline terminal line keys.  NEC recommends the following for the first three programmable keys: Line Keys 1 and 2 = CAP Keys  Line Key 3 = Intercom Key	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ 99* (Appearance Function Code) (Service Code 752 by default) (*08 + XXXX = CAP key where XXXX is the CAP orbit number 0001-9999)	✓		
15-02-13	<b>Multiline Telephone Basic Data Setup – Redial List Mode</b>	Select the type of numbers that are stored in the Redial List – Internal and External numbers (0) or External only (1).  For the ML440 extensions this should be set to 0.	0 = ICM/Trunk (Extension/Trunk Mode) 1 = Trunk Mode (default = 1)	✓		
15-02-34	<b>Multiline Telephone Basic Data Setup – Call Register Mode</b>	The Caller ID Scroll stores Trunk calls only (0), or both Internal and Trunk calls (1).  For the ML440 extensions this should be set to 1.	0 = Trunk Mode 1 = Extension/Trunk Mode (default = 0)	✓		
15-05-28	<b>IP Telephone Terminal Basic Data Setup – Addition Information Setup</b>	Determines manner in which CID id presented to an extension.  For the ML440 extensions this should be set to 1.	0 = Do not inform 1 = Inform (default = 0)	✓		
20-02-12	<b>System Options for Multiline Telephones – Forced Intercom Ring (ICM Call Type)</b>	Enable/Disable Forced Intercom Ringing. If enabled, incoming Intercom calls normally ring. If disabled, Intercom calls voice-announce.	0 = Disable (Voice) 1 = Enable (Signal) (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign ML440 handsets to their own Class of Service.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	Set this option for the ML440 Class of Service. When an extension is set to ring mode for ICM calls, enabling this option prevents callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type:</b>	Assign Call Forwarding Type and the destination numbers for each extension/virtual extension.	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)		✓	
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign CO Call Forwarding Destination for ring, all call, and no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)		✓	
24-09-03	<b>Call Forward Split Settings - Intercom Call Forwarding Destination for Both ring, All Call, No Answer</b>	Assign Intercom Call Forwarding Destination for ring, all call and no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)		✓	
24-09-04	<b>Call Forward Split Settings – CO Call Forwarding Busy Destination</b>	Assign CO Call Forwarding for busy destinations.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)		✓	
24-09-05	<b>Call Forward Split Settings – Intercom Call Forwarding Busy Destination</b>	Assign Intercom Call Forwarding for busy destinations.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)		✓	
24-09-06	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/ PBX for All Call, No Answer</b>	Assign Call Forwarding for CTX/ PBX all call, no answer destinations.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)		✓	
24-09-07	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/ PBX for Busy</b>	Assign Call Forwarding destinations for busy CTX/PBX calls.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)		✓	
84-11-28	<b>Dterm IP CODEC Information Basic Setup – Audio Capability Priority</b>	Set voice (RTP packet) encoding parameters. The ML440 only supports G.711.	0 = G.711_PT 2 = G.729_PT (default = 0)		✓	
84-26-01	<b>IPL Basic Setup – IP Address</b>	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-02	<b>IPL Basic Setup – RTP Port Number</b>	Assign the RTP port number to be used for each DSP on the IPLA/ IPLB.  <i>Only even numbered ports are supported.</i>	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244		✓	
84-26-03	<b>IPL Basic Setup – RTCP Port Number (RTP Port Number + 1)</b>	Define the UDP port number for RTCP to use for each DSP.	0~65534 Defaults: VoIP GW1 = 10021 VoIP GW2 = 10053 VoIP GW3 = 10085 VoIP GW4 = 10117 VoIP GW5 = 10149 VoIP GW6 = 10181 VoIP GW7 = 10213 VoIP GW8 = 10245		✓	

## Operation

Refer to the ML440 User Guide for detailed operation information.

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## *IP Single Line Telephone (SIP)*

### Enhancements

With **Version 4000** software, FoIP (Fax over Internet Protocol) with T.38 protocol is supported.

The **SV8100 Version 4000** Enhancement license is required for T.38 to function.

With **Version 4000 (4.01 or higher)** software video codecs H.264, H.263 and H.261 are supported.

The **SV8100 Version 4000** Enhancement license is required for video support.

For Standard SIP video support, one SV8100 SIP video license is required per system.

With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

With **Version 6000 (6.00 or higher)**, the SV8100 now supports both Attended and Unattended transfers. In previous versions, the SV8100 only supported Attended transfer.

With **SV8100 Version 9000 (9.00 or higher)** software, the system has the ability to receive DTMF information in SIP INFO messages sent by Standard SIP Terminals. This allows the SIP Terminal to initiate features during a ringing state such as Camp-On and Message Waiting.

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### Description

SIP (Session Initiation Protocol) is used for Voice over Internet Protocol. It is defined by the IETF (Internet Engineering Task Force) RFC3261. Other RFC designations, such as RFC3842, refer to a later implementation of SIP and may be supported by the UNIVERGE SV8100. Commonly called SIP Station, this feature is used for IP Stations using SIP.

SIP analyzes requests from clients and retrieves responses from servers, then sets call parameters at either end of the communication, handles call transfer, and terminates. Typically, such features, including but not limited to Voice over IP services, are available from an SIP service provider.

Each PZ-32IPLA/IPLB, PZ-64IPLA/IPLB, or PZ-128IPLA/IPLB application can support either 32, 64 or 128 TDM Talk paths. This total may be shared among SIP Stations or SIP Trunks. Registered SIP Stations and/or SIP Trunks require a one-to-one relation with the PZ-( )IPLA/IPLB DSP Resource. This is a required component of SIP implementation in the SV8100.

The UNIVERGE SV8100 CD-CP00-US contains a regular TCP/RTP/IP stack that can handle real-time media, support industry standard SIP (RFC 3261) communication on the WAN side, and interface with the PZ-( )IPLA/IPLB.

SIP IP Stations use the PZ-( )IPLA/IPLB. The IPLA/IPLB controls and interprets RTP messaging from the SIP IP Phone to the UNIVERGE SV8100 CD-CP00-US.

The IPLA/IPLB supports only those codecs that are considered to provide toll-quality equivalent speech path. The following voice compression methods are supported for the IP Station SIP feature:


- G.711  $\mu$ -Law – Highest Bandwidth
- G.722 – Wideband
- G.729 – Mid-Range Bandwidth

For the minimum bandwidth requirements for each voice call refer to [Table 2-44 Minimum Bandwidth Requirements on page 2-808](#). This includes all the overhead of VoIP communication, including signaling).

**Table 2-44 Minimum Bandwidth Requirements**

Codec	Transmit Data Rate	Receive Data Rate	Time Between Packets	Packetization Delay	Default Jitter Buffer Delay	Theoretical Maximum MOS
G.711 $\mu$ -Law	90Kbps	90Kbps	20ms*	1.5ms	2 datagrams (40ms)	4.4
G.722	64Kbps	64Kbps	20ms*	1ms	2 datagrams (40ms)	4.5
G.729	34Kbps	34Kbps	20ms*	15.0ms	2 datagrams (40ms)	4.07

- The PZ-( )IPLA/IPLB contains a regular TCP/RTP/IP stack that can handle real time media. The PZ-( )IPLA/IPLB daughter board is an end-point on the IP network from the network administration perspective.
- The CD-CP00-US uses SIP Protocol to provide telephony services between remote stations through the IP Network. This is an IETF/ITU standards-based protocol.
- Speech-connection audio quality depends greatly on the available bandwidth between the stations in the data network. Because Internet is an uncontrolled data network compared to an Intranet, using this application in Intranet WAN environment with known (or controlled and assured) Quality of Service (QoS) is highly recommended.
- The PZ-32IPLA requires two IP addresses, the PZ-64IPLA requires four IP addresses and the PZ-128IPLA requires eight IP addresses. When a PZ-( )IPLB is installed only two IP Address are required.
- An on-board RJ-45 connector provides a WAN/LAN connection. Voice and signaling data to/from the IP Stations are converted into IP Frames and transmitted through the Data Communication IP Network.

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- PZ-32IPLA/IPLB supports a maximum of 32 VoIP connections, PZ-64IPLA/IPLB supports a maximum of 64 VoIP connections, PZ-128IPLA/IPLB supports a maximum of 128 VoIP connections.
  - Duplex mode (Auto, Full, or Half) and speed (10 or 100 mbps) are configured via SV8100 chassis programming.
    -  *The IPLB does not support half duplex, it only supports full duplex.*
  - UNIVERGE SV8100 supports a 100 rel option and Session Timer option.
  - UNIVERGE SV8100 supports Early Media.
  - UNIVERGE SV8100 SIP restricts an outgoing call under the following conditions:
    - SIP configuration failed
    - SIP registration failed
    - CD-CP00-US Link down
    - Lack of PZ-( )IPLA/IPLB resource
  - Both the signaling and voice ports can be configured in the SV8100. This change only affects the packets from the SV8100 to the IP Phone. A change must be made in the IP phone to affect the packets from the IP Phone to the SV8100.
  - ToS Support.

## Conditions

- Documentation for Polycom devices are available at <http://www.polycom.com/voicedocumentation>.
- By default Polycom devices use # to initiate dialing. Therefore, # cannot be used in a dial string without a configuration change to the Polycom device. For example, dialing the default Park access code #6 will not work from a Polycom device because it starts dialing after the #, ignoring everything after. In this case, either the Park access code must be changed to not include a #, or the Remove End-Of-Dial Marker option must be disabled in the Polycom SIP Configuration Local Settings.
- SIP Stations which support RFC 3842 (Message Waiting) receive Message Waiting Lamp indications.
- SIP Station – PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB does not support NAT traversal.
- SIP Station – PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB does not support a Blind Transfer feature.
- With **Version 4000 (4.01 or higher)** software, video codecs H.264, H.263, and H.261 are supported.
- Video is supported when P2P for standard SIP is turned on. (Program 10-26-03 SIP Peer to Peer Mode ON)

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- Auto start video when call is answered is not supported.
  - Standard SIP video Codecs are not supported across CCIS.
  - Standard SIP video Codecs are not supported across NetLink.
  - Standard SIP terminal can not negotiate video Codec with SP310.
  - SIP protocol (RFC3261) is used.
  - SIP Station uses the PZ-( )IPLA/IPLB as a media gateway.
  - Default UDP listen port for a SIP station is 5070.
  - UNIVERGE SV8100 Station registration policy supports an authentication feature. Enabling this policy prevents the registered telephone from unexpected override.
  - UNIVERGE SV8100 supports HOLD and TRF feature on the basis of IETF draft.
    - draft-ietf-sipping-service-examples-09.txt
    - Section 2.5 (Transfer - Attended) of draft-ietf-sipping-service-examples-15.txt
    - draft-ietf-sip-session-timer-10.txt
  - **When all VoIP DSP resources are busy, the SIP phone cannot preempt active calls to make a 911 call.**
  - The UNIVERGE SV8100 CD-CP00-US is the registration server for the SIP stations. The configurable IP Address is located in Program 10-12-09 (SV8100 Network Setup – IP Address).
  - T.38 (Fax) is not supported for 3rd Party SIP “IP Single Line Telephone (SIP)” station ports (**Version 3100 or lower** software).
  - T.38 (Fax) is supported for 3rd Party SIP “IP Single Line Telephone (SIP)” station ports (**Version 4000 or higher** software).
  - Program 15-03-03 must be set to 1 (Special) at the receiving terminal in order for T.38 to function.
  - With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.
  - When using 3rd party SIP stations, the SIP server name can not contain a parenthesis.
  - When out of band DTMF is used (via RFC2833), the IPLA supports a payload of 96 ~ 126. IPLB supports an out of band DTMF payload of 96 ~ 127.
  - If a user on a standard SIP phone is talking to another station using Voice Announce (the receiving station has not pressed speaker or lifted the handset) and the SIP phone user presses transfer or hold, the call is terminated. A standard SIP call cannot be placed on hold or transferred until the other party answers.
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- The Exclusive Hold Recall Timer is used when an internal call from a 3rd Party SIP telephone is placed on hold.
- With **SV8100 Version 9000 (9.00 or higher)** software, the system has the ability to receive DTMF information in SIP INFO messages sent by Standard SIP terminals. This allows the SIP Terminal to initiate features during a ringing state such as Camp-On and Message Waiting. SIP terminals must be able to support this feature and have it enabled.
- If Program 15-05-49 is set to **1: Allowed any time**, SIP INFO is received upon arrival.
- If Program 15-05-49 is set to **2: Allowed while RTP is not available**, SIP INFO is received while RTP is not established. An In-band method such as RFC2833 is used once the voice path is established.
- SIP INFO functions independently from other DTMF methods such as RFC2833. This means SIP terminals should send DTMF information by a single method, otherwise the system will receive both separately causing double digits.
- NAT or NAPT is only supported on the DT700 series phones. NAT or NAPT is not supported on the ML440, MH240, the Wireless DECT (SIP), SP310 or third party SIP phones.

**Table 2-45 Feature Support Table for Standard SIP Device**

Feature Name	Standard SIP	Comments
Account Code – Forced/Verified/Unverified	Yes	Depending on SIP device the account code may have to be part of the dial string.
Account Code Entry	Yes	
Alarm	No	
Alarm Reports	No	
Alphanumeric Display	Yes	Some SIP devices have Alphanumeric Displays and are backlit. However, the display is not updated with CPU messages.
Analog Communications Interface (ACI)	No	
Ancillary Device Connection	No	
Answer Hold	No	
Answer Key	No	
Attendant Call Queuing	No	
Automatic Call Distribution (ACD)	No	
Automatic Release	Yes	
Automatic Route Selection	Yes	
Background Music	No	
Barge-In	Yes	
Call Appearance (CAP) Keys	No	

Table 2-45 Feature Support Table for Standard SIP Device (Continued)

Feature Name	Standard SIP	Comments
Call Arrival (CAR) Keys	No	
Call Duration Timer	No	Call Duration timer is a function of the client device and is not the system timer.
Call Forwarding – Centrex	Yes	
Call Forwarding	Yes	Can be programmed in 24-09-xx, through feature code from administrator desk set and from the SIP device using dial access codes. In some cases Call Forwarding can be set on SIP device itself but this not system side forwarding.
Call Forwarding with Follow Me	No	
Call Forwarding – Park and Page	No	
Call Forwarding, Off-Premise	Yes	Can be programmed in 24-09-xx, through feature code from administrator desk set and in some cases from the SIP device using dial access codes.
Call Forwarding/Do Not Disturb Override	Yes	
Call Monitoring	No	
Call Redirect	No	
Call Waiting/Camp-On	No	
Callback	Yes	
Caller ID Caller Return	Yes	Caller ID Call Return is a SIP device feature not a system feature.
Caller ID	Yes	Caller ID is shown only on ISDN, SIP or Analog CO trunks that are directed at the SIP device. Caller ID will not display for calls transferred to the SIP device.
Call Transfer	Yes	Only Announce/Supervised transfer is supported.
Central Office Calls, Answering	Yes	
Central Office Calls, Placing	Yes	
Class of Service	Yes	
Clock/Calendar Display	No	
CO Message Waiting Indication	No	
Code Restriction	Yes	
Code Restriction Override	No	
Code Restriction, Dial Block	Yes	
Computer Telephony Integration (CTI) Applications	No	
Conference	No	

Table 2-45 Feature Support Table for Standard SIP Device (Continued)

Feature Name	Standard SIP	Comments
Conference, Voice Call/Privacy Release	No	
Cordless Telephone Connection	No	
Data Line Security	Yes	
Delayed Ringing	No	
Department Calling	No	
Department Step Calling	Yes	
Department Group All Ring	Yes	
Dial Pad Confirmation Tone	No	
Dial Tone Detection	No	
Dialing Number Preview	Yes	
Direct Inward Dialing (DID)	Yes	
Direct Inward Line (DIL)	Yes	
Direct Inward System Access (DISA)	No	
Direct Station Selection (DSS) Console	No	
Directed Call Pickup	Yes	
Directory Dialing	No	
Distinctive Ringing, Tones and Flash Patterns	No	
Do Not Disturb	Yes	Do Not Disturb (DND) can be set from the SIP device using dial access codes. In some cases Do Not Disturb can be set via the SIP device but is not system side DND.
Do Not Disturb/Call Forward Override	Yes	
Door Box	Yes	Door Box will not ring a SIP device. A SIP device can call a door box but cannot activate the relay.
Drop Key	No	
<i>D<sup>term</sup></i> Cordless II Terminal	No	
<i>D<sup>term</sup></i> Cordless Lite II Terminal	No	
<i>D<sup>term</sup></i> Handset Cordless	No	
<i>D<sup>term</sup></i> IP Gateway System	No	
E911 Compatibility	No	
Electra Elite Terminal Migration	No	

Table 2-45 Feature Support Table for Standard SIP Device (Continued)

Feature Name	Standard SIP	Comments
Facsimile CO Branch Connection	No	
Flash	No	
Flexible System Numbering	Yes	
Flexible Timeouts	Yes	
Forced Trunk Disconnect	No	
Group Call Pickup	Yes	
Group Listen	No	
Handset Mute	Yes	Handset mute is a function of the SIP device.
Handset Operation	Yes	
Handsfree and Monitor	Yes	Handsfree is a feature of the SIP device.
Handsfree Answerback/Forced Intercom Ringing	No	
Hold	Yes	
Hotel/Motel	No	
Hotline	Yes	A SIP device can be a hotline destination, but cannot originate a hotline call.
Howler Tone Service	No	
Intercom	Yes	
IP Multiline Station (SIP)	No	
IP Trunk – (SIP) Session Initiation Protocol	Yes	
IP Trunk – H.323	No	
ISDN Compatibility	Yes	
K-CCIS – IP	Yes	
K-CCIS – T1	Yes	
Last Number Redial	No	
Line Preference	No	
Long Conversation Cutoff	Yes	
Meet Me Conference	No	
Meet Me Paging	Yes	
Meet Me Paging Transfer	Yes	A SIP device can receive a Meet Me Paging Transfer but it cannot originate a Meet Me Paging transfer call.
Memo Dial	No	

**Table 2-45 Feature Support Table for Standard SIP Device (Continued)**

<b>Feature Name</b>	<b>Standard SIP</b>	<b>Comments</b>
Message Waiting	No	
Message Waiting Answer	Yes	
Microphone Cutoff	Yes	Microphone Cutoff is a function of the SIP device.
Multiple Trunk Types	Yes	
Music on Hold	Yes	
NetLink	Yes	
Name Storing	No	
Night Service	No	
Off-Hook Signaling	No	
Off-Hook Signalling Override	Yes	
One-Touch Calling	No	
Operator	Yes	
(OPX) Off-Premise Extension	No	
Paging, External	Yes	A SIP device can only initiate an Internal, External or All Call Page. It cannot receive either Internal or All Call pages or display page information.
Paging, Internal	Yes	A SIP device can only initiate an Internal, External or All Call Page. It cannot receive either Internal or All Call pages or display page information.
Park	No	
PBX Compatibility	Yes	
PC Programming	Yes	
Power Failure Transfer	No	
Prime Line Selection	Yes	Prime Line Selection can be assigned for Standard SIP devices, however when this is done the telephones cannot access ICM dial tone.
Private Line	Yes	
Programmable Function Keys	No	
Programming from a Multiline Terminal	No	
Pulse to Tone Conversion	No	
Quick Transfer to Voice Mail	Yes	Multiline Telephones can Quick Transfer to a SIP device's mailbox, but a SIP device cannot execute Quick Transfer.

Table 2-45 Feature Support Table for Standard SIP Device (Continued)

Feature Name	Standard SIP	Comments
Redial Function	No	Call Redial Function is a function of the client device and not the system.
Repeat Redial	No	
Reverse Voice Over	No	
Ring Groups	Yes	
Ringdown Extension, Internal/External	Yes	A SIP device can be a ring down destination but cannot originate a ring down call.
Room Monitor	No	
Save Number Dialed	No	
Secondary Incoming Extension	No	
Secretary Call (Buzzer)	No	
Secretary Call Pickup	No	
Selectable Display Messaging	No	
Selectable Ring Tones	Yes	Selectable Ring Tones is a function of the client device.
Serial Call	No	
Single Line Telephones, Analog 500/2500 Sets	No	
SLT Adapter	No	
SMB8000 Conference Bridge	Yes	
SMB8000 Interactive Voice Response	No	
Softkeys	No	
Speed Dial – System/Group/Station	No	
Station Hunt	No	
Station Message Detail Recording	Yes	
Station Name Assignment – User Programmable	No	
Station Relocation	No	
SV8100 Communications Analyst Enterprise	Yes	
SV8100 PoE Gigabit Switch	No	
SV8100 UC Desktop Suite Applications	No	
SV8100/SV8300 Terminals	No	
Synchronous Ringing	No	
T1 Trunking (with ANI/DNIS Compatibility)	Yes	

**Table 2-45 Feature Support Table for Standard SIP Device (Continued)**

<b>Feature Name</b>	<b>Standard SIP</b>	<b>Comments</b>
Tandem Ringing	No	
Tandem Trunking (Unsupervised Conference)		
TAPI Compatibility	No	
Tone Override	No	
Traffic Reports	No	
Transfer	Yes	Transferred calls cannot be pulled back once transfer is initiated.
Trunk Group Routing	Yes	
Trunk Groups	Yes	
Trunk Queuing/Camp-On		
Uniform Call Distribution (UCD)	No	
Uniform Numbering Network	Yes	
UM8000	Yes	
User Programming Ability		
Virtual Extensions	No	Limited user customization available.
VM8000 InMail	Yes	
Voice Call & Signal Switching	Yes	Can only send voice/signal switch.
Voice Mail Integration (Analog)	Yes	
Voice Over	No	
Voice Over Internet Protocol (VoIP)	Yes	By nature, this is a SIP device.
Voice Response System (VRS) – Call Forwarding – Park and Page	Yes	
Volume Controls	Yes	Volume control is a function of the client device.
Wireless – DECT	No	

### **Default Setting**

None

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## System Availability

### Terminals

SIP Terminals Compliant with RFC 3261, RFC 3262, RFC 3264 (Session Description Protocol), RFC 1889 (Real Time Protocol).

### Required Components

- CD-CP00-US
- PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB

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## Related Features

None

## STD SIP Transfer-Unattended

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### Description

With **Version 6000 or higher** software, any standard SIP terminal can perform an Unattended (Blind/Unsupervised) transfer. Refer to Section 2.4 (transfer-Unattended) of draft-ietf-sipping-service-examples-15.txt

### Conditions

- Program10-26-03 (SIP Peer to Peer Mode) must be disabled for the Unattended Transfer to be performed.
- A SIP terminal must receive the re-Invite message of Session Timer in a state of Unattended transfer.
- When the transfer destination terminal is busy, unanswered or the extension number in the Refer-To header is wrong or out of service, the call is sent back to the original terminal.
- If the standard SIP phone is placed on hold/park from another extension, this call cannot be transferred until the station that placed the call on hold/park retrieves the call. An unattended transfer can only be completed while both parties are in a talking state.



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- An unattended transfer can only be performed to the following locations:
    - Extension Number
    - Department Group Pilot Number
    - ACD Group Pilot Number
    - Operator Access
    - Trunk/Alternate trunk access code
    - F-Route Access
    - Network Access
  - Quick transfer to Voice Mail is not supported when using Unattended Transfer.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

Standard SIP Terminal

### **Required Components**

- CD-CP00-US
- PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB

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## **Related Features**

### **IP Single Line Telephone (SIP)**


#### **Transfer**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### VoIP Settings:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.  <i>The IP Address assigned in Program 10-12-01 cannot start with the same leading digits as the IP Address assigned here.</i>	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	<b>CD-CP00-US Network Setup – Subnet Mask</b>	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)		✓	
10-19-01	<b>VoIP DSP Resource Selection</b>	Select type of IPLA/IPLB DSP Resource. This program setting has no affect on the terminal/trunk port assignment or usage.	0 = Common use for both IP extensions and trunks 1 = IP Extension 2 = SIP Trunk 3 = CCIS 4 = Use for NetLink 5 = Blocked Default: Resource 1 = 1 Resource 2~128 = 0	✓		
10-26-01	<b>IP System Operation Setup – Peer to Peer Mode</b>	Enable/Disable the Peer to Peer feature for SIP IP stations.	0 = Off 1 = On (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-26-03	<b>IP System Operation Setup – SIP Peer to Peer Mode</b>	Enable/Disable the Peer to Peer feature for SIP IP stations.	0 = Off 1 = On (default = 1)		✓	
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		
84-06-01	<b>PVA Data Setting – RTP Port Number</b>	Define the Media Gateway starting RTP Port Number.	0~65535 (default = 10020)		✓	
84-06-02	<b>PVA Data Setting – RTCP Port Number</b>	Define the Media Gateway Starting RTCP Port Number. The RTCP Port Number is the RTP port number + 1.	RTP Port Number + 1 (default = 10021)		✓	
84-06-04	<b>PVA Data Setting – Fract Lost Threshold</b>	Define the fractional lost threshold – this data is sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~100% (default = 0)		✓	
84-06-05	<b>PVA Data Setting – Packets Lost Threshold</b>	Define the packet lost threshold – this data is sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~16777215 (default = 0)		✓	
84-06-07	<b>PVA Data Setting – Jitter Threshold</b>	Define the Jitter Threshold – this data is sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~4294967295 (seconds) (default = 0)		✓	
84-06-09	<b>PVA Data Setting – Delay LSR Threshold</b>	Define the Delay threshold – this data is sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~4294967295 (default = 0)		✓	

**VoIP ToS Setup:**

The UNIVERGE SV8100 supports Quality of Service (QoS) Marking for the Session Initiation Protocol (SIP).

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-10-01	ToS Setup – ToS Mode	When Input Data is set to 1, Protocol 7 is invalid. When Data is set to 2, Protocols 2~6 are invalid.	0 = Disable (Invalid) 1 = IP Precedence 2 = Diffserv (default = 0)		✓	

**IP Extension Numbering:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-02-01	Extension Numbering	Define the IP Phone extension number.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513	✓		

**SIP Extension Codec Information:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-01	SIP Extension CODEC Information Basic Setup – Number of G.711 Audio Frames	Define the G.711 audio frame size.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 2)		✓	
84-19-02	SIP Extension CODEC Information Basic Setup – G.711 Voice Activity Detection Mode	Enable/ Disable Voice Activity Detection for G.711.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-03	SIP Extension CODEC Information Basic Setup – G.711 Type	Define the G.711 Type – $\mu$ -law is recommended when in USA.	0 = A-law 1 = $\mu$ -law (default = 1)		✓	
84-19-04	SIP Extension CODEC Information Basic Setup – G.711 Jitter Buffer (min)	Define G.711 Jitter Buffer minimum accepted value.	0~160ms (default = 20)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-05	SIP Extension CODEC Information Basic Setup – G.711 Jitter Buffer (average)	Define G.711 Jitter Buffer average accepted value.	0~160ms (default = 40)		✓	
84-19-06	SIP Extension CODEC Information Basic Setup – G.711 Jitter Buffer (max)	Define G.711 Jitter Buffer maximum accepted value.	0~160 ms (default = 80)		✓	
84-19-07	SIP Extension CODEC Information Basic Setup – Number of G.729 Audio Frames	Define the G.729 audio frame size.	1~6 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms 5 = 50ms 6 = 60ms (default = 2)		✓	
84-19-08	SIP Extension CODEC Information Basic Setup – G.729 Voice Activity Detection Mode	Enable/Disable Voice Activity Detection for G.729.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-09	SIP Extension CODEC Information Basic Setup – G.729 Jitter Buffer (min)	Define G.729 Jitter Buffer minimum accepted value.	0~270ms (default = 20)		✓	
84-19-10	SIP Extension CODEC Information Basic Setup – G729 Jitter Buffer (average)	Define G.729 Jitter Buffer average accepted value.	0~270ms (default = 40)		✓	
84-19-11	SIP Extension CODEC Information Basic Setup – G729 Jitter Buffer (max)	Define G.729 Jitter Buffer maximum accepted value.	0~27 ms (default =80)		✓	
84-19-17	SIP Extension CODEC Information Basic Setup – Jitter Buffer Mode	Define the Jitter Buffer mode – supported Static or Immediate.	1 = Static 2 = Adaptive during Silence 3 = Adaptive Immediately (default = 3)		✓	
84-19-18	SIP Extension CODEC Information Basic Setup – VAD Threshold	Define the VAD Threshold – Values set in dB. Consult the UNIVERGE SV8100 Programming Manual for Threshold scale to set acceptable values.	0~30 (default = 20)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-26	<b>SIP Extension CODEC Information Basic Setup – TX Gain</b>	Define TX Gain Values – Adjusting this value increases or decreases volume levels for the receiving party. Consult the UNIVERGE SV8100 Programming Manual for Transmit Gain scale to set acceptable value.	0~30 = (-19 dB ~ +10 db, Auto) 0 = Auto Adjust 1 = -19 dB (-49dBm) : 20 = 0 db (-30 dBm) : 29 = +19 db (-21 dBm) 30 = +10 db (-20 dBm) (default =20)		✓	
84-19-27	<b>SIP Extension CODEC Information Basic Setup – RX Gain</b>	Define to RX Gain Values – Adjusting this value increases or decreases volume levels for the sending party. Consult the UNIVERGE SV8100 Programming Manual for Transmit Gain scale to set acceptable value.	0~40 = (-20dBm ~ +20dBm) 0 = -20 dBm 1 = -19 dBm : 20 = 0 dBm : 39 = +19 dBm 40 = +20 dBm (default = 20)		✓	
84-19-28	<b>SIP Extension CODEC Information Basic Setup – Audio Capability Priority</b>	Define Audio Priority. Consult the UNIVERGE SV8100 Programming Manual for Transmit Gain scale to set acceptable value.	0 = G.711_PT 1 = G.723_PT 2 = G.729_PT 3 = G.722 4 = G.726 5 = Not Used (default = 0)		✓	
84-19-31	<b>SIP Extension CODEC Information Basic Setup – DTMF Payload Number</b>	Define the DTMF Payload Number.	96~127 (default = 96)		✓	
84-19-32	<b>SIP Extension IP CODEC Information Basic Setup – DTMF Relay Mode</b>	Define the DTMF Relay Mode.	0 = Disable 1 = RFC2833 (default = 0)		✓	
84-19-33	<b>SIP Extension IP CODEC Information Basic Setup – Number of G.722 Audio Frames</b>	Define the number of Audio Frames for G.722 CODEC.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 3)		✓	
84-19-34	<b>SIP Extension IP CODEC Information Basic Setup – G.722 Voice Activity Detection Mode</b>	Enable/Disable G.722 Voice Activity Detection Mode.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-35	<b>SIP Extension IP CODEC Information Basic Setup – G.722 Jitter Buffer (min)</b>	Define the minimum setting for the G.722 Jitter Buffer.	0~160ms (default = 30)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-36	SIP Extension IP CODEC Information Basic Setup – G.722 Jitter Buffer (Average)	Define the average setting for the G.722 Jitter Buffer.	0~160ms (default = 60)		✓	
84-19-37	SIP Extension IP CODEC Information Basic Setup – G.722 Jitter Buffer (Max)	Define the maximum setting for the G.722 Jitter Buffer.	0~160ms (default = 120)		✓	
84-19-38	SIP Extension IP CODEC Information Basic Setup – Number of G.726 Audio Frames	Define the number of G.726 Audio Frames.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 3)		✓	
84-19-39	SIP Extension IP CODEC Information Basic Setup – G.726 Voice Activity Detection Mode	Enable/Disable the G.726 Voice Activity Detection mode.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-40	SIP Extension IP CODEC Information Basic Setup – G.726 Jitter Buffer (min)	Define the minimum setting for the G.726 Jitter Buffer.	0~160ms (default = 30)		✓	
84-19-41	SIP Extension IP CODEC Information Basic Setup – G.726 Jitter Buffer (Average)	Define the average setting for the G.726 Jitter Buffer.	0~160ms (default = 60)		✓	
84-19-42	SIP Extension IP CODEC Information Basic Setup – G.726 Jitter Buffer (Max)	Define the maximum setting for the G.726 Jitter Buffer.	0~160ms (default = 120)		✓	
84-19-49	SIP Extension IP CODEC Information Basic Setup – RTP Filter	To avoid incorrect voice pass connection, this Program checks the sending side address from received RTP packet at VoIPDB.	0 = Disable 1 = Enable (default = 0)	✓		
84-19-50	SIP Extension IP CODEC Information Basic Setup – FAX Relay Mode	Enable/Disable the FAX relay mode.	0 = Disable 1 = Enable (default = 0)	✓		
84-19-51	SIP Extension IP CODEC Information Basic Setup – T.38 Protocol Mode	Sets the T.38 protocol mode.	0 = RTP 1 = UDPTL (default = 1)	✓		
84-19-52	SIP Extension IP CODEC Information Basic Setup – FAX Maximum Rate	Sets the maximum FAX rate.	0 = V.27ter, 2400bps 1 = V.27ter, 4800bps 2 = V.29, 7200bps 3 = V.29, 9600bps 4 = V.17, 12000bps 5 = V.17, 14400bps (default = 5)		✓	
84-19-53	SIP Extension IP CODEC Information Basic Setup – FAX Payout FIFO Nominal Delay	Sets the FAX payout FIFO nominal delay.	0~600ms (default = 300)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-54	SIP Extension IP CODEC Information Basic Setup – FAX Packet Size	Sets the T.38 FAX packet size.	20~48 (bytes) (default = 20)		✓	
84-19-55	SIP Extension IP CODEC Information Basic Setup – High Speed Data Packet Length	Sets the high speed data packet length.	1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 4)		✓	
84-19-56	SIP Extension IP CODEC Information Basic Setup – Low Speed Redundancy	Sets the number of redundant packets for V.21.	0~5 (default = 0)		✓	
84-19-57	SIP Extension IP CODEC Information Basic Setup – High Speed Data Packet Redundancy	Sets the number of redundant packets for V.27.	0~2 (default = 0)		✓	
84-19-58	SIP Extension IP CODEC Information Basic Setup – TCF Handling Method	Sets the training confirmation handling mode, local denotes that the VoIP DB will generate tone and check, Network denotes that TCF is sent over the network provider.	0 = Receive TCF signal by VoIPDB 1 = Through TCF signal to external FAX (default = 1)		✓	
84-19-59	SIP Extension IP CODEC Information Basic Setup – Maximum Low Speed Data Packetization	Sets the maximum number of bytes of low-speed fax data packet into each network packet.	1~65535 (bytes) (default = 1)		✓	
84-19-60	SIP Extension IP CODEC Information Basic Setup – Transmit Network Timeout	Sets the timer value of transmits network time-out.	10~32000 seconds (default = 150)		✓	
84-19-61	SIP Extension IP CODEC Information Basic Setup – T.38 RTP Format Payload Number	Sets the payload number for T.38 RTP Format.	96~127 (default = 100)		✓	

### SIP Extension Basic Information Setup:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-20-01	SIP Extension Basic Information Setup – Registrar/Proxy Port	Define SIP station Proxy Port.	1~65535 (default = 5070)		✓	
84-20-02	SIP Extension Basic Information Setup – Session Timer Value	Define the periodic refresh time that allows both user agents and proxies to determine if the SIP session is still active.	0~65535 (default = 180)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-20-03	<b>SIP Extension Basic Information Setup – Minimum Session Timer Value</b>	Define the minimum allowed value for the SIP session timer.	0~65535 (default = 180)		✓	
84-20-04	<b>SIP Extension Basic Information Setup – Called Party Info</b>	Define the SIP Extension presented Caller ID information.	0 = Request URI 1 = To Header (default = 0)		✓	
84-20-05	<b>SIP Extension Basic Information Setup – Expire Value of Invite</b>	Define the time out response value for SIP invite.	0~256 (seconds) (default = 180)		✓	
84-26-01	<b>IPL Basic Setup – IP Address</b>	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27	✓		
84-26-02	<b>IPL Basic Setup – RTP Port Number</b>	Assign the RTP port number to be used for each DSP on the IPLA/IPLB.  <i>Only even numbered ports are supported.</i>	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244		✓	
84-26-03	<b>IPL Basic Setup – RTCP Port Number (RTP Port Number + 1)</b>	Define the TCP port number for RTCP to use for each DSP.	0~65534 Defaults: VoIP GW1 = 10021 VoIP GW2 = 10053 VoIP GW3 = 10085 VoIP GW4 = 10117 VoIP GW5 = 10149 VoIP GW6 = 10181 VoIP GW7 = 10213 VoIP GW8 = 10245		✓	

**IP Phone Configuration:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-01-01	<b>Basic Extension Data Setup – Extension Name</b>	Define the extension/virtual extension name.	Up to 12 characters Default: STA 101 = Ext 101 STA 102 = Ext 102, etc.	✓		
15-05-02	<b>IP Telephone Terminal Basic Data Setup – IP Phone Fixed Port Assignment</b>	MAC Address of registered MLT SIP phone is stored and/or can input the MAC address of an MLT SIP phone so when it comes online it is provided with the extension which the MAC address matches.	MAC address 00-00-00-00-00-00 to FF-FF-FF-FF-FF-FF (default = 00-00-00-00-00-00)	✓		
15-05-07	<b>IP Telephone Terminal Basic Data Setup – Using IP Address</b>	Review the registered IP Phones IP Address [Informational Only].	0.0.0.0~ 255.255.255.255 (default = 0.0.0.0)	✓		
15-05-15	<b>IP Telephone Terminal Basic Data Setup – CODEC Type</b>	Set the registered IP Phone Codec type – Reference Program 84-11 <i>D<sup>term</sup></i> IP Codec Basic Information.	1-Type 1 2-Type 2 3-Type 3 4-Type 4 5-Type 5 (default = 1)	✓		
15-05-16	<b>IP Telephone Terminal Basic Data Setup – Authentication Password</b>	Assign the authentication password for SIP single line telephones.	Up to 24 characters (default not assigned)	✓		
15-05-18	<b>IP Telephone Terminal Basic Data Setup – IP Duplication Allowed Group</b>	For an adapter that has one IP address coming into it but multiple extensions off of it. Assign all the extensions to a group so the CPU knows that the one IP address is assigned to multiple extensions.	0 = Not Used 1 = Group 1 2 = Group 2 3 = Group 3 4 = Group 4 5 = Group 5 6 = Group 6 7 = Group 7 8 = Group 8 9 = Group 9 10 = Group 10 (default = 0)	✓		
15-05-40	<b>IP Telephone Terminal Basic Data Setup – Calling Name Display Info via Trunk for Standard SIP</b>	Sets the incoming calling name display type on a standard SIP terminal. Trunk name is the first priority and abbreviated (SPD) name is second priority.	0 = Both name and number 1 = Name only 2 = Number only 3 = None (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-05-43	IP Telephone Terminal Basic Data Setup – Video Mode	Enable or Disable Video Mode for standard SIP terminals.	0 = Disable 1 = Enable (default = 0)		✓	
15-05-49	IP Telephone Terminal Basic Data Setup – Receiving SIP INFO	Select whether or not system can receive DTMF from standard SIP phone via SIP INFO message.	0 = Disable 1 = Allowed any time 2 = Allowed while RTP is not available (default = 1)		✓	

**STD SIP Transfer – Unattended:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-26-03	IP System Operation Setup – SIP Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.	0 = Off 1 = On (default = 1)	✓		

**SIP Phone Example:**

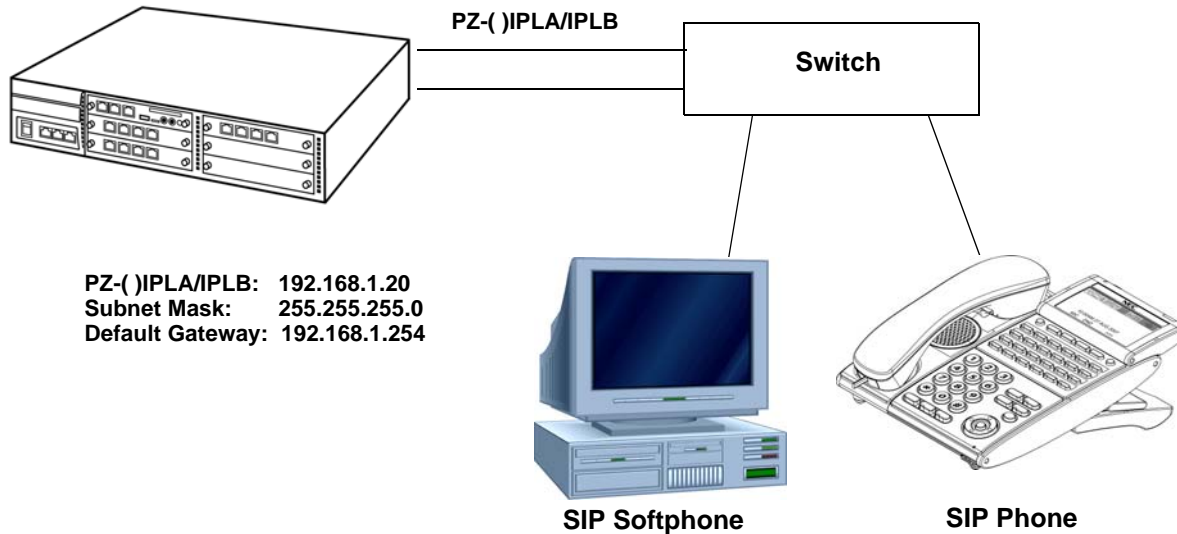



Figure 2-22 Example – SIP Phone

The following menu items require programming in your SIP IP Phone (consult SIP Phone vendor specific documentation):

Program/ Item No.	Description/Selection	Default Assigned Data	Comments
1	IP Address	0.0.0.0	Enter a Static IP Address for the SIP Phone.
2	Subnet Mask	0.0.0.0	Enter the Subnet Mask Address.
3	Default Gateway	0.0.0.0	Enter the Default Gateway address.
4	IPLA/IPLB Address	0.0.0.0	Enter the IPLA/IPLB IP Address.   This information can be located in Program 10-12-09 UNIVERGE SV8100 Network Setup IP Address.
5	Extension Number	0	Assign the SIP Phone extension. This information must match Program 11-02-01 Extension Numbering.

## Operation

None

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# *IP Trunk – (SIP) Session Initiation Protocol*

## Enhancements

With **Version 4000** software, FoIP (Fax over Internet Protocol) with T.38 protocol is supported.

The **SV8100 Version 4000** Enhancement license is required for T.38 to function.

With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

The SV8100 **Version 5000 (5.00 or higher)** software enhancement enables multiple SIP trunk carriers to be utilized when NetLink is configured.

With **Version 7000 or higher**, when + is added to the country code of an incoming SIP trunk call, it is recognized as an international call, simplifying outgoing calls from the incoming call list.

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## Description

The UNIVERGE SV8100 IP Trunk SIP package sends the real time voice over the corporate LAN or WAN. The voice from the telephone is digitized and then put into frames to be sent over a network using Internet protocol.

Using VoIP equipment at a gateway (a network point that acts as an entrance to another network), the packetized voice transmissions from users in the company are received and routed to other parts of the company Intranet (local area or wide area network) or they can be sent over the Internet using CO lines to another gateway.

The PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB Daughter Board interface can provide IP trunks and Tie Lines that can operate in the following modes:

- COI
- COID
- DID
- TLI
- DTI

Depending on the requirements and resource allocation in the LAN/WAN/Internet, the PZ-( )IPLA/IPLB - SIP can be configured to use any of the following voice compressions:

- G.711  $\mu$ -Law – Highest Bandwidth
- G.729 (a) – Most often used
- The LAN/WAN or Internet connection is provided by a 10 Base-T/100 Base-TX Ethernet.

For a list of vendors that have successfully completed interoperability certification go to <http://www.necntac.com> and refer to Technical Documentation.

## Conditions

- With SV8100 **Version 6000 (6.0 or higher)** software, the option to set the SIP trunk CODEC to G711 or G729 Fixed is supported in Program 84-13-28.
- A maximum of 128 IP Trunks are supported in the SV8100.
- The SV8100 supports G.711 or T.38 for FAX.
- The SV8100 does not support fallback to G.711 from G.729/G.726 for data (FAX) calls.
- A transferred call can not use T.38 at the transferred destination.
- SIP trunks are assigned in increments of four.
- Calling Party Name is not provided for outgoing calls on SIP trunks.
- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.
- The SV8100 **Version 5000 (5.00 or higher)** software enhancement enables multiple SIP trunk carriers to be utilized when NetLink is configured. Refer to [SV8100 NetLink on page 2-1489](#) for additional details.
- All IP trunks (SIP, CCIS, or H.323) must be contiguous. If any IP trunks are added to a system that already has IP trunks installed, and the next set of trunks is not in sequence, then all IP trunks are moved to a new set of sequential trunk numbers.

## Default Setting

None



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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

## SIP Trunk E.164 Support

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### Description

With SIP Trunk E.164 Support enabled, the PBX is able to support SIP configurations where the number presentation within the SIP messages is formatted using the E.164 international numbering scheme. Specifically the system is able to handle the + digit when required as the International Access Code.

For example, a normal international SIP call can be dialed and displayed as follows:

Number dialed = **00441202223344**

*Request-URI: Invite sip: 00441202223344@172.16.18.100 SIP/2.0*

With SIP Trunk E.164 Support enabled, the SIP call can be displayed once dialed as:

*Request-URI: Invite sip:+441202223344@172.16.18.100 SIP/2.0*

This display is a requirement of certain SIP ITSPs (Internet Telephony Service Providers) and may require that PBX handle these calls and modify any SIP messages to the correct format accordingly.

This feature uses the following SIP header fields:

Request-URI

To

From

P-Asserted Identity

P-Preferred Identity

## Conditions

- Minimum of SV8100 main system software **Version 7000 or higher** is required.
- E.164 support is applied on the SIP trunk interface.
- E.164 is supported for all carrier choices (Program 10-29-14).
- Netlink multi-carrier support uses E.164 support across all carrier configurations at the secondary nodes.

## Default Setting

Disabled

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## System Availability

### Terminals

All Multiline Terminals

### Trunks

IP SIP

### Required Component(s)

CD-CP00-US

IPLA/ IPLB

IP Trunk License

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## SIP Trunk E.164 CLIP Enhancement

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### Description

With the SIP Trunk E.164 CLIP Enhancement enabled, when an incoming SIP call from an external ITSP is presented at the system with a + in the From header field as the international access code, it is recognized and displayed as an international call at the terminal display and also logged in the terminals incoming caller history, allowing any outbound calls made from a multiline terminals caller history possible using this numbering scheme.

This presentation can be a requirement of certain SIP ITSPs (Internet Telephony Service Providers) so it is necessary the PBX can handle these calls and modify any SIP messages to the correct format accordingly.

### Conditions

- Minimum of SV8100 main system software **Version 7000 or higher** is required.
- E.164 Enhancement is applied for the SIP trunk interface.
- Outgoing call from caller history of incoming calls is only possible from multiline terminals.
- Netlink systems deployed in multiple countries using this feature may not work correctly because the system will not know which international code should be added at each node.

### Default Setting

Disabled

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## System Availability

### Terminals

All Multiline Terminals

### Trunks

IP SIP

## Required Component(s)

CD-CP00-US

IPLA/ IPLB

IP Trunk License

## Video Support over SIP Trunks

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### Description

With **Version 9000 or higher** software, the SV8100 can support video calling over SIP interconnection trunks. The IP Trunk license (5001), IP Station licenses (5101 Basic, 5102 Soft Phone, 5111 Advanced), Feature Enhancement license (0033 V4000 Enhanced), V9000 Enhancement license (0038) and SIP Video license (0040) are required.

### Conditions

- Calls over SIP Interconnection while in P2P mode cannot be put on hold.
- Calls over SIP Interconnection while in P2P mode cannot be transferred, i.e. an internal call cannot be transferred to a SIP Interconnection trunk.
- A video call cannot be changed to a voice call. A voice call cannot be changed to a video call.
- A video caller cannot use CTI/OAI at the same time as the CTI/OAI feature needs P2P to be set to off.
- When the video interconnection using a SIP trunk is configured, other SIP connections, such as a SIP carrier connection is not supported in the same system.
- Video capability in the initial invite message is required for the Video Terminal.
- When using an MCU, the SV8100 requires the Carrier Type Setting (Program 10-29-14) to be set to 0 = Standard.
- When using an MCU, the same video capability must be set between the MCU and the Video SIP Terminal.

### Default Settings

This feature is not enabled at default.

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## System Availability

### Terminals

Polycom HDX4003

Polycom VVX1500D

### Required Component(s)

CD-CP00-US with PZ-32IPLB, PZ-64IPLB or PZ-128IPLB installed.

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## Related Features

None

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## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### IP Trunk – (SIP) Session Initiation Protocol:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-05	CD-CP00-US Network Setup – NIC Interface	Set up the NIC Interface.	0 = Auto Detect 1 = 100Mbps, Full Duplex 2 = 100Mbps, Half Duplex 3 = 10Mbps, Full Duplex 4 = 10Mbps, Half Duplex (default = 0)	✓		
10-12-06	CD-CP00-US Network Setup – Network Address Port Translation (NAPT) Router	Define whether or not using an external NAT router.	0 = No (Disable) 1 = Yes (Enable) (default = 0)		✓	
10-12-07	CD-CP00-US Network Setup – NAPT Router IP Address (Default Gateway [WAN])	Define the IP Address of the WAN side of the router.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	
10-12-08	CD-CP00-US Network Setup – ICMP Redirect	When receiving ICMP redirect messages, this determines if the IP Routing Table updates automatically or not.	0= (Enable) 1= (Disable) (default = 0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)		✓	
10-12-11	CD-CP00-US Network Setup – NIC Setup	Define the LAN interface Speed and Mode of the VoIP Application supported.  <i>IPLB daughter board does not support half duplex connection.</i>	0 = Auto Detect 1 = 100Mbps, Full Duplex 2 = 100Mbps, Half Duplex 3 = 10Mbps, Full Duplex 4 = 10Mbps, Half Duplex 5 = 1Gbps, Full Duplex 6 = 1Gbps, Half Duplex (default = 0)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-19-01	<b>VoIP DSP Resource Selection</b>	Select type of IPLA/IPLB DSP Resource. This program setting has no affect on the terminal/trunk port assignment or usage.	0 = Common use for both IP extensions and trunks 1 = IP Extension 2 = SIP Trunk 3 = CCIS 4 = Use for NetLink 5 = Blocked Default: Resource 1 = 1 Resource 2~128 = 0	✓		
10-23-01	<b>SIP System Interconnection Setup – System Interconnection</b>	Determine if the system is interconnected to another system.	0 = No (Disable) 1 = Yes (Enable) (default = 0)	✓		
10-23-02	<b>SIP System Interconnection Setup – IP Address</b>	Define the IP Address of the SIP System Interconnection.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-23-04	<b>SIP System Interconnection Setup – Dial Number</b>	Define Dial Number for the SIP System Interconnection.	Up to 12 digits (0~9) (default not assigned)	✓		
10-28-01	<b>SIP System Information Setup – Domain Name</b>	Define the Domain name. This information is generally provided by the SIP carrier.	Up to 64 Characters (default not assigned)	✓		
10-28-02	<b>SIP System Information Setup – Host Name</b>	Define the Domain name. This information is generally provided by the SIP carrier.	Up to 48 Characters (default not assigned)	✓		
10-28-03	<b>SIP System Information Setup – Transport Protocol</b>	Define the Transport type. This option is always set to UDP.	0 = UDP 1 = TCP (default = 0)	✓		
10-28-04	<b>SIP System Information Setup – User ID</b>	Define the User ID.	Up to 32 Characters When assigning the User ID, the ID may contain only alpha characters. (A space and/or special characters are not allowed in the User ID field). (default not assigned)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-28-05	<b>SIP System Information Setup – Domain Assignment</b>	Define the Domain Assignment. This entry is determined by what information the SIP carrier provides. If the SIP carrier provides a server name: SIPconnect-sca@L0.cbeyond.net, then the domain is: L0.cbeyond.net and the host name is SIPconnect-sca.	0 = IP Address 1 = Domain Name (default = 0)	✓		
10-28-06	<b>SIP System Information Setup – IP Trunk Port Binding</b>	Enable/Disable IP Trunk Port binding.	0 = Disable 1 = Enable (default = 0)	✓		
10-29-01	<b>SIP Server Information Setup – Default Proxy (Outbound)</b>	Define the SIP Proxy setup, Default Proxy (Outbound). When SIP trunking is used, this must be on. <i>If entries are made in Program 10-29-xx for an SIP Server and the SIP Server is removed or not used, the entries in Program 10-29-xx must be set back to their default settings. Even if Program 10-29-01 is set to 0 (off), the UNIVERGE SV8100 still checks the settings in the remaining 10-29 programs.</i>	0 = Off 1 = On (default = 0)	✓		
10-29-02	<b>SIP Server Information Setup – Default Proxy (Inbound)</b>	Define the Default Proxy (Inbound).	0 = Off 1 = On (default = 0)	✓		
10-29-03	<b>SIP Server Information Setup – Default Proxy IP Address</b>	Enter the default Proxy IP Address if the SIP carrier is using an IP address for the proxy. In most cases, this is left at the default entry as the domain name is used.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-29-04	<b>SIP Server Information Setup – Default Proxy Port Number</b>	Define the Proxy Port Number.	0~65535 (default = 5060)	✓		
10-29-05	<b>SIP Server Information Setup – Registrar Mode</b>	Define the Registrar Mode. This should always be set to manual when using SIP trunking.	0 = None 1 = Manual (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-29-06	SIP Server Information Setup – Registrar IP Address	Define the Registrar IP Address. The carrier may provide an IP address. In most cases, a domain name is used so this entry is left at the default.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-29-07	SIP Server Information Setup – Registrar Port Number	Define the Registrar Port Numbers.	0 ~ 65535 (default = 5060)	✓		
10-29-08	SIP Server Information Setup – DNS Server Mode	Define the DNS Mode. If the SIP carrier provides a domain name, turn this option on.	0 = Off 1 = On (default = 0)	✓		
10-29-09	SIP Server Information Setup – DNS Server IP Address	Define the DNS IP Address (normally provided by the SIP carrier). Enter the carrier-provided information or enter a valid DNS server IP address.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-29-10	SIP Server Information Setup – DNS Port Number	Define the DNS Transport port.	0~65535 (default = 53)	✓		
10-29-11	SIP Server Information Setup – Registrar Domain Name	Define the Registrar Domain Name (normally provided by the SIP carrier).	Up to 128 Characters (default not assigned)	✓		
10-29-12	SIP Server Information Setup – Domain Name	Define the Proxy Domain Name (UNIVERGE SV8100 domain name).	Up to 64 Characters (default not assigned)	✓		
10-29-13	SIP Server Information Setup – Proxy Host Name	Define the Proxy Host name (UNIVERGE SV8100 proxy name).	Up to 48 Characters (default not assigned)	✓		
10-29-14	SIP Server Information Setup – SIP Carrier Choice	Define the SIP Carrier Choice.  <i>Selecting Carrier B automatically sets Program 10-29-16 to on (1). Program 10-29-16 MUST be set to off for incoming calls to route using the lowest available trunk port.</i>	0 ~ 7 1 = Carrier A 2 = Carrier B 3 = Carrier C 4 = Carrier D 5 = Carrier E 6 = Carrier F 7 = Carrier G (default = 0)	✓		
10-29-15	SIP Server Information Setup – Registration Expiry (Expire) Time	Define the Registration Expire time – the time allowed to register with the SIP carrier.	120~65535 seconds (default = 3600)	✓		
10-30-02	SIP Authentication Information – User Name	Define the authentication User name provided by the SIP carrier.	Up to 64 Characters (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-30-03	<b>SIP Authentication Information – Password</b>	Enter the authentication password provided by the SIP carrier. When the UNIVERGE SV8100 registers its own ID with the carrier SIP server or makes an outgoing call via the carrier SIP server, the SIP server requests the authentication. This data is used as Register ID 0.	Up to 32 Characters (default not assigned)	✓		
10-30-04	<b>SIP Authentication Information – Authentication Trial</b>	Define the Authentication Trial. When a call tries to register with the SIP carrier and they refuse, this entry determines how many times the UNIVERGE SV8100 sends authentication.	0~9 (default = 1)	✓		
10-36-01	<b>SIP Trunk Registration Information Setup – Registration</b>	Enable/Disable the SIP trunk registration.	0 = Disable 1 = Enable (default = 0)	✓		
10-36-02	<b>SIP Trunk Registration Information Setup – User ID</b>	Define the USER ID for the SIP Trunk.	Up to 32 Characters. (default not assigned)	✓		
10-36-03	<b>SIP Trunk Registration Information Setup – Authentication User ID</b>	Define the Authentication USER ID for the SIP Trunk.	Up to 64 Characters. (default not assigned)	✓		
10-36-04	<b>SIP Trunk Registration Information Setup – Authentication Password</b>	Define the Authentication Password for the SIP Trunk.	Up to 32 Characters. (default not assigned)		✓	
10-37-01	<b>UPnP Setup – UPnP Mode</b>	Enable/Disable UPnP.	0 = Disable 1 = Enable (default = 0)	✓		
10-37-02	<b>UPnP Setup – Retry Time</b>	Define the retry time for UPnP.	0,60~3600 (1~59 cannot be input) (default = 60)	✓		
10-40-01	<b>IP Trunk Availability – IP Trunk Availability</b>	Enable/Disable IP Trunks.	0 = Disable 1 = Enable (default = 0)	✓		
10-40-02	<b>IP Trunk Availability – Number of Ports</b>	Define the number of IP Trunks when enabled.	0~128 (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	<b>System Numbering – Service Code</b>	Set the system internal (Intercom) numbering plan. The numbering plan assigns the first and second digits dialed and affects the digits an extension user must dial to access other extensions and features, such as service codes and trunk codes. If the default numbering plan does not meet the site requirements, use this program to tailor the system numbering to the site.	Refer to System Numbering Default Settings table in the UNIVERGE SV8100 Programming Manual for a list of default settings.	✓		
14-01-24	<b>Basic Trunk Data Setup – Trunk-to-Trunk Outgoing Caller ID through Mode</b>	Enable/Disable the ability to send the original Caller ID through when the call is Forward Off-Premise.	0 = Disable (No) 1 = Enable (Yes) (default = 0)		✓	
14-02-01	<b>Analog Trunk Data setup – Signaling Type (DP/DTMF)</b>	Set the outgoing signaling type for the tie trunk.	0=Dial Pulse (10 PPS) 1=Dial Pulse (20 PPS) 2=DTMF (default = 2)			✓
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to trunk groups.	Trunks 1~200 Trunk Port 1~200, Group 1, Priority 1~200	✓		
15-03-18	<b>Single Line Telephone Basic Data Setup – Select Special Terminal</b>	Used for selecting Special terminal type (FAX or Modem). This setting influences how data is transmitted via SIP trunk.  <i>Program 15-03-03 must be set to 1 (Special) to use this feature.</i>	Type 0 = FAX 1 = Modem (default = 0)		✓	
21-17-01	<b>IP Trunk (SIP) Calling Party Number Setup for Trunk</b>	Assign the Caller Party Number for each IP trunk. The assigned number is sent to the central office when the caller places an outgoing call. If the Calling Party Number is assigned by both Program 21-17 and Program 21-18/ 21-19, the system uses the entry in Program 21-18/21-19.	Up to 16 Digits (1~0, *, #) (default not assigned)	✓		
21-19-01	<b>IP Trunk (SIP) Calling Party Number Setup for Extension</b>	Assign the Calling Party Number for each extension. The assigned number is sent to the central office when the caller places an outgoing call. If the Calling Party Number is assigned by both Program 21-17 and Program 21-18/Program 21-19, the system uses the data in Program 21-18/Program 21-19.	Up to 16 Digits (1~0, *, #) (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type for each trunk.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
44-02-01	<b>Dial Analysis Table for ARS/F-Route Access – Dial</b>	Set the Dial digits for the Pre-Transaction Table for selecting ARS/F-Route (eight digits max: 1~9, 0 * #, @). To enter a wild card/don't care digit, press Line Key 1 to enter an @.	Up to eight digits (Use line key 1 for a 'Don't Care' digit, @) (default not assigned)		✓	
44-02-02	<b>Dial Analysis Table for ARS/F-Route Access – Service Type</b>	Set the Service Type (0~3) for the Pre-Transaction Table for selecting ARS/F-Route.	0 = No Setting (None) 1 = Extension Call (Own) 2 = ARS/F-Route Table (F-Route) 3 = Dial Extension Analyze Table (Option) (default = 0)		✓	
44-02-03	<b>Dial Analysis Table for ARS/F-Route Access – Additional Data</b>	If a Service Type is selected in Program 44-02-02, set the additional data, if required, for the Pre-Transaction Table for selecting ARS/F-Route (24 digits max: 1~9, 0 * #, @). To enter a wild card/don't care digit, press Line Key 1 to enter an @.	1 = Delete Digit = 0~255 (255 : Delete All Digits) 2 = 0~500 (0 = No Setting) 3 = Dial Extension Analyze Table Number = 0~4 (0 = No Setting) (default = 0)		✓	
44-05-01	<b>ARS/F-Route Table – Trunk Group Number</b>	Assign the trunk group to be used by the ARS/F-Route Table.	0~100, 255 0 = No Setting 255 = Extension Call (default = 0)		✓	
44-05-09	<b>ARS/F-Route Table – Maximum Digit</b>	Input the maximum number of digits to send when using the F-Route.	0~24 (default = 0)		✓	
84-06-01	<b>PVA Data Setting – RTP Port Number</b>	Define the Media Gateway starting RTP Port Number.	0~65535 (default = 10020)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-06-02	<b>PVA Data Setting – RTCP Port Number</b>	Define the Media Gateway Starting RTCP Port Number . The RTCP Port Number must be the (RTP port number + 1).	RTP Port Number + 1 (default = 10021)		✓	
84-06-04	<b>PVA Data Setting – Fract Lost Threshold</b>	Define the fractional lost threshold – this data will be sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~100% (default = 0)		✓	
84-06-05	<b>PVA Data Setting – Packets Lost Threshold</b>	Define the packet lost threshold – this data will be sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~16777215 (default = 0)		✓	
84-06-07	<b>PVA Data Setting – Jitter Threshold</b>	Define the Jitter Threshold – this data is sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~4294967295 (seconds) (default = 0)		✓	
84-06-09	<b>PVA Data Setting – Delay LSR Threshold</b>	Define the Delay threshold – this data will be sent to the UNIVERGE SV8100 CD-CP00-US when the value exceeds the defined value.	0~4294967295 (seconds) (default = 0)		✓	
84-06-16	<b>VoIP Info – IMCP Redirect</b>	Set whether or not IPLA/IPLB daughter board supports sending the Internet Message Control Protocol (IMCP) redirect message.	0=No 1=Yes (default = 0)		✓	
84-10-01	<b>ToS Setup – ToS Mode</b>	When Input Data is set to 1, Protocol 7 is invalid. When Data is set to 2, Protocols 2~6 are invalid.	0 = Disable (Invalid) 1 = IP Precedence 2 = Diffserv (default = 0)	✓		
84-10-02	<b>ToS Setup – Priority, IP Precedence</b>	1 = Router queuing priority.	0~7 0 = Low 7 = High (default = 0)	✓		
84-10-03	<b>ToS Setup – Low Delay</b>	1 = Optimize for low delay routing.	0~1 0 = Normal Delay, Low Delay (default = 0)	✓		
84-10-04	<b>ToS Setup – Wideband (Throughout)</b>	1 = Optimize for high bandwidth routing.	0~1 0 = Normal Throughput 1 = High Throughput (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-10-05	ToS Setup – High Reliability	1 = Optimize for reliability routing.	0~1 0 = Normal Reliability 1 = Low Reliability (default = 0)	✓		
84-10-07	ToS Setup – Priority (D.S.C.P. - Differentiated Services Code Point)	DSCP (Differentiated Services Code Point).	0~63 (default = 0)	✓		
84-13-01	SIP Trunk CODEC Information Basic Setup – Number of G.711 Audio Frames	Set the G.711 Audio Frame Number.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 2)	✓		
84-13-02	SIP Trunk CODEC Information Basic Setup – G.711 Voice Activity Detection Mode	Enable/Disable the G.711 VAD Detection Mode.	0 = Disable 1 = Enable (default = 0)	✓		
84-13-03	SIP Trunk CODEC Information Basic Setup – G.711 Type	Define the G.711 type.	0 = A-law 1 = $\mu$ -law (default = 1)	✓		
84-13-04	SIP Trunk CODEC Information Basic Setup – G.711 Jitter Buffer (min)	Set the minimum G.711 Jitter Buffer.	0~160ms (default = 20)	✓		
84-13-05	SIP Trunk CODEC Information Basic Setup – G.711 Jitter Buffer (Average)	Set the average G.711 Jitter Buffer.	0~160ms (default = 40)	✓		
84-13-06	SIP Trunk CODEC Information Basic Setup – G.711 Jitter Buffer (max)	Set the maximum G.711 Jitter Buffer.	0~160ms (default = 80)	✓		
84-13-07	SIP Trunk CODEC Information Basic Setup – Number of G.729 Audio Frames	Set the G.729 Audio Frame Number.	1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms 5 = 50ms 6 = 60ms (default = 2)	✓		
84-13-08	SIP Trunk CODEC Information Basic Setup – G.729 Voice Activity Detection Mode	Enable/Disable the G.729 VAD Detection Mode.	0 = Disable 1 = Enable (default = 0)	✓		
84-13-09	SIP Trunk CODEC Information Basic Setup – G.729 Jitter Buffer (min)	Set the minimum G.729 Jitter Buffer.	0~270ms (default = 20)	✓		
84-13-10	SIP Trunk CODEC Information Basic Setup – G.729 Jitter Buffer (Average)	Set the average G.729 Jitter Buffer.	0~270ms (default = 40)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-13-11	<b>SIP Trunk CODEC Information Basic Setup – G.729 Jitter Buffer (max)</b>	Set the maximum G.729 Jitter Buffer.	0~270ms (default = 80)	✓		
84-13-17	<b>SIP Trunk CODEC Information Basic Setup – Jitter Buffer Mode</b>	Set the Jitter Buffer Mode.	1 = Fixed 2 = Adaptive during silence 3 = Adaptive Immediately (default = 3)	✓		
84-13-18	<b>SIP Trunk CODEC Information Basic Setup – VAD Threshold</b>	Set the VAD (Voice Activity Detection) threshold.	0~30 = -19dB~-10dB 1 = -19dB (-49dBm) : 2 = 0dB (-30dBm) : 29 = 9dBm (-21dBm) 30 = 0dBm (-20dBm) (default = 20)	✓		
84-13-26	<b>SIP Trunk CODEC Information Basic Setup – TX Gain</b>	Set the transmit gain.	0~40 (-20dBm ~ +20dBm) 0 = -20dBm 1 = -19 dBm : 20 = 0dBm : 39 = 19 dBm 40 = 20dBm (default = 20)	✓		
84-13-27	<b>SIP Trunk CODEC Information Basic Setup – RX Gain</b>	Set the receive gain.	0~40 (-20dBm ~ +20dBm) 0 = -20dBm 1 = -19 dBm : 20 = 0dBm : 39 = 19 dBm 40 = 20dBm (default = 20)	✓		
84-13-28	<b>SIP Trunk CODEC Information Basic Setup – Audio Capability Priority</b>	Define the CODEC Priority.	0 = G.711_PT 1 = G.723_PT 2 = G.729_PT 3 = G.722_PT 4 = G.726_PT 5 = iLBC 6 = G711_Fix 7 = G729_Fix (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-13-31	SIP Trunk CODEC Information Basic Setup – DTMF Payload Number	Define the DTMF Payload Number.	96~127 (default = 110)	✓		
84-13-32	SIP Trunk CODEC Information Basic Setup – DTMF Relay Mode	Determine the DTMF setup.	0 = Disable 1 = RFC2833 (default = 0)	✓		
84-13-33	SIP Trunk CODEC Information Basic Setup – Number of G.722 Audio Frames	Define the number of G.722 Audio Frames.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 3)		✓	
84-13-34	SIP Trunk CODEC Information Basic Setup – G.722 VAD Mode	Enable/Disable the G.722 VAD Mode.	0 = Disable 1 = Enable (default = 0)		✓	
84-13-35	SIP Trunk CODEC Information Basic Setup – G.722 Jitter Buffer (min)	Define the minimum level for the G.722 jitter buffer.	0~160ms (default = 30)		✓	
84-13-36	SIP Trunk CODEC Information Basic Setup – G.722 Jitter Buffer (average)	Define the average level for the G.722 Jitter Buffer.	0~160ms (default = 60)		✓	
84-13-37	SIP Trunk CODEC Information Basic Setup – G.722 Jitter Buffer (max)	Define the Max level for the G.722 Jitter buffer.	0~160ms (default = 120)		✓	
84-13-38	SIP Trunk CODEC Information Basic Setup – Number of G.726 Audio Frames	Define the number of G.726 audio frames.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 3)		✓	
84-13-39	SIP Trunk CODEC Information Basic Setup – G.726 VAD Mode	Enable/Disable the VAD mode for G.726.	0 = Disable 1 = Enable (default = 0)		✓	
84-13-40	SIP Trunk CODEC Information Basic Setup – G.726 Jitter Buffer (min)	Define the minimum level for the G.726 jitter buffer.	0~160ms (default = 30)		✓	
84-13-41	SIP Trunk CODEC Information Basic Setup – G.726 Jitter Buffer (average)	Define the average level for the G.726 jitter buffer.	0~160ms (default = 60)		✓	
84-13-42	SIP Trunk CODEC Information Basic Setup – G.726 Jitter Buffer (max)	Define the max level for the G.726 jitter buffer.	0~160ms (default = 120)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-13-49	<b>SIP Trunk CODEC Information Basic Setup – RTP Filter</b>	To avoid incorrect voice pass connection, this program checks the sending side address from received RTP packet at VoIPDB.	0 = Disable 1 = Enable (default = 0)		✓	
84-13-50	<b>SIP Trunk CODEC Information Basic Setup – FAX Relay Mode</b>	Enables/Disables the FAX relay mode.	0 = Disable 1 = Enable (default = 0)	✓		
84-13-51	<b>SIP Trunk CODEC Information Basic Setup – T.38 Protocol Mode</b>	Sets the T.38 protocol mode.	0 = RTP 1 = UDPTL (default = 1)	✓		
84-13-52	<b>SIP Trunk CODEC Information Basic Setup – FAX Maximum Rate</b>	Sets the maximum FAX rate.	0 = V.27ter, 2400bps 1 = V.27ter, 4800bps 2 = V.29, 7200bps 3 = V.29, 9600bps 4 = V.17, 12000bps 5 = V.17, 14400bps (default = 5)		✓	
84-13-54	<b>SIP Trunk CODEC Information Basic Setup – FAX Packet Size</b>	Sets the FAX packet size.	20~48 (bytes) (default = 20)		✓	
84-13-55	<b>SIP Trunk CODEC Information Basic Setup – High Speed Data Packet Length</b>	Sets the high speed data packet length (v27ter, V29, V33, and V17).	1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 4)		✓	
84-13-56	<b>SIP Trunk CODEC Information Basic Setup – Low Speed Redundancy</b>	Sets the number of redundant packets for V.21.	0~5 (default = 0)		✓	
84-13-57	<b>SIP Trunk CODEC Information Basic Setup – High Speed Data Packet Redundancy</b>	Sets the number of redundant packets for V.27ter, V.29, V33 and V17.	0~2 (default = 0)		✓	
84-13-58	<b>SIP Trunk CODEC Information Basic Setup – TCF Handling Method</b>	Sets the training confirmation handling mode. Local denotes that the VoIP generates and checks, Network denotes that the TCF is sent to the network provider.	0 = Receive TCF signal by VoIPDB 1 = Through TCF signal to external FAX (default = 1)		✓	
84-13-59	<b>SIP Trunk CODEC Information Basic Setup – Maximum Low Speed Data Packetization</b>	Sets the maximum number of bytes of low-speed fax data packet into each network packet.	1~65535 (bytes) (default = 1)		✓	
84-13-60	<b>SIP Trunk CODEC Information Basic Setup – Transmit Network Timeout</b>	Sets the timer value of transmits network timeout.	10~32000 seconds (default = 150)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-13-61	<b>SIP Trunk CODEC Information Basic Setup – T.38 RTP Format Payload Number</b>	Sets the payload number for T.38 RTP Format.	96~127 (default = 100)		✓	
84-14-06	<b>SIP Trunk Basic Information Setup – SIP Trunk Port Number</b>	Set the SIP UA (User Authorized) Trunk port number (Receiving Transport for UNIVERGE SV8100 SIP).	1~65535 (default = 5060)	✓		
84-14-07	<b>SIP Trunk Basic Information Setup – Session Timer Value</b>	Set the Session Timer Value.	1~65535 seconds (default = 0)	✓		
84-14-08	<b>SIP Trunk Basic Information Setup – Minimum Session Timer Value</b>	Set the Minimum Session Timer Value.	1~65535 seconds (default = 1800)	✓		
84-14-09	<b>SIP Trunk Basic Information Setup – Called Party Information</b>	Set the Called Party Information.	0 = Request URI 1 = To Header (default = 0)	✓		
84-14-10	<b>SIP Trunk Basic Information Setup – URL Type</b>	Define the URL type for SIP trunks.	0 = SIP-URL 1 = TEL-URL (default = 0)	✓		
84-26-01	<b>IPL Basic Setup – IP Address</b>	Define the IP address for each DSP on the IPLA/IPLB daughter board. PZ-32IPLA/IPLB has 2 DSPs, PZ-64IPLA/IPLB has 4 DSPs, PZ-128IPLA/IPLB has 8 DSPs.  <i>When using a PZ-( )IPLB only 1 IP Address has to be assigned to the DSP. Set the other 7 DSP addresses to equal 0.0.0.0.</i>	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27		✓	
84-26-02	<b>IPL Basic Setup – RTP Port Number</b>	Define the UDP port number for RTP to use for each DSP.  <i>Only even numbered ports are supported.</i>	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-03	IPL Basic Setup – RTCP Port Number (RTP Port Number + 1)	Define the TCP port number for RTCP to use for each DSP.	0~65534 Defaults: VoIP GW1 = 10021 VoIP GW2 = 10053 VoIP GW3 = 10085 VoIP GW4 = 10117 VoIP GW5 = 10149 VoIP GW6 = 10181 VoIP GW7 = 10213 VoIP GW8 = 10245	✓		
90-10-01	System Alarm Setup – Alarm Type	Define if Alarms are Minor, Major, or Not Set.	0 = Not Set 1 = Major Alarm 2 = Minor Alarm (default not assigned)	✓		

### SIP Trunk E.164 Support

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-02-01	Location Setup – Country Code	Enter the country code.	Dial (up to four digits): 0~9, *, # (default = 1)	✓		
10-02-02	Location Setup – International Access Codes	Enter the international access code.	Dial (up to four digits): 0~9, *, # (default not assigned)	✓		
44-01-02	System Options for ARS/F-Route – Dial Tone Simulation	When first dialed, digit matches the data set in this Program, system sends simulated DT to calling party after receiving first digit. Numbering plan for the dial needs to be configured as F-Route in Program 11-01.	1 Digit (0~9) (*, # cannot be used) (default not assigned)	✓		
44-01-03	System Options for ARS/F-Route – Tone Type	Set simulated DT to type which can change the tone used in Program 44-01-02 and Program 44-02-04.	0 = Internal Dial Tone 1 = External Dial Tone (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-14-13	<b>SIP Trunk Basic Information Setup – Incoming/ Outgoing SIP Trunk for E.164</b>	When this data is set to 1, then for any outbound SIP calls a + is added as a prefix to the Request-URI, To and From header fields of the SIP message. When it is set to 2 then if the dialed international access code matches the value in Program 10-02-02 this value is removed from the number dialed and the + added as a prefix to the Request-URI, To and From header fields of the SIP Message.	0 = Off 1 = Mode 1 2 = Mode 2 3 = Mode 3 (default = 0)	✓		


### SIP Trunk E.164 CLIP Enhancement





Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-02-01	<b>Location Setup – Country Code</b>	Enter the country code.	Dial (up to four digits): 0~9, *, # (default = 1)	✓		
10-02-02	<b>Location Setup – International Access Codes</b>	Enter the international access code.	Dial (up to four digits): 0~9, *, # (default not assigned)	✓		
10-02-03	<b>Location Setup – Other Area Access Code</b>	Enter the other area access code.	Dial (up to two digits): 0~9, *, # (default = 9)	✓		
84-14-13	<b>SIP Trunk Basic Information Setup – Incoming/ Outgoing SIP Trunk for E.164</b>	When this data is set to 1, then for any outbound SIP calls a + is added as a prefix to the Request-URI, To and From header fields of the SIP message. When it is set to 2 then if the dialed international access code matches the value in Program 10-02-02 this value is removed from the number dialed and the + added as a prefix to the Request-URI, To and From header fields of the SIP Message.	0 = Off 1 = Mode 1 2 = Mode 2 3 = Mode 3 (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-14-16	<b>SIP Trunk Basic Information Setup – SIP Trunk SIP-URI E.164 Incoming Mode</b>	<p>When this data is set to 1, then for any inbound SIP calls that include a + and a country code not defined in Program 10-02-01, delete the + and add the International Access Code in Program 10-02-02. If the country code is a match then delete both the + and country code but do not add the International Access code.</p> <p>When it is set to 2, then for any inbound SIP calls that include a + and a country code not defined in Program 10-02-01, delete the + and add the International Access Code in Program 10-02-02. If the country code is a match then delete both the + and country code and add the Caller ID Edit Code from Program 10-02-03.</p>	0 = Disable 1 = Mode 1 2 = Mode 2 (default = 0)	✓		




### Video Support over SIP Trunks




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	<b>CD-CP00-US Network Setup – IP Address</b>	It is recommended to set this program to <b>0.0.0.0</b> . All connections to the system are made through the IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)		✓	
10-12-03	<b>CD-CP00-US Network Setup – Default Gateway</b>	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-08	<b>CD-CP00-US Network Setup – ICMP Redirect</b>	When receiving ICMP redirect messages, this determines if the IP Routing Table updates automatically or not.	0= (Enable) 1= (Disable) (default = 0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLB.  <i>The IP Address assigned in Program 10-12-01 cannot start with the same leading digits as the IP Address assigned here.</i>	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-11	CD-CP00-US Network Setup – NIC Setup	Define the LAN interface Speed and Mode of the VoIP Application supported.  IPLB daughter board does not support half duplex connection.	0 = Auto Detect 1 = 100Mbps, Full Duplex 2 = 100Mbps, Half Duplex 3 = 10Mbps, Full Duplex 4 = 10Mbps, Half Duplex 5 = 1Gbps, Full Duplex 6 = 1Gbps, Half Duplex (default = 0)	✓		
10-23-01	SIP System Interconnection Setup – System Interconnection	Determine if the system is interconnected to another system.  For the SIP System Interconnection set to 1 (Yes).	0 = No (Disable) 1 = Yes (Enable) (default = 0)	✓		
10-23-02	SIP System Interconnection Setup – IP Address	Define the IP Address for the SIP System Interconnection.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-23-04	SIP System Interconnection Setup – Dial Number	Define the Dial Number for the SIP System.	Up to 12 digits (0~9) (default not assigned)	✓		
10-26-03	IP System Operation Setup – SIP Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.  For Video Call to function set to 1 (On).	0 = Off 1 = On (default = 1)	✓		
10-28-04	SIP System Information Setup – User ID	Define the User ID.  An entry is required for SIP System Interconnection to function.	Up to 32 Characters When assigning the User ID, the ID may contain only alpha characters. (A space and/or special characters are not allowed in the User ID field). (default not assigned)	✓		
10-40-01	IP Trunk Availability – IP Trunk Availability	Enable/Disable IP Trunks.  For the SIP System Interconnection set to 1 (Enable).	0 = Disable 1 = Enable (default = 0)	✓		
10-40-02	IP Trunk Availability – Number of Ports	Define the number of IP Trunks when enabled.	0~128 (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	<b>System Numbering – Service Code</b>	Assign the 1st and 2nd dial digit to F-Route for Remote System Extension Numbering.	Refer to System Numbering Default Settings table in the UNIVERGE SV8100 Programming Manual for a list of default settings.	✓		
11-02-01	<b>Extension Numbering – Dial (Up to 8 Digits)</b>	Assign extension numbers to Extension ports.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513		✓	
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign SIP Trunks to same Trunk Group.	Trunks 1~200 Trunk Port 1~200, Group 1, Priority 1~200	✓		
14-18-03	<b>IP Trunk Data Setup – P2P Mode</b>	Enable/Disable P2P Mode.  For Video Call via the System Interconnection set to <b>1</b> (Enable).	0 = Disable 1 = Enable (default = 0)	✓		
14-18-04	<b>IP Trunk Data Setup – Video Mode</b>	Enable/Disable Video Mode.  For Video Call via the System Interconnection set to <b>1</b> (Enable).	0 = Disable 1 = Enable (default = 0)	✓		
15-05-43	<b>IP Telephone Terminal Basic Data Setup – Video Mode</b>	Enable/Disable Video Mode for Standard SIP terminals.  For Video Call via the System Interconnection set to <b>1</b> (Enable).	0 = Disable 1 = Enable (default = 0)	✓		
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators should be allowed.	0 = Off 1 = On (default = 0)		✓	
21-17-01	<b>IP Trunk (SIP) Calling Party Number Setup for Trunk</b>	Assign the Caller Party Number for each IP trunk. The assigned number is sent to the central office when the caller places an outgoing call. If the Calling Party Number is assigned by both Program 21-17 and Program 21-18/ 21-19, the system uses the entry in Program 21-18/21-19.	Up to 16 Digits (1~0, *, #) (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-19-01	<b>IP Trunk (SIP) Calling Party Number Setup for Extension</b>	Assign the Calling Party Number for each extension. The assigned number is sent to the central office when the caller places an outgoing call. If the Calling Party Number is assigned by both Program 21-17 and Program 21-18/Program 21-19, the system uses the data in Program 21-18/Program 21-19.	Up to 16 Digits (1~0, *, #) (default not assigned)		✓	
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type for each trunk.  <i>For the SIP System Interconnection, set each trunk to 5 (E&amp;M Tie Line).</i>	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
44-02-01	<b>Dial Analysis Table for ARS/F-Route Access – Dial</b>	Set the Dial digits for the Pre-Transaction Table for selecting ARS/F-Route (eight digits maximum: 1~9, 0 #, @).  <i>To enter a wild card/don't care digit, press Line Key 1 to enter an @.</i>	Up to eight digits (default not assigned)	✓		
44-02-02	<b>Dial Analysis Table for ARS/F-Route Access – Service Type</b>	Set the Service Type (0~3) for the Pre-Transaction Table for selecting ARS/F-Route.  <i>For the SIP System Interconnection, set each Dial Digit to 2 (F-Route).</i>	0 = No Setting (None) 1 = Extension Call (Own) 2 = ARS/F-Route Table (F-Route) 3 = Dial Extension Analyze Table (Option) (default = 0)	✓		
44-02-03	<b>Dial Analysis Table for ARS/F-Route Access – Additional Data</b>	This is the F-Route Table set in Program 44-05.	1 = Delete Digit = 0~255 (255 : Delete All Digits) 2 = 0~500 (0 = No Setting) 3 = Dial Extension Analyze Table Number = 0~4 (0 = No Setting) (default = 0)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-05-01	ARS/F-Route Table – Trunk Group Number	Assign the Trunk Group to be used by the F-Route Table.  <i>This is the Trunk Group assigned to the SIP System Interconnection trunks in Program 14-05-01.</i>	0~100, 255 0 = No Setting 255 = Extension Call (default = 0)	✓		
44-05-09	ARS/F-Route Table – Maximum Digit	Input the maximum number of digits to send when using the F-Route.	0~24 (default = 0)		✓	
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27		✓	

## Operation

### SIP Trunk E.164 Support:

#### To make a call using E.164 number format:

1. Lift the handset or press **Speaker**.
2. Dial **00441202223344#**.

 *The system automatically modifies the required header fields of the SIP INVITE message using the configuration settings in the table below before forwarding to the ITSP.*

**Table 2-46 SIP INVITE Header Fields**

Program 84-14-13	Program 10-02-01	Program 10-02-02	Description Calling Party Number = 441509555123 Called Party Number = 00441202223344
0	44	–	Request-URI: Invite sip: 00441202223344@172.16.18.100 SIP/2.0 To header: To:sip:00441202223344@172.16.18.100 From header: From<sip:441509555123@172.16.0.10>
	No Setting	–	Request-URI: Invite sip: 00441202223344@172.16.18.100 SIP/2.0 To header: To:sip:00441202223344@172.16.18.100 From header: From<sip:441509555123@172.16.0.10>

**Table 2-46 SIP INVITE Header Fields (Continued)**

Program 84-14-13	Program 10-02-01	Program 10-02-02	Description Calling Party Number = 441509555123 Called Party Number = 00441202223344
1	44	–	Request-URI: Invite sip:+4400441202223344@172.16.18.100 SIP/2.0 To header: To:sip:+4400441202223344@172.16.18.100 From header: From<sip:+44441509555123@172.16.0.10>
	No Setting	–	Request-URI: Invite sip:+00441202223344@172.16.18.100 SIP/2.0 To header: To:sip:+00441202223344@172.16.18.100 From header: From<sip:+441509555123@172.16.0.10>
2	–	00	Request-URI: Invite sip:+441202223344@172.16.18.100 SIP/2.0 To header: To:<sip:+441202223344@172.16.18.100> From header: From<sip:441509555123@172.16.0.10> P-Asserted-Identity: P-Asserted-Identity441509555123@172.16.0.10> P-Preferred-Identity: P-Preferred-Identity441509555123@172.16.0.10>
	–	No Setting	No Function

**SIP Trunk E.164 CLIP Enhancement**

**Delete the + only from an incoming SIP INVITE using E.164 numbering scheme:**

**Table 2-47 Delete + from Incoming SIP INVITE**

Program 84-14-16	Program 84-14-13	Description
0: Off	0: Off Or 1: On	When a + is presented as the international access code in a SIP INVITE for incoming calls then delete the + only.

<Example Output>

Incoming call from: +4902131795770

Displayed in terminal incoming caller history as:

01:	4902131795770
*	3-5 11:17
↑	↓ Store DEL

Original

**Delete and replace the + and matched country code from an incoming SIP INVITE using E.164 numbering scheme:**

**Table 2-48 Delete + and Country Code from Incoming SIP INVITE**

Program 84-14-16	Program 84-14-13	Description
1: Mode 1	1: On	With a SIP INVITE for incoming calls. When a + is presented as the international access code along with a country code that <b>DOES NOT</b> match the value in Program 10-02-01, then delete the + and add the international access code value in Program 10-02-02 only. <b>- Or -</b> With a SIP INVITE for incoming calls. When a + is presented as the international access code along with a country code that <b>DOES</b> match the value in Program 10-02-01, then delete the + and country code but <b>DO NOT</b> add the international access code value.

<Example Output>

Incoming call from: +4902131795770

Program 10-02-02 = 00

Displayed in terminal incoming caller history as:

01:	4902131795770
* 3-5	11:17
↑ ↓	Store DEL

Original

01:	004902131795770
* 3-5	11:17
↑ ↓	Store DEL

Program 10-02-01 = 0

01:	02131795770
* 3-5	11:17
↑ ↓	Store DEL

Program 10-02-01 = 49

**Delete and replace the + and matched country code from an incoming SIP INVITE using E.164 numbering scheme:**

**Table 2-49 Delete + and Country Code from Incoming SIP INVITE**

Program 84-14-16	Program 84-14-13	Description
2: Mode 2	1: On	With a SIP INVITE for incoming calls. When a + is presented as the international access code along with a country code that <b>DOES NOT</b> match the value in Program 10-02-01, then delete the + and add the international access code value in Program 10-02-02 only. <b>- Or -</b> With a SIP INVITE for incoming calls. When a + is presented as the international access code along with a country code that <b>DOES</b> match the value in Program 10-02-01, then delete the + and country code but <b>DO NOT</b> add the international access code value.

<Example Output>

Incoming call from: +4902131795770

Program 10-02-02 = 00

Program 10-02-03 = 9

Displayed in terminal incoming caller history as:

01:	4902131795770
* 3-5	11:17
↑	↓ Store DEL

Original

01:	004902131795770
* 3-5	11:17
↑	↓ Store DEL

Program 10-02-01 = 0

01:	902131795770
* 3-5	11:17
↑	↓ Store DEL

Program 10-02-01 = 49

#### Making an outgoing call from history of incoming calls:

1. From an idle multiline terminal.
2. Press soft key **List**.
3. Press soft key **CID**.
4. Press **Speaker**.

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## *IP Trunk – H.323*

### Enhancements

With SV8100 <b>Version 5000 (5.00 or higher)</b> software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.
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### Description

H.323 is an International Telecommunication Union (ITU) standard for Packet Based Multimedia Communication Systems. The UNIVERGE SV8100 can use H.323 to connect to another UNIVERGE SV8100 system or a third-party product.

The feature set is limited. When using H.323, it is impossible to use the advanced networking features. If these features are required, use IP KCCIS. The UNIVERGE SV8100 Voice over IP Trunk – H.323 package sends the real-time voice over the corporate LAN or WAN. The voice from the telephone is digitized and then put into frames to be sent over a network using Internet Protocol.

The UNIVERGE SV8100 Voice over IP Trunk – H.323 package allows communication using standard H.323 (Normal and Fast Start) Protocol and allows connectivity to any H.323 standards compliant voice gateway and gatekeeper. This VoIP Trunk Daughter board also allows Registration and Authentication Server (RAS) support to register with an RAS Server and use Gatekeeper for dynamic call routing.

The PZ-(x)IPLA/IPLB – H.323 is an optional interface that can provide IP trunks and Tie Lines. It can operate in the following modes:

- COI
- COID
- DID
- TLI
- DTI

Depending on the requirements and resource allocation in the LAN/WAN/Internet, the PZ-(x)IPLA/IPLB – H.323 can be configured to use any of the following voice compressions:

- G.729 Low bandwidth requirement is used on most Wide Area Network links.
- G.711 High bandwidth requirement is usually used on Local Area Networks.

- G 722 This codec is useful in fixed network, Voice over IP applications, where the required bandwidth is typically not prohibitive.
- G.723 This codec is a ITU-T standard wide band speech codec. This is an extension of recommendation G.721 adaptive differential pulse code modulation to 24 and 40 kbit/s for digital circuit multiplication equipment application.

### Conditions

- A maximum of 128 IP Trunks are supported in the SV8100.
- Calling Party Name is not provided for outgoing calls on H.323 trunks.
- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.
- All IP trunks (SIP, CCIS, or H.323) must be contiguous. If any IP trunks are added to a system that already has IP trunks installed, and the next set of trunks is not in sequence, then all IP trunks are moved to a new set of sequential trunk numbers.

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

CPU with PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB Daughter Board

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## Related Features


None



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 2** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	ETU Setup (IPLA/IPLB Pkg) – Trunk Logical Port Number	Displays the port number assigned to the IPLA/IPLB.	0~200 (default = 0)		✓	
10-03-02	ETU Setup (IPLA/IPLB Pkg) – Trunk Type	Define if the IP Trunks are H.323 or SIP.	0 = H.323 1 = SIP (default = 1)	✓		
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
10-17-02	H.323 Gatekeeper Setup – Gatekeeper IP Address	Define the Gatekeeper IP address for H.323.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-17-04	H.323 Gatekeeper Setup – Preferred Gatekeeper	When 10-17-01 is set to 1, this is used and sets the preferred ID of multiple gatekeepers.	Maximum 124 characters (default not assigned)	✓		
10-18-01	H.323 Alias Address Setup – Alias Address	Set the telephone number (Alias Address) to external gatekeeper.	Dial up to 12 digits (0~9, *, #) (default not assigned)	✓		
10-18-02	H.323 Alias Address Setup – Alias Address Type	Set the Alias Address Type to external gatekeeper.	0 = E164 (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-23-01	<b>SIP System Interconnection Setup – System Interconnection</b>	Determine if the system is interconnected to another system.	0 = No (Disable) 1 = Yes (Enable) (default = 0)	✓		
10-23-02	<b>SIP System Interconnection Setup – IP Address</b>	Define the IP Address for the SIP System Interconnection.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-23-04	<b>SIP System Interconnection Setup – Dial Number</b>	Define the Dial Number for the SIP System.	Up to 12 digits (0~9) (default not assigned)	✓		
10-40-01	<b>IP Trunk Availability – IP Trunk Availability</b>	Enable/Disable IP Trunks.	0 = Disable 1 = Enable (default = 0)	✓		
10-40-02	<b>IP Trunk Availability – Number of Ports</b>	Define the number of IP Trunks when enabled.	0~128 (default = 0)	✓		
14-02-01	<b>Analog Trunk Data Setup – Signaling Type (DP/DTMF)</b>	Set the outgoing signaling type for the tie trunk.	0=Dial Pulse (10 PPS) 1=Dial Pulse (20 PPS) 2=DTMF (default = 2)			✓
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to trunk groups then go to Program 14-06-01 below to set up Trunk Group Routing.	Trunks 1~200 Trunk Port 1~200, Group 1, Priority 1~200	✓		
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified)	✓		
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators should be allowed.	0 = Off 1 = On (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
21-17-01	<b>IP Trunk (SIP) Calling Party Number Setup for Trunk</b>	Assign the Caller Party Number for each IP trunk. The assigned number is sent to the central office when the caller places an outgoing call. If the Calling Party Number is assigned by both Program 21-17 and Program 21-18/ 21-19, the system uses the entry in Program 21-18/21-19.	Up to 16 Digits (1~0, *, #) (default not assigned)	✓		
21-18-01	<b>IP Trunk (H.323) Calling Party Number Setup for Extension – IP Trunk (H.323) Calling Party Number Setup for Extension</b>	Assign the Calling Party Number for each extension. The assigned number is sent to the exchange when the caller places an outgoing call.	Up to 16 digits (1~0, *, #) (default not assigned)	✓		
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type for each trunk.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
44-02-01	<b>Dial Analysis Table for ARS/ F-Route Access – Dial</b>	Set the number of digits to be analyzed by the system for ARS routing.	Up to eight digits (Use line key 1 for a 'Don't Care' digit, @) (default not assigned)		✓	
44-02-02	<b>Dial Analysis Table for ARS/ F-Route Access – Service Type</b>	Set the Service Type (0~3) for the Pre-Transaction Table for selecting ARS/F-Route.	0 = No Setting (None) 1 = Extension Call (Own) 2 = ARS/F-Route Table (F-Route) 3 = Dial Extension Analyze Table (Option) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-02-03	Dial Analysis Table for ARS/F-Route Access – Additional Data	If a Service Type is selected in Program 44-02-02, set the additional data, if required, for the Pre-Transaction Table for selecting ARS/F-Route (24 digits max: 1~9, 0 * #, @). To enter a wild card/don't care digit, press Line Key 1 to enter an @.	1 = Delete Digit = 0~255 (255 : Delete All Digits) 2 = 0~500 (0 = No Setting) 3 = Dial Extension Analyze Table Number = 0~4 (0 = No Setting) (default = 0)		✓	
44-05-01	ARS/F-Route Table – Trunk Group Number	Select the trunk group number to be used for the outgoing ARS call.	0~100, 255 0 = No Setting 255 = Extension Call (default = 0)		✓	
44-05-09	ARS/F-Route Table – Maximum Digit	Input the maximum number of digits to send when using the F-Route.	0~24 (default = 0)		✓	
84-01-02	H.323 Trunk Basic Information Setup – Number of G.711 audio frames	Define the number of G.711 Audio Frames.	1~4 (default = 3)		✓	
84-01-03	H.323 Trunk Basic Information Setup – G.711 VAD mode	Enable/Disable the G.711 VAD mode for H.323.	0 = Disable 1 = Enable (default = 0)		✓	
84-01-04	H.323 Trunk Basic Information Setup – G.711 Type	Define the G.711 type for H.323.	0 = A-law 1 = $\mu$ -law (default = 1)		✓	
84-01-05	H.323 Trunk Basic Information Setup – Number of G.729 audio frames	Define the number of G.729 audio frames for H.323.	1~6 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms 5 = 50ms 6 = 60ms (default = 3)		✓	
84-01-06	H.323 Trunk Basic Information Setup – G.729 VAD mode	Enable/Disable the G.729 VAD mode for H.323.	0 = Disable 1 = Enable (default = 0)		✓	
84-01-07	H.323 Trunk Basic Information Setup – G.729 Jitter Buffer (min)	Define the G.729 jitter buffer (minimum) for H.323.	0~270ms (default = 30)		✓	
84-01-08	H.323 Trunk Basic Information Setup – G.729 Jitter Buffer (average)	Define the G.729 jitter buffer (average) for H.323.	0~270ms (default = 60)		✓	
84-01-09	H.323 Trunk Basic Information Setup – G.729 Jitter Buffer (max)	Define the G.729 jitter buffer (maximum) for H.323.	0~270ms (default = 120)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-01-11	H.323 Trunk Basic Information Setup – Number of G.723 audio frames	Define the number of G.723 audio frames for H.323.	1~2 (default = 1)		✓	
84-01-12	H.323 Trunk Basic Information Setup – G.723 VAD mode	Define the G.723 VAD mode for H.323.	0 = Disable 1 = Enable (default = 0)		✓	
84-01-15	H.323 Trunk Basic Information Setup – Jitter Buffer Mode	Define the jitter buffer mode for H.323.	1 = Fixed 2 = Self adjusting (silence period) 3 = Self adjusting (default = 3)		✓	
84-01-16	H.323 Trunk Basic Information Setup – G.711 Jitter Buffer (min)	Define the G.711 jitter buffer (minimum) for H.323.	0~160ms (default = 30)		✓	
84-01-17	H.323 Trunk Basic Information Setup – G.711 Jitter Buffer (average)	Define the G.711 jitter buffer (average) for H.323.	0~160ms (default = 60)		✓	
84-01-18	H.323 Trunk Basic Information Setup – G.711 Jitter Buffer (max)	Define the G.711 jitter buffer (maximum) for H.323.	0~160ms (default = 120)		✓	
84-01-19	H.323 Trunk Basic Information Setup – G.723 Jitter Buffer (min)	Define the G.723 jitter buffer (minimum) for H.323.	0~270ms (default = 30)		✓	
84-01-20	H.323 Trunk Basic Information Setup – G.723 Jitter Buffer (average)	Define the G.723 jitter buffer (average) for H.323.	0~270ms (default = 60)		✓	
84-01-21	H.323 Trunk Basic Information Setup – G.723 Jitter Buffer (max)	Define the G.723 jitter buffer (maximum) for H.323.	0~270ms (default = 120)		✓	
84-01-22	H.323 Trunk Basic Information Setup – VAD Threshold	Define the VAD threshold for H.323.	0~30 (-19db~ +10db and self adjustment) 0 = Self adjustment 1 = -19db (-49dbm) : 20 = 0db (-30dbm) : 29 = 9db (-21dbm) 30 = 10db (-20dbm) (default = 20)		✓	
84-01-23	H.323 Trunk Basic Information Setup – Idle Noise Level	Define the idle noise level for H.323.	-5000dbm ~ -7000dbm (default = 7000)		✓	
84-01-24	H.323 Trunk Basic Information Setup – Echo Canceller Mode	Enable/Disable the echo canceller mode for H.323.	0 = Disable 1 = Enable (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-01-25	H.323 Trunk Basic Information Setup – Echo Canceller Tail Size	Define the echo canceller tail size for H.323.	1 = 4ms 2 = 8ms 3 = 16ms 4 = 32ms 5 = 64ms 6 = 128ms (default = 6)		✓	
84-01-26	H.323 Trunk Basic Information Setup – Echo Canceller NLP Mode	Define the echo canceller NLP mode for H.323.	0 = Disable 1 = Enable (default = 1)		✓	
84-01-28	H.323 Trunk Basic Information Setup – Echo Canceller NLP Noise Setting	Define the echo canceller NLP noise setting for H.323.	0 = Automatic level adjustment 1 = Fixed level (default = 0)		✓	
84-01-30	H.323 Trunk Basic Information Setup – TX Gain	Define the TX gain for H.323.	0~40 (-20dBm~+20dBm) (default = 20)		✓	
84-01-31	H.323 Trunk Basic Information Setup – RX Gain	Define the RX gain for H.323.	0~40 (-20dBm~+20dBm) (default = 20)		✓	
84-01-33	H.323 Trunk Basic Information Setup – Priority CODEC setting	Priority of voice encoding method.	0~3 0 = G.711 1 = G.723 2 = G.729 3 = G.722 (default = 0)		✓	
84-01-36	H.323 Trunk Basic Information Setup – The Maximum FAX Transmission Rate	Define the the maximum FAX transmission rate for H.323.	0 = V.27ter, 2400bps 1 = V.27ter, 4800bps 2 = V.29, 7200bps 3 = V.29, 9600bps 4 = V.17, 12000bps 5 = V.17, 14400bps (default = 5)		✓	
84-01-37	H.323 Trunk Basic Information Setup – FAX FIFO Considering Delay Time	Define the FAX FIFO considering delay time for H.323.	0~600ms (default = 300)		✓	
84-01-38	H.323 Trunk Basic Information Setup – Size of FAX Packet	Define the size of FAX packet for H.323.	20~48 bytes (default = 20)		✓	
84-01-39	H.323 Trunk Basic Information Setup – FAX Modem Transmission Level	Define the FAX modem transmission level for H.323.	0~13 (0dBm ~-13dBm) (default = 9)		✓	
84-01-40	H.323 Trunk Basic Information Setup – FAX Modem Carrier Signal Detection Threshold	Define the FAX modem carrier signal detection threshold for H.323.	0 = -26dBm 1 = -33dBm 2 = -43dBm (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-01-41	H.323 Trunk Basic Information Setup – FAX Communication no Communication Time-Out	Define the FAX communication no communication time-out for H.323.	10~32000 seconds (default = 30)		✓	
84-01-43	H.323 Trunk Basic Information Setup – High-speed Signal Data (fax picture signal) Packet Length	Define the high-speed signal data (fax picture signal) packet length for H.323.	1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 4)		✓	
84-01-44	H.323 Trunk Basic Information Setup – Low-speed Signal Data (FAX Procedure Signal)	Define the low-speed signal data (FAX procedure signal) for H.323.	0~5 (default = 0)		✓	
84-01-45	H.323 Trunk Basic Information Setup – High-speed Signal Data (FAX Procedure Signal)	Define the high-speed signal data (FAX procedure signal) for H.323.	0~2 (default = 0)		✓	
84-01-46	H.323 Trunk Basic Information Setup – TCF Operation Setting	Define the TCF operation setting for H.323.	1 = Training signal (TCF) of the fax is locally generated and checked. 2 = Training signal (TCF) of the fax is sent over the network. (default = 1)		✓	
84-01-47	H.323 Trunk Basic Information Setup – The Maximum, Low-speed Signal Data (Size of Packet)	Define the the maximum, low-speed signal data (Size of packet) for H.323.	1~65535 bytes (default = 1)		✓	
84-01-48	H.323 Trunk Basic Information Setup – Network Transmission Time-out	Define the network transmission time-out for H.323.	10~32000 seconds (default = 150)		✓	
84-01-49	H.323 Trunk Basic Information Setup – Eflag Beginning Timer	Define the Eflag beginning timer for H.323.	0~65535 (default = 2600)		✓	
84-01-50	H.323 Trunk Basic Information Setup – Eflag Stop Timer	Define the Eflag stop timer for H.323.	0~65535 (default = 2300)		✓	
84-01-51	H.323 Trunk Basic Information Setup – The Former Line Substitution of Scanning Line	Enable/Disable the former line substitution of scanning line for H.323.	0 = Disable 1 = Enable (default = 1)		✓	
84-01-52	H.323 Trunk Basic Information Setup – Eflag Setting at Head DIS	Define the Eflag setting at head DIS for H.323.	0 = Disable 1 = Enable (default = 1)		✓	
84-01-53	H.323 Trunk Basic Information Setup – TFOP Protocol	Define the TFOP protocol for H.323.	0 = Disable 1 = Enable (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-01-54	H.323 Trunk Basic Information Setup – NSF Superscription	Define the NSF superscription for H.323.	0 = Disable 1 = Enable (default = 0)		✓	
84-01-55	H.323 Trunk Basic Information Setup – ECM (Error Correction Mode)	Define the ECM (error correction mode) for H.323.	0 = Disable 1 = Enable (default = 1)		✓	
84-01-56	H.323 Trunk Basic Information Setup – Enable Modified Read Code	Define the enable modified read code for H.323.	0 = Disable 1 = Enable (default = 1)		✓	
84-01-57	H.323 Trunk Basic Information Setup – NSF Country Code Setting	Define the NSF country code setting for H.323.	0~65535 (default = 0)		✓	
84-01-58	H.323 Trunk Basic Information Setup – NSF Vendor Code Setting	Define the NSF vendor code setting for H.323.	0~65535 (default = 0)		✓	
84-01-59	H.323 Trunk Basic Information Setup – FAX Relay Function	Enable/ Disable the FAX relay function for H.323.	0 = Disable 1 = Enable 2 = Each port mode (default = 0)		✓	
84-01-60	H.323 Trunk Basic Information Setup – Echo Canceller Type	Define the echo canceller type for H.323.	0~3 (default = 0)		✓	
84-01-61	H.323 Trunk Basic Information Setup – Auto Gain Control	Use to define the auto gain control for H.323.	0~5 (default = 0)		✓	
84-01-62	H.323 Trunk Basic Information Setup – DTMF Relay Mode	Set up information of VoIP is set by Program 84-06-10.	0 = VoIP 1 = RFC2833 2 = H.245 3 = Disable (default = 0)		✓	
84-01-63	H.323 Trunk Basic Information Setup – Number of G.722 audio frames	Define the number of G.722 audio frames for H.323.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 3)		✓	
84-01-64	H.323 Trunk Basic Information Setup – G.722 Voice Activity Detection Mode	Enable/Disable the G.722 voice activity detection mode for H.323.	0 = Disable 1 = Enable (default = 0)		✓	
84-01-65	H.323 Trunk Basic Information Setup – G.722 Jitter Buffer (min)	Define the G.722 jitter buffer (minimum) for H.323.	0~160ms (default = 30)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-01-66	H.323 Trunk Basic Information Setup – G.722 Jitter Buffer (average)	Define the G.722 jitter buffer (average) for H.323.	0~160ms (default = 60)		✓	
84-01-67	H.323 Trunk Basic Information Setup – G.722 Jitter Buffer (max)	Define the G.722 jitter buffer (maximum) for H.323.	0~160ms (default = 120)		✓	

## Operation

None

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## *IPK/IPK II Migration*

### Enhancements

This feature added with **Version 2500**.

DTU/DTP terminal support is available with **Version 2500 (2.51 or higher)**.

With **Version 4000 (4.01 or higher)** software, a combination of IPK/IPK II cabinets and SV8100 chassis are supported.

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### Description

The IPK/IPK II Migration package allows the user of an existing NEC IPK/IPK II platform to utilize the enhanced capabilities of the SV8100.

### Conditions

- In a NetLink environment, IPK/IPK II Migration can only be used in the Primary system. Secondary systems do not support IPK/IPK II Migration.
- IPK/IPK II Migration feature available with **Version 2500 or higher**.
- DTU/DTP terminal support is available with **Version 2500 (2.51 or higher)**.
- The IPK/IPK II Migration package (MGN-U10 ETU) is available only with the SV8100.
- The MGN-U10 ETU is only supported in the B64-U10, U20, and U30 KSU's.
- When migrating from an IPK or IPK II system, the system database cannot be converted and must be rebuilt.
- The MGN-U10 ETU provides a connection between the IPK/IPK II and the UNIVERGE SV8100 system. The MGN-U10 ETU is installed in the CPU/EXP slot of the IPK/IPK II KSU.
- Refer to the UNIVERGE SV8100 System Hardware Manual for a complete list of supported packages.
- The IPK/IPK II system is limited to 18 slots total.
- MEGACO telephone is not supported.
- An IPK/IPK II system can support the migration card, provided the cards and terminals are listed below as being supported. It may be necessary to upgrade firmware as noted.
- DT300 series terminals are not supported in a migration system unless connected to a DLCA blade in the controlling SV8100 chassis.

- When adding or removing padding for trunks, use Program 14-01 for all trunks except the PRI trunks in a Migration cabinet. Use Program 81-12 to add or remove padding for PRI trunks in a migration cabinet.
- SV8100 UC Desktop Suite Applications and UCB are not supported for DTU/DTP style terminals in an IPK/IPK II Migration system.

### Single SV8100 to IPK/IPK II Chassis Connectivity

Figure 2-23 [Single SV8100 to IPK/IPK II Connection](#) illustrates a typical connection layout of the SV8100 and IPK/IPK II with **Version 4000 or lower** software.

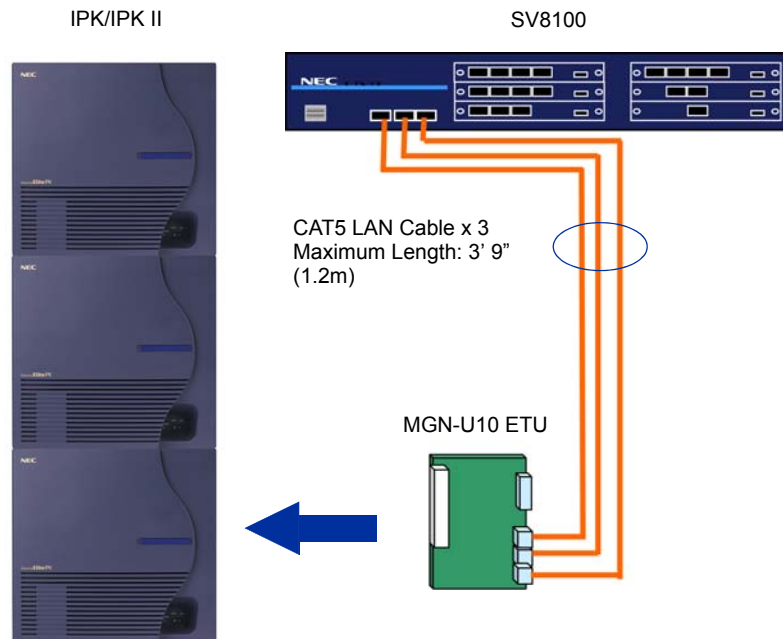
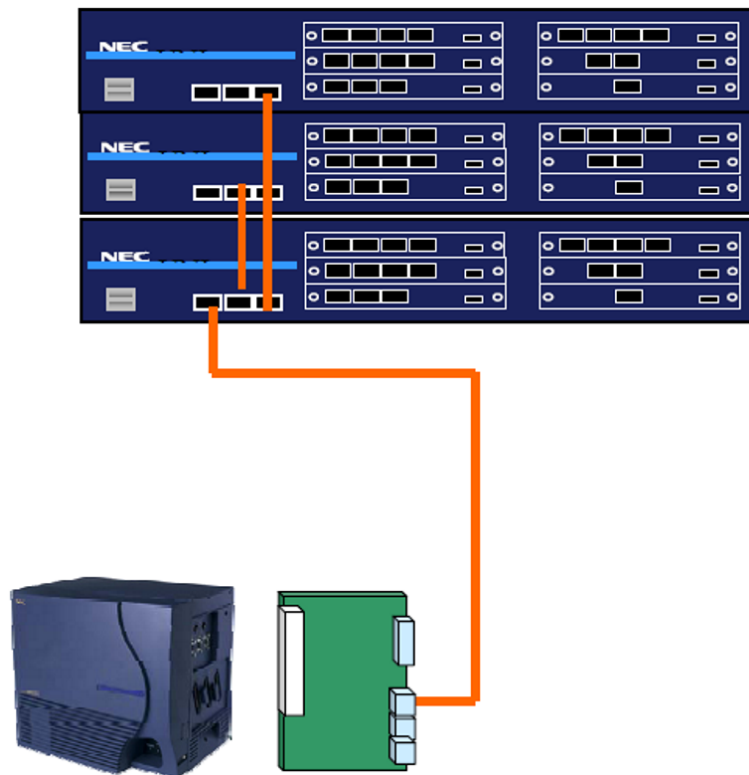


Figure 2-23 Single SV8100 to IPK/IPK II Connection

## Multiple SV8100 to IPK/IPK II Chassis Connectivity


In addition to the cabinet/chassis layout shown above, with **Version 4000 (4.01) or higher** software the following configurations are also supported:

**Layout 1:** Refer to [Figure 2-24 Multiple SV8100 to IPK/IPK II Connection \(Layout 1\)](#). One cable is connected to the MGN-U10 ETU (Migration Board) and two cables are connected to the (PZ-BS11).

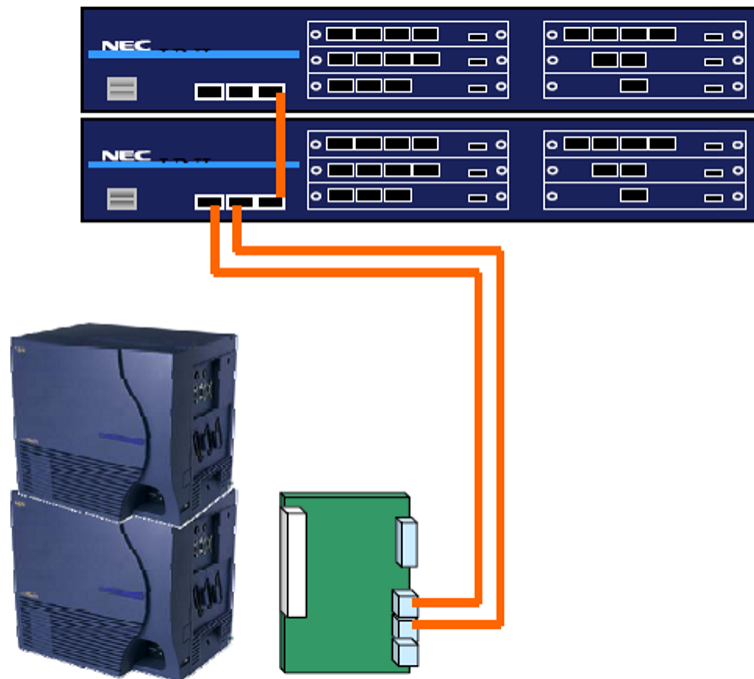


**Figure 2-24 Multiple SV8100 to IPK/IPK II Connection (Layout 1)**

### Slot Layout:

- Slot 1 ~ 6: 1st SV8100 chassis slots 1 ~ 6
- Slot 7 ~ 11: 1st IPK II cabinet slots 1 ~ 5
- Slot 13 ~ 24: 2nd and 3rd SV8100 chassis slots, 1 ~ 6 each
-  Slot 12 is used for B channel highway and cannot support the hardware.

**Layout 2:** Refer to [Figure 2-25 Multiple SV8100 to IPK/IPK II Connection \(Layout 2\)](#). Two cables are connected to the MGN-U10 ETU and one cable connected to the (PZ-BS11).



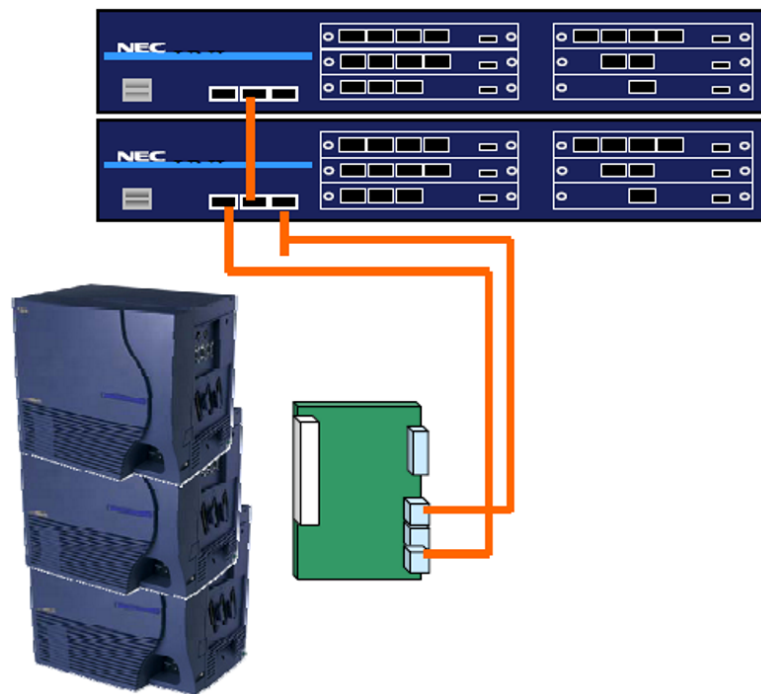
**Figure 2-25 Multiple SV8100 to IPK/IPK II Connection (Layout 2)**

**Slot Layout:**

- Slot 1 ~ 6: 1st SV8100 chassis slots 1 ~ 6
- Slot 7 ~ 17: 1st IPK II cabinet slots 1~8, 2nd IPK II cabinet slots 1 ~ 3
- Slot 19 ~ 24: 2nd SV8100 chassis slots 1 ~ 6

*Slot 18 is used for B channel highway and cannot support the hardware.*


**Layout 3:** Refer to [Figure 2-26 Multiple SV8100 to IPK/IPK II Connection \(Layout 3\)](#). Two cables are connected to the MGN-U10 ETU and one cable connected to the (PZ-BS11).



**Figure 2-26 Multiple SV8100 to IPK/IPK II Connection (Layout 3)**

Slot Layout:

- Slot 1 ~ 6: 1st SV8100 chassis slots 1 ~ 6
- Slot 7 ~ 11: 1st IPK II cabinet slots 1 ~ 5
- Slot 13 ~ 18: 2nd SV8100 chassis slots 1 ~ 6
- Slot 19 ~ 24: 2nd IPK II cabinet slots 5 ~ 8, 3rd IPK II cabinet slots 1 ~ 2

 Slot 12 is used for B channel highway and cannot support the hardware.



- [Table 2-50 IPK II Supported Hardware on page 2-882](#) provides a listing of the IPK II hardware supported.



***IPK II PCPro data will not upload to a migration package.***

Table 2-50 IPK II Supported Hardware

	Package Name	Description	Supported
EXP	EXP-U10	Expansion Unit	Y
ESI	ESI(8)-U10	8-Port Electronic Station Interface	Y
	ESIB(8)/ESIE(8)-U10	8-Port Electronic Station Interface	Y
	ESIB(8)/ESIE(8)-U20	8-Port Electronic Station Interface	Y
SLI	SLIB(4)/SLIE(4)-U10	4-Port Single Line Interface	Y
	SLI(8)-U10	8-Port Single Line Interface	Y
	SLIB(4)/SLIE(4)-U10 (F/W 1.74 or above)	4-Port Single Line Interface	Y
OPX	OPX(2)-U10	Off-Premise Extension Interface	Y
COI	COI(4)-U( )	CO/PBX Line Interface	Y
	COI(8)-U( )	CO/PBX Line Interface	Y
	COID(4)-U( )	CO/PBX Line Interface	Y
	COID(8)-U( )	CO/PBX Line Interface	Y
	COIB(4)-U10	CO/PBX Line Interface	Y
	COIB(4)-U20	CO/PBX Line Interface	Y
	COIB(4)-U30	CO/PBX Line Interface	Y
	COIB(8)-U( )	CO/PBX Line Interface	Y
	COIB(8)-U30	CO/PBX Line Interface	Y
DID	DID(4)-U10	Direct Inward Dialing Interface	Y
TLI	TLI(2)-U10	Tie Line Interface	Y



**Table 2-50 IPK II Supported Hardware (Continued)**

	<b>Package Name</b>	<b>Description</b>	<b>Supported</b>
ISDN	BRT-U20 (F/W Ver. 4.0 or later)	ISDN Interface	Y
	DTI-U40 (PRT mode) (F/W Ver. 5.0 or later)	ISDN-Primary Rate Trunk Interface	Y
DTI	DTI-U10/20/30/40	T1/FT1 Trunk Interface	Y
HUB	Hub(8)-U10	Switching Hub	Y

- [Table 2-51 Supported Optional Equipment \(via MGN-U10 ETU\)](#) provides a listing of the DTU/DTP and DTH/DTR optional equipment supported for terminals connected to the IPK/IPK II KSU's.

**Table 2-51 Supported Optional Equipment (via MGN-U10 ETU)**

<b>Description</b>	<b>DTU/DTP</b>	<b>DTH/DTR</b>
Ancillary Device Adapter	ADA-U	ADA-R
Analog Port Adapter	APA-U	APA-R
Analog Port Ringer	APR-U	APR-R
Single Line Telephone Adapter	SLT2 ADP	SLT2 ADP
Hands Free Unit	HF-U	HF-R
Attendant Console	DCU-60-1	DCR-60-1
Paging/Door Box Adapter	PGDAD	PGDAD
Add on Module	–	16-ADM
Computer Telephony Adapter	CTA-U	CTA-R
Computer Telephony Adapter	–	CTU-R
DTH16LD-1 Terminal	–	Desi-Less
Voice Security Recorder	VSR	VSR

- [Table 2-52 Supported Optional Equipment](#) provides a listing of the DT300 optional equipment supported for terminals connected to the SV8100 chassis.

**Table 2-52 Supported Optional Equipment**

Equipment Name	DTH/DTR	DT300
ADA	✓	✓
APR	✓	✓
SLT ADP	✓	✓
60DSS Console	✓	✓
PGDAD	✓	✓
Desi-Less	✓	✓
VSR	✓	✓
8LK-L UNIT	—	✓
BCH-L (BK) UNIT	—	✓
BHA-L UNIT	—	✓
PSA-L UNIT	—	✓

## Default Setting

Disabled

## System Availability

### Terminals

DTU/DTP Series E (Version 2.51 or higher)

DTH/DTR Series I

## Required Component(s)

The MGN-U10 ETU board requires the CD-CP00-US, PZ-ME50-US and PZ-BS10 blades to be installed in the CHS2U-US (19") or CHS2U B-US (9.5") controlling chassis.

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## Related Features

None

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## Guide to Feature Programming

None

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## Operation

Refer to the UNIVERGE SV8100 System Hardware Manual for installation instructions.

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## *IP/Digital Call Logging*

### Enhancements

<p>The NEC Call Logging Unit now supports licensing via LMS which in most cases can eliminate the need for a license dongle.</p>
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### Description

When using NEC DT300 and DT700 desktop terminals, telephone calls can be monitored, recorded and stored. For single phone applications, the NEC 1-Port Digital Call Logging Unit can be used. This will only support digital DT300 phone applications. For up to 16 digital ports or VoIP traffic the NEC IP/Digital Back Office call logging unit can be used.

The back bone of NEC's higher volume call recording software is the NEC IP/Digital BackOffice software which is PC based and is capable of recording calls from both VoIP (DT700) and digital (DT300) phones. NEC's BackOffice software works in conjunction with a 4-Port Digital Logging Unit for recording of TDM type calls. Three options are available for playing back of the recorded calls. For playback and management of recorded calls NEC offers the NEC Player/Recorder, Manager and Reporter Pro. All of these perform the playback function but offer increasing levels of additional features.

The NEC Digital Player/Recorder is used by an individual user to play back their own archive of calls or to play back NEC VSR calls stored on their PC or network. It easily manages calls from one storage location. It does not offer many of the advanced functions of the VSR Manager, such as establishing preset shortcuts to any number of storage folders for quick and easy access. The Recorder portion of this software is much like Back Office but scaled down to be utilized by the single port digital call logging unit. It allows you to set where to store calls, and how long to archive them amongst other things.

The NEC IP/Digital Manager is much like the Player, it provides advanced visibility, access, retrieval, and playback tools for the VSR Recorder administrators. It provides an intuitive interface for establishing shortcuts to any number of storage folders and allows the supervisor to search across all storage folders for specific call information such as User, Time/Date, Length of Call, etc. The application can be used to access and manage VSR recordings whether created by the single port VSR or the 4-Port Digital Call Logging Unit.

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The NEC IP/Digital Reporter is NECs most feature rich product for listening to recorded phone calls. It has functionality much the same as the Manager but offers additional features. These additional features make management easier by providing tools to help gather data and generate reports. NEC's IP/Digital Reporter also provides advanced features which help in gathering data and report generation of usage and performance metrics for analysis and monitoring of the call recording environment. Usage analysis provide data metrics on call volume, disk usage, average call length, longest calls, most called numbers, longest recorded time numbers, call volume distribution over date span, call volume distribution at hourly intervals and call volume distribution at call length intervals.

The use of these products is covered in greater depth it their specific User Guides.



*The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversation or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal or state laws. Legal advice should be sought prior to implementing any practice that monitors or records any telephone conversation. Some federal and state laws require some form of notification to all parties to a telephone conversation, such as using a beep tone or other notification methods or requiring the consent of all parties to the telephone conversation, prior to monitoring or recording the telephone conversation. Some of these laws incorporate strict penalties.*

## Conditions

- The PC hosting Back Office should have the power save functionality disabled.
- Encryption is only supported at 256-bit setting.
- Does not support recording of VoIP phone conversations in a Netlink or CCIS configuration.
- No Wireless terminal support.
- Encryption Feature – Requires IP/Digital Call Logging Manager or Reporter for playback.
- Network Port monitoring is required for recording calls from VoIP extensions.
- Peer-to-Peer is only supported in a VoIP multi-port mirroring scenario.
- VoIP calls placed on hold or conference will break into two call recordings.
- The data switch used to monitor traffic needs to have the monitor port capable of ingress and egress simultaneously.
- Only a single NIC is supported for the PC hosting Back Office.
- A maximum of four 4-Port Digital Call Logging Units is supported.
- IP/Digital Call Logging supports the G.711 CODEC only.

## Default Setting

None

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## System Availability

### Terminals

NEC DT300/DT700 Series Desktop Terminals – NEC IP/Digital Call Logging

### Required Component(s)

- 4-Port Digital Call Logging Unit
- PC Hardware and Software:
  - Pentium 4 processor
  - 512 Mb RAM
  - Microsoft .Net Framework 2.0+
  - Data switch with managed port capabilities
  - LAN connection to data switch to monitor for SIP and RTP traffic and for remote access to stored calls.
  - NEC BackOffice or Recorder software
  - Sufficient hard drive space for recording calls. Using the default (.xtr) format 168 hours of recording can be stored in 1 gbyte of storage space
  - Windows XP or Windows 7 (32- or 64-bit)

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## Related Features

None

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## **Guide to Feature Programming**

None

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## **Operation**

None



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## *ISDN Compatibility*

### Enhancements

Calling Party Name can be sent on outgoing ISDN calls using NI2 protocol (**Version 3000 or higher** software).

With **Version 4000 (4.01 or higher)** CPU software, 2 B-Channel Transfer is supported.

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### Description

#### ISDN-BRI

Integrated Service Digital Network – Basic Rate Interface (ISDN-BRI) is a Public Switched Telephone Network (PSTN) service that provides two B channels and a D channel (2B + D) for voice call trunking. The B channels provide two voice path connections. Caller ID is usually a standard feature on ISDN-BRI provided trunks. Caller ID indication displays the calling party telephone number on the LCD of the multiline terminal for CO incoming calls. This interface provides voice communication path only.

With ISDN BRI the SV8100 only supports the following protocol:

- National ISDN-1 (NI-1)

#### ISDN-PRI

ISDN-PRI (Integrated Service Digital Network – Primary Rate Interface) is a Public Switched Telephone Network (PSTN) service that provides 23 B channels and a single D channel (23B+1D) for trunking. Caller ID indication displays the calling party telephone number on the LCD of the multiline terminal for CO incoming calls. This interface provides voice communication path only.

With ISDN PRI the SV8100 supports the following protocols:

- NI-2
- 4ESS (AT&T Custom)
- AT&T 5ESS (Lucent Custom)
- DMS-100 Custom (Nortel Spec NIX-A211-1)
- DMS-100 National ISDN (Nortel Spec NIX-A233-1)

## ISDN – BRI/PRI Features

### DID Line Service

When configured for DID Line Service, the trunks emulate Loop Start or Ground Start trunks for outgoing calls and DID trunks for incoming calls.

### Calling Line Identification Presentation (CLIP)

Program 10-03-05: ETU Configuration – CLIP Information Announcement, allows the Calling Party Number IE in the Setup Message for a call when placed out an ISDN Trunk.

### Calling Party Number (CPN) Presentation from Station

Calling Party Number (CPN) Presentation from Station allows each unique station or virtual extension 10-digit number (representing the DID number of the originating station) to be sent out over the ISDN Network, if it is programmed. If no Extension Calling Number is assigned, the system sends the calling number for the ISDN trunk. If both the extension and trunk information are programmed, the extension information is sent as it takes priority.

### Calling Party Name

If programmed, Calling Party Name allows the station name to be sent out over the ISDN network. A system wide name can be programmed to be sent over the network or the name can be defined on a per station basis. If both are programmed, the system wide name takes priority over the station name.

### SMDR Includes Dialed Number

The SMDR report can optionally print the trunk name (entered in system programming) or the number the incoming caller dialed (i.e., the dialed ISDN digits). This allows you to analyze the SMDR report based on the number your callers dial. (This option also applies to a DID trunk.)

### Display Shows Why Caller ID is Not Available

With Caller ID enabled, the system provides information for ISDN calls that do not contain the Caller ID information. If the Caller ID information is restricted, the telephone display shows PRIVATE. If the system cannot provide Caller ID information because the Telco information is not available, the display shows OUT OF AREA.

## Conditions

### Primary Rate Interface (PRI):

The system is compatible with ISDN Primary Rate Interface (PRI) services. PRI services currently supported include:

- Basic PRI Call Control (BCC)
- Display of incoming caller's name and number when allowed by Telco
- Routing in the system based on the number the caller dialed
- ISDN maintenance functions (such as In Service/Out of Service Messaging)

- ❑ Speech and 3.1 KHz audio

PRI ability requires the installation of CD-PRTA. Each PRI circuit provides 24 PRI channels (23B + D) 4 with 64K Clear Channel response. The T1/PRI Interface uses a single slot. When installed, the T1/PRI Interface uses the first block of 24 consecutive trunks. For example, if you have an CD-4COT + PZ-4COT installed for trunks 1~8, the T1/PRI Interface automatically uses trunks 9~32. If you have CD-4COT + PZ-4COT installed for trunks 1~8 and 17~24, the T1/PRI uses trunks 25~48. The T1/PRI Interface cannot use trunks 9~16 (even if available) since they are not part of a consecutive block of 24 trunks.

- The sending of Calling Party Name display information to the public network with ISDN PRI is only supported with NI2 protocol.
- When using Mobile Extension in a NetLink Network, the ISDN/PRI must be utilized in the Primary System.
- When using fractional PRI, the blade comes up as zero ports until Program 10-03-06 is set to the 4/8/12/16/20/24(auto), and then reset.
- If fractional PRI has the number of ports changed, the Trunk Port number might change if they become split or fit into an empty gap of trunk ports. For example, if you have a CD-4COT + PZ-4COT for Trunks ports 1~8 and 17~24 and the PRI (12 ports) was assigned as 25~36 and the PRI is changed to be eight ports instead of 12 ports, the new trunk port numbers would be 9~16 because the eight ports can now fit into the gap without being split ports. Another example, if you have a CD-4COT + PZ-4COT for Trunks ports 1~8 and 17~24 and the PRI (8 ports) was assigned as 9~16 and then you change the PRI to be 12 ports instead of eight, the new trunk ports would be 25~36 because the ports have to be split to keep the original port numbers, and this is not supported.
- If using a CSU/DSU, Program 10-03-13 must be set to 0. If not using a CSU/DSU, Program 10-03-13 must be set to 1~7 or anything other than 0.
- Restrictions for Calling Party Name:

The UNIVERGE SV8100 supports receiving the name from the Network in supported formats only. Refer to [Table 2-53 Restrictions for Calling Party Names](#).

**Table 2-53 Restrictions for Calling Party Names**

Protocols	Name Delivery Formats
NI-2	Facility Information Elements
4ESS (AT&T Custom)	Not Supported
AT&T5ESS Lucent Custom	Facility Information Element
DMS-100 (Custom) *	Display Information Element *
DMS-100 (National; ISDN) **	Facility Information Element **

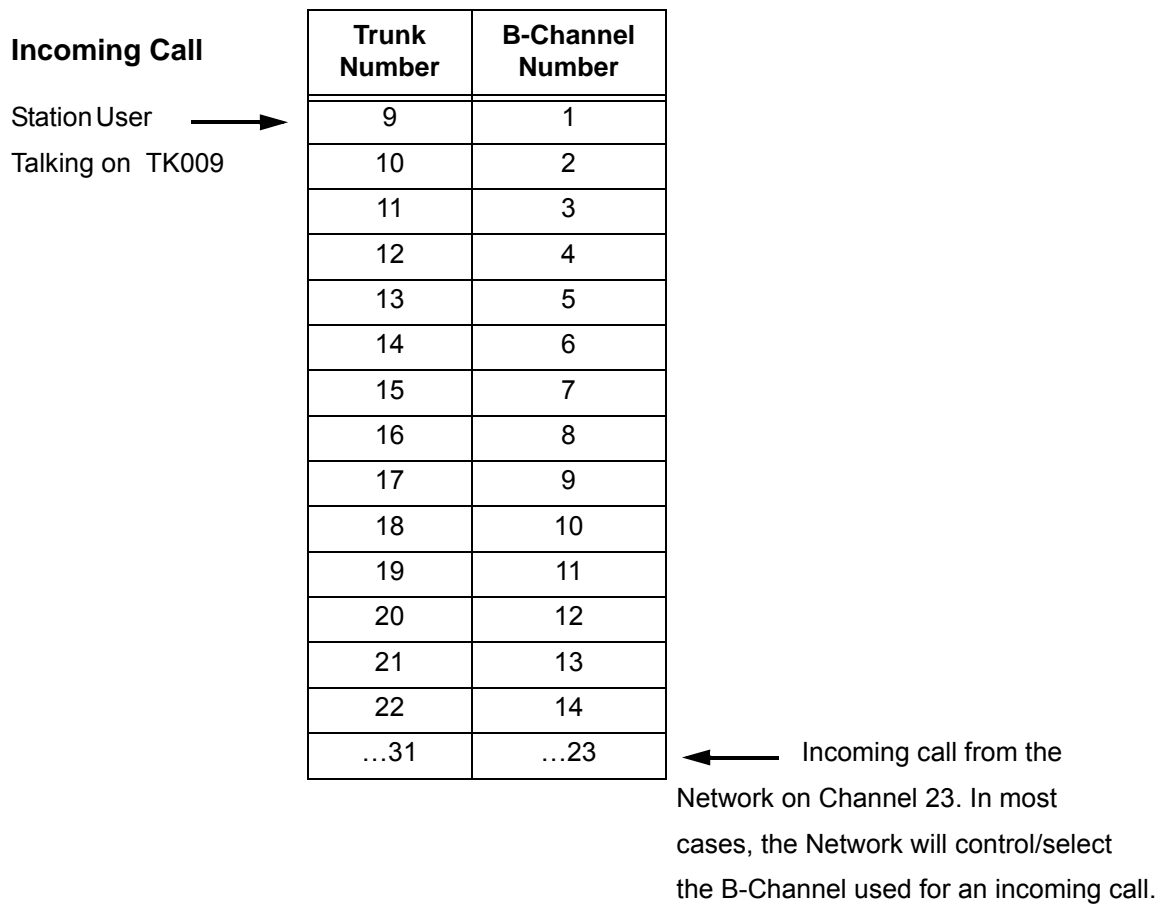
\* Nortel Specification NIX-A211-1

\*\* Nortel Specification NIS-A233-1

- CO Line Service is not supported  
ISDN – PRI cannot be configured for CO Emulation
- B-Channel to Trunk Association

When an Incoming ISDN-BRI/PRI call is received, the system assigns the lowest trunk number of the ISDN circuit to the incoming call associated with the B-Channel. When an Outgoing call is placed using the ISDN-PRI/BRI, the system assigns the Trunk and B-Channel association according to the chart below. This is based on the Trunk-to-Trunk Group and Trunk Group Priority assignment in (Program 14-05-01).


Refer to the charts below for examples:



**Outgoing Call**

Trunk Number	Trunk Group	Trunk Priority	B-Channel Number
9	1	9	1
10	1	8	2

Outgoing Call	Trunk Number	Trunk Group	Trunk Priority	B-Channel Number
	11	1	7	3
	12	1	6	4
	13	1	5	5
	14	1	4	6
	15	1	3	7
	16	1	2	8
Station user → places outgoing trunk call by dialing Trunk Access code. Outgoing call is placed on the associated B-Channel.	17	1	1	9
	18	2	3	10
	19	2	2	11
	20	2	1	12
	21	3	11	13
	22	3	10	14
	...31	3	...1	...23

 In addition to T1/PRI interface ETUs, PRI also requires a CSU/DSU Unit and interconnecting cables to interface with the Telco.


#### ○ Basic Rate Interface (BRI)

Caller ID Name to Single Line Telephone is *NOT* supported for ISDN (BRT) Trunks.

The system is compatible with ISDN Basic Rate Interface (BRI) services. BRI services currently supported include:

- Basic BRI Call Control (BCC)
- Point-to-Point BRI Terminal Connection (no daisy-chaining)
- Multipoint BRI Terminal Connection (daisy-chaining)

BRI services require the installation of CD-2BRIA. Each CD-2BRIA has two BRI circuits. The CD-2BRIA uses a single universal slot.

 A PZ-2BRIA daughter board can be added to the CD-2BRIA to add two more BRI circuits for a total of 4.

For each BRI line, two different Terminal Endpoint Identifiers (TEIs) are assigned to two different Service Profile Identifiers (SPIDs).

The two different SPIDs for each BRI line, are related to different trunk logical port numbers. One BRI provides two trunk logical ports when it is connected to a CO line. Each SPID is assigned to a different TEI. This relationship is made in the initialization of the BRI line when it is connected to the CO.

This relationship between SPID and TEIs are created as follows.

LOGICAL-PORT-NUMBER + 0 = SPID-1

LOGICAL-PORT-NUMBER + 1 = SPID-2

When using the SMDR reports for BRI, all incoming BRI calls are displayed under the CLASS column as IVIN.

- When using Mobile Extension in a NetLink Network, the ISDN/PRI must be utilized in the Primary System.
- Automatic Data Link Failure Recovery

If a data link error is detected by the BRI ETU, the system tries to recover the data link and send the SPID to the central office. To provide this enhancement, the BRI ETU must be able to indicate to the system when a data link error has occurred.

*In addition to the BRI Interface ETU, BRI Services require the installation of NT1 Network Terminators and interconnecting cabling.*

- CO Line Service is not supported.

ISDN-BRI cannot be configured for CO Emulation.

- BRI and DID Callers with Non-Matching SPID Numbers

This feature allows you to determine whether the system checks the called party number with the SETUP message and the SPID setup. Depending on the system programming, this can allow DID calls to be received on BRI trunks and direct them according to the DID Translation Table (Program 22-11).

- Special Conditions Related to Ordering DID Service For ISDN-BRI

Telcos may refer to this in different ways. The reference Verizon uses to order such service is Additional Directory Numbers with no new terminating equipment (only a dialable number). When you want Additional Directory Numbers to hunt when a B-Channel is busy, the service may be called Busy Diversion.

- Calling Party Number (CPN) presentation from station is available for virtual extensions.
- SV8100 supports only National ISDN-1.
- The trunk setting (Program 20-19-09) for sending the caller name on outgoing ISDN calls takes priority over the same setting for the station (Program15-01-01).
- When programmed, Calling Party Name will be sent on calls that originate from a station (MLT, SLT, or IP Multiline) or an incoming trunk (Analog, ISDN, or CCIS).
- Calling Party Name supports up to 12 ASCII characters.
- When a call originates from a virtual extension, the Calling Party Name for the virtual extension is sent. It does not follow the setting in Program 15-18-02.

- Calling Party Name is dependant upon the carrier. The network carrier must allow the SV8100 to edit the Calling Party Name information.
- SV8100 does not support ISDN sub-addressing.
- SV8100 does not support ISDN Network Specific Parameters for the AT&T protocol such as SDN (Software Defined Network, also known as Virtual Private Network), Megacom, and Megacom800.

## ISDN 2 B-Channel Transfer

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### Description

This ISDN PRI 2 B-Channel Transfer feature allows the UNIVERGE SV8100 to receive a call on one B-Channel and transfer it back out on a second B-Channel (Trunk-to-Trunk transfer on the telco side). When the transferred call connects, both of the B-Channels are then released and available for either making or receiving another call. This feature provides more efficient use of B Channels on an ISDN PRI by allowing a customer to transfer calls without tying up their B Channels for the duration of the call.

### Conditions

- This feature is available with **Version 4000 (4.01 or higher)** CPU software.
- The bearer capability of two calls must be “Speech, 3.1-kHz Audio, Unrestricted Digital Information” or compatible.
- This feature is not supported with Automatic Transfer.
- This feature is not supported with Unsupervised Conference.
- This feature is only supported with a Manual Transfer.
- This feature is only supported when both trunks are ISDN/PRI and the bearer capability of the two trunks meet the same service requirements.
- Trunk-to-Trunk programming must be enabled for this feature to work.
- Both ISDN/PRI trunks must reside in the same system for this feature to work.
- This feature is available if the Telco Service Provider supports this feature.
- This feature is available in the following case:

At least one call to be transferred is:

- answered (*outgoing* from the SV8100)
- answered (*incoming* to the SV8100)

And the other call is:

- answered (*outgoing* from the SV8100)
- answered (*incoming* to the SV8100)

## Default Setting

None

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## System Availability

### Terminals

All Terminals

### Required Component(s)

To provide ISDN-PRI trunk connection:

- CD-PRTA

To provide ISDN-BRI trunk connection:

- CD-2BRIA or CD-2BRIA with PZ-2BRIA
- NT-1 for each BRI (locally provided)

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## Related Features

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Direct Inward Dialing (DID)**

**Direct Inward Line (DIL)**

**E911 Compatibility**

**Forced Trunk Disconnect**

**Programmable Function Keys**



## Station Message Detail Recording

### Transfer


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


### ISDN – BRI Installation:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	ETU Setup (BRIA PKG) – ISDN Line Mode	Set up and confirm the Basic Configuration data for each CD-2BRIA. Use this program to select the ISDN Line Mode.	0 = Not Used 1 = T-Point (default = 1)	✓		
10-03-03	ETU Setup (BRIA PKG Setup) – Connection Type	Set up and confirm the Basic Configuration data for each CD-2BRIA. Confirm the connection type for each CD-2BRIA.	0 = Point-to-Multipoint 1 = Point-to-Point (default = 0)	✓		
10-03-04	ETU Setup (BRIA PKG Setup) – Layer 3 Timer Type	Set up and confirm the Basic Configuration data for each CD-PRTA. This program selects the Layer 3 timer type (1~5). Each timer value of Layer 3 is set up for each type in Program 81-06 (T-Bus).	1~5 (default = 1)	✓		
10-03-08	ETU Setup (BRIA PKG Setup) – Dial Sending Mode	Select ISDN protocol.	0 = Enblock Sending 1 = Overlap Sending (default = 1)	✓		
10-03-09	ETU Setup (BRIA PKG Setup) – Dial Information Element	Select ISDN Protocol if Overlap Sending is selected in Program 10-03-08.	0 = Keypad Facility 1 = Called Party Number (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-13	<b>ETU Setup (PRTA PKG Setup) – Loss of Signal Detection Limit</b>	If the transmit/receive voltage is less than the setting in Program 10-03-13, the system considers this as Loss-Of-Signal and the PRI does not come up. Note that there are different values based on the setting in Program 10-03-12 for the PRI.	0 = Level 0 (lowest sensitivity) 1 = Level 1 2 = Level 2 3 = Level 3 4 = Level 4 5 = Level 5 6 = Level 6 7 = Level 7 (highest sensitivity) (default = 2)	✓		
10-06-01	<b>ISDN BRI Setup – TEI Selection</b>	Select the method the system uses when assigning Terminal Endpoint Identifier (TEI) values to the BRI Circuit.	0 = Select by SPID number 1 = Select by Channel ID Number (default = 0)		✓	
10-06-02	<b>ISDN BRI Setup – DID Mode</b>	Select the method the system uses when assigning DID Mode to the BRI Circuit.	0 = Route by Called Party Number 1 = Route by Redirecting Number (default = 0)		✓	
10-06-03	<b>ISDN BRI Setup – SPID 1</b>	Assign the SPID Number for B-Channel 1.	Dial up to 20 digits (default not assigned)		✓	
10-06-04	<b>ISDN BRI Setup – SPID 2</b>	Assign the SPID Number for B-Channel 2.	Dial up to 20 digits (default not assigned)		✓	
14-01-36	<b>Basic Trunk Data Setup – Sending Caller Name on Outgoing Calls (ISDN Trunk)</b>	Disable/Enable sending the Caller Name on outgoing ISDN trunks.	0 = Disable 1 = Enable (default = 0)	✓		
15-01-10	<b>Basic Extension Data Setup – Sending Caller Name on Outgoing Calls (ISDN Trunk)</b>	Disable/Enable sending the Caller Name on outgoing ISDN calls per station.	0 = Disable 1 = Enable (default = 0)	✓		
20-19-09	<b>System Options for Caller ID – Calling Party Name for ISDN Trunk</b>	Enter the Calling Party Name to be used system wide for outgoing ISDN calls. If no data is entered, it will follow the station name in Program 15-01-01.	Up to 12 characters (default = None)	✓		
21-12-01	<b>ISDN Calling Party Number Setup for Trunks – Calling Party Number Data</b>	Assign Calling Party Numbers for each trunk (maximum 16 digits per entry).  <i>After the above programming is complete a reset of the CD-2BRIA is required.</i>	(maximum 16 digits) 1-0, *, # Default: (All trunks = No setting)		✓	

**ISDN – PRI Installation:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-04	<b>ETU Setup (PRTA PKG Setup) – Layer 3 Timer Type</b>	Set up and confirm the Basic Configuration data for each CD-PRTA. This program selects the Layer 3 timer type (1~5). Each timer value of Layer 3 is set up for each type in Program 81-06 (T-Bus).	1~5 (default = 1)	✓		
10-03-06	<b>ETU Setup (PRTA PKG Setup) – Length of Cable</b>	Set up and confirm the Basic Configuration data for each CD-PRTA. Select the length of cable to be used.	0 = Level 1 1 = Level 2 2 = Level 3 3 = Level 4 4 = Level 5 (default = 2)	✓		
10-03-08	<b>ETU Setup (PRTA PKG Setup) – Dial Sending Mode</b>	ISDN protocol definition. Select either enblock or overlap sending.	0 = Enblock Sending 1 = Overlap Sending (default = 0)	✓		
10-03-09	<b>ETU Setup (PRTA PKG Setup) – Dial Information Element</b>	ISDN protocol definition. If Overlap Sending is selected in Program 10-03-08, select either 0 or 1 for the dial information element.	0 = Keypad Facility 1 = Called Party Number (default = 0)	✓		
10-03-18	<b>ETU Setup (PRTA PKG Setup) – Type of Number</b>	Select the number type for the ISDN circuit.	0 = Unknown 1 = International number 2 = National number 3 = Network Specific number 4 = Subscriber number 5 = Abbreviated number (default = 2)	✓		
10-03-19	<b>ETU Setup (PRTA PKG Setup) – Numbering Plan Identification</b>	Select the Numbering Plan used for the ISDN circuit.	0 = Unknown 1 = ISDN numbering plan 2 = Data numbering plan 3 = Telex numbering plan 4 = National standard numbering plan 5 = Private numbering plan (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-20	<b>ETU Setup (PRTA PKG Setup) – Network Exchange Selection</b>	Select the ISDN protocol for the ISDN circuit.	0 = Standard (Same as NI-2) 1 = reserved 2 = reserved 3 = DMS (A211) 4 = 5ESS 5 = DMS (A233) 6 = 4ESS 7 = NI-2 (default = 0)	✓		
10-03-21	<b>ETU Setup (PRTA PKG Setup) – PRI Number of Ports</b>	Select the number of ports for the PRI.	0 = Auto 1 = 4 Ports 2 = 8 Ports 3 = 12 Ports 4 = 16 Ports 5 = 20 Ports (default = 0)	✓		
10-39-01	<b>Fractional Setup</b>	Enable/Disable the T1/PRI fractional function.	0 = Disable 1 = Enable (default = 0)	✓		
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to trunk groups then go to Program 14-06-01 below to set up Trunk Group Routing.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)	✓		
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	The time the system waits for the timer to expire before placing the call in a talk state.	0~64800 (seconds) (default = 5)		✓	
21-12-01	<b>ISDN Calling Party Number Setup for Trunks – Calling Party Number Data</b>	Assign Calling Party Numbers for each trunk (maximum 16 digits per entry).  <i>After the above programming is complete a reset of the CD-PRTA is required.</i>	(maximum 16 digits) 1-0, *, # Default: (All trunks = No setting)		✓	

**DID Services for either ISDN – BRI or PRI:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type for each trunk.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-09-01	<b>DID Basic Data Setup – Expected Number of Digits</b>	For each DID Translation Table (1~20), enter the number of digits the table expects to receive from the CO (eight maximum). For example, for a table used with 3-digit DID service, enter 3. For additional DID Services refer to <a href="#">Direct Inward Dialing (DID) on page 2-433</a> .	1~8 (default = 4)	✓		
22-11-01	<b>DID Translation Number Conversion – Received Number</b>	For each DID Translation Table entry (1~2000), specify the digits received by the system.	(maximum eight digits) (default not assigned)	✓		
22-11-02	<b>Translation Number Conversion – Target Number</b>	For each DID Translation Table entry (1~2000), specify the extension the system dials after translation.	(maximum 24 digits) (default not assigned)	✓		

**Calling Party Number Presentation for either ISDN – BRI or PRI:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-05	<b>ETU Setup (PRTA PKG Setup) – CLIP Information</b>	Based on this setting, the system includes Presentation Allowed (1) or Presentation Restricted (0) in the Setup message to allow or deny the Calling Party Number. Program 15-01-04 must also be set to 1 if this option is enabled.	0 = Disable 1 = Enable (default = 1)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-01-04	<b>Basic Extension Data Setup – ISDN Caller ID</b>	If Program 15-01-04 and Program 10-03-05 are enabled, the system includes Caller ID in the Setup message as Presentation Allowed. If these options are disabled, it is Presentation Restricted.	0 = Disable 1 = Enable (default = 1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators should be allowed.	0 = Off 1 = On (default = 0)		✓	
21-12-01	<b>ISDN Calling Party Number Setup for Trunks</b>	Assign Calling Party Numbers for each trunk (maximum 16 digits per entry). When a call is made by an extension which does not have an Extension Calling Number assigned (Program 21-13), the system sends the calling number for the ISDN trunk defined in 21-12. If the Calling Party Number is assigned in both Program 21-12 and Program 21-13, the system sends the data in Program 21-13.	(maximum 16 digits) 1-0, *, # Default: (All trunks = No setting)		✓	
21-13-01	<b>ISDN Calling Party Number Setup for Extensions</b>	Assign a Calling Party Number (maximum 16 digits per entry) to each extension. The calling number is the subscriber number of the dial-in number. When a call is made by an extension which does not have an Extension Calling Number assigned (Program 21-12), the system sends the calling number for the ISDN trunk defined in Program 21-13. If a Calling Party Number is assigned in both Program 21-12 and Program 21-13, the system sends the data in Program 21-13.	0~9, *, # (maximum 16 digits) (default not assigned)		✓	

**ISDN – PRI Network Specific Assignment:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
26-02-07	<b>Dial Analysis Table for ARS/LCR – Network Specified Parameter Table</b>	Define the network specified parameter table for each ARS Table.	0~16 (default = 0)		✓	
26-12-01	<b>Network Specific Parameter Table for ARS – Type of Number</b>	Define the type of Number parameter for an ISDN outgoing call.	0 = System Default 1 = Unknown 2 = International No. 3 = National No. 4 = Network Specific No. 5 = Subscriber No. 6 = Abbreviated No. (default = 0)		✓	
26-12-02	<b>Network Specific Parameter Table for ARS – Numbering Plan Identification</b>	Define the Numbering Plan Identification Parameter for an ISDN outgoing call.	0 = System Default 1 = Unknown 2 = ISDN Plan 3 = Data Plan 4 = Telex Plan 5 = National Standard Plan 6 = Private Plan (default = 0)		✓	
44-05-11	<b>ARS/F-Route Table – Network Specified Parameter Table</b>	Define the network specified parameter table for each F-Route table.	0~16 (default = 0)		✓	

**SMDR Dialed Digits for either ISDN – BRI or PRI:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-15	<b>SMDR Output Options – CLI/DID Number Switching</b>	Determine if the CLI/DID Number should be displayed.	0 = CLI (CLIP) 1 = DID Calling Number 2 = Caller ID Name (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-16	<b>SMDR Output Options – Trunk Name or Received Dialed Number</b>	Determine how the SMDR should print incoming calls on ANI/DNIS or DID trunks. If set to 1, ANI/DNIS trunks can print DNIS digits, if set to 0 trunk names are printed instead.  For additional SMDR Services refer to <a href="#">Station Message Detail Recording on page 2-1451</a> .	0 = Trunk Port Name 1 = Received Dialed Number 2 = Both (default = 0)		✓	

### General ISDN Programs:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	For each trunk that should be able to participate in a tandem call, enter 1. To disable a trunk from Tandem Trunking, enter 0. Required for 2 B-Channel transfer.	0 = Disable 1 = Enable (default = 1)		✓	
15-02-29	<b>Multiline Telephone Basic Data Setup – PB Back Tone Level</b>	Adjust the PB Back Tone level when calling an ISDN line.	1~63 (-15.5dB~+15.5dB) (default = 32) 0dB			✓
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Caller ID Block for ISDN (63) if required.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-03	<b>Class of Service Options (Incoming Call Service) – Sub Address Identification</b>	Define whether or not an extension displays the Caller Sub-Address.	0 = Deny 1 = Allow (default = 0 for COS 1~15)		✓	
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to transfer when the user hangs up.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is impossible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow an extension user to set up a tandem call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-19-04	<b>System Options for Caller ID – Wait Facility IE Timer</b>	This is the time an ISDN trunks uses to determine the time the system waits for the Caller ID name from the Telco.	0~64800 (seconds) (default = 10)			✓
20-25-14	<b>ISDN Options – No response Release Send</b>	Operation mode setting for when second T303 timer expires.	0 = Off 1 = On (default = 0)			✓

### ISDN 2 B-Channel Transfer:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-16	<b>ETU Setup – PRI Service Two B-Channel Transfer</b>	Turn On or Off the ability to use the ISDN-PRI 2 B-Channel Transfer service.	0 = Off 1 = On (default = 0)	✓		
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	If DISA caller can place outgoing calls through the system (refer to Program 20-14 in the Electra Elite IPK II Programming Manual), Enable loop supervision for the DISA trunk. If DISA caller cannot use the system trunks for outgoing calls, enter Disable.	0 = Disable 1 = Enable (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign function to multiline terminal line keys (Transfer = 06).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-02-08	<b>System Options for Multiline Telephones – LCD Display Holding Time</b>	Determine the time a user display shows Caller ID for a second incoming call.	0~64800 (seconds) (default = 5 seconds)		✓	
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is impossible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem/conference call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-25-15	<b>ISDN Options – Call Reference Selection for PRI 2 B-Channel Transfer</b>	Turn ON (1) or OFF (0) the ability for an incoming call to be transferred (Trunk-to-Trunk) to an outgoing call when 2 B Channel Transfer is used.	0 = Negative Integer 1 = No Edit (default = 0)	✓		
24-02-09	<b>System Options for Transfer – Two B-Channel Transfer Retry Timer</b>	Enable/Disable disconnect Supervision for the system trunks.	0~64800 (seconds) (default = 10)		✓	

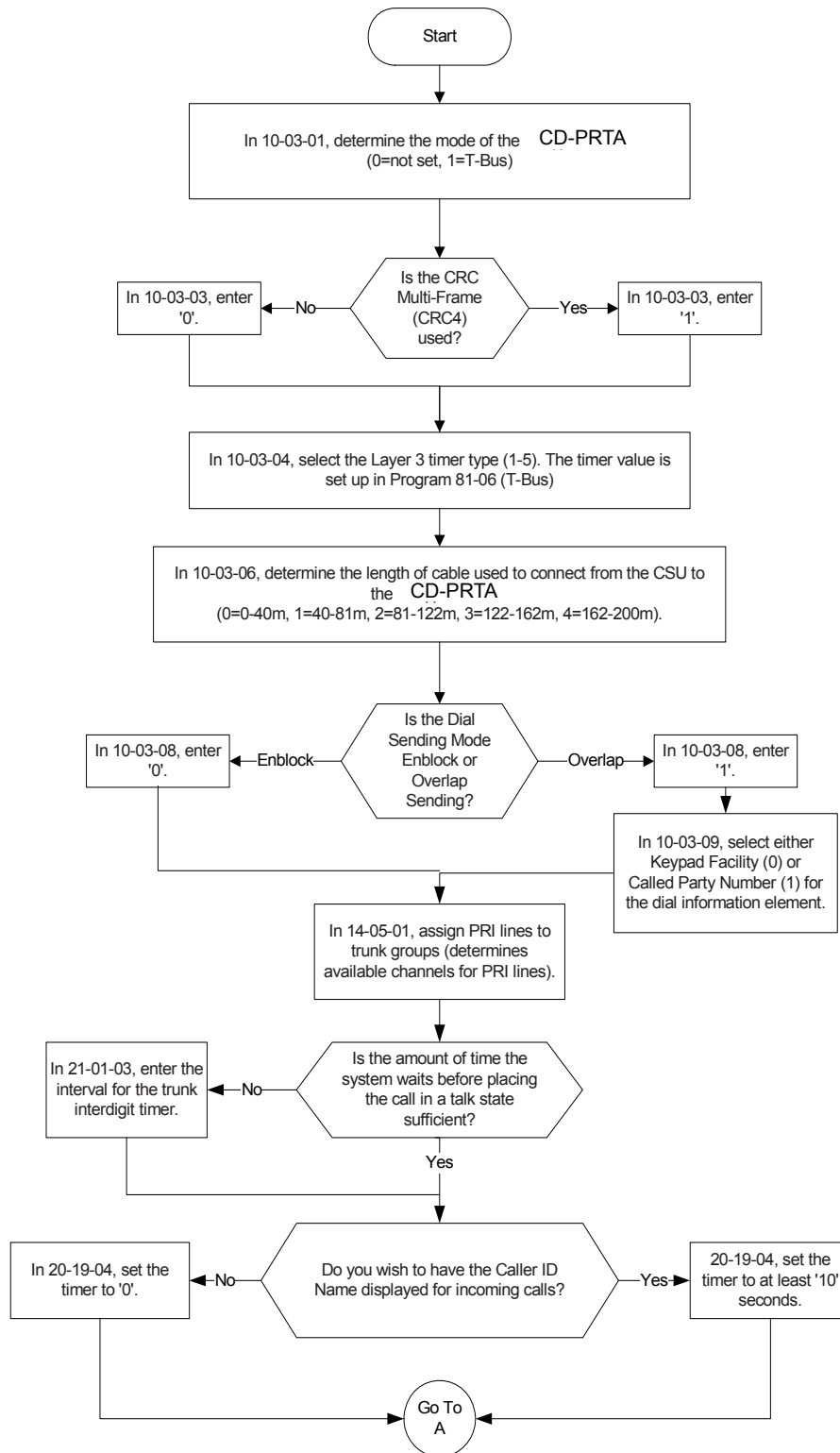
## Operation

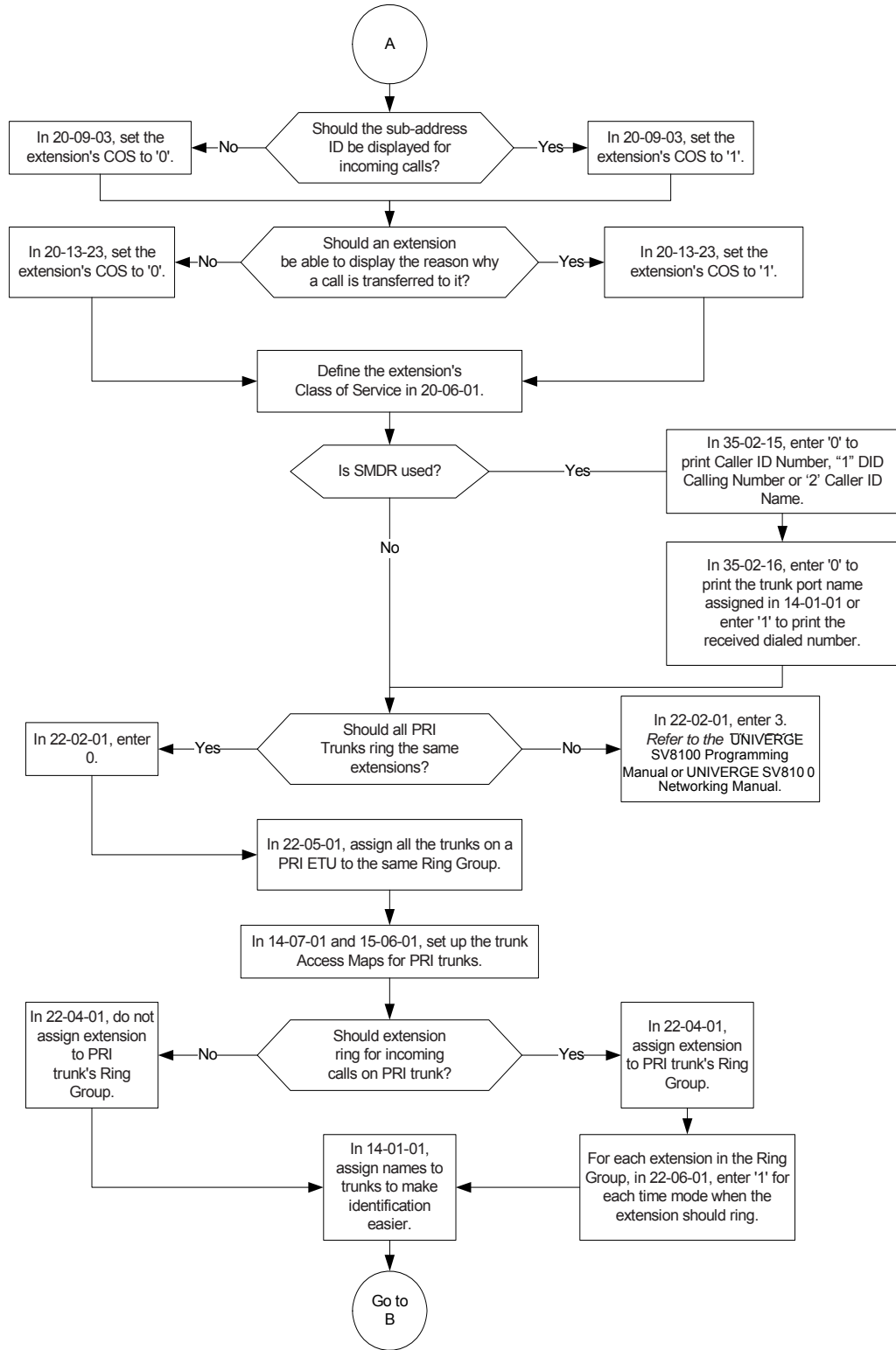
### To Perform an ISDN 2 B-Channel Transfer:

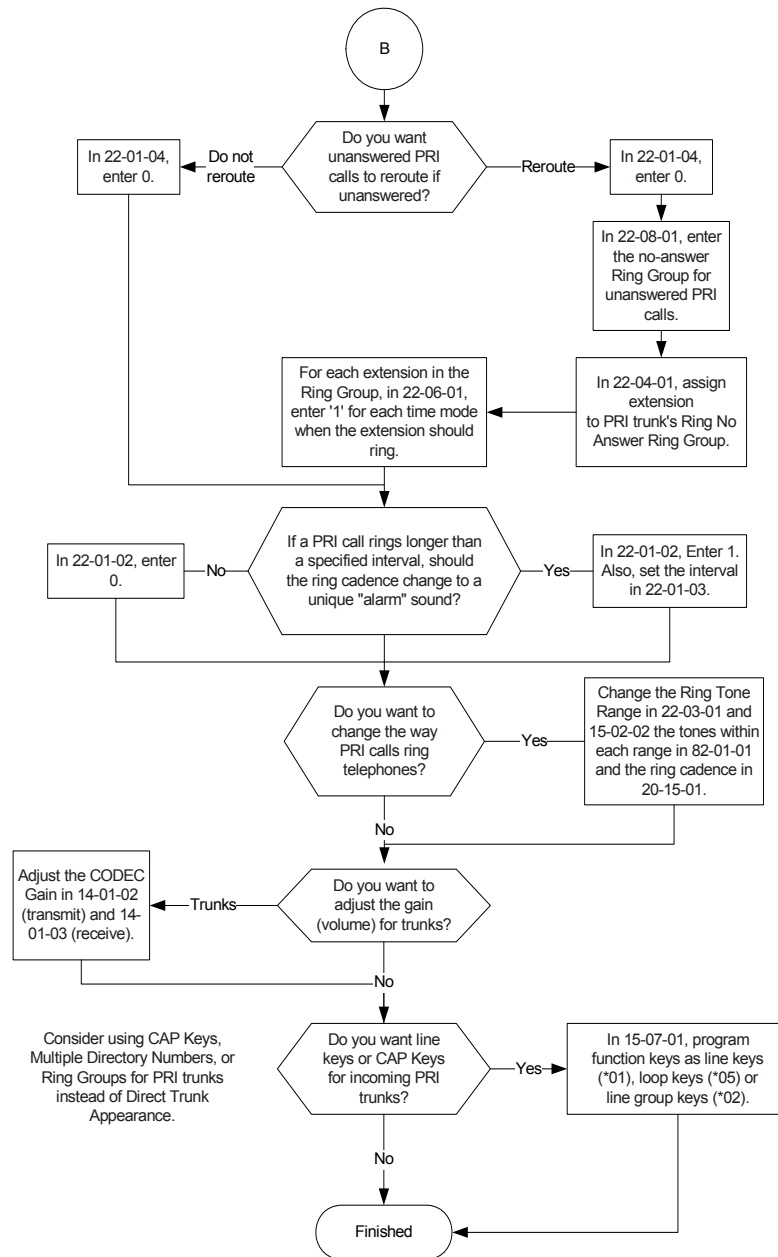
1. Receive or make an ISDN trunk call.
2. Go off-hook using the handset, or press **Speaker** (the Call Appearance key or direct trunk appearance lights). Talk with the outside party.
3. Press the **Transfer** key.
4. Dial **9** to access second ISDN trunk.

5. Dial the **outside number** and wait for the outside party to answer.
6. Hang up.
7. LCD returns to idle after the LCD Display Hold timeout (Program 20-02-08).

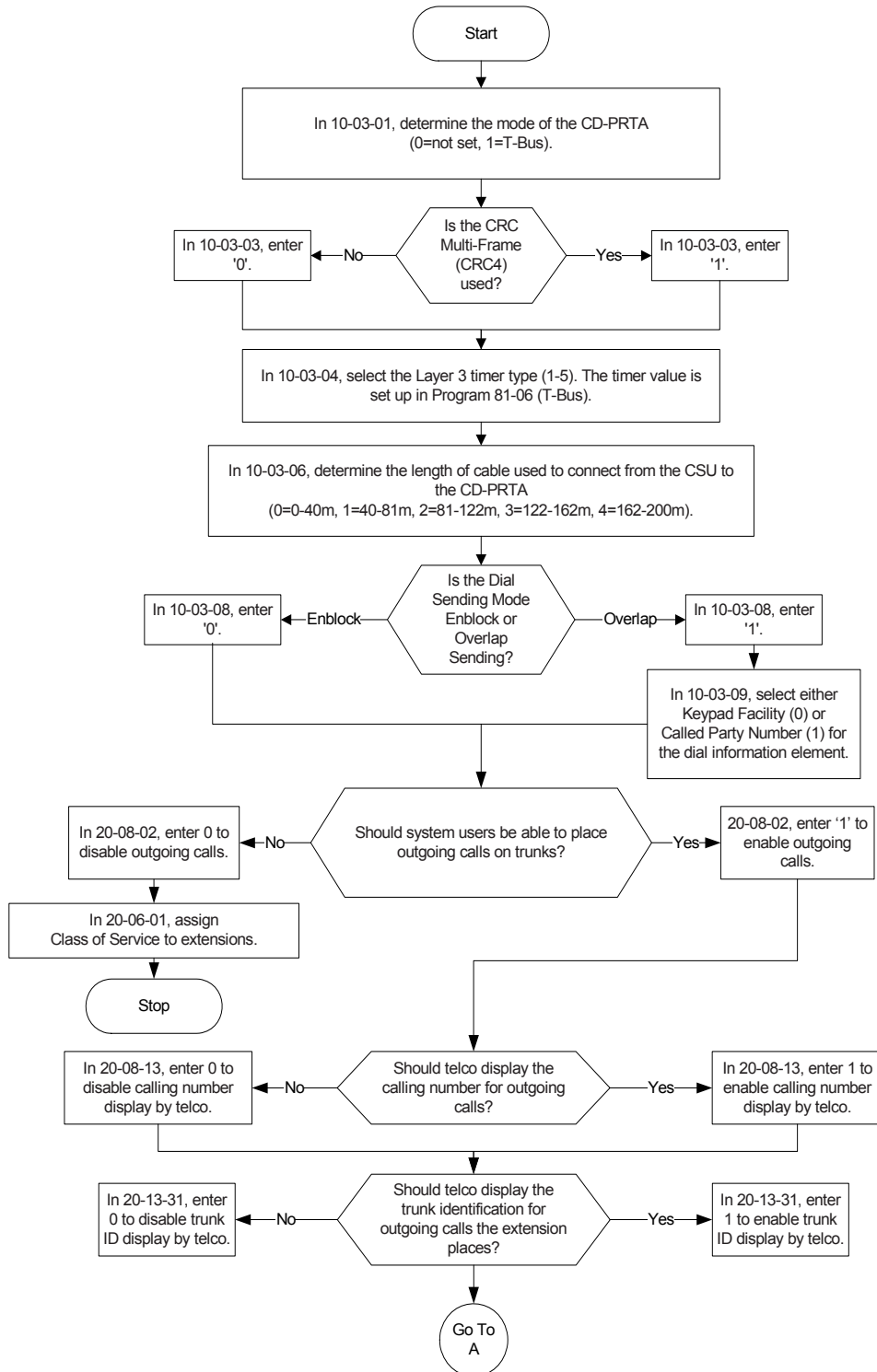
## Programming Flowchart for ISDN-PRI – Answering Calls

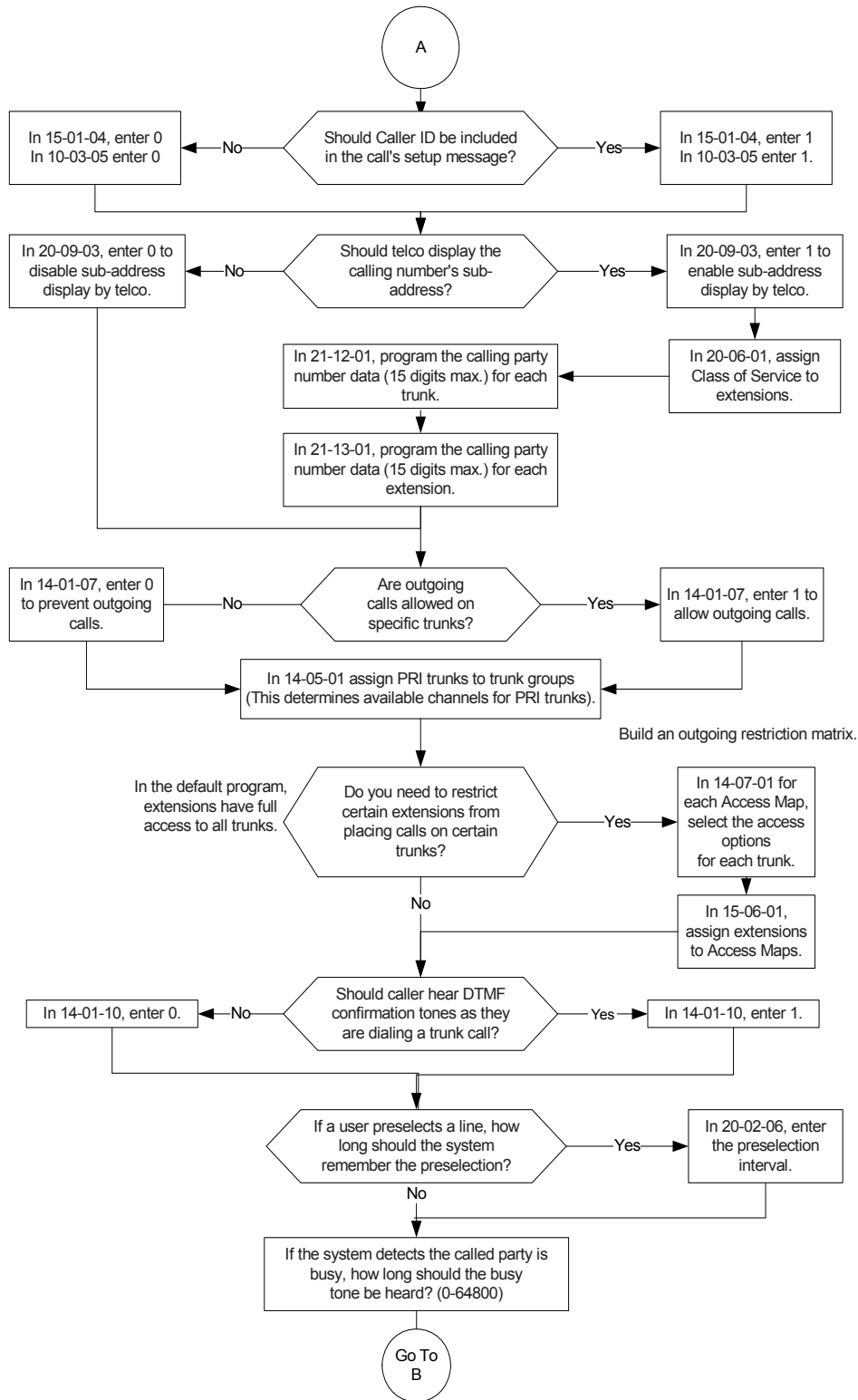




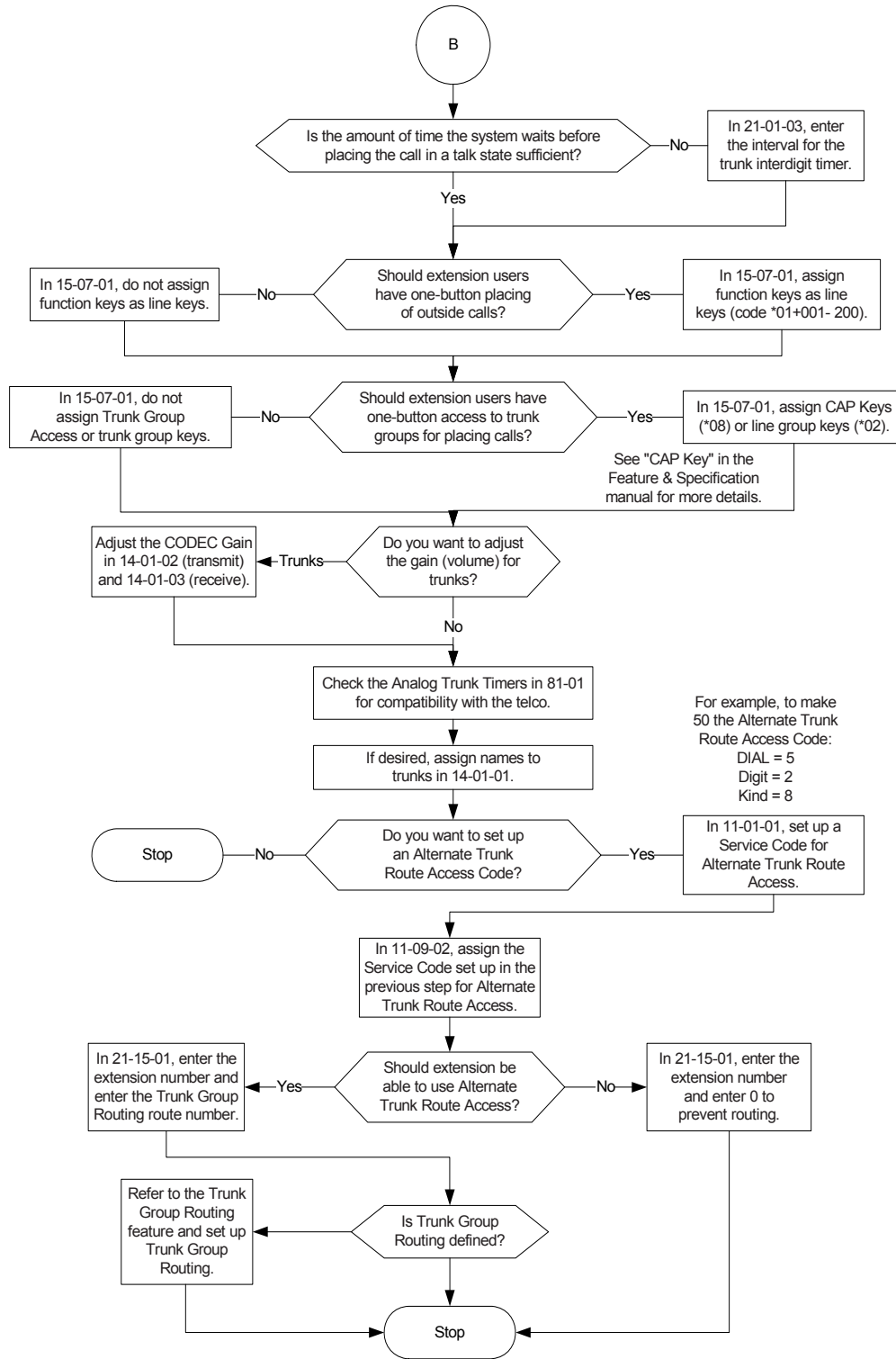


## Programming Flowchart of ISDN-PRI – Placing Calls









For example, to make 50 the Alternate Trunk Route Access Code:  
 DIAL = 5  
 Digit = 2  
 Kind = 8

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# *IVR – Appointment Reminder Server*

## Enhancements

With <b>Version 6000 (6.02 or higher)</b> software, IVR – Appointment Reminder Server is supported.
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## Description

The IVR – Appointment Reminder Server solution is designed to provide a knowledge-based, intelligent distributed application to optimize the scheduling and reminder of appointments. The IVR – Appointment Reminder Server is an external software application that connects to the SV8100 through Standard SIP Ports. The IVR – Appointment Reminder Server can be configured for 8 – 16 ports using SV8100 licensing.

This IVR – Appointment Reminder Server enables the phone system to automatically call customers and remind them of their upcoming appointment. The Appointment Reminder automatically dials based on a configurable schedule and upon detection of a “live voice” or answering device, delivers one of your pre-recorded messages. The customer is then provided options to confirm the appointment or, if they desire, to be able to talk to a customer service representative.

The Appointment Reminder was designed for the following verticals:

- Dentist office
- Doctor’s office
- Optometrist’s office and other medical offices where scheduling is in common use.
- Any other office where appointments are made and need to be reminded.

The contact numbers for the customers are loaded in the form of a CSV file using a web page on the Appointment Reminder system. This file can offer up to three different alternate phone numbers to dial including Home, Mobile, and Business numbers in any order you prefer. This file contains the date/time of the appointment and the name of the customer to be called. Contact Numbers can also be manually added one by one through the Appointment Reminder application to be used in times when a small amount of numbers is to be called.

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## Appointment Reminder Call Flow

### □ Out Bound Call - New Call


If the call is answered:

- Play Main Greeting
- Hello this is an appointment reminder from (name of customer). (Text to Speech name) your appointment is scheduled for (Time and Date). To confirm this appointment press 1, to replay this message press 2, to re-schedule this appointment or speak to someone in the office press 3.
- If customer presses “1”, annotate the database with the result saying that the customer has confirmed the appointment.
- If the customer presses “2” the message will be replayed
- If the customer presses “3” then the call will be transferred to a configurable destination in the phone system.
- If the customer presses anything other than 1, 2, or 3 he/she will be prompted to retry three times.  
If the customer continues to press wrong digit, after three times, the database is annotated with ‘invalid selection’ as the result, and the call is completed.

If the call is unanswered:

- If a new call goes unanswered (after one minute) the call will be marked as NO ANSWER in the database and the call will end.
- This call can be re-tried at an interval that is configurable.
- The call will be re-tried a configurable amount of times and then the outbound calls to this number will not be tried again.

## Conditions

- SV8100 CPU software **Version 6.02 or higher** is required.
- SIP Peer to Peer (Program 10-26-03) must be disabled.
- The Appointment Reminder only supports the G.711 Codec.
- All SIP stations programmed as Appointment Reminder ports must be in the same IP Duplication group (Program 15-05-18).
- The following Web Browsers are supported for configuring the IVR – Appointment Reminder Server; Internet Explorer 8, Internet Explorer 9, Firefox 3.6, Firefox 4 and Chrome 11.0.
- The IVR – Appointment Reminder Server can be configured for 8 – 16 ports.
- When a external user dials an invalid DTMF digit while listening to a recording, the initial message is stopped and the user is prompted to make the selection by dialing other digits.  
  
 *The digits 1~9, 0, and \* can be programmed to show up in the callout log report, but the # character is not displayed in the report.*
- If TOS settings are changed in the Appointment Reminder application, a reset of the IVR – Appointment Reminder Server is required.

- If the SV8100 is configured for Forced Account codes, the account code must be entered before the dialed number in the IVR – Appointment Reminder Server. For example: if the system account code is "123456" and the Appointment Reminder needs to call 9-214-555-1111 then the entry in the IVR – Appointment Reminder Server would be: 9\*123456\*2145551111.
- 1- or 2-digit extension numbers are not supported in a system that has IVR – Appointment Reminder Server installed.

## Default Settings

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

CD-CP00-US with Version 6.02 or higher installed.

PZ-32IPLA/IPLB, PZ-64IPLA/IPLB, PZ-128IPLA/IPLB

LK-SYS-IP-TERMINAL-SIP1-LIC (one license required per Appointment Reminder port. For 16 ports of appointment reminder (16) LK-SYS-IP-TERMINAL-SIP1-LIC's must be purchased).

External IVR – Appointment Reminder Server

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.  It is recommended to set Program 10-12-01 to <b>0.0.0.0</b> . All connections to the system are made through the IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Set the subnet mask of the IPLA/IPLB.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)		✓	
10-26-03	IP System Operation Setup – SIP Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.  This is a system wide command. Once disabled, all 3rd party SIP stations no longer use the Peer to Peer functionality.  When the Appointment Reminder is installed in the SV8100, this program <b>must</b> be set to <b>Disable</b> .	0 = Off 1 = On (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-02-01	<b>Extension Numbering</b>	Set the extension number for the Appointment Reminder ports.  The extension numbers must be assigned to unused hardware ports to allow the Appointment Reminder SIP stations to register.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513		✓	
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign pilot numbers to each Department Group set up.	Up to eight digits (default not assigned)	✓		
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow the SIP Station ports to receive DTMF tones after the initial call setup. For the Appointment Reminder, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		
15-05-18	<b>IP Telephone Terminal Basic Data Setup – IP Duplication Allowed Group</b>	For a device that has one IP address coming into it but multiple extensions off of it. Assign all the extensions to a group so the CPU knows that the one IP address is assigned to multiple extensions.  All Appointment Reminder ports must be assigned in a Duplication Group that have no other system ports assigned.	0 = Not Used 1 = Group 1 2 = Group 2 3 = Group 3 4 = Group 4 5 = Group 5 6 = Group 6 7 = Group 7 8 = Group 8 9 = Group 9 10 = Group 10 (default = 0)	✓		
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Use to assign the name for the Department Group to be used for the Appointment Reminder.	Maximum 12 characters (default not assigned)		✓	
16-01-02	<b>Department Group Basic Data Setup – Department Calling Cycle</b>	Set the routing cycle for calls into a department (i.e., when a user dials the department pilot number). The system can ring the highest priority extension available (Priority Routing, 0) or cycle in circular order to a new idle extension for each new call (Circular Routing, 1).	0 = Normal Routing (Priority) 1 = Easy – UCD Routing (Circular) (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-04	<b>Department Group Basic Data Setup – Hunting Mode</b>	<p>This program sets what happens when an unanswered call to a Department Group pilot number reaches the last member of the group.</p> <p>If set to (0), once the last extension is called the hunting stops.</p> <p>If set to (1), once the last extension is called the hunting continues to search for an idle member to receive the call.</p> <p><b>1 (circular)</b> is recommended when using a Department Group for an Appointment Reminder.</p>	<p>0 = Last extension is called and hunting is stopped</p> <p>1 = Circular (default = 0)</p>		✓	
16-01-10	<b>Department Group Basic Data Setup – Enhanced Hunt Type</b>	<p>Set the type of hunting for each Extension (Department) Group.</p> <p><b>3 (Hunting When Busy or No Answer)</b> is recommended when using a Department Group for an Appointment Reminder.</p>	<p>0 = No queuing</p> <p>1 = Hunting When Busy</p> <p>2 = Hunting When Not Answered</p> <p>3 = Hunting When Busy or No Answer (default = 0)</p>		✓	
16-02-01	<b>Department Group Assignment for Extensions</b>	<p>Use this program to assign all Appointment Reminder ports to the Department Group.</p>	<p>Department Groups 1~64</p> <p>Priority 1~999</p> <p>Default = 1 extensions in Department Group 1 with priority in port order:</p> <p>Port 1 priority = 1</p> <p>Port 256 priority = 256</p>	✓		
84-19-28	<b>SIP Extension CODEC Information Basic Setup – Audio Capability Priority</b>	<p>Assign the Codec that is to be used for any 3rd party SIP stations.</p> <p>When Appointment Reminder is installed, this program <b>must</b> be set to <b>0 (G.711)</b>.</p>	<p>0 = G.711_PT</p> <p>1 = G.723_PT</p> <p>2 = G.729_PT</p> <p>3 = G.722</p> <p>4 = G.726</p> <p>5 = Not Used (default = 0)</p>		✓	
84-19-32	<b>SIP Extension IP CODEC Information Basic Setup – DTMF Relay Mode</b>	<p>Define the DTMF Relay Mode.</p> <p>When Appointment Reminder is installed, this program <b>must</b> be set to <b>1 (RFC2833)</b>.</p>	<p>0 = Disable</p> <p>1 = RFC2833 (default = 0)</p>	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27		✓	

## Operation

For operating procedures refer to the IVR – Appointment Reminder Server Configuration Guide.

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## *IVR – Broadcast Server*

### Enhancements

With <b>Version 6000 (6.02 or higher)</b> software, IVR – Broadcast Server is supported.
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### Description

The IVR – Broadcast Server solution is designed to provide a knowledge based, intelligent distributed application which provides the most cost effective form of contacting your customers, employees, and prospects. The IVR – Broadcast Server is an external software application that connects to the SV8100 through Standard SIP Ports. The IVR – Broadcast Server can be configured for 8 – 16 ports using SV8100 licensing. Each IVR – Broadcast Server port requires the following license in the SV8100: LK-SYS-IP-TERMINAL-SIP1-LIC (e.g. For 16 ports of Broadcast Server (16) LK-SYS-IP-TERMINAL-SIP1-LIC's must be purchased.)

This solution provides an effective way of communicating corporate voice messages, informational messages, past due notices, reminders, and verifications. The IVR – Broadcast Message solution is designed to call numbers from a managed list and plays a pre-recorded message to the call recipient or answering machine.

Broadcast was designed for the following verticals:

- Medical Offices
- Utility Companies
- Emergency Centers
- Any other office where messages are to be Broadcast to users.

The contact numbers for the customers are loaded in the form of a CSV file using a web page on the Broadcast system. This file can offer up to three different alternate phone numbers to dial including Home, Mobile, and Business numbers in any order you prefer. Contact Numbers can also be manually added one by one through the Broadcast application to be used in times when a small amount of numbers is to be called.

### Broadcast Call Flow

- Out Bound Call - New Call
  - If the call is answered:
    - Play Main Greeting

- Hello this is a Broadcast message from (name of customer). Customers personal message played here. To replay this message press 1.
- If the customer presses **1** the message will repeat.
- If the customer presses anything other than the digit 1, they will receive a message stating "that was an invalid entry". After the incorrect digit is pressed three times the call is terminated.

If the call is unanswered:

- If a new call goes unanswered (after one minute) the call will be marked as NO ANSWER in the database and the call will end.
- This call can be re-tried at an interval that is configurable.
- The call will be re-tried a configurable amount of times and then the outbound calls to this number will not be tried again.

## Conditions

- SV8100 CPU software **Version 6.02 or higher** is required.
- SIP Peer to Peer (Program 10-26-03) must be disabled.
- IVR – Broadcast only supports the G.711 Codec.
- All SIP stations programmed as IVR – Broadcast ports must be in the same IP Duplication group (Program 15-05-18).
- The following Web Browsers are supported for configuring the IVR – Broadcast Server; Internet Explorer 8, Internet Explorer 9, Firefox 3.6, Firefox 4 and Chrome 11.0.
- The IVR – Broadcast Server can be configured for 8 through 16 ports.
- When a external user dials an invalid DTMF digit while listening to a recording, the initial message is stopped and the user is prompted to make the selection by dialing other digits.
  - 📎 *The digits 1~9, 0, and \* can be programmed to show up in the callout log report, but the # character is not displayed in the report.*
- If TOS settings are changed in the IVR – Broadcast application, a reset of the IVR – Broadcast Server is required.
- 1 or 2 digit extension numbers are not supported in a system that has a IVR – Broadcast Server installed.
- If the SV8100 is configured for Forced Account codes, the account code must be entered before the dialed number in the IVR – Broadcast Server. For example, if the system account code is "123456" and the IVR – Broadcast Server needs to call 9-214-555-1111 then the entry in the IVR – Broadcast Server would be: 9\*123456\*2145551111.

## Default Settings

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

CD-CP00-US

PZ-32IPLA/IPLB, PZ-64IPLA/IPLB, PZ-128IPLA/IPLB

LK-SYS-IP-TERMINAL-SIP1-LIC (one license required per Broadcast port. For 16 ports of Broadcast (16) LK-SYS-IP-TERMINAL-SIP1-LIC's must be purchased).

External IVR – Broadcast Server

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.  It is recommended to set Program 10-12-01 to <b>0.0.0.0</b> . All connections to the system are made through the IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Set the subnet mask of the IPLA/IPLB.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)		✓	
10-26-03	IP System Operation Setup – SIP Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.  This is a system wide command. Once disabled, all 3rd party SIP stations no longer use the Peer to Peer functionality.  When IVR – Broadcast is installed in the SV8100, this program <b>must</b> be set to <b>Disable</b> .	0 = Off 1 = On (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-02-01	<b>Extension Numbering</b>	Set the extension number for the IVR – Broadcast ports.  The extension numbers must be assigned to unused hardware ports to allow the IVR – Broadcast SIP stations to register.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513		✓	
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign pilot numbers to each Department Group set up.	Up to eight digits (default not assigned)	✓		
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow the SIP Station ports to receive DTMF tones after the initial call setup. For Broadcast, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		
15-05-18	<b>IP Telephone Terminal Basic Data Setup – IP Duplication Allowed Group</b>	For a device that has one IP address coming into it but multiple extensions off of it. Assign all the extensions to a group so the CPU knows that the one IP address is assigned to multiple extensions.  All IVR – Broadcast ports must be assigned in a Duplication Group that have no other system ports assigned.	0 = Not Used 1 = Group 1 2 = Group 2 3 = Group 3 4 = Group 4 5 = Group 5 6 = Group 6 7 = Group 7 8 = Group 8 9 = Group 9 10 = Group 10 (default = 0)	✓		
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Use to assign the name for the Department Group to be used for the IVR – Broadcast.	Maximum 12 characters (default not assigned)		✓	
16-01-02	<b>Department Group Basic Data Setup – Department Calling Cycle</b>	Set the routing cycle for calls into a department (i.e., when a user dials the department pilot number). The system can ring the highest priority extension available (Priority Routing, 0) or cycle in circular order to a new idle extension for each new call (Circular Routing, 1).	0 = Normal Routing (Priority) 1 = Easy – UCD Routing (Circular) (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-04	<b>Department Group Basic Data Setup – Hunting Mode</b>	<p>This program sets what happens when an unanswered call to a Department Group pilot number reaches the last member of the group.</p> <p>If set to (0), once the last extension is called the hunting stops.</p> <p>If set to (1), once the last extension is called the hunting continues to search for an idle member to receive the call.</p> <p><b>1 (circular)</b> is recommended when using a Department Group for a IVR – Broadcast.</p>	<p>0 = Last extension is called and hunting is stopped</p> <p>1 = Circular (default = 0)</p>		✓	
16-01-10	<b>Department Group Basic Data Setup – Enhanced Hunt Type</b>	<p>Set the type of hunting for each Extension (Department) Group.</p> <p><b>3 (Hunting When Busy or No Answer)</b> is recommended when using a Department Group for a IVR – Broadcast.</p>	<p>0 = No queuing</p> <p>1 = Hunting When Busy</p> <p>2 = Hunting When Not Answered</p> <p>3 = Hunting When Busy or No Answer (default = 0)</p>		✓	
16-02-01	<b>Department Group Assignment for Extensions</b>	<p>Use this program to assign all Broadcast ports to the Department Group.</p>	<p>Department Groups 1~64</p> <p>Priority 1~999</p> <p>Default = 1 extensions in Department Group 1 with priority in port order:</p> <p>Port 1 priority = 1</p> <p>Port 256 priority = 256</p>	✓		
84-19-28	<b>SIP Extension CODEC Information Basic Setup – Audio Capability Priority</b>	<p>Assign the Codec that is to be used for any 3rd party SIP stations.</p> <p>When IVR – Broadcast is installed, this program <b>must</b> be set to <b>0 (G.711)</b>.</p>	<p>0 = G.711_PT</p> <p>1 = G.723_PT</p> <p>2 = G.729_PT</p> <p>3 = G.722</p> <p>4 = G.726</p> <p>5 = Not Used (default = 0)</p>		✓	
84-19-32	<b>SIP Extension IP CODEC Information Basic Setup – DTMF Relay Mode</b>	<p>Define the DTMF Relay Mode.</p> <p>When IVR – Broadcast is installed, this program <b>must</b> be set to <b>1 (RFC2833)</b>.</p>	<p>0 = Disable</p> <p>1 = RFC2833 (default = 0)</p>	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27		✓	

## Operation

For operating procedures refer to the SV8100 IVR – Broadcast Server Configuration Guide.

## Enhancements

With **Version 4000 (4.01 or higher)** CPU software, K-CCIS – IP has been improved to support Peer to Peer calls between IP Terminals residing in different offices, without using DSP resources. With software lower than **Version 4000**, two DSP resources in each office/system were consumed for calls between IP Terminals.

With **Version 5000 or higher** CPU software, the SV8100 supports FAX over IP (T.38) between SV8100 and to the SV8500 and SV8300. This feature enables the system to change to the specified CODEC for FAX when the system detects a FAX Tone during conversation. Consequently, the quality of FAX calls can be secured even if the system uses a low quality CODEC on the call. This feature requires the **Version 5000 or higher** software, the PZ-IPLB32/64/128 VoIPDB and **Version 5000 Enhancement** license.

With **Version 5000 or higher** CPU software, the CCIS Call Back feature has been added. This allows a station to set a CCIS Call Back request when a station dialed across CCIS is busy. When this feature has been set, the setting station will receive a call back as soon as the busy station becomes available. This feature requires the **Version 5000 or higher** software and **Version 5000 Enhancement** license.

When using **Version 5000 or higher** software, InMail is supported in a CCIS network for centralized voice mail.

With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

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## Description

The system uses the PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB daughter board to connect multiple systems together over a Data Communication IP Network (Intranet). Key-Common Channel Interoffice Signaling (KCCIS) is used to provide telephony services between the UNIVERGE SV8100 and another UNIVERGE SV8100 or a NEAX PBX system.

CCIS Networking via IP (Non Peer to Peer Connections Basis).

- IP trunk connections over CCIS Networking via IP provide telephony services between UNIVERGE SV8100 and UNIVERGE SV8100 and a NEAX IPS, IPX, SV7000, UNIVERGE SV8300 and UNIVERGE SV8500.

- The UNIVERGE SV8100 uses the NEC proprietary CCIS Peer to Peer protocol over IP to communicate between system to system.
- The PZ-(X)IPLA/IPLB is required for connections between IP terminals and IP trunks. Only one PZ-(X)IPLA/IPLB daughter board can be accommodated per system with a maximum of 128 DSP resources per system.

The PZ-(X)IPLA/IPLB daughter board is an optional interface package for converting the Real Time Transfer Protocol (RTP) packets on the IP network to PCM highway. IP telephones are required to be connected directly to the IP bus. When IP telephones are required to be connected to conventional PCM based digital circuit, the PZ-(X)IPLA/IPLB converts IP packet signals. The PZ-(X)IPLA/IPLB provides the digital signal processors (DSPs) for IP stations and trunks.

A DSP provides format conversion from circuit switched networks (TDM) to packet switched networks (IP). Each voice channel from the circuit switched network is compressed and packetized for transmission over the packet network. In the reverse direction, each packet is buffered for de-jittering, decompressed, and sent to the circuit switched network. Each DSP converts a single speech channel from IP to TDM and vice versa.

The following are examples of DSP allocation:

- Calling from IP telephone to a TDM telephone uses one DSP.
- Calling from an IP telephone to another IP telephone that is registered to the same CPU uses no DSPs.
- Calling from a TDM telephone to a TDM telephone uses no DSPs.
- Calling from a TDM telephone and out an IP trunk uses one DSP.
- Calling from a TDM telephone across IP K-CCIS to another TDM telephone uses one DSP.
- Calling from an IP telephone across IP K-CCIS to another IP telephone uses two DSP resources at each location.

As stated earlier in this document, using Encryption (RTPs) or Packet Loss Recovery (PLR) can reduce the number of available DSPs. Another thing that can reduce the amount of available DSPs is CODEC choice.

## Systems Requirements

Only voice (RTP/RTCP) processing functions are mounted among VoIP functions on the PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB. All call control functions are handled by the CD-CP00-US.

Three daughter boards are offered according to the number of voice channels:

- PZ-32IPLA/IPLB Voice channel 32
- PZ-64IPLA/IPLB Voice channel 64
- PZ-128IPLA/IPLB Voice channel 128

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Only one PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB daughter board can be installed on the CD-CP00-US.

The PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB daughter board has Layer2 Switch ability, along with a Gigabit Ethernet LAN interface and RTP/RTCP packet is transmitted and received directly.

The number of ports supported by the IP K-CCIS (Peer to Peer) application depends on which PZ-( )IPLA/IPLB is installed on the CD-CP00-US and on the number of ports licensed in the CD-CP00-US. For example, if the CD-CP00-US is installed with a PZ-64IPLA/IPLB, the maximum configuration supported by the CCISoIP application is 64 CCISoIP channels.

## Conditions

- A maximum of 200 IP Trunks are supported in the SV8100, but the maximum number of simultaneous talk paths depend on the size and available channels of the IPLA/IPLB unit.
- When using ARS Class of Service Matching, CCIS calls always follow Class of Service 1.
- UCB is not supported for Centralized Voice Mail.
- With **Version 3100 (3.13 or higher)** CPU software, if single lines for fax machines are set to Special (Program 15-03-03), faxing across IP CCIS will always use G.711 codec.
- When using InMail in a CCIS or Netlink network, 8-digit extensions and mailboxes are not supported.
- When connecting a SV8100 to a NEAX PBX, Link reconnect needs to be turned off in the PBX to the SV8100.
- The CCISoIP Fax Enhancement feature requires **Version 5000 or higher** software, the PZ-IPLB32/64/128 VoIPDB and the **Version 5000 Enhancement** license.
- The CCIS Call Back feature requires **Version 5000 or higher** software and the **Version 5000 Enhancement** license.
- The CCISoIP Fax Enhancement feature supports G.711, G.726 and T.38 between two SV8100s.
- When using the CCISoIP Fax Enhancement feature between a SV8100 and a SV8300/SV8500, refer to the documentation for the SV8300/SV8500 system software level to determine if the desired Fax CODEC is supported and for information on setting up the feature on that system.
- When connecting to a SV8300 or SV8500 using K-CCIS the Call Back feature is not supported.
- The CCIS Call Back feature is only supported when using a closed numbering plan.
- The CCIS Call Back feature is not supported on K-CCIS – PVA.
- CCIS Call Back can only be set when the destination party is busy, and the calling party hears a busy tone.

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- The calling party must hang up after setting CCIS Call Back.
  - CCIS Call Back can only be set by pressing a programmed Feature key. Softkeys or dialing a service code is not supported.
  - CCIS Call Back can only be set from a multiline terminal.
  - CCIS Call Back target can only be a multiline terminal.
  - The following telephones are not supported for either setting or receiving K-CCIS - Call Back:
    - ❑ Single Line Telephones
    - ❑ Standard SIP Telephones
    - ❑ MH240 Telephones
    - ❑ IP-DECT Telephones
  - For the CCIS Call Back to occur, CCIS trunks must be available in both systems.
  - The setting party can only set Call Back to one destination telephone.
  - One system can have a maximum of 50 Camp On/Call back requests set.
  - Call Back requests are canceled by a system reset.
  - When the destination extension does not become available within a specified time (Program 20-01-09), the CCIS Call Back is canceled. This timer is set on the destination system.
  - If the setting extension does not answer the Call Back ring within a specified time (Program 20-01-07) the CCIS Call Back is canceled. This timer is set on the originating system.
  - The called extension has the ability to receive Call Back settings from multiple extensions. If this occurs, the Call Back requests are returned in the order received.
  - The K-CCIS – Call Back feature does not apply to trunk calls as it does not include trunk queuing features.
  - Call Forward Busy No Answer must be disabled for a telephone to receive a CCIS Call Back request.
  - The CCISoIP Fax Enhancement feature requires installation of the PZ-32/64/128 IPLB IP daughter board.
  - When using **Version 4000 or lower** software, InMail is not supported for centralized voice mail in a KTS to KTS CCIS network.
  - When using **Version 5000 or higher** software, InMail is supported for centralized voice mail in a KTS to KTS CCIS network.
  - In a CCIS network, the Memo Display Function only supports DID calls directed across CCIS to a remote system.
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- Calls forwarded or transferred across CCIS do not support the Memo Display Function.
- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.
- Verified Account Codes for Toll Calls across a CCIS network are not restricted when a trunk access code is added to the number allowing ARS routing through another K-CCIS T1/IP networked site. This access code (typically a 9), precedes the dialed “1” used by the system to identify a long distance call. As a result, the call is no longer considered long distance and the account code is not required.
- Any calls across CCISoIP (station to station or stations transferring trunks) that use Quick Transfer to voice mail require an extra CAP key. The initial call across the CCSIoIP link uses the first CAP key. When the digit “8” is pressed to perform the Quick Transfer, a second CAP key is accessed.
- When trunks are being shared for outbound calls between CCIS networks, all sites must utilize the same trunk access code.
- All IP trunks (SIP, CCIS, or H.323) must be contiguous. If any IP trunks are added to a system that already has IP trunks installed, and the next set of trunks is not in sequence, then all IP trunks are moved to a new set of sequential trunk numbers.

## CCIS Networking via IP (Peer to Peer Connections Basis)

### Description

IP-KCCIS has been improved to support Peer to Peer calls between IP Terminals residing in different offices, without using DSP resources. With **Version 4000 or lower** software, two DSP resources in each office/system were consumed for calls between an IP Terminal and an IP Terminal. Refer to the SV8100 Networking manual for more information.

**Table 2-54 K-CCIS Main and Remote System VoIP Resources Used**

The number in each box indicates how many VoIP resources are used		Main System					Remote System				
		TDM Terminal	IP Terminal	CO Analog/Digital/SIP	CO Conf. IP Terminal	CO Conf. TDM Terminal	TDM Terminal	IP Terminal	CO Analog/Digital/SIP	CO Conf. IP Terminal	CO Conf. TDM Terminal
Main System	TDM Terminal	0	M: 1	0	M: 1	0	M: 1 R: 1	M: 1	0	M: 1	M: 1 R: 1
	IP Terminal	M: 1	0	M: 1	M: 2	M: 1	R: 1	0	R: 1	M: 2	M: 2 R: 1

**Table 2-54 K-CCIS Main and Remote System VoIP Resources Used (Continued)**

The number in each box indicates how many VoIP resources are used		Main System					Remote System				
		TDM Terminal	IP Terminal	CO Analog/Digital/SIP	CO Conf. IP Terminal	CO Conf. TDM Terminal	TDM Terminal	IP Terminal	CO Analog/Digital/SIP	CO Conf. IP Terminal	CO Conf. TDM Terminal
Remote System	TDM Terminal	M: 1 R: 1	R: 1	M: 1 R: 1	R: 1	M: 1 R: 1	0	R: 1	0	R: 1	M: 1 R: 1
	IP Terminal	M: 1	0	M: 1	R: 2	M: 1 R: 2	R: 1	0	R: 1	R: 2	M: 1 R: 2

M = Main K-CCIS System

R = Remote K-CCIS System

## Conditions

- Main software **Version 4000 (4.01 or higher)** and the **Version 4000 Main Version license** is required for the SV8100 to support Peer to Peer in a CCISoIP network.
- DT700 terminals are supported for Peer to Peer connections via a P2P CCIS call.
- Standard SIP terminals are not supported for Peer to Peer connection.
- If either Programs10-26-04 or 50-15-04 are set to 0 (Disable) in system A, Peer to Peer is disabled for system A and any remote systems when calling system A.
- When port translation is done through a NAT router, Peer to Peer is disabled.
- When RTP encryption is enabled, Peer to Peer is disabled.
- When connecting to a SV8300 or SV8500 using CCISoIP, Program 84-21-21 must be set to H.245 (2).
- When connecting to other SV8100s using CCISoIP, Program 84-21-21 must be set the same in all systems.
- SV8100 K-CCIS-IP to another SV8100, for calls from an IP terminal to a TDM terminal/trunk via Peer to Peer, the IP Terminal's Codec must match the CCIS Codec and the packet size is auto negotiated based on the receiving sides packet size.
- SV8100 K-CCIS-IP to another SV8100 or to a NEAX PBX (SV8300, SV8500, etc.), for calls from an IP terminal to another IP terminal/trunk via Peer to Peer, the IP Terminal's Codec must match and the packet size is auto negotiated.
- SV8100 K-CCIS-IP to a NEAX PBX (SV8300, SV8500, etc.), for calls from an IP terminal to a TDM terminal via Peer to Peer, the IP Terminal's Codec and packet size (Program 84-24-XX) need to match the NEAX PBX CCIS Codec and packet size settings.
- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.



## Default Setting

Enabled

## System Availability

### Terminals

None

### Required Component(s)

CD-CP00-US with PZ-32/64/128IPLA or PZ-32/64/128IPLB Daughter Board

## Related Features

K-CCIS – IP

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Refer to the UNIVERGE SV8100 Networking Manual for programming details.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-26-04	IP System Operation Setup – DT700 Peer to Peer Mode	Use to Enable (1) or Disable (0) the Peer to Peer feature for SIP MLT and SIP IP stations.	0 = Off 1 = On (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
50-15-04	<b>CCIS over IP Basic Information Setting – Connection Method for Terminal</b>	Choose the connection method for the DT700.	0 = Peer to Peer disable 1 = Peer to Peer enable (default = 1)		✓	
84-21-21	<b>CCIS over IP CODEC Information Basic Setup – DTMF Relay Mode</b>	When connecting to a SV8300 or SV8500 this must be set to 2 (H.245).	0 = Disable (IPL) 2 = Inbound(RFC2833) 3 = Outbound(H.245) (default = 0)		✓	

**K-CCISoIP FAX:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		
84-21-47	<b>CCIS over IP CODEC Information Basic Setup – FAX over IP Type</b>	Select FAX over IP type. Type1: SV8100 original mode Type2: PBX compatible mode  If type2 is selected, FAX over IP feature is executed using Program 84-32 settings.	0 = Type 1 1 = Type 2 (default = 0)		✓	
84-32-01	<b>FAX over IP Codec Setup – FAX Codec</b>	Setup FAX over IP codec settings when using CCIS over IP.  If "4 = T.38 (UDPTL)" is selected, system does not follow item 02 to 07.	1 = G.711 a-law 2 = G.711 u-law 3 = G726 4 = T.38 (UDPTL) (default = 2 for US) (default = 1 for other)		✓	
84-32-02	<b>FAX over IP Codec Setup – Payload Size</b>	Setup FAX over IP Codec settings when using CCIS over IP.	1-4 (10ms base) (default = 2)		✓	
84-32-03	<b>FAX over IP Codec Setup – Jitter Buffer Mode</b>	Setup FAX over IP Codec settings when using CCIS over IP.	0 = Static 1 = Self Adjusting (default = 1)		✓	
84-32-04	<b>FAX over IP Codec Setup – Minimum Jitter Buffer</b>	Setup FAX over IP Codec settings when using CCIS over IP.	0~300 (default = 20)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-32-05	<b>FAX over IP Codec Setup – Average Jitter Buffer</b>	Setup FAX over IP Codec settings when using CCIS over IP.	0~300 (default = 40)		✓	
84-32-06	<b>FAX over IP Codec Setup – Maximum Jitter Buffer</b>	Setup FAX over IP Codec settings when using CCIS over IP.	0~300 (default = 80)		✓	
84-32-07	<b>FAX over IP Codec Setup – RTP Payload Type</b>	Setup FAX over IP Codec settings when using CCIS over IP.	96~127 (default = 103)		✓	

### CCIS Call Back:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function for Camp-On (code 35). This key is also the Callback key.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-01-07	<b>System Options – Callback Ring Duration Time</b>	Set the time of the Callback ring. The timer is set on the originating system.	0~64800 (seconds) (default = 15 seconds)		✓	
20-01-09	<b>System Options – Callback/ Trunk Queuing Cancel Time</b>	The system cancels Callback and Trunk Queuing requests after this time. The timer is set on the destination system.	0~64800 (seconds) (default = 64800 seconds)		✓	
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller. This should be set to Off (0) in the destination system.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy. This should be set to Off (0) in the destination system.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension user ability to receive Off-Hook Signals. This should be set to Off (0) in the destination system.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Automatically (1) or Manually (0) receive off-hook Signals. Allow a busy extension to Automatically (1) or Manually (0) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

## Operation

Refer to the UNIVERGE SV8100 Networking Manual for detailed feature information.

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## *K-CCIS – IP with PVA*

### Enhancements

**Version 3000 (3.01 or higher) CPU software and K-CCIS – IP Compact Flash with PVA License and Version 3000 Enhancement license (0031) is required.**

When using **Version 5000 or higher** software, InMail is supported in a CCIS network for centralized voice mail.

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### Description

The K-CCIS – IP with PVA feature provides the benefits and additional feature compatibility of Key-Common Channel Interoffice Signaling (K-CCIS) between multiple systems including NEAX PBX systems connected together over a Data Communication IP Network (Intranet). Voice Signals and common signaling from and to distant offices are converted into IP packets and transmitted through the Data IP Network. When using this feature, both Voice and Data Communication lines are integrated into one network and communication costs can be reduced.

This feature is available between UNIVERGE SV8100, Electra Elite IPK II, Electra Elite IPK and NEAX PBX systems.

The following features are provided:

- Automatic Recall\*\*\*
- Brokerage Hotline
- Call Forwarding – All Calls
- Call Forwarding – Busy/No Answer
- Call Park Retrieve
- Call Transfer – All Calls
- Calling Name Display
- Calling Number Display
- Calling Party Number (CPN) Presentation from Station
- Centralized Billing
- Centralized BLF (K-CCIS)\*\*
- Centralized Day/Night Mode Change

- Centralized E911
- Dial Access to Attendant
- Direct Inward Dialing
- Dual Hold
- Elapsed Time Display
- Flexible Numbering of Stations
- Hands-Free Answerback
- Hot Line
- Link Reconnect
- Multiple Call Forwarding – All Calls
- Multiple Call Forwarding – Busy/No Answer
- Paging Access
- Quick Transfer to Voice Mail
- Station-to-Station Calling
- Uniform Numbering Plan
- Voice Call
- Voice Mail Integration\*

\* Not supported with VM8000 InMail.

\*\* Not supported with NEAX PBX.

\*\*\* Not supported with IPK/IPK II.

## Conditions

- The K-CCIS – IP with PVA web interface supports Windows Internet Explorer 8 run on any Windows 7 operating system.
- The CD-PVAA blade requires the K-CCIS – IP with PVA with PVA Compact Flash card.
- The K-CCIS – IP with PVA application can be licensed in increments of four or a single 24 ports.
- Each CD-PVAA blade reduces the maximum capacity of trunks in the system.
- The CD-PVAA is required for K-CCIS – IP with PVA connection to the IPK and IPK II.
- When connecting the CD-PVAA K-CCIS – IP with PVA application to the IPK and IPK II, the PVA(X)-U ( ) ETU installed in the IPK and IPK II must be upgraded to the latest Service Pack and Firmware.

- One CD-PVAA is required to support up to 24 channels of K-CCIS – IP with PVA.
- Up to eight CD-PVAA blades can be installed in the UNIVERGE SV8100.
- Port assignment of the CD-PVAA package depends on the K-CCIS – IP with PVA license. You must input the license code **6200** in Program10-54 for each slot the PVA-CCIS package is installed.
- When multiple CD-PVAA blades are installed in the same UNIVERGE SV8100, it is necessary to input Program 10-54 for each slot the K-CCIS – IP with PVA is installed. The total K-CCIS with PVA call count is limited by the license quantity installed in the system.

The following tables illustrate examples of K-CCIS – IP with PVA licensing and slot assignments:

**Table 2-55 CD-PVAA Blade Installed in Slot 6**

<b>Example #1</b>	
License Quality: 8	Can make or receive a total of eight calls.
Program 10-54 = 8	Can assign eight ports and CD-PVAA blade starts.
<b>Example #2</b>	
License Quality: 8	Cannot assign ports and CD-PVAA blade does not start.
Program 10-54 = 0	
<b>Example #3</b>	
License Quality: 0	Cannot make or receive calls.
Program 10-54 = 8	Can assign eight ports and CD-PVAA blade starts
<b>Example #4</b>	
License Quality: 8	Can make or receive a total of eight calls.
Program 10-54 = 24	Can assign 24 ports and CD-PVAA blade starts

**Table 2-56 CD-PVAA Blade Installed in Slot 4 and Slot 6**

<b>Example #1</b>	
License Quality: 16	Can Make or receive a total of 16 calls.
Program 10-54 (slot 4) = 8	Can assign eight ports and CD-PVAA blade starts.
Program 10-54 (slot 6) = 8	Can assign eight ports and CD-PVAA blade starts.
<b>Example #2</b>	
License Quality: 16	Can Make or receive a total of 16 calls.
Program 10-54 (Slot 4) = 16	Can assign 16 ports and CD-PVAA blade starts.
Program 10-54 (Slot 6) = 16	Can assign 16 ports and CD-PVAA blade starts.

- This feature requires **Version 3000 (3.01 or higher)** CPU software and **Version 3000 Enhancement license (0031)**.
- The K-CCIS – IP with PVA shares the CO/PBX/Tie/DID trunks available for the system.
- The CD-PVAA blade supports only those codecs that are approved to provide toll-quality speech path. The following voice compression methods are supported for the K-CCIS – IP with PVA application:
  - G.711  $\mu$ -Law – Highest Bandwidth
  - G.729 – Mid-Range Bandwidth
  - G.723 – Lowest Bandwidth
- Each voice call requires at a minimum the bandwidth listed in the following table:

**Table 2-57 Minimum Bandwidth Required**

Codec	Transmit Data Rate	Receive Data Rate	Time Between Packets	Packetization Delay	Default Jitter Buffer Delay	Theoretical Maximum MOS
G.711 $\mu$ -Law	90 Kbps	90 Kbps	20ms	1.5ms	2 datagrams (40ms)	4.4
G.729	34 Kbps	34 Kbps	20ms	15.0ms	2 datagrams (40ms)	4.07
G.723	25 Kbps	25 Kbps	30ms	37.5ms	2 datagrams (60ms)	3.87

*This includes the overheads of VoIP communication including signaling.*

*In voice communications, particularly Internet telephony, the mean opinion score (MOS) provides a numerical measure of the quality of human speech at the destination end of the circuit. The scheme uses subjective tests (opinionated scores) that are mathematically averaged to obtain a quantitative indicator of the system performance. A score of 5.0 is the maximum for the Mean Opinion Score.*

- Data Calls (Modem Data) across the VoIP connection are only supported when the G.711  $\mu$ -Law Codec is used.
- The CD-PVAA blade contains a regular TCP/RTP/IP stack that can handle real-time media. The blade, from the network administration perspective, is an endpoint on the IP network.
- The CD-PVAA with K-CCIS – IP with PVA application loaded uses Common Channel Interoffice Signaling over IP networks. Currently this protocol does not allow for communications across networks where Network Address Translation (NAT) is performed.
- The audio quality of speech connections depends greatly on the available bandwidth between the CD-PVAA blade in the data network. As the Internet is an uncontrolled data network compared to an Intranet, using this application in an Intranet WAN environment, with known (or controlled and assured) Quality of Service (QoS), is highly recommended.



- If any network where the CD-PVAA blade is connected uses NAT for connecting the voice calls (including firewall), consulting your network provider/administrator and specifically requesting service for VoIP or real-time media support on your networks is highly recommended.
- A static IP Address is required for each CD-PVAA with K-CCIS – IP with PVA.
- This feature allows Point-to-Multipoint connections for calls through the IP K-CCIS Network. If a call is transferred or forwarded to a different system in the network, the trunks in the transferring system are released and a new point-to-point connection is established.
  - ✎ *When a call terminates back to the originating system because of call forwarding or transfer, the intermediate trunks are not released until the call is completed by an answer at the called party or until the call is forwarded to a different system (similar to the linkreconnect function in TDM CCIS).*
- The CD-CCTA blade is not required to support this feature. It can be installed and used in a system using traditional K-CCIS with point-to-point T1 lines allowing both K-CCIS – IP with PVA and traditional K-CCIS to be used with the same system.
- The LAN connection is provided by a 10/100/1000 Base T, Auto-sensing, full duplex Ethernet.
- When assigning a Closed Numbering Plan and DID conversion across K-CCIS – IP with PVA is required, the UNIVERGE SV8100 uses the ARS/F-Route Tables.
- The UNIVERGE SV8100 uses the F-Route Tables to assign an Open Numbering Plan.
- When all K-CCIS – IP with PVA voice channels are busy, the UNIVERGE SV8100 originator of a K-CCIS – IP with PVA call hears a busy tone from the system.
- Outgoing CO calls in a K-CCIS – IP with PVA network can be routed over the K-CCIS – IP with PVA link and use the distant system CO lines.
- Distant system extension numbers in the K-CCIS – IP with PVA network can be assigned to One Touch keys and Speed Dial buffers.
- When a K-CCIS – IP with PVA trunk is on hold, the Specified Line Seizure access codes can be used to retrieve the call from its held state.
- FoIP (Fax over Internet Protocol) with T.38 protocol is only supported with SV8100 to SV8100.
- Each UNIVERGE SV8100 can support both K-CCIS – IP, K-CCIS – IP with PVA and SV8100 Net-link simultaneously.
- Each UNIVERGE SV8100 can support up to eight CD-PVAA blades – (three) per chassis. Refer to the SV8100 System Hardware Manual for more information regarding maximum capacities.
- K-CCIS – IP with PVA **does not** require the use of the PZ-(X)IPLA/IPLB (VoIPDB).
- One way delay must not exceed 100ms.
- Round Trip delay must not exceed 200ms.

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- Packet loss must not exceed 1%.
  - Data switches must be manageable.
  - Routers must provide QOS.
  - Adequate bandwidth for estimated VoIP traffic.
  - Centralized Voice Mail is supported from the UNIVERGE SV8100 or Electra Elite IPK II when using 5-, 6-, 7- and 8-digit station numbers, when the Voice Mail is installed in the SV8100.
  - Codec changes in Program 84-30-XX require a CD-PVAA reset.
  - With **Version 3000 or higher** software, the PVA-CCIS blade is supported in the primary system and/or secondary systems of a NetLink network.
  - When using **Version 4000 or higher** software, InMail is supported for centralized voice mail in a NetLink network. However, replication should be scheduled for non-peak hours of operation.
  - When using **Version 5000 or higher** software, InMail is supported for centralized voice mail in a CCIS network.
  - Verified Account Codes for Toll Calls across a CCIS network are not restricted when a trunk access code is added to the number allowing ARS routing through another K-CCIS T1/IP networked site. This access code (typically a 9), precedes the dialed "1" used by the system to identify a long distance call. As a result, the call is no longer considered long distance and the account code is not required.
  - Any calls across CCISoIP (station to station or stations transferring trunks) that use Quick Transfer to voice mail require an extra CAP key. The initial call across the CCSIoIP link uses the first CAP key. When the digit "8" is pressed to perform the Quick Transfer, a second CAP key is accessed.
  - When trunks are being shared for outbound calls between CCIS networks, all sites must utilize the same trunk access code.

## Restrictions

- The UNIVERGE SV8100 can send billing information to a billing center office (UNIVERGE SV8300/SV8500) but cannot receive the billing information as the billing center office.
- Not all data networks are suitable to support Voice over Internet Protocol (VoIP). A good VoIP solution requires a low-latency, low jitter and low packet loss network. Accordingly, a network must be evaluated for latency, packet loss, and jitter to qualify and determine if it can provide toll-quality speech paths.
- K-CCIS – IP with PVA application will support trunks configured in increments of four contiguous DSP resources.
- Blade Configuration – The K-CCIS – IP with PVA Application Package is identified as a PVA-XXCCIS blade type.

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- When the K-CCIS – IP with PVA application is installed in the UNIVERGE SV8100, the system assigns the first available logical port numbers for CCISoIP trunks.
  - When using K-CCIS – T1 or K-CCIS – IP with PVA in a Netlink system, the CCTA or PVA-CCIS blades are only supported in the primary system.
  - If the UNIVERGE SV8100 system does not have registered CD-PVAA K-CCIS – IP with PVA licenses, the Logical Trunk will not be assigned.
  - The UNIVERGE SV8100 can support only 1~8-digit station numbers.
  - Station Numbers are assigned by the 10s group for 4-digit station numbers, 100s group for 5-digit station numbers, 1000s group for 6-digit station numbers, 10000s group for 7-digit station numbers.
  - When Voice Mail Message Waiting status must be sent across the K-CCIS to a remote system, F-Routes must be used.
  - For a Closed Numbering Plan network using F-Routes, a maximum of 120 F-Route Tables are available allowing a maximum of 121 connected systems per K-CCIS network.
  - When a Closed Numbering Plan Network is used, a user can call another station by dialing the distant extension number, but extensions in the network cannot have the same prefix.
  - For an Open Numbering Plan network, a user can dial another station by dialing the office location number plus an extension number and the extension number can have the same prefix, but the office location cannot be the same.
  - An UNIVERGE SV8100 K-CCIS network should never have more than five hops (tandem connections) because of the message delay through each tandem system.
  - The maximum number of systems depends on the Numbering Plan used and the maximum number of hops (tandem connections).
  - K-CCIS requires assigning a point code for each office. Point codes differentiate between an originating office and a destination office in the K-CCIS Network. Assigning point codes requires the following considerations:
    - The point code must be unique in the network.
    - The UNIVERGE SV8100 can have a maximum of 255 codes assigned to distant systems.
  - Using a Key System-to-Key System network, centralized voice mail is not supported when an Open Numbering Plan is used.
  - Centralized E911 – K-CCIS is supported.
  - When Centralized E911 – K-CCIS is not used, each UNIVERGE SV8100 system in a K-CCIS network must have at least one trunk for Emergency 911calls.
  - Using a NEAX-to-UNIVERGE SV8100 network, the PBX must supply centralized voice mail.
  - Multiline terminals must have an available Call Appearance (CAP) key to originate or answer a K-CCIS – IP with PVA trunk call.

- Direct access of K-CCIS – IP with PVA voice or data channels using Line keys or Specified Line Seizure access codes is prohibited.
- The Recall key or Drop key does not function on K-CCIS – IP with PVA calls. When either key is pressed, operation is ignored, and the call continues.
- Trunk queuing is prohibited on a K-CCIS – IP with PVA trunk route.
- The ability to route an incoming DID call directly across a K-CCIS – IP with PVA link (Direct Inward Dialing – K-CCIS) is supported only when a Closed Numbering Plan using F-Routes is used.
- This feature is not supported by the CD-4ODTA Analog Line interface.
- Extension numbers cannot start with 0 or 9.
- Internal Calls, transferred calls, and K-CCIS – IP with PVA calls do not provide Caller ID to single line telephones.
- Caller ID Call Return feature is not supported with K-CCIS – IP with PVA calls.
- Any IPK/IPK II in a K-CCIS – IP with PVA network must use the PVA(X)-U ( ) ETU with the latest Service Pack and Firmware.
- The Automatic Recall feature is not supported when the call is originated in the Electra Elite IPK System.
- Centralized Voice Mail is not supported from the Electra Elite IPK, when using 5-, 6- or 7-digit station numbers. Refer to the IPK K-CCIS Manual for more information.
- In a K-CCIS – IP with PVA network, the Electra Elite IPK must be programmed internally to match the same extension number length of other systems in the network.
- UCB is not supported as the Centralized Voice Mail.
- When using **Version 4000 or lower** software InMail is not supported for centralized voice mail in a KTS to KTS CCIS network.
- When using InMail in a CCIS or Netlink network, 8-digit extensions and mailboxes are not supported.
- For SV8100 systems with **Version 4000 or higher** system software and has been migrated from a UX5000, [Table 2-58 Migration Supported Blades](#) defines the application blades supported in current system chassis.

**Table 2-58 Migration Supported Blades**

Blade	Color	CHS1U-US Blue 19" Chassis	CHS2U B-US Blue 9.5" Base Chassis	CHS2U E Blue 9.5" Exp Chassis	IP3NA- 6KSU-A1 White 19" Chassis	IP3NA-3KSU- B1 White 9.5" Base Chassis	IP3WW-3KSU- E1 White 9.5" Exp Chassis
CD-RTB	Blue	S	S	S	N/S	N/S	N/S
CD-ETIA	Blue	S	S	S	N/S	N/S	N/S

**Table 2-58 Migration Supported Blades (Continued)**

Blade	Color	CHS1U-US Blue 19” Chassis	CHS2U B-US Blue 9.5” Base Chassis	CHS2U E Blue 9.5” Exp Chassis	IP3NA- 6KSU-A1 White 19” Chassis	IP3NA-3KSU- B1 White 9.5” Base Chassis	IP3WW-3KSU- E1 White 9.5” Exp Chassis
CD-PVAA	Blue	S	S	S	N/S	N/S	N/S
IP3WW-RTU-B1	White	N/S	N/S	N/S	S	S	S
IP3WW-GSWU-B1	White	N/S	N/S	N/S	S	S	S
LU-PVA-CONF- PORT8-LIC	White	N/S	N/S	N/S	S	S	S

S = Supported

N/S = Not Supported

- The CCISoIP Fax Enhancement feature is not supported when using K-CCIS – IP with PVA.
- The CCIS Call Back feature is not supported when using K-CCIS – IP with PVA.

### Default Setting

None

## System Availability

### Terminals

All Terminals

### Required Component(s)

- CD-PVAA w/K-CCIS-IP Compact Flash [PVA CCISoIP APP CF (670918)]
- LK-PVA-CCISoIP 4 Port - LIC license requirements
- LK-PVA-CCISoIP 24 Port - LIC license
- LK-SYS-V3000 Enhancement LIC

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## **Related Features**

K-CCIS – IP

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## **Guide to Feature Programming**

None

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## **Operation**

Normal call handling procedures apply.

Refer to the UNIVERGE SV8100 Networking Manual for detailed feature information.

## *K-CCIS – T1*

### Enhancements

With **Version 5000 or higher** CPU software, the CCIS Call Back feature has been added. This allows a station to set a CCIS Call Back request when a station dialed across CCIS is busy. When this feature has been set, the setting station will receive a call back as soon as the busy station becomes available. This feature requires the **Version 5000 or higher** software and **Version 5000 Enhancement** license.

When using **Version 5000 or higher** software, InMail is supported in a CCIS network for centralized voice mail.

### Description

Key-Common Channel Interoffice Signaling (K-CCIS) allows multiple systems to be connected to provide additional feature compatibility, above what normal Tie Lines provide. The system is configured with a 24 channel T1 Connection and CD-CCTA for receiving or transmitting common signaling data from/to a distant office. The system can provide a variety of interoffice service features such as Calling Name display, Centralized Voice Mail Integration, or Link Reconnect.

The following features are provided:

- Call Forwarding – All Calls – K-CCIS
- Call Forwarding – Busy/No Answer – K-CCIS
- Call Park Retrieve – K-CCIS
- Call Transfer – All Calls – K-CCIS
- Calling Name Display – K-CCIS
- Calling Number Display – K-CCIS
- Calling Party Number (CPN) Presentation from Station – K-CCIS
- Centralized Billing – K-CCIS
- Centralized BLF (K-CCIS)
- Centralized Day/Night Mode Change – K-CCIS
- Centralized E911 (K-CCIS)
- Dial Access to Attendant – K-CCIS

- Direct Inward Dialing – K-CCIS
- Dual Hold – K-CCIS
- Elapsed Time Display – K-CCIS
- Flexible Numbering of Stations – K-CCIS
- Hands-Free Answerback – K-CCIS
- Hot Line – K-CCIS
- IP (K-CCIS)
- IP (K-CCIS) to NEAX (Point-to-Multipoint)
- Link Reconnect – K-CCIS
- Multiple Call Forwarding – All Calls – K-CCIS
- Multiple Call Forwarding – Busy/No Answer – K-CCIS
- Paging Access – K-CCIS
- Quick Transfer to Voice Mail – K-CCIS
- Station-to-Station Calling – K-CCIS
- Uniform Numbering Plan – K-CCIS
- Voice Call – K-CCIS
- Voice Mail Integration – K-CCIS \*

\* Not supported with VM8000 InMail.

## Conditions

- Each UNIVERGE SV8100 system can have up to eight K-CCIS routes.
- Eight CD-CCTAs can be used to support/connect a maximum of eight K-CCIS Links.
- The Basic Port Package can have up to 63 T1 trunks for K-CCIS voice path.
- The Expanded Port Package can have up to 199 T1 trunks for K-CCIS voice path.
- The K-CCIS feature shares the CO/PBX/Tie/DID trunks available for the system.
- When assigning a Closed Numbering Plan and DID conversion across K-CCIS is required, the UNIVERGE SV8100 uses the ARS/F-Route Tables.
- The UNIVERGE SV8100 uses the F-Route Tables to assign an Open Numbering Plan.
- When all K-CCIS voice channels are busy, the UNIVERGE SV8100 originator of a K-CCIS call hears a busy tone from the system.



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- Outgoing CO calls in a K-CCIS network can be routed over the K-CCIS link and use the distant system CO lines.
  - Distant system extension numbers in the K-CCIS network can be assigned to Feature Access or One Touch keys and Speed Dial buffers.
  - When a K-CCIS trunk is on hold, the Specified Line Seizure access codes can be used to retrieve the call from its held state.
  - The UNIVERGE SV8100 can support only 2~8-digit station numbers.
  - Station Numbers are assigned by the 10s group for 4-digit station numbers, 100s group for 5-digit station numbers, 1,000s group for 6-digit station numbers, 10,000s group for 7-digit station numbers.
  - When Voice Mail Message Waiting status must be sent across the K-CCIS to a remote system, F-Routes must be used.
  - For a Closed Numbering Plan network using F-Routes, a maximum of 120 F-Route Tables are available allowing a maximum of 121 connected systems per K-CCIS network.
  - When a Closed Numbering Plan Network is used, a user can call another station by dialing the distant extension number, but extensions in the network cannot have the same prefix.
  - For an Open Numbering Plan network, a user can dial another station by dialing the office location number plus an extension number and the extension number can have the same prefix, but the office location cannot be the same.
  - When an UNIVERGE SV8100 system is a tandem system (in the middle) between systems with higher K-CCIS feature support (including NEAX PBXs), only the K-CCIS features supported by the UNIVERGE SV8100 tandem system are passed through and supported.
  - An UNIVERGE SV8100 K-CCIS network should never have more than five hops (tandem connections) because of the message delay through each tandem system.
  - A Star topology network supports up to eight systems.
  - A Tree topology network is supported. The maximum number of systems depends on the Numbering Plan used and the maximum number of hops (tandem connections).
  - A Mesh topology network is not supported.
  - K-CCIS requires assigning a point code for each office. Point codes differentiate between an originating office and a destination office in the K-CCIS Network. Assigning point codes requires the following considerations:
    - The point code must be unique in the network.
    - When a system has two or more CCH channels, the same originating point code must be assigned to all channels in the system.
    - The UNIVERGE SV8100 can have a maximum of 255 codes assigned to distant systems.
  - Using an UNIVERGE SV8100-to-UNIVERGE SV8100 network, centralized voice mail is not supported when an Open Numbering Plan is used.

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- Centralized E911 – K-CCIS is supported.
  - When Centralized E911 – K-CCIS is not used, each UNIVERGE SV8100 system in a K-CCIS network must have at least one trunk for Emergency 911 calls.
  - Using a NEAX-to-UNIVERGE SV8100 network, the PBX must supply centralized voice mail.
  - Multiline terminals must have an available Call Appearance (CAP) key to originate or answer a K-CCIS trunk call.
  - Direct access of K-CCIS voice or data channels using Line keys or Specified Line Seizure access codes is prohibited.
  - The Recall key or Drop key does not function on K-CCIS calls. When either key is pressed, operation is ignored, and the call continues.
  - Trunk queuing is prohibited on a K-CCIS trunk route.
  - Routing an incoming DID call directly across a K-CCIS link (Direct Inward Dialing - K-CCIS) is supported only when a Closed Numbering Plan using F-Routes is used.
  - This feature is not supported by the CD-4ODTA Analog Line interface.
  - Up to eight CD-CCTA blades can be assigned per system.
  - Extension numbers cannot start with 0 or 9.
  - Internal Calls, transferred calls, and K-CCIS calls do not provide Caller ID to single line telephones.
  - Caller ID Call Return feature is not supported with K-CCIS calls.
  - Call Park Searching is supported only in the local system.
  - When the system searches the Dial Extension Analyze Table (Program 11-20-01), it uses prefix searching, giving the lower table number the higher priority. For example, the user programs 211 in table 1 and 2113 in table 2, then dials 2113, the system selects table 1.
  - When using ARS Class of Service Matching, CCIS calls always follow Class of Service 1.
  - UCB is not supported for Centralized Voice Mail.
  - When using **Version 4000 or lower** software, InMail is not supported for centralized voice mail in a KTS to KTS CCIS network.
  - When using **Version 5000 or higher** software, InMail is supported for centralized voice mail in a KTS to KTS CCIS network.
  - With **Version 3000 or higher** software, the T-1 CCTA blade is supported in the primary system and/or secondary systems of a NetLink network.
  - When using InMail in a CCIS or Netlink network, 8-digit extensions and mailboxes are not supported.

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- When connecting a SV8100 to a NEAX PBX, Link reconnect needs to be turned off in the PBX to the SV8100.
  - The CCIS Call Back feature requires **Version 5000 or higher** software and the **Version 5000 Enhancement** license.
  - Call Forward Busy No Answer must be disabled for a telephone to receive a CCIS Call Back request.
  - Main software **Version 5000 or higher** and the **Version 5000 Enhancement License** are required to support CCIS Callback.
  - When connecting to a SV8300 or SV8500 using KCCIS the Callback feature is not supported.
  - This feature is only supported when using a closed numbering plan.
  - CCIS Callback can only be set when the destination party is busy, and the calling party hears busy tone.
  - The calling party must hang up after setting CCIS Call Back.
  - CCIS Callback can only be set by pressing a programmed Feature key. Softkeys or dialing a service code is not supported.
  - CCIS Callback can only be set from a multiline terminal.
  - CCIS Call Back target can only be a multiline terminal.
  - The following telephones are not supported for either setting or receiving CCIS Callback:
    - ❑ Single Line Telephones
    - ❑ Standard SIP Telephones
    - ❑ MH240 Telephones
    - ❑ IP-DECT Telephones
    - ❑ H.323 Telephones
    - ❑ ISDN Telephones
  - For the CCIS Call Back to occur there must be available CCIS trunks in both systems.
  - The setting party can only set Callback to one destination telephone.
  - One system can have a maximum of 50 Camp On/Call back requests set.
  - Callback requests are canceled by a system reset.
  - When the destination extension does not become available within a specified time (Program 20-01-09) the CCIS Callback will be canceled. This timer is set on the destination system.
  - If the setting extension does not answer the Callback ring within a specified time (Program 20-01-07) the CCIS Callback will be canceled. This timer is set on the originating system.

- The called extension has ability to receive Callback settings from multiple extensions. If this occurs the Callback requests are returned in the order received.
- The CCIS Callback feature does not apply to trunk calls as it does not include trunk queuing features.
- Verified Account Codes for Toll Calls across a CCIS network are not restricted when a trunk access code is added to the number allowing ARS routing through another K-CCIS T1/IP networked site. This access code (typically a 9), precedes the dialed "1" used by the system to identify a long distance call. As a result, the call is no longer considered long distance and the account code is not required.
- Any calls across CCISoIP (station to station or stations transferring trunks) that use Quick Transfer to voice mail require an extra CAP key. The initial call across the CCISoIP link uses the first CAP key. When the digit "8" is pressed to perform the Quick Transfer, a second CAP key is accessed.
- When trunks are being shared for outbound calls between CCIS networks, all sites must utilize the same trunk access code.

## Default Setting

None

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## System Availability

### Terminals

All Terminals

### Required Component(s)

- CD-CCTA
- The following table shows the chassis system software compatibility with CD-CCTA firmware and K-CCIS feature compatibility.

Chassis Software	CCTA
SV8100 V	X

X = Compatible

– = Not Compatible

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## **Related Features**

**T1 Trunking (with ANI/DNIS Compatibility)**

**Universal Slots**

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## **Guide to Feature Programming**

Refer to the UNIVERGE SV8100 Key-Common Channel Interoffice Signaling (K-CCIS) Manual.

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## **Operation**

Refer to the UNIVERGE SV8100 Key-Common Channel Interoffice Signaling (K-CCIS) Manual.

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# Last Number Redial

## Enhancements

Improved Cursor Key operation (**Version 3000 or higher** software).

## Description

Last Number Redial allows an extension user to quickly redial the last number dialed. For example, a user may quickly recall a busy or unanswered number without manually dialing the digits.

Last Number Redial saves in system memory the last 24 digits a user dials. The number can be any combination of digits 0~9, # and \*. The system remembers the digits regardless of whether the call was answered, unanswered or busy. The system normally uses the same trunk group as for the initial call. However, the extension user can preselect a specific trunk if desired.

When Redial is pressed, the display indicates REDIAL [#] / SYS. The user can then press # to redial the number displayed, or enter an System Speed Dialing bin number to be dialed. Press the Redial key repeatedly to scroll through the last 10 numbers dialed.

## Cursor Key Operation

By pressing the Left Cursor Key the user can access the Redial and Incoming Call History menus. The flow chart below shows the menu access sequence. If the terminal is not allowed to have the Dial Preview feature, these menus cannot be accessed.

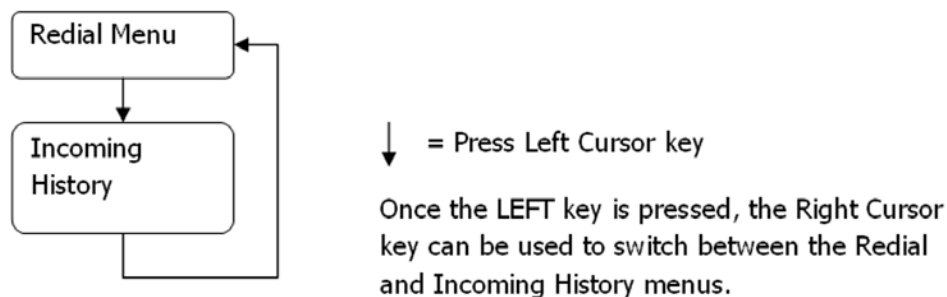


Figure 2-27 Left Cursor Key Operation Flow Chart

## Conditions

- Redial List requires the use of a display telephone. Non-display and single line telephones cannot use this feature.
- When using Automatic Route Selection, ARS selects the trunk for the call unless the user preselects.

## Default Setting

Enabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

---

## Related Features

**Automatic Route Selection**

**Repeat Redial**

**Save Number Dialed**



## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-12	<b>Service Code Setup (for Service Access) – Last Number Dial</b>	Assign a service code (#5) to use Last Number Dial.	MLT, SLT (default = #5)		✓	
11-12-17	<b>Service Code Setup (for Service Access) – Clear Last Number Dialing Data</b>	Assign a service code (776) to clear the Last Number Dial.	MLT, SLT (default = 776)		✓	
15-02-13	<b>Multiline Telephone Basic Data Setup – Redial List Mode</b>	Select the type of numbers that are stored in the Redial List – Internal and External numbers (0) or External only (1).	0 = ICM/Trunk (Extension/Trunk Mode) 1 = Trunk Mode (default = 1)		✓	
20-08-05	<b>Class of Service Options (Outgoing Call Service) – Dial Number Preview (Preset Dial)</b>	Turn Off or On an extension user ability to use Dial Number Preview. This program also turns Off or On the Last Number Redial function.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To redial your last call:

1. Without lifting the handset, press **Redial**.  
 *The last dialed number is displayed.*

2. To redial the last number, press **#**.


- OR -

Search for the desired number from the Redial List by pressing **Redial** or VOLUME ▲ or VOLUME ▼ keys.

- OR -


Press the **Left Cursor** key once and the VOLUME ▲ or VOLUME ▼ keys to find number.

3. Lift the handset or press **Speaker** to place the call.

 *The system automatically selects a trunk from the same group as your original call and dials the last number dialed.*

- OR -

1. At the multiline terminal, press **Speaker** or lift the handset (optional).


 *The system automatically selects a trunk from the same group as your original call.*

2. Press **Redial**.

- OR -


At the single line telephone, lift the handset.

3. Dial **#5**.

 *The system automatically selects a trunk from the same group as your original call and dials the last number dialed.*

#### To check the number saved for Last Number Redial:

1. Press **Redial** or the **Left Cursor** key once.

 *The stored number displays for six seconds. The stored number dials out if you:*

- Lift the handset.

- Press an idle line key.

- or -

- Press **Speaker**.

2. Press the **Exit** key.

#### To erase the stored number:

1. At the multiline terminal, press **Speaker** or lift handset.

- OR -

At the single line telephone, lift the handset.

2. Dial **776**.

## Licensing

### Enhancements

The NAPT feature requires a **Version 3000 or higher** system license in order to be activated.

A CD-CP00-US (CPU) can be upgrade to a **Version 3000 or higher** system software however, the NAPT feature will not function unless a **Version 3000 or higher** system license is applied.

When upgrading to **Version 3100 ~ Version 8000 (8.0)** software, four IP Terminal Basic licenses are provided. If a system with **Version 3000 (3.01 or lower)** is upgraded to **Version 3100 ~ Version 8000 (8.0)** software, the system gains four IP Terminal licenses as soon as it is upgraded.

With **Version 4.0 or higher PcPro** and **Version 4000 or higher** CPU software, system license information is saved to the database.

With **Version 5000 or higher** software, Temporary License is supported up to 10 days.

With **Version 5000** software, the following features have been added:

- FAX Enhancement.
- Callback to cell phone.
- Memo Display Function.
- VM8000 InMail – Automatic Access to VM by Caller ID (CID).
- ACD Skill Based Routing.
- Paging, External (VRS).
- CCIS Call Back.

With **Version 6000** software, the following features have been added:

- VM8000 InMail  
Additionally, the following also require **Version 6000 Enhancement license (0035)**:
- Automatic message playback of new messages.
- Find Me Follow Me schedule by day of week in addition to time of day.
- Cascade Message Notification schedule by day of week in addition to time of day.
- Save message as new after listening.

With **Version 7000** software, the following features have been added:

- Recognize Extension Location When Logging In With NetLink System.
- Analog Trunk Codec Filter, Auto Adjustment.
- E.164 Support.
- Improved Hotel Room Status PMS Codes.
- Incoming Ring Tone / Call Volume Enhancement.
- Operation Improvement for General Purpose Relay.  
Additionally, the following also require **Version 7000 Enhancement license(0036)**.
- Expand ARS Table For NetLink.

## Enhancements (Continued)

- Intercom SMDR.
- Ecology feature.
- Security feature.
- Improvement for email notification. **Maintenance License (0043)** required.
- DID Enhancement with Day of Week.

With **Version 8000** software, the following features have been added:

- Warning tone for IP-DECT (Out of range/Power Off)  
Additionally, the following also require **IP Terminal SIP Ext license (5111)**.
- VM8000 InMail Enhancement
  - Answer Table
  - Dial Action Table
  - Message Notification Option
- Softkey Disable feature
- Virtual Extension Enhancement  
Additionally, the following also require **Version 8000 Enhancement license (0037)**.
- Do Not Disturb (DND) Enhancement
- SMDR – Buffer Expansion with MEMDB
- ACD – Caller ID based routing
- WebPro Improvement
  - USB backup
  - ISDN Layer Status Indication
  - Indicate System/Station condition

When upgrading to **Version 8000 (8.01) or higher** software, four IP Terminal Advanced (5111) licenses are provided. If a system with **Version 3000 (3.01 or lower)** is upgraded to **Version 8000 (8.01) or higher** software, the system gains four IP Terminal Advanced (5111) licenses as soon as it is upgraded.

With **Version 9000** software, the following features have been added:

- WebPro
  - Save/Restore PCPro Configuration file
  - Remote software upgrade
- Collect Call Blocking on ISDN
- Progress tone for Mobile Extension
- VRS enhancement
  - Disable DTMF detection during VRS talk
  - Single Digit Attendant improvement
- NAT Improvement – Separate expire timer for NAT terminal  
**V3000 Enhancement license (0031)** required.
- NetLink Improvement – Packet buffering (Nagle algorithm) as default  
**Net Link license (0002)** required.
- SMDR – Tracking of virtual ISDN loop-back  
Additionally, the following also require **Version 9000 Enhancement license (0038)**.

## Enhancements (Continued)

- Identify Dial-in call for Mobile Extension or normal Dial-in
- ACD Call Monitor in normal mode
- Video support over SIP Trunk
  - Video license (0040), IP Trunk license (5001) and IP Terminal SIP Ext license (5111) required.

## Description

Licenses are used to activate certain features and applications for the UNIVERGE SV8100. The UNIVERGE SV8100 system provides the following licenses:

### System Licenses:

#### System Capacity

- Max Port – This licenses the system for up to 712 ports. (Requires 256 Port License and PZ-ME50-US).
- 256 Port – This licenses the system for up to 256 ports. (Requires PZ-ME50-US).



- *Failure to properly install and program ports higher than 64 (as described below) can corrupt the SV8100 database. If the PZ-ME50-US is not physically installed on the CD-CP00-US, do not attempt to change the PCPro database configuration to indicate that the PZ-ME50-US is installed on the CD-CP00-US, program ports 64 and higher and then upload the PCPro configuration to the SV8100 system. This process can corrupt the SV8100 database. Refer to the next bullet for the proper installation/programming procedure.*
- *To properly install and configure the PZ-ME50-US; first install the PZ-ME50-US on the CD-CP00-US. To program the ports above 64 using PCPro, perform a new download before attempting to program the ports.*

- IP Trunks – This licenses the number of SIP trunks that can be installed in the system.
- IP Terminal Basic – This licenses the number of DT700 phones that can be connected to the system.
- IP Terminal Advanced – This licenses the number of Third Party SIP phones to connect to the system.

#### System Feature License

- Enhancement Licences – This licenses the system to have the advanced features added in the release.
- NetLink – This licenses the number of remote system that can be connected to the main system.
- Hotel/Motel (PMS) – This licenses the system to run the Hotel/Motel feature.
- SMDR – This licenses the system to print SMDR reports.
- Remote Software Upgrade – This licenses the system to be upgraded remotely.
- InACD – This licenses the system to run the In ACD feature.
- Encryption – This licenses the SV8100 system to encrypt VoIP calls.

**Voice Mail (Embedded)**

- VRS Channels – This licenses the number of VRS channels that can be used in the system.
- InMail channels – This licenses the number of InMail channels that can be used in the system.
- VRS/InMail Multi-language – This licenses the number of languages that can be used simultaneously.
- InMail Email Client – This licenses the number of InMail users that can be allowed to receive email notification.

**Applications:****Voice Mail (InSkin US)**

- UMS Channel – This licenses the number Voice channels that can be used in the UMS.
- UMS Fax Channel – This licenses the number FAX channels that can be used in the UMS.
- UMS Client (View Apps) – This licenses the number of simultaneous Client (View Apps) that can be connected to the UMS.
- UMS Multi-language – This licenses the number of languages that can be used simultaneously.
- UMS Hospitality/PMS – This licenses the UMS to run Hospitality/PMS.
- UMS Hospitality Language – This licenses the number of languages that can be used simultaneously with UMS Hospitality.
- UMS Amis/Plus Net – This licenses the UMS for Amis/Plus Net.
- UMS TTS Channel – This licenses the number of TTS channels that can be used in the UMS.
- UMS TTS Language – This licenses the number of languages that can be used simultaneously for TTS.
- UMS Lite Channel – This licenses the number of Voice Channels that can be used in UMS-Lite.
- UMS Lite 2 port Upgrade – Loading this license enables the upgrade option of the UMS.
- UMS Lite to Full Upgrade – This licenses upgrading UMS-Lite to UMS full.

**Desktop Application**

- Softphone – This licenses the number of Desktop Applications that can be used for Softphone.
- Desktop Shared Services – This licenses the number of Desktop Applications that can use the Shared Services features like presence, DSS/BLF view, central directory, phone message, and quick message.
- Desktop Client – This licenses the number of Desktop Applications that can be run.
- Soft phone Enhancement – This licenses the number of Desktop Applications that can use White Board, Apps Share, and IM.
- Desktop Suite InMail Integration – This licenses the number of Desktop clients that can access the InMail function from Desktop Suite.

**Call Management**

- Comm Analyst Base Package (20 Stations) – This licenses the Communications Analyst to report for 20 stations.
- Comm Analyst 256 Stations – This licenses the Communications Analyst to report for 256 stations.
- Comm Analyst Upgrade 20 to 256 – This licenses the Communications Analyst to upgrade from 20 stations to 256 stations to report.
- Comm Analyst Network User Pack – This licenses the Communications Analyst for simultaneously Network Clients to connect to the database.

- 
- 
- Comm Analyst Add Remote Site – This licenses the Communications Analyst for the number of sites that it can collect data from.
  - Comm Analyst Traffic Analysis – This licenses the Communications Analyst for Traffic Analysis.
  - Comm Analyst PMS Integration – This licenses the Communications Analyst to use the PMS Integration module.
  - Comm Analyst Web Reporting – This licenses the Communications Analyst to use Web Reporting Feature.
  - Comm Analyst Migration from IPK II CA – This licenses the migration of the IPKII CA to Communication Analyst.
  - Comm Analyst Migration from IPK II CES – This licenses the migration of the IPKII CES to Communication Analyst.
  - Comm Analyst Additional 256 Stations – This licenses the Communications Analyst to upgrade from 256 stations to 512 stations to report.
  - E911 Security Notification – This licenses the Communications Analyst to support E911 Notification.
  - E911 Security Notification Sites – This licenses the number of sites that the Communications Analyst can collect E911 data from.
  - E911 Security Notification Clients – This licenses the number of clients that can be monitoring the E911 Security Notifications simultaneously.

**ACD MIS**

- ACD MIS Basic – This licenses the SV8100 ACD MIS.
- ACD MIS Add Monitor – This licenses the SV8100 ACD MIS for Monitor/Report.
- ACD MIS Agent – This licenses the SV8100 ACD MIS for Agent Client.

**PVA**

- PVA-Conference Channel – This licenses the number of Conference Channels that can be used by the PVA.
- PVA-IVR Channel – This licenses the number of IVR channels that can be used by the PVA.
- PVA-CCIS Channel – This licenses the number of CCIS channels that can be used by the PVA.
- PVA PMS Channel – This licenses then number of PMS channels that can be used by the PVA.

**DTPlusWare**

- DTPlusWare Users – This licenses the number of DTPlusWare users that can connect to the system.

**Integration Methods**

- 1st Party CTI Connection – This licenses the number of 1st Party CTI connections to the system.
- 3rd Party CTI Connection – This licenses the system to allow a 3rd Party CTI connection.
- SOAI Connection – This licenses the system to allow a SOAI connection.

**IP Recorder**

- IP Recorder Basic – This licenses the system to use the IP Recorder.
- IP Recorder Supervisor – This licenses the number of supervisors that can simultaneously use the IP Recorder.
- IP Recorder Users – This licenses the number of users that can be recorded.

## 60 Day Free License

The 60 Day Free License comes with the CD-CP00-US. It allows for all features (except Encryption feature) to be active for 60 days. The count down starts on the first power on and ends at midnight of the 60th day.

- By default, the 60 Day Free License is set to disabled (**Version 3000 and higher** software). The 60 day count down starts when the system is initially powered on and continues if the 60 Day Free License is disabled or enabled.
- The CD-CP00-US works for 1440 hours from the first time powered on.
- The clock counts down only when the power supply in the chassis is ON – battery is not in effect.
- If the CD-CP00-US is removed, or the system is powered OFF, the countdown stops.
- Every time the clock is changed, the CD-CP00-US free license (60 days) loses one hour.
- While the free license is active the user can increase the port size of the system to maximum by using Program 90-55.
- With **Version 8000 and higher**, the Encryption feature will only work if **Encryption License (0030)** is installed.

## Recovery License

The recovery license turns on all licenses for up to 30 days.

To request a recovery license, go to <http://eip.necunified.com/Default.aspx> and then go to the license portal and select the customer and the location of the CD-CP00-US. This can be done only once per CD-CP00-US.

## Conditions

- The recovery license can be used only once for each UNIVERGE SV8100 CD-CP00-US.
- When the recovery license is generated, it gives the date that the license ends (30 days includes the day generated).
- If the date is changed in Program 10-01-XX, while the license is in effect, to a date before the generated date it subtracts one day from the recovery license.
- If the date is changed in Program 10-01-XX, while the license is in effect, to a date after the generated date, it runs until the End Date specified when the License was generated.
- If the date is changed in Program 10-01-XX, while the license is in effect, to a date after the End Date specified when the License was generated, the system resets when it is applied (transfer key pressed), not when exiting program mode.
- When the System time turns to midnight of the End Date, the system resets and comes back with no licenses.
- The recovery license can be activated only from PCPro or WebPro, not a multiline terminal.



- If any CD-CP00-US license is activated when the recovery licensing is being used, the CD-CP00-US license resets with only the activated license(s).

## Temporary License

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### Description

With **Version 5000 or higher** software, Temporary License activates all valid feature licenses and all port maximum licenses. Temporary License is programmed using Telephone programming only. Web/ PC pro can be used when verifying the settings.

The Temporary License can be set up to a maximum number of 10 days.

### Conditions

- With **Version 8000 or higher** software, Temporary License activates all feature licenses (except the Encryption feature) and all port maximum licenses.
- When the number of days for the temporary license is assigned, system reset is required for the license to take affect.
- When the number of the date is 0 (disable), the number can be set (1~10). When the number of the date is 1~10, the date can be set to 0 (disable) only.
- The date counter of the temporary license is decreased one day at twelve o'clock midnight of each day. When the number of set date expires, the temporary license is cleared at twelve o'clock midnight of the next day.
- When the system date is changed, the date counter of the temporary license is cleared. As a result, the temporary license is cleared at twelve o'clock midnight of the next day.
- When the temporary license is cleared, the system reboots automatically at twelve o'clock midnight of the next day.
- The temporary license is cleared after a cold reset (default).
- When the temporary license is cleared, the Normal license/Campaign license is not cleared.
- When the Normal license / Campaign license is registered, the temporary license remains valid. The temporary license stays valid until the expiration date, then after a system reboot Normal License / Campaign License is valid.
- When a Free License is valid (Program 90-55-01); the temporary license cannot be set. If a Free license is set during the period the temporary license is valid, the temporary license is cleared, but the system does not reboot.

- With **Version 8000 and higher**, the Encryption feature will only work if **Encryption License (0030)** is installed.

### **Default Settings**

60 Day Free License is enabled (Version 2500 and lower).

60 Day Free License is disabled (Version 3000 and higher).

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## **System Availability**

### **Terminals**

None

### **Required Component(s)**

Refer to the particular feature for required component(s)

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## **Related Features**

### **Programming from Multiline Terminal**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-48-01	License Activation – Software Key Code	Turn on the license issued from the license server.	20-digit character (default not assigned)		✓	
10-48-02	License Activation – Activation Code	Turn on the license issued from the license server.	8-digit hexadecimal number (default not assigned)		✓	
10-48-03	License Activation – Feature Code	Turn on the license issued from the license server.	7-digit figure (default not assigned)		✓	
10-49-01	License File Activation – Save License File on USB Drive	Enable the command to save the license file via USB memory which is issued from the license server.	Dial 1 + TRF (Press TRF to cancel) (default not assigned)		✓	
10-50-01	License Information – License Name	Confirm license information that is stored in a system.	(default not assigned)		✓	
10-50-02	License Information – License Quantity	Confirm license information that is stored in a system.	0~32767 (default not assigned)		✓	
10-50-03	License Information – Free License Quantity	Confirm license information that is stored in a system.	0~32767 (default not assigned)		✓	
10-50-04	License Information – Free License Remaining Days	Confirm license information that is stored in a system.	0~9999 (default not assigned)		✓	
10-52-01	Free/Demo License Information – Remaining Days of Free/Demo License	Display information on free of charge/Demo license.	0~9999 (default not assigned)		✓	
90-37-01	Set Temporary License – Set Number of Days for Temporary License	Use to set the effective days of the temporary license <i>☞ Requires system reset to take affect.</i>	00~10 Days 0 = Temporary License is invalid (default = 0)		✓	
90-55-01	Free License Select – Start Free License	Validate the Free License.	0 = Off 1 = On (default = 0)	✓		

Table 2-59 License Information

License Code	License Name	Reset Required	Min	Max	Note
0001	Max. Port	Yes	On/Off		–
0002	NetLink	Yes	1	49	–
0007	Hotel/Motel (PMS)	Yes	On/Off		–
0008	SMDR	–	On/Off		–
0009	Remote Upgrade	Yes	On		USB Drive required to load software
0014	256 Port	Yes	On/Off		–
0017	Remove License	--- Not Used ---			
0030	Encryption	–	On/Off		–
0031	V3000 Enhanced	–	On/Off		–
0033	V4000 Enhanced	–	On/Off		–
0034	V5000 Enhanced	–	On/Off		–
0035	V6000 Enhanced	–	On/Off		–
0036	V7000 Enhanced	–	On/Off		–
0037	V8000 Enhanced	–	On/Off		–
0038	V9000 Enhanced	–	On/Off		–
0040	SIP Video	–	On/Off		–
0043	Maintenance	–	On/Off		–
0044	Sphericall	–	On/Off		–
0045	Microsoft OCS 2007/CS2010	–	On/Off		–
0111	1stPartyCTI Ether	–	1	128	–
0112	3rdPartyCTI Clie	Yes	On/Off		–
0123	SOAI Interface	–	On/Off		–

Table 2-59 License Information (Continued)

License Code	License Name	Reset Required	Min	Max	Note
0141	DTPlusWare User	–	1	64	–
1001	VRS	–	1	16	–
1002	InMail	–	1	8	–
1011	InMail Multi Lan	–	1	20	–
1013	Email Notify	No	On/Off		–
1014	InMail Email Clnt	No	0	512	InMail Email Clients
1401	UMS Port	No	1	16	–
1402	UMS Fax Port	–	1	4	–
1403	UMS TTS Port	–	1	6	–
1404	UMS Client	–	1	512	–
1406	UMS Multi Language	–	1	25	–
1407	UMS Hosp. and PMS	–	On/Off		–
1408	UMS Hosp. Language	–	1	10	–
1409	UMS Amis/Plus Net	–	On/Off		–
1410	UMS TTS Language	–	1	10	–
1424	UMS LITE 2Basic	–	On/Off		–
1425	UMS LITE Ch	–	1	8	UMS Port License. The Lite license does not support Text-to-speech, Networking and will support up to two ports for fax.
1426	UMS LITE 2UP	–	On/Off		2-Port LITE Upgrade Kit.
1427	UMS LITE FULL	–	On/Off		Upgrade from UMS LITE to FULL License.

Table 2-59 License Information (Continued)

License Code	License Name	Reset Required	Min	Max	Note
2001	ACD	–	On/Off		–
2102	ACD-MIS Basic	–	On/Off		–
2103	ACD-MIS Add.Monit	–	1	4	–
2104	ACD-MIS Agent	–	1	197	–
2105	ACD Advance	–	On/Off		–
3000	CA-Basic	–	On/Off		–
3001	CA-256 Station	–	On/Off		–
3002	CA-Up 20 to 256	–	On/Off		–
3003	CA-Network Client	–	1	999	–
3004	CA-AddRemote Site	–	1	999	–
3005	CA-RemoteSiteSoft	–	1	999	–
3006	CA-Traffic Analys	–	On/Off		–
3007	CA-PMS Integratio	–	On/Off		–
3008	CA-Web Reporting	–	On/Off		–
3009	CA-IPKII CA Migra	–	On/Off		–
3010	CA-IPKII CESMigra	–	On/Off		–
3013	CA-Add Stations	–	1	256	–
3014	CA-E911 Reporting	–	1	999	–
3200	IP Recorder Basic	–	On/Off		–
3201	REC BASIC SUPV	–	1	256	–
3202	REC BASIC PORT	–	1	256	–
3300	ESN Registry	–	On/Off		–
3301	ESN Site Monitor	–	1	999	–

Table 2-59 License Information (Continued)

License Code	License Name	Reset Required	Min	Max	Note
3302	ESN Alarm Client	–	1	999	–
3303	ESN Call Notify	–	1	999	–
3400	CTI OCX	–	On/Off		–
5001	IP Trunk	–	1	128	Limited by IPL Channels
5101	IP Terminal Basic	–	1	512	Limited by IPL Channels
5102	IP Terminal SoftPhone	–	1	128	Limited by IPL Channels
5111	IP Terminal Advan	–	1	512	Limited by IPL Channels
5301	SoftPhone	–	1	128	–
5303	SoftPhone Enhance	–	1	128	–
5304	Shared Services	–	1	128	–
5305	Desktop Client	–	1	128	–
5309	DT Enhance	–	1	999	–
5310	DT CRM Integrate	–	1	999	–
5312	DT InMail Integration	–	1	999	–
5313	UC DT Web Client	–	1	512	
6000	PVA-CONF Port	–	1	16	–
6101	PVA-IVR Port	–	1	16	–
6200	PVA-CCIS Port	–	1	200	–
6201	PVA-PMS Port	–	1	200	–
7231	DAPS Enterprise	–	On/Off		–
7232	DAPS Record	–	On/Off		–
7233	iS3000 Ext Lic (1)	–	On/Off		–
7234	iS3000 Ext Lic	–	On/Off		–
7235	MACUSMGT	–	1	999	–
7236	MABCTMON	–	1	999	–

Table 2-59 License Information (Continued)

License Code	License Name	Reset Required	Min	Max	Note
7237	MAVMSA	–	1	999	–

## Operation


There are four different ways to activate the licenses in the system:

### Manual Enter Software Key Code:

1. In Program 10-48-01 enter the Software Key Code.
2. In Program 10-48-02 enter the activation code.
3. In Program 10-48-03 enter the feature code(s) in the Software Key Code.
4. In Program 10-48-03 hit the Submit Softkey.

### Manually Load the License File via the USB Drive:

1. Manually register the software key.
2. Save the License file to the USB Drive.
3. Install the USB Drive onto the CD-CP00-US.
4. In Program 10-49-01 assign to 1 and then hit transfer.


 *Multiple License files can be loaded at the same time.*

### Upload the License File via WebPro/PCPro:

1. Manually register the software key.
2. Save the license file.
3. Connect to the system.
4. Go to the Feature Activation screen.
5. Click on Load File.
6. Select the location of the license file to upload.



**Auto Register the License for the System:**

1. Connect to the system.
2. Go to the Feature Activation screen.
3. Enter email Address and Password.
4. Add Software Key code(s).
  -  *If left blank, it registers all attached licenses for the Hardware Key code.*
5. Click on Auto Register.

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# *Line Preference*

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## **Description**

Line Preference determines how a multiline terminal user places and answers calls. Line Preference has two types: Incoming Line Preference or Outgoing Line Preference.

### **Incoming Line Preference**

Incoming Line Preference establishes how a multiline terminal user answers calls. When a call rings the multiline terminal, lifting the handset answers either the ringing call (for Ringing Line Preference) or seizes an idle line (for Idle Line Preference). The idle line can provide either Intercom or trunk dial tone (see Outgoing Line Preference below). Ringing Line Preference helps users whose primary function is to answer calls (such as a receptionist). Idle Line Preference is an aid to users whose primary function is to place calls (such as a telemarketer).

### **Outgoing Line Preference**

Outgoing Line Preference sets how a multiline terminal user places calls. If a multiline terminal has Outgoing Intercom Line Preference, the user hears Intercom dial tone when they lift the handset. If a multiline terminal has Outgoing Trunk Line Preference, the user hears trunk dial tone when they lift the handset. Outgoing Line Preference also determines what happens at extensions with Idle Line Preference. The user hears either trunk (dial 9) or Intercom dial tone.

### **Auto-Answer of Non-Ringing Lines**

With Auto-Answer of Non-Ringing Lines, an extension user can automatically answer trunk calls that ring other extensions (not their own). This would help a user that has to answer calls for co-workers that are away from their desk. When the user lifts the handset, they automatically answer the ringing calls based on Trunk Group Routing programming. The extension user's own ringing calls, however, always have priority over calls ringing other co-worker's extensions.

## **Conditions**

- If a multiline terminal extension has more than one call ringing its line keys, Ringing Line Preference answers the calls on a first-in first-answered basis.
- DILs do not affect Incoming Line Preference operation.
- Trunks ring extensions according to Ring Group programming.
- If an extension gets trunk dial tone when the user lifts the handset, the system uses the dial 9 routing to select the trunk. This bypasses ARS.

## **Default Setting**

Enabled

---

## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

---

## **Related Features**

**Direct Inward Line (DIL)**

**Ring Groups**

**Trunk Groups**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-05-01	<b>Trunk Group – Trunk Group Number</b>	For Auto-Answer of Non-Ringing Lines, assign trunks to trunk groups. This is part of Trunk Group Routing programming.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order)	✓		
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number (1~4).	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	For Outgoing Line Preference and Auto-Answer of Non-Ringing Lines, set up the Trunk Access Maps.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-01-02	<b>Basic Extension Data Setup – Outgoing Trunk Line Preference</b>	Turn Off or On an Outgoing Trunk Line Preference for extensions.	0 = Off 1 = On (default = 0)	✓		
15-02-10	<b>Multiline Telephone Basic Data Setup – Ringing Line Preference for Trunk Calls</b>	Enable Idle or Ringing Line Preference for trunk calls. Program 22-01-01 sets Intercom (0) or trunk (1) call priority.	0 = Idle 1 = Ringing (default = 1)	✓		
15-06-01	<b>Trunk Access Map for Extensions</b>	For Outgoing Line Preference and Auto-Answer of Non-Ringing Lines, assign trunk Access Maps to extensions.	Trunk Access Maps: 1~200 (default = 1)		✓	
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension user ability to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
22-01-01	<b>System Options for Incoming Calls – Incoming Call Priority</b>	Determine if Intercom calls or trunk calls have answer priority when both are ringing simultaneously.	0 = Intercom call priority 1 = Trunk call priority (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions to ring groups. Auto-Answer for Non-Ringing Lines only works for trunks that do not ring an extension.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.	✓		
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	Assign trunks to ring groups. Auto-Answer for Non-Ringing Lines only works for trunks that do not ring an extension.	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
23-03-01	<b>Universal Answer/Auto Answer</b>	Let an extension user automatically answer trunk calls that ring other extensions. When the user lifts the handset, they automatically answer the ringing calls based on Trunk Group Routing programming (defined in Program 14-06).	Maximum eight digits Day/Night Mode 1~8 Route Table Number 0~100 (default = 0)		✓	

## Operation

### Ringing Trunk or intercom (ICM) call:

Lift the handset or press **Speaker**.

 The setting assigned for Program 15-02-10 and Program 22-01-01 determines which call is answered first.

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## *Long Conversation Cutoff*

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### **Description**

For incoming and outgoing central office calls, each trunk can be programmed to disconnect after a defined time. The timer begins when the trunk is seized and disconnects the call after the time expires.

When used with the Warning Tone for Long Conversation feature, the system can provide a warning tone on outgoing trunks calls before the call is disconnected.

### **Conditions**

- Long Conversation Cutoff can disconnect incoming and outgoing CO calls after a set time.
- Long conversation cutoff is controlled separately for DISA and Tie Lines.
- Using the Warning Tone for Long Conversation feature allows users on outgoing calls to hear a warning tone prior to the call disconnecting.

### **Default Setting**

Disabled

---

### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

---

## Related Features

Central Office Calls, Answering

Central Office Calls, Placing

Direct Inward System Access (DISA)

Multiple Trunk Types

Warning Tone for Long Conversation

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-14	<b>Basic Trunk Data Setup – Long Conversation Cutoff</b>	Enable/Disable a trunk ability to disconnect incoming and outgoing central office calls automatically.	0 = Disable 1 = Enable (default = 0)	✓		
14-01-15	<b>Basic Trunk Data Setup – Long Conversation Alarm Before Cut Off</b>	Enable/Disable the Long Conversation Alarm for each trunk.	0 = Disable 1 = Enable (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-21-03	<b>System Options for Long Conversation – Long Conversation Cutoff for Incoming Call</b>	Enter the time the system waits before disconnecting incoming trunks.	0~64800 (seconds) (default = 0)	✓		
20-21-04	<b>System Options for Long Conversation – Long Conversation Cutoff for Outgoing Call</b>	Enter the time the system waits before disconnecting outgoing trunks.	0~64800 (seconds) (default = 0)	✓		

## Operation

This feature is automatic once it is programmed.

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## Loop Keys

### Enhancements

This feature added with **Version 4000**.

### Description

Loop Keys are uniquely programmed function keys that simplify placing and answering trunk calls. There are three types of Loop Keys: Incoming Only, Outgoing Only and Both Ways.

#### Incoming Only Loop Keys

Incoming Only loop keys are for answering trunk calls. An extension can have an incoming loop key for a specific trunk group (fixed) or a “catch all” loop key for any trunk group (switched). Fixed loop keys allow an extension user to tell the type of call by the ringing key. Switched loop keys are ideal for an extension with a large number of feature keys. In addition, switched loop keys are a destination for any trunk not on a line key or fixed loop key. Without a switched loop key, calls not appearing on a line key or fixed loop key will ring only the CALL key. Incoming Only loop keys also receive Transferred trunk calls.

#### Outgoing Only Loop Keys

Outgoing Only loop keys are for placing trunk calls. An extension can have outgoing loop keys for a specific trunk group or for ARS access. When a user presses the loop key, they get dial tone from the first available trunk in the group (or from ARS if programmed). Outgoing Only loop keys help ensure that an extension will always have a key available for placing calls.

#### Both Ways Loop Keys

Both Ways loop keys combine the functions of both Incoming Only and Outgoing Only loop keys. Both Ways loop keys work well for extension users that handle a moderate amount of calls and don't separate keys for incoming and outgoing calls. Both Ways loop keys also receive Transferred trunk calls. An extension can have many loop keys - of any type. You can program an operator, for example, with four loop keys for incoming calls and four for outgoing calls. Once a loop key call is set up, the user can handle it like any other trunk call. For example, the user can place the call on Hold, Transfer it to a co-worker or send it to a Park Orbit. An incoming call will ring the first available loop key, beginning with the lowest numbered key. If keys 1-3 are loop keys, for example, the first incoming call rings key 1. If key 1 is busy, the next call rings key 2. If keys 1 and 2 are busy, the next call rings key 3. If all three keys are busy, additional incoming calls queue for the first available key. The terminal display will show “WAITING - LOOP KEY” if the user presses a loop key when there are additional calls waiting.

## Conditions

- With **Version 4000 or higher** software, Loop Keys can only be assigned or used when Program 20-02-03 is set to UX5000 (1).
- A system can use either CAP keys or Loops keys.
- When SV telephones are installed, CAP key mode must be used. When UX telephones are installed, Loop key mode must be used.

## Default Settings

None

---

## System Availability

### Terminals

UX5000 Terminals only

### Required Component(s)

None

---

## Related Features

**Automatic Route Selection**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Direct Inward Dialing (DID)**

**Direct Inward Line (DIL)**

**Direct Inward System Access (DISA)**

**Off-Hook Signaling**

**Programmable Function Keys**

## Ring Groups

## Tie Lines

## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-05-01	Trunk Group – Trunk Group Number	For Auto-Answer of Non-Ringing Lines, assign trunks to trunk groups. This is part of Trunk Group Routing programming.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	For Outgoing Line Preference and Auto-Answer of Non-Ringing Lines, set up the Trunk Access Maps.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign trunks to trunk groups. In general, loop keys access trunks within specific trunk groups.	Trunk Access Maps: 1~200 (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Program function keys as trunk group/loop keys (*02 or *05). For additional data, enter 0 (incoming only), 1 (outgoing only) or 2 (both ways). Use Programs 15-13-01 or 15-13-02 to define the trunk groups used.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-13-01	<b>Loop Key Data – Outgoing</b>	Assign trunk groups for outgoing loop keys (0=ARS, Trunk Groups 1-100). Selecting "0" for ARS should only be used when ARS is enabled in Program 26-01-01 or it could cause the loop key to lock up.	Trunk Group: 0~100	✓		
15-13-02	<b>Loop Key Data – Incoming</b>	Assign trunk groups for incoming loop keys (0=all Trunk Groups, Trunk Groups 1-100).	Trunk Group: 0~100	✓		




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-23	<b>System Options for Multiline Telephones – UX5000 Phone Operation Mode</b>	Selects the Loop Key operation like the UX5000 terminal, or the CAP Key operation like the SV8100 terminal.	0 = Original Operation Mode (CAP Key) 1 = UX5000 Special Operation Mode (Loop Key) (default = 0)	✓		
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.  <i>When programming a feature as a Programmable Function Key, refer to Program 15-07-01 in the UNIVERGE SV8100 Programming Manual.</i>	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions (up to 32) to Ring Groups. Calls ring extensions according to Ring Group programming. There are 100 available ring groups.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	Assign trunks to incoming Ring Groups. Use this program to assign Normal Ring Trunks (Program 22-02) to Incoming Ring Groups (Program 22-04).	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	



## Operation

### To place a call on a loop key:


1. Press outgoing or both ways loop key.  
 *You hear dial tone and the key lights green.*
2. Dial number.

### To answer a call on a loop key:

 *Listen for ringing or look for a flashing loop key.*

1. Press loop key.  
 *The key lights green and you connect to the call.*  
 *If there are additional calls waiting to be answered, your display shows: [WAITING - LOOP KEY]*

### To program a loop key:

1. Press the SPK key.
2. Dial 752.
3. Press the key you want to program as a loop key.
4. Dial \*05.
5. Dial the loop key type:
  - 0 = Incoming only
  - 1 = Outgoing only
  - 2 = Both ways (incoming and outgoing)
6. Dial the loop key routing option for incoming, outgoing, or incoming and outgoing calls:  
 *If you selected option 2 in step 5 above, enter the incoming Trunk Group followed by the outgoing Trunk Group.*
7. Press SPK to hang up.

# Maintenance

## Enhancements

With **Version 7000 or higher** software, the Side Tone Auto Setup feature has been added.

## Description

The UNIVERGE SV8100 system has several utilities to assist in troubleshooting and diagnosing problems both during and after installation.

PCPro can remotely access the UNIVERGE SV8100 for maintenance and diagnostics. Within PCPro, the debug terminal can be accessed to monitor the systems activity and logging. PCPro also has built-in reports that can display alarm data. If need be, an option in PCPro allows the technician to reset or initialize the system remotely. If the technician determines the problem is isolated to a specific slot, PCPro can reset only the slot in question.

The SV8100 Maintenance manual contains a number of flow charts to help technicians diagnose and resolve problems that may arise during and after the installation of the UNIVERGE SV8100 system.

For detailed information on the Maintenance feature, refer to the UNIVERGE SV8100 System Maintenance Manual.


## Side Tone Auto Setup

Per each analog trunk (or all analog trunks) the most suitable Codec Filter setting for Program 81-07 and Program 81-17 can be automatically adjusted using Programs 90-68-01 and 90-68-02.

During the trunk measurement process, the following LCD indications are provided:

- During measurement: Measurement (x/4)  
x = number of measurements
- Measure complete: Complete  
Error condition: Error  
Trunk busy: Busy

After successful measurement, the option to copy the same settings to all analog trunks is shown.

 *Side Tone Auto Setup available when the system is in an idle condition.*

### **Conditions**

None

### **Default Setting**

Enabled

---

## **System Availability**

### **Terminals**

None

### **Required Component(s)**

None

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## **Related Features**

None

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## **Guide to Feature Programming**

None

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## **Operation**

None

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## *Meet Me Conference*

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### **Description**

With Meet Me Conference, an extension user can set up a Conference with their current call and up to 31 other internal or external parties. Each party joins the Conference by dialing a Meet Me Conference code. Meet Me Conference lets extension users have a telephone meeting – without leaving the office.

The CD-CP00-US provides two blocks of 32 conference circuits, allowing each block to have any number of internal or external parties conferenced up to the block limit of 32.

### **Conditions**

None

### **Default Setting**

Enabled

---

### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

None

---

### **Related Features**

Conference

Meet Me Paging


Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign function keys for Conference (code 07).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
31-01-04	<b>System Options for Internal/ External Paging – Privacy Release Time</b>	Set the Privacy Release Time. After the user initiates Meet Me Conference, the system waits this interval for the Paged party to join the conversation.	0~64800 (seconds) (default = 90)		✓	

 For additional programming for Paging, refer to the [Paging, External](#) and [Paging, Internal](#) features.

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## Operation

### Meet Me External Conference:

#### To make a Meet Me External Conference:


##### Multiline Terminal

1. While on a call, press **Conf** softkey.
2. Dial **\*1** and the Combined Paging Zone code **1~8** (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).
3. Announce the zone.
4. When a co-worker answers your page, press **Conf** softkey twice.
5. Repeat steps 1~4 for each co-worker you want to add.

##### Single Line Telephone

1. While on a call, hookflash and dial **#1**.
2. Dial **703** and the External Paging zone code (**1~8** or **0** for All Call).  
**- OR -**  
Dial **\*1** and the Combined Paging Zone code **1~8** (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).
3. Announce the zone.
4. When a co-worker answers your page, press hookflash twice.
5. Repeat steps 1~4 for each co-worker you want to add.

#### To join a Meet Me External Conference:

1. At the multiline terminal, press **Speaker**.  
**- OR -**  
At a single line telephone, lift the handset.
2. Dial **765**.
3. Dial the announced External Paging Zone code (**0~8**).  
 *You connect to the other parties.*

## Meet Me Internal Conference:

### To make a Meet Me Internal Conference:

#### Multiline Terminal

1. While on a call, press **Conf** softkey.
2. Dial **\*1** and the Combined Paging Zone code **1~8** (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).
3. Announce the zone.
4. When a co-worker answers your page, press **Conf** softkey twice.
5. Repeat steps 1~4 for each co-worker you want to add.

#### Single Line Telephone

1. While on a call, hookflash and dial **#1**.
2. Dial **\*1** and the Combined Paging Zone code **1~8** (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).
3. Announce the zone.
4. When a co-worker answers your page, press hookflash twice.
5. Repeat steps 1~4 for each co-worker you want to add.

### To join a Meet Me Internal Conference:

1. At the multiline terminal, press **Speaker** (or lift the handset).

- OR -

At the single line telephone, lift the handset.

2. Dial **763** (if your extension is in the zone called).

- OR -

Dial **764** and the zone number (if your extension is not in the zone called).

- OR -

Press the Meet Me Conference/Paging Pickup key (Program 15-07 or 23) if your extension is in the zone called.



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## *Meet Me Paging*

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### **Description**

Meet Me Paging allows an extension user to Page a co-worker and privately meet with them on a Page zone. The Paging zone is busy to other users while the meeting takes place. While the co-workers meet on the zone, no one else can hear the conversation, join in or make an announcement using that zone. Meet Me Paging is a good way to talk to a co-worker when their location is unknown. If the co-worker can hear the Page, they can join in the conversation.

### **Conditions**

- With Meet Me Paging Transfer, a user can page a co-worker and have the call automatically transfer when the co-worker answers the page.
- An extension access to internal and external page zones affects the Meet Me Paging feature.
- Internal and External Paging keys simplify Meet Me Paging operation.

### **Default Setting**

Enabled

---

### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

External zone paging requires a PGD(2)-U10 ADP installed in the system.

---

### **Related Features**

#### **Meet Me Conference**

## Meet Me Paging Transfer

### Paging, External

### Paging, Internal

### Programmable Function Keys


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-21	<b>Service Code Setup (for Service Access) – Meet-Me Answer to Specified Internal Paging Group</b>	Customize the Service Codes used for meet-me answer to specified internal paging group service access.	MLT, SLT (default = 764)		✓	
11-12-22	<b>Service Code Setup (for Service Access) – Meet-Me Answer to External Paging</b>	Customize the Service Codes used for meet-me answer to external paging service access.	MLT, SLT (default = 765)		✓	
11-12-23	<b>Service Code Setup (for Service Access) – Meet-Me Answer in Same Paging Group</b>	Customize the Service Codes used for meet-me answer in same paging group service access.	MLT, SLT (default = 763)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign function keys for External Zone Paging (code 19 + zone), External All Call Paging (code 20), Internal Zone Paging (code 21 + zone) or Meet Me Conference/Paging Pickup (code 23).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
31-02-01	<b>Internal Paging Group Assignment – Internal Paging Group Number</b>	Assign extensions to Internal Paging Groups (i.e., Page Zones).	0~64 (0 = No Setting) Default: 0 for IP Station 1 for TDM Station		✓	
31-02-02	<b>Internal Paging Group Assignment – Internal All Call Paging Receiving</b>	Allow/Deny All Call Internal Paging for each extension. If allowed, extension can place and receive All Call Internal Paging announcements. If denied, extensions can make, but not receive, All Call Internal Paging announcements. If combined, Paging zones should be restricted as well, change the internal page zone group in Program 31-07-01 to 0.	0 = Deny 1 = Allow (default = 0)		✓	

 For additional programming information on Paging, refer to the [Paging, External](#) and [Paging, Internal](#) features.

## Operation

### Meet Me External Page:

#### To make a Meet Me External Page:

1. At multiline terminal, press **Speaker** or pick up the handset.

- OR -

At the single line telephone, lift the handset.

2. Dial **703** and the External Paging Zone code (1~8 or 0 for All Call).

- OR -

Dial **\*1** and the Combined Paging Zone code 1~8 (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).

3. Announce the zone.

- OR -

1. At the multiline terminal, press the **External Paging Zone** key (Program 15-07 or SC 751: 19 + zone).
2. Announce the zone.


#### **To join a Meet Me External Page:**

1. At the multiline terminal, press **Speaker** or pick up the handset.

- OR -

At the single line telephone, lift the handset.

2. Dial **765**.
3. Dial the announced External Paging Zone (0~8).

 *You connect to the other party.*

#### **Meet Me Internal Page:**

##### **To make a Meet Me Internal Page:**

1. At the multiline terminal, press **Speaker** or pick up the handset.

- OR -

At the single line telephone, lift the handset.

2. Dial **701** and dial the Internal Paging Zone code (0~9, 00~32 or 00~64).

- OR -

Dial **\*1** and the Combined Paging Zone code 1~8 (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).

3. Announce the zone.

- OR -

1. At the multiline terminal, press the **External Paging Zone** key (Program 15-07 or SC 751: 19 + zone).
2. Announce the zone.

**To join a Meet Me Internal Page:**

1. At the multiline terminal, press **Speaker** or pick up the handset.

- OR -

At the single line telephone, lift the handset.

2. Dial **763** (if your extension is in the zone called).

- OR -

Dial **764** and the zone number (if your extension is not in the zone called).

- OR -

Press the Meet Me Conference/Paging Pickup key (Program 15-07 or SC 751: 23) if your extension is in the zone called.

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## *Meet Me Paging Transfer*

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### **Description**

If a user wants to Transfer a call to a co-worker but they do not know where the co-worker is, they can use Meet Me Paging Transfer. With Meet Me Paging Transfer, the user can Page the co-worker and have the call automatically Transfer when the co-worker answers the Page. Since Meet Me Paging Transfer works with both Internal and External Paging, a call can be quickly extended to a co-worker anywhere in the facility.

### **Conditions**

- An extension user can set up a conference with their current call and up to 31 other inside parties.
- An extension user can Page a co-worker and meet with them on a page zone.
- With External Paging, an extension user can broadcast an announcement over paging equipment connected to external paging zones.
- Internal Paging lets extension users broadcast announcements to other multiline terminals.
- Function keys simplify Meet Me Paging Transfer operation.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

External zone paging requires a PGD(2)-U10 ADP installed in the system.

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## Related Features

Meet Me Conference

Meet Me Paging

Paging, External

Paging, Internal


Programmable Function Keys

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-21-04	CD-CP00-US Hardware Setup – External Source I/O Selection on CD-CP00-US	Define how the I/O ports on the CD-CP00-US are used.	0 = External MOH (CN8)/ External Speaker(CN9) 1 = BGM source (CN8)/ External Speaker(CN9) 2 = External MOH (CN8)/BGM source (CN9)  The relationship between CN number and Relay number are as follows: CN8 = Relay2 CN9 = Relay1 (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-21	<b>Service Code Setup (for Service Access) – Meet-Me Answer to Specified Internal Paging Group</b>	Customize the Service Codes used for meet-me answer to specified internal paging group service access.	MLT, SLT (default = 764)		✓	
11-12-22	<b>Service Code Setup (for Service Access) – Meet-Me Answer to External Paging</b>	Customize the Service Codes used for meet-me answer to external paging service access.	MLT, SLT (default = 765)		✓	
11-12-23	<b>Service Code Setup (for Service Access) – Meet-Me Answer in Same Paging Group</b>	Customize the Service Codes used for meet-me answer in same paging group service access.	MLT, SLT (default = 763)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign function keys for External Zone Paging (code 19 + zone), External All Call Paging (code 20), Internal Zone Paging (code 21 + zone) or Meet Me Conference/ Paging Pickup (code 23).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
31-02-01	<b>Internal Paging Group Assignment – Internal Paging Group Number</b>	Assign extensions to Internal Paging Groups (i.e., Page Zones).	0~64 (0 = No Setting) Default: 0 for IP Station 1 for TDM Station		✓	
31-02-02	<b>Internal Paging Group Assignment – Internal All Call Paging Receiving</b>	Allow/Prevent All Call Internal Paging for each extension. If allowed, extension can place and receive All Call Internal Paging announcements. If prevented, extensions can make (not receive) only All Call Internal Paging announcements. If combined, Paging zones should be restricted as well, change the internal page zone group in Program 31-07-01 to 0.	0 = Prevent 1 = Allow (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
31-03-01	<b>Internal Paging Group Settings – Internal Paging Group Name</b>	Assign name to Internal Paging Groups (i.e., Page Zones). The system shows the name you program on the telephone display.	Up to 12 characters Refer to table in Programming Manual.		✓	


 For additional programming information on Paging, refer to the [Paging, External](#) and [Paging, Internal](#) features.

## Operation

### Meet Me External Paging Transfer:



#### To make a Meet Me External Paging Transfer:

- At the multiline terminal, while on a call, press **Hold**.  
- OR -  
At the single line telephone, while on a call, hookflash.
- Press the **External Paging Zone** key (Program 15-07 or SC 751: 19 + zone or 20 for all external zones).  
- OR -  
Dial **703** and the External Paging Zone code (1~8 or 0 for All Call).  
- OR -  
Dial **\*1** and the Combined Paging Zone code 1~8 (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).
- Announce the call.
- From a multiline terminal, when the paged party answers, press **Transfer** or the **Transfer** softkey.  
- OR -  
From a single line telephone, when the paged party answers, hang up.

 *The party is transferred.*


#### To join a Meet Me External Paging Transfer:

- At the multiline terminal, press **Speaker** or pick up handset.  
- OR -  
At single line telephone, lift the handset.
- Dial **765**.

- 
- 
3. Dial the announced External Paging Zone (0~8).  
 *The Paging party is connected.*
  4. Stay on the line.  
From a multiline terminal, press **Transfer** or the **Transfer** softkey.  
- OR -  
From a single line telephone, hang up.  
 *The party is transferred.*

### Meet Me Internal Paging Transfer:

#### To make a Meet Me Internal Paging Transfer:

1. At multiline terminal, while on a call, press **Hold**.  
- OR -  
At the single line telephone, while on a call, hookflash.
2. Press **Internal Paging Zone** key (Program 15-07 or SC 751: 21 + zone or 22 for all internal zones).  
- OR -  
Dial **701** and the Internal Paging Zone code (0~9 or 00~64).  
- OR -  
Dial **\*1** and the Combined Paging Zone code 1~8 (for Internal/External Zones 1~8) or 0 (for Internal/External All Call).
3. Announce the call.
4. From a multiline terminal, when the paged party answers, press **Transfer** or the **Transfer** softkey.  
- OR -  
From a single line telephone, when the paged party answers, hang up.  
 *The party is transferred.*

#### To join a Meet Me Internal Paging Transfer:

1. At the multiline terminal, press **Speaker** or pick up handset.  
- OR -  
At the single line telephone, lift the handset.

2. Dial **763** (if your extension is in the zone called).

- OR -

Dial **764** and the zone number (if your extension is not in the zone called).

- OR -


Press the Meet Me Conference/Paging Pickup key (Program 15-07 or SC 751: 23) if your extension is in the zone called.

3. Stay on the line.

From a multiline terminal, when the paged party answers, press **Transfer** or the **Transfer** softkey.

- OR -

From a single line telephone, when the paged party answers, hang up.

 *The party is transferred.*

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## *Memo Dial*

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### **Description**

On an outside call, Memo Dial lets a multiline terminal user store an important number for easy redialing later on. The telephone can be like a notepad. For example, a user could dial Directory Assistance and ask for a client's telephone number. When Directory Assistance plays back the requested number, the caller can use Memo Dial to jot the number down in the telephone memory. They can quickly call the Memo Dial number after hanging up.

When a user enters a Memo Dial number, the dialed digits do not output over the trunk. Dialing Memo Dial digits does not interfere with a call in progress.

### **Conditions**

- When Memo Dial calls out, it outdials the entire stored number. Memo Dial does not automatically strip out trunk or PBX access codes if entered as part of the stored number.
- Only one number can be stored at a time.
- If a number is already stored in Memo Dial and you are on an internal or external call and the Dial Memo Key is pressed, the number is erased.
- A user's outgoing dialing options affect how a Memo Dial call is placed.
- Memo Dial is not available on single line telephones.

### **Default Setting**

Disabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

None

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## Related Features

Central Office Calls, Placing

Last Number Redial

Save Number Dialed

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	Programmable Function Keys	Assign a function key for Memo Dial (code 31).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

---


## Operation

### To store a number while you are on a call:

1. While on a call, press **Memo Dial** key (Program 15-07 or SC 751: 31).
2. Dial number you want to store.
3. Press **Memo Dial** key again and continue with conversation.


**To call a stored Memo Dial number:**

1. Do not lift the handset.
2. Press the **Memo Dial** key (Program 15-07 or SC 751: 31).
3. Press **Speaker**.

 *The stored number dials out only if you store a trunk access code before the number.*


**- OR -**

Press the **line** key.

 *The stored number dials out.*

**To check to see the stored Memo Dial number:**

1. Do not lift the handset.
2. Press **Memo Dial** key (Program 15-07 or SC 751: 31).

 *The stored number displays.*

**To cancel (erase) a stored Memo Dial number:**

1. Press **Speaker**.
2. Press the **Memo Dial** key (Program 15-07 or SC 751: 31).

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# Message Waiting

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## Description

An extension user can leave a Message Waiting indication at a busy or unanswered extension requesting a return call. The indication is a flashing MW lamp at the called extension and a steadily lit MW lamp on the calling extension. Answering the Message Waiting automatically calls the extension which left the indication. Message Waiting ensures that a user does not have to recall an unanswered extension. It also ensures that a user does not miss calls when their extension is busy or unattended.

Additionally, Message Waiting lets extension users:

- View and selectively answer messages left at their extension (display multiline terminal only)
- Cancel all messages left at their extension
- Cancel messages they left at other extensions

An extension user can leave Messages Waiting at any number of extensions. Also, any number of extensions can leave a Message Waiting at the same extension. A periodic VRS announcement may remind users that they have Messages Waiting.

### Message Key will Operate as Voice Mail Key


The system enhances a telephone Message key function when connected to a system which has voice mail installed. When an extension receives a voice mail, the Message key can be used to check the number of messages in voice mail, and call the voice mail to listen to the messages. If no Voice Mail Programmable Function Key is defined (Program 15-07-01, code 77), the telephone Message Waiting LED flashes to indicate new messages.

This option is not available with a networked voice mail – the voice mail must be local.

Refer to the [Voice Mail Integration \(Analog\) on page 2-1941](#) feature for the feature operation.

### LED Color Indication

The software allows you to select whether the Message Wait LED located at the top of the multiline terminal flashes green (0) or red (1) when a Message Wait indication is flashing. By default, this option is set to flash red.

 *If this LED is also used for voice mail indications (no Programmable Function Key programmed for voice mail), and there are both voice mail messages and Message Wait indications, the color set for Message Wait overrides the color used for voice mail indications (red).*

### Conditions

- Reminder messages require a DSP daughter board for VRS messages.
- Analog ports from APA or APR adapters do not provide Message Waiting lamping.
- When a user responds to a Message Waiting, the system does not cancel the Message Waiting indication if the called party uses Handsfree Answerback. The system cancels the indication only if the called party lifts the handset or presses Speaker.
- With the Hotel/Motel set up, an employee with a multiline terminal can send a Message Waiting to a room telephone if allowed in system programming.
- A Message Waiting key simplifies this feature operation.
- Telephone-to-telephone Message Waiting works when the voice mail is installed.
- The MW (Message Waiting) LED may be used to indicate voice mail messages if no extension number is assigned to the voice mail key in system programming.
- If the following programs are changed while the phone is online, a reset of the feature is required before the setting takes effect.
  - ❑ Program 15-02-35 Message Waiting Lamp Cycle for Calling Extension
  - ❑ Program 15-02-36 Message Waiting Lamp Cycle for Called Extension
  - ❑ Program 15-02-37 Voice Mail Message Wait Lamp Color
  - ❑ Program 15-02-38 Voice Mail Message Wait Lamp Cycle
  - ✎ *For example, if a message waiting was set before any of these programs were changed, the lamp remains the same until the message waiting is set again.*
- If both Voice Mail Message and Message Wait indication are set, the color set for Message Wait overrides the color used for Voice Mail Message indication.
- When the system has the Hotel Motel license (0007), the Message Waiting Indication (MWI) on a DSS Console for an extension is a Green LED. Without the Hotel Motel license the MWI on a DSS Console for an extension is a Red LED.

## Default Setting

Enabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

**Handsfree Answerback/Forced Intercom Ringing**

**Hotel/Motel**

**Programmable Function Keys**

**UM8000 Mail**

**VM8000 InMail**

**Voice Response System (VRS)**

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-16	<b>Service Code Setup (for System Administrator) – Leaving Message Waiting (Requires CPU to be licensed for Hotel/Motel)</b>	Customize the leave message waiting Service Codes (CD-CP00-US must be licensed for Hotel/Motel).	MLT (default = 626)		✓	
11-11-09	<b>Service Code Setup (for Setup/Entry Operation) – Answer Message Waiting</b>	Customize the answer message waiting service code.	MLT, SLT (default = *0)		✓	
11-11-10	<b>Service Code Setup (for Setup/Entry Operation) – Cancel All Messages Waiting</b>	Customize the Cancel All Messages Waiting service code.	MLT, SLT (default = 773)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-11	<b>Service Code Setup (for Setup/Entry Operation) – Cancel Message Waiting</b>	Cancel message waiting used for registration and setup.	MLT, SLT (default = 771)		✓	
11-16-07	<b>Single Digit Service Code Setup – Message Waiting</b>	Customize the message waiting Service Codes used to set message waiting when a busy or ring back signal is heard.	(default = 0)		✓	
15-02-28	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Color</b>	Determine whether an extension Message Waiting Lamp lights Green or Red when a message is received.	0 = Green 1 = Red (default = 1)		✓	
15-02-35	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Cycle for Calling Extension</b>	Select the cycle that the Large LED flashes when the extension has set Message Waiting.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 7)		✓	
15-02-36	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Cycle for Called Extension</b>	Select the cycle that the Large LED flashes when the extension has Message Waiting set to the extension.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 3)		✓	
15-02-37	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Color</b>	Select the Message Waiting flash pattern for the station that set the Message Waiting reminder.	0 = Green 1 = Red (default = 1)		✓	
15-02-38	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Cycle</b>	Select the cycle method that the Large LED flashes when the extension has a VM Message Waiting set to the extension.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 3)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Message Waiting (code 38).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
80-01-01 (48)	<b>Service Tone Setup – Repeat Count</b>	Set repeat count for tone 16 Lockout.	default = 0 (endless). Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01</a> on page 2-703			✓
80-01-02 (48)	<b>Service Tone Setup – Basic Tone Number</b>	Customize Service Tones.	(default = 0) Refer to <a href="#">Table 2-34 Service Tone Setup, Program 80-01-02</a> on page 2-707.			✓


## Operation

### To leave a Message Waiting:

1. Call busy or unanswered extension.
2. Dial **0** or press the **Message Waiting** key (Program 15-07 or SC 751: 38).
3. Hang up.

 *With multiline terminal telephones, the Message Waiting LED lights.*

**To answer a Message Waiting:**

 When you have a message, your Message Waiting LED flashes fast for multiline terminals.


1. At the multiline terminal, press **Speaker** and dial **\*0**.


- OR -

Press the **Message Waiting** key (Program 15-07 or SC 751: 38).


- OR -

At the single line telephone, lift the handset and dial **\*0**.

 If the called extension does not answer, dial 0 or press your **Message Waiting** key to automatically leave them a message.

 Normally, your Message Waiting LED goes out. If it continues to flash, you have new messages in your Voice Mail mailbox or a new General Message. See “To check your messages” below.

**To cancel all your Messages Waiting:**

 This includes messages you have left for other extensions and messages other extension have left for you.

1. At the multiline terminal, press **Speaker**.

- OR -

At the single line telephone, lift the handset.

2. Dial **773**.
3. Hang up.

**To cancel the Messages Waiting you have left at a specific extension:**

1. At the multiline terminal, press **Speaker**.


- OR -

At the single line telephone, lift the handset.

2. Dial **771**.
3. Dial the number of the extension you do not want to have your messages.
4. Hang up.

**To check your messages:**

1. Press **Message** key or the **MW** (Message Waiting) softkey.
2. Dial **\*0**.

 You can have any combination of the message types in the table below on your telephone.

If you see. . .	You have. . .
<b>VOICE MESSAGE</b> <b>n MESSAGE</b>	New messages in your Voice Mail mailbox.
<b>CHECK MESSAGE</b> <b>VRS GENERAL MESSAGE</b>	A General message in Voice Mail that has not been heard.
<b>CHECK MESSAGE</b> <b>(name)</b>	Message Waiting requests left at your telephone by your co-workers.

3. Press VOL ▲ or VOL ▼ to scroll through your display.
4. When you find the message you want to answer, press **Speaker**. You either:
  - Go to your Voice Mail mailbox.
  - Listen to the new General Message.
  - Automatically call the extension that left you a Message Waiting.

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# MH240 Wireless IP Telephone

## Enhancements

This feature added with **Version 2500**.

The same user name and password can be assigned to IP Multiline Station, MH240 and Desktop ports when automatic or manual registration is used (**Version 3000 or higher** software).


With **Version 4000 or higher software**, a Flash (Recall) key can be placed on a line key.

With **Version 4000 or higher software**, the door strike relay can be activated from the MH240 or Cordless DECT terminal by a Flash Key assigned to a line key in Program 15-07 (751: 62).

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## Description

The MH240 Wireless IP Telephone is a wireless IP multiline terminal. The WL1700 Controller is the equipment that controls additional WL1500 Access Points (APs) and has its own internal AP. The WL1700 creates an IEEE802.11-standard wireless network. The MH240 complies with IEEE 802.11b/g specifications and utilizes a Wi-Fi network consisting of a WL1700 Controller and WL1500 APs distributed throughout an enterprise environment. The MH240 is equipped with Conference, Directory, Disconnect, Enter (select), History, Hold, Menu, Talk, Transfer, Volume Up, and Volume Down keys as well as eight programmable function keys.

 *The MH240 Wireless IP Telephone supports some 3rd Party access points. For a list of the supported 3rd Party access points, please visit <http://www.necunifiedsolutions.com>.*

## Physical Connections

The WL1700 and WL1500 components must be connected to a LAN within the facility. The WL1700 and WL1500 components must receive electricity from Power over Ethernet (PoE). A CAT 5 or better, 4-pair 10/100 Base-T Ethernet cabling should be used.

## IP Addressing

The WL1700 has a statically assigned address and then acts as a DHCP server to issue dynamic addresses to the WL1500 APs and the MH240 terminals.

## Software Configuration/Updates

The components are field upgradable in terms of new software and features using TFTP to automatically download when available.

## Call Admission Control (CAC)

The combination of WL1700 and MH240 provides Call Admission Control, which regulates addition of new VoIP sessions on AP radios. CAC can be used to ensure VoIP sessions by limiting the number of active voice sessions a radio can have. An AP does not permit a new voice session before ensuring sufficient bandwidth is available.

## Quality of Service (QoS)

Quality of Service (QoS) is a means of providing a level of service that will result in a network connection of acceptable quality. Typically this results in providing different levels of service for different applications, depending on their requirements. When data and voice are competing for bandwidth, it is necessary to have a prioritization method that provides a controlled preference to voice packets. WL1700-MH240 supports Layer 2 and Layer 3 classification and marking of traffic, and optimized forwarding of traffic for voice.

## Security

Proper security provisions are critical for any enterprise Wi-Fi network. Wireless technology does not provide any physical barrier from malicious attackers, since radio waves penetrate walls and can be monitored and accessed from outside a facility. The extent of security measures used is typically proportional to the value of the information accessible on the network. The security risk for Wi-Fi telephony is not limited to the typical wired telephony concerns of eavesdropping on telephone calls or making unauthorized toll calls, but is equivalent to the security risk of the data network that connects to the APs.

Several different security solutions can be implemented with MH240 handset. Determining the proper level of security should be based on identified risks, corporate policy and an understanding of the pros and cons of the available security methods.

### Wired Equivalent Privacy (WEP)

The MH240 handset supports Wired Equivalent Privacy (WEP) encryption as defined by the 802.11 standard. The handset can use either 40-bit, or 128-bit key lengths. WEP is provided for backward compatibility of a laptop, but is not recommend as a security measure for the MH240.

### Wi-Fi Protected Access (WPA/WPA2)

Recognizing the need for stronger security standards beyond WEP, the IEEE developed and ratified the 802.11i standard, which includes stronger encryption, key management, and authentication mechanisms. Wi-Fi protected Access 2 (WPA2) is the Wi-Fi Alliance's specification and certification program based on the 802.11i standard. WPA2 includes the Advanced Encryption Standard (AES), which is widely accepted as one of the most powerful forms of encryption available. WPA2 has two different authentication modes: Enterprise Mode uses 802.1x EAP-based authentication and Personal Mode uses a pre-shared key (PSK). 802.1x authentications employ a RADIUS authentication server and an EAP-based key exchange sequence. In the MH240 network, it is recommended to use WPA2/PSK.

## Coverage

The required number and placement of APs in a given environment is driven by several factors, including the intended coverage area, system capacity, power output, physical environment, and radio mode. Many enterprise Wi-Fi networks are laid out for data applications and may not provide adequate coverage for Wi-Fi telephony. Horizontal and vertical positioning as well as RF obstacles should be considered to avoid coverage holes. It is recommended to deploy the APs in a 15m square.

## Multiple Logon

With **Version 3000 or higher** software, the same user name and password can be assigned to multiple extensions when using Automatic or Manual Registration. This makes it easier on the user by only having to remember one password. For example, if a user has an IP Multiline terminal, MH240 handset, and uses Desktop Applications with the Enhancement bundle controlling the IP Multiline, three different ports are used in the system. Prior to Version 3000, each IP port required a unique user name and password. With Version 3000 all three can be assigned the same user name and password.

## Conditions

- The WL1700-MS controls additional WL1500 APs and has its own internal AP.
- Each WL1700-MS can control three additional WL1500 APs. If more APs are needed, a second WL1700-MS must be added.
- It is recommended to deploy the APs in a 15m square.
- The MH240 has eight programmable function keys. The MH240 does not support function keys 9 through 48.
- The MH240 terminal has a 2-line LCD display each supporting 20 characters.
- The MH240 does not support Multicast.
- The MH240 cannot receive firmware download by Program 84-07.
- Hold tone or music on hold is provided via the MH240 terminal, not the SV8100 system programming.
- Volume control is provided via the MH240 terminal and not by the SV8100 system programming.
- The ring pattern is set in the MH240 and does not reflect changes to the ring patterns in the SV8100 system programming.
- Service tones are provided via the MH240 terminal and not by the SV8100 system programming.
- The MH240 can support a maximum of 32 digit preset dial.
- Time format is provided via the MH240 terminal and not by the SV8100 system programming.

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- Key confirmation tone is provided by the MH240 and not by the SV8100 system programming.
  - The backlight LED duration is provided by the MH240 and not by the SV8100 system programming.
  - Call History is stored on the MH240, not in the SV8100 system.
  - The MH240 does not support the blink and reverse display, double high characters.
  - If the MH240 should show more than 20 digits, 20 digits will show starting from the head of the character string.
  - If the MH240 should display more than 10 digits for the name display, the last 10 characters are displayed.
  - When the MH240 receives a character string from voice mail, the first 20 digits are displayed on line 1, and the rest on line 2.
  - The MH240 does not display Day/Night mode information.
  - MH240 terminals cannot be operator terminals.
  - The MH240 cannot be an ACD agent.
  - The MH240 does not support the override function.
  - The MH240 does not support the use of manual login mode.
  - The Caller ID history key (08) is not supported on the MH240 as the history is stored internally on the terminal.
  - The maximum character length for Caller ID is 10 digits.
  - When talking on a MH240, if you walk outside of the coverage area, the outside party hears silence for one minute before the trunk call is dropped.
  - If the MH240 is on a station call (IP or TDM) and you walk outside the coverage area, the call is not disconnected. The phone called shows hangup in the display and hears an error tone.
  - When using the MH240 in conjunction with the UM8000 Mail, the softkeys should be disabled for all MH240 mailboxes by enabling Handsfree in the UM8000.
  - The MH240 only supports G.711 and G.729 codecs. When using G.711 you can have a 10Ms, 20Ms, 30Ms, or 40Ms packet size. When using G.729 you can have a 20Ms, 30Ms, or 40Ms packet size.
  - The system sees terminal types 1 (Economy), 2 (Value), 3 (Desi-Less), 4 (Sophisticated) and 5 (Softphone) as the same terminal type.
  - When using Multiple Logon, the same Personal ID index can be assigned to an ITL/Softphone, a CTI (Desktop), and an MH240 terminal type.
  - Two ports of the same terminal type (Program 15-05-26) cannot be assigned to the same Personal ID index (Program 15-05-27).

- Program 10-46-01 must be set to 1 (Auto) or 2 (Manual) for Multiple Logon to work.
- When three ports are assigned the same Personal ID index in Program 15-05-27, if Program 15-05-26 is not set for those ports, the terminal types will be assigned based on order of login. If Program 15-05-26 is set, the login order does not matter and they will assign the correct port.
- Flash (Recall) Key can be place on Line Key (**Version 4000 or higher** software required).
- The door strike relay can be activated from a MH240 terminal by a Flash Key assigned to a line key in Program 15-07 (751: 62) (**Version 4000 or higher** software required).
- For any incoming call (internal or external), only one MH240 wireless handset can be assigned to ring for the incoming call.
- NAT or NAPT is only supported on the DT700 series phones. NAT or NAPT is not supported on the ML440, MH240, the Wireless DECT (SIP), SP310 or third party SIP phones.

Refer to [Table 2-60 Supported Features](#) for the SV8100 features supported on the MH240.

**Table 2-60 Supported Features**

SV8100 Feature Name	Supported	Not Supported	Remarks
Account Code – Forced/Verified/Unverified	X		Account Code key in 15-07 (50) is not supported on first release
Account Code Entry	X		Account Code key in 15-07 (50) is not supported on first release
Alarm		X	
Alarm Reports		X	
Alphanumeric Display	X		
Analog Communications Interface (ACI)	X		
Ancillary Device Connection		X	
Answer Hold	X		
Answer Key		X	
Attendant Call Queuing	X		
Automatic Call Distribution (ACD)		X	
Automatic Release	X		
Automatic Route Selection	X		
Background Music		X	
Barge-In	X		

Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Battery Backup – System Memory		N/A	
Battery Backup – System Power		N/A	
Call Appearance (CAP) Keys	X		
Call Arrival (CAR) Keys	X		
Call Duration Timer	X		
Call Forwarding	X		
Call Forwarding – Centrex	X		
Call Forwarding with Follow Me	X		
Call Forwarding, Off-Premise	X		
Call Forwarding/Do Not Disturb Override	X		
Call Monitoring	X		
Call Redirect	X		
Call Waiting/Camp-On		X	
Callback	X		
Caller ID	X		Caller ID history button (08) not supported on first release. Also, maximum character length on CID name is 10 digits.
Caller ID Call Return	X		
Central Office Calls, Answering	X		Synchronous ringing is not supported.
Central Office Calls, Placing	X		
Class of Service	X		
Clock/Calendar Display	X		
CO Message Waiting Indication	X		Limited support. The light will light up on the MH240 (solid it does not flash). You will not be able to use the callback feature because there is no Feature key and there is no other way to do this on the MH240.
Code Restriction	X		
Code Restriction Override	X		

Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Code Restriction, Dial Block	X		
Conference	X		
Conference, Voice Call/Privacy Release	X		
Continued Dialing	X		
Cordless DECT Terminals		N/A	
Cordless Telephone Connection		N/A	
Data Line Security		X	
Delayed Ringing	X		
Department Calling	X		
Department Step Calling	X		
Dial Pad Confirmation Tone	X		This is supported, but is a local setting in the MH240.
Dial Tone Detection		N/A	
Dialing Number Preview	X		Limitation is that MH240 can input 32 digits max where DT300/DT700 can input 64 digits maximum. Also, when a VRS is installed you do not need to dial an * first like you would with a normal phone.
Digital Trunk Clocking		N/A	
Direct Inward Dialing (DID)	X		When using a DDI night mode button on the phone, the DDI button will not flash accordingly because the LK's do not flash.
Direct Inward Line (DIL)	X		
Direct Inward System Access (DISA)	X		
Direct Station Selection (DSS) Console		N/A	
Directed Call Pickup	X		
Directory Dialing		X	On first release directory dialing can not use service code 700 from MH240. Also, no soft key so this feature does not work.

Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Distinctive Ringing, Tones and Flash Patterns	X		MH240 has a local ring pattern setting. MH240 cannot change the ring pattern by service code 11-11-20~11-11-21 and 15-02-02~15-02-03.
Do Not Disturb	X		MH240 does not have soft keys so it has to use access codes to bypass DND, etc.
Door Box	X		Door Lock Release can not be released from MH2400 ( <b>Version 3000 or lower</b> software).
Drop Key	X		
<i>D<sup>term</sup></i> Cordless II Terminal		N/A	
<i>D<sup>term</sup></i> Cordless Lite II Terminal		N/A	
E911 Compatibility	X		To cancel the E911 alarm, from the MH240 press the Hold Key.
Electra Elite IPK Terminals		N/A	
Facsimile CO Branch Connection		N/A	
Flash		X	
Flexible System Numbering	X		
Flexible Timeouts	X		
Forced Trunk Disconnect		X	
Group Call Pickup	X		When using the group call pickup key, you do not get caller ID name you just get the number.
Group Listen		X	
Handset Mute	X		
Handsfree and Monitor	X		
Handsfree Answerback/Forced Intercom Ringing		X	Cannot voice call a MH240.



Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Headset Operation	X		Headset key is not supported on first release. Also, command 15-02-41 does not affect MH240 there is a local setting for this. Also, when the headset is plugged in you have to use the headset you can not use the handset.
Hold	X		Hold recall will not recall while you are talking on the phone. It will keep trying to recall based upon the system hold recall timer. So, if the system hold recall timer is 30 seconds and you are on the phone for 40 seconds and hangup the call will still be on hold for another 20 seconds before it recalls back to you.
Hot Key-Pad		X	Not supported at all per bug.
Hotel/Motel		X	
Hotline	X		
Howler Tone Service		X	Will not play tone.
Intercom	X		MH240 cannot be called by a voice call. Also, if the MH240 has an ICM key programmed on it and they place an internal call on hold the CNF key will not flash anymore. It will not flash when the ICM key is programmed on the phone.
IP Multiline Station (SIP)		N/A	
IP Single Line Telephone (SIP)		N/A	
IP Trunk – (SIP) Session Initiation Protocol	X		
IP Trunk – H3.23	X		
IPK/IPK II Migration		N/A	
ISDN Compatibility	X		
K-CCIS – IP	X		
K-CCIS – T1	X		

Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Last Number Redial	X		To get LNR to work properly set the following commands accordingly: 15-02-13:0 15-05-28:1
Licensing	X		
Line Preference	X		
Long Conversation Cutoff	X		
Maintenance	X		
Meet Me Conference	X		
Meet Me Paging	X		
Meet Me Paging Transfer	X		
Memo Dial		X	
Message Waiting	X		
Microphone Cutoff	X		
Mobile Extension	X		
Multiple Trunk Types	X		
Music on Hold	X		MH240 listens to local music it cannot use the system MOH.
Name Storing	X		Service code 700 is not supported on first release for MH240's.
Night Service	X		MH240 does not display the DAY/ NIGHT mode info on the LCD. Also, the DDI mode button does not flash.
Off-Hook Signaling		X	
One-Touch Calling	X		
Operator		X	The MH240 cannot be an operator terminal.
(OPX) Off-Premise Extension	X		
Paging, External	X		
Paging, Internal		X	MH240 does not support multicast therefore, no paging.

Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Park	X		
PBX Compatibility	X		
PC Programming	X		
Power Failure Transfer		N/A	
Prime Line Selection	X		
Private Line	X		
Programmable Function Keys	X		
Programming from a Multiline Terminal		X	
Pulse to Tone Conversion	X		
Redial Function	X		
Remote (System) Upgrade		N/A	
Repeat Redial	X		
Resident System Program		X	
Reverse Voice Over	X		
Ring Groups	X		
Ringdown Extension, Internal/External	X		
Room Monitor		X	MH240 cannot initiate a room monitor.
Save Number Dialed	X		
Secondary Incoming Extension	X		
Secretary Call (Buzzer)	X		On a DTERM you press Help and the buzzerkey to see who called you. On a MH240 you go off hook dial 751 and then press the key to see who called you.
Secretary Call Pickup	X		When using the secretary call pickup feature the MH240 will only get the caller ID number, it will not get the name.
Selectable Display Messaging		X	On first release this is not supported.
Selectable Ring Tones	X		Local setting to MH240.
Serial Call	X		

Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Single Line Telephones, Analog 500/2500 Sets		N/A	
SLT Adapter		X	
SMB8000 Communications Analyst	X		
SMB8000 Interactive Voice Response	X		
SMB8000 Conference Bridge	X		
Softkeys		X	
Speed Dial – System/Group/Station	X		
Station Hunt	X		
Station Message Detail Recording	X		
Station Name Assignment – User Programmable	X		The access code can not be dialed from the MH240 to change the station name. However, you can dial the access code from another station and change the MH240 name.
Station Relocation	X		The code can not be dialed from the MH240 in first release. In the future, this will be added. However, you can dial this code from another phone and swap the extensions.
SV8100 UC Desktop Suite Applications	X		
SV8100 Internal Router		N/A	
SV8100 NetLink	X		
SV8100 PoE Gigabit Switch	X		
SV8100/SV8300 Terminals		N/A	
Synchronous Ringing		X	
T1 Trunking (with ANI/DNIS Compatibility)	X		
Tandem Ringing		X	Not supported first release.
Tandem Trunking (Unsupervised Conference)	X		On first release the access code 733 is not supported.
TAPI Compatibility	X		
Tone Override	X		

Table 2-60 Supported Features (Continued)

SV8100 Feature Name	Supported	Not Supported	Remarks
Traffic Reports		X	
Transfer	X		On a transferred call ring tone may skip once. Internal ring tone and transfer ring tone are the same on the MH240. So when it changes from the Internal to Transfer there can be what sounds like a skip in the ring cycle.
Trunk Group Routing	X		
Trunk Groups	X		
Trunk Queuing/Camp-On	X		
UCB (Unified Communications for Business)		X	
UM8000 Mail	X		
Uniform Call Distribution (UCD)	X		
Uniform Numbering Network	X		
Universal Slots		N/A	
User Programming Ability	X		
Virtual Extensions	X		
VM8000 InMail	X		
VM8000 InMail Park and Page	X		
Voice Mail Integration (Analog)	X		
Voice Mail Message Indication on Line Keys	X		
Voice Over		X	Added to wishlist.
Voice Response System (VRS)	X		
Voice Response System (VRS) – Call Forwarding – Park and Page	X		
Volume Controls	X		The MH240 has local volume control, it does not use system data in 15-02-27 (Retain user setting).
Warning Tone for Long Conversation	X		
Wireless DECT (SIP)		N/A	

Refer to the following tables for a listing of the Function Codes supported by the MH240.

**Table 2-61 Program 15-07 Function Codes (Service Code 751)**

Function Number	Function Name	Supported	Not Supported
00	Not Defined	X	
01	DSS/One-Touch	X	
02	Microphone Key (ON/OFF)		X
03	DND Key	X	
04	BGM (ON/OFF)		X
05	Headset		X
06	Transfer Key	X	
07	Conference Key	X	
08	Incoming Call Log		X
09	Day/Night Mode Switch	X	
10	Call Forward – Immediate	X	
11	Call Forward – Busy	X	
12	Call Forward – No Answer	X	
13	Call Forward – Busy/No Answer	X	
14	Call Forward – Both Ring	X	
15	Follow Me	X	
18	Text Message Setup		X
19	External Group Paging	X	
20	External All Call Paging	X	
21	Internal Group Paging	X	
22	Internal All Call Paging	X	
23	Meet-Me Answer to Internal Paging		X
24	Call Pickup	X	
25	Call Pickup for Another Group	X	
26	Call Pickup for Specified Group	X	
27	Speed Dial – Common/Private	X	
28	Speed Dial – Group	X	

**Table 2-61 Program 15-07 Function Codes (Service Code 751) (Continued)**

<b>Function Number</b>	<b>Function Name</b>	<b>Supported</b>	<b>Not Supported</b>
29	Repeat Redial	X	
30	Saved Number Redial	X	
31	Memo Dial		X
32	Meet – Me Conference	X	
33	Override (Off-Hook Signaling)	X	
34	Break – In	X	
35	Camp On	X	
36	Step Call	X	
37	DND/FWD Override Call	X	
38	Message Waiting	X	
39	Room Monitoring		X
40	Handset Transmission Cutoff	X	
41	Buzzer	X	
42	Boss – Secretary Call	X	
43	Series Call	X	
44	Common Hold	X	
45	Exclusive	X	
46	Department Group Log Out	X	
47	Reverse Voice Over		X
48	Voice Over		X
49	Call Redirect	X	
50	Account Code		X
51	General Purpose Relay	X	
52	Automatic Answer with Delay Message Setup	X	
53	Automatic Answer with Delay Message Start	X	
54	External Call Forward by Door Box		X
55	Extension Name Change		X
56	General Purpose LED Operation	X	

Table 2-61 Program 15-07 Function Codes (Service Code 751) (Continued)

Function Number	Function Name	Supported	Not Supported
57	General Purpose LED Indication	X	
58	Automatic Transfer at Department Group Call	X	
59	Delayed Transfer at Department Group Call	X	
60	DND at Department Group Call	X	
61	--- Not Used ---		
63	Outgoing Call Without Caller ID (ISDN)	X	
64	--- Not Used ---		
66	CTI		X
67	--- Not Used ---		
68	--- Not Used ---		
70	--- Not Used ---		
71	--- Not Used ---		
72	Keypad Facility Key	X	
73	Keypad HOLD Key	X	
74	Keypad RETRIEVE Key	X	
75	Keypad Conference Key	X	
76	--- Not Used ---		
77	Voice Mail (In-Skin)	X	
78	Conversation Recording – Voice Mail	X	
79	Automated Attendant (In-Skin)	X	
80	Tandem Ringing		X
81	Automatic Transfer to Transfer Key		X
82	<i>D<sup>term</sup></i> IP Call Log		X
83	Conversation Recording Function (VMSU)	X	
84	Drop Key	X	
85	Directory Dialing		X
86	Private Call Refuse	X	
87	Caller ID Refuse	X	



**Table 2-61 Program 15-07 Function Codes (Service Code 751) (Continued)**

Function Number	Function Name	Supported	Not Supported
88	Dial-In Mode Switching	X	
89	Do-Not-Call Setup	X	
90	Do-Not-Call Data Registration	X	
91	Live Recording Key InMail		X
94	Call Attendant	X	
97	Door Box Access Key	X	
98	--- Not Used ---		
99	--- Not Used ---		

**Table 2-62 Program 15-07 Function Codes (Service Code 752)**

Function Number	Function Name	Supported	Not Supported
*00	ICM Key	X	
*01	Trunk Key	X	
*02	Trunk Group	X	
*03	Virtual Extension Key	X	
*04	Park Key	X	
*06	Trunk Access Via Networking		X
*07	Station Park Hold None	X	
*08	CAP Key	X	
*10	ACD Log-In/Log-Out		X
*12	ACD Emergency Call		X
*13	ACD Off Duty Mode		X
*14	ACD Start/End		X
*15	ACD Terminal Speech Monitor		X
*16	ACD Waiting		X
*17	ACD Work Wrap Up Time		X

**Table 2-62 Program 15-07 Function Codes (Service Code 752) (Continued)**

Function Number	Function Name	Supported	Not Supported
*18	ACD Overflow Control		X
*19	ACD Queue Status Display Check		X

Refer to the following tables for the Service Code Setup listing supported by the MH240.

**Table 2-63 Program 11-10 Service Code Setup (Setup/Entry Operation)**

Function Number	Function Name	Supported	Not Supported
01	Night Mode Switching	X	
02	--- Not Used ---		
03	Setting the System Time		X
04	Storing Common Speed Dialing Numbers	X	
05	Storing Group Speed Dialing Numbers	X	
06	Setting the Automatic Transfer for Each Trunk Line		X
07	Canceling the Automatic Transfer for Each Trunk Line		X
08	Setting the Destination for Automatic Trunk Transfer		X
09	Charging Cost Display by the Supervisor		X
10	--- Not Used ---		
11	Entry Credit for Toll Restriction		X
12	Night Mode Switching for Other Group		X
13	--- Not Used ---		
14	--- Not Used ---		
15	--- Not Used ---		
16	Leaving Message Waiting (Requires CPU to be licensed for Hotel/Motel)		X
17	Dial Block by Supervisor		X
18	Off-Premise Call Forward by Door Box		X
19	--- Not Used ---		
20	VRS - Record/Eraser Message	X	

**Table 2-63 Program 11-10 Service Code Setup (Setup/Entry Operation) (Continued)**

Function Number	Function Name	Supported	Not Supported
21	VRS - General Message Playback	X	
22	VRS - Record or Erase General Message	X	
23	SMDR - Extension Accumulated Printout Code		X
24	SMDR - Group Accumulated Printout Code		X
25	Account Code Accumulated Printout Code		X
26	Forced Trunk Disconnect		X
27	Trunk Port Disable for Outgoing Calls		X
28	--- Not Used ---		
29	--- Not Used ---		
30	--- Not Used ---		
31	--- Not Used ---		
32	Set Private Call Refuse	X	
33	Entry Caller ID Refuse		X
34	Set Caller ID Refuse	X	
35	Dial-In Mode Switching	X	
36	Change the Guidance Message Number on Voice Mail Auto Attendant	X	
41	Date Setting		X
42	Maintenance Service		X

**Table 2-64 Program 11-11 Service Code Setup (Setup/Entry Operation)**

Function Number	Function Name	Supported	Not Supported
01	Call Forward – All	X	
02	Call Forward – Busy	X	
03	Call Forward – No Answer	X	
04	Call Forward – Busy/No Answer	X	
05	Call Forward – Both Ring	X	
06	--- Not Used ---		

**Table 2-64 Program 11-11 Service Code Setup (Setup/Entry Operation) (Continued)**

<b>Function Number</b>	<b>Function Name</b>	<b>Supported</b>	<b>Not Supported</b>
07	Call Forwarding – Follow-Me	X	
08	Do Not Disturb	X	
09	Answer Message Waiting	X	
10	Cancel All Messages Waiting	X	
11	Cancel Message Waiting	X	
12	Alarm Clock		X
13	Display Language Selection for Multiline Terminal	X	
14	Text Message Setting		X
15	Enable Handsfree Incoming Intercom Calls		X
16	Force Ringing of Incoming Intercom Calls		X
17	Programmable Function Key Programming (2-Digit Service Codes)	X	
18	BGM On/Off		X
19	Key Touch Tone On/Off		X
20	Change Incoming CO and ICM Ring Tones		X
21	Check Incoming Ring Tones		X
22	Extension Name Programming		X
23	Second Call for DID/DISA/DIL		X
24	Change Station Class of Service		X
25	Automatic Transfer Setup for Each Extension Group	X	
26	Automatic Transfer Cancellation for Each Extension Group	X	
27	Destination of Automatic Transfer Each Extension Group		X
28	Delayed Transfer for Every Extension Group	X	
29	Delayed Transfer Cancellation for Each Extension Group	X	
30	DND Setup for Each Extension Group	X	
31	DND Cancellation for Each Extension Group	X	

**Table 2-64 Program 11-11 Service Code Setup (Setup/Entry Operation) (Continued)**

<b>Function Number</b>	<b>Function Name</b>	<b>Supported</b>	<b>Not Supported</b>
32	--- Not Used ---		
33	Dial Block	X	
34	Temporary Toll Restriction Override	X	
35	Pilot Group Withdrawing	X	
36	Toll Restriction Override	X	
37	Ring Volume Set		X
38	Programmable Function Key Programming (3-Digit Service Codes)	X	
39	Station Speed Dial Number Entry	X	
40	--- Not Used ---		
41	Tandem Ringing		X
42	--- Not Used ---		
43	Headset Mode Switching		X
44	Auto Attendant		X
45	Set/Cancel Call Forward All (Split)	X	
46	Set/Cancel Call Forward Busy (Split)	X	
47	Set/Cancel Call Forward No Answer (Split)	X	
48	Set/Cancel Call Forward Busy No Answer (Split)	X	
49	Set/Cancel Call Forward Both Ring (Split)	X	
50	Set Message Waiting Indication		X
51	Cancel Message Waiting Indication		X
52	Set/Cancel Call Forward All Destination (No Split)	X	
53	Set/Cancel Call Forward Busy Destination (No Split)	X	
54	Set/Cancel Call Forward No Answer Destination (No Split)	X	
55	Call Forward Busy No Answer Destination (No Split)	X	
56	Telephone Book Lock Service		X

**Table 2-64 Program 11-11 Service Code Setup (Setup/Entry Operation) (Continued)**

Function Number	Function Name	Supported	Not Supported
57	Set Do Not Call Table	X	
58	Call Forward with Personal Greeting	X	
59	Call Forward to Attendant except Busy	X	
60	Call Forward to Attendant/No Answer	X	
62	Headset Ring Volume Adjustment		X
63	Double Height Character Indication		X
64	Reverse Display Indication	X	
65	Headset Mode Switching		X

**Table 2-65 Program 11-12 Service Code Setup (Service Access)**

Function Number	Function Name	Supported	Not Supported
01	Bypass Call	X	
02	Conference	X	
03	Override (Off-Hook Signaling)	X	
04	Set Camp-On	X	
05	Cancel Camp-On	X	
06	Switching of Voice Call and Signal Call	X	
07	Step Call	X	
08	Barge-In	X	
09	Change to STG (Department Group) All Ring	X	
10	Station Speed Dialing	X	
11	Group Speed Dialing	X	
12	Last Number Dial	X	
13	Saved Number Dial	X	
14	Trunk Group Access	X	
15	Specified Trunk Access	X	
16	Trunk Access Via Networking	X	

**Table 2-65 Program 11-12 Service Code Setup (Service Access) (Continued)**

<b>Function Number</b>	<b>Function Name</b>	<b>Supported</b>	<b>Not Supported</b>
17	Clear Last Number Dialing Data	X	
18	Clear Saved Number Dialing Data	X	
19	Internal Group Paging	X	
20	External Paging	X	
21	Meet-Me Answer to Specified Internal Paging Group	X	
22	Meet-Me Answer to External Paging	X	
23	Meet-Me Answer in Same Paging Group		X
24	Combined Paging	X	
25	Direct Call Pickup - Own Group	X	
26	Call Pickup for Specified Group	X	
27	Call Pickup	X	
28	Call Pickup for Another Group	X	
29	Direct Extension Call Pickup	X	
30	Specified Trunk Answer	X	
31	Park Hold	X	
32	Answer for Park Hold	X	
33	Group Hold	X	
34	Answer for Group Hold	X	
35	Station Park Hold	X	
36	Door Box Access	X	
37	Common Canceling Service Code	X	
38	General Purpose Indication	X	
39	--- Not Used ---		
40	Station Speed Dialing	X	
41	Voice Over		X
42	Flash on Trunk lines		X
43	Answer No-Ring Line (Universal Answer)	X	
44	Callback Test for SLT		X

**Table 2-65 Program 11-12 Service Code Setup (Service Access) (Continued)**

Function Number	Function Name	Supported	Not Supported
45	Enabled On Hook When Holding (SLT)		X
46	Answer On Hook When Holding (SLT)		X
47	Call Waiting Answer/Split Answer		X
48	Account Code		X
49	--- Not Used ---		
50	General Purpose Relay	X	
51	VMS Access (InMail and VMS)	X	
52	Live Monitoring (InMail)		X
53	Live Recording at SLT		X
54	VRS Routing for ANI/DNIS	X	
55	--- Not Used ---		
56	E911 Alarm Shut Off		X
57	Tandem Trunking	X	
58	Transfer into Conference	X	
59	Trunk Drop Operation for SLT		X

**Table 2-66 Program 11-13 Service Code Setup (ACD)**

Function Number	Function Name	Supported	Not Supported
01	ACD Log In/Log Out (for KTS)		X
02	ACD Log Out (for SLT)		X
03	Set ACD Wrap-Up Time (for SLT)		X
04	Cancel ACD Wrap-Up Time (for SLT)		X
05	Set ACD Off Duty (for SLT)		X
06	Cancel ACD Off Duty (for SLT)		X
07	--- Not Used ---		
08	Agent ID Code Login		X
09	Agent ID Code Logout		X



**Table 2-66 Program 11-13 Service Code Setup (ACD) (Continued)**

Function Number	Function Name	Supported	Not Supported
10	ACD Agent Login by Supervisor		X
11	ACD Agent Logout by Supervisor		X
12	Change Agent ACD Group by Supervisor		X
13	ACD Agent Changing Own ACD Group		X

**Table 2-67 Program 11-14 Service Code Setup (Hotel)**

Function Number	Function Name	Supported	Not Supported
01	Set DND for Own Extension		X
02	Cancel DND for Own Extension		X
03	Set DND for Other Extension		X
04	Cancel DND for Other Extension		X
05	Set Wake Up Call for Own Extension		X
06	Cancel Wake Up Call for Own Extension		X
07	Set Wake Up Call for Other Extension		X
08	Cancel Wake Up Call for Other Extension		X
09	Set Room to Room Call Restriction		X
10	Cancel Room to Room Call Restriction (Hotel)		X
11	Change Toll Restriction Class for Other Extension		X
12	Check-In		X
13	Check-Out		X
14	Room Status Change for Own Extension		X
15	Room Status Change for Other Extension		X
16	Room Status Output		X
17	Hotel Room Monitor		X
18	Set Hotel PMS Code Restriction		X

**Table 2-68 Program 11-15 Service Code Setup (Special Access)**

Function Number	Function Name	Supported	Not Supported
01	Remote Maintenance		X
02	ACD Access in Dial-In Conversion Table		X
03	Backup Save Data		X
04	--- Not Used ---		
05	System Programming Mode, Log-On		X
06	Wake on LAN to APSU Unit		X
07	--- Not Used ---		
08	Network Message Lamp Control		X
09	Transfer to Incoming RingGroup		X
10	--- Not Used ---		
11	Ethernet Port Reset		X
12	Extension Data Swap		X
13	Remote Access from DISA		X
14	Modem Access		X

### Ring Tones

The MH240 has three different ring tone settings; Internal, External, and Non-Notification. Different types of incoming calls can ring differently depending on the setting in Program 15-05-28.

**Ring Tones with Program 15-05-28 Enabled**

Call Type	Program 22-02-01	Caller ID	Ring Pattern	When Call Forward Busy to the MH240	When Call Forward No Answer to the MH240
<b>Analog Trunk Call</b>	0: Normal	With Caller ID	Non-Notification	Normal call does not support busy transfer	External Ring
		Without Caller ID	Non-Notification	Normal call does not support busy transfer	Non-Notification
	1: VRS	With Caller ID	External Ring	External Ring	External Ring
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification
	2: DISA	With Caller ID	External Ring	External Ring	External Ring
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification
	3: DID	With Caller ID	External Ring	External Ring	External Ring
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification
	4: DIL	With Caller ID	Non-Notification	DIL call does not support busy transfer	External Ring
		Without Caller ID	Non-Notification	DIL call does not support busy transfer	Non-Notification
	5: Leased Line	With Caller ID	It is not assumed to receive Caller ID		
		Without Caller ID	Non-Notification	Leased Line call does not support busy transfer	Leased Line call does not support busy transfer
	6: Delayed VRS	With Caller ID	External Ring	External Ring	External Ring
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification
	7: ANI/ DNIS	With Caller ID	External Ring	External Ring	External Ring
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification
	8: DID Mode Switching	With Caller ID	External Ring	External Ring	External Ring
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification

Call Type	Program 22-02-01	Caller ID	Ring Pattern	When Call Forward Busy to the MH240	When Call Forward No Answer to the MH240	
<b>ISDN Trunk Call</b>	0: Normal	With Caller ID	External Ring	Normal call does not support busy transfer	External Ring	
		Without Caller ID	Non-Notification	Normal call does not support busy transfer	Non-Notification	
	1: VRS	With Caller ID	External Ring	External Ring	External Ring	
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification	
	2: DISA	With Caller ID	External Ring	External Ring	External Ring	
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification	
	3: DID	With Caller ID	External Ring	External Ring	External Ring	
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification	
	4: DIL	With Caller ID	External Ring	DIL call does not support busy transfer	External Ring	
		Without Caller ID	Non-Notification	DIL call does not support busy transfer	Non-Notification	
	6: Delayed VRS	With Caller ID	External Ring	External Ring	External Ring	
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification	
	8: DID Mode Switching	With Caller ID	External Ring	External Ring	External Ring	
		Without Caller ID	Non-Notification	Non-Notification	Non-Notification	
	<b>Intercom Call</b>		–	Internal Ring	Internal Ring	Internal Ring

**Ring Tones with Program 15-05-28 Disabled**

Call Type	Program 22-02-01	Caller ID	Ring Pattern	When Call Forward Busy to the MH240	When Call Forward No Answer to the MH240
<b>Analog Trunk Call</b>	0: Normal	With Caller ID	Internal Ring	Normal call does not support busy transfer	Internal Ring
		Without Caller ID	Internal Ring	Normal call does not support busy transfer	Internal Ring
	1: VRS	With Caller ID	Internal Ring	Internal Ring	Internal Ring
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring
	2: DISA	With Caller ID	Internal Ring	Internal Ring	Internal Ring
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring
	3: DID	With Caller ID	Internal Ring	Internal Ring	Internal Ring
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring
	4: DIL	With Caller ID	Internal Ring	DIL call does not support busy transfer	Internal Ring
		Without Caller ID	Internal Ring	DIL call does not support busy transfer	Internal Ring
	5: Leased Line	With Caller ID	It is not assumed to receive Caller ID		
		Without Caller ID	Internal Ring	Leased Line call does not support busy transfer	Leased Line call does not support busy transfer
	6: Delayed VRS	With Caller ID	Internal Ring	Internal Ring	Internal Ring
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring
	7: ANI/ DNIS	With Caller ID	Internal Ring	Internal Ring	Internal Ring
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring
	8: DID Mode Switching	With Caller ID	Internal Ring	Internal Ring	Internal Ring
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring

Call Type	Program 22-02-01	Caller ID	Ring Pattern	When Call Forward Busy to the MH240	When Call Forward No Answer to the MH240	
<b>ISDN Trunk Call</b>	0: Normal	With Caller ID	Internal Ring	Normal call does not support busy transfer	Internal Ring	
		Without Caller ID	Internal Ring	Normal call does not support busy transfer	Internal Ring	
	1: VRS	With Caller ID	Internal Ring	Internal Ring	Internal Ring	
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring	
	2: DISA	With Caller ID	Internal Ring	Internal Ring	Internal Ring	
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring	
	3: DID	With Caller ID	Internal Ring	Internal Ring	Internal Ring	
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring	
	4: DIL	With Caller ID	Internal Ring	DIL call does not support busy transfer	Internal Ring	
		Without Caller ID	Internal Ring	DIL call does not support busy transfer	Internal Ring	
	6: Delayed VRS	With Caller ID	Internal Ring	Internal Ring	Internal Ring	
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring	
	8: DID Mode Switching	With Caller ID	Internal Ring	Internal Ring	Internal Ring	
		Without Caller ID	Internal Ring	Internal Ring	Internal Ring	
	<b>Intercom Call</b>		–	Internal Ring	Internal Ring	Internal Ring

## Default Setting

None

## System Availability

### Terminals

MH240 Wireless IP Terminals

### **Required Component(s)**

- CPU with PZ-32IPLA/IPLB, PZ-64IPLA/IPLB or PZ-128IPLA/IPLB daughter board installed.
- WL1700-MS
- WL1500-MS (Optional)
- MH240 Wireless IP Handset

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### **Related Features**

None

## Guide to Feature Programming



The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.



- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-02	CD-CP00-US Network Setup – Subnet Mask	The setting of Subnet Mask is invalid when all Host Addresses are 0. If the network section is: 0, 127, 128.0, 191.255, 192.0.0, 223.255.255 The setting of Subnet Mask is invalid.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.255.0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	<b>CD-CP00-US Network Setup – Default Gateway</b>	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	<b>CD-CP00-US Network Setup – IP Address</b>	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		
10-26-01	<b>IP System Operation Setup – Peer to Peer Mode</b>	Enable/Disable the Peer to Peer feature for SIP IP stations.	0 = Off 1 = On (default = 1)	✓		
10-46-01	<b>DT700 Server Information Setup – Register Mode</b>	Normal mode: When the phone boots up, it reports the ext. assigned in the phone or chooses the next available extension in the system. No password is required. Auto mode: If set to Auto, the SIP user name and password must be entered in the actual IP phone. These settings must match 84-22/15-05-27, for the phone to come online. Manual mode: When the phone boots up it prompts a user to enter a user ID and password before logging in. It checks the user ID/password against 84-22/15-05-27. If there is no match, the phone does not come online.	0 = Normal 1 = Auto 2 = Manual (default = 0)		✓	
15-05-15	<b>IP Telephone Terminal Basic Data Setup – CODEC Type</b>	Set the registered IP Phone Codec type – Reference Program 84-11 Dterm IP Codec Basic Information.	1-Type 1 2-Type 2 3-Type 3 4-Type 4 5-Type 5 (default = 1)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-10-01	ToS Setup – ToS Mode	When Input Data is set to 1, Protocol 7 is invalid. When Data is set to 2, Protocols 2~6 are invalid.	0 = Disable (Invalid) 1 = IP Precedence 2 = Diffserv (default = 0)		✓	
84-10-07	ToS Setup – Priority (D.S.C.P. - Differentiated Services Code Point)	DSCP (Differentiated Services Code Point).	0~63 (default = 0)	✓		
84-11-28	Dterm IP CODEC Information Basic Setup – Audio Capability Priority	Set voice (RTP packet) encoding parameters.	0 = G.711_PT 2 = G.729_PT (default = 0)	✓		
84-22-01	DT700 Multiline Logon Information Setup – User ID	Input the User ID for each Personal ID Index (1-512) when using auto or manual registration in 10-46-01.  IP multiline terminals only support numerical user IDs, not alphanumeric.	Up to 32 characters (default not assigned)		✓	
84-22-02	DT700 Multiline Logon Information Setup – Password	Input the Password for each Personal ID Index (1-512) when using manual or auto registration in 10-46-01.	Up to 16 characters (default not assigned)		✓	
84-22-03	DT700 Multiline Logon Information Setup – User ID Omission	Enable/Disable User ID Omission.  Used when the registration mode (10-46-01) is set to manual. When the phone prompts for a login, the previous user ID appears so the user only has to enter the password.	0 = Off 1 = On (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-22-04	<b>DT700 Multiline Logon Information Setup – Log Off</b>	<p>When the registration mode (10-46-01) is set to manual, and the phone prompts for a login, the previous user ID appears so the user only has to enter the password.</p> <p>When enabled, the extension assigned to the Personal ID Index can be logged off or overridden by another IP multiline station or Softphone.</p> <p> <i>In Manual mode a user can also logoff the IP phone to allow another user to login with their own user ID and password.</i></p> <p><i>To logoff the IP phone: Press the <b>Down Arrow</b> Softkey, press the <b>Prog</b> Softkey, and then press the <b>LOGOFF</b> Softkey.</i></p>	0 = Off 1 = On (default = 1)		✓	
84-22-05	<b>DT700 Multiline Logon Information Setup – Nick Name</b>	Input the Personal ID from terminal automatically when log on again.	Up to 32 characters (default not assigned)		✓	
84-26-01	<b>IPL Basic Setup – IP Address</b>	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW 1~8: 172.16.0.20~ 172.16.0.27	✓		
84-26-02	<b>IPL Basic Setup – RTP Port Number</b>	<p>Assign the RTP port number to be used for each DSP on the IPLA/IPLB.</p> <p> <i>Only even numbered ports are supported.</i></p>	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244	✓		


In addition to the above programming, define the programming options as required for the system features. Refer to the UNIVERGE SV8100 Programming Manual and the UNIVERGE SV8100 Networking Manual for programming details.

## Operation



### To make a call:

1. Enter the telephone number and press the  key


-OR-

2. Press the  key and then enter the telephone number.



### To answer a call:

1. Press the  key.
2. To stop the ring without answering the call, press the  key.

### To place a call on hold:

1. Press the  key.

### To transfer a call:

1. Press the  key during the call.
2. After hearing the second dial tone, enter the telephone number to transfer the call.
3. Press the  key to complete the transfer.

-OR-

4. Press the  key before the called party answers.

Refer to the MH240 User Guide, or the UNIVERGE SV8100 Networking Manual for more detailed feature information.

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# *Microphone Cutoff*

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## **Description**

Microphone Cutoff lets a multiline terminal user turn off their telephone handsfree or handset microphone anytime. When activated, Microphone Mute prevents the caller from hearing conversations in the user's work area. The user may turn off the microphone while their telephone is idle, busy on a call or ringing. The microphone stays off until the user turns it back on.

## **Conditions**

- Microphone Cutoff does not operate if the user calls another extension and the called extension user responds without lifting the handset or pressing Speaker.
- When using the Handset Transmission Cutoff key during an intercom call with the handset on-hook, you hear three beep tones and the LED is on solid. This also occurs on an outside call.
- When using the Handset Transmission Cutoff key during an intercom call with the handset off-hook, you hear three beep tones through the handset and the Handset Transmission Cutoff and MIC keys flash. This also occurs on an outside call.
- When Handset Transmission Cutoff is activated and the handset is off-hook, pressing Speaker and returning the handset to the cradle turns off the Handset Transmission Cutoff key. Three beep tones are heard over the telephone speaker.

## **Default Setting**

Enabled (using MIC key)

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

## Related Features

Handsfree Answerback/Forced Intercom Ringing

Handset Mute

Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	If an extension needs handset microphone cutoff, program a Handset Transmission Cutoff key (code 40). To program a MIC Cutoff key, use code 02 as the entry. The MIC Cutoff key mutes conversation on a handsfree call, but the Handset Transmission Cutoff key mutes the handset transmission on a non-handsfree call.	For Line Keys: 1~48 0 ~ 99 (Normal Function Code) (default = Service Code 751)* 00* ~ *99 (Appearance Function Code) (default = Service Code 752)	✓		
20-02-11	<b>System Options for Multiline Telephones – Handsfree Microphone Control</b>	Control the setting for multiline terminal handsfree microphone after being disconnected and reconnected. If set to 0, the microphone is always off when the terminal is reconnected. If set to 1, the microphone remains in the same state it was in when the terminal is reconnected.	0 = Off 1 = On (default = 1)		✓	


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## Operation


### To mute your telephone handset or Handsfree microphone while on a call:

1. Press **MIC**.

 *This only turns off the Handsfree microphone.*

**- OR -**

Press the **Microphone Cutoff** key (Program 15-07 or SC 751: 40).

 *This turns off both the handset and Handsfree microphone.*


### To turn your telephone microphone back on:

1. Press **MIC**.

 *Use **MIC** only if you pressed it initially to turn off your Handsfree microphone.*

**- OR -**

Press the **Microphone Cutoff** key (Program 15-07 or SC 751: 40).

 *Use the **Microphone Cutoff** key only if you pressed it initially to turn off your handset or Handsfree microphone.*

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# Mobile Extension

## Enhancements

With **Version 3000 or higher** system software, the Desktop terminal and the Mobile Extension can both ring. If neither extension answers, the call can forward to Voice Mail.

With **Version 3000 or higher** system software, the Calling Party Number (CPN) can be delivered to the Mobile Extension user.

 *Must be coordinated with local Telco.*

With **Version 3000 or higher** system software, the Mobile Extension feature supports analog trunks.

With **Version 5000 or higher** system software, callback to cell phone has been added.


With **Version 9000 or higher** system software, a Progress Tone is played to the caller until the call to the Mobile Extension number is set up.

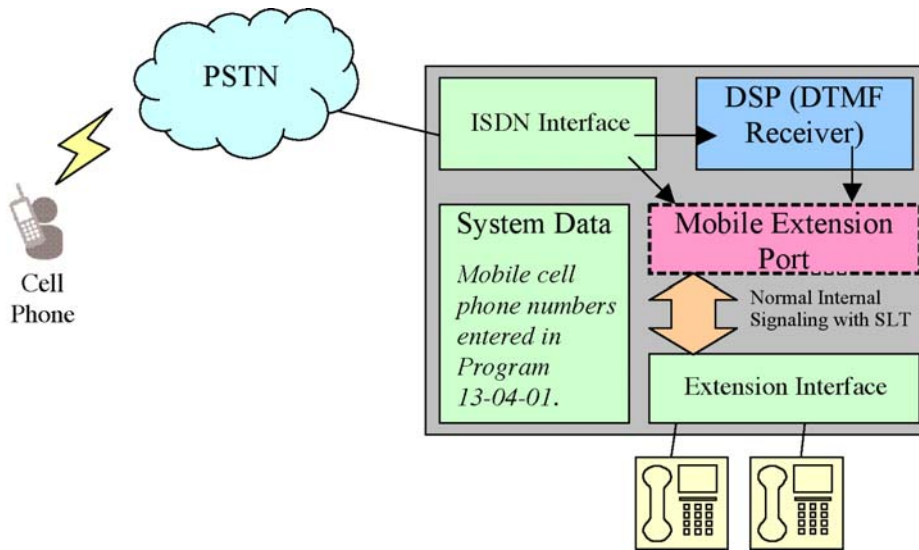
With **Version 9000 or higher** system software, any DID can be set up to provide an internal dial tone when Mobile Extension users call in.

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## Description



A mobile extension is an external telephone (preferably a mobile phone) linked to the UNIVERGE SV8100 via a Proxy Port to operate as an internal single line telephone extension. The extension sends DTMF signals to the system allowing access to the system features. A registered Mobile Extension uses one analog port (ports are reserved in groups of two), however, **no** PCB support (analog or digital) is required. The Mobile Extension port must be an unequipped extension port on the UNIVERGE SV8100 system - no physical telephone is required on the SV8100 system.

 *A mobile extension cannot be used as a voice mail port.*




**Figure 2-28 Mobile Extension Layout**

This feature can currently be used with ISDN PRI trunks or SIP trunks.

-  *It is recommended to use this feature with an ISDN PCB (PRI or BRI), however, analog trunks can be used as well.*
-  *To provide a proper disconnect, Disconnect Supervision is required for the trunks used for this feature.*

The Mobile extension internal extension number (Proxy Port) is linked to a speed dial bin to provide integration.

-  *If all external trunks are busy when a call is made to the mobile extension, ringback tone is presented giving the impression the phone is ringing.*

A DID is directed to the Mobile Extension internal extension number (Proxy Port), and to provide internal dial tone to the Mobile Extension, the incoming calling line identification of the Mobile Extension must match the number in the Speed Dial bin. Once internal dial tone is presented, the operation is similar to a single line telephone user lifting the handset.

With **Version 9000 or higher**, any DID with Program 22-11-13 enabled, provides internal dial tone to the Mobile Extension, must have an incoming calling line identification that matches exactly the number of any Mobile Extension Speed Dial Bins.

In the absence of DIDs, the VRS can be used to transfer the Mobile Extension call to the Mobile Extension extension number. This provides internal dial tone when the calling line identification is presented and matches the number in the associated Speed Dial bin.

Alternatively, if calling line identification routing is enabled, the relevant Speed Dial bin could be transferred to the Mobile Extension proxy port, which would then provide internal dial tone.

The number of Mobile Extensions per system is limited by the available unequipped extension ports.

## Features

The features available from a Mobile Extension are listed below. As the Mobile Extension is based on a single line telephone port, the service codes used are as per a single line telephone port. Any feature not listed should be assumed to be not supported:

- Hold
- Transfer
- Incoming Ring Group member
- Department Group member
- DID
- Toll Restriction
- Class of Service
- DSS Keys

Though DSS keys are available for the Mobile Extension, they cannot provide an exact indication of busy status if, for example, the Mobile Extension is active on a call not linked to the UNIVERGE SV8100.

The following service codes are supported:

**Table 2-69 Supported Service Codes**

Type Incoming Feature	Program	Code	Set By Mobile Extension	Set to Mobile Extension
Night Mode Switching	11-10-01	718	Yes	
Night Mode Switching for Other Group	11-10-12	618	Yes	
Call Forward – All	11-11-01	741	Yes	Yes
Call Forward – Busy	11-11-02	742	Yes	Yes
Call Forward – No Answer	11-11-03	743	Yes	Yes
Call Forward – Busy/No Answer	11-11-04	744	Yes	Yes
Call Forward – Both Ring	11-11-05	745	Yes	Yes
Call Forward – Follow-Me	11-11-07	746	Yes	Yes
Do Not Disturb	11-11-08	747	Yes	
Answer Message Waiting	11-11-09	*0	Yes	
Cancel All Messages Waiting	11-11-10	773	Yes	

**Table 2-69 Supported Service Codes (Continued)**

<b>Type Incoming Feature</b>	<b>Program</b>	<b>Code</b>	<b>Set By Mobile Extension</b>	<b>Set to Mobile Extension</b>
Automatic Transfer Setup for Each Extension Group	11-11-25	602	<b>Yes</b>	
Automatic Transfer Cancellation for Each Extension Group	11-11-26	603	<b>Yes</b>	
Delayed Transfer for Every Extension Group	11-11-28	605	<b>Yes</b>	
Delayed Transfer Cancellation for Each Extension Group	11-11-29	606	<b>Yes</b>	
DND Setup for Each Extension Group	11-11-30	607	<b>Yes</b>	
DND Cancellation for Each Extension Group	11-11-31	608	<b>Yes</b>	
Pilot Group Withdrawing	11-11-35	650	<b>Yes</b>	
Station Speed Dial Number Entry	11-11-39	755	<b>Yes</b>	
Auto Attendant	11-11-44	No Setting	<b>Yes</b>	
Bypass Call	11-12-01	707	<b>Yes</b>	<b>Yes</b>
Conference	11-12-02	#1	<b>Yes</b>	
Override (Off-Hook Signalling)	11-12-03	709	<b>Yes</b>	
Set Camp-On	11-12-04	750	<b>Yes</b>	<b>Yes</b>
Cancel Camp-On	11-12-05	770	<b>Yes</b>	<b>Yes</b>
Switching of Voice Call and Signal Call	11-12-06	712	<b>Yes</b>	
Step Call	11-12-07	708	<b>Yes</b>	<b>Yes</b>
Barge-In	11-12-08	710	<b>Yes</b>	<b>Yes</b>
Change to STG (Department Group) All Ring	11-12-09	No Setting	<b>Yes</b>	
Station Speed Dialling	11-12-10	#2	<b>Yes</b>	
Group Speed Dialling	11-12-11	#4	<b>Yes</b>	
Trunk Group Access	11-12-14	704	<b>Yes</b>	
Specified Trunk Access	11-12-15	#9	<b>Yes</b>	
Trunk Access Via Networking	11-12-16	No Setting	<b>Yes</b>	
Internal Group Paging (Mobile Extension cannot be a member of a paging group)	11-12-19	701	<b>Yes</b>	
External Paging	11-12-20	703	<b>Yes</b>	
Meet-Me Answer to Specified Internal Paging Group	11-12-21	764	<b>Yes</b>	

**Table 2-69 Supported Service Codes (Continued)**

<b>Type Incoming Feature</b>	<b>Program</b>	<b>Code</b>	<b>Set By Mobile Extension</b>	<b>Set to Mobile Extension</b>
Meet-Me Answer to External Paging	11-12-22	765	<b>Yes</b>	
Meet-Me Answer in Same Paging Group (although Mobile Extension cannot be paged)	11-12-23	763	<b>Yes</b>	<b>Yes</b>
Combined Paging	11-12-24	*1	<b>Yes</b>	
Direct Call Pickup – Own Group	11-12-25	756	<b>Yes</b>	<b>Yes</b>
Call Pickup for Specified Group	11-12-26	768	<b>Yes</b>	<b>Yes</b>
Call Pickup	11-12-27	*#	<b>Yes</b>	<b>Yes</b>
Call Pickup for Another Group	11-12-28	769	<b>Yes</b>	<b>Yes</b>
Direct Extension Call Pickup	11-12-29	**	<b>Yes</b>	
Park Hold	11-12-31	#6	<b>Yes</b>	
Answer for Park Hold	11-12-32	*6	<b>Yes</b>	
Group Hold	11-12-33	732	<b>Yes</b>	
Answer for Group Hold	11-12-34	762	<b>Yes</b>	
Personal (Extension) Park	11-12-35	757	<b>Yes</b>	
Door Box Access (Door Box can also ring the Mobile Extension, *# operates relay)	11-12-36	702	<b>Yes</b>	
Common Canceling Service Code	11-12-37	620	<b>Yes</b>	
General Purpose Indication	11-12-38	783	<b>Yes</b>	
Station Speed Dialing	11-12-40	#7	<b>Yes</b>	
Voice Over	11-12-41	690	<b>Yes</b>	
Flash on Trunk lines	11-12-42	#3	<b>Yes</b>	
Enabled On Hook when Holding (SLT)	11-12-45	749	<b>Yes</b>	
Answer On Hook when Holding (SLT)	11-12-46	759	<b>Yes</b>	
Call Waiting Answer/Split Answer	11-12-47	794	<b>Yes</b>	
Account Code	11-12-48	##	<b>Yes</b>	
General Purpose Relay	11-12-50	780	<b>Yes</b>	
VM Access (VM8000 InMail and VMS)	11-12-51	*8	<b>Yes</b>	
Live Recording at SLT	11-12-53	654	<b>Yes</b>	
VRS Routing for ANI/DNIS	11-12-54	682	<b>Yes</b>	

Table 2-69 Supported Service Codes (Continued)

Type Incoming Feature	Program	Code	Set By Mobile Extension	Set to Mobile Extension
Tandem Trunking	11-12-57	#8	Yes	
Transfer into Conference	11-12-58	624	Yes	
Set DND for Other Extension	11-14-03	629	Yes	Yes
Cancel DND for Other Extension	11-14-04	630	Yes	Yes
Set Wake Up Call for Own Extension	11-14-05	631	Yes	
Cancel Wake Up Call for Own Extension	11-14-06	632	Yes	
Set Wake Up Call for Other Extension	11-14-07	633	Yes	Yes
Cancel Wake Up Call for Other Extension	11-14-08	634	Yes	Yes
Set Room to Room Call Restriction	11-14-09	635	Yes	Yes
Cancel Room to Room Call Restriction (Hotel)	11-14-10	636	Yes	Yes
Change Toll Restriction Class for Other Extension	11-14-11	637	Yes	Yes
Check-in	11-14-12	638	Yes	Yes
Check-out	11-14-13	639	Yes	Yes
Room Status Change for Own Extension	11-14-14	640	Yes	
Room Status Change for Other Extension	11-14-15	641	Yes	Yes
Room Status Output	11-14-16	642	Yes	
Hotel Room Monitor	11-14-17	675	Yes	Yes

Although some features may be available to the Mobile Extension, it may be advisable to disable them in Class of Service. There are also features that should be disabled in any case.

The features ***to be disabled/not used*** for Mobile Extension include:

- ACD
- TAPI (including applications such as UC Desktop Suite, etc.)
- H.323 Trunks
- Analog Trunks
- Port Swap
- Hotline

- General Message
- Message Waiting
- Headset Mode for single line telephone
- Flexible Transfer/Virtual Loop Back
- Tandem Ringing
- Park over CCIS
- Virtual extension key as Call Coverage Key for mobile extension
- Automatic Conversation Record for trunks

#### Caller ID Presented to the Mobile Extension\* for Type of Call

- Direct Internal Call** – CPN of the Calling Phone is presented to the Mobile Extension (**Version 3000 or higher** software required).
- Direct Trunk Call with CID** – Caller ID of incoming call is presented to the Mobile Extension\*\* (**Version 3000 or higher** software required).
- Direct Trunk Call without CID** – CPN of Mobile Extension is presented to the Mobile Extension.
- Transferred Trunk Call with CID** –
  - Transferred before inter-digit timeout – Caller ID of incoming call is presented to the Mobile Extension\*\* (**Version 3000 or higher** software required).
  - Transferred after inter-digit timeout – CPN of the Transferring Phone is presented to the Mobile Extension (**Version 3000 or higher** software required).
- Transferred Trunk Call without CID** –
  - Transferred before inter-digit timeout – CPN of Mobile Extension is presented to the Mobile Extension.
  - Transferred after inter-digit timeout – CPN of the Transferring Phone's CPN is presented to the Mobile Extension (**Version 3000 or higher** software required).

\* Only when the outbound trunks are ISDN or SIP trunks.

\*\* ISDN will need to accept the inbound Caller ID as the Calling Party Number (CPN) presentation for the outbound call.

**Table 2-70 Caller ID Sent to Mobile Telephone**

Inbound Trunk	Outbound Trunk	Y/N
Analog CID	CFA Analog	N
Analog CID	CFA ISDN PRI/SIP	Y
ISDN PRI/SIP	CFA ISDN PRI/SIP	Y
ISDN PRI/SIP	CFA Analog	N

Table 2-70 Caller ID Sent to Mobile Telephone (Continued)

Inbound Trunk	Outbound Trunk	Y/N
Analog CID	CFNA Analog	N
Analog CID	CFNA ISDN PRI/SIP	Y
ISDN PRI/SIP	CFNA ISDN PRI/SIP	Y
ISDN PRI/SIP	CFNA Analog	N

## Conditions

- It is recommended that this feature use ISDN/SIP platform (as these trunks provide answer supervision).
- If an extension has Call Forward-Both Ring set to a Mobile Extension (twinning), it will not forward to VM or anywhere else (**Version 2500 or lower** software).
- If the extension has Call Forward-Both Ring set to a Mobile Extension (twinning), it can only forward to VM (NA or B/NA) and nowhere else (**Version 3000 or higher** software is required).
- If an extension has Call Forward-Both Ring set to a Mobile Extension (twinning), it will not forward when the Mobile Extension is forwarded All or B/NA (Busy Immediate).
- ISDN and SIP trunks are only supported for the outbound call to the Mobile Extension (**Version 2500 or lower** software).
- Analog, ISDN and SIP trunks are supported for the outbound call to the Mobile Extension (**Version 3000 or higher** software is required).
- The analog line must provide calling line identification information to allow the Mobile Extension to dial into the system to access features.
- For the **extension** DTMF, the minimum Detect Level for the DTMF Tone (Program 80-03-03) must be set to allow a minimum detection level of -25dBm. This entry is dependent on the Detect Level selected in Program 80-03-01.
- ***The Mobile Extension uses the \* to perform a flash, so any service codes which begin with \* must be changed (Programs 11-10, 11-11, 11-12, 11-13).***
- ***To provide a proper disconnect, Disconnect Supervision is required for the trunks used for this feature.***
- When an entry is made in Program 15-22-01 for a Mobile Extension, ports are reserved for Mobile Extension usage in groups of 2.
- To keep consecutive port numbering for blades, you may wish to consider starting Mobile Extensions at the upper extension port range.
- The incoming Caller ID for a call that is forwarded to a mobile extension will not be presented to the Mobile Extension (**Version 2500 or lower** software).



- When using Mobile Extension in a NetLink Network, the ISDN/PRI must be utilized in the Primary System (**Version 3100 or lower** software).
- With **Version 4000 or higher** software, when using Mobile Extension in a NetLink Network, the ISDN/PRI can be utilized in the Secondary systems.
- Mobile Extension and UCB (Unified Communications for Business) are not supported within the same system (**UCB 5.0 SP4, TSP 3.03 and SV8100 Version 4.01 and lower**).
- Mobile Extension and UCB (Unified Communications for Business) are supported within the same system. (**UCB 5.1, TSP 4.0 and SV8100 Version 5000 or higher**).
- Calls on Mobile Extension can be easily picked up from a telephone in the SV8100 system. This is done via a Barge-In key (34+Mobile Ext# or 34+\*) \* will Barge in to the Extension that Call Forward Both Ring is set to. If no Forward Both Ring is set, the key will act as a basic Barge-In key. (**Version 5000 or higher** required)

## Callback to Cell Phone

### Description

Callback to Cell Phone allows the user to make an incoming call to a system then hang up before the system answers (like a one ring call), then the system calls back to the calling Cell Phone using a pre-programmed number. The advantage is to reduce Cell Phone charges for calls on a mobile extension system.

After receiving a call back on a Cell Phone, the user can call another extension or make an outgoing call via the system using the mobile extension function.

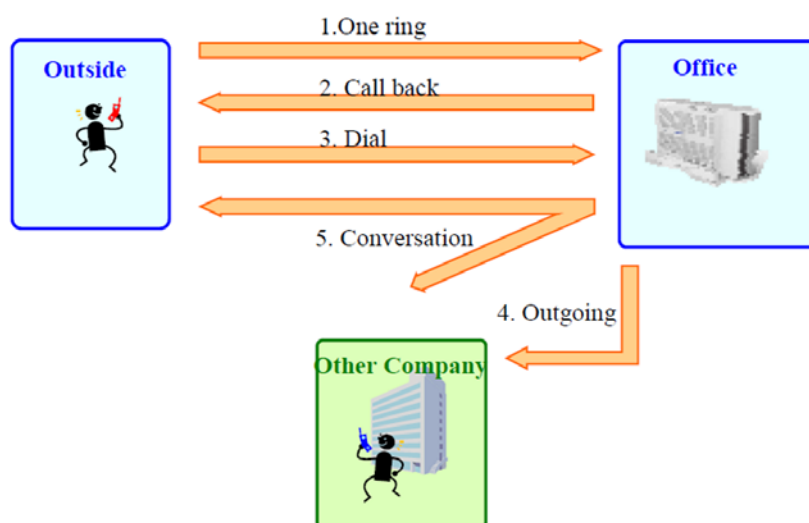


Figure 2-29 Example – Callback to Cell Phone

## Conditions

- The **Version 5000 Enhancement License** is required for this feature to work.
- Mobile Extension must be programmed for this feature to work.
- In the Callback to Cell Phone feature set Program 15-22-04 to 1. If the Cell Phone user continues to ring over the time set in Program 22-01-12, the system answers the call as a normal Mobile Extension call.
- Callback to Cell Phone will not proceed and no retry is made if all trunks are busy when trying to callback.
- Callback trunk routing follows Program 15-22-03 setting. When set 0 (Normal trunk access code), ARS also can be used.
- If Mobile Extension does not answer the Callback within time set in Program 20-01-16, Callback will stop. If answered the within the Callback time, the user hears an extension dial tone. A splash tone is not heard.
- If the system receives a “Disconnect” from the far end after a Callback is made, Callback will stop.
- When Calling party number is used, Callback follows the Program 21-19-01 outgoing call setting of the Mobile Extension which made the outgoing call.
- The Callback to Cell Phone feature is not supported when using an analog trunk.
- If Flexible ringing is set, the Callback to Cell Phone feature works in any type of Program 22-02-01 trunk setting. If Flexible ringing is not set, the Callback to Cell Phone feature does not work if the incoming call type is “DID/DISA”.
- After answering Callback, if the system does not receive a DTMF signal from the Mobile Extension using Program 20-18-01 (Default; 30 seconds), the system disconnects the call.
- The trunk user for SMDR for Callback is tied to the extension number of Mobile Extension.
- If the user calls a Mobile Extension port during while using the Callback to Cell Phone feature, the caller hears a busy tone.
- The Callback to Cell Phone feature can be used on the K-CCIS network. AspireNet/Netlink can be used for the Callback line, but not for the incoming line.

## Default Setting

No Mobile Extensions are configured.

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

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## **Related Features**

**Speed Dial – System/Group/Station**

**Caller ID**

**Call Forwarding**

**Direct Inward Dialing (DID)**

**Direct Inward Line (DIL)**

**Station Message Detail Recording**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### Mobile Extension:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-02-01	Extension Numbering	The Mobile Extension port must be an unequipped extension port on the SV8100 system. This extension port is directed to an Abbreviated Dial bin.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513	✓		
11-10	Service Code Setup (for System Administrator)	Customize the System Administrator service codes.	Please refer to the SV8100 Programming Manual for more information on this program.		✓	
11-11	Service Code Setup (for Setup/Entry Operation)	Customize the service code for Setup and Entry.	Please refer to the SV8100 Programming Manual for more information on this program.		✓	
11-12	Service Code Setup (for Service Access)	Customize the service codes for Service Access.	Please refer to the SV8100 Programming Manual for more information on this program.		✓	
11-13	Service Code Setup (for ACD)	Customize the service codes for ACD.	Please refer to the SV8100 Programming Manual for more information on this program.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	For the bin number defined in Program 15-22-01 for the Mobile Extension, enter the external number of the Mobile Extension. This must exactly match the Caller ID number of the Mobile Extension or the user cannot access the internal features.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
14-01-24	<b>Basic Trunk Data Setup – Trunk-to-Trunk Outgoing Caller ID through Mode</b>	Enable/Disable the ability to send the original Caller ID through.	0 = Disable (No) 1 = Enable (Yes) (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Barge-In (code 34). Optional additional data can be assigned as extension number or * (Version 5000 or higher required).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
15-22-01	<b>Mobile Extension Setup – Mobile Extension Target Setup</b>	For each Mobile Extension number, select the Abbreviated Dial bin number to be associated with it.	0~1999 (0 = No setting 1~1999 = target of mobile extension) (default = 0)	✓		
15-22-02	<b>Mobile Extension Setup – Connect Confirmation</b>	As the Mobile Extension can be a GSM phone, it is necessary to be certain a person and not, for example, a GSM voice mail has answered the call. This is achieved by returning Music on Hold/ring tone to the Mobile Extension on answer, after which the Mobile Extension user presses * to connect the call. For each Mobile Extension number, select whether the user needs to use DTMF confirmation before a call is answered. Until the * is pressed, the call is treated as not being answered.	0 = Always 1 = On analog line 2 = Never (default = 0)	✓		
15-22-03	<b>Mobile Extension Setup – Trunk Access Code</b>	Select whether the Normal or Individual Trunk access is used when making the call to the mobile number.	0 = Use normal trunk access code (Program 11-09-01) 1 = Use individual trunk access code (Program 11-09-02) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-22-04	<b>Mobile Extension Setup – Call Back</b>	Select whether or not the system will try to call back a mobile extension user.	0 = Don't call back 1 = Call back (default = 0)		✓	
20-01-16	<b>System Options – Mobile Extension Callback Duration Time</b>	Determines the amount of time the system will call back a mobile extension user before abandoning the call.	1~64800 seconds (default = 15 seconds)		✓	
20-01-20	<b>System Options – Progress Tone for Mobile Extension Setting</b>	Select whether the Progress Tone (1) or Ringback (0) is played to the Internal Caller until the call to the Mobile Extension is setup.	0 = Disable 1 = Enable (default = 1)		✓	
20-03-04	<b>System Options for Single Line Telephones – Dial Sending Start Time for SLT or ARS</b>	When an extension user dials a Mobile Extension number, the system waits this time before dialing the number.	0~64800 seconds (default = 3)		✓	
20-09-02	<b>Class of Service (Incoming Call Service) – Caller ID Display</b>	Turns Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
21-12-01	<b>ISDN Calling Party Number Setup for Trunks</b>	Assign Calling Party Numbers for each trunk (maximum 16 digits per entry). When a call is made by an extension which does not have an Extension Calling Number assigned (Program 21-13), the system sends the calling number for the ISDN trunk defined in 21-12. If the Calling Party Number is assigned in both Program 21-12 and Program 21-13, the system sends the data in Program 21-13.	(maximum 16 digits) 1-0, *, # Default: (All trunks = No setting)		✓	
21-13-01	<b>ISDN Calling Party Number Setup for Extensions</b>	Assign each extension a Calling Party Number (maximum 16 digits per entry). The calling number is the subscriber number of the dial-in number. When a call is made by an extension which does not have an Extension Calling Number assigned (Program 21-12), the system sends the calling number for the ISDN trunk defined in Program 21-13. If a Calling Party Number is assigned in both Program 21-12 and Program 21-13, the system sends the data in Program 21-13.	0~9, *, # (Maximum 16 digits) (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-01-12	<b>System Options for Incoming Calls – Mobile Extension Answer Time</b>	Determines the amount of time before the mobile extension will answer with internal dial tone. Extend this timer long enough for 1 ring cycle to complete, giving the mobile extension user time to hang up and wait for callback.	1~64800 seconds (default = 3 seconds)	✓		
22-11-01	<b>DID Translation Number Conversion – Received Number</b>	Define the digits received by the system for the telephone number on which a Mobile Extension user calls into the system.	Maximum eight digits (default not assigned)	✓		
22-11-02	<b>DID Translation Number Conversion – Target Number</b>	For the DID number defined in Program 22-11-01, enter the extension number for the Mobile Extension user.	Maximum 24 digits (default not assigned)	✓		
22-11-13	<b>DID Translation Number Conversion – Identify for Mobile Extension</b>	Determines when a Mobile Extension number calls in on a DID if it will provide an Internal Tone (1) or route the call as programmed (0).	0 = Off 1 = On (default = 0)	✓		
80-01-01	<b>Service Tone Setup – Tone 44, External Dial Tone</b>	It is necessary to adjust the DID/ DISA dial tone (tone 44) to a Repeat Count of 250 (by default, this is set to 0). The system must be reset for this change to take affect.	0~255 (0 = until On-Hook) Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a>		✓	
80-01-01	<b>Service Tone Setup – Tone 54, Progress Tone</b>	By default, when calling a Mobile Extension, the Progress Tone is played to the caller.	Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a>		✓	
80-01-01	<b>Service Tone Setup – Tone 57, Off-Hook Beep Tone - Headset Earpiece ringing Tone</b>	If required, change the tone heard when a Mobile Extension user goes off hook to answer a call prior to pressing *. The system must be reset for this change to take affect.	Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a>		✓	
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Select the Detect Level to be used for DTMF Tone detection. For the extension DTMF, this entry must allow for a detection of -25dBm. Set the minimum detection level in Program 80-03-03. The system must be reset for this change to take affect.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1~5 = 0		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	<b>DTMF Tone Receiver Setup – Min. Detect Level</b>	For the extension DTMF, the minimum Detect Level (0-15) for the DTMF Tone must be set to allow a minimum detection level of -25dBm. This entry is dependent on the Detect Level selected in Program 80-03-01. For example, if Detect Level 0 were selected in Program 80-03-01, the entry in this option would be 15 for -25dBm. The system must be reset for this change to take affect.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)		✓	



**Callback to Cell Phone:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	Enter the Common and Group Speed Dialing numbers and names which are to be used for Trunk-to-Trunk Forwarding.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
13-04-03	<b>Speed Dialing Number and Name – Transfer Mode</b>	When the incoming caller ID matches the number programmed in the speed dial bin, this setting determines the destination of the call.	0 = Not Used 1 = Internal Dial 2 = Incoming Ring Group (IRG) (default = 0)	✓		
13-04-04	<b>Speed Dialing Number and Name – Transfer Destination Number</b>	When the incoming caller ID matches the number programmed in the speed dial bin, this setting determines the destination of the call.  Set up the transfer destination number or the IRG number.	If Transfer mode is (Refer to 13-04-03): 1 = Internal Dial Mode 1~9, 0, *, #, P, R, @ (Maximum 24 Characters) 2 = Incoming Ring Group 0~100 (IRG Number) P=Pause R=Recall @= Additional Digits when using ISDN functionality (default not assigned)	✓		
14-01-30	<b>Basic Trunk Data Setup – Flexible Ringing by Caller ID</b>	Enable/Disable Flexible ringing on each Trunk port base.	0 = Disable 1 = Enable (default = 1)	✓		
15-22-01	<b>Mobile Extension Setup – Mobile Extension Target Setup</b>	For each Mobile Extension number, select the Abbreviated Dial bin number to be associated with it.	0~1999 (0 = No setting 1~1999 = target of mobile extension) (default = 0)	✓		
15-22-03	<b>Mobile Extension Setup – Trunk Access Code</b>	Select whether the Normal or Individual Trunk access is used when making the call to the mobile number.	0 = Use normal trunk access code (Program 11-09-01) 1 = Use individual trunk access code (Program 11-09-02) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-22-04	<b>Mobile Extension Setup – Call Back</b>	Select whether or not the system will try to call back a mobile extension user.	0 = Don't call back 1 = Call back (default = 0)		✓	
20-01-16	<b>System Options – Mobile Extension Callback Duration Time</b>	Determines the amount of time the system will call back a mobile extension user before abandoning the call.	1~64800 seconds (default = 15 seconds)		✓	
20-31-24	<b>Timer Class Timer Assignment – Answer Time from Mobile Extension</b>	This program defines the data corresponding to Program 22-01-12. Refer to Timer Class for Extension.	0 = Immediate Answer 1~64800 seconds (default = 3 seconds)		✓	
20-31-25	<b>Timer Class Timer Assignment – Mobile Extension Callback Duration Time</b>	This program defines the data corresponding to Program 22-01-12. Refer to Timer Class for Extension.	1~64800 seconds (default = 15 seconds)		✓	
22-01-12	<b>System Options for Incoming Calls – Mobile Extension Answer Time</b>	Determines the amount of time before the mobile extension will answer with internal dial tone. Extend this timer long enough for 1 ring cycle to complete, giving the mobile extension user time to hang up and wait for callback.	1~64800 seconds (default = 3 seconds)	✓		

## Operation

With any feature, if the Mobile Extension user presses \*, an existing call is placed in hold. Pressing \* a second time or the timeout of the inter-digit timer returns the call to conversation mode.

### Using Analog Lines with the Mobile Extension:

Analog lines can be used for integration with the Mobile Extension using either DILs or VRS Auto Attendant to access the Mobile Extension Proxy Port. However, it must be noted that the \*0 Hang Up code must be used prior to terminating any call (e.g., transfer, hang up etc.) as analog trunks do not provide Disconnect Supervision.

### Placing an Intercom Call to a Mobile Extension:

1. Lift the handset or press **SPK**.
2. Dial the extension number assigned to the Mobile Extension.  
If the Mobile Extension is turned off, incoming callers hear a message indicating the user is not available. The setting in the DTMF Confirmation programming (Program 15-22-02) determines how the call is handled.

**Program 15-22-02 set to 0 or 1 (DTMF Confirmation Required):**

The caller is retrieved by the UNIVERGE SV8100 and follows the no-answer programming (ring another extensions, forward to UNIVERGE SV8100 voice mail, etc.)

**Program 15-22-02 set to 2 (No DTMF Confirmation Required):**

The caller is forwarded to the external extension voice mail, if available.

**Outside Party Dialing the Mobile Extension**

1. Dial the DID or DIL telephone number for the Mobile Extension.

System programming (DID=22-11-01 or DIL=22-07-01) must be defined.

If the Mobile Extension is turned off, incoming callers hear a message indicating the user is not available. The setting in the DTMF Confirmation programming (Program 15-22-02) determines how the call is handled.

**Program 15-22-02 set to 0 or 1 (DTMF Confirmation Required):**

The caller is retrieved by the SV8100 and follows the no-answer programming (ring another extension, forward to SV8100 voice mail, etc.)

**Program 15-22-02 set to 2 (No DTMF Confirmation Required):**

The caller is forwarded to the external extension voice mail, if available.

**Placing a Call from the Mobile Extension**

1. Dial the DID or DIL telephone number for the Mobile Extension.

If the Caller ID of the Mobile Extension matches the Speed Dial bin entry (Program 13-04 and 15-22), internal dial tone is heard by the Mobile Extension user.

2. Dial the desired Intercom number or dial the trunk access code to place an outgoing call.

**Answering a Call on the Mobile Extension**

1. Answer the ringing call.
2. If Program 15-22-02 is set to 0 or 1, the Mobile Extension user hears Music on Hold/ring tone. Press \* (within 10 seconds) to answer the call.

This step is required when using analog trunks for the Mobile Extension feature.

**Sending a Flash from the Mobile Extension**

1. While on a conversation, a hook flash is returned by dialing \*# from the Mobile Extension.

**Internal Dial Tone After Hang Up**

1. When a call is finished, disconnect the call and receive internal dial tone by dialing \*0.

**Placing/Retrieving a Call on Hold from the Mobile Extension**

1. While on a call, press \* #.
2. To retrieve the held call, with system dial tone, press \* #.

**Swapping Between Two Held Calls from the Mobile Extension**

1. While on a call, press \* #.  
The first call is placed on Hold.
2. Place second call, then place on Hold by pressing \* #.  
The second call is placed on Hold and the first call is picked up.
3. The Mobile Extension can connect the two held calls with Automatic On-Hook Transfer if Program 20-11-11 is enabled by dialing \* 0.

**Transferring a call from the Mobile Extension**

1. With an active call, press \* #.
2. Dial the extension number to which the call is to be transferred.
3. Dial \* 0.
4. Hang up.

**Call Forwarding:**

When setting Call Forwarding from the Mobile Extension, the service code(s) must be defined in Programs 11-11-01~11-11-05 and 11-11-07.

**To activate or cancel Call Forwarding to/from the Mobile Extension:**

1. ***When activating Call Forwarding From the Mobile Extension:***  
Dial the DID or DIL telephone number for the Mobile Extension.  
If the Caller ID of the Mobile Extension matches the Speed Dial bin entry (Program 13-04 and 15-22), internal dial tone is heard by the Mobile Extension user.

**-OR-**

When activating Call Forwarding to the Mobile Extension:  
Press **CALL** key or lift the handset.

2. Dial the service code defined in Program 11-11-01~11-11-05 and.
3. Dial Call Forwarding condition:  
1 = Set  
0 = Cancel
4. Dial the destination extension or Off-Premise number.
5. Dial \* 0 (from Mobile Extension only).
6. Hang up.

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**To activate Call Forward Follow Me:****1. *When activating Call Forwarding From the Mobile Extension:***

Dial the DID or DIL telephone number for the Mobile Extension.

If the Caller ID of the Mobile Extension matches the Speed Dial bin entry (Program 13-04 and 15-22), internal dial tone is heard by the Mobile Extension user.

**-OR-**

When activating Call Forwarding to the Mobile Extension:

Press **SPK** or lift the handset.

2. Dial 746.
3. Dial Call Forwarding condition:  
1 = Set  
0 = Cancel
4. Dial the destination extension.
5. Dial \* 0 (from Mobile Extension only).
6. Hang up.

**To cancel Call Forward Follow Me:****1. *When activating Call Forwarding From the Mobile Extension:***

Dial the DID or DIL telephone number for the Mobile Extension.

If the Caller ID of the Mobile Extension matches the Speed Dial bin entry (Program 13-04 and Program 15-22), internal dial tone is heard by the Mobile Extension user.

**-OR-**

When activating Call Forwarding to the Mobile Extension:

Press **SPK** or lift the handset.

2. Dial 746.
3. Dial **0**.
4. Dial destination Station to Cancel Forward Follow Me extension or Dial 0 to cancel all.
5. Dial \* 0 (from Mobile Extension only).
6. Hang up.

**Receive Callback:****Receive call from Mobile Extension and Callback:**

Cell phone number: 09012345678  
Incoming trunk set up: 22-02: Trk1, DIL  
Mobile Extension set up: Ext150  
Program 15-22-01: Speed Dial bin No, 50  
Program 15-22-03: Trunk access code, 0: Use normal trunk access code  
Program 15-22-04: Callback, (1) Enable

Speed Dial bin set up: No.50  
Program 13-04-01: 09012345678  
Program 13-04-03: Transfer mode, (1) Extension  
Program 13-04-04: Destination, 150

Callback timer set up  
Program 22-01-12: Answer time from Mobile Extension, 3 seconds  
Program 20-01-16: Mobile Extension Callback Duration time, 15 seconds  
Program 20-18-01: Extension Dial Tone Time, 30 seconds

1. Call the system Trk1 from the cell phone setting as a mobile extension (Ex 150).
2. The Cell Phone user hangs up within 3 seconds, before system answers.
3. System makes the Callback to the cell phone.
4. Answer the cell phone within 15 seconds.
5. Cell phone hears a dial tone and dials \* before 30 seconds.

**Receive call from Mobile Extension, but system answered:**

1. Call the system Trk1 from the cell phone setting as a mobile extension (Ex 150).
2. Cell Phone user continues ring for longer than 3 seconds, then system answers.
3. Cell phone user hears a dial tone.

**Cell phone does not answer to Callback:**

1. Call the system Trk1 from the cell phone setting as a mobile extension (Ex 150).
2. The Cell Phone user hangs up within 3 seconds, before system answers.
3. System makes the Callback to the cell phone.
4. The Cell phone does not answer the call within 15 seconds.
5. System disconnects the call.

**After Callback answered, but does not send any DTMF:**

1. Call the system Trk1 from the cell phone setting as a mobile extension (Ex 150).
2. The Cell Phone user hangs up within 3 seconds, before system answers.
3. System makes the Callback to the cell phone.
4. The Cell Phone answers within 15 seconds.
5. The Cell phone hears a dial tone but does not send any DTMF within 30 seconds.
6. System disconnects the call.

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## *Multiple Trunk Types*

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### **Description**

The UNIVERGE SV8100 supports many different Trunks in the system (DID, E&M Tie Lines, Loop Start, Ground Start, ISDN BRI, ISDN PRI, and T-1 trunks). The system supports up to 200 trunks in the expanded port package, and a maximum of 56 trunks in the basic port package.

#### DID

Refer to the [Direct Inward Dialing \(DID\)](#) feature for related information.

#### E&M Tie Lines

E&M Tie Lines (4-Wire) can be connected to the system to provide communication between remote systems and facilities. The system can receive and/or transmit DTMF or DP signals on E&M Tie Lines.

#### Ground Start Trunks

Ground Start Trunks can be connected to the system. Ground and Loop Start Trunks can be mixed in the system per trunk. Ground Start Trunks are provided with line supervision to reduce call collisions.

#### Loop Start Trunks

Loop Start Trunks can be connected to the UNIVERGE SV8100 system. Loop Start is assigned per trunk at the associated blade. Ground Start and Loop Start Trunks can be mixed in the system per trunk.

#### ISDN BRI

Refer to the [ISDN Compatibility on page 2-891](#) feature for related information.

#### ISDN PRI

Refer to the [ISDN Compatibility on page 2-891](#) feature for related information.

#### T-1 Trunks

Refer to the [T1 Trunking \(with ANI/DNIS Compatibility\) on page 2-1561](#) feature for related information.

### **Conditions**

- Each CD-4ODTA supports four 4-wire E&M Tie Lines.
- Ground Start Trunks do not support Caller ID.

- When adding or removing padding for trunks, use Program 14-01 for all trunks except the PRI trunks in a Migration cabinet. Use Program 81-12 to add or remove padding for PRI trunks in a migration cabinet.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

Any Trunk Blade

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## **Related Features**

**Automatic Route Selection**

**Call Appearance (CAP) Keys**

**Caller ID**

**Direct Inward Dialing (DID)**

**ISDN Compatibility**

**T1 Trunking (with ANI/DNIS Compatibility)**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-01	<b>Basic Trunk Data Setup – Trunk Name</b>	Set the names for trunks. The trunk name is displayed on a multiline terminal for incoming and outgoing calls.	Up to 12 Characters Default: Line 001 Line 002 Line 003 : Line 200		✓	
25-07-01	<b>System Timers for VRS/DISA – VRS/DISA Dial Tone Time</b>	After answering a VRS/DISA trunk, the system waits this time for the caller to dial the first digit of the DISA password. If the caller fails to dial during this time, the system drops the call.	0~64800 (seconds) (default = 10)		✓	
34-01-02	<b>E&amp;M Tie Line Basic Setup – Receive Dial Type for E&amp;M Tie Line</b>	For DID and tie trunks, set the trunk signaling.	0 = DP 1 = DTMF (default = 1)		✓	

### Loop Start/Ground Start Trunks:


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-14	<b>Analog Trunk Data Setup – Loop Start/Ground Start</b>	Indicate if the Analog trunk is Loop Start or Ground Start.	0 = Loop Start (Loop) 1 = Ground Start (Ground) (default = 0)	✓		
14-04-01	<b>Behind PBX Setup</b>	Indicate if the trunk is installed behind a PBX (1) or not (0). There is one item for each Night Service Mode.	0 = Stand Alone (Trunk) 1 = Behind PBX (PBX) 2 = Not Used 3 = CTX assume 9 (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to Trunk Groups. You can also assign the outbound priority for trunks in the group. When users dial the trunk group, they seize the trunks in the order you specify in the outbound priority entry.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)	✓		
22-02-01	<b>Incoming Call Trunk Setup</b>	For each Night Service mode, enter service type for each trunk.	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
81-10-01	<b>COT Initial Data Setup – DP Interdigit Time Selection</b>	Select the DP Interdigit Time (minimum pause time between Dial Pulses).	0 = Pattern A (Pattern A: 10pps – 650ms, 20pps - 500ms) 1 = Pattern B (Pattern B: 10pps – 800ms, 20pps - 800ms) [default = 1 (Pattern B)]			✓
81-10-02	<b>COT Initial Data Setup – Prepause Time Selection</b>	Specify the loop open time for a hookflash signal sent to the CO or PBX when Recall on a multiline terminal is pressed. A single line telephone generates a hookflash to the CO or PBX line when a single line telephone hookflash is assigned.	1~13 (1~13 seconds) (0 = No Setting) (default = 1 second)			✓
81-10-03	<b>COT Initial Data Setup – Incoming Signal Detect Time Selection</b>	Specify the time after the incoming signal from another system is detected before the acknowledge signal is sent out.	0~15 (50~800ms) [default = 3 (200ms)]			✓
81-10-04	<b>COT Initial Data Setup – Disconnect Recognition Time Selection</b>	Specify the minimum time before a disconnected circuit can be accessed again.	1~15 (100ms~1.5 seconds) (0 = No Setting) [default = 3 (300ms)]			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
81-10-05	<b>COT Initial Data Setup – Auto Release Signal Detection Time</b>	Specify the signal detection time for release of a CO/PBX line after a disconnect signal is received from the distant Central Office or PBX.	1~14 (50~700ms) 15 = (No limit) (0 = No Setting) [default = 7 (350ms)]			✓

**Tie Lines:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	If the system has DTMF Tie Lines, be sure to reserve at least one circuit for analog trunk DTMF reception (type 0 or 2). ○ Use the following as a guide when allocating DTMF receivers: ✍ <i>In light traffic sites, allocate one DTMF receiver for every 10 devices that use them.</i> ✍ <i>In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.</i>	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
14-01-02	<b>Basic Trunk Data Setup – Transmit Level</b>	Customize the transmit level of the CODEC Gain for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]			✓
14-01-03	<b>Basic Trunk Data Setup – Receive Level</b>	Customize the receive level of the CODEC Gain for each trunk as required.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]			✓
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	Enable loop supervision for each Tie Line that should be able to place outgoing calls.	0 = Disable 1 = Enable (default = 1)		✓	
14-02-01	<b>Analog Trunk Data Setup – Signaling Type (DP/DTMF)</b>	Set the outgoing signaling type for the tie trunk. To set incoming signaling, refer to Program 34-01-02.	0=Dial Pulse (10 PPS) 1=Dial Pulse (20 PPS) 2=DTMF (default = 2)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Program Tie Lines of similar type into the same trunk group. The system uses trunk groups for outgoing access to Tie Lines (i.e., Service Code 704 + group). Also see Program 34-05-01.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)	✓		
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified).	✓		
20-01-05	<b>System Options – DTMF Receive Active Time</b>	After answering the Tie Line call, the system attaches a DTMF receiver to the Tie Line for this time.	0~64800 (seconds) (default = 10)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-14-01	<b>Class of Service Options for DISA/E&amp;M – First Digit Absorption (Delete First Digit Dialed)</b>	For Tie Lines, turn Off or On the ability to absorb (ignore) the first incoming digit. Use this to make the tie trunk compatible with 3- and 4-digit Tie Line service. This option does not apply to DISA.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-02	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Routing/ARS Access</b>	Turn Off or On a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-03	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Access</b>	Turn Off or On a DISA or tie trunk caller ability to access trunk groups for outside calls (Service Code 704).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-04	<b>Class of Service Options for DISA/E&amp;M – Outgoing System Speed Dial</b>	Turn Off or On a DISA or tie trunk caller ability to use the System Speed Dialing.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-05	<b>Class of Service Options for DISA/E&amp;M – Operator Calling</b>	Turn Off or On a DISA or tie trunk caller ability to dial 0 for the telephone system operator.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-06	<b>Class of Service Options for DISA/E&amp;M – Internal Paging</b>	Turn Off or On a DISA or tie trunk caller ability to use the telephone system Internal Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-07	<b>Class of Service Options for DISA/E&amp;M – External Paging</b>	Turn Off or On a DISA or tie trunk caller ability to use the telephone system External Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-08	<b>Class of Service Options for DISA/E&amp;M – Direct Trunk Access</b>	Turn Off or On a DISA or tie trunk caller ability to use Direct Trunk Access (Service Code 715).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-09	<b>Class of Service Options for DISA/E&amp;M – Forced Trunk Disconnect &lt;Not for ISDN T-point&gt;</b>	Turn Off or On a tie trunk caller ability to use Forced Trunk Disconnect (Service Code *26). This option is not available to DISA callers.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-10	<b>Class of Service Options for DISA/E&amp;M – Call Forward Setting by Remote via DISA</b>	Turn Off or On a DISA caller ability to use the Call Forward service codes (Program 11-11-01 through Program 11-11-05).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Turn Off or On a DISA or tie trunk caller ability to use Barge-In.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-12	<b>Class of Service Options for DISA/E&amp;M – Retrieve Park Hold</b>	Turn Off or On a DISA caller ability to retrieve parked or held calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
21-05-01	<b>Toll Restriction Class – International Call Restriction Table</b>	For the Toll Restriction Class you select, Assign or Unassign the International Call Restrict Table (Program 21-06-01).	0 = Unassign (No) 1 = Assign (Yes) default: 1, 6~15 = 0 2~5 = 1		✓	
21-05-02	<b>Toll Restriction Class – International Call Permit Code Table</b>	For the Toll Restriction Class you select, Assign or Unassign the International Call Permit Table (Program 21-06-02).	0 = Unassign 1 = Assign default: 1, 3~15 = 0 2 = 1		✓	
21-05-04	<b>Toll Restriction Class – Maximum Number of Digits Table Assignment</b>	Select the table (Program 21-06-03) to be used to determine the maximum number of digits allowed for outgoing calls.	1~4 = Table 0 = Disable (None) Default: 1, 2, 6~15 = 0 3 = 1 4 = 2 5 = 3		✓	
21-05-05	<b>Toll Restriction Class – Common Permit Code Table</b>	Choose whether to refer or not refer to the table set up by Program 21-06-04.	0 = Not Refer 1 = Refer Default: 1, 8~15 = 0 2~7 = 1		✓	
21-05-06	<b>Toll Restriction Class – Common Restriction Table</b>	Choose whether to refer or not refer to the table set up by Program 21-06-05.	0 = Not Refer 1 = Refer Default: 1, 6~15 = 0 2~5 = 1		✓	
21-05-07	<b>Toll Restriction Class – Permit Code Table</b>	Set the tables 1~4 when referring to the table set up by Program 21-06-06.	1~4 = Table 0 = Disable (None) Default: 1, 2, 6~15 = 0 3 = 1 4 = 2 5 = 3		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-05-08	<b>Toll Restriction Class – Restriction Table</b>	Set the tables 1~4 when referring to the table set up by Program 21-06-07.	1~4 =Table 0 = Disable (None) Default: 1, 2, 6~15 = 0 3 = 1 4 = 2 5 = 3		✓	
21-05-09	<b>Toll Restriction Class – Restriction for Common Speed Dials</b>	For the Code Restriction Class you select, Enable/Disable Code Restriction for Common Speed Dialing numbers.	0 = Disable 1 = Enable (default = 0)		✓	
21-05-10	<b>Toll Restriction Class – Restriction for Group Speed Dials</b>	For the Toll Restriction Class you select, Enable/Disable Code Restriction for Group Speed Dialing numbers.	0 = Disable 1 = Enable (default =0)		✓	
21-05-11	<b>Toll Restriction Class – Intercom Call Restriction</b>	For the Toll Restriction Class you select, Enable/Disable Intercom Call Restriction. If enabled, extensions cannot place or receive Intercom calls.	0 = Disable 1 = Enable (default = 0)		✓	
21-05-12	<b>Toll Restriction Class – PBX Call Restriction</b>	Set how the system Toll Restricts calls over PBX trunks. If you enable PBX Toll Restriction, the system begins Toll Restriction after the PBX access code. The user cannot dial a PBX extension. If you disable Toll Restriction, the system only restricts calls that contain the PBX access code, but does not restrict calls to PBX extensions. Refer to PBX compatibility feature.	0 = Disable 1 = Enable Default: 1~6, 8~15 = 0 7 = 1		✓	
21-05-13	<b>Toll Restriction Class – Restriction of Tie Line Calls</b>	Enable/Disable toll restriction for Tie Line calls (defined in Program 34-08-01).	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Set the feature type for the trunk you are programming. For each Night Service mode, enter 5 when the trunk should be an E&M tie line.	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
34-01-01	<b>E&amp;M Tie Line Basic Setup – DID/ E&amp;M Start Signaling</b>	Set the start signaling mode for DID and Tie trunks. They can use either immediate start or Wink start signaling.	0 = 2nd Dial Tone 1 = Wink (default) 2 = Immediate 3 = Delay (default = 1)		✓	
34-01-03	<b>E&amp;M Tie Line Basic Setup – E&amp;M Dial-In Mode</b>	Determine if the incoming Tie Line call should be directed as an intercom call or if it should follow the DID Translation Table in Program 22-11-01.	0 = Specify Extension Number (Intercom) 1 = Use Conversion Table (NTT) (default = 0)		✓	
34-01-04	<b>E&amp;M Tie Line Basic Setup – E&amp;M Line Dial Tone</b>	Enable if the Tie Line should send dial tone to the calling system after the call is set up. Disable if the Tie Line should not send dial tone.	0 = Disable (No) 1 = Enable (Yes) (default = 1)		✓	
34-01-05	<b>E&amp;M Tie Line Basic Setup – System Toll Restriction</b>	Determine if an incoming Tie Line call should be subject to Toll Restriction.	0 = No (Off) 1 = Yes (On) (default = 0)		✓	
34-02-01	<b>E&amp;M Tie Line Class of Service</b>	Assign the Tie Line Class of Service (1~15). Use Program 20-14-01 to set the Tie Line Class of Service options. You cannot use Program 20-06 to assign Class of Service to Tie Lines.	Day/Night Mode 1~8 Class: 1~15 (default = 1)		✓	
34-03-01	<b>Trunk Group Routing for E&amp;M Tie Lines</b>	Assign the trunk group route chosen when a user seizes a Tie Line and dials 9. Set Trunk Group Routing in Program 14-06-01. If the system has ARS, dial 9 to access ARS.	0~100 (0 = No Setting) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
34-04-01	<b>E&amp;M Tie Line Toll Restriction Class</b>	If the system uses Toll Restriction, enter a Toll Restriction Class (1~15) for each Tie Line. The system uses the class you enter in Program 21-05 and 21-06. Make a separate Toll Restriction Class entry for each night service mode. You cannot use Program 20-06 to assign Toll Restriction to Tie Lines.	1~15 (default = 2)		✓	
34-05-01	<b>Tie Line Outgoing Call Restriction</b>	Build a restriction matrix for outgoing trunk calls placed over a Tie Line. For each Tie Line trunk group, Enable/ Disable outgoing access to each CO trunk group.	0 = Enable (Y-Tandem) 1 = Disable (N-Tandem) (default = 0)	✓		
34-06-01	<b>Add/Delete Digit for E&amp;M Tie Line – Delete Digit</b>	Some Tie Line networks pass the location number and extension number to the remote side. If the system should ignore these digits, use this program to define the number of digits which should be deleted for a call.	0~255 (255 = delete all digits) (default = 0)		✓	
34-06-02	<b>Add/Delete Digit for E&amp;M Tie Line – Additional Dial Digits</b>	If a Tie Line network requires additional digits to reroute the call to a location, enter the digits for the location which should be added to the received digits.	Up to four digits 0~9, *, # (default not assigned)		✓	
34-07-01	<b>E&amp;M Tie Line Timer – First Digit Pause (E&amp;M Immediate Start)</b>	Define the First Digit Pause (E&M Immediate Start) timer.	0~64800 (seconds) (default = 3)			✓
34-07-02	<b>E&amp;M Tie Line Timer – First Digit Pause (E&amp;M Wink Start)</b>	Define the First Digit Pause (E&M Wink Start) timer.	0~64800 (seconds) (default = 0)			✓
34-07-03	<b>E&amp;M Tie Line Timer – First Digit Pause (LD Trunk)</b>	Define the First Digit Pause (LD Trunk) timer.	0~64800 (seconds) (default = 3)			✓
34-07-04	<b>E&amp;M Tie Line Timer – LD Trunk Guard Time</b>	Define the LD Trunk Guard Time.	0~64800 (seconds) (default = 0)			✓
34-07-05	<b>E&amp;M Tie Line Timer – Trunk Answer Detect Timer for E&amp;M</b>	Define the Trunk Answer Detect Timer for E&M timer.	0~64800 (seconds) (default = 30)			✓
34-08-01	<b>Toll Restriction Data for E&amp;M Tie Lines</b>	Define the toll restriction data for E&M Tie Lines if required. This must be defined if toll restriction is enabled in Program 21-05-13.	Up to 10 digits (0~9, *, #) (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Use Items 11~32 to set the criteria for dial tone detection for outgoing ARS calls.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1~5 = 0			✓
80-03-02	<b>DTMF Tone Receiver Setup – Start Delay Time</b>	Define the start delay time for DTMF Tone Receiver.	0~255 (0.25ms~64ms) default: Type 1~5 = 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	DTMF Tone Receiver Setup – Min. Detect Level	Define the minimum detection level for DTMF Tone Receiver.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-04	<b>DTMF Tone Receiver Setup – Max. Detect Level</b>	Define the maximum detection level for DTMF Tone Receiver.	0~15 detect level 0: 0dBm(0) to -15dBm(15) detect level 1: -5dBm(0) to -20dBm(15) detect level 2: -10dBm(0) to -25dBm(15) detect level 3: -15dBm(0) to -30dBm(15) detect level 4: -20dBm(0) to -35dBm(15) detect level 5: -25dBm(0) to -40dBm(15) detect level 6: -30dBm(0) to -45dBm(15) detect level 7: -35dBm(0) to -50dBm(15) detect level 8: -40dBm(0) to -55dBm(15) detect level 9: -45dBm(0) to -60dBm(15) detect level 10: -50dBm(0) to -65dBm(15) detect level 11: -55dBm(0) to -70dBm(15) detect level 12: -60dBm(0) to -75dBm(15) detect level 13: -65dBm(0) to -80dBm(15) detect level 14: -70dBm(0) to -85dBm(15) detect level 15: -75dBm(0) to -90dBm(15) default: Type 1~5 = 2 (-2dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-05	<b>DTMF Tone Receiver Setup – Forward Twist Level</b>	Define the forward twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1~5 = 5 (6dBm)			✓
80-03-06	<b>DTMF Tone Receiver Setup – Backwards Twist Level</b>	Define the backwards twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1~5 = 0 (1dBm)			✓
80-03-07	<b>DTMF Tone Receiver Setup – ON Detect Time</b>	Define the On detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1~5 = 1 (30ms)			✓
80-03-08	<b>DTMF Tone Receiver Setup – OFF Detect Time</b>	Define the Off detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1~5 = 1 (30ms)			✓
80-04-01	<b>Call Progress Tone Detector Setup – Detection Level</b>	Define the detection levels for the Call Progress Tone Detector.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1 (DT) – 0 (-25dBm) Type 2 (BT) – 0 (-25dBm) Type 3 (RBT) – 0 (-25dBm) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-02	<b>Call Progress Tone Detector Setup – Min. Detection Level</b>	Define the minimum detection levels for the Call Progress Tone Detector.	0~15 detect level 0: –15dBm(0) to –30dBm(15) detect level 1: –30dBm(0) to –45dBm(15) detect level 2: –40dBm(0) to –55dBm(15) default: Type 1 (DT) – 15 (-25dBm) Type 2 (BT) – 15 (-25dBm) Type 3 (RBT) – 15 (-25dBm) Type 4, Type 5 – 0			✓
80-04-03	<b>Call Progress Tone Detector Setup – S/N Ratio</b>	Define the S/N ratio for the Call Progress Tone Detector.	0~4 (0dB ~ -20dB) default: Type 1 (DT) – 4 (-20dB) Type 2 (BT) – 4 (-20dB) Type 3 (RBT) – 4 (-20dB) Type 4, Type 5 – 0			✓
80-04-04	<b>Call Progress Tone Detector Setup – No Tone Time</b>	Define the no tone time for the Call Progress Tone Detector.	0~255 (30+30-7680 ms) The formula is 30+30N. When set to N=1, it means 30+30*1=60 When set to N=255, it means 30+30*255=7680 (0 =not detect) default: Type 1 (DT) – 132 (3990ms) Type 2 (BT) – 132 (3990ms) Type 3 (RBT) – 132 (3990ms) Type 4, Type 5 – 0			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-05	<b>Call Progress Tone Detector Setup – Pulse Count</b>	Define the pulse count for the Call Progress Tone Detector.	1~255 default: Type 1 (DT) – 1 Type 2 (BT) – 1 Type 3 (RBT) – 1 Type 4, Type 5 – 0			✓
80-04-06	<b>Call Progress Tone Detector Setup – ON Minimum Time</b>	Define the on minimum time for the Call Progress Tone Detector.	1~255 (30+30-7680ms) default: Type 1 (DT) – 9 (300ms) Type 2 (BT) – 12 (300ms) Type 3 (RBT) – 25 (780ms) Type 4, Type 5 – 0			✓
80-04-07	<b>Call Progress Tone Detector Setup – ON Maximum Time</b>	Define the on maximum time for the Call Progress Tone Detector.	0~255 (30+30-7680ms) default: Type 1 (DT) – 0 Type 2 (BT) – 20 (450ms) Type 3 (RBT) – 40 1230ms) Type 4, Type 5 – 0			✓
80-04-08	<b>Call Progress Tone Detector Setup – OFF Minimum Time</b>	Define the off minimum time for the Call Progress Tone Detector.	1~255 (30+30-7680 ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 12 (300 ms) Type 3 (RBT) – 83 (2520ms) Type 4, Type 5 – 0			✓
80-04-09	<b>Call Progress Tone Detector Setup – OFF Maximum Time</b>	Define the off maximum time for the Call Progress Tone Detector.	0~255 (30+30-7680 ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 20 (450ms) Type 3 (RBT) – 115 (3480ms) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
81-11-01	<b>Tie Line Initial Setup – DP Interdigit Time Selection</b>	Select the DP Interdigit Time (minimum pause time between Dial Pulses).	0 = Pattern A (Pattern A: 10pps – 650ms, 20pps - 500ms) 1 = Pattern B (Pattern B: 10pps – 800ms, 20pps - 800ms) (default = 1)			✓
81-11-02	<b>Tie Line Initial Setup – Prepause Time Selection</b>	Specify the loop open time for a hookflash signal sent to the Tie Line when the Recall key on a multiline terminal is pressed. A single line telephone generates a hookflash to the Tie Line when a single line telephone hookflash is assigned.	1~4 (1~4 = 0.5~2.0 seconds) (5~15 = 3.0~13 seconds) (0 = No Setting) (default = 0)			✓
81-11-03	<b>Tie Line Initial Setup – Tie Line Answer Detect Time Selection</b>	Specify the time before a SV8100 System answer (off-hook) is recognized as an answer.	0~15 (130ms~1950ms) (0 = No Setting) [default = 4 (520ms)]			✓
81-11-04	<b>Tie Line Initial Setup – Tie Line Release Detect Time Selection</b>	Specify the before the circuit disconnect detected on the Tie Line on the distant system side is recognized as Tie Line release.	0~15 (130ms~1950ms) (0 = No Setting) [default = 4 (520ms)]			✓
81-11-05	<b>Tie Line Initial Setup – Incoming Signal Detect Time Selection</b>	Specify the time after the incoming signal from another system is detected before the acknowledge signal is sent out.	[Wink Start] 1~15 (130ms~1950ms) (0 = No Setting) [Delay] 1~15 (30ms~450ms) (0 = No Setting) Default: [Wink Start] 3 (390ms) [Delay] 3 (90ms)			✓
81-11-06	<b>Tie Line Initial Setup – Loop Off-Guard Time Selection</b>	Assign the loop off-guard time to prevent noise that could cause the system to be unable to answer an incoming Tie Line.	1~4 (0.5 sec~2.0 seconds) 5~15 (3 sec~13 seconds) (0 = No Setting) [default = 4 (2.0ms)]			✓
81-11-07	<b>Tie Line Initial Setup – Length of Wink Signal Selection</b>	Specify the time a wink pulse is sent to another system.	0~15 (30ms~480 ms) [default = 5 (180ms)]			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
81-11-08	<b>Tie Line Initial Setup – Length of Delay Signal Selection</b>	Specify the time a delay pulse is sent to another system.	1~15 (300 ms~4.5 seconds) (0 = No Setting) [default = 1 (300ms)]			✓
81-11-09	<b>Tie Line Initial Setup – Incoming Interdigit Timeout Selection</b>	Specify the time that an address signal is missing during the incoming call detection process before an error tone is returned to the other system.	0 = 8 1~15 (1~15 seconds) (default = 6)			✓
81-11-10	<b>Tie Line Initial Setup – Wink/Delay Signal Detect Timeout Selection</b>	Specify a maximum time for receiving an acknowledgment signal from a distant system before sending a busy tone.	0 = 8 1~15 (1~15 seconds) (default = 7)			✓
81-11-11	<b>Tie Line Initial Setup – Disconnect Recognition Time Selection</b>	Specify the minimum time before a disconnected circuit can be accessed again.	1~15 (0.1~1.5 seconds) (0 = No Setting) [default = 3 (0.3 seconds)]			✓
81-11-12	<b>Tie Line Initial Setup – Automatic Release Signal Detection Selection</b>	Specify the signal detection time for release of a Tie Line after a disconnect signal is received from the distant Central Office or PBX.	1~14 (50~700 ms) 15 = (No Limit) (0 = No Setting) [default = 7 (350ms)]			✓
81-11-13	<b>Pause Time Selection</b>	Specify the length of a pause (500~7500ms).	1~15 (500~7500ms) [default = 6 (3000ms)]			✓

## Operation

None

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# Music on Hold


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## Description


Music on Hold (MOH) sends music to calls on Hold and parked calls. The music lets the caller know that the call is waiting, not forgotten. Without Music on Hold, the system provides silence to these types of calls. The Music on Hold source can be internal (tone) or from an external customer-provided music source (i.e., tape deck, receiver, etc.). The customer-provided source can connect to a PGD(2)-U10 ADP analog port or to a connector on the CD-CP00-US.

## Option Available for Using System Tone

The Music on Hold feature has been enhanced to allow callers to hear a system tone instead of playing the internal or external music.

 *In accordance with U.S. copyright law, a license may be required from the American Society of Composers, Authors and Publishers (ASCAP) or other similar organizations, if radio, television broadcasts or music other than material not in the public domain are transmitted through the Music on Hold feature of telecommunications systems. NEC America, NEC Unified Solutions, Inc., and NEC Infrontia hereby disclaim any liability arising out of the failure to obtain such a license.*

## Conditions

- A maximum of 97 Music on Hold sources are possible; 96 from PGD(2)-U10 ports and one from the connector on the CD-CP00-US.
- External music on hold source for internal calls is provided only via audio input on the CD-CP00-US. Program 10-04-01 is to be set for 1 = External Source.
- No music is provided to internal calls on hold via the ACI input.
- Use the combination of Program 10-04, Program 10-21, Program 10-38 and Program 14-08.
- The PGD(2)-U10 ADP can connect to a CD-8DLCA, CD-16DLCA, or CD-LTA.
  -  *A maximum of 56 PGD(2)-U10 ADP units can be installed in an UNIVERGE SV8100 system. Refer to the UNIVERGE SV8100 System Hardware Manual for more information.*
- ACD can only support one Music on Hold source.

## Default Setting

Disabled

## System Availability

### Terminals

None

### Required Component(s)

Optional – PGD(2)-U10 ADP

Optional – Locally provided Background Music source (i.e., CD player, Radio, NEC Audio Emcee).

## Related Features


None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-04-01	Music on Hold Setup – Music on Hold Source Selection	Determine whether the system should use Internal MOH, External MOH, Service Tone, or VMDB. If set to 1, Program 14-08-01 must be set to 0 or 1.	0 = Internal MOH 1 = External MOH 2 = Service Tone 3 = VMDB (default = 2)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-04-02	<b>Music on Hold Setup – Music on Hold Tone Selection</b>	When Program 10-04-01 is set to Internal MOH, define the music that is played for Music on Hold.	[When Item 1 is 0] 1 = Download File1 2 = Download File2 3 = Download File3 [When Item 1 is 1, 2, or 3] 1~100 = VRS Message Number (default not assigned)		✓	
10-04-03	<b>Music on Hold Setup – Audio Gain Setup</b>	Set the Music on Hold audio gain (1~63).	1~63 (-15.5 +15.5dB) [default = 32 (0dB)]		✓	
10-21-04	<b>CD-CP00-US Hardware Setup – External Source I/O Selection on CD-CP00-US</b>	Define how the I/O ports on the CD-CP00-US are used.	0 = External MOH (CN8)/ External Speaker(CN9) 1 = BGM source (CN8)/ External Speaker (CN9) 2 = External MOH (CN8)/BGM source (CN9)  Relationship between CN number and Relay number are as follows: CN8 = Relay2 CN9 = Relay1 (default = 1)		✓	
14-08-01	<b>Music on Hold Source for Trunks – MOH Type</b>	Set the Music on Hold source for each trunk.	0 = Internal/External MOH 1 = Customer Provided Source Connected to BGM Port 2 = Customer Provided Source Connected to ACI Port (default = 0)	✓		
14-08-02	<b>Music on Hold Source Port Number – Source Port Number</b>	If the MOH type is 2 in Program 14-08-01, for each trunk enter the ACI source port number (1~96).	Source port 0-96 (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	

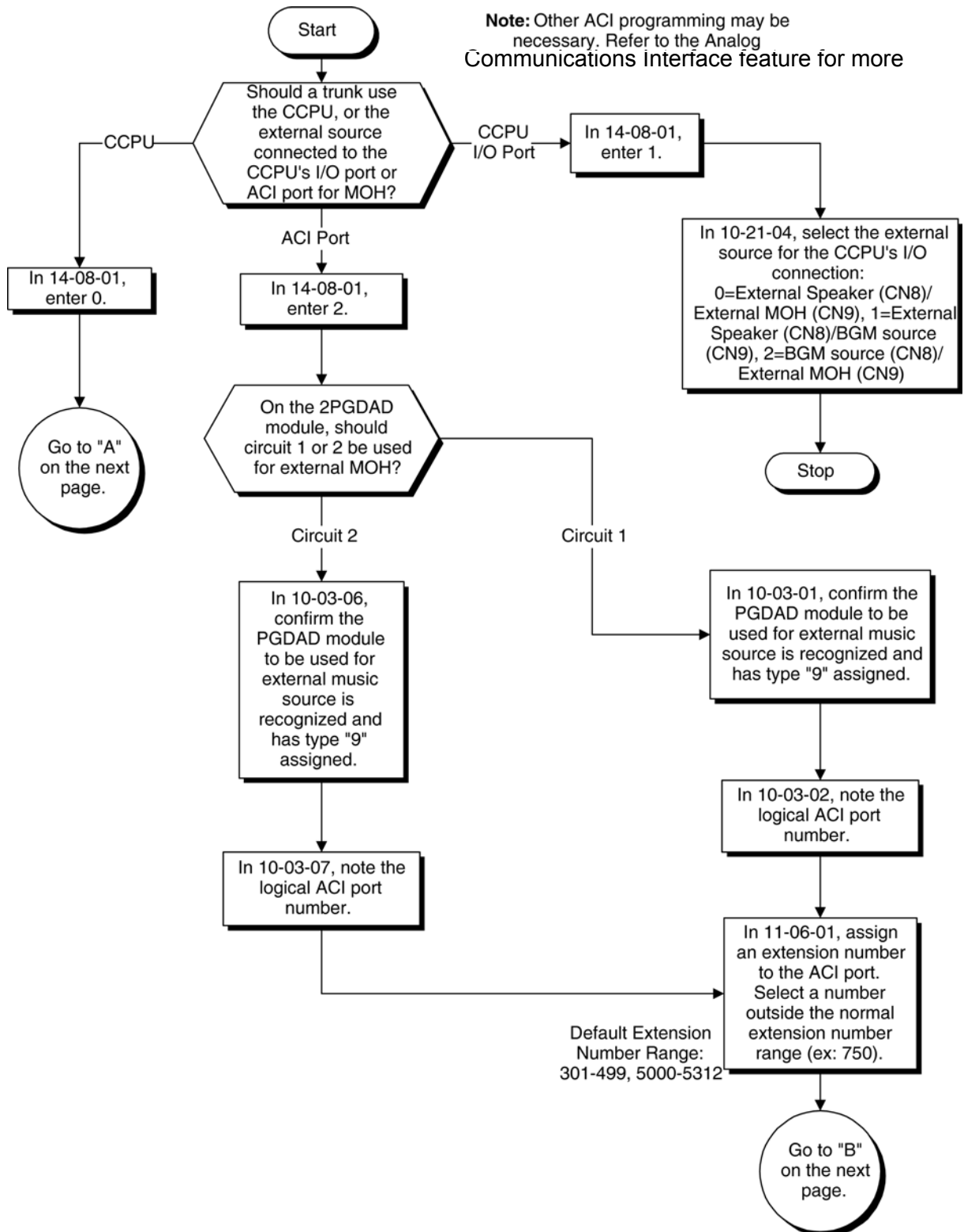
Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-02	<b>Class of Service Options (Administrator Level) – Changing the Music on Hold Tone</b>	Turn Off or On an extension user ability to change the Music on Hold tone.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
22-11-09	<b>DID Translation Number Conversion – Music On Hold Source</b>	For each DID Translation Table entry (1~2000), specify the source of music to be used for DID trunks.	0 = IC/MOH Port 1 = BGM Port 2 = ACI Port (default = 0)		✓	
22-11-10	<b>DID Translation Number Conversion – ACI Music Source Port</b>	For each DID Translation Table entry (1~2000), if item 2 is selected in Program 22-11-09, specify the port to be used for the source of music heard on DID trunks.	When a sound source type is 2 in above : (0~96) (default = 0)		✓	
80-01-01	<b>Service Tone Setup – Music On Hold Tone (Service Tone 64)</b>	Customize the repeat count for the music on hold tone if Program 10-01-01 is set to 2.	0~255 (0=Until On-Hook) (Default 0) Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a>			✓
80-01-02	<b>Basic Tone Number</b>	Customize the basic tone number for the music on hold tone if Program 10-01-01 is set to 2.	1~33 (0 = No Tone) (33=Default Time Slot)		✓	
80-01-03	<b>Duration Count</b>	Customize the duration count for the music on hold tone if Program 10-01-01 is set to 2.	1~255 (100~25500ms)		✓	
80-01-04	<b>Gain Level (dB)</b>	Customize the Gain Level for the music on hold tone if Program 10-01-01 is set to 2.	1~63 (-15.5 ~ +15.5)		✓	

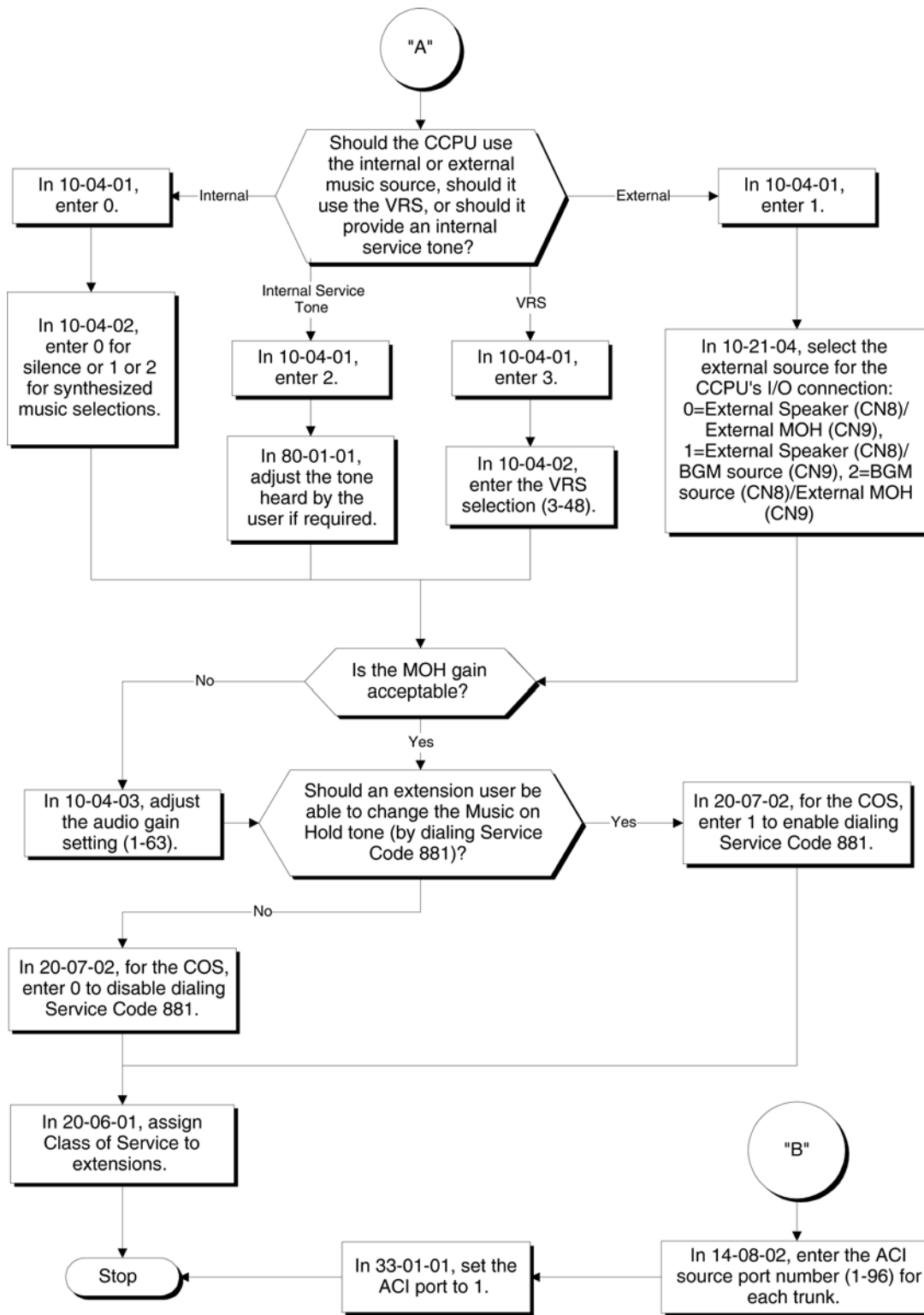


### When Using a PGD(2)-U10 ADP:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DLCA PKG Setup) – Terminal Type (B1)</b>	If a PGD(2)-U10 ADP is used for the external music source, the module is automatically assigned type 9 if the jumper straps in the module were set prior to connecting it to the system. If another type was assigned, disconnect the PGD(2)-U10 ADP from the system, delete the type setting, and, with the jumper straps positioned correctly in the PGD(2)-U10 ADP, reconnect the module to the system. Refer to the UNIVERGE SV8100 System Hardware Manual for the jumper strap settings.	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)	✓		
10-24-01	<b>Daylight Savings Setup – Daylight Savings Mode</b>	Enable/Disable the system ability to adjust the time for daylight savings/standard time.	0 = Disable 1 = Enable (default = 1)	✓		
11-06-01	<b>ACI Extension Numbering</b>	Each ACI port must be assigned an extension number. Assign the extension numbers to ACI software ports. Select a number outside of the normal extension number range.	ACI Ports: 1~96 (default not assigned)	✓		
11-08-01	<b>ACI Group Pilot Number – Dial</b>	Assign pilot numbers to ACI groups. When a user dials the pilot number, they reach an available ACI software port in the group.	Up to eight digits ACI Groups: 1~16 (default not assigned)	✓		
22-11-09	<b>DID Translation Number Conversion – Music On Hold Source</b>	For each DID Translation Table entry (1~2000), specify the source of music to be used for DID trunks.	0 = IC/MOH Port 1 = BGM Port 2 = ACI Port (default = 0)		✓	
33-01-01	<b>ACI Port Type Setup</b>	Set each ACI software port for Input or Input/Output. Use input ports for Music on Hold sources. Use output ports for External Paging/Ringer Control.	ACI Ports: 1~96 ACI Types: 0 = None 1 = MOH/BGM (Input) 2 = External Audio Port (Input/Output) (default = 2)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
33-02-01	ACI Department Calling Group	Assign ACI software ports to an ACI Department Group. This lets ACI callers connect to ACI software ports by dialing the group pilot number (set in Program 11-08).	ACI Ports: 1~96 ACI Groups: 1~16 Default: ACI Port/Group/Priority 01/ 1/ 1 02/ 1/ 2 : / : / : 96/ 1/ 96  Refer to <a href="#">Analog Communications Interface (ACI) on page 2-47</a> for additional information.	✓		
80-01-02	Service Tone Setup – Basic Tone Number	The following features require that the system tones listed below be changed to match the table. After changing these settings the chassis must be reset for the changes to take effect. <input type="radio"/> Call Screening <input type="radio"/> Call Holding <input type="radio"/> Busy Greeting <input type="radio"/> Await Answer Transfer	1~33 (0 = No Tone) (33=Default Time Slot) Refer to <a href="#">Table 2-34 Service Tone Setup, Program 80-01-02 on page 2-707</a> .	✓		







## Operation

None

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# Name Storing

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## Description

Extensions and trunks can have names instead of just circuit numbers. These names show on a multiline terminal display when the user places or answers calls. Extension and trunk names make it easier to identify callers. The user does not have to refer to a directory when processing calls. A name can have up to 12 digits, consisting of alphanumeric characters, punctuation marks and spaces.

## Additional Characters Available

When using Name Storing, the system now provides additional characters which can be used. These characters are available with any option which allows Name Storing - Speed Dial – System/Group/Station, One-Touch Keys, Extension Name, Trunk Naming.

## Conditions

- Display telephones use extension names for Directory Dialing.
- Single line extensions cannot program names.
- If a name is not assigned to the Extension/Virtual Extension, it does not show in the Extension Directory.
- Extension Directory only shows telephones/virtual extensions that have a name assigned in Program 15-01-01.

## Default Setting

Enabled

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## System Availability

### Terminals

All Multiline Terminals with Display

## Required Component(s)

None

## Related Features

Directory Dialing

Single Line Telephones, Analog 500/2500 Sets

Speed Dial – System/Group/Station

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-22	<b>Service Code Setup (for Setup/Entry Operation) – Extension Name Programming</b>	Customize the service code used to edit Extension Name Programming.	MLT (default = 700)		✓	
14-01-01	<b>Basic Trunk Data Setup – Trunk Name</b>	Set the names for trunks. The trunk name displays on a multiline terminal for incoming and outgoing calls.	Up to 12 Characters Line 001 Line 002 Line 003 : Line 200		✓	
15-01-01	<b>Basic Extension Data Setup – Extension Name</b>	Define the extension/virtual extension name.	Up to 12 characters Default: STA 101 = Ext 101 STA 102 = Ext 102, etc.	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program the name.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-47	<b>Class of Service Options (Supplementary Service) – Station Number Display</b>	Determine if a station Number is Displayed or Not Displayed in the LCD when the phone is idle.	0 = Not Displayed 1 = Displayed (default = 1 for COS 1~15)		✓	
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Name is Displayed or Not Displayed in the LCD when the phone is idle.	0 = Not Displayed 1 = Displayed (default = 1 for COS 1~15)		✓	
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name appear in the Directory</b>	Determine if an extension name and number are Listed or Unlisted in the directory.	0 = Not Listed 1 = Listed (default = 1 for COS 1~15)		✓	

## Operation

Refer to [Table 2-71 Keys for Entering Names](#) for an explanation for using the keypad to enter names.

**Table 2-71 Keys for Entering Names**

Use this keypad digit . . .	When you want to . . .
1	Enter characters: 1 @ [ ¥ ] ^ _ ` {   } Æ " Á À Â Ã Ç É Ê Ì Ó
2	Enter characters: <b>A-C, a-c, 2.</b>
3	Enter characters: <b>D-F, d-f, 3.</b>
4	Enter characters: <b>G-I, g-i, 4.</b>
5	Enter characters: <b>J-L, j-l, 5.</b>
6	Enter characters: <b>M-O, m-o, 6.</b>
7	Enter characters: <b>P-S, p-s, 7.</b>
8	Enter characters: <b>T-V, t-v, 8.</b>
9	Enter characters: <b>W-Z, w-z, 9.</b>
0	Enter characters: 0 ! “ # \$ % & ’ ( ) ô Õ ú ä ö ü α ε θ
*	Enter characters: * + , - . / : ; < = > ? π Σ σ Ω □ φ £
#	# = Accepts an entry (only required if two letters on the same key are needed – ex: TOM). Pressing # again = Space. (In system programming mode, use the right arrow Softkey instead to accept and/or add a space.)
CONF	Clear the character entry one character at a time.
HOLD	Clear all the entries from the point of the flashing cursor and to the right.

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## *NEC Meeting Center (NMC)*

### Enhancements

This feature added with <b>SV8100 Version 7000</b> .
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### Description

With **Version 7000 or higher** software, the SV8100 can support the NEC Meeting Center (NMC) feature. NEC Meeting Center, a sophisticated audio conferencing, web collaboration and mass notification solution for the SV8100, equips your employees with the tools they need to help them improve efficiency, lower spending by reducing the need for travel and stay informed. As a result, your employees become more responsive and productive through real-time sharing of information and most importantly, service your customers better.

The maximum supported port capacity is 24 ports on one blade and integrates to the SV8100 system using Standard SIP extensions. This means that up to 24 simultaneous people can be in one Audio Conference or in multiple Audio Conferences at the same time (sum total equals 24). This simultaneous audio conferencing is in addition to any web collaboration conferencing as well.

Each NMC CD-SVRU blade comes with eight Audio and eight Web Conference port licenses at default. Additional licenses can be added if needed.

### General

- Web portal for Administrator
- Web Portal for Moderators
- Bulk upload of users and groups for mass notifications via CSV file upload
- LDAP support for remote authentication
- Multiple Information Assurance features for platform security

### Audio Conferencing Application

Audio Conferencing Application provides rich conferencing experience for demanding users.

### NMC Capacity

- Audio conferencing ports: 24
- Video conferencing ports: 8
- Audio Conference Recording Ports: 4

- Audio Recording storage capacity: 300 hours

### NMC Audio Conferencing Features

- Support both reservation-less and reservation based audio conferences.
- Customize each audio conference room per your requirements, e.g., select entry tones, select memorable vanity PINs, turn recording on/off, select auto-call back on/off, select enter audio conference muted on/off etc.
- Schedule recurring audio conferences via the Web Portal. Use Microsoft Outlook® iCalendar application to send invitations to desired participants.
- See real time view of a running audio conference via Web Portal. Participants can be seen by name or by caller ID.
- Display loudest speaker. Allows the identification and muting of a participant who may be inadvertently injecting noise into the audio conference.
- Exercise multiple in-conference controls via phone key presses or the Web portal.
- Auto mute noisy lines or lines with excessive echo.
- Merge two or more audio conferences into one without dropping any calls by transferring participants between conferences.
- Send a detailed end of conference summary report to the moderator after a given audio conference is over.
- Record entire conference or excerpts from a conference and playback via PC's media player or via dial-in IVR.
- Forward usage data and associated CDRs to an external billing system via TCP/IP based interface.
- Operator assisted conference
- Secure Audio Conference calls.

**Table 2-72 Feature Support Table for Standard SIP Device**

Feature	How it Works	Benefits
Ad-hoc 'Meet Me' audio conference.	Moderator and participants agree upon a start time and PIN to use. When people dial in and enter their PIN, they are placed in the conference.	Simple to use. No/little training required.
Scheduled 'Meet Me' with PIN audio conference.	Schedule from familiar Microsoft Outlook Calendar after checking for participant availability.	Use your existing Outlook 'contacts'. Calendar automatically reminds participants about upcoming conference.
Dialed number (DNIS) based audio conference.	Multiple participants simply dial a phone number and join an audio conference.	No PINs to remember.
Progressive dial out audio conference.	Moderator can dial out from the conference bridge and bring participants into a conference one by one.	Impromptu conferencing, no need to inform participants ahead of time.
Instantaneous Dial out with 'Find-you' conference (with Firebar option).	Incoming calls trigger a dial out conference. Conference Bridge will call participants at multiple locations and connect them into an audio conference.	Communicate with a 'group' with a single key press.
Scheduled Dial out with 'Find-you' conference.	At a scheduled time, conference bridge will trigger a dial out conference.	Reduces excuses for not joining a conference.

## Web Conferencing Application

- NMC Capacity
  - Web Conference Ports: 8
- NMC Web Conference Features
  - Web based application, no software download required
  - Web Browser: Internet Explorer® 7 and above, Firefox®, Mac Safari®
  - Maximum document size (10Mb) for uploading in web conference
  - Microsoft Office® 2003 and 2007 document support
  - PDF, JPEG, TIFF, BMP document support
  - Application sharing
  - Desktop sharing
  - Instant messaging
  - Sharing participant control.

**Table 2-73 Feature Support Table for Standard SIP Device**

Feature	How it Works	Benefits
Desk Top Sharing Mode.	Moderator shares his/her Desktop with fellow participants.	Show any document or co-browse the Web with fellow participants. Simple to use and ideal for product demos.
Presentation Sharing Mode.	Upload PowerPoint® and PDF documents. Use annotation tools to edit in a collaborative session.	Significantly reduce number of edits/versions to produce final version.
White Boarding Mode	Create diagrams/visuals with fellow participants in a collaborative session.	Ideal for brainstorming.
Public & private Chat Room	Moderator can respond to questions in public or privately.	Makes Web conferencing more productive.
Multiple Presenters	Moderator can allow another participant to take control and share their desktop.	Multiple points of view on one conference.

## Mass Notification

- NMC Capacity
  - Up to 24 ports shared with Audio Conference application.
- NMC Mass Notification Features
  - Select communications medium to be used for message delivery (Voice only, Email only, Voice and SMS, etc.)
  - Use built-in 'Find-you' capability to increase the probability of delivering a message.
  - Send caller-ID of your choice that can be used by cell phones to display associated 'caller name' (e.g., Security Alert) – leading to higher percentage of people picking up a message.
  - Control the speed of dialing out.
  - Display real time call activity and a progress bar on a Web Portal.

- Abandon a Group Alert in progress via web portal or through DTMF.
- Provide summary and detailed reports on call completions (Busy, No Answer, Answering machine etc.)

**Table 2-74 Feature Support Table for Standard SIP Device**

Feature	How it Works	Benefits
Pre-recorded message delivery	Pro-actively build call out groups. Pre-record messages and tie groups and messages into Group Alert sessions. Trigger dial out from Web Portal or with incoming phone call.	Make messaging a planned activity. No need to search for address books at the time of actual need.
On-the-fly Message Delivery	Dial into the server, enter a PIN, record/re-record a message and send.	Quick dissemination of emergency oriented messages.
Built-in 'Find-You' capability	System captures up to four phone numbers per individual and dials them successively until making a positive contact.	Increases probability of delivering a message.
Announcement Box capability	Moderator periodically dials in and records a message in an announcement box. People can call in and hear the updated message.	Great way to inform people during changing emergency situations such as hurricanes, blackouts etc.
Re-iteratively contact the uncontacted	Set up Group Alert with 'un-contacted' option. Trigger same Group Alert multiple times until message is received by desired percentage of recipients.	No wasted calls. Iteratively build up the percentage of people who received calls.
Send message to 'contacted' people	Use 'swap' to convert contacted into uncontacted and send a new message.	Only people who received a previous message will get the new message. Great way to send 'all clear' message.

## Firebar Emergency Conferencing

- NMC capacity
  - Up to 24 ports shared with Audio Conference application.
- NMC Firebar Conferencing Features
  - Can be used with legacy TDM network or with the next generation VoIP network.
  - Send calls to any landline or cellular phone instead of just dedicated 'red' or emergency phones.
  - Select communications medium to be used for message delivery (Voice only, Email only, SMS only or any combination etc.)
  - Support unlimited number of call out groups.
  - Send caller-ID of your choice that can be used by recipient's phone to display associated 'caller name' (e.g., Fire Chief).
  - Trigger a dial-out based on a) incoming phone call, b) click on a web portal, c) dry contact closure (optional).
  - Schedule one time or recurring dial out calls.
  - Display real time call activity on a Web Portal.
  - Support analog or digital phones with Push to Talk handsets.
  - Display individual line status (on-hook, off-hook etc.)
  - Provide summary and detailed reports on call completions (Busy, No Answer, Answering machine etc.)

## Conditions

- Web Conference ports support video only. A conference audio port is required for audio support.
- Only the G.711 CODEC is supported (Program 84-19-28) when integrating the SV8100 with the NMC.
- Each NMC CD-SVRU blade comes with eight audio and eight web conference port licenses as default. Additional licenses can be added if required.
- Integration of the NMC to the SV8100 is by standard SIP extensions.
- The SV8100 must be licensed for IP Terminal Advanced License (5111).
- The NMC cannot send a hook flash to Telco.
- The Web Conferencing video travels on port 1935. If that port is not available, it will tunnel to port 80, but performance is impacted.
- Desk Top sharing travels on port 1270. If that port is not available, it will tunnel to port 80, but performance is impacted.
- Each Web Conference participant uses approximately 277Kb/s per video stream.
- Web Conference participant video resolution is limited to 640 X 380.
- Manual registration is not supported for NMC SIP extensions.
- Encryption is not supported on NMC extensions.
- NMC is not supported on the SV8300.
- Payload type for the NMC must be 101 and may conflict with other third party SIP devices.
- There is no mechanism to default the NMC application or server blade settings.
- The drive is married to the CD-SVRU blade and cannot be moved to another CD-SVRU.
- The 10 and 60 day licenses have no effect on NEC Meeting Center features or capacities.
- All NEC Meeting Center feature licenses are applied to and stored on the NMC/CD-SVRU blade. NMC licenses are not stored on the SV8100.

## Default Setting

None

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## System Availability

### Terminals

None

### Required Component(s)

- SV8100 IP Terminal Advanced License (5111)
- SV8100 Version 7.00 software or higher
- CD-SVRU blade with NMC Application

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## Related Features

None

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	Assign the IP Address. Set to 0.0.0.0	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-09	<b>CD-CP00-US Network Setup – IP Address</b>	Set to static IP address for local network.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)		✓	
11-01-01	<b>System Numbering – Service Code</b>	Customize the system internal (Intercom) numbering plan.	Refer to System Numbering Default Settings table in the UNIVERGE SV8100 Programming Manual for a list of default settings.		✓	
11-02-01	<b>Extension Numbering</b>	Assign extension numbers to extension ports. The telephone programming identity follows the port number – not the extension number.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513		✓	
14-02-23	<b>Analog Trunk Data Setup – Caller ID Receiving Method</b>	Set to 0 (Wait for Caller ID) for all trunks.	0 = Wait Caller ID 1 = Immediate Ring (default = 1)		✓	
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Set to 1 (Special) for all XOP ports.	0 = Normal 1 = Special (default = 0)	✓		
15-05-18	<b>IP Telephone Terminal Basic Data Setup – IP Duplication Allowed Group</b>	Put all XOP extensions in same duplication group.	0 = Not Used 1 = Group 1 2 = Group 2 3 = Group 3 4 = Group 4 5 = Group 5 6 = Group 6 7 = Group 7 8 = Group 8 9 = Group 9 10 = Group 10 (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Program one Call Appearance Key (CAP Key) on each NMC extension.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default) (*08 + XXXX = CAP key where XXXX is the CAP orbit number 0001-9999)	✓		
84-19-31	<b>SIP Extension CODEC Information Basic Setup – DTMF Payload Number</b>	Set Payload Number to 101.	96~127 (default = 96)	✓		
84-26-01	<b>IPL Basic Setup – IP Address</b>	Set static IP address for each of the DSP's on the local network.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW 1~8: 172.16.0.20~ 172.16.0.27		✓	
90-61-01	<b>Manual Slot Install – Install</b>	This can only be set via phone programming.  For the slot the SVRU is installed in set Program 90-61-01 to 3 (Server Blade). This is done so the slot is populated in Web Pro or on a PC Pro download.	0 = None 1 = Router 2 = PVA-NAT 3 = Server Blade 4 = PVA-DCU (default = 0)	✓		

## Operation

None

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## Night Service

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### Description

Night Service lets system users activate one of the Night Service modes. Night Service redirects calls to their night mode destination, as determined by Assigned and Universal Night Answer programming. A user typically activates Night Service after normal working hours, when most employees are unavailable to answer calls.

- There are eight Service Modes. At default, the mode names are assigned as follows:
  - Mode 1 = No setting
  - Mode 2 = Night
  - Mode 3 = Midnight
  - Mode 4 = Rest
  - Mode 5 = Day2
  - Mode 6 = Night2
  - Mode 7 = Midnight2
  - Mode 8 = Rest2

There are 32 Service Patterns/Groups available.

### Assigned Night Answer (ANA)

With Assigned Night Answer (ANA), Night Service has calls ring extensions directly. Assigned Night Answer provides an answering point for Night Service calls. For certain applications, this may be more appropriate than Universal Night Answer. For example, you could program trunks to ring the security station telephone during off hours.

For more information on assigning trunks to ring extensions, refer to [Direct Inward Line \(DIL\) on page 2-455](#).

### Universal Night Answer (UNA)

Universal Night Answer makes incoming calls ring over the External Paging speakers. With UNA, an employee can go to a telephone and press the flashing line key or use Universal Answer to pick up the call. Only ring groups calls can be used with Universal Night Answer. For more on setting up Universal Answer, refer to [Central Office Calls, Answering on page 2-263](#).

You may also use Transfer to UNA. An extension user can transfer their call to UNA (i.e., External Paging at night). Once transferred, the call rings the External Paging speakers like any other UNA call and can be picked up at any extension. You can also set up Transfer to UNA through the Voice Response System (VRS). This lets outside callers, answered by the VRS, dial a code to have their call ring External Paging.

### **Automatic Night Service**

The system allows or denies Automatic Night Service. If allowed, the calls route according to the service patterns programmed. The Night Service programming is stored in the RAM memory. This means that if the system is not using the Automatic Night Service, for a power failure in night mode, when the power is restored, the system continues to be in night mode.

### **Programmable Function Key Can Toggle Night Modes**

The software allows a Night Service Programmable Function Key (Program 15-07-01 or SC 751: 09 + 0) to toggle night modes. You can determine in programming (Program 12-08-01) how many modes through which the user toggles. Note that the additional data for the Programmable Function Key must be set to 0 for the toggle function to work.

### **Conditions**

- Almost all features are affected by Night Mode except the following:
  - Dial Tone Detection
  - External Alarm Sensors
  - Flexible System Numbering
  - Pulse to Tone conversion
  - SMDR
  - Volume Control
- Call Arrival (CAR) Keys and Virtual Extension keys do not support Day/Night Mode (09) Programmable Function keys.
- Universal Night Answer only works when Call is sent to a ring group.
- A Separate Access Map and Ring Group programming entry is available for each Night Service mode (modes 1~8). Also, Universal Answer allows an extension user to pick up a Universal Night Answer (UNA) call.
- Mode Keys can be assigned as required for DSS Consoles.
- With Universal Night Answer, outside calls can ring External Paging Zones.
- Programmable Function Keys simplify activating Night Service.
- The relay circuits (5~8) are on the PGD(2)-U10 ADP are programmed and used for General Purpose Relays.

- When programming Night Service function keys, multiple keys must be used for switching between each Night Service Mode.
- Virtual Extension Ring Assignment (command 15-09) follows the ring assignment for the Night Mode Group the virtual extension is assigned to (default Night Mode Group 1) and not the Night Mode Group of the keyset the virtual is appearing on.

### **Default Setting**

System is always in the Mode 1

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## **System Availability**

### **Terminals**

None

### **Required Component(s)**

None

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## **Related Features**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Direct Station Selection (DSS) Console**

**Paging, External**

**Programmable Function Keys**

**Ring Groups**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-01	<b>Service Code Setup (for System Administrator) – Night Mode Switching</b>	Customize the service code (718) used for day/night mode switching.	MLT,SLT (default = 718)		✓	
11-10-12	<b>Service Code Setup (for System Administrator) – Night Mode Switching for Other Group</b>	Customize the service code (618) used for Day/Night mode switching for another Night service group.	MLT (default = 618)		✓	
11-12-43	<b>Service Code Setup (for Service Access) – Answer No-Ring Line (Universal Answer)</b>	Customize the service code (#0) used to manually answer a Universal Night Answer.	MLT, SLT (default = #0)		✓	
11-12-50	<b>Service Code Setup (for Service Access) – General Purpose Relay</b>	Define the service code used for turning the general purpose relay on and off.	MLT, SLT (default = 780)		✓	
12-01-01	<b>Night Mode Function Setup – Manual Night Mode Switching</b>	Turn Off or On an extension user ability to activate Manual Night Service.	0 = Off 1 = On (default = 1)	✓		
12-01-02	<b>Night Mode Function Setup – Automatic Night Mode Switching</b>	According to a preset schedule, Enable (1) or Disable (0) Automatic Night Service for the system. Make sure to set the Service Patterns in Program 12-02-01, Program 12-02-02 and Program 12-02-03.	0 = Off 1 = On (default = 0)	✓		
12-02-01	<b>Automatic Night Service – Start Time</b>	For each Night Service Group, enter up to 20 start times for each Time Pattern (1~10). The first pattern start time (Pattern 1) should begin at 00:00 (midnight).	0000~2359 Please refer to the SV8100 Programming manual for default settings.	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
12-02-02	<b>Automatic Night Service – End Time</b>	For each Night Service Group (01~32), enter up to 20 end times (0000~2359) for each Time Pattern (1~10).	0000~2359 Please refer to the SV8100 Programming manual for default settings.	✓		
12-02-03	<b>Automatic Night Service – Operation Mode</b>	For each Night Service Group (01~32), define the Night Service Mode (1~8) for up to 20 start/end times for each Time Pattern (1~10).	1~8 Please refer to the SV8100 Programming manual for default settings.	✓		
12-03-01	<b>Weekly Night Service Switching</b>	Assign one of the 10 Time Patterns programmed in Program 12-02-01 to each day of the week.	Night Mode Service Group Numbers: 01~32 Time Schedule Pattern Number: 1~10 Day of Week: 01 = Sunday (default = Time Pattern 2) 02 = Monday (default = Time Pattern 1) 03 = Tuesday (default = Time Pattern 1) 04 = Wednesday (default = Time Pattern 1) 05 = Thursday (default = Time Pattern 1) 06 = Friday (default = Time Pattern 1) 07 = Saturday (default = Time Pattern 2)S	✓		
12-04-01	<b>Holiday Night Service Switching</b>	Assign one of the 10 Time Patterns to holidays.	Days and Months: 0101~1231 (e.g. 0101 = Jan. 1; 1231 = Dec. 31) Time Pattern Number: 0~10 (0 = No Setting) (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
12-05-01	<b>Night Mode Group Assignment for Extensions</b>	Assign a Day/Night Mode Group (01~32), for each extension.	Night Mode Service Group Number: 01~32 (default = 1)	✓		
12-06-01	<b>Night Mode Group Assignment for Trunks</b>	Assign a Day/Night Mode Group (01~32), for each trunk port (1~200).	Trunk Port Number: 001~200 Night Mode Service Group Number: 01~32 (default Night Mode Service Group Number = 1)	✓		
12-07-01	<b>Text Data for Night Mode</b>	Create an original text message which is displayed on an LCD of multiline terminal in each Night Mode.	Night Mode Service Group Number: 01~32 Day/Night Mode: 1~8 Text Message: Maximum 12 Characters (alphabetic or numeric) Default Text Messages for Day/Night Modes: Mode 1 = No Setting Mode 2 = <Night> Mode 3 = <Midnight> Mode 4 = <Rest> Mode 5 = <Day2> Mode 6 = <Night2> Mode 7 = <Midnight2> Mode 8 = <Rest2>	✓		
12-08-01	<b>Night Mode Service Range</b>	For each Night Mode Group (01~32), determine how many night modes a user toggles through when the Night Mode key is pressed.	Night Mode Service Group Number: 01~32 Range: 2~8 (default Range = 2)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup</b>	To allow for Universal Night Answer (UNA) answering, set up the Trunk Access Maps (1~200). For UNA, extension must have incoming access to trunk ringing the External Paging speakers.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).	✓		
15-06-01	<b>Trunk Access Map for Extensions</b>	For Universal Night Answer (UNA) answering, assign Trunk Access Maps (1~200) to extensions. Make one entry for each Night Service mode.	Trunk Access Maps: 1~200 (default = 1)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign Night Service function keys (09) to extensions and set the key for the proper mode (Day, Night, Rest, etc.). If the additional data is set to 0, the toggle mode is assigned.	For Line Keys: 1~48 0 ~ 99 (Normal Function Code) (default = Service Code 751)* 00* ~ *99 (Appearance Function Code) (default = Service Code 752)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-01	<b>Class of Service Options (Administrator Level) – Manual Night Service Enabled</b>	Turn Off or On an extension user ability to manually Switch the Night Mode (Service Code 718). This option must be enabled for an extension to display the Night indication.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension user ability to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type for each trunk. There is one item for each Night Service Mode (1~8).	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	To have trunks ring extensions during the different Night Service modes (for ANA), assign extensions to Ring Groups. For each extension in the Ring Groups (1~100), indicate in Program 22-06-01 if trunk should Ring (1) or Not Ring (0).	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	To have trunks ring extensions for ANA, assign trunks to Ring Groups (1~100), you make a different entry for each Night Service mode.	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)	✓		
22-08-01	<b>DIL/IRG No Answer Destination</b>	If a Universal Answer call rings longer than the DIL No Answer Time (Program 22-01-04), it routes to the Ring Group specified in this option.	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)	✓		
31-05-01	<b>Universal Night Answer/Ring Over Page</b>	For each Night Service Mode, assign which trunks should ring which External Paging Zones.	0 = No Ringing (No) 1 = Ringing (Yes) (default = 0)		✓	

## Operation



### To activate Night Service by dialing codes:

- At a multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
- Dial **718**. To change a different group's mode, dial **718** + the group number (**01~32**).
- Dial the Night Service Code:  
1 = Day 1 Mode  
2 = Night 1 Mode  
3 = Midnight 1 Mode  
4 = Rest 1 Mode  
5 = Day 2 Mode  
6 = Night 2 Mode  
7 = Midnight 2 Mode  
8 = Rest 2 Mode
- Press **Speaker** or hang up.

**To activate Night Service by using programmable keys:**

1. Press **Night Service** key (Program 15-07-01 or SC 751:09 + Mode code number below).
  - 1 = Day 1 Mode
  - 2 = Night 1 Mode
  - 3 = Midnight 1 Mode
  - 4 = Rest 1 Mode
  - 5 = Day 2 Mode
  - 6 = Night 2 Mode
  - 7 = Midnight 2 Mode
  - 8 = Rest 2 Mode

**To transfer a call to the Universal Answer External Page zones:**

1. Place the CO call on hold and dial the Transfer to Trunk Ring Group code (assigned in Program 11-15-09).
  -  *You hear a confirmation tone.*
2. Hang up.
  -  *The call rings over the External Paging, enabling anyone to answer the call.*

# Off-Hook Signaling

---

## Description

Off-Hook ringing alerts a multiline terminal user that an incoming outside call is ringing to that station during another call. Off-Hook Signaling helps important callers get through, without waiting in line for the called extension to become free. The system provides the following Off-Hook Signaling options:

**Called Extension Block**

The called extension Class of Service may block incoming Off-Hook Signaling attempts. This is beneficial to users that do not want interruptions while on a call.

**Automatic Signaling**

Calling a busy extension automatically initiates Off-Hook Signaling. This option is useful to receptionists, operators and others that must quickly process calls. This is set in the called extension Class of Service.

**Manual Signaling**

After reaching a busy extension, manual signaling gives the caller the choice of using Off-Hook Signaling or activating other features. Extensions without automatic signaling have manual signaling. The users can dial a service code or press a Programmable Function Key to send Off-Hook Signaling to the called telephone.

**Selectable Off-Hook Signaling Mode**

The Off-Hook Signal can be muted ringing, no off-hook ringing or a beep in the handset – based on the caller's programming.

**Off-Hook Ringing**

Use this option to enable or disable an extension Off-Hook Signaling for incoming calls. If enabled, Off-Hook Signaling occurs normally. If disabled, calls queue behind the extension busy line appearance and the user gets no Off-Hook Signaling indication. The second line appearance stays idle. The caller hears ringback tone while their call waits. This is set in the called extension Class of Service.

**DID Call Waiting**

An extension can optionally have DID calls camp-on with Off-Hook/Call Wait signaling, without Off-Hook/Call Wait signaling or no signaling. This is set in the called extension Class of Service.

### **Block Manual Off-Hook Signals**

This Class of Service option enables/disables a busy extension ability to block off-hook signals manually sent from a co-worker. If disabled (not blocked), callers can dial \* at busy or busy/ring to signal the extension. If enabled (blocked), nothing happens when the caller dials \* to off-hook signal.

### **Block Camp-On**

If an extension has Block Camp-On enabled, callers to the extension cannot dial 2 to Camp-On after hearing busy or busy/ring. If the extension has Block Camp-On disabled, callers are not prevented from dialing 2 to Camp-On after hearing busy or busy/ring. This is set in the called extension Class of Service.

## **Conditions**

- An extension user cannot Camp-On to a busy extension or leave a callback if Off-Hook Signaling has already gone through. Off-Hook Signaling allows an extension to block a caller's ability to dial # to camp-on.
- You cannot send off-hook signals to an extension busy on a Handsfree (Speakerphone) call. The called extension large LED flashes fast, with no ringing.
- The setting of Program 20-13-06 affects the BLF display for Hotline and Reverse Voice Over. Refer to [Hotline](#) and [Reverse Voice Over](#) features for additional information.
- You cannot send off-hook signals to an extension that is already receiving a voice announcement.
- An extension user can store the Off-Hook Signaling Service Code (709) under a One-Touch Key to provide quick Off-Hook Signaling access.
- An extension set as Operator in Program 20-17-01 does not follow settings in Program 20-13-05, Program 20-13-06 or Program 20-09-07 and always receives Off-Hook Signaling.
- Program 20-09-07 and 20-13-06 must be set to 1 in Class of Service for a normal extension to receive automatic Off-Hook Signaling.
- Off-Hook signaling is not supported for Wireless DECT (SIP) telephones, **Version 4000 (V4.01) or lower**. Off-hook signaling is supported for **Version 5000 and higher**.

## **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Multiline Terminals and Single Line Telephones

### **Required Component(s)**

None

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## **Related Features**

**Callback**

**Call Waiting/Camp-On**

**Direct Inward Dialing (DID)**

**Handsfree and Monitor**

**Hotline**

**Intercom**

**One-Touch Calling**

**Programmable Function Keys**

**Reverse Voice Over**

**Single Line Telephones, Analog 500/2500 Sets**


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-03	<b>Service Code Setup (for Service Access) – Override (Off-Hook Signaling)</b>	Assign a service code (709 by default) to be used for off-hook Signaling Override.	MLT, SLT (default = 709)		✓	
11-16-04	<b>Single Digit Service Code Setup – Intercom Off-Hook Signaling</b>	Assign a one-digit service code to be used for off-hook signaling.	(default = *)		✓	
15-02-12	<b>Multiline Telephone Basic Data Setup – Off-Hook Ringing</b>	For each extension, set off-hook Ringing type: 0 (muted), 1 (none), 3 (beep in speaker), 4 (beep in handset), 5 (Speaker & Handset Beep). DID, DNIS and DIL trunks can use any of the options – normal/ring group trunks can use only option 0 or 1.	0 = Muted Off-Hook Ringing 1 = No Off-Hook Ringing 2 = Not Used 3 = Beep in Speaker (SP) 4 = Beep in Handset (HS) 5 = Speaker & Handset Beep (default = 5)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for off-hook Signaling (code 33).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension ability to have calls queued if a call rings the extension when it is busy.  <i>Must be set to 1 to enable automatic off-hook Signaling.</i>	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension user ability to receive Off-Hook Signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Automatically (1) or Manually (0) receive off-hook Signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-18-06	<b>Service Tone Timers – Interval of Call Waiting Tone</b>	Set the time between off-hook Signaling alerts.	0~64800 (seconds) (default = 10)		✓	
80-01-01 (39)	<b>Service Tone Setup – Repeat Count</b>	Customize the system basic tones and system service tones. The system must be reset for the changes to take affect.	Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a> .			✓
80-01-02 (39)	<b>Service Tone Setup – Basic Tone Number</b>	The following features require that the system tones listed below be changed to match the table. After changing these settings the chassis must be reset for the changes to take effect. <ul style="list-style-type: none"> <li>○ Call Screening</li> <li>○ Call Holding</li> <li>○ Busy Greeting</li> <li>○ Await Answer Transfer</li> </ul>	Refer to <a href="#">Table 2-34 Service Tone Setup, Program 80-01-02 on page 2-707</a> .			✓

## Operation


### To send Off-Hook signals to an extension busy on a call:


 *Your extension may send off-hook signals automatically.*

1. Dial **7**.

- OR -


Press **Off-Hook Signaling** key (Program 15-07 or SC 751: 33).

 *You hear ringback.*

 *To have your call voice-announce, dial 1.*

### Receiving Off-Hook Signaling on a single line telephone while engaged on an internal or external call:

1. When Off-Hook Signaling is heard in the receiver, press the **Flash** Key to answer the call. The first call is placed on hold.
2. Press the **Flash** Key again to toggle between the two calls.

 *If the single line phone hangs up with the active call, the other call on hold rings back to the single line.*

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# One-Touch Calling

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## Description



One-Touch Calling gives a multiline terminal user one-button access to extensions, trunks, speed dial bins and selected system features. This saves users time when accessing co-workers, clients and features they use most often. Instead of dialing a series of codes, the user need only press the One-Touch key. An extension user can have One-Touch keys programmed for:

- Direct Station Selection – one-button access to extensions
- Station Speed Dial** – one-button access to stored numbers (up to 24 digits long)
- Speed Dial – System/Group/Station – one-button access to stored speed dialing numbers
- Trunk Calling** – one-button access to trunks or trunk groups
- Service Codes** – one-button access to specific Service Codes

An extension user can chain dial with One-Touch Keys. For example, a user can store the number for a company Automated Attendant in key 1 and employee extension numbers in keys 2~5. The user presses key 1 to call the company, then one of keys 2~5 to ring the employee to which they want to speak.

An extension user or system administrator can optionally store a Flash command under a One-Touch key. This is helpful for One-Touch Keys used as Station Speed Dial bins. The stored Flash may be helpful to access features of the connected Telco, PBX or Centrex.

## Conditions

- One-Touch keys provide a Busy Lamp Field (BLF).
- When a multiline terminal user is on a call, they can transfer to another station by pressing a DSS key for that station. It is not necessary to press Transfer to transfer to another station using a DSS key.
  -  *When a multiline terminal user is on a call, they must press transfer to transfer a call off site with a DSS key.*
  -  *When a multiline terminal user is on a call, they must press transfer to transfer a call to a destination that is not a station (ACD/Voice Mail/Department group pilot, etc.).*
- Pauses can be entered in the dial string of a DSS/One Touch button. The pause is entered as P in the dial string and causes the system to wait three seconds before sending the rest of the digits that follow the P (pause). Multiple pauses can be entered.

- The @ can be entered in the dial string of a DSS/One Touch button. The @ only applies to ISDN and Intercom calls. When using the @, the system waits for the destination to answer (answer supervision), and then sends the rest of the digits.
- Entering a P (pause) in a DSS/One Touch dial string can be used for CO calls, Intercom calls, or after the @ for ISDN calls.
- ARS with Max Digits is not supported when entering the @ or a P (pause) in the dial string of a DSS/One Touch button.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

All Multiline Terminals and DSS Consoles

### **Required Component(s)**

None

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## **Related Features**

### **Programmable Function Keys**

### **Transfer**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Define a Programmable Function Key for One-Touch Calling by defining the key as a DSS/One-Touch key (01).	For Line Keys: 1~48 0~99 (Normal Function Code) (default = Service Code 751)* 00* ~ *99 (Appearance Function Code) (default = Service Code 752)	✓		
11-11-17	<b>Service Code Setup (for Setup/Entry Operation) – Programmable Function Key Programming (2-Digit Service Codes)</b>	Set the service code (default 751) to assign 2-digit function codes to the Function keys.	MLT (default = 751)		✓	
20-13-18	<b>Class of Service Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
30-03-01	<b>DSS Console Key Assignment</b>	Customize DSS Console keys to function as DSS keys, Service Code keys, Programmable Function Keys, and One-Touch Calling keys. When programming a feature within a One-Touch Key, refer to the feature description for additional programming options.	Key Number 001~500 0~99 (General Functional Level) 97 = Door Box Access key (additional data: 1~8 Door Box No.) * 00 ~ * 99 (Appearance Functional Level)		✓	

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## Operation

### Programmable Function Keys:

#### To define a Programmable Function Key as a One-Touch Key:

1. Dial the service code for Function Key Programming (Program 11-11-17, 751 by default).
2. Press the key to be defined.
3. Dial **01** (DSS/One-Touch Key Operation).
4. For Direct Station Selection (Extension):
  - a. Dial extension number you want assigned to that key.
  - b. Press **Hold**.
  - c. Press **Speaker**.

#### *For Personal Speed Dial:*

- a. Dial the general trunk access code (**9**).
  - *OR* -
  - Dial the Specific Trunk Service Code (**#9**) plus the trunk number (e.g., 005).
  - *OR* -
  - Dial the Trunk Group Service Code (**704**) plus the trunk group number (e.g., 1).
- b. Dial the number you want to store.
  - ☞ *The total of the digits stored in steps 3 and 4 cannot exceed 24.*
  - ☞ *Valid entries are 0~9, # and \*. To enter a pause, press **MIC**. To store a Flash, press **Redial**.*
- c. Press **Hold**.
- d. Press **Speaker**.

#### *For Speed Dial – System/Group:*

- a. Dial **#2** to store a Speed Dial – System dialing number.
  - *OR* -
  - Dial **#4** to store a Speed Dial – Group dialing number.
- b. Dial Speed Dial number storage code (e.g., 001).
- c. Press **Hold**.
- d. Press **Speaker**.

*For Central Office Calls, Placing (Trunk Calling):*

- a. a. Dial the general trunk access code (**9**).

- OR -

Dial the specific Trunk Service Code (**#9**) plus the trunk number (e.g., 005).


- OR -

Dial the Trunk Group Service Code (**704**) plus the trunk group number (e.g., 1).

- b. Dial the telephone number to be stored.
- c. Press **Hold**.
- d. Press **Speaker**.

*For Service Codes:*



- a. Dial the Service Code you want stored.

 *For example, if you want a One-Touch Key to automatically clear your Last Number Redial, enter 776.*

- b. Press **Hold**.
- c. Press **Speaker**.

### Checking the One-Touch Keys:

**To check the function of a One-Touch key:**

1. Press the **Help** key.
2. Press the **One-Touch** key.
  -  *The stored function displays.*
  -  *Repeat this step to check additional keys.*
3. Press the **Exit** key.

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# Operator

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## Description

When an extension user dials 0, calls are routed to a main system operator. The operator can answer and route outside calls or locate employees using the Page feature.

A maximum of eight operators is available.

### Conditions

- Attendant extensions can have up to 32 incoming calls queued before additional callers hear busy tone.
- The operator extension cannot be a CAR Key or virtual extension.
- When dialing 0 from the in-skin Voice Mail across CCIS and CCISoIP, it follows what is in the operator set up.
- Extensions and trunks can be assigned to an operator group. A call to an operator that is busy rolls to the next operator in the operator group.

### Default Setting

Extension 101 is an operator.

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

## Related Features

### Attendant Call Queuing

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-01-01	<b>System Options – Operator Access Mode</b>	Set up priority of a call when calling an operator telephone (0 = Step, 1 = Circular).	0 = Step 1 = Circular (default = 0)	✓		
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Designate an extension an operator. When an extension user dials 0 or 9 (defined by Program 11-01, Type 5), calls go to the operator selected in this program. If you do not assign an extension in Program 90-11-01, system alarms appear on the extension assigned in this option.	Up to eight digits (default = 101)		✓	
20-35-01	<b>Extension's Operator Setting</b>	Assign an extension to an operator group.	(Input: 0~15)		✓	
20-36-01	<b>Trunk's Operator Setting</b>	Allow the user to select Operator Group per trunk.	(Input: 0~15) (0 = Not assigned) (default = 0)		✓	
20-37-01	<b>Operator Extension Group Setup</b>	Define the initial operator extension in the operator group.	Up to eight Digits (default not assigned)		✓	
20-38-01	<b>Operator Group Setting – Operator Access Mode</b>	Set up priority of a call when calling an operator telephone.	0 = Step 1 = Circular (default = 0)		✓	



## Operation

Refer to the individual features for operation.

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## *(OPX) Off-Premise Extension*

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### **Description**

Off-Premise Extension allows a single line telephone, located remotely from the main installation site, to access the system features with the same abilities as an on-premise single line telephone.

### **Conditions**

- Each CD-4DIOPA provides four off-premise circuits.
- The maximum loop resistance between a CD-4DIOPA and an Off-Premise Extension Single Line Telephone is 1600ohms (including single line telephone set resistance).
- The CD-4DIOPA has a built-in ringer (RSG). This blade supports Synchronous Ringing and detects Dial Pulse/DTMF tones.
- The CD-4DIOPA does not support an interface to a Voice Mail unit.

### **Default Setting**

None

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### **System Availability**

#### **Terminals**

Single Line Telephones

#### **Required Component(s)**

CD-4DIOPA

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### **Related Features**


**Single Line Telephones, Analog 500/2500 Sets**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup</b>	Set up and confirm the basic configuration data for each blade. This program represents different data depending on the blade installed in the slot. Please refer the SV8100 Programming Manual for a more detailed description of this program.	The assigned data varies depending on the blade installed in the slot. Please refer to the SV8100 Programming Manual for a more detailed description of the 10-03-XX programs.		✓	
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Allocate the circuits on the CD-CP00-US ETUs for either DTMF receiving or dial tone detection. Program 14-01-13 Basic Trunk Data Setup – Loop Supervision Enable (1) loop supervision for each trunk that should be able to use Call Forwarding – Centrex.	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
15-03-01	<b>Single Line Telephone Basic Data Setup – SLT Signaling Type</b>	For each UNIVERGE SV8100 voice mail extension, set this option to 0.	0 = DP 1 = DTMF (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-03-03	Single Line Telephone Basic Data Setup – Terminal Type	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)		✓	
15-03-05	Single Line Telephone Basic Data Setup – Trunk Polarity Reverse	-- Not Used in U.S. -- Do Not Change Default Entry as DTMF issues may arise with voice mail.	0 = Off 1 = On (default = 0)		✓	
15-03-06	Single Line Telephone Basic Data Setup – Extension Polarity Reverse	-- Not Used in U.S. -- Do Not Change Default Entry as DTMF issues may arise with voice mail.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	
15-03-07	Single Line Telephone Basic Data Setup – Enabled On-Hook When Holding (SLT)	Enable/Disable this program.	0 = No 1 = Yes (default = 1)		✓	
15-03-08	Single Line Telephone Basic Data Setup – Answer On-Hook when Holding (SLT)	Enable/Disable Answer on-hook when Holding for SLT.	0 = Disable (No) 1 = Enable (Yes) (default = 1)		✓	
15-03-09	Single Line Telephone Basic Data Setup – Caller ID Function - For External Module	Enable/Disable the Caller ID FSK signal for an external Caller ID module or a 3rd-Party vendor telephone with Caller ID display. <b>Important:</b> If voice mail is used, this setting must be disabled for the system integration codes to be correct.  <i>With a 2500 set (no Caller ID) installed, this must be set to 0 for incoming callers to have a talk path.</i>	0 = Disable 1 = Enable (default = 0)		✓	
15-03-10	Single Line Telephone Basic Data Setup – Caller ID Name	Determine if an extension user telephone should display the Caller ID name.	0 = Disable 1 = Enable (default = 1)		✓	
15-03-11	Single Line Telephone Basic Data Setup – Caller ID Type	Select whether the Caller ID type is FSK or DTMF.	0 = FSK 1 = DTMF (default = 0)		✓	
15-03-14	Single Line Telephone Basic Data Setup – Forwarded Caller ID Display Mode	Determine what the display shows when a multiline terminal receives a forwarded outside call.	0 = Calling Extension Number (Calling) 1 = External Caller ID (Forward) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-03-01	<b>System Options for Single Line Telephones – SLT Call Waiting Answer Mode</b>	For a busy single line (500/2500 type) telephone, set the mode used to answer a camped-on trunk call. For ESL sets, enabling this option (1) allows the user to dial Service Code for Voice Mail Conversation Record.	0 = Hookflash (Hooking) 1 = Hookflash + Service Code 654 (default = 0)		✓	
20-03-02	<b>System Options for Single Line Telephones – Ignore Received DP Dial on DTMF SLT Port</b>	Define whether the system should receive dial pulse and DTMF signals (0) or ignore dial pulse and only accept DTMF signals (1).	0 = Do Not Ignore (No) 1 = Ignore (Yes) (default = 0)		✓	
20-03-03	<b>System Options for Single Line Telephones – SLT DTMF Dial to Trunk Lines</b>	<ul style="list-style-type: none"> <li>○ <b>Type 0:</b> The system keeps the digits dialed by the single line telephone on a trunk in a buffer. After they are received, the system sends all the digits to the trunk. If the time space between digits is longer than the time in Program 20-03-04, the system considers all digits received.</li> <li>○ <b>Type 1:</b> The system passes the received digits from the single line telephone to the trunk immediately. If the single line telephone has a Last Number Dial key without a pause, this key may not be able to use the Last Number Dial key with the Type 1 setting.</li> </ul> <p>When using a third-party external paging device, set this option to 1. In addition, set Program 20-03-04 to 1. These programs must be set for Wireless DECT (SIP) users to break dial tone on an analog trunk that is used for paging.</p>	0 = Receive all dialed data, before sending (All) 1 = Direct through out (Direct) (default = 0)		✓	
20-03-04	<b>System Options for Single Line Telephones – Dial Sending Start Time for SLT or ARS</b>	When ARS or an analog extension user accesses a trunk and dials an outside call, the system waits this interval before outdialing the first digit.	0~64800 (seconds) (default = 3)		✓	
20-03-05	<b>System Options for Single Line Telephones – SLT Operation Mode</b>	Set the operation mode for single line telephones.	0 = Normal Mode 1 = Extended Mode1 2 = Extended Mode2 (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-03-06	<b>System Options for Single Line Telephones – Headset Ringing Start Time (for SLT)</b>	Define the headset ringing start time. After this time expires after a single line telephone is off-hook, the system sets the single line telephone to headset ringing mode.	0~64800 seconds (default = 5)		✓	
20-03-07	<b>System Options for Single Line Telephones – Trunk Call Dial Forced Sending Start Time (Forced Dial)</b>	Define the Trunk Call Dial Forced Sending Start Time (Forced Dial) for single line telephones.	0~64800 seconds (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-15-01	<b>Ring Cycle Setup – Normal Incoming Call on Trunk</b>	Define the ring cycle for INcoming Internal calls.	Ring Cycle = 1~13 (default = 2)		✓	
20-15-03	<b>Ring Cycle Setup – Incoming Internal Call</b>	Define the incoming internal call ringing cycles for each ring type.	Ring Cycle = 1~13 (default = 12)		✓	
20-15-05	<b>Ring Cycle Setup – DID/DDI</b>	Define the ring cycle for DID/DDI calls.	Ring Cycle = 1~13 (default = 8)		✓	
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Use Items 11~32 to set the criteria for dial tone detection for outgoing ARS calls.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1~5 = 0			✓
80-03-02	<b>DTMF Tone Receiver Setup – Start Delay Time</b>	Define the start delay time for DTMF Tone Receiver.	0~255 (0.25ms~64ms) default: Type 1~5 = 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	<b>DTMF Tone Receiver Setup – Min. Detect Level</b>	Define the minimum detection level for DTMF Tone Receiver.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-04	<b>DTMF Tone Receiver Setup – Max. Detect Level</b>	Define the maximum detection level for DTMF Tone Receiver.	0~15 detect level 0: 0dBm(0) to -15dBm(15) detect level 1: -5dBm(0) to -20dBm(15) detect level 2: -10dBm(0) to -25dBm(15) detect level 3: -15dBm(0) to -30dBm(15) detect level 4: -20dBm(0) to -35dBm(15) detect level 5: -25dBm(0) to -40dBm(15) detect level 6: -30dBm(0) to -45dBm(15) detect level 7: -35dBm(0) to -50dBm(15) detect level 8: -40dBm(0) to -55dBm(15) detect level 9: -45dBm(0) to -60dBm(15) detect level 10: -50dBm(0) to -65dBm(15) detect level 11: -55dBm(0) to -70dBm(15) detect level 12: -60dBm(0) to -75dBm(15) detect level 13: -65dBm(0) to -80dBm(15) detect level 14: -70dBm(0) to -85dBm(15) detect level 15: -75dBm(0) to -90dBm(15) default: Type 1~5 = 2 (-2dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-05	<b>DTMF Tone Receiver Setup – Forward Twist Level</b>	Define the forward twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1 = 5 (6dBm) Type 2 = 5 (6dBm) Type 3 = 5 (6dBm) Type 4 = 5 (6dBm) Type 5 = 5 (6dBm)			✓
80-03-06	<b>DTMF Tone Receiver Setup – Backwards Twist Level</b>	Define the backwards twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1 = 0 (1dBm) Type 2 = 0 (1dBm) Type 3 = 0 (1dBm) Type 4 = 0 (1dBm) Type 5 = 0 (1dBm)			✓
80-03-07	<b>DTMF Tone Receiver Setup – ON Detect Time</b>	Define the On detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1 = 1 (30ms) Type 2 = 1 (30ms) Type 3 = 1 (30ms) Type 4 = 1 (30ms) Type 5 = 1 (30ms)			✓
80-03-08	<b>DTMF Tone Receiver Setup – OFF Detect Time</b>	Define the Off detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1 = 1 (30ms) Type 2 = 1 (30ms) Type 3 = 1 (30ms) Type 4 = 1 (30ms) Type 5 = 1 (30ms)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-04	<b>Call Progress Tone Detector Setup – No Tone Time</b>	Define the no tone time for the Call Progress Tone Detector.	0~255 (30+30-7680ms) The formula is 30+30N. When set to N=1, it means 30+30*1=60 When set to N=255, it means 30+30*255=7680 (0 =not detect) default: Type 1 (DT) – 132 (3990ms) Type 2 (BT) – 132 (3990ms) Type 3 (RBT) – 132 (3990ms) Type 4, Type 5 – 0			✓
82-11-01	<b>LCA Initial Setup – Bounce Protect Time</b>	Specify a time for detection of a valid Off-Hook indication that is long enough to prevent an unintentional bounce of the receiver from being detected as a new off-hook indication from a single line telephone.	0 = No Setting 1~15 = 100ms~1.5sec (default = 3)			✓
82-11-02	<b>LCA Initial Setup – HookFlash Start Time</b>	Specify the minimum hookflash time from a Single Line Telephone or analog Voice Mail system before it is detected as the beginning of a valid hookflash.	0 = 40ms 1~15 = 90ms~790ms (default = 5)			✓
82-11-03	<b>LCA Initial Setup – HookFlash End Time</b>	Specify the maximum hookflash duration from a Single Line Telephone to receive a second dial tone.	0 = HST+0ms 1~15 = HST+100ms~HST+1500ms (HST=Hookflash Start Time) (default = 7)			✓

Refer to [Single Line Telephones, Analog 500/2500 Sets on page 2-1339](#) for related programming.

## Operation

Normal call handling procedures for single line telephones apply.

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# Paging, External

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## Description

With External Paging, a user can broadcast announcements over paging equipment connected to external Paging zones. When a user pages one of these external zones, the system broadcasts the announcement over the speakers. Like Internal Paging, External Paging allows a user to locate another employee or make an announcement without calling each extension individually.

The UNIVERGE SV8100 system allows up to eight External Paging zones, or a common zone output provided by the CPU (Speaker 9). All other speakers (1~8) require a port on a PGD(2)-U10 ADP, with a maximum of two external paging circuits per module. You must have four PGD(2)-U10 ADPs to get the eight external zones. In addition, each external zone has an associated relay contact. When a user pages to a zone, the corresponding contact activates (closes). This provides for Paging amplifier control.


## Combined Paging

Use Combined Paging when you want to simultaneously Page into an internal and corresponding external zone. For example, you can Page your company warehouse and outside loading dock at the same time. Combined Paging is available for zones 1~8 and All Call. Refer to [Paging, Internal on page 2-1181](#) for more on setting up Combined Paging. In addition, you can program a Function Key as a Combined Paging key. Using the External Page Function Key, when an All Call External Page Function Key is programmed, it includes both the external zones and the assigned internal zone(s). If the internal page zone is busy or there are no extensions in a page group, the announcement is made on the external zones only.

## Conditions

- The UNIVERGE SV8100 provides a common zone output provided by the chassis. For more than one external page zone, External Paging requires PGD(2)-U10 ADPs and customer-provided paging equipment.
- Talkback paging requires the use of a PGD(2)-U10 ADP. The UNIVERGE SV8100 common zone output provided by the chassis does not allow talkback.
- A common zone output is provided by the chassis and is considered Zone 9 when programming.
- A Class of Service option is available in system programming to prevent display telephones from showing incoming paging information. This allows the system to save processor time and speed up system operation.

- DID and DIL trunks do not ring external page speakers. Only trunks defined as normal in Program 22-02-01 ring external page speakers.
- Paging keys can be assigned on Programmable Function Keys and Direct Station Selection (DSS) Consoles to simplify External Paging operation.
- If a PGD(2)-U10 ADP circuit has a Door Box connected, you cannot use that circuit for External Paging.
- To have outside calls ring External Paging Zones at night, refer to the Night Service feature and Program 31-05.
- The PGD(2)-U10 ADP can be connected only to a DLC.
- The maximum number of PGD(2)-U10 ADP is 56. Refer to the Hardware Manual for more information which describes how many of the 56 can be for paging, door box or Music on Hold (MOH).
- Phones that have an APR/APA installed do not pass voice to a trunk used for paging until the interdigit timer expires (Program 21-01-03).
- If a Central Office (CO) trunk port is used for external paging, a Multiline Terminal with an AP(A)-R Unit installed or the DTR-2DT-1 multiline telephone does not provide a speech path to the paging system.

 *When using Multiline Terminals with an AP(A)-R Unit installed or DTR-2DT-1 telephones for external paging, the Common zone output provided by the CPU or a PGD(2)-U10 is required for external paging.*

## Default Setting

None

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## System Availability

### Terminals

All Terminals

### Required Component(s)

- CD-8DLCA, CD-16DLCA or CD-LTA for PGD(2)-U10 ADP
- PGD(2)-U10 ADP for Zone Paging
- 1- or 2-way amplifier and speakers (locally provided)



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## Related Features

Central Office Calls, Placing

Direct Inward Dialing (DID)

Direct Inward Line (DIL)

Direct Station Selection (DSS) Console

Door Box

Night Service

Paging, Internal

Programmable Function Keys


Transfer


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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-05-01	<b>General Purpose Relay Setup – Slot No. Physical Port of DLCA Sensor Circuit No.</b>	Define which relay circuits (5~8) on the PGD(2)-U10 ADP are used for General Purpose Relays.	Slot No: 0~24 DLCA Port: 0~16 Relay No: 0, 5~8  After each entry, press Transfer to advance to the next entry. (default = 0 - 0 - 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-21-04	<b>CD-CP00-US Hardware Setup – External Source I/O Selection on CD-CP00-US</b>	Define how the I/O ports on the CD-CP00-US are used.	0 = External MOH (CN8)/ External Speaker(CN9) 1 = BGM source (CN8)/ External Speaker(CN9) 2 = External MOH (CN8)/BGM source (CN9)  <i>Relations between CN number and Relay number are as follows: CN8 = Relay2 CN9 = Relay1 (default = 1)</i>		✓	
11-12-50	<b>Service Code Setup (For Service Access) – General Purpose Relay</b>	Specify the service code used to toggle the relay open and closed.	MLT, SLT (default = 780)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign function keys for External Paging zones (19 + zone) and External All Call Page (20). If required, define a function key for a multiline terminal to use the general purpose relay (51).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
31-01-02	<b>System Options for Internal/ External Paging – Page Announcement Duration</b>	Set the maximum allowable duration for a Paging announcement.	0~64800 (seconds) (default = 1200)		✓	
31-03-01	<b>Internal Paging Group Settings – Internal Paging Group Name</b>	Assign name to Internal Paging Groups (i.e., Page Zones). The system shows the name you program on the telephone display.	Up to 12 characters Refer to Programming Manual for table.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
31-04-01	<b>External Paging Zone Group</b>	Assign each External Paging Speaker to an External Paging Group (1~8) used for accessing the zone. If zones 1~8 are not connected to PGD(2)-U10 ADP, set these unused zones to External Paging Group 0.	External Paging Speaker/Zones: 1~9 Speaker 1 [PGD(2)-U10] = 1 (Group 1) Speaker 2 [PGD(2)-U10] = 2 (Group 2) Speaker 3 [PGD(2)-U10] = 3 (Group 3) Speaker 4 [PGD(2)-U10] = 4 (Group 4) Speaker 5 [PGD(2)-U10] = 5 (Group 5) Speaker 6 [PGD(2)-U10] = 6 (Group 6) Speaker 7 [PGD(2)-U10] = 7 (Group 7) Speaker 8 [PGD(2)-U10] = 8 (Group 8) Speaker 9 (CD-CP00-US) = 1 (Group 1)	✓		
31-05-01	<b>Universal Night Answer/Ring Over Page</b>	Assign Universal Night Answer ringing to each External Paging zone. For each trunk port, make a separate entry for each External Paging Speaker.	External Paging Speaker/Zones: 1~9 0 = No Ringing (No) 1 = Ringing (Yes) (default = 0)		✓	
31-06-01	<b>External Speaker Control – Broadcast Splash Tone before Paging (Paging Start Tone)</b>	Enable/Disable splash tone before Paging over an external zone. If enabled, the system broadcasts a splash tone before the External Paging announcement.	0 = No Tone (None) 1 = Splash Tone 2 = Chime Tone (default = 2)		✓	
31-06-02	<b>External Speaker Control – Broadcast Splash Tone after Paging (Paging End Time)</b>	Assign option for each External Paging Speaker (1~9).	0 = No Tone (None) 1 = Splash Tone 2 = Chime Tone (default = 2)		✓	
31-06-04	<b>External Speaker Control – CODEC Transmit Gain Setup</b>	Define the CODEC transmitting gain settings for the external speaker using an amplifier.	1~63 (-15.5 ~ +15.5dB) (default = 32)		✓	
31-06-05	<b>External Speaker Control – CODEC Receive Gain Setup</b>	Select the CODEC gain types (1~32) for each External Page Speaker.	External Paging Speaker/Zone: 1~9 1~63 (-15.5 ~ +15.5dB) (default = 32)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
31-07-01	<b>Combined Paging Assignments</b>	Assign an External Paging Group (0~8) to an Internal Paging Zone (0 = All Call, Zones 1~64) for Combined Paging. When an extension user makes a Combined Page, they simultaneously broadcast into both the External and Internal Zone.	0~64 (0 = All internal paging) (default = 1)	✓		
31-08-01	<b>BGM on External Paging – BGM</b>	Assign the Background Music option for each External Paging Speaker. If enabled, the system plays Background Music over the zone when it is idle.	External Paging Speaker/Zone: 1~9 0 = Disable 1 = Enable (default = 0)		✓	

## Operation


### To Page into an external zone:


1. Press External Paging key (Program 15-07 or SC 751: 19 for External Paging zones or 20 for External All Call Paging).
  2. Make announcement.
    - OR -
    - 1. At the multiline terminal, press **Speaker** or pick up the handset.
      - OR -
      - At single line telephone, lift the handset.
    - 2. Dial **703** and the External Paging Zone code (1~8 or 0 for All Call).
      - OR -
      - Dial **\*1** and the Combined Paging Group code (1~8 or 0 for Internal/External All Call).
-  *Display indicates the Combined Paging as an External Page.*
-  *If the Internal Page Zone is busy or if there are no extensions in a page group, the page may be announced as an External Page only.*
3. Make an announcement.

4. Dial **703** and the External Paging Zone code (1~8 or 0 for All Call).

- OR -

Dial **\*1** and the Combined Paging Group code (1~8 or 0 for Internal/External All Call).

 *Display indicates the Combined Paging as an External Page.*

 *If the Internal Page Zone is busy or if there are no extensions in a page group, the page may be announced as an External Page only.*

5. Make an announcement.

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## *Paging, External (VRS)*

### Enhancements

This feature added with <b>Version 5000</b> .
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### Description

Paging, External (VRS) enables the use of prerecorded VRS messages for External Paging. The advantage of this feature is saving time for the users who regularly use External Paging with the same announcements.

### Conditions

- If VRS External Paging is answered using the meet me paging service code and both parties are connected, VRS stops the announcement.
- Paging, External (VRS) does not support Internal Paging. Also, combined paging is not supported.
- The paging telephone must remain off-hook during paging. If the paging telephone hangs up during paging, VRS External paging stops.
- If an invalid VRS number is dialed or, there is no recorded VRS greeting, the caller hears an error tone.
- Paging, External (VRS) will not play the starting and ending tone if enabled. If the starting and ending tones are needed, they must be recorded in the VRS message itself.
- After the recorded VRS message is finished, the paging telephone hears a busy tone.
- When using the speaker mode on a paging telephone, the telephone becomes idle after the recorded VRS message finishes.
- The Paging, External (VRS) feature requires **Version 5000 or higher** software and the **Version 5000 Enhancement** license.
- The Paging, External (VRS) feature is supported with Embedded VRS.

### Default Setting

Disabled

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## System Availability

### Terminals

- All Multiline Terminals
- Single Line Telephones
- Cordless Terminals
- ISDN Terminals
- H.323 Terminals
- Standard SIP Terminals

### Required Component(s)

- PZ-VM21
- VM8000 InMail Compact Flash
- CPU license for VRS
- CD-8DLCA, CD-16DLCA or CD-LTA for PGD(2)-U10 ADP
- PGD(2)-U10 ADP for Zone Paging
- 1- or 2-way amplifier and speakers (locally provided)

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## Related Features

### Paging, External

### Voice Response System (VRS) Embedded VRS

### Voice Response System (VRS)



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-20	<b>Service Code Setup (for System Administrator) – VRS - Record/ Erase Message</b>	Define the service code to record or erase a VRS message.	MLT, SLT (default = 616)		✓	
11-12-20	<b>Service Code Setup (for Service Access) – External Paging</b>	External paging access code. Service code setup. ○ In case of normal Paging via External speaker: <Service code+Paging group number (0: all, 1-8)>. ○ In case of VRS Paging via External speaker: <Service code+* +Paging group number (0: all, 1-8)+VRS message number (001-100).	MLT, SLT (default = 703)		✓	
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase and listen to VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	

## Operation

### External VRS Messaging:

#### To page into an external zone with VRS message:

1. Pick up the handset or press Speaker at multiline terminal.
2. Dial 703 and \* then the External Paging Zone code (1-8, 0 for all call).

3. Dial VRS message Number (001-100).
4. Make announcement.
5. Press Speaker at multiline terminal or on-hook.


- OR -

1. Press DSS/One Touch Key programmed for External Paging.

### **To Program One Touch Key:**

The following example shows how to program a On Touch key for External Paging zone 2 to play VRS greeting number 099.

1. Press Speaker.
2. Dial 7, 5, 1.
3. Press Line Key to be programmed.
4. Dial 0, 1 (Function Code for DSS/One Touch Key).
5. Dial 7, 0, 3, \*, 2, 0, 9, 9.
6. Press Speaker.

 *When using the Paging, External (VRS) feature, FC 20 (External All Call Paging code) cannot be used as a programmable function key.*

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## *Paging, Internal*

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### **Description**

Internal Paging lets extension users broadcast announcements to other multiline terminal users. When a user makes a Zone Paging announcement, the announcement broadcasts to all idle extensions in the zone dialed. With All Call Paging, the announcement broadcasts to all idle extensions programmed to receive All Call Paging. An extension can be a member of only one Internal Paging Zone. Like External Paging, Internal Paging allows a user to locate another employee or make an announcement without calling each extension individually.

### **Combined Paging**

Use Combined Paging when you want to simultaneously Page into an internal and corresponding external zone. For example, you can Page your company warehouse and outside loading dock at the same time. Combined Paging is available for Paging zones 1~8 and All Call. Optionally, you can change the Combined Paging assignments. For example, you can associate External Paging Zone 1 with Internal Paging Zone 4. You can program a Function Key as a Combined Paging key. When an All Call External Page Function Key is programmed, it includes both the external zones and the assigned internal zone(s). If the internal page zone is busy or there are no extensions in a page group, the announcement is made on the external zones only.

### **Conditions**

- Internal Paging does not require a PGD(2)-U10 ADP.
- A maximum of 50 extensions is supported for Internal or All Call Paging Group.
- A maximum of 50 TDM extensions are supported for Internal or All Call Paging Group.
- A maximum of 16 IP extensions are supported for Internal or All Call Paging Group.
- A system must have at least one extension port idle to make an Internal Page. If no extension port is idle, the extension performing the Page hears a busy signal.
- There are 64 available Internal Paging Groups (Zones).
- A Class of Service option is available in system programming to prevent display telephones from showing incoming internal paging information. This allows the system to save processor time and speed up system operation.
- An extension user can broadcast an announcement over an External Paging Zone.
- Function keys simplify Internal Paging operation.
- You must assign an extension to a two-digit zone in Program 31-02-01 before you can assign a function key using the 751 service code as a two-digit Internal Group Paging Zone key.

- If Auto Hold in Program 15-02-07 is set to Cut (1), when a user presses the page key while on a trunk call, the trunk call is put on hold.
- A single line telephone can initiate an Internal Zone page, but cannot receive an Internal Zone Page.
- If an internal paging group has only IP Multiline Stations, multicast is used for the page. IP multiline terminals must have a gateway programmed to accomplish a multicast transmission. When an actual gateway device does not exist on the network, a dummy gateway address on the same subnet must be defined.
- When a paging group contains all IP phones, the page is sent via a multicast message from the initiating IP phone. If a paging group has IP and TDM phones, when an IP phone initiates the page, a message is sent to the CPU and the CPU sends the multicast message for the IP phones.
- To receive the All Call Page, the extension must be assigned to an Internal Page Group.

### **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Multiline Terminals and Single Line Telephones

### **Required Component(s)**

None

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## **Related Features**

**Meet Me Paging**

**Meet Me Paging Transfer**

**Paging, External**

**Programmable Function Keys**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-19	<b>Service Code Setup (for Service Access) – Internal Group Paging</b>	Service code setup.	MLT, SLT (default = 701)		✓	
11-12-24	<b>Service Code Setup (for Service Access) – Combined Paging</b>	Combined paging, internal/external access code. Service code setup.	MLT, SLT (default = *1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign function keys for Internal Paging Zones (code 21 + page zone) and Internal All Call Paging (code 22).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
31-01-01	<b>System Options for Internal/External Paging – All Call Paging Zone Name</b>	Assign a name to the All Call Internal Paging Zone. The name shows on the display of the telephone making the announcement.	Up to 12 Characters (default = Group All)		✓	
31-01-02	<b>System Options for Internal/External Paging – Page Announcement Duration</b>	Set the maximum allowable duration for a Paging announcement (External Paging only).	0~64800 (seconds) (default = 1200)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
31-02-01	<b>Internal Paging Group Assignment – Internal Paging Group Number</b>	Assign extensions to Internal Paging Zones. An extension must be assigned to a 2-digit zone to access any 2-digit zone.	Internal Page Zones: 0, 1~9, 00, 01~64 0~64 (0 = No Setting) Default: 0 for IP Station 1 for TDM Station	✓		
31-02-02	<b>Internal Paging Group Assignment – Internal All Call Paging Receiving</b>	Turn Off or On All Call Internal Paging for each extension. If allowed, extensions can make and receive All Call Internal Paging announcements. If prevented, extension can make only All Call Internal Paging announcements.	0 = Off 1 = On (default = 0)	✓		
31-03-01	<b>Internal Paging Group Settings – Internal Paging Group Name</b>	Program names for the Internal Paging Zones.	Up to 12 Characters 01 = Group 1 02 = Group 2 : 64 = Group 64		✓	
31-07-01	<b>Combined Paging Assignments</b>	For each External Paging Group (1~8 and 0 for All Call), assign a corresponding Internal Zone for Combined Paging.	Internal Page Zones: 0, 1~9, 00, 01~64 0~64 (0 = All internal paging) (default = 1)		✓	

## Operation

### To make an Internal Page announcement:


#### Multiline Terminal

1. Press the zone **Internal Paging** key (Program 15-07 or SC 751: 21 + 0 or 1~9 or 01~64 for zones (0 or 00 for All Call).

- OR -


Press **Speaker** or lift the handset.


- 
- 
2. Dial **701** and the Paging Zone number (0~9 or 00~64).

 *Dialing 0 or 00 calls All Call Internal Paging.*

**- OR -**

- Dial **\*1** and the Combined Paging Group code 1~8 or 0 (for Internal/External All Call).

 *Display indicates the Combined Paging as an External Page.*


 *If the Internal Page Zone is busy or if there are no extensions in a page group, the page is announced as an External Page only.*

3. Make an announcement.
4. Press **Speaker** to hang up.

### Single Line Telephone

1. Lift the handset.
2. Dial **701** and the Paging Zone number (0~9 or 00~64).

 *Dialing 0 or 00 calls All Call Internal Paging.*

 *Dial **\*1** and the Combined Paging Group code 1~8 or 0 (for Internal/External All Call).*

3. Make an announcement.
4. Hang up.

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## Park

### Enhancements

Calls can be parked from a virtual extension (**Version 3000 or higher** software).

With **Version 5000 or higher** software, calls can be parked at a co-worker's extension.

### Description

Park places a call in a wait state (called a Park Orbit) so an extension user may pick it up. Park has two types: System and Personal. System Park allows a user to have a call wait in System Orbit. Personal Park allows a user to Park a call at their extension so a co-worker can pick it up. After parking a call in orbit, a user can Page the person receiving the call and hang up. The paged party can dial a code or press a programmed Park key to pick up the call. With Park, it is not necessary to locate a person to handle their calls. A call parked for too long recalls the extension that initially parked it, however the call remains in the park orbit until it is answered. There are 64 Park Orbits (1~64) available for use.

### Extended Park

An extension Class of Service determines whether it uses the normal Park Orbit Recall time or the Extended Park Orbit Recall time. The timers are set in system programming. When an extension with Extended Park Recall Class of Service option parks a call, it recalls after the Extended Park Orbit Recall time. When an extension with the Normal Park Orbit Recall Class of Service option parks a call, it recalls after the normal Park Orbit Recall time, however the call remains in the park orbit until it is answered.

### Programmable Function Key and Service Code Available for Personal Park

The Personal Park feature is enhanced by using a Programmable Function Key or service code (3-digit or 1-digit) to place a call in Personal Park. This option is available for multiline terminals, single line sets, and UNIVERGE SV8100 Wireless telephones and can be used for analog or ISDN trunks.

### Conditions

- An extension user can park a call in any Park Orbit. However, an extension user can pick up only a call Parked by a member of their own Park group (see Program 24-03).
- When a 2-button telephone user parks a call, they must wait the Interdigit Time (normally 10 seconds) before trying to retrieve it.
- An extension can have only one Personal Park key.

- When the terminal that has a call in Personal Park is unplugged, the Personal Park is released and the held caller is placed on Non-Exclusive Hold.
- The following table indicates what condition the service codes and Programmable Function key can be used.

<b>Status</b>	<b>Using 3-Digit Service Code</b>	<b>Using 1-Digit Service Code</b>	<b>Using Personal Park Key</b>
Speaking	Not Available	Not Available	Available
ICM Dial Tone or Busy Tone	Available	Not Available	Available
Calling Another Extension	Not Available	Available (with outside call on hold and when called extension does not answer)	Available
Receiving a Personal Park Recall	Not Available	Not Available	Available

- A user can display the Caller ID of a call in Park if Caller ID is enabled (1) in Program 20-09-02.
- Park keys can be assigned on DSS consoles.
- Calls on virtual extension keys cannot be put in Personal Park if Program 15-18-01 is set to Land on the key (1).
- Function keys simplify Park operation.
- One Touch keys programmed for Park Hold Service Code cannot be used to park calls without using Hold or Transfer.
- Call Park – Step Call is supported in the local system only.
- A parked call cannot be retrieved from Hold Dial Tone (Second dial tone).
- When a call is parked from a virtual extension, the virtual extension is released.
- When parking a call from a virtual extension, Programs 15-02-21 and 15-18-01 must be set to 1.
- Park Group assignment is by the terminal extension, not the virtual extension.
- When a call parked from a virtual extension recalls, it will ring the terminal the virtual extension is programmed on, not the virtual extension key.

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## Personal Park at a Co-Worker's Extension

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### Description

The Personal Park feature allows an extension user to place an outside call, which is on hold, on Personal Park at a co-worker's extension after placing an intercom call. This feature is available for keysets, SLTs, IP terminals and IP DECT terminals.

### Conditions

- If an internal call forwards before Personal Park on a Co-Worker's Extension is performed, the call is Parked in the originator's Personal Park orbit.
- This feature is not available when calling a Department Group's pilot number.
- If an extension user has a call in Personal Park and the terminal is unplugged, the Personal Park is cancelled and the held caller hears a busy tone.
- This feature does not work when calling a Networked or virtual extension.
- If an extension already has a call in their Personal Park Orbit, the Personal Park for a Co-Worker's Extension will not work until the first call is retrieved from Park.
- A Personal Park Programmable Function Key or the Soft Key must be used to park the call in a co-worker's park. This operation cannot be done using a service code.
- An extension can park a call in any Park Orbit. However, an extension can only pick up a call Parked by a member of its own Park group (see Program 24-03).
- If an extension is not allowed access to trunks in the Access Maps (Program 14-07 and Program 15-06), calls in Park and on Hold can be blocked.

### Default Setting

Enabled

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### System Availability

#### Terminals

All Terminals

## Required Component(s)

None

## Related Features

Caller ID

Call Arrival (CAR) Keys

Direct Station Selection (DSS) Console

Hold

Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-31	<b>Service Code Setup (for Service Access) – Park Hold</b>	Set the service code used for placing a call in Park.	MLT, SLT (default: #6)		✓	
11-12-32	<b>Service Code Setup (for Service Access) – Answer for Park Hold</b>	Set the service code used for answering a call in Park.	MLT, SLT (default: *6)		✓	
11-12-35	<b>Service Code Setup (for Service Access) – Station Park Hold</b>	Set the service code used for placing a call in a Personal Park.	MLT, SLT (default = 757)		✓	
11-16-11	<b>Single Digit Service Code Setup – Station Park Hold</b>	Customize the one-digit service code used when placing a call in Personal Park.	(default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-08	<b>Multiline Telephone Basic Data Setup – Automatic Handsfree</b>	Set whether pressing a One-Touch key preselects the key or goes off-hook to access the key.	0 = Preselect 1 = One-Touch (Automatic Handsfree) (default = 1)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a keys as a Park Orbit key (code *04 plus Park orbit number [01~64]) or as a Personal Park key.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-18-01	<b>Virtual Extension Key Enhanced Options – Virtual Extension Key Operation Mode</b>	Set whether an incoming call to a Virtual Extension/CAR resides on the Virtual Extension/CAR key once answered (1) or appears on a CAP Key/CO Appearance Line key (0). This setting applies to multiline terminals, single line telephones and virtual extension numbers.	0 = Release 1 = Land On the Key (default = 0)		✓	
15-18-02	<b>Virtual Extension Key Enhanced Options – Display Mode when pacing a call on Virtual Extension Key</b>	Define whether calls to or from a Virtual Extension Key display the Virtual Extension Key name or the name of the extension on which it resides.	0 = Secondary Extension Name 1 = Actual Station Name (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow normal or extended Park.	0 = Normal 1 = Extended (default = 0 for COS 1~15)		✓	
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn Off or On an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-26	<b>Class of Service Options (Hold/Transfer Service) – Station Park Hold Mode</b>	Turn Off or On an extension users ability to Personal Park on a Co-Worker's extension. <b>Version 5000 or higher</b> software required.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-27	<b>Class of Service Options (Hold/Transfer Service) – Call Park Automatically Search</b>	Turn Off or On using the Call Park Automatically Search option.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
24-01-02	<b>System Options for Hold – Hold Recall Callback Time</b>	A trunk recalling from Hold or Park rings an extension for this time. After this time the system invokes the Hold recall time again. Cycling between Hold recall time and callback time and normal or extended (Recall) Park Hold time continues until a user answers the call.	0~64800 (seconds) (default = 30)		✓	
24-01-06	<b>System Options for Hold – Park Hold Time - Normal</b>	Set the Park Hold Time. A call left parked longer than this time recalls the extension that initially parked it.	0~64800 (seconds) (default = 90)		✓	
24-01-07	<b>System Options for Hold – Park Hold Time - Extended (Recall)</b>	Set the Extended Park Hold Time. A call left parked longer than this time recalls the extension that initially parked it.	0~64800 (seconds) (default = 300)		✓	
24-03-01	<b>Park Group – Park Group Number</b>	Assign an extension to a Park Group. An extension user can pick up only a call parked by a member of their own Park Group.	1~64 (default = 1)		✓	

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## Operation

### To Park a call in a system orbit:

 You can Park Intercom or trunk calls.


1. Press the **Park** key (Program 15-07 or SC 752: \*04 + orbit).

 The Park key LED lights.

 If you hear busy tone, the orbit is busy. Try another orbit.

2. Use Paging to announce call.

3. Press **Speaker** to hang up.

 If not picked up, the call recalls to you.


- OR -


1. At the multiline terminal or 2-button telephone, press **Hold**.

- OR -

At a 500/2500 single line telephone, hookflash.


2. Dial **#6** and the Park orbit (01~64).


 If you hear busy tone, the orbit is busy. Try another orbit.

 If you hear a busy tone, the orbit is busy. Dial **#6\*** if enabled in Program 20-11-27 (Call Park AutoSearching) to search for an idle park location in ascending order.

3. Use Paging to announce the call.

4. Press **Speaker** to hang up.

 If not picked up, the call recalls to you.

 The parked call recalls after the Park Hold Time (Program 24-01-06). The call rings the extension to which it recalled for the Hold Recall Callback Time (Program 24-01-02). The call then goes on Hold for the Park Hold Time, then recalls again for the Hold Recall Callback Time. The call continues to cycle between Hold and recall until the extension user answers the call or the outside party hangs up.

### To pick up a parked call:

1. Lift the handset.

2. Press the **Park** key (Program 15-07 or SC 752: \*04 + orbit).

- OR -

1. At the multiline terminal or 2-button telephone, press **Speaker**.

- OR -

At single line telephone, lift the handset.




2. Dial **\*6** and the Park orbit (01~64).


**To park a call at your extension:**

1. Press **Hold** and dial 757.





- OR -

Press **Hold** and the **Personal Park** key (Program 15-07 or SC 752: \*07).



-  *At a 500/2500 single line telephone, hookflash instead of pressing **Hold**.*
-  *A confirmation tone is heard and the call is parked at your extension. If the extension has a Personal Park key, the key flashes.*
-  *The Personal Park single-digit service code (Program 11-16-11) cannot be used in this operation.*

2. Page your co-worker to pick up the call.
3. Press **Speaker** to hang up (or hang up at the single line telephone).
  -  *If not picked up, the call recalls to you.*

**To park a personal call at your extension after trying to call a co-worker:**

1. While on a call, press **Transfer/Hold**.
  -  *Version 4000 or lower or Version 5000 or higher with Program 20-11-26=0 for an extension's Class of Service required.*
2. Dial a co-worker's extension number.
  -  *The co-worker does not answer.*
3. Press the **Personal Park** key (Program 15-07 or SC 752: \*07).
  - OR -
  - Dial the Personal Park single digit code (Program 11-16-11).
    -  *The Intercom call to the co-worker is dropped. A confirmation tone is heard and the outside call is parked at your extension.*
    -  *If the co-worker answers the call, the outside call rings back after the intercom call is completed. The call can then be placed in Personal park if desired.*

**To Park a personal call at a co-worker's extension after calling them (Version 5000 or higher):**

-  *An extension's Class of Service must allow the user to park the call at a co-worker's extension (Program 20-11-26 = 1).*
1. While on a call, press **Transfer/HOLD**.
  2. Dial a co-worker's extension number.
    -  *The co-worker does not answer.*




3. Press the Personal Park key (Program 15-07 or SC 752: \*07).


- OR -

Press the StaP Soft Key **h**.

- OR -

Dial the Personal Park single digit code (Program 11-16-11).

 *The Intercom call to the co-worker is dropped. A confirmation tone is heard and the call is parked at the co-worker's extension.*


 *If the co-worker does not answer the call, it will recall to the originator's extension.*


### To pick up a call parked at your extension:

1. Press the **Personal Park** key (Program 15-07 or SC 752: \*07).

- OR -


Press **Speaker** and dial **757**.

 *At a single line telephone, do not press **Speaker**.*


 *The Personal Park single-digit service code (Program 11-16-11) cannot be used in this operation.*

### To answer a call parked at a co-worker's extension:

1. Press **Speaker**, dial **\*\*** plus the co-worker's extension number.

 *At a single line telephone, do not press **Speaker**.*

### To display Caller ID for a call in Park:

 *With Program 15-02-08 set to 0 (preselect) for this feature.*

1. With Program 15-02-08 set to 0 (preselect) and a call in Park, press the **Park** key. (Program 15-07 or SC 752: \*04).

- OR -

With Program 15-02-08 set to 1 (One-Touch), and a call in Park, press **Feature**, then the **Park** key (Program 15-07 or SC 752: \*04).


### Call Park – Step Call:

#### To Park a call in the first available system orbit:


 *You can Park Intercom or trunk calls.*

1. Press **Hold** or **Transfer**.


2. Dial **#6**.

 *If you hear a busy tone, the orbit is busy. Proceed to step 3.*

3. Dial **\***.

 *Program 20-11-27 must be enabled in the multiline terminals Class of Service.*

4. Press **Speaker** to hang up.

 *If not picked up, the call will recall to you.*

- OR -

1. Press **Hold** or **Transfer**.

2. Press the DSS/BLF key programmed as **#6\***  
(The Park location will be displayed in the LCD).

3. Press **Speaker** to hang up.

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## *PBX Compatibility*

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### Description

You can connect your telephone system trunks to Centrex/PBX lines, rather than to Telco trunk circuits. This makes the trunk inputs to the system 500/2500 type compatible Centrex/PBX extensions, rather than Telco circuits. PBX Compatibility lets the system be a node (i.e., satellite) in a larger private telephone network. To place outside calls when the system is behind a PBX, telephone system users must first dial the PBX trunk access code (usually 9).

The system provides the following PBX Compatibility options:

PBX Trunk Access Code Screening

The system can monitor the numbers users dial and screen for PBX trunk access codes. The system can screen up to four groups of trunk access codes. The codes can have one or two digits, consisting of the digits 0~9, # and \*. (You use Line Key 1 as a wild card entry.)

PBX Trunk Toll Restriction

The system can provide the Toll Restriction for the PBX trunk, or restriction can be handled solely by the connected PBX. If the telephone system provides the restriction, it restricts the digits dialed after the PBX access code.

PBX Call Restriction

When the telephone system does the Toll Restriction, it can further restrict users from dialing PBX extensions. In this case, the only valid numbers are those dialed after the PBX trunk access code. The only PBX facility telephone system users can access are the PBX outside trunks.

Automatic Pause

The system automatically pauses when it sees a PBX trunk access code during manual dialing, Speed Dialing, Last Number Redial, Repeat Redial and Save Number Dialed. This gives the connected PBX time to set up its trunk circuits.

### Conditions

- When using Account Codes, do not use \* in a PBX access code. Otherwise, after the \*, the trunk stops sending digits to the central office.
- The system automatically pauses after it finds a PBX access code in a Speed Dialing bin.
- If Speed Dialing routes a call to a PBX trunk, it does not automatically insert a PBX access code. It outdials the digits just as they are stored.
- Users answer incoming calls on PBX trunks just like other trunks. All relevant access and Ring Group programming applies.

- Except for dialing the PBX access code, users place calls on PBX trunks just like other trunks. All relevant access programming applies. Refer to the [Central Office Calls, Placing on page 2-275](#) feature for more details.
- You can have DILs route from the connected PBX. Users can access these trunks for outgoing PBX calls. All PBX Compatibility restrictions and programming apply.
- Flash may allow access to certain PBX features – like Transfer. Make sure you program Flash for compatibility with the connected PBX.
- The system does not provide automatic Pulse to Tone Conversion after outdialing the PBX trunk access code.
- You can program incoming DISA trunks to be outgoing PBX trunks. All PBX Compatibility restrictions and programming apply.
- PBX trunks can follow normal system Toll Restriction.
- Users can get outbound access to PBX trunks through Trunk Groups and/or Trunk Group Routing. All PBX Compatibility restrictions and programming apply.
- If the system routes a call to a PBX trunk, it does not automatically insert the PBX access code. It outdials the call just as the user dialed it.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Account Code Entry**

**Call Forwarding – Centrex**

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**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Code Restriction**

**Direct Inward Line (DIL)**

**Direct Inward System Access (DISA)**

**Flash**

**Pulse to Tone Conversion**

**Ring Groups**

**Speed Dial – System/Group/Station**

**Trunk Group Routing**

**Trunk Groups**

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-01	<b>Basic Trunk Data Setup – Trunk Name</b>	Set the names for trunks. The trunk name displays on a multiline terminal for incoming and outgoing calls.	Up to 12 Characters Line 001 Line 002 Line 003 : Line 200	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-02	<b>Basic Trunk Data Setup – Transmit Level</b>	Set these options for compatibility with the connected PBX.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]	✓		
14-01-08	<b>Basic Trunk Data Setup – Toll Restriction</b>	For each PBX trunk port, Enable/Disable Toll Restriction.	0 = Restriction Disabled (No) 1 = Restriction Enabled (Yes) (default = 1)	✓		
14-02-01	<b>Analog Trunk Data Setup – Signaling Type (DP/DTMF)</b>	At default, Program 14-02-01 is set to 2 (DTMF).	0=Dial Pulse (10 PPS) 1=Dial Pulse (20 PPS) 2=DTMF (default = 2)	✓		
14-02-02	<b>Analog Trunk Data Setup – Ring Detect Type</b>	Set Extended Ring Detect or Immediate Ring Detect for the trunk. For T1 loop/ground start trunks, this option must be set to 1 for the trunks to ring and light correctly.	Trunks 1~200 0 = Normal/delayed 1 = Immediate Ringing (default = 1)	✓		
14-04-01	<b>Behind PBX Setup</b>	For each PBX trunk port, enter 1. Make a separate entry for each Night Service mode.	0 = Stand Alone (Trunk) 1 = Behind PBX (PBX) 2 = Not Used 3 = CTX assume 9 (default = 0)	✓		
21-04-01	<b>Toll Restriction Class for Extensions</b>	Assign a Toll Restriction Class (1~15) to each extension.	Day/Night Mode 1~9 (9 = Power Failure Mode) 1~15 (default = 2)		✓	
21-05-12	<b>Toll Restriction Class – PBX Call Restriction</b>	For each Toll Restriction Class, enter 1 to restrict calls on the PBX trunk to outside calls only. Enter 0 to allow users to dial PBX extensions.	0 = Disable (No) 1 = Enable (Yes) Default: 1~6, 8~15 = 0 7 = 1		✓	
21-06-08	<b>Toll Restriction Table Data Setup – PBX Access Code</b>	Enter the system PBX access codes. The system can have up to four codes. A code can have one or two digits. Valid entries are 0~9, # and *. Use Line Key 1 as a don't care digit. If using Account Codes, do not use the * in the PBX Access Code.	Dial (Up to two digits) default: Table 1~4 = No Setting		✓	

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## Operation

### To place a call over a PBX trunk:

1. At multiline terminal, press **Speaker** and dial **704**.  
- OR -  
At single line telephone, lift the handset and dial **704**.
2. Dial PBX trunk group number (1~9 or 001~100).
3. Dial PBX access code and number.  
- OR -
  1. At the multiline terminal only, press **PBX trunk group** key (Program 15-07 or SC 752: \*02 + group).
  2. Dial PBX access code and number.
1. At the multiline terminal, press **Speaker** and dial **9**.  
- OR -  
At the single line telephone, lift the handset and dial **9**.
2. Dial the PBX access code and number.  
- OR -
  1. At the multiline terminal, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
  2. Dial **#9**.
  3. Dial the PBX trunk number (e.g., 005 for line 5).
  4. Dial the PBX access code and number.
- OR -
  1. Press the **PBX trunk key** (Program 15-07 or SC 752: \*01 + 1 to 200).
  2. Dial the PBX access code and number.

 *In all cases above, Toll Restriction may prevent your call.*

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# PC Programming

## Enhancements

With **Version 4.00** software, PCPro can migrate a UX5000 database to a SV8100 database and set the database to UX5000 defaults. Also, PCPro can download the DIM logs from the system for engineering troubleshooting and save the license information for the system.

With **Version 4000 or higher** software, WebPro is enhanced to include the Maintenance Debug option. This allows the WebPro user to enable and disable debug traces for troubleshooting.

With **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

With **Version 6000 or higher** software, Outbound IP Connection is supported.

With **Version 8000 or higher** software:

- PCPro and WebPro have been enhanced allowing T1/ISDN layer 1 status, System Alarms and SRAM information to be viewed. The SRAM displays Day/Night Mode information, Trunk information (Trunk to Trunk Transfer Set/Not Set, Trunk disabled), Read List, Department Group information (DND, Transfer settings) and Extension information (Forwarding settings, Alarm settings, DND, BGM and more). This feature requires **Version 8000 Enhanced (0037)** license and **Maintenance (0043)** license.
- USB backup via WebPro is available.

With **Version 9000 or higher** software, WebPro is enhanced to allow for remote upgrade and Backup/Restore of system.

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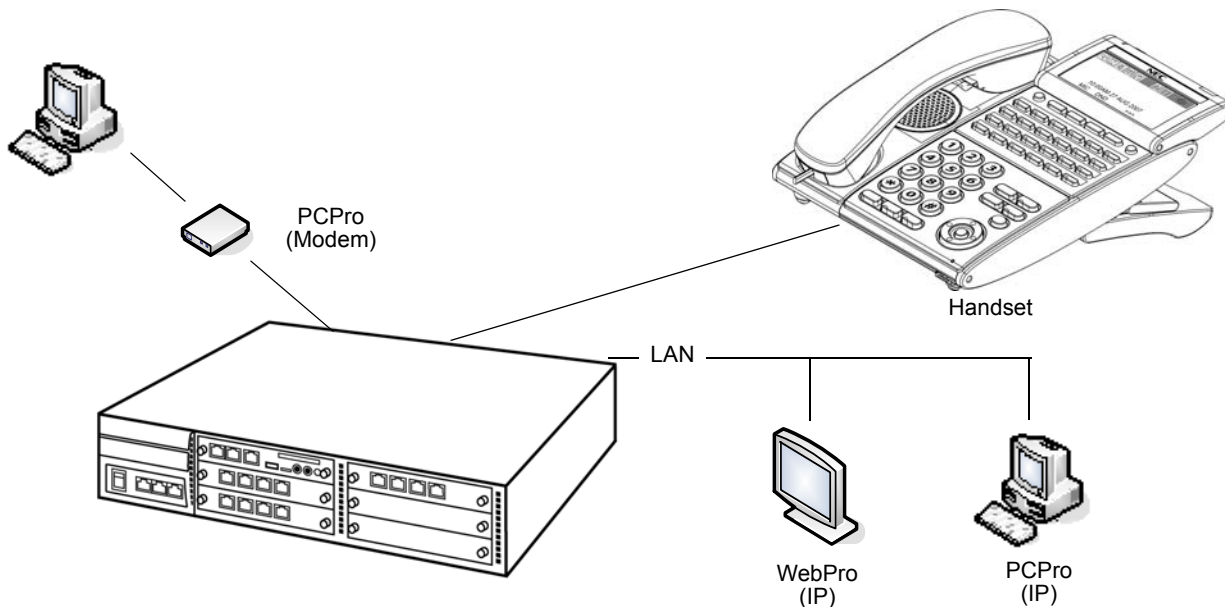
## Description

The UNIVERGE SV8100 has three different methods for programming. The first is via the handset, the second is by PCPro and third by WebPro.

PCPro is a Microsoft Windows based application. It allows the technician/system administrator to download a database from the system, make changes, and then upload.

The WebPro application is a web server running on the CD-CP00-US blade of the SV8100 system. No special installation program is required. When programming the system, use Internet Explorer other web browsers are not currently supported.

An overview of the three programming applications is shown below.




**Figure 2-30 PC Programming Overview**

## Connecting

As can be seen in [Figure 2-30 PC Programming Overview](#), three connection types are available to PCPro/WebPro.

If using PCPro, a user can connect directly, remotely using a modem or via LAN. A connection with the system is made via the Connection Dialog in the application. (Refer to [Figure 2-31 PCPro Connection Dialog on page 2-1205](#).)

- Direct* connections (IPK II only) are established using the RS232 serial port (COM Port 1) on the side of the system.
- Modem* (remote) connections are established via the internal CD-CP00-US modem. To access the modem, dial a trunk that is directed to the modem access service code (DIL or DID) or dial an extension that is redirected to the modem access service code. When connecting with a Modem, a Dial Up Connection (PPP) must be set in Windows Network Connections.
  -  *When uploading via a Dial Up connection, uploading card configuration (Hardware Upload) is not supported.*
- IP* (LAN) connections are established via the Ethernet connector on the CC-CP00-US blade.

3) (Optional) Load a defined Connection Account (can skip steps 1~3 by using this option.

1) Select Connection Type.

If connecting to an IPK II system, select either Direct or Modem Connection Type.

2) To login, specify the User Name and Password.

4) To make the connection to the system, click Connect.

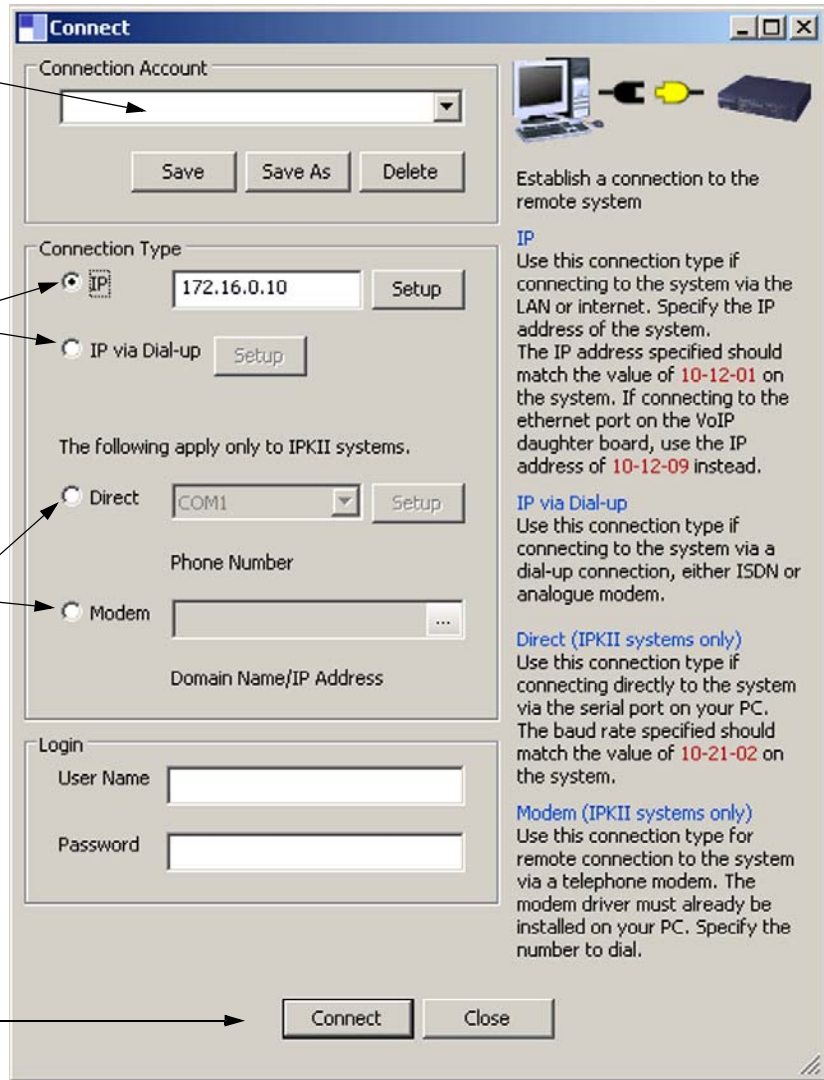


Figure 2-31 PCPro Connection Dialog

If using WebPro, a user can connect only via IP. To connect, launch Internet Explorer and enter the IP address of the switch (refer to [Figure 2-32 WebPro Login Screen](#)).

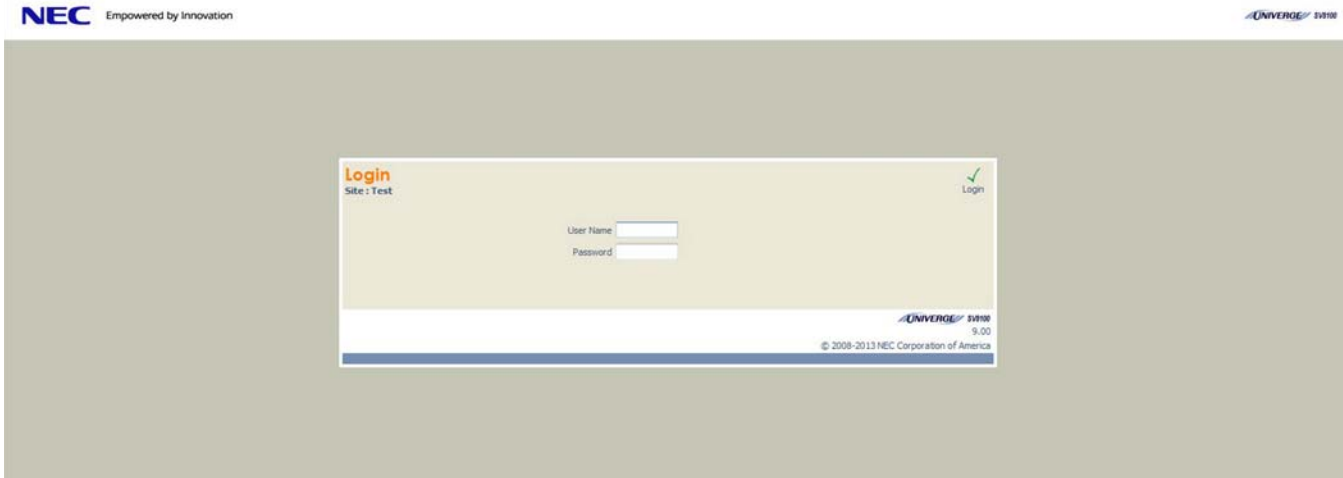


Figure 2-32 WebPro Login Screen

## WebPro System Programming

WebPro can be used to edit system programming from a Web browser. System Data, License Information, and Modification History are among the items that can be viewed in WebPro (refer to [Figure 2-33 WebPro Home Page](#)).

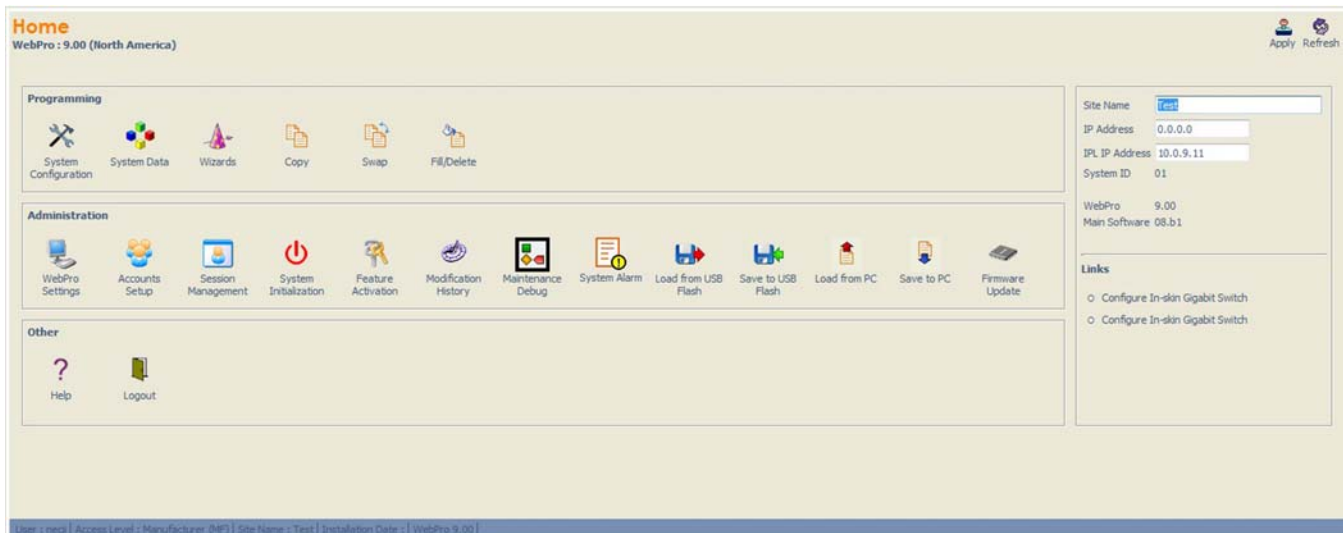


Figure 2-33 WebPro Home Page

With **Version 4000 or higher**, the Maintenance Debug section is added to allow the WebPro user to turn on debug traces for engineering troubleshooting (refer to [Figure 2-34 Maintenance Debug Screen](#)).

**Maintenance Debug**

Service Name	Trace Command Operation	Trace Status	DIM Command Reference
CAPS	Disable	-----	mal in 0 0 0 0
Call Control	Disable	-----	mal in 0 0 1 2
ISDN	Disable	-----	path debug on /path debug off
PATH	Disable	-----	mal in 0 d0ff 1 1 / mal in 0 d0ff 0 1
InMail / APSU	Disable	-----	vmuaid 1 15
InMail detail	Disable	-----	cygnet dp 1 / cygnet dp 0
Netlink	Disable	-----	voipcodebug 0 1 / voipcodebug 0 0
SIP Trunk	Disable	-----	voipcodebug 5 1 / voipcodebug 5 0
STD SIP	Disable	-----	voipcodebug 5 2 / voipcodebug 5 0
STD SIP Register	Disable	-----	spnlt dbg c 1 / spnlt dbg c 0
SIPMLT Path	Disable	-----	spnlt dbg f 1 / spnlt dbg f 0
SIPMLT Error	Disable	-----	mal i 0 9ff 0 0
IOCS	Disable	-----	

User : root | Access Level : Manufacturer (MF) | Site Name : Test | Installation Date : | WebPro 9.00 |

**Figure 2-34 Maintenance Debug Screen**

## WebPro End User Programming

WebPro has an End User Login for which extensions can program functions for their own extension. They can program Function keys, Virtual Extension ringing assignment, Station Speed Dial, InMail features, Station Name, Call Forwarding, Display Language, Ring Tone and End User Password.

To login to the WebPro End User Programming, point to the IP address of the system in a web browser like you would logging into WebPro. Use the extension number as the User Name (refer to [Figure 2-35 WebPro End User Screen on page 2-1208](#)) and the password is assigned in Program 90-28-01 (Default is 1111).

**Telephone Setting**

Apply Refresh Logout

● Feature Setup ○ Function Key Assignment ○ Virtual Extension Ring Assignment ○ One Touch Key Assignment ○ InMail Station Mailbox Options ○ Station Mailbox Message Notification Options ○ Station Mailbox Find-Me Follow-Me Options ○ InMail Audio Up/Down load

[Extension 1403]

Name: 1403

Call Forward Type: No Call Forward

CO Call Forward Destination for Both Ring, All Calls and No Answer: [Empty]

Intercom Call Forward Destination for Both Ring, All Calls and No Answer: [Empty]

CO Call Forward Busy Destination: [Empty]

Intercom Call Forward Busy Destination: [Empty]

Display Language Selection: English

Incoming Ring Tone: Trunk Incoming Ring Tone: Medium, Internal Incoming Ring Tone: Melody 5

Toll Restriction Override Password: [Empty]

Night Mode Switching: Mode 1

End User Password: 1111

User: 1403 | Access Level: Telephone (TEL) | Site Name: Test | Installation Date: | WebPro 9.00

**Figure 2-35 WebPro End User Screen**

## Conditions

- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.
- When connecting via a dial up connection, a Dial Up Connection (PPP) must be configured in Windows Network Connections.
- When uploading via a Dial Up connection, uploading card configuration (Hardware Upload) is not supported.
- The hardware/software requirements for the host PC running the PCPro application are:

Item	Requirement
CPU	Pentium® III 598MHz (minimum) Pentium 4 2.5GHz (recommended)
Memory	128MB of RAM, 256MB (recommended)
Operating System (OS)	Windows XP or Microsoft Vista Windows 7 (32- and 64-bit)
Other	Microsoft Internet Explorer 6.0 or higher
Communication Port	LAN, or Modem

Item	Requirement
Disk Space	35MB for PCPro (minimum)
TCP Port	TCP port 8000 must be open between the terminal and the host PC for uploading/downloading via LAN. PCPro/WebPro TCP port is set for 8000 at default, but can be changed via WebPro using Program 90-38-02. Program 90-38-02 is not accessible from Phone Programming or PCPro. TCP port 5963 is required to be open if the Debug Terminal is going to be used.
Screen Resolution	800 x 600 (minimum) 1024 x 760 (recommended)

- The hardware/software requirements for the host PC running WebPro are:

Item	Requirement
Browser	MS Internet Explorer 6.0 (or higher)
Network	IP connection to the KTS
Screen Resolution	800 x 600 (minimum) 1024 x 760 (recommended)

- You can have a maximum of four users logged into WebPro anytime.
- You can have up to two phones in programming mode anytime.
- You can have four WebPro users and two phone programming users logged in at the same time for a **total of six users** in programming mode simultaneously. However, the two phone programming users do not show up in session management in WebPro.
- PCPro can be logged in with only one user. This is allowed only if no other users are logged into programming mode (PCPro, WebPro, or Phone). Also, if a user is connected to the switch via PCPro, no other user can log in through PCPro, WebPro, or Phone Programming.
- Only one PCPro/WebPro/Handset can be programming the switch anytime.
- When programming via WebPro/PCPro, some data requires you to logout before the switch fully applies the changes. These Programs are: 10-21-2, 11-02 (for directory dial), 11-04 (for directory dial), 13-04 (for directory dial), 14-04, 15-05, 15-15, 16-02, 23-02, 31-02, 41-02, 41-17, 47-02, 47-03, 82-11 and 83-11.

- In the card configuration window, if you click a card type in the main menu, the menu closes. You must mouse over the card type to open the submenu to list all cards of that type.
- To access the modem over K-CCIS, route the modem access service code to the target switch. Do not call a station that is call forwarded to the service code. When accessing the modem over K-CCIS, enter the service code to be dialed in PC Pro.
  - ✎ *PC Pro follows the PC dialing properties. If dialing a service code, you must turn off the dial 9 for outside line and area code inclusion or PC Pro will dial these digits as well.*
- Some program items require second initialization of the KTS before they take effect. These Programs are: 10-12-01, 10-12-02, 10-12-03, 10-12-04, 10-13-01, 10-13-02, 10-13-03, 10-14, 10-15, 10-16-01, 10-16-02, 10-16-03, 10-16-04, 20-01-03, 47-01-01, 80-01, 80-02-01, 80-02-02, 80-02-03, 80-02-04, 80-03, 80-04, 84-03-01, 84-03-02, 84-03-06, 84-03-07, 84-03-08, 84-05-01, 84-05-02, 84-06-01, 84-06-02, 84-06-03, 84-06-04, 84-06-05, 84-06-06, 84-06-07, 84-06-08, 84-06-09, 84-06-10, 84-06-11, 84-09 and 84-10.

*These caution statements do not apply to Version 2.0 or higher software.*



- *Failure to properly install and program ports higher than 64 (as described below) can corrupt the SV8100 database. If the PZ-ME50-US is not physically installed on the CD-CP00-US, do not attempt to change the PCPro database configuration to indicate that the PZ-ME50-US is installed on the CD-CP00-US, program ports 64 and higher and then upload the PCPro configuration to the SV8100 system. This process can corrupt the SV8100 database. Refer to the next bullet for the proper installation/programming procedure.*
- *To properly install and configure the PZ-ME50-US; first install the PZ-ME50-US on the CD-CP00-US. Next, you must reload the system software. With the PZ-ME50-US installed, a portion of the main software is loaded onto the PZ-ME50-US.*
- *Before attempting to program the ports above 64 using PCPro, a new download must be performed after the PZ-ME50-US is installed.*
- PCPro converts an Electra Elite IPK II PCPro database file into a SV8100 PCPro database file. PCPro Software **Version 3.00 or higher** is required.


The system data to be converted is limited to the system data listed below.

PRG No.	Name
10-23	IP System Interconnection Setup
11-01	System Numbering
11-02	Extension Numbering



13-04	Abbreviated Dial Number and Name
14-01	Trunk Basic Data Setup
14-02	Analogue Trunk Data Setup
14-05	Trunk Group
14-06	Trunk Group Routing
15-01	Extension Basic Data Setup
15-07	Programmable Function Key
21-02	Trunk Group Routing for Extensions
22-02	Incoming Service Type Setup
22-04	Incoming Ring Group Setup
22-05	IRG Assignment for Normal Ring Trunk
22-07	DIL Assignment
22-11	Dial-In Conversion Table Data Setup
26-01	Automatic Route Selection Service
26-02	Dial analysis Table for ARS/LCR
26-03	ARS Dial Treatments
26-04	ARS Class of Service
26-11	Transit Network ID Table
26-12	Network Specified Parameter Table for ARS/F-Route
40-02	Mail Box Setup
44-02	Dial analysis Table for F-Route Access
44-05	F-Route Table
44-06	Additional Dial Table

- PCPro can open and convert a UX5000 database to an SV8100 database (**Version 4.00 PCPro or higher** is required).

 Refer to the PCPro manual for programs converted.

- Databases that have a PZ-ME50-US installed can not be uploaded into a system without a PZ-ME50-US.

- With **Version 8000 or higher** software, PCPro and WebPro have been enhanced allowing T1/ISDN layer 1 status, System Alarms and SRAM information to be viewed. The SRAM displays Day/Night Mode information, Trunk information (Trunk to Trunk Transfer Set/Not Set, Trunk disabled), Read List, Department Group information (DND, Transfer settings) and Extension information (Forwarding settings, Alarm settings, DND, BGM and more). This feature requires **Version 8000 Enhanced (0037)** license and **Maintenance (0043)** license.
  - ✎ *Refer to the UNIVERGE SV8100 PC Programming Manual, Appendix L, Maintenance Features for more details.*
- With **Version 9000 or higher** software, WebPro has been enhanced to allow for remote upgrade and is only available in the Manufacture (MF) and Installer (IN) level logins.
- With **Version 9000 or higher** software, WebPro has been enhanced to allow for Backup of the system data and also the restoring of a Backup.
  - Backup data is in the GZIP (.gz) format.
  - Backup is not able to be modified.
  - When the Backup is restored, the system resets after the upload is completed.
  - Only available in Manufacture (MF), Installer (IN), and System Administrator 1 (SA1) level logins.

## Outbound IP Connection

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### Description

Outbound IP Connection for PC Programming allows the system to make a PC Pro Connection via an outgoing call over IP, to a pre-programmed IP Address, upon receipt of an incoming CO call matching a pre-programmed CLI. When the target number of DID incoming call matches with the service code of 'Outbound IP Connection' the SV8100 compares the received CLI with the registered CLI (Program 90-69-03). When the received caller ID and registered caller ID match, the SV8100 sends a TCP establishment request to a waiting PCPro application. When the caller ID does not match, the call will either step to the locations in Program 22-11-05 and Program 22-11-06 if configured or, send a busy tone to the caller. Alternatively, via dialing service code from a Multiline Terminal, an outgoing IP connection can be made to a waiting PCPro terminal with a pre-programmed IP Address. This allows for a pre-authorized connection for programming purposes without using CO Lines and potentially reducing the cost of calls for maintenance. The outgoing IP call connects by sending a TCP establishment request to a waiting PC Programming terminal. A fixed, encrypted, user ID and password are used to verify the connection.

If an unsuccessful connection attempt is made, this can be output as an alarm.

## Conditions

- **Version 6.00 or higher** SV8100 system software is required for Outbound IP Connection for PC Programming.
- **R6 PC Programming or higher** is required for Outbound IP Connection for PC Programming.
- Outbound IP Connection for programming is not available when an existing WebPro/PCPro or station programming session is active.
- SV8100 changes the port number of TCP at each connection. The range used is 61050~61099.
- Outbound IP Connection Service code can be dialed across CCIS.
- Outbound IP Connection to a secondary side of Net-Link is not supported.

## Default Setting

None

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## System Availability

### Terminals

All Terminals

### Required Software

None

### Required Component(s)

CPU

PC Programming

R6000 Enhancement (0035) license (for Outbound IP Connection)

Maintenance (0043) License (for Outbound IP Connection)

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## Related Features

### Alarm Reports

### Direct Inward Dialing (DID)

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## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### PC Programming:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	Assign the IP Address.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-02	<b>CD-CP00-US Network Setup – Subnet Mask</b>	The setting of Subnet Mask is invalid when all Host Addresses are 0. If the network section is: 0, 127, 128.0, 191.255, 192.0.0, 223.255.255 The setting of Subnet Mask is invalid.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.255.0)	✓		
10-12-03	<b>CD-CP00-US Network Setup – Default Gateway</b>	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
11-15-14	<b>Service Code Setup, Administrative (for Special Access) – Modem Access</b>	Assign the service code to be used to access the internal modem on the CD-CP00-US.	(default = 740)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Define the service type for the trunk intended to access the internal modem as 4:DIL.	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-07-01	<b>DIL Assignment</b>	Assign the Modem Access service code set in Program 11-15-14 as the destination extension for the DIL trunk for modem access.	Extension Number (maximum eight digits) (default not assigned)		✓	
90-02-01	<b>Programming Password Setup – User Name</b>	Set the system passwords.	Maximum 10 characters Refer to the SV8100 Programming Manual for default settings.		✓	
90-02-02	<b>Programming Password Setup – Password</b>	Configure the administrator accounts that are used when connecting to the KTS via PCPro/ WebPro. If using PCPro, these are the accounts that are used to <i>connect</i> . If using WebPro, these are the accounts that are used to login.  <i>If calls are answered by an Auto attendant first, instead of the DIL setup on Program 22-01 and Program 22-07, set the transfer destination in the Auto Attendant to the Modem Access Service Code.</i>	Up to eight digits. Refer to the SV8100 Programming Manual for default settings.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-02-03	<b>Programming Password Setup – User Level</b>	Set the system password user levels.	0 = Prohibited User 1 = MF (Manufacturer Level) 2 = IN (Installer Level) 3 = SA (System Administrator Level 1) 4 = SB (System Administrator Level 2) 5 = UA (User Programming Level 1) Refer to the SV8100 Programming Manual for default settings.		✓	
90-26-01	<b>Program Access Level Setup – Maintenance Level</b>	Define access levels to each program. This program defines which administrator accounts in Program 90-02 can access the program. If a program is not accessible, it does not appear in PCPro/WebPro.	1 = MF Level 2 = IN Level 3 = SA Level 4 = SB Level Default: Refer to the Level indication for each individual program (located in the upper left corner at the beginning of each program).		✓	
90-28-01	<b>User Programming Password Setup – Password</b>	Use to set the password to enter the user programming mode.	Up to eight digits Fixed four digits (default = 1111)		✓	

### Outbound IP Connection:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup</b>	Set up and confirm the basic configuration data for each blade. This program represents different data depending on the blade installed in the slot. Refer to the SV8100 Programming Manual for a more detailed description of this program.	The assigned data varies depending on the blade installed in the slot. Please refer to the SV8100 Programming Manual for a more detailed description of the 10-03-XX programs.		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-15-16	<b>Service Code Setup, Administrative (for Special Access) – Outbound IP Connect for Programming</b>	Assign the service code for Outbound IP Connection for Programming. This Service Code is used to invoke TCP establishment request from SV8100 to remote PCPro.	(default not assigned)	✓		
90-10-01	<b>System Alarm Setup – Alarm Type</b>	Indicates the alarm type for Failure of Outbound IP Connection for PC Programming.	Alarm 58: Failure of Connection (Outbound IP Connection) Adding parameter: 01: Programming session is already active 02: Not setting of IP Address or Port 03: Caller ID is not match. 10: Failure of getting IP Address. 11: Socket Open Error 12: Socket Port Setting Error. 13: TCP Session Timeout		✓	
90-69-01	<b>Outbound IP Connection Setup – Port Number</b>	Define the port number used for Outbound IP Connection for Programming.	1~65535 (default = 8000)		✓	
90-69-02	<b>Outbound IP Connection Setup – IP Address</b>	Define the IP Address that the System will make the TCP establishment request to. I.E. the IP address of the PC with the waiting PC Programming.	0.0.0.0 ~ 255.255.255.255 (default = 0.0.0.0)	✓		
90-69-03	<b>Outbound IP Connection Setup – Caller ID</b>	Define Caller ID number that the system to compare with received Caller ID.	Max 16 digit (0 - 9, *, #9) (default = None)	✓		

## Operation

### Outbound IP Connection

1. Open PC Pro (**V6000 or higher**) on PC that has same IP address as assigned in Program 90-69-02.
2. Go to **Communications/Connect**.



3. Select **Outbound IP**.
4. Input **Connection** port (same as Program 90-69-01).
5. Select **Connect**.
  -  When PCPro does not receive a TCP established request within three minutes (fixed time), it ends the state of "Attempting to Connect".
6. Dial **Outbound IP Connection Service Code** (Program 11-15-16).
 

**-OR-**
7. Call the **DID** that points to the **Outbound IP Connection Service Code** (Program 11-15-16) with the matching CID (Program 90-69-03).
8. After Connection hang up.

Refer to the UNIVERGE SV8100 PC Programming Manual for further operational details.

## PCPro and WebPro Comparison

The table below gives a quick feature comparison of PCPro and WebPro. For further details refer to the UNIVERGE SV8100 PC Programming Manual.

**Table 2-75 PCPro and WebPro Comparison**

Feature		Feature Application		Comments
		PCPro	WebPro	
<b>Installation Program</b>		Y	–	
<b>File Handling</b>	File New/Open/Save/Save As	Y	–	
	File Properties	Y	–	PCPro supports save/view/modify UNIVERGE SV8100 Site Information, password protect files, add notes, connection settings.
	Version Conversion	Y	–	PCPro can convert databases between different UNIVERGE SV8100 versions.
<b>Programming Modes</b>	Offline	Y	–	Ability to program offline and upload to the UNIVERGE SV8100 at a later date.
	Live Update	Y	Y	Changes made in WebPro apply immediately. No upload is required. PCPro has Interactive Mode to make live changes.

Table 2-75 PCPro and WebPro Comparison (Continued)

Feature		Feature Application		Comments
		PCPro	WebPro	
Remote Connection	Upload	Y	–	PCPro can download the database from the UNIVERGE SV8100 to allow backups.
	Download	Y	–	
	Connection Accounts	Y	–	PCPro supports Direct, Modem and IP connections. WebPro supports only IP.
Accounts		Y	Y	WebPro: Refer to Program 90-02 in the Programming Manual.
Programming	Screen Help Text: System Data Help Text	Y	Y	Help in WebPro is more simplified than in PCPro.
	Control Hint Text	Y	Y	
	Smart Links	Y	–	WebPro has more simplified links than PCPro.
	Smart Labels	Y	Y	WebPro has more simplified labels than PCPro.
	Smart Controls	Y	–	WebPro has more simplified controls than PCPro.
	Validation	Y	Y	
	Multi-Assignments: Extension Numbers	Y	–	PCPro provides special screens that allow multiple values to be set easily. This applies mainly to table data. These screens shorten the programming time.
	Line Keys (CAP)	Y	–	
	Line Keys (General)	Y	–	
	Account Codes	Y	–	
	Defaults: View	Y	–	
	Copy: System Data Level	Y	Y	Copy items in an individual program.
	Group Level	Y	Y	Copy data for ports (telephone/trunk).
Modification Tracking (See also Modification History.)	Y	–	PCPro keeps track of changes made to a database. This includes: <ul style="list-style-type: none"> <li>1. Changes made to a database that are not yet saved.</li> <li>2. Changes made to database that are not yet uploaded.</li> </ul>	
Wizards		Y	Y	

Table 2-75 PCPro and WebPro Comparison (Continued)

Feature		Feature Application		Comments
		PCPro	WebPro	
<b>Configuration Screens</b>	Blade Configuration	Y	–	PCPro provides special screens that shorten the programming time to setup core UNIVERGE SV8100 features.
	Class of Service	Y	–	
	Night Mode Switching	Y	–	
	Trunk Access Maps	Y	–	
	Trunk Groups	Y	–	
	Department Groups	Y	–	
	Direct Inward Dialing	Y	–	
	Ring Groups	Y	–	
	Timers (Trunk/Telephone)	Y	–	
<b>QuickSearch</b>		Y	Y	WebPro has a simplified search facility. It applies only to programs.  PCPro provides extensive searching on programs, Wizards and IPK cross-referencing.
<b>Reports</b>	System Data	Y	–	PCPro can generate various reports based on values in the database.
	Verify	Y	–	
	Maintenance	Y	–	
	CAP Keys	Y	–	
	Numbering Plan	Y	–	
	Class of Service	Y	–	
	Modification History	Y	–	
<b>Simulators</b>	LCR/ACR	Y	–	
<b>Import/Export</b>	Speed Dials	Y	–	PCPro allows import/export of speed dials (csv file). It can also import converted IPK databases.
	IPK Converted File	Y	–	
<b>Program Help</b>	Help Pages	Y	Y	WebPro has more simplified help than PCPro.
	Context Sensitive Help	Y	Y	
<b>Security</b>	Application Login	Y	Y	User name/password protection to login to PCPro/WebPro.
	KTS Connection Login	Y	–	PCPro connections to a UNIVERGE SV8100 are user name/password protected.
	File Open	Y	–	You can password protect a PCPro saved database.

Table 2-75 PCPro and WebPro Comparison (Continued)

Feature		Feature Application		Comments
		PCPro	WebPro	
<b>Debug/Capture</b>	CD-CP00-US Debug Capture	Y	–	PCPro provides a tool for capturing debug information from the UNIVERGE SV8100 CD-CP00-US.
	SMDR Capture	Y	–	PCPro provides a tool for capturing SMDR reports from the UNIVERGE SV8100.
<b>Modification History</b>		Y	–	PCPro keeps a running list of all the modifications made to a system databases. It also tracks uploads/downloads.
<b>System Initialize</b>		Y	Y	This is the ability to initialize the UNIVERGE SV8100.
<b>System Time Setting</b>		Y	Y	This sets the time on the UNIVERGE SV8100.
<b>Software Updates</b>	Firmware Upload	Y	–	The UNIVERGE SV8100 CD-CP00-US firmware can be upgraded via PCPro.
<b>Licensing / Feature Activation</b>	KTS Feature Activation	Y	Y	Licensed UNIVERGE SV8100 features can be activated via PCPro/WebPro. You can also see what is licensed.

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# *Power Failure Transfer*

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## **Description**

Power Failure Transfer ensures that a customer has access to the Central Office network during a power outage. The CO/PBX tip and ring are automatically transferred to a DTH or ITH terminal multiline terminal with a PSA-L adapter installed.

## **Conditions**

- The PSA-L is not supported on DTL-2E-1, DTL-6DE-1, ITL-2E-1 and ITL-6DE-1 terminals.
- The single line telephones that are installed must provide dialing signal accepted by the outside exchange (Dial Pulse or Dual Tone Multifrequency).
- Multiline telephones with PSA-L adapter or single line telephones cross-connected at the MDF can be used for this feature.
- Single Line or PSA-L equipped multiline telephones and outside lines connected during power failure are fixed one-to-one.
- Single line telephones must be equipped with a ground start button for use with Ground Start Trunks.
- System features cannot be activated from single line telephone or multiline telephone with PSA-L adapter when Power Failure Transfer is in operation.
- When power is restored to the system one of the following happens dependant on whether a single line telephone or multiline telephone with PSA-L adapter is used:

### **Single Line Telephones**

Power Failure Transfer is cancelled. Calls in progress on Power Failure Transfer lines are disconnected.

### **Multiline Telephones with PSA-L Adapter**

Calls in progress continue but the display does not show the date, time and system softkeys. When the user hangs up, the phone automatically switches to Digital mode and the display returns to normal.

- Refer to the UNIVERGE SV8100 System Hardware Manual for the MDF Pin Numbers and PFT Connections (Power Failure Transfer Relay 1).
- The PSA-L adapter can be set to send DTMF or DP.
- The PSA-L is supported on Loop Start Trunks only.

- A Power Fail circuit is required. The CD-4COTB has Power Failure circuits on the first two ports.
- The PZ-4COTF daughter board does not have Power Fail or Fax Branch Exchange circuits.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

- PSA-L Handset Adapter
- CD-4COTB

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## **Related Features**

None

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-09	<b>Analog Trunk Data Setup – Busy Tone Detection</b>	Set the basic options for each analog trunk port.	0 = Disable 1 = Enable (default = 0)	✓		
14-02-14	<b>Analog Trunk Data Setup – Loop Start/Ground Start</b>	Set the basic options for each analog trunk port.	0 = Loop Start (Loop) 1 = Ground Start (Ground) (default = 0)	✓		

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## Operation

None

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## *Prime Line Selection*

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### **Description**

Prime Line Selection allows a multiline terminal user to place or answer a call over a specific trunk by lifting the handset. The user does not have to press keys or dial codes. This simplifies handling calls on a frequently used trunk.

Prime Line Selection has the following two modes of operation:

**Outgoing Prime Line Preference**

Lifting the handset seizes the Prime Line. Outgoing Prime Line Preference would help a telemarketer who always needs a free line to call prospective clients. The telemarketer lifts the handset and the Prime Line is always available. (Outgoing Prime Line Preference may be affected by Incoming Prime Line Preference – refer to the Programming section of this feature.)

**Incoming Prime Line Preference**

When the Prime Line rings the extension, lifting the handset answers the call. Incoming Prime Line Preference could benefit the Service Department dispatcher who must quickly answer customer's service calls and then dispatch repair technicians. When a customer calls in, the dispatcher lifts the handset to get their call. (Incoming Prime Line Preference can optionally seize an idle line appearance – refer to the Programming section of this feature.)

### **Conditions**

- Prime Line Selection can be assigned for Wireless DECT (SIP) and single line telephones (Analog 500/2500), however, the telephones cannot access ICM dial tone.
- Prime Line Selection directly interacts with line preference.

### **Default Setting**

Disabled

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### **System Availability**

#### **Terminals**

All Terminals

## Required Component(s)

None

## Related Features

Central Office Calls, Placing

Direct Inward Dialing (DID)

Direct Inward Line (DIL)

Direct Inward System Access (DISA)

Line Preference

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-05-01	Trunk Group – Trunk Group Number	Assign Prime Line to a separate trunk group for outgoing Prime Line selection. (Also refer to Program 14-06 and Program 21-02.)	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified)	✓		
14-07-01	<b>Trunk Access Map Setup – Trunk Port Number</b>	For outgoing Prime Line selection, assign each Prime Line trunk to a different Access Map and deny outbound access to all trunks except the Prime Line trunk.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold)	✓		
15-01-02	<b>Basic Extension Data Setup – Outgoing Trunk Line Preference</b>	Turn Off or On Outgoing Trunk Line Preference for extensions.	0 = Off 1 = On (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-10	<b>Multiline Telephone Basic Data Setup – Ringing Line Preference for Trunk Calls</b>	Enter 1 if lifting the handset should answer ringing Prime Line; enter 0 to seize idle line appearance.	0 = Idle (Off) 1 = Ringing (On) (default = 1)		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Set assignment so extension(s) can have access to Prime Line. Deny outbound access to extensions that should not have Prime Line.	Trunk Access Maps: 1~200 (default = 1)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a *00(ICM key) on phones to get an Intercom dial tone when both Program 15-01-02 and 20-08-21 are turned on for the extension.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
21-02-01	<b>Trunk Group Routing for Extensions</b>	Assign extension(s) to a Prime Line route for outgoing Prime Line access.	Trunk Groups: 1~100 Day/Night Mode: 1~8 Route Table Number: 0~100 (0 = No Setting) (default = 1)	✓		
22-01-01	<b>System Options for Incoming Calls – Incoming Call Priority</b>	Determine if Intercom calls or trunk calls have answer priority when both are ringing simultaneously.	0 = Intercom call priority 1 = Trunk call priority (default = 1)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extension(s) to a ring group that consists of a Prime Line.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	Assign a Prime Line to a ring group.	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-21	<b>Class of Service Options (Outgoing Call Service) – Automatic Trunk Seizing by Pressing Speaker Key</b>	Enable/Disable an extension user ability to automatically access Trunk Route when going Off-hook via the Speaker key.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	

## Operation

### To place a call on your Prime Line:

- Lift the handset.
  -  *You hear dial tone on your Prime Line.*

### To answer a call on your Prime Line:

- Lift the handset.
  -  *Depending on your Line Preference programming, you either answer the Prime Line or get dial tone on the idle line appearance.*

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## *Private Line*

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### **Description**

A Private Line is a trunk reserved for a multiline terminal for placing and answering calls. Users with a Private Line always know when important calls are for them. Additionally, the user has their own trunk for placing calls that are not available to others in the system.

### **Conditions**

- Incoming Only – The multiline terminal has a Private Line only for incoming calls. The user cannot place calls on the Private Line.
- Outgoing Only – The multiline terminal has a Private Line only for outgoing calls. The Private Line does not ring for incoming calls.
- Both Ways – The multiline terminal has a Private Line for both incoming and outgoing calls.
- Private Lines do not follow Call Forwarding if not Direct Inward Line (DIL).
- Other programmed options for outgoing calls also affect a Prime Line.
- Calls to extensions with DND active do not follow Call Forwarding programming. Direct Inward Line (DIL) calls ring an idle Department Group member, then follow Program 22-08 then Program 22-05.
- An extension user can have Line Preference options applied to their Private Line.
- A Private Line can also be a Prime Line.
- You should always program a line key for each Private Line.
- Private Lines are available on single line telephones.
- Private Lines follow normal Toll Restriction.
- An extension user can transfer their Private Line. If other users have hold access, the destination can answer the transferred Private Line and place it on Hold.
- NEC does not recommend assigning ringdown to a private line.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Call Forwarding**

**Central Office Calls, Placing**

**Do Not Disturb**

**Line Preference**

**Prime Line Selection**

**Programmable Function Keys**

**Single Line Telephones, Analog 500/2500 Sets**

**Toll Restriction**

**Transfer**


**VM8000 InMail**



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-09	<b>Basic Trunk Data Setup – Private Line</b>	Determine if a trunk should be used as a Normal or Private line.  <i>A Private Line reserves a trunk for a multiline terminal for placing and answering calls. A user with a Private Line always knows when important calls are for them. Additionally, the user has their own trunk for placing calls that is not available to others in the system.</i>	0 = Disable Private Line (Normal) 1 = Enable Private Line (Private Line) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-07-01	<b>Trunk Access Map Setup – Trunk Port Number</b>	Assign Private Line to the Private Line Access Map (refer to Program 15-06 in this section). Use option 5 for Incoming, option 7 for Both Ways and option 4 for Outgoing. In all other Access Maps, assign option 3 to the Private Line.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign extension to have Private Line to an unused Private Line Access Map.	Trunks 1~200 (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Make sure extension has a line key (e.g., 012) for the Private Line.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
21-02-01	<b>Trunk Group Routing for Extensions</b>	Change the routing as needed.	1~100 (Trunk Groups) 0~100 (0 = No Setting) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Set the Trunk Service to Type 4 if routing unanswered Private Lines to voice mail or 0 if not routing to voice mail.	Ring Groups: 1~100 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extension to Private Line ring group. Set the ringing in Program 22-06 – use option 1 for Incoming or Both Way Private Lines. Use option 0 for Outgoing Private Lines. Do not assign any other extensions to the Private Line ring group.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	Assign Private Line to an unused Private Line ring group (i.e., a ring group just for the Private Line).	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
22-07-01	<b>DIL Assignment</b>	If routing unanswered Private Lines to voice mail, assign DILs to the extensions.	Extension Number (maximum eight digits) (default not assigned)	✓		

## Operation

### To place a call on your Private Line:

1. Press **Private Line** key and then press **Speaker** or lift the handset.
2. Dial the number.

**To answer a call on your Private Line:**

1. Press **Private Line** key, and then press **Speaker** or lift handset.


**To place a call from your multiline terminal on you Private Line:**

1. Press the **Private Line** key, then press **Speaker** or lift the handset.
2. Dial the number.

**To answer a call from your multiline terminal on your Private Line:**

1. Press **Private Line** key or press **Speaker** or lift handset.

**To place a call on your Private line from a single line telephone:**

1. Pick up handset.  
 *Private Line dial tone is heard.*
2. Dial the number.

**To answer a call on you Private Line from a single line telephone:**

1. Lift the handset.

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# *Programmable Function Keys*

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## **Description**


Each multiline terminal has Programmable Function Keys. Programmable Function Keys simplify placing calls, answering calls and using certain features. You can customize the function of a multiline terminal programmable keys from each multiline terminal. Depending on your telephone style, you can have up to 48 Programmable Function keys.


## **Conditions**

- When a key is programmed using service code 752, that key cannot be programmed with a function using the 751 code until the key is undefined (000). For example with a Park Key programmed by dialing 752 + \*04 must be undefined by dialing 000 before it can be programmed as a Voice Over key by dialing 751 + 48.
- Using Program 92-01 to copy a multiline terminal Programmable Function Keys, copies all the keys whether or not they exist on the telephone to which the programming is being copied. This may cause confusion when trying to define a key which is already defined but which does not exist on the telephone (displays as DUPLICATE DATA). It is recommend to either clear these non-existent keys or to copy only from an extension which has the same or fewer number of keys than the extension to which the programming is being copied.
- When using Program 15-07-01 to program a D16(LD)-R ADM, regardless of the type of multiline terminal connected, *start programming the D16(LD)-R ADM keys at key number 17*. Service codes 751 and 752 can also be used to program these keys.
- Speed Dialing and One-Touch Calling also offer quick access to calls and features.
- Programming a 60-button console requires separate programming.

- If the feature key is not listed below, the LCD shows ALL-BLANK. (Program 15-07-01 Line Key Assign).

Function Number	Function	Display
00	None	[All Blank]
01	DSS/One-Touch	DSS (xxxxxxxx xxxxxxxx = Extension Number)
02	Microphone Key (ON/OFF)	MIC
03	DND Key	DND
04	BGM (ON/OFF)	BGM
05	Headset	HSET
07	Conference Key	CONF
10	Call Forward – Immediate	CFA
11	Call Forward – Busy	CFB
12	Call Forward – No Answer	CFNA
13	Call Forward – Busy/No Answer	CFBNA
14	Call Forward – Both Ring	CFBOTH
15	Follow Me	FLWME

 If a key is programmed as a DSS/One-Touch key for a station that is set for Call Forward All Calls or Do Not Disturb, the DSS/One-Touch key flashes.

 Refer to the UNIVERGE SV8100 Programming Manual for a complete list of Function Numbers.

- One-Touch keys programmed for Park Hold Service Code cannot be used to park calls without using Hold or Transfer.
- Pauses can be entered in the dial string of a DSS/One Touch button. The pause is entered as P in the dial string and causes the system to wait three seconds before sending the rest of the digits that follow the P (pause). Multiple pauses can be entered.
- The @ can be entered in the dial string of a DSS/One Touch button. The @ only applies to ISDN and Intercom calls. When using the @, the system waits for the destination to answer (answer supervision), and then sends the rest of the digits.
- Entering a P (pause) in a DSS/One Touch dial string can be used for CO calls, Intercom calls, or after the @ for ISDN calls.
- DSS/One-Touch keys can be used for one-touch transfer.
- DSS keys can distinguish whether the telephone is set for DND/Call Forward All Calls if the telephone is off-hook.
- When a Ring Group call rings a station, a BLF Indication for this station shows idle or busy based on Class of Service option (20-13-49).
- All features programmed under one touch keys are still subject to class of service restrictions.

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- 
- If you change the extension assigned to a port in Program 11-02, the line key programming does not follow. However, if you move the extension using the Station Relocation Feature, the line key programming does follow.
  - In order for a station to retrieve a held ICM call, the station must have an ICM key assigned in 15-07 (\*00).

### **Default Setting**

The first eight keys on a telephone are line keys (e.g., key 1 = line 001). The remaining keys are unassigned.

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

D16(LD)-R ADM

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## **Related Features**

**Direct Station Selection (DSS) Console**

**One-Touch Calling**

**Speed Dial – System/Group/Station**


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign the functions of a multiline terminal Programmable Function Keys. When using Program 15-07-01 to program <i>the function keys 17~32 on the D16(LD)-R ADM start with key 17</i> . Service codes 751 and 752 can also be used to program these keys.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-20-01	<b>LCD Line Key Name Assignment</b>	Define the Line Key Name for line keys on DESILESS terminals.	Up to eight digits Up to 13 characters Key Number: 01~16 (for 16LD TEL) 17~32 (for 16LD ADM) Default: LK01 CO001 : : LK08 CO008 LK09 All Blank : : LK48 All Blank		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.  <i>When programming a feature as a Programmable Function Key, refer to Program 15-07-01 in the UNIVERGE SV8100 Programming Manual.</i>	0 = Off 1 = On (default = 1 for COS 01~15)	✓		
20-13-18	<b>Class of Service for Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-49	<b>Class of Service for Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Turn Off or On the BLF Indication on CO Incoming State.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

## Operation

### To change a 2-digit programmable key:

1. Press **Speaker**.
2. Dial **751** for 2-digit codes.
3. Press the key you want to program.
4. Enter the 2-digit key function, any additional information needed for the key and press **Hold**.




 *For available functions codes refer to Program 15-07 in the UNIVERGE SV8100 Programming Manual.*

 *To undefine a key, enter 00.*


### To change a 3-digit programmable key:

1. Press **Speaker**.
2. Dial **752** for 3-digit codes.
3. Press the key you want to program.

4. Enter the 3-digit key function and any additional information needed for the key.

-  For available functions codes, refer to Program 15-07 in the UNIVERGE SV8100 Programming Manual.
-  To undefine a key, enter 000.
-  When a key is programmed using service code 752, that key cannot be programmed with a function using the 751 code until the key is undefined (000). For example with a Park Key programmed by dialing 752 + \*04 must be undefined by dialing 000 before it can be programmed as a Voice Over key by dialing 751 + 48.

**To check the function of a programmable key:**

1. Press the **Help** key.
2. Press the programmable key.
  -  The programmed function displays.

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# *Programming from a Multiline Terminal*

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## Description

System Programming can be performed from any display multiline terminal. Most programming changes become effective immediately. Other programming changes become effective after the data is backed up from temporary memory to permanent memory.

## Conditions

- Up to two telephones can be in programming mode anytime.
- A maximum of four users can be logged into WebPro anytime.
- Four WebPro users and two phone programming users can be logged in at the same time for a **total of six users** in programming mode simultaneously. However, the two phone programming users do not show up in session management in WebPro.
- PCPro can be logged in with only one user. This is allowed only if no other users are logged into programming mode (PCPro, WebPro, or Phone). Also, if a user is connected to the switch via PCPro, no other user can log in through PCPro, WebPro, or Phone Programming.
- Programming from a multiline terminal can require a password to enter programming.
- Temporary License can be activated only from a multiline terminal, not PCPro or WebPro.
  - ❑ When activated, the system is temporarily licensed for ACD, CTI, Firmware Upgrade, Hotel, 256 MEGACO stations, and SMDR.
  - ❑ Each time the temporary license is activated, the program is read only until the temporary license expires.
  - ❑ Each time the temporary license expires, it can be set again for up to 10 additional days.
  - ❑ After setting a number of days in the program, subsequent days show one less as it counts down to expiration.
  - ❑ When Program 90-37-01 shows 1, the license expires at midnight on that day. When the license expires, the system resets.
  - ❑ If the date is changed in Program 10-01-01 while the temporary license is in effect, one day is subtracted from the license period.
  - ❑ If the date is changed in Program 10-01-01 when the temporary license shows 1 day, the system resets when it is applied (Transfer), not when exiting programming mode.

## Default Setting

Enabled

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## System Availability

### Terminals

All Multiline Terminals with Display

### Required Component(s)

Any DLC Blade

### Required Software

None

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## Related Features

### PC Programming


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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-02-01	Programming Password Setup – User Name	Set the system passwords.	Maximum 10 characters Please refer to the SV8100 Programming Manual for default settings.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-02-02	<b>Programming Password Setup – Password</b>	<p>Configure the administrator accounts that are used when connecting to the KTS via PCPro/ WebPro.</p> <p>If using PCPro, these are the accounts that are used to <i>connect</i>.</p> <p>If using WebPro, these are the accounts that are used to login.</p> <p> <i>If calls are answered by an Auto attendant first, instead of the DIL setup on Program 22-01 and Program 22-07, set the transfer destination in the Auto Attendant to the Modem Access Service Code.</i></p>	Up to eight digits Please refer to the SV8100 Programming Manual for default settings.		✓	
90-02-03	<b>Programming Password Setup – User Level</b>	Set the system password user levels.	0 = Prohibited User 1 = MF (Manufacturer Level) 2 = IN (Installer Level) 3 = SA (System Administrator Level 1) 4 = SB (System Administrator Level 2) 5 = UA (User Programming Level 1) Please refer to the SV8100 Programming Manual for default settings.		✓	

## Operation

Refer to the UNIVERGE SV8100 Programming Manual for additional information.

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## *Pulse to Tone Conversion*

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### **Description**

An extension can use Pulse to Tone Conversion on trunk calls. Pulse to Tone Conversion lets a user change their extension dialing mode while placing a call. For systems in a Dial Pulse area, this permits users to access dial-up OCCs (Other Common Carriers – such as MCI) from their DP area. The user can, for example:

- Place a call to an OCC over a DP trunk.
- Depending on programming:
  - Manually implement Pulse to Tone Conversion
  - OR -**
  - Wait 10 seconds.
- Dial the OCC security code and desired number. The system dials the digits after the conversion as DTMF.

### **Conditions**

Pulse to Tone Conversion is valid only for Dial Pulse trunks (Program 14-02-01, options 0 or 1).

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals

## Required Component(s)

CD-4COTB, PZ-4COTF

- OR -

CD-4ODTA

- OR -

CD-CCTA

## Related Features

Central Office Calls, Placing

Multiple Trunk Types

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-01	Analog Trunk Data setup – Signaling Type (DP/DTMF)	At default, Program 14-02-01 is set to 2.	0=Dial Pulse (10 PPS) 1=Dial Pulse (20 PPS) 2=DTMF (default = 2)	✓		
14-02-07	Analog Trunk Data Setup – DP to DTMF Conversion Options	For each trunk, set the type of DP to DTMF Conversion required.	0 = Automatic 1 = Automatic and Manual 2 = Manual (default = 2)	✓		



## Operation

### To convert your telephone dialing to tone after placing your call on a pulse line:

1. Place a call over pulse line.
2. Dial # to switch the DP trunk to DTMF dialing.

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# Redial Function

## Enhancements

With **Version 5000 (V5.00) or higher** software, names and numbers stored as a common or group speed dial can be displayed for redialed numbers. The **Version 5000 Enhancement** license is also required.

---

## Description

Users can press Redial to cycle through the last 10 outside numbers dialed. Pressing # redials the number displayed. Users can also press Redial and dial a System Speed Dial bin number to access System Speed Dial.

### Conditions

- Redial List requires a display telephone.
- This feature is not supported on multiline cordless phones.
- UNIVERGE SV8100 telephones only support redial using Softkey or Navigation key.
- Stored name for Redial Function is cleared when the system is reset.

### Default Setting

Enabled

---

## System Availability

### Terminals

All Multiline Terminals

R

## Required Component(s)

None

---

## Related Features

Last Number Redial

Speed Dial – System/Group/Station

---

## Guide to Feature Programming

None

---

## Operation

### To redial the last number dialed:

For Elite IPK Telephones Only:

1. Press **Redial**.  
REDIAL [#] / SYS is displayed along with the last dialed number.
2. Press the **up** or **down** arrow to view the number to dial.

For SV8100 Telephones Only:

1. Press the left **Navigation** key.  
REDIAL [#] / SYS is displayed along with the last dialed number.
2. Press the **up** or **down** arrow to view the number to dial.
3. Press # or press **Speaker** or lift the handset or press an idle trunk key.

- OR -

For SV8100 and Elite IPK Telephones:

1. Press the **List** softkey
2. Press **Redial**.  
REDIAL -01 is displayed along with the last dialed number.

- 
- 
3. Press the up and down arrow to view the number to dial.
  4. Press the # key or press **Speaker** or lift the handset or press and idle trunk key.

#### To scroll through the last 10 outside numbers dialed:

1. Press **Redial**. Each time the Redial key is pressed, it displays the next most recently dialed number.
2. When the desired number is displayed, press the # key or press **Speaker** or lift the handset.  
- OR -
  1. Press the **List** softkey
  2. Press **Redial**.
  3. Press the up and down arrow to view the number to dial.
  4. Press # or press **Speaker** or lift the handset.

#### To access a System Speed Dial bin:

For Elite IPK Telephones Only:


1. Press **Redial**.  
REDIAL [#] / SYS is displayed along with the last dialed number.
2. Dial the System Speed Dial bin number.  
The number stored in that bin is displayed for your preview.
3. Press the # key or press **Speaker** or lift the handset or press an idle trunk key.  
- OR -

For SV8100 Telephones Only:

1. Press the left **Navigation** key.  
REDIAL [#] / SYS is displayed along with the last dialed number.
2. Dial the System Speed Dial bin number.  
The number stored in that bin is displayed for your preview.
3. Press # or press **Speaker** or lift the handset or press and idle trunk key.

#### To view saved name history of outgoing calls:

1. Press **REDIAL**  
REDIAL [#] / SYS is displayed along with the last dialed number.

2. Tap the cursor key up or down to refresh the list, if the redialed number has a matching common or group speed dial bin associated with it, the name information from Program13-04-02 is displayed.
3. Press **Speaker** or lift the handset to dial the number.
  -  *The name information will not display after dialing.*

---

---

## *Remote (System) Upgrade*

### Enhancements

To upgrade main system software from a remote requires the installation of USB.

With **Version 6000 or higher** system software and using an MEMDB, installation of USB on the system is not required for remotely upgrading the system.

With **Version 9000 or higher** software, Web Pro has been enhanced to allow for remote upgrade and is only available in the Manufacture (MF) and Installer (IN) level logins.

---

### Description

With PCPro or WebPro, the UNIVERGE SV8100 can be remotely upgraded to a newer version of main system software. When a new version of main system software is released, a firmware package file is provided. Using the PCPro or WebPro application, a technician can remotely upgrade the firmware on the CD-CP00-US. The upgrade can be applied immediately, or at a scheduled date and time. Remote Upgrade is supported only via a LAN connection. A modem connection is NOT supported for Remote Upgrade.

### Conditions

- When doing a Firmware Upgrade, the telephone system can become sluggish during the file transfer portion of the update. You should perform updates after hours, even if the update is scheduled. The file transfer happens when the update is set. For example, at 2:00PM a technician schedules an update to happen at 12:00AM. When they click start (2:00PM), it begins transferring the file to the system. At this time the telephone system experiences sluggishness until the file transfer is complete. When the time turns to 12:00AM, the telephone system resets and switches to the new firmware.
- The Package file needed is provided by NEC at the time the new version of main system software is released. Use files found in the Field Upgrade Folder to upgrade the system with or without MEMDB. For **Version 6000 or higher** you can use file found in Remote Upgrade to upgrade the system with MEMDB.
- For **Version 5000 or lower** a USB drive is required to be connected to CN5 for Remote (System) Upgrade that has a MEMDB or No MEMDB. During the Firmware Upgrade, the Package file is copied to the USB drive and extracted. The system then resets and boots off the USB drive.
- Booting from the USB drive does not replace the firmware in Flash Memory on the CD-CP00-US.

- Up to two versions of firmware are kept on the USB drive. One version is the current version that the CD-CP00-US used to boot up from. The other version is the new version that is used on the next boot up. If the boot up fails when switching to the new version, the CD-CP00-US can revert back to the old version.
- The CD-CP00-US boots from its Flash Memory if no USB drive is installed.
- The time entered on the Firmware Upgrade screens is relative to the time on the CD-CP00-US, not the PC that PCPro was launched from. The user should take into account time zone differences when using this feature.
- The time to upload a firmware package file is directly related to the file size. Generally, it takes a few minutes.
- Remote Upgrade is supported only via LAN connection. A modem or serial connection is not supported for Remote Upgrade.
- For **Version 6000 or higher**, USB is not needed if the system has MEMDB. You do still need to obtain a new version of the main system software release from NEC.
- With **Version 9000 or higher** software, Web Pro has been enhanced to allow for remote upgrade and is only available in the Manufacture (MF) and Installer (IN) level logins.

## Default Setting

At default, PCPro and WebPro are set to *Update Immediately* after the upload.

---

## System Availability

### Terminals

None

### Required Component(s)

PCPro

PC connection with WebPro

---

## Related Features

### PC Programming



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---

## Guide to Feature Programming




Refer to [PC Programming on page 2-1203](#).

---

---

### Operation

#### PCPro:

1. Obtain the firmware package file from NEC.
2. Open and login to PCPro.
3. Connect to the system.
4. Under the Communications menu, choose the **Firmware Update** option.  
 *Until connected to the system the Firmware Update option is grayed out.*
5. In the **Firmware Update** window, browse to the location of the Firmware Package file. For example, the file name might be 'SV8100\_v5.01RemoteUpgrade.mem', 'SV8100\_v6.0RemoteUpgrade.mdu' or "SV8100\_v5.01RemoteUpgrade.usb".  
 *File extension .mdu is for **Version 6000 or higher** upgrade method (USB less).*
6. Select the schedule type:
  - Immediately after upload
  - At the time...  
 *If you choose At the time..., select the date and time you want the CD-CP00-US to reset and switch over to the new software version.*
7. Click **Start**. PCPro uploads the firmware package file, and updates the system at the time you specified in step 6.

For additional information, refer to the UNIVERGE SV8100 PC Programming Manual.

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## *Repeat Redial*

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### **Description**

If a multiline terminal user places a trunk call that is busy or unanswered, they can have Repeat Redial try it again later on. The user does not continually have to try the number again – hoping it goes through. Repeat Redial automatically retries it until the called party answers (the number of retries is based on system programming).

### **Conditions**

- Lifting the handset during a callout cycle cancels Repeat Redial.
- Other programmed options for outgoing calls can affect how a Repeat Redial call is placed. Refer to Central Office Calls, Placing options as needed.
- For systems with Automatic Route Selection (ARS), ARS selects the trunk for the Repeat Redial call.
- Single line telephones cannot use Repeat Redial.

### **Default Setting**

Enabled

---

### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

None

---

## Related Features

Automatic Route Selection

Central Office Calls, Placing

Last Number Redial

Save Number Dialed

Single Line Telephones, Analog 500/2500 Sets

---

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.





- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Repeat Redial (code 29).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-07	<b>Class of Service Options (Outgoing Call Service) – Repeat Redial</b>	Turn Off or On an extension to use Repeat Redial.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
21-08-01	<b>Repeat Dial Setup – Repeat Redial Count</b>	Set how many times Repeat Redial automatically repeats if the call does not go through.	0~255 (default = 3)	✓		
21-08-02	<b>Repeat Dial Setup – Repeat Redial Interval Time</b>	Set the time between Repeat Redial attempts.	0~64800 (seconds) (default = 60)	✓		
21-08-03	<b>Repeat Dial Setup – Repeat Dial Calling Timer</b>	Set the time the system waits for the called party to answer after a Repeat Redial. If the called party does not answer in this time, the system hangs up and tries again (after the Repeat Redial Interval Time). For unanswered calls, the total time between retries is the sum of Program 21-08-02 and Program 21-08-03.	0~64800 (seconds) (default = 30)	✓		
21-08-04	<b>Repeat Dial Setup – Time for Send Busy Tone for ISDN Trunk</b>	Set the time to send out Busy Tone with an ISDN line, when called party is busy.	0~64800 (seconds) (default = 0)	✓		

## Operation

### To use Repeat Redial (if the outside party you call is unavailable or busy):

- Place a trunk call.
  -  Listen for busy tone or ring no answer.
- Press **Feature + Redial**.
  - OR -
  - Press the **Repeat Redial** key (Program 15-07 or SC 751: 29).
    -  Repeat Redial key flashes while you wait for the system to redial.
- Press **Speaker** to hang up.
  -  The system periodically redials the call.
- Lift the handset when called party answers.
  -  When using trunks with answer supervision the Repeat Redial feature automatically cancels.

**To cancel Repeat Redial:**

1. Press **Feature**.
  2. Press **Redial**.
- OR -
1. Press **Repeat Redial** key (Program 15-07 or SC 751: 29).  
(Also refer to [Last Number Redial on page 2-961](#).)

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## *Resident System Program*

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### **Description**

When power is supplied to the system, the hardware configuration is scanned and Resident System Program default values are assigned including terminal types (e.g. PGD(2)-U10 ADP, DSS Console). This enables immediate operation, even before the system is programmed to accommodate the individual site requirements.

### **Conditions**

- Default assignments for multiline terminals are: LK 01~LK 08 corresponds to CO 01~CO 08.
- DSS Console to Extension assignments for Attendant Add-On Consoles are not assigned.
- Default Attendant Add-On Console key assignments are:  
  
DSS Keys = 001~060  
Stations = 101~160
- First Initialization of the system returns all programming values to default. Without a PC-ATA Compact Flash card installed, press and hold the SW1 (Load Switch) and toggle the Reset (SW2) switch. Continue to hold the SW1 switch for approximately 5~10 seconds before releasing. The system boots loading Resident System Programming.

### **Default Setting**

None

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### **System Availability**

#### **Terminals**

None

#### **Required Component(s)**

None

---

## **Related Features**

None

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## **Guide to Feature Programming**

None

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## **Operation**

None



## Reverse Voice Over


### Description

During a call, Reverse Voice Over lets a busy multiline terminal user make a private Intercom call to an idle co-worker. The idle co-worker can be at a multiline terminal or single line telephone. The busy user just presses a programmed Reverse Voice Over key to make a private call to a specified co-worker. The initial caller cannot hear the Reverse Voice Over conversation. The private Intercom call continues until the Reverse Voice Over caller presses the key again. The initial call can be an outside call or an Intercom call.

Reverse Voice Over could help a salesman, for example, when placing a call to an important client. The salesman can talk with the client and give special instructions to a secretary – without interrupting the initial call.

When the multiline terminal is idle, the Reverse Voice Over key functions the same as a Hotline or One-Touch key. A multiline terminal Reverse Voice Over key also shows at a glance the status of the associated extension:

When the key is. . .	The associated extension is. . .
Off	Idle
On	Busy or call ringing
Fast Flash	In Do Not Disturb

 *When the destination extension is idle, the Reverse Voice Over provides one button calling to the associated extension (like a Hotline key). An extension user cannot, however, use the Reverse Voice Over key to Transfer calls by one-touch operation.*

### Conditions

- An extension can have Reverse Voice Over keys for more than one extension (limited only by the number of available function keys).
- When the destination extension is in Do Not Disturb, a Reverse Voice Over placed to an extension always rings, regardless of how Handsfree Answerback/Forced Intercom Ringing is set at the destination.
- When the destination extension is not in Do Not Disturb, Reverse Voice Over follows Handsfree Answerback/Forced Intercom Ringing programming.
- Reverse Voice Over is not available from single line telephones, but a single line can be a Reverse Voice Over destination.

- Reverse Voice Over requires a uniquely programmed function key.
- If an extension user places a Reverse Voice Over to a busy destination extension, the system sets up a Voice Over. The Voice Over continues until the Reverse Voice Over key is pressed again.
- When a Reverse Voice Over call is placed to a destination station, while the originator is on a CO call, the Reverse Voice Over is dropped if the destination station is involved in another call and this call is terminated.

### **Default Setting**

Disabled

---

## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

---

## **Related Features**

**Do Not Disturb**

**Handsfree Answerback/Forced Intercom Ringing**

**Hotline**

**One-Touch Calling**

**Programmable Function Keys**

**Single Line Telephones, Analog 500/2500 Sets**

**Voice Over**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Reverse Voice Over (code 47 + destination extension). Assign a function key for Voice Over to the destination extension (code 48). This allows the user at the destination to switch between calls if they were busy when the Reverse Voice Over was initiated.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (COS) to each extension (1~15).	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### When on a call:


### To place a Reverse Voice Over call:

1. Press your **Reverse Voice Over** key (Program 15-07 or SC 751: 47 + destination extension).
  -  *Your Reverse Voice Over key lights steadily (red) and you can talk with the programmed Reverse Voice Over destination.*


**To receive a Reverse Voice Over Call while busy:**

1. Press the **Voice Over** key (Program 15-07 or SC 751: 48).
  -  *The voice over key allows you to switch back and forth between the initial call and the Reverse Voice Over Call.*

**To return to your initial caller:**

1. Press the **Reverse Voice Over** key again.
  -  *If the co-worker you call hangs up, you return to the initial call automatically.*

**When the telephone is idle:****To place a call to your Reverse Voice Over destination:**

1. Press your **Reverse Voice Over** key (Program 15-07 or SC 751: 47 + destination extension).
  -  *You can optionally lift the handset after this step for privacy.*

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# Ring Groups

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## Description

Ring Groups determine how trunks ring extensions. Generally, trunks ring extensions only if Ring Group programming allows. For example, to make a trunk ring an extension:

- Assign the trunk and the extension to the same Ring Group.
- In the extension Ring Group programming, assign ringing for the trunk.

Any number of extensions and trunks can be in a specific group. The system allows:

- Ring Groups = 1~100
- In-Skin Voice Mail = 102
- Centralized Voice Mail = 103

If an extension has a line key for the trunk, Ring Group calls ring the line key. If the extension does not have a line key, the trunk rings the line appearance key. If an extension has a key for a trunk that is not in its ring group, the trunk follows Access Map programming.

## Conditions

- DIL trunks disregard ring group programming until DIL overflow.

## Default Setting

All trunks are in Ring Group 1. The first 16 extensions ring for trunk calls and all other extensions only flash.

---

## System Availability

### Terminals

All Multiline Terminals and Single Line Telephones

### Required Component(s)

None

---

## Related Features

**Automatic Call Distribution (ACD)**

**Automatic Route Selection**

**Direct Inward Line (DIL)**

**Direct Inward Dialing (DID)**

**Direct Inward System Access (DISA)**

**ISDN Compatibility**

**Night Service**

**Programmable Function Keys**


---


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign function keys as line (code *01 + trunk number) or Call Appearance (CAP) Keys [code *08 + CAP Key orbit 0001~9999 (or 0000 for auto assign)].	Trunks: 1~200 Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Turn Off or On BLF Indication on CO Incoming State.	1 = On 0 = Off (default = 0 for COS 01~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this time diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)		✓	
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type (0) for each trunk. There is one item for each Night Service Mode.  <i>This option must be set to 0 for Ring Groups to work.</i>	Day/Night Mode: 1~8 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions to ring groups.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.	✓		
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	Assign trunks to ring groups.	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)	✓		
22-06-01	<b>Normal Incoming Ring Mode</b>	Define whether or not an extension should ring for the Normal Incoming Ring Mode.	0 = No Ring 1 = Ring (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-08-01	<b>DIL/IRG No Answer Destination</b>	For DIL Delayed Ringing, assign the DIL No Answer Ring Group. An unanswered DIL rings this group after the DIL No Answer Time (Program 22-01-04) expires. DIL Delayed Ringing can also reroute outside calls ringing a Ring Group In-Skin/External Voice Mail, or Centralized Voice Mail.	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
22-12-01	<b>DID Intercept Ring Group</b>	For each DID Translation Table, assign the destination for DID Intercept. The destination can be a Ring Group, In-Skin/External Voice Mail, or Centralized Voice Mail. For each table, make a separate entry for each Night Service mode.	0 (No Setting) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) (default = 1)		✓	
25-03-01	<b>VRS/DISA Transfer Ring Group With Incorrect Dialing</b>	Set the transfer destination for each DISA and Automated Attendant (OPA) trunk. The destination can be a Ring Group or Voice Mail. Make a separate entry for each Night Service mode.  <i>For incoming calls, Ring Group programming (Program 22-04/Program 22-05) overrides Access Map programming (Program 14-07/Program 15-06).</i>	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)		✓	

Use the charts below to program the following example:

For this extension . . . <sup>1, 2</sup>			
301	Trunk 1 Rings	Trunk 2 Flashes	Trunk 3 Flashes
302	Trunk 1 Flashes	Trunk 2 Rings	Trunk 3 Flashes
303	Trunk 1 Flashes	Trunk 2 Flashes	Trunk 3 Rings

<sup>1</sup> Trunks ring the same in the day as at night.

<sup>2</sup> MLT has trunk appearances not CAP keys.



<b>Program 22-04 : Incoming Extension Ring Group Assignment</b>			
Ring Group <sup>1&gt;</sup>	1	2	3
Trunk 1	X	-	-
Trunk 2	-	X	-
Trunk 3	-	-	X

X = Trunk assigned to indicated Ring Group

<sup>1</sup> Make the same Program 22-04 entry for all Night Service modes.

<b>Program 22-05 : Incoming Trunk Ring Group Assignment</b>			
Ring Group >	1	2	3
Ext. 301	1	0 <sup>1</sup>	0 <sup>1</sup>
Ext. 302	0 <sup>1</sup>	1	0 <sup>1</sup>
Ext. 303	0 <sup>1</sup>	0 <sup>1</sup>	1

1 = Extension rings

0 = Extension does not ring

<sup>1</sup> To allow extension user to answer flashing line, be sure to give extension incoming access to the trunk in Program 14-07 and Program 15-06.

## Operation

Refer to [Central Office Calls, Answering on page 2-263](#).

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## *Ringdown Extension, Internal/External*

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### **Description**

With a Ringdown Extension, a user can call another extension, outside number, or Speed Dialing number by lifting the handset. The call automatically goes through – there is no need for the user to dial digits or press additional keys. Ringdown Extensions are frequently used for lobby telephones, where the caller just lifts the handset to get the information desk or off-site Reservation Desk.

After the Ringdown Extension user lifts the handset, ringdown occurs after a programmable time. Depending on the setting of this time, the extension user may be able to place other calls before the ringdown goes through.

This feature can also be used as an off-hook alarm application. For example, if a patient in a care facility fails to return the handset to the cradle, it routes to a care givers station after a programmed time.

### **Conditions**

- Ringdown extension has no effect on an extension current (active) call.
- The Ringdown Extension user can lift the handset or press Speaker to initiate ringdown.
- If the Ringdown/Hotline destination is a speed dial bin, the appropriate service code must precede the bin number.
- Ringdown Extension can use Speed Dial – System/Group/Station numbers (and follow their trunk routing) as the destination number.
- Ringdown Extension follows Call Forwarding. For example, the ringdown destination can forward their calls. When the Ringdown Extension user lifts the handset, ringdown automatically calls the extension to which calls are forwarded.
- If the Ringdown Extension user hears busy tone when they lift the handset, they can Camp-On to the destination, leave a Callback or activate Off-Hook Signaling.
- The ringdown destination user can activate Do Not Disturb. When the Ringdown Extension user lifts the handset, they hear DND. If enabled, the Ringdown Extension user can override the destination DND.
- If the destination extension has Handsfree Answerback enabled, the call voice announces. If the destination extension has Forced Intercom Ringing enabled, the call rings.
- A Call Arrival (CAR) Key or Virtual Extension can be a ringdown destination. This would allow a front door key to be programmed on every extension.
- Delayed Ringdown can occur by setting the Hotline Start Timer. However, Ringdown does not occur if the Hotline Start Timer is set longer than the Extension Dial Tone Timer.

- Use the @ code to make an outbound call automatically forward to a DISA Trunk or to VM Auto Attendant. This code can be used only on ISDN outbound calls. Internal calls and analog outbound calls are not supported.

### **Default Setting**

Disabled

---

## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

---

## **Related Features**

**Call Arrival (CAR) Keys**

**Callback**

**Call Forwarding**

**Call Waiting/Camp-On**

**Do Not Disturb**

**Handsfree Answerback/Forced Intercom Ringing**

**Off-Hook Signaling**

**Speed Dial – System/Group/Station**

**Virtual Extensions**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Hotline (Ringdown). If disabled in Class of Service, the settings in Program 21-11 below have no effect.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
21-01-09	<b>System Options for Outgoing Calls – Ringdown Extension Timer (Hotline Start)</b>	After the user lifts the handset, the extension automatically calls the ringdown destination after this time. A setting of 0 immediately rings the programmed extension. Any other setting delays the ringdown the number of seconds programmed.	0~64800 seconds (default = 5)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-11-01	<b>Extension Ringdown (Hotline) Assignment</b>	Program the ringdown (Hotline) source and destination (target) number, up to 24 digits (512 Hotline assignments). Remember to include the trunk access code (usually 9) in front of the number when dialing outside numbers. When programming Speed Dial – System numbers as the destination, the entry should be 753 + bin number (the service code for Speed Dialing and the Speed Dial bin number).	0, *, #, Pause, Hook Flash, @ (Code to wait for answer supervision) (maximum 24 digits) (default not assigned)	✓		

## Operation

### To place a call if your extension has ringdown programmed:

- Lift the handset.
  - If you want to place a trunk call, press a line key before lifting the handset.*
  - Depending on the setting of your ringdown timer, you may be able to dial an Intercom call before your ringdown goes through.*
  - If the destination has Handsfree Answerback enabled, your call voice announces. If the destination has Forced Intercom Ringing enabled, your call rings.*

### To answer a call if you are another extension ringdown destination:

- Speak toward telephone to answer incoming voice announcement.

- OR -

Lift the handset or press **Speaker** to answer ringing Intercom call.

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## Room Monitor

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### Description

Room Monitor lets an extension user listen to the sounds in a co-workers area. For example, the receptionist could listen for sounds in the warehouse when it is left unattended. To use Room Monitor, the initiating extension **and** the receiving extension must activate it.

When using multiline terminals for monitoring, an extension user can monitor only one extension at a time. However, many extensions can monitor the same extension at the same time. However, only one single line telephone can monitor another single line telephone at a time.

### Room Monitor for Single Lines

This option enables you to monitor the room status through your single line telephones. Between multiline terminals, the monitored room status is picked up by the telephone microphone and the activity is heard through the speaker of the monitoring multiline terminal. Between single line telephones, at the station to be monitored, a user goes off-hook and dials a service code and the extension number of the monitoring telephone. At the monitoring station, a user goes off-hook and dials a service code and the extension number of the monitored telephone. The activity of the area where the monitored telephone is placed can then be heard at the monitoring telephone. This service is available until the handset of the monitored telephone is placed on-hook.



*The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversation or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal or state laws. Legal advice should be sought prior to implementing any practice that monitors or records any telephone conversation. Some federal and state laws require some form of notification to all parties to a telephone conversation, such as using a beep tone or other notification methods or requiring the consent of all parties to the telephone conversation, prior to monitoring or recording the telephone conversation. Some of these laws incorporate strict penalties.*

### Conditions

- Room Monitor is for listening only. It does not allow conversation between the monitoring and monitored extensions.
- An extension user cannot monitor an Attendant.
- A multiline terminal user cannot monitor a single line telephone, and a single line telephone cannot monitor a multiline terminals.

- Call Arrival (CAR) Key (virtual extension) keys do not support Room Monitor Programmable Function keys (code 39).
- Room Monitor for single line telephones can be used with the Hotel/Motel feature.
- For a multiline terminal, Room Monitor requires uniquely programmed function keys.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Multiline Terminals and Single Line Telephones

### **Required Component(s)**

None

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## **Related Features**

**Hotel/Motel**

**Programmable Function Keys**



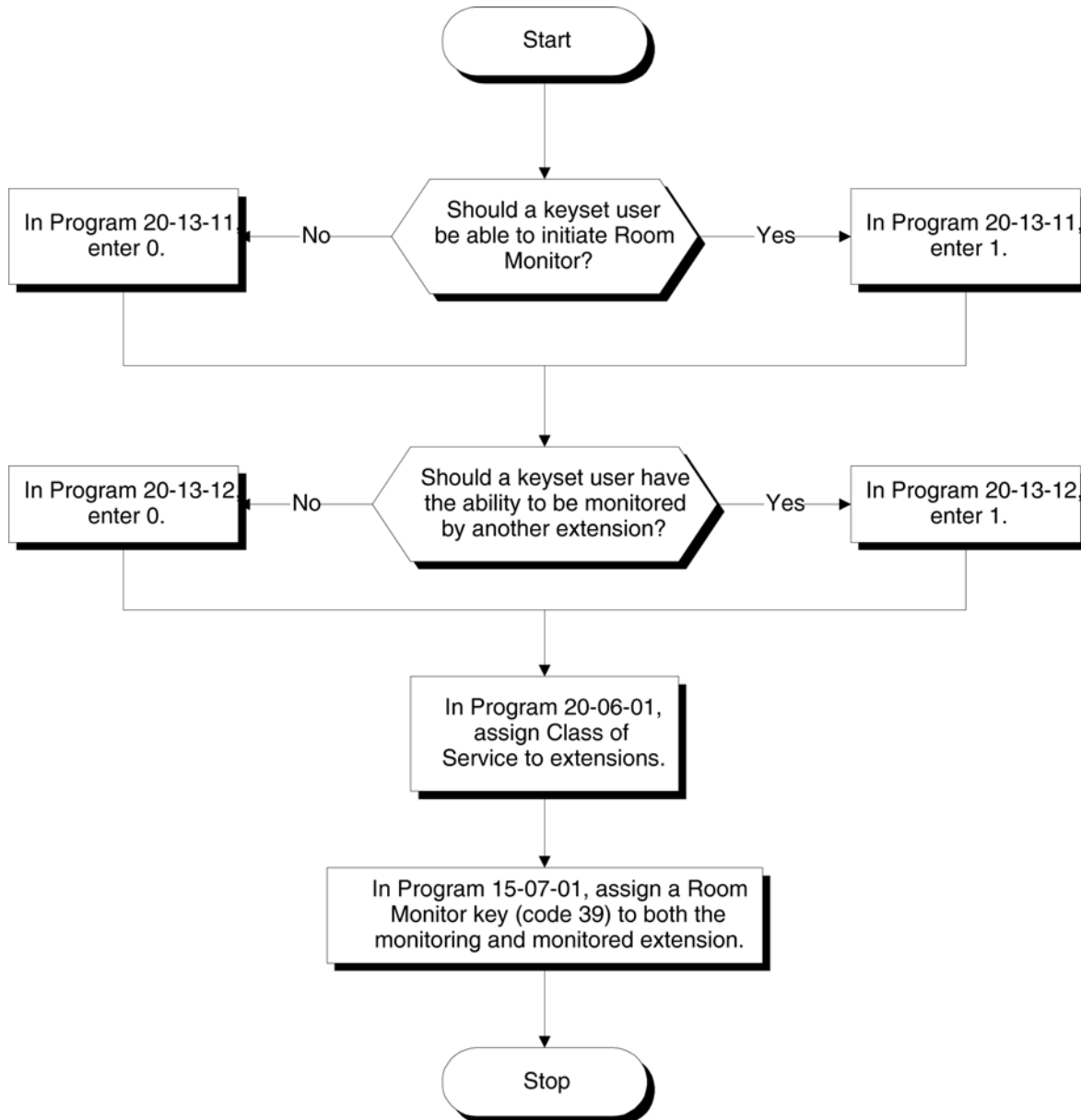
## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

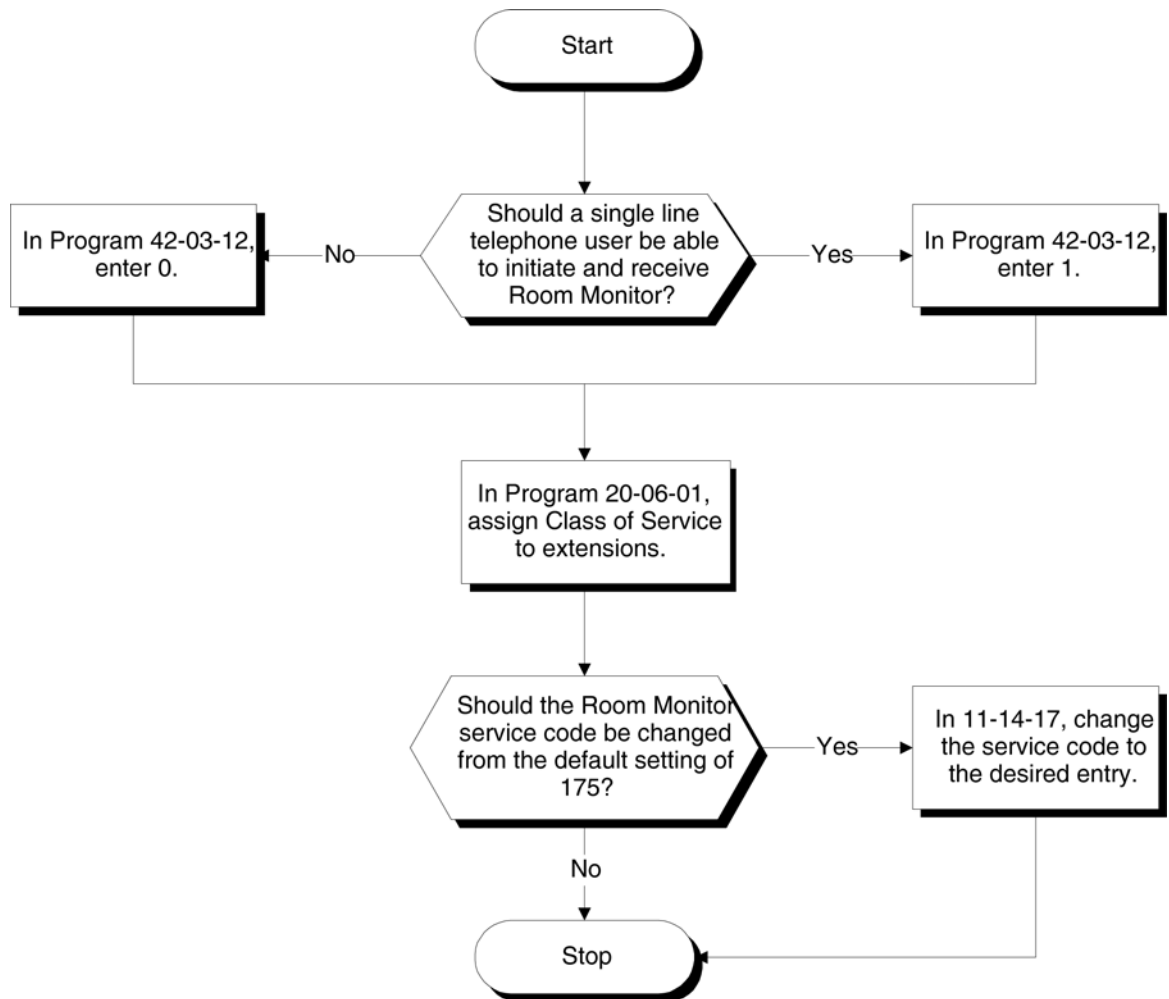
- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-14-17	<b>Service Code Setup (for Hotel) – Hotel Room Monitor</b>	Customize the service code (675 by default) to be used for Room Monitor.	MLT, SLT (default = 675)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key as a Room Monitor key (code 39) for both the extension being monitored and the extension initiating Room Monitor.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
42-03-12	<b>Class of Service Options (Hotel/Motel) – SLT Room Monitor</b>	Enable/Disable a single line telephone user ability to use Room Monitor.	0 = Disable 1 = Enable (default = 0 for COS 1~15)	✓		


### Multiline Room Monitoring



## Single Line Telephone Room Monitoring




## Operation

 You must activate Room Monitor at the extension initiating the monitor and at the extension you want to monitor. You can only listen to one extension at a time.



### Multiline Terminals:

#### To activate Room Monitor from an idle Multiline Terminal (initiating extension):

1. Press the **Room Monitor** key (Program 15-07 or SC 751: 39).

2. Dial the number of extension you want to monitor.  
 *You can place and answer other calls while Room Monitor is active.*


**To activate Room Monitor from an idle Multiline Terminal (extension to be monitored):**

1. Press **Room Monitor** key (Program 15-07 or SC 751: 39).
2. Dial the number of the extension where you are located.  
 *For example, if you are at extension 106, dial 106.*  
 *You can place and answer other calls while Room Monitor is active.*


**To cancel Room Monitor (at either extension):**

1. Press the **Room Monitor** key at both the initiating extension and the monitored extension.

**Single Line Telephones:****To activate Room Monitor (at the initiating extension):**

1. Lift the handset at the telephone which is monitoring another telephone.
2. Dial **675**.
3. Dial **2**.
4. Dial number of extension number, which will be monitored.  
 *You cannot place or answer other calls while Room Monitor is active.*

**To activate Room Monitor (at the extension to be monitored):**

1. Lift the handset at the telephone to be monitored.
2. Dial **675**.
3. Dial **1**.
4. Dial number of the extension number, which is monitoring the telephone.
5. Place the handset on the desk, placing the handset transmitter towards the room.  
 *You cannot place or answer other calls while Room Monitor is active.*

**To cancel Room Monitor (at either extension):**

1. Hang up the handsets for both the monitored and the monitoring telephones.

# Save Number Dialed

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## Description

Save Number Dialed allows an extension user to save their last outside number dialed and easily redial it later on. For example, an extension user can recall a busy or unanswered number without manually dialing the digits. The system retains the saved number until the user stores a new one in its place or clears the stored one.

Save Number Dialed saves in system memory a dialed number of up to 24 digits. The number can be any combination of digits 0~9, # and \*. The system remembers the digits regardless of whether the call was answered, unanswered or busy. The system normally uses the same trunk group as for the initial call. However, the extension user can preselect a specific trunk if desired.

## Conditions

- For systems with Automatic Route Selection, ARS selects the trunk for the call unless the user preselects.
- Function keys simplify Save Number Dialed operation.

## Default Setting

Enabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

None

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## Related Features

Automatic Route Selection

Central Office Calls, Placing

Dial Tone Detection

Last Number Redial

Programmable Function Keys

Repeat Redial

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-13	<b>Service Code Setup (for Service Access) – Saved Number Dial</b>	Customize the service code used for dialing a saved number.	MLT, SLT (default = 715)		✓	
11-12-18	<b>Service Code Setup (for Service Access) – Clear Saved Number Dialing Data</b>	Define the service code for Clear Save Number Dialing List if it is not acceptable.	MLT, SLT (default = 785)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key as a Save key (code 30).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

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## Operation

### To save the outside number you just dialed (up to 24 digits):

 Use this feature before hanging up.

#### Multiline Terminal


1. Press the **Save Number Dialed** key (Program 15-07 or SC 751: 30).


#### Single Line Telephone

1. Hookflash.
2. Dial **715**.

### To redial a saved number:

#### Multiline Terminal

1. Press an idle trunk line key.  
 This selects a specific trunk for the call.
2. Press the **Save Number Dialed** key (Program 15-07 or SC 751: 30).


 The stored number dials out.


- OR -

1. Press **Speaker**.
2. Dial **715**.

- OR -

Press **Save Number Dialed** key (Program 15-07 or SC 751: 30).



 Save Number Dialed automatically selects a trunk from the same group as your original call.

 The stored number dials out.

#### Single Line Telephone

1. Go off-hook.
2. Dial **715**.

**To view the number you have saved from a multiline terminal with a display:**

1. Press the **Save Number Dialed** key (Program 15-07 or SC 751: 30).
  -  *The stored number displays for 10 seconds.*
  -  *The stored number dials out if you:*
    - Lift the handset,*
    - Press an idle line key,*
    - Press the Speaker key.*
2. Press the **Exit** key.

**To clear your saved number:**Multiline Terminal

1. Press **Speaker**.
2. Dial **785**.
3. Press **Speaker** to hang up.

Single Line Telephone

1. Lift the handset and dial **785**.
2. Hang up.



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## *Secondary Incoming Extension*

### Enhancements

With <b>Version 3000 or higher</b> system software, the appropriate line key page automatically displays for incoming calls on the DTL-8LD-1 (DESI-Less) and ITL-320C-1 terminals.
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### Description

Secondary Incoming Extensions (SIEs) are incoming appearance keys of actual stations assigned in the system. SIE keys are assigned to programmable function keys and can appear on an individual station, or multiple stations. Incoming internal calls, ringing DIL/Tie/DID/CO Transfer calls, or call forwarded calls can be picked up from an SIE.

### Conditions

- Calls can be originated from a Secondary Incoming Extension, but the actual station cannot place or answer calls.
- Off-Hook ringing is provided with calls ringing to Secondary Incoming Extensions.
- Secondary Incoming Extensions are forwarded when the actual station is set for call forwarding.
- SIE keys can appear on an individual station, or multiple stations.
- A station can have more than one SIE key assigned.
- Up to 32 calls can be queued waiting on an SIE key.
- When a Secondary Incoming Extension call is received and answered while the user is on an outside line, the first call can be automatically put on hold.
- If a trunk call rings a Secondary Incoming Extension, to answer the call, the station must be programmed with the direct trunk appearance key or an available CAP key and the SIE must be programmed to allow the call to come off the SIE key and appear on the line or CAP key.
- The same SIE key cannot be programmed on multiple programmable function keys on the same multiline terminal.
- An SIE key does not ring during an Intercom Voice call to the actual station.
- If multiple CAR/SIE/VE keys are ringing on a station at the same time, the CAR/SIE/VE key on the lowest Line Key is answered first.

- In **Version 3000 or higher** software, the system can be programmed to blink the page number of a DT300/DT700 DESI-Less terminal when it receives an incoming call, or switch to the page of the incoming call. Also, a default page can be defined for the DESI-Less terminal to change to when it goes idle or when it has answered a call.
- DT300/DT700 terminals installed in a SV8100 with the IPK/IPK II Migration system do not support the DESI-Less page switching and blinking.
- DESI-Less screen page switching only applies to idle terminals. If a terminal is not idle, the screen will not switch if another call comes in until the phone goes idle.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

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## **Related Features**

**Call Waiting/Camp-On**

**Call Appearance (CAP) Keys**

**Call Arrival (CAR) Keys**

**Virtual Extensions**

## Guide to Feature Programming

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Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-04-01	Virtual Extension Numbering	Assign virtual extension numbers.	Up to eight digits 1 201 2 202 3 203 ~ ~ 99 299 100 3601 ~ ~ 256 3857		✓	
15-01-01	Basic Extension Data Setup – Extension Name	Define the extension/virtual extension name.	Up to 12 characters Default: STA 101 = Ext 101 STA 102 = Ext 102, etc.		✓	
15-02-07	Multiline Telephone Basic Data Setup – Automatic Hold for CO lines	When talking on a CO call and another CO line key is pressed, place the original trunk on Hold or Disconnect it.	0 = Hold 1 = Disconnect (Cut) (default = 1)		✓	
15-02-21	Multiline Telephone Basic Data Setup – Virtual Extension Access Mode (When idle Virtual Extension key pressed)	Determine whether a Virtual Extension/Call Arrival Key (CAR) should function as a DSS key, a Virtual Extension, or a CAR key. When DSS (0) is selected, the key functions as a DSS key to the extension and for incoming calls to that extension. When Outgoing (1) is selected, the key functions as a virtual extension and can be used for incoming and outgoing calls. When Ignore (2) is selected, the key functions as a CAR key and can receive incoming calls only.	Virtual Extension Key Mode 0 = DSS 1 = OTG (Outgoing) 2 = Ignore (default = 2)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-30	<b>Multiline Telephone Basic Data Setup – Toll Restriction Class</b>	Select the Toll Restriction Class used when placing a call from a virtual extension.	0 = Vir. Ext. (Virtual Extension Class) 1 = Real Ext. (Real Extension Class) (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign the SIE key to the Multiline extension.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-08-01	<b>Incoming Virtual Extension Ring Tone Setup</b>	When an extension or a virtual extension is assigned to the function key on the key telephone, select the ring tone when receiving a call on that key. For ACD CAR keys, only tone pattern 1 can be used. The remaining patterns are not checked with this feature.	ICM Tone Pattern, 0 = Pattern 1 1 = Pattern 2 2 = Pattern 3 3 = Pattern 4 4 = Incoming Ring Tone Extension 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 (default = 0)		✓	
15-09-01	<b>Virtual Extension Ring Assignment</b>	Assign the ring options for an extension Virtual Extension Key or Virtual Extension Group Answer Key which is defined in Program 15-07.	Mode 1: 0 = No Ring 1 = Ring (default = 0)	✓		
15-10-01	<b>Incoming Virtual Extension Ring Tone Order Setup</b>	When two or more virtual extensions are set on a function key on the telephone, and the tone pattern by which the sound of each extension differs, set up the priority of ring sound.	Default priority order: 1 = 0 (Tone Pattern 1) 2 = 1 (Tone Pattern 2) 3 = 2 (Tone Pattern 3) 4 = 3 (Tone Pattern 4)		✓	
15-11-01	<b>Virtual Extension Delayed Ring Assignment</b>	Assign the delayed ringing options for an extension Virtual Extension or Virtual Extension Group Answer keys (defined in Program 15-09).	KY01 Mode 1: 0 = Immediate Ring 1 = Delayed Ring (default = 0)		✓	
15-18-01	<b>Virtual Extension Key Enhanced Options – Virtual Extension Key Operation Mode</b>	Define whether calls to a Virtual Extension key land on the virtual key or on the extension/CAP/CO appearance.	0 = Release (Release to Line Appearance) 1 = Land On the Key (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-18-02	<b>Virtual Extension Key Enhanced Options – Display mode when placing a call on Virtual Extension Key</b>	Define whether calls to or from a Virtual Extension Key display the Virtual Extension key name or the name of the extension on which it resides.	0 = Secondary Extension Name 1 = Actual Station Name (default = 0)		✓	
20-04-03	<b>System Options for Virtual Extensions – CAR/SIE/Virtual Extension Delay Interval</b>	CAR Keys/SIE Keys/Virtual Extensions set for Delayed Ringing (see Program 15-11) ring the extension after this interval.	0~64800 (seconds) (default = 10)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension by lifting the handset.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, you can call a busy extension which is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be set to off for this option to work.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
21-01-15	<b>System Options for Outgoing Calls – Outgoing Disable on Incoming Line (Toll Restriction)</b>	Enable/Disable the Outgoing Disable on Incoming Line feature.	0 = Disable 1 = Enable (default = 0)		✓	
23-04-01	<b>Ring Line Preference for Virtual Extensions</b>	When an extension has a virtual extension assigned to a Programmable Function Key, determine the priority for automatically answering the ringing calls when the handset is lifted. If 0 or 00 is selected, the user can lift the handset to answer a ringing call from any group.	00~64 (0 or 00=Don't Care) (default = 00)		✓	

## Operation

### To answer a call ringing a SIE key:

1. Press the flashing **SIE** key.

### To program a SIE key on a phone:

1. Press **Speaker**.
2. Dial **752**.
3. Press the key you want to program.
4. Dial **\*03**.
5. Dial the number of the extension you want to appear on the key.
6. Press **Hold** once for Immediate Ring, (skip to step 8 for Delayed Ring).
7. Dial the mode number in which the key rings.
8. Press hold a second time for Delayed Ring, or Skip to step 10.
9. Dial the mode number in which the key delays ringing.
10. Press **Speaker**.

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## *Secretary Call (Buzzer)*

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### **Description**

Secretary Call lets two co-workers alert each other without disturbing their work. To have Secretary Call, both co-workers must have multiline terminals with Secretary Call buzzer keys. When a user presses their buzzer key, the system alerts the called extension by sending a splash tone and flashing the called extension buzzer key. The called user can respond by placing an intercom call to the calling party.

The called extension buzzer key continues to flash and the splash tone is heard until either user cancels the Secretary Call. A secretary could use this feature, for example, to get a message through to the boss in an important meeting. After being alerted, the boss could call the secretary when it is most convenient.

An extension can have a Secretary Call key for any number of extensions, limited only by the available number of programmable keys.

### **Conditions**

- Secretary Call is not available to single line telephone users.
- Secretary Call does not set up an Intercom call.
- When assigning Secretary Call, a user enters the associated extension number, not port number.
- Secretary Call requires a uniquely programmed function key.

### **Default Setting**

Disabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

None

## Related Features

### Programmable Function Keys

## Guide to Feature Programming





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- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	Programmable Function Keys	Assign function keys for Secretary Call buzzer (code 41 + the destination extension number). Both co-workers must have a buzzer key for each other.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

## Operation

### To buzz your secretary or boss:

1. Do not lift the handset.
2. Press the buzzer key (Program 15-07 or SC 751: 41 + secretary extension).
  -  Your boss or secretary hears ringing.
  -  Your buzzer key lights steadily.
  -  Your boss's or secretary's buzzer key flashes fast.
  -  The telephone continues to ring until the Secretary Call key is pressed.



**To check to see who left you a Secretary Call:**

1. Do not lift the handset.
2. Press the **Help** key.
3. Press the **Secretary Call** key that flashed.
4. Press the **Exit** key.

**To answer your Secretary Call indication:**

1. Place an Intercom call to the extension that called you.

**To cancel a Secretary Call you left at another extension:**

1. Press the lit **Secretary Call** key.

**To cancel a Secretary Call left at your extension:**

1. Do not lift the handset.
2. Press the flashing **Secretary Call** key.

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## Secretary Call Pickup

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### Description

Secretary Call Pickup lets a multiline terminal user easily reroute calls intended for a co-worker to themselves. By pressing a Secretary Call Pickup key, the user can have all calls to a co-worker's telephone ring or voice-announce theirs instead. Secretary Call Pickup is a simplified type of Call Forward with Follow Me for employees that work closely together. This feature could be helpful to customer service representatives that must frequently cover each other's clients. When a representative leaves their desk, an associate could press the Secretary Call Pickup key to intercept all their calls.

An extension can have a Secretary Call Pickup key for any number of extensions, limited only by the available number of programmable keys.

### Conditions

- Secretary Call Pickup is not available to single line telephone users.
- A Call Arrival (CAR) Key (virtual extension) cannot be programmed as the boss's extension.
- An extension user can also have Call Forwarding with Follow Me reroute a co-worker's calls to themselves.
- A multiline terminal can have a Secretary Call Pickup key for a single line telephone.
- ACD agents should not use this feature.

### Default Setting

Disabled

---

### System Availability

#### Terminals

All Multiline Terminals

#### Required Component(s)

None

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## Related Features

Call Forwarding with Follow Me

Programmable Function Keys

Secretary Call (Buzzer)

Single Line Telephones, Analog 500/2500 Sets

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## Guide to Feature Programming

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- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	Programmable Function Keys	Assign a function key for Secretary Call Pickup (42 + boss ext). Unlike Secretary Call, you do not have to program a corresponding key at the source and destination extensions.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

---

## Operation

### To activate Secretary Call Pickup:

1. Press your Secretary Call Pickup key (Program 15-07 or SC 751: 42 + boss extension).
  -  *Your Secretary Call Pickup key lights and the boss's telephone display shows "BOSS FWD>>".*
  -  *Calls intended for covered extension, ring your telephone instead.*

**To cancel Secretary Call Pickup:**

1. Press your lit Secretary Call Pickup key (Program 15-07 or SC 751: 42 + boss extension).

**To check a key Secretary Call Pickup assignment:**

1. Press the **Help** key.
2. Press your **Secretary Call Arrival (CAR)** key (Program 15-07 or SC 751: 42 + boss's extension).
3. Press the **Exit** key.

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## Security

### Enhancements

Security feature added with **Version 7000 or higher** software and requires **Version 7000 Enhancement License (0036)**.

### Description

This system supports the following built-in simple security features:

Warning Message (Watch Mode)

Automatically and periodically send the Watching (VRS) Message from built-In Speaker on Multiline Terminal or external paging adapter during nightmode.

Enable to accommodate with 3rd Party PIR (Passive Infrared Sensor) or Emergency Button to provide security feature such as Auto-Emergency Call with Warning (VRS) Message sending.

Remote Inspection

Automatically ring the terminal with pre-programmed schedule in order to check whether users answer or not. If not answered, Emergency Call is placed to predefined destination automatically.

### Conditions

#### Warning Message (Watch Mode)

- Watch mode can provide **Watching message** in a preprogrammed interval via internal paging group terminals during defined schedule such as night time.
- When connected to the system the security sensor will receive sensor detections and send a prepared warning message or emergency call to a pre-programmed destination.
- When connecting security sensor, set Program 20-46-01 Sensor mode to **1 (On)**, the security sensor can be connected to the detector circuit on the 2PGDAD. A maximum of eight sensors can be connected.
  - Applied voltage when sensor is Off: 5V
  - Loop current when sensor is On: 14mA
- When the system receives a detection signal from a contact on the 2PGDAD detector circuit. The input circuit contact setting in Program 20-46-12 must match the circuit setting in Program 10-41-01.
- Watch mode can be started and stopped automatically using settings in Program 20-47-01.

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- Watch mode can be started and stopped manually using Service code (Program 11-12-63) or function key (SC752: \*32) assignment. After 10 seconds a warning message is provided, press again to stop the message.
  - Security sensor can be started and stopped automatically using settings in Program 20-48-01.
  - Security sensor can start and stop manually using Service code (Program 11-12-64) or function key (SC752: \*33). Function key (\*33) blinks until the timer in Program 20-55-01 expires, then the function key turns red. The system can detect a signal from the sensor.
  - The Watching Message:
    - ❑ Is displayed after the timer in Program 20-44-04 expires.
    - ❑ Can be edited using the Service Code in Program 11-10-20.
    - ❑ Can be recorded up to a maximum of two minutes.
    - ❑ The Length of the watch message depends on the length of the recorded VRS message.
    - ❑ Internal Paging will only play the message when the targeted terminal is in an **Idle** state.
    - ❑ If an ordinary Internal Paging message is sent, the message is aborted and the watching message is played.
    - ❑ A Warning message has a higher priority than a Watch message when both occur at same time.
    - ❑ When using an external speaker, start and end tones are not supported.
  - When the security sensor detects a signal the following options can be set:
    - ❑ A Warning message is sent.
    - ❑ An Emergency call is sent.
    - ❑ A Warning message and an Emergency call are both sent.
  - Calling to an emergency destination:
    - ❑ The emergency number is set in Program 20-46-05.
    - ❑ Outside call routing uses Program 13-05-01.
    - ❑ If Program 13-05-01 is set to 0, outside call routing uses the settings in Program 14-06-01 and search for data from route table 100 using order 4 in descending order. If Program 14-06-01 is set to 0, outside calls are not supported.
    - ❑ If an outgoing call is set in a system, emergency calls cannot go through. When using outgoing call restriction, Class 1 toll restriction is followed.
    - ❑ If all trunks are busy, the emergency call is not sent. If this occurs, Alarm Type 33 is used.



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- When an emergency call is answered:
    - ❑ Provide a VRS message to the destination.
    - ❑ After finishing the VRS message, start monitor operation which pre-programmed in Program 20-46-10. Also by pressing \* key from outside, it is possible to enable a two-way path. If the monitor terminal is not idle status, an emergency call destination cannot start monitor and hear no tone.
    - ❑ If a Watch or Warning message is sent to the destination and all VSR channels are busy, a tone is played instead of displaying the VRS message.
    - ❑ If the VRS message is not recorded, a tone is played.
    - ❑ Barge-in is not allowed to outside call while monitoring.
  - A VRS message can be played from the extension's speaker only when the extension is idle. But if a Watch or Warning message is requested while a normal page is being used, normal paging stops and the Watch or Warning message is sent.
  - If a warning tone is provided instead of the VRS message, paging information is displayed as a blank to the paging group terminal LCD.
  - If a Watch or Warning message happens during normal paging, normal paging stops and the Watch or Warning message is sent.
  - A Warning message has a higher priority than a Watch message when both occur at same time.
  - Activating or stopping sensor operations need to be set according to sensor specifications.
  - If an outgoing call restriction is set in a system, the number for the emergency call needs to be pre-registered in the restriction allow table.
  - Auto outgoing call via leased line cannot go through when all trunks are busy.
  - When an emergency call destination is not answered, the system repeats the emergency call the number of times specified in Program 20-46-08.
  - For Answer detection of Analog Trunks;
    - ❑ In case of answer supervision, when answer supervision is received, the system recognizes the called party has answered.
    - ❑ In case of no answer supervision, after the inter digit timer has expired, the DTMF receiver waits for the \* key to be pressed. Then the system recognizes the called party has answered.
  - During remote monitoring, the outside lines cannot be disconnected until the timer in Program 20-21-05 expires.
  - For the Warning message:
    - ❑ Watch mode operation uses the order set in internal paging.
    - ❑ The VRS message can be edited using Service code Program 11-10-20.
    - ❑ The maximum length of a recorded message is two minutes.

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- If multiple sensors are detected at the same time, the latest detected sensor's Warning message is provided.
  - The warning message continues to play the same VRS message.
  - To cancel the Warning message use Security Sensor Reset Service Code Program 11-12-62.
  - When using external speaker, a start and end tone is not provided for any situation.
  - If, while playing a Warning message and the targeted internal or external paging group was already playing another Warning message, the first Warning message is canceled. In this case either the internal or external paging group was duplicated with the latest paging group. An old Warning message stops both internal and external paging.
  - If the DND key is pressed at the called terminal while playing a Watch or Warning message, the next message is not played because the terminal is determined to be busy. When the terminal returns to an idle state, the message is played again.
  - An emergency call via analog trunk which has no disconnect signal, if Program 14-02-18 is invalid the call cannot disconnect by trunk side.
  - An emergency call does not provided over Aspire Net trunks.
  - In case of an emergency call the trunk key status is red. It is also red while monitoring or speaking.
  - An emergency call goes through even if no trunk key is assigned to the terminal.
  - In case of using internal and external paging group same time, message will provided when both paging groups are in idle status. If internal or external paging group is already used, message will not provided.
  - In case of speaking status after monitor mode, monitored terminal key does not operate except speaker key.
  - When the sensor malfunctions, use Security Sensor Reset Service Code programmed at Program 11-12-62 to cancel the operation, stop warning message or stop emergency call.
  - During the Watch mode or Security sensor "On" state, if a system reset occurs these modes automatically continue after boot up.
  - When sending a **Warning message** or placing an emergency call, if system reset occurs the call state is cleared. Following a boot up, the **Warning message** or source placing an emergency call will stop.
  - If security sensor detects a signal, display below sentence to terminal which set Program 20-08-23 data to 1.

```

Clock/Calendar
Sensor Detect
List   Dir   ICM   Prog
1234567890123456789012345678

```

**Figure 2-36 Idle Terminal Display**

Press **Exit**, terminal returns to idle display.

### Remote Inspection

- To use the Remote Inspection feature target destination setting is necessary.
- When Remote Inspection is set to the terminal, **Confirm** and **Ring Time** are displayed on Multiline Terminal LCD.

```

Clock/Calendar
Confirm                               13:00
List   Dir   ICM   Prog
1234567890123456789012345678

```

**Figure 2-37 Confirm Ring Time Display**

- If Remote Inspection set terminal is busy (receiving another incoming call or on active calls), an inspection ring starts after finishing the previous call.
- If the VRS message is not recorded, a warning tone instead of a VRS message is sent.
- A target dial can be programmed by using Service Code (Program 11-10-49).
- Outside call routing follows the settings in Program 13-05-1 Abbreviated Dialing.
- When Program 13-05-01 set to 0, an outside call route is referring to Program 14-06-01 setting and search data from route table 100 of order 4 in descending order. If Program 14-06-01 set to 0, no outside call is provided.
- If outgoing call restriction is set in a system, an emergency call cannot go through. In case of using outgoing call restrictions, toll restriction Class 1 is followed.
- Auto outgoing call via leased line cannot go through when all trunks are busy.
- When trunks are all busy, the emergency call does not complete. In this case, Alarm Type 33 is provided.

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- 
- When the target destination answered:
    - Provide a VRS message to the destination.
    - After finishing VRS message, destination person can start monitoring of inspection terminal. Also by dialing \* from outside it is possible to make both way talk. Dialing \* during the message will just stop the message from being played and then you must dial \* again to have speech path in both direction. When using Analog trunks the destination person must dial \* before the initial message is played to the caller.
    - Barge-in is not allowed to outside call while monitoring.
  - If the destination does not answer an emergency call, the system repeats placing the call using the number of times set in Program 20-45-07.
  - For answer detection of analog trunks:
    - In case of answer supervision, when answer supervision is received, the system recognizes the called party has answered.
    - In case of no answer supervision, after the inter digit timer has expired, the DTMF receiver waits for the \* key to be pressed. Then the system recognizes the called party has answered.
  - An emergency call via analog trunk has no disconnect signal. If Program 14-02-18 is invalid the call cannot be disconnected on the trunk side.
  - If the cable was disconnected while ringing, the ring does not restart once the cable is reconnected.
  - An emergency call does not provided over Aspire Net trunks.
  - In case of an emergency call trunk key status is red. It is also red while monitoring or speaking.
  - An emergency call goes through even if no trunk key is assigned to the terminal.
  - If the cable is disconnected while ringing, an emergency call performance is same as off-hook status. If the cable was not connected by ring timer, Program 20-01-19 is set to 1 provide an emergency call, set to 0 retry to ring the inspection terminal.
  - If internal paging access performed while ringing, continues remote inspection ringing.
  - In case of speaking status after monitor mode, monitored terminal key does not operate except speaker key.
  - When disconnected from outside while monitoring, the line can not be released without disconnecting the signal. It disconnects when the timer in Program 20-21-05 ends. A disconnect also occurs while monitoring or speaking if the timer expires. To prevent a line hold, a disconnect occurs if the timer in Program 20-21-05 ends while hearing an answer message.
  - A maximum of six extensions can be set as Remote Inspection terminals.
  - If all VRS channels are busy, a tone is provided instead of the VRS message, such as an inspection message or a destination message.
- 
-

- If the VRS message is not recorded, a tone is provided.
  - ✎ *Emergency call destination must be set considering this feature's purpose.*
- The emergency number dialed does not follow ARS settings:
  - ❑ If Program 13-01-01 is set to Trunk the system uses command Program 13-05 to route the emergency call.
  - ❑ If Program 13-01-01 is set to ICM the system uses command Program 14-06 to route the emergency call.
- If remote inspection target does not answer, display below sentence to terminal which set Program 20-08-24 data to 1.

```

Clock/Calendar
Remote Inspection No Answer
List Dir ICM Prog
1234567890123456789012345678
```

**Figure 2-38 No Answer Display**

Press **Exit**, display returns to idle.

### Emergency Call 1

Emergency calls when **Security Sensor** or **Remote Inspection** performed, SMDR can record these call class as follows:

- Security Sensor: SAD
- Remote Inspection: WAD

### Emergency Call 2

When **Security Sensor** or **Remote Inspection** performs an Emergency call, alarm reports are recorded and the alarm display terminal indicates the following:

- Security Sensor: 31: Sensor Detect
- Remote Inspection: 32: Confirm Dial

### Recording Emergency Call

By setting Program 90-20-11 (1; Report) Emergency calls can be recorded on security report.

- Maximum of 50 records can be saved.

## **Default Setting**

None

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

CD-8DLCA/ CD-16DLCA

PZ-VM21 with CF

PGDAD

Version 7000 Enhancement License (0036)

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## **Related Features**

**Paging, External**

**Speed Dial – System/Group/Station**

**Voice Response System (VRS)**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-46	<b>Service Code Setup (for System Administrator) – Watch Message Setting</b>	Service Code setting for Watching message recording to VRS.	MLT, SLT (default = 614(NA/AT)/ 714(OT))		✓	
11-10-47	<b>Service Code Setup (for System Administrator) – Warning Message Setting</b>	Service Code setting for Warning message recording to VRS.	MLT, SLT (default = 615(NA/AT)/ 719(OT))		✓	
11-10-48	<b>Service Code Setup (for System Administrator) – Auto Dial for Security Sensor</b>	Service Code setting for destination number when Warning mode detected.	MLT (default = 617(NA/AT)/ 748(OT))		✓	
11-10-49	<b>Service Code Setup (for System Administrator) – Auto Dial for Remote Inspection</b>	Service Code setting for destination number when remote inspection detects no answer.	MLT (default = 619(NA/AT)/ 749(OT))		✓	
11-12-62	<b>Service Code Setup (for Service Access) – Security Sensor Reset</b>	Service Code setting for cancel Warning message sending and emergency call.	MLT, SLT (default = 716(NA/AT)/ 837(OT))		✓	
11-12-63	<b>Service Code Setup (for Service Access) – Watch Mode Start</b>	Service Code (SC) setting for on/off watch mode. SC+1; Watch mode start SC+0; Watch mode end.	MLT, SLT (default = 717(NA/AT)/ 817(OT))		✓	
11-12-64	<b>Service Code Setup (for Service Access) – Security Sensor Mode Start</b>	Service code + 1, after the timer (Program 20-55-01) passes, sensor signal is valid. Service code + 0, sensor signal is invalid.	MLT, SLT (default = 719(NA/AT)/ 819(OT))		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	Enter the System and Group Speed Dialing numbers and names.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Warning Message (code *32).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Sensor Mode (code *33).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-01-19	<b>System Options – Emergency Call Setting of Remote Inspection Feature when the Target is in Off-Hook Status</b>	Assign to make an emergency call when the inspection target is in off hook status.	0 = Not Call 1 = Call (default = 0)		✓	
20-08-23	<b>Class of Service Options (Outgoing Call Service) – Display Indication for Security Sensor Detection</b>	Enable(1) or Disable(0) an extension's ability to display indication for security sensor detection.	0 = Disable 1 = Enable (default = 0)		✓	
20-08-24	<b>Class of Service Options (Outgoing Call Service) – Display Indication for Emergency Call by Remote Inspection</b>	Enable(1) or Disable(0) an extension's ability to display indication for emergency call by remote inspection.	0 = Disable 1 = Enable (default = 0)		✓	
20-21-05	<b>System Option when Long Conversation – Conversation Cutoff for Remote Monitor</b>	Determines how long the system waits before disconnecting for remote monitor.	0~64800 (seconds) (default = 180)			✓
20-44-01	<b>Watch Mode Setup – Internal Paging Group for Watch Message</b>	Define Internal paging group number for Watching message.	0 = No Internal Paging 1-64 = Internal Paging Group Number (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-44-02	<b>Watch Mode Setup – External Paging Group for Watch Message</b>	Define External paging group number for Watching message.	0 = No External Paging 1-8 = External Paging Group Number (default = 0)	✓		
20-44-03	<b>Watch Mode Setup – VRS Message for Watch Mode</b>	Define VRS number used for Watching message.	0 = Send Warning Tone 1-100 = VRS Message Number (default = 0)	✓		
20-44-04	<b>Watch Mode Setup – Interval Timer for Watch Message</b>	Define interval time for sending Watching message.	0 = No Message Send 1-60 (minutes) (default = 0)	✓		
20-45-01	<b>Remote Watch Setup – Ring Terminal for Remote Monitor</b>	Assign Extension number for Remote Inspection.	Terminal No. 1-6: Extension Number (up to 8 digits) (default not assigned)	✓		
20-45-02	<b>Remote Watch Setup – Ring Time Setting</b>	Assign Ringing start time for Inspected Extension.	Terminal No. 1-6: 0000-2359 (default = 0000)	✓		
20-45-03	<b>Remote Watch Setup – Ring Timer</b>	Assign Ringing continue time for inspected extension.	Terminal No. 1-6: 0-60 (default = 0)	✓		
20-45-04	<b>Remote Watch Setup – Auto Dial Number Area Setting</b>	Assign Speed dial area number when detect no answer at extension and make emergency call.	Terminal No. 1-6: Speed Dial Area 0-1999 (default = 0)	✓		
20-45-05	<b>Remote Watch Setup – VRS Message for Answer</b>	Assign VRS message number when inspected extension answered.	Terminal No. 1-6: 0 = Send Warning Tone 1-100 = VRS Message (default = 0)	✓		
20-45-06	<b>Remote Watch Setup – VRS Message for Autodial</b>	Assign VRS message number when emergency call destination answered.	Terminal No. 1-6: 0 = Send Warning Tone 1-100 = VRS Message Number (default = 0)	✓		
20-45-07	<b>Remote Watch Setup – Time of Repeat Autodial</b>	Assign Repeat numbers for making emergency call.	Terminal No. 1-6: 0 = No Redial 1-255 (times) (default = 0)	✓		
20-45-08	<b>Remote Watch Setup – Auto Dial Calling Time</b>	Assign Calling continue time when making emergency call.	Terminal No. 1-6: 0 = No Redial 1-3600 (seconds) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-45-09	Remote Watch Setup – Interval of Auto Dial	Assign interval between Auto Dial when making emergency call.	Terminal No. 1-6: 0 = No Call 1-3600 (seconds) (default = 0)		✓	
20-46-01	Security Sensor Setup – Sensor Mode	Define to use security sensor.	Security Sensor No. 1-8 0 = Disable 1 = Enable (default = 0)	✓		
20-46-02	Security Sensor Setup – Internal Paging Group for Warning Message	Define Internal paging group number for Warning message.	Security Sensor No. 1-8 0 = No Internal Paging 1-64 = Internal Paging Group Number (default = 0)	✓		
20-46-03	Security Sensor Setup – External Paging Group for Warning Message	Define External paging group number for Warning message.	Security Sensor No. 1-8 0 = No External Paging 1-8 = External Paging Group Number (default = 0)		✓	
20-46-04	Security Sensor Setup – VRS Message for Warning	Define VRS number used for Warning message.	Security Sensor No. 1-8 0 = Send Warning Tone 1-100 = VRS Message Number (default = 0)	✓		
20-46-05	Security Sensor Setup – Auto Dial Number Area Setting	Define Speed dial area number when sensor detects warning.	Security Sensor No. 1-8 Speed Dial Area 0-1999 (default = 1999)	✓		
20-46-06	Security Sensor Setup – VRS Message for Answer	Define VRS message number when emergency call destination answered.	Security Sensor No. 1-8 0 = Send Warning Tone 1-100 = VRS Message Number (default = 0)	✓		
20-46-07	Security Sensor Setup – Auto Dial Wait Timer	Define wait time before making emergency auto dial.	Security Sensor No. 1-8 0 = Immediate Call 1~64800 (seconds) (default = 10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-46-08	<b>Security Sensor Setup – Repeat Dial Times</b>	Define repeat numbers for making emergency call.	Security Sensor No. 1-8 0 = No Redial 1-255 (times) (default = 0)	✓		
20-46-09	<b>Security Sensor Setup – Auto Dial Calling Time</b>	Define calling continue time when making emergency call.	Security Sensor No. 1-8 0 = No Call 1-3600 (seconds) (default = 120)	✓		
20-46-10	<b>Security Sensor Setup – Monitored Terminal</b>	Define extension number for monitor from outside. IP terminal cannot set as monitored extension.	Security Sensor No. 1-8 Extension Number (Up to 8 digits) (default not assigned)	✓		
20-46-11	<b>Security Sensor Setup – Interval of Auto Dial</b>	Assign interval between Auto Dial when making emergency call.	Security Sensor No. 1-8 0 = No Call 1-3600 (seconds) (default = 0)	✓		
20-46-12	<b>Security Sensor Setup – General Purpose Relay Contact Detector Circuit Setup</b>	Define general purpose relay contact detector circuit number (programmed in Program 10-41) for connect security sensor.	Security Sensor No. 1-8 0 = Not Used 1-8 = Detect Circuit Number (default = 0)	✓		
20-47-01	<b>Time Pattern Setting for Watch Mode – Watch Mode</b>	Define watch mode on/off against time pattern 1-8.	Time Pattern 1-8: 0 =Off 1 = On (default = 0)		✓	
20-48-01	<b>Time Pattern for Security Sensor – Security Sensor</b>	Define security sensor on/off against time pattern 1-8.	Time Pattern 1-8: 0 =Off 1 = On (default = 0)		✓	
20-55-01	<b>Delay Timer for Security Sensor – Sensor Delay Timer</b>	Assign the delay time, when the contact detection start to work after set the security sensor. The sensor starts at once in case of set 0.	0-3600 (seconds) (default = 60)		✓	
35-02-22	<b>SMDR Output Options – Security Auto Dialing</b>	Select whether the system should display the SAD (Security Auto Dialing) on SMDR report.	SMDR Port 1-8: 0 = No Output 1 = Output (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-23	<b>SMDR Output Options – Watch Auto Dialing</b>	Select whether the system should display the WAD (Warning Auto Dialing) on SMDR report.	SMDR Port 1-8: 0 = No Output 1 = Output (default = 0)			✓
90-10-01	<b>System Alarm Setup – Alarm Type</b>	Set the alarm type 31, 32, 33. Alarm 31 – Auto dialing after sensor detection. Alarm 32 – Auto Dialing for Remote Watch function. Alarm 33 – Fail to auto dialing of security function.	0 = Not Set 1 = Major Alarm 2 = Minor Alarm (default = 0)		✓	
90-10-02	<b>System Alarm Setup – Report</b>	Assign whether or not the alarm information is reported to the predefined destination in Program 90-11.	0 = No Report (no autodial) 1 = Report (autodial) (default = 0)		✓	
90-20-11	<b>Traffic Report Data Setup – Security Sensor Dial Record</b>	Assign whether or not the security sensor dial report is recorded for Record Security sensor dialing and Remote Inspection dialing.	0 = Not Record 1 = Record (default = 0)			✓

## Operation

### Warning Message (Watch Mode):

< Program >

Program 11-10-20: (616) Record, Erase VRS message SC616

Program 11-10-46: (614) Watch message setting

Program 11-12-63: (717+1/0) Watch Mode Start/Stop

Program 15-07-01: Set \* 32 to Function key

Program 20-44-01: (1) Internal paging group, 1

Program 20-44-02: (1) External paging group, 1

Program 20-44-03: (1) VRS message number for watching, 1

Program 20-44-04: (5) Interval time of Watching message, 5 minutes

Program 20-47-01: (1) Watch mode time pattern, 1

### To record Watching message to VRS 001

1. Press **Speaker** and dial **616 + 7 + 001**.
2. After the beep, record message.
3. Press **Speaker** to hang up.

---

---

**Set up Watch mode**

1. Press **Speaker** and dial **614**.
2. Dial the internal paging group number **01**.
3. Dial the external paging group number **1**.
4. Dial the interval time of Watch message **05**.
5. Dial the VRS message number being watched **001**.
6. After the beep, record message.
7. Press **Speaker** to hang up.

**To Start Watch mode**

1. Press **Speaker** and dial **717 + 1**.

**-OR-**

Press function key (\*32), the function keys turn red.

**-OR-**

Wait for Watch mode pattern 1 to start.

2. The Watching message is sent to internal and external page group 1 (every five minutes).

**To Stop Watch mode**

1. Press **Speaker** and dial **717 + 0**.

**-OR-**

Press the red lit function key (\*32), the function keys turn off.

**-OR-**

Wait for Watch mode pattern 1 to end.

**Warning Message (Use Security Sensor and Warning Message):**

< Program >

Program 10-41-01(Index 1): (2) Slot Number connected with 2PGDAD

Program 10-41-02(Index 1): (8) Port Number connected with 2PGDAD

Program 10-41-03(Index 1): (1) Detection circuit number on 2PGDAD where a Sensor is connected to

Program 11-10-47: (615) Warning message setting

Program 11-10-48: (617) Auto Dial Setting for Security Sensor

Program 11-12-62: (716) Security Sensor Reset

Program 11-12-64: (719+1/0) Security Sensor Mode Start/Stop

Program 15-07-01: Set \* 33 to Function key

Program 20-46-01: (1) Sensor mode, on  
Program 20-46-02: (1) Internal paging group, 1  
Program 20-46-03: (1) External paging group, 1  
Program 20-46-04: (1) VRS message number for warning, 1  
Program 20-46-05: (1999) Speed dial bin number, 1999  
Program 20-46-06: (2) VRS message number for destination answer, 2  
Program 20-46-07: (10) Auto Dial Wait Timer, 30 sec  
Program 20-46-08: (3) Times of auto repeat dial, 3  
Program 20-46-09: (30) Auto dial calling time, 30 sec  
Program 20-46-10: (200) Monitored terminal number, 200  
Program 20-46-11: (30) Interval of Auto Dial, 30 sec  
Program 20-46-12: (1) General purpose relay contact detector circuit 1  
Program 20-48-01: (1) Security sensor time pattern, 1  
Program 20-55-01: (60 sec, default) Sensor delay timer

### Set up Warning message

1. Press **Speaker** and dial **615**.
2. Dial the Security sensor number **1**.
3. Dial the Internal paging group number, **01**.
4. Dial the external paging group number, **1**.
5. Dial the VRS message number for the warning, **001**.
6. After the beep, record message.
7. Press **Speaker** to hang up.

### Set up Auto Dial (Security Sensor) Using Service Code

1. Press **Speaker** and dial **617**.
2. Dial the Security sensor number (1-8), **1**.
3. Dial the Speed dial bin number to be used, **1999**.
4. Dial the emergency call destination number xxx-xxx and press **Hold**.
5. Dial the monitored terminal number, **200**.
6. Dial the VRS message number **002**.
7. After the beep, record message.
8. Press **Speaker** to hang up.

**Start Security Operation**

1. Press **Speaker** and dial **719 + 1**. The sensor is enabled using the timer in Program 20-55-01.

**-OR-**

2. Press function key (\*33), the function keys turn red. The key lights after the timer in Program 20-55-01 expires. The sensor is valid.

**-OR-**

3. Security Sensor time pattern 1 starts.

**Stop Security Operation**

1. Press **Speaker** and dial **719 + 0**.

**-OR-**

2. Press the red lit function key (\*33), the function keys turn off.
3. Security Sensor time pattern 1 stops.

**When Detect Security Sensor is On**

1. A Warning message sent to internal page group 1 and external page group 1.
2. An outgoing call is automatically sent according to setting in speed dial bin 1999.
3. When destination answers, VRS sends a second message.
4. Once received, extension 200 can be used for monitoring. To have a two-way conversation, dial \*.

**To Send Warning message**

To send a Warning message, but not as an Emergency call:

Change Program 20-46-05 to **no setting**.

**To Place an Emergency Call**

To send an Emergency call, but not as an Warning message:

Set Programs 20-46-02 and 20-46-03 to **0**.

## Remote Inspection

<Program>

Program 11-10-49: (619) Auto Dial Setting for Remote

Program 20-45-01: (200) Remote Inspection terminal, 200

Program 20-45-02: (12:00) Ringing start time, 12 o'clock noon

Program 20-45-03: (3) ringing continue time, 3 minutes

Program 20-45-04: (1999) Speed dial bin number, 1999

Program 20-45-05: (1) VRS message number when inspected extension answered, 1

Program 20-45-06: (2) VRS message number when emergency call destination answered, 2

Program 20-45-07: (3) Times of auto repeat dial, 3

Program 20-45-08: (30) Auto dial calling time, 30 sec

Program 20-45-09: (30) Interval of Auto Dial, 30 sec

### Set Up Remote Inspection

1. Press **Speaker** and dial **619**.
2. Dial the Remote Inspection terminal number (1-6).
3. Dial **1** to set.
4. Dial the Remote Inspection extension number, **200**.
5. Dial the Ring start time, **1200**.
6. Dial ring length time, **03**.
7. Dial the Speed dial bin number to be used, **1999**.
8. Dial the emergency call destination number xxx-xxx and press **Hold**.
9. When answered, dial the VRS message number **001**.
10. After the beep, record the message and press #.
11. When the emergency call destination answers, dial VRS message2
12. After confirmation tone, record message.
13. Press **Speaker** to hang up.

### Cancel the Remote Inspection

1. Press **Speaker** and **619**.
2. Dial the Remote Inspection number (1-6).
3. Dial **0** to cancel.



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### Answering the Remote Inspection Ring

1. At 12:00 o'clock (noon) extension 200 will start ringing.
2. The first VRS message is played when answered.
3. When message finishes, the call disconnects.

### Not Answering the Remote Inspection Ring

1. At 12:00 o'clock extension 200 will start ringing.
2. Ringing will continue over three minutes.
3. The ringing on extension 200 ends and a call is automatically placed to Speed dial bin 1999.
4. When answered, VRS sends second message.
5. After finishing second VRS message finishes, called destination can automatically monitor extension 200.
6. Press \* to enable two-way conversation.

### Emergency Call Record

<Program Example>

Program 10-20-01 (Index 5): 10000

Program 14-01-06: 1

Program 35-01-01: 3 (LAN)

Program 35-02-22: 1

Program 35-02-23: 1

In above setting, make sensor mode or remote inspection emergency call, record to SMDR.

### Alarm Report

<Program Example>

Program 90-10-02 (Index 31, 32, 33): (1) report

Program 90-50-01: Extension number for System Alarm Display Telephone

In the above settings, send an alarm display to the terminal pre-programmed in Program 90-50-01 and report to the predefined destination in Program 90-11.

After Program 90-53-01 completes, alarm display is cancelled.

## Security Report

<Program Example>

Program 10-20-01 (Index 12): 20000

Program 90-20-11: 1

In the above settings, use the sensor mode or remote inspection emergency call, to record a traffic report.

## Selectable Display Messaging

### Description

An extension user can select a programmed Selectable Display Message for their extension. Display multiline terminal callers see the selected message when they call the user's extension. Selectable Display Messaging provides personalized messaging. For example, an extension user could select the message GONE FOR THE DAY. Any display multiline terminal user calling the extension may hear a DND signal and then see the message. See table below for a list of the standard messages.

An extension user can add digits for date, time or telephone number after messages 1~8 and 10 (up to 24 characters). For example, an extension user could select the message ON VACATION UNTIL and then enter the date. Callers see the original message followed by the appended date. They could then tell when the user is coming back from vacation. The system allows all telephones to use the Selectable Display Messaging feature at the same time.

All telephones can use Selectable Display Messaging at one time.

The default messages are:

**Table 2-76 Selectable Display Messaging Defaults**

No.	Message	Change “#” to...
1	IN MEETING UNTIL ##:##	Time (when meeting done)
2	MEETING ROOM - #####	Room Name or extension
3	COME BACK ##:##	Time (when returning)
4	PLEASE CALL #####	11 digits (telephone number)
5	BUSY CALL AFTER ##:##	Time (when returning)
6	OUT FOR LUNCH BACK ##:##	Time (when returning)
7	BUSINESS TRIP BACK ##/##	Date (when returning)
8	BUSINESS TRIP #####	10 digits (where reached)
9	GONE FOR THE DAY	
10	ON VACATION UNTIL ##/##	Date (when returning)
11~20	MESSAGE 11~20	

## Conditions

- The # cannot be used in a Message.
- When Selectable Display Messaging is set as DND All, all other DND modes are canceled when Selectable Display Messaging is canceled.
- The Selectable Display Message will not display to the calling party's phone if there is forwarding on the phone that set the Selectable Display, it will just follow the forwarding.

## Default Setting

Enabled

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## System Availability

### Terminals

All Multiline Terminals with Display

### Required Component(s)

None

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## Related Features


**Do Not Disturb**

**Programmable Function Keys**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-14	<b>Service Code Setup (for Setup/Entry Operation) – Text Message Setting</b>	Define the service code used when setting a text message.	MLT (default not assigned)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Text Message (code 18). The Text Message key automatically selects the message used when programming the key.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-01-02	<b>System Options – Text Message Mode</b>	Select whether an intercom caller should hear busy (1) or ring through (0) for extensions which have Selectable Display Messaging set.  <i>Any extension previously set with Selectable Display Messaging must cancel the feature and reactivate for a change in this option to take affect.</i>	0 = Call mode 1 = No Answer/ Busy mode (default = 1)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-07	<b>System Options for Multiline Telephones – Time and Date Display Mode</b>	Set the System Time and Date display mode. The time that displays in Selectable Display Messages follows this setting.	1~8 Type 1 = (12 hour) 10 MAR TUE 3:15PM Type 2 = (12 hour) 3:15PM MAR 10 TUE Type 3 = (12 hour) 3-10 TUE 3:15 PM Type 4 = (12 hour) 3:15PM TUE 10 MAR Type 5 = (24 hour) 10 MAR TUE 15:15 Type 6 = (24 hour) 15:15 MAR 10 TUE Type 7 = (24 hour) 3-10 TUE 15:15 Type 8 = (24 hour) 15:15 TUE 10 MAR (default = 3)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-19	<b>Class of Service Options (Supplementary Service) – Selectable Display Messaging (Text Messaging)</b>	Turn Off or On an extension user ability to use Selectable Display Messaging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-16-01	<b>Selectable Display Messages</b>	Program the Selectable Display Messages (1~20). Refer to the chart below for character entry.	24 characters Default: Refer to <a href="#">Table 2-76 Selectable Display Messaging Defaults on page 2-1325</a>		✓	

Table 2-77 Selectable Display Message – Character Entry Chart



Use this keypad digit . . .	When you want to . . .
1	Enter characters: 1 @ [ ¥ ] ^ _ ‘ {   } > <
2	Enter characters: <b>A-C, a-c, 2.</b>
3	Enter characters: <b>D-F, a-f, 3.</b>
4	Enter characters: <b>G-I, g-i, 4.</b>
5	Enter characters: <b>J-L, j-l, 5.</b>
6	Enter characters: <b>M-O, m-o, 6.</b>
7	Enter characters: <b>P-S, p-s, 7.</b>
8	Enter characters: <b>T-V, t-v, 8.</b>
9	Enter characters: <b>W-Z, w-z, 9.</b>
0	Enter characters: 0 ! “ # \$ % & <space> ( )
*	Enter characters: * + , - . / : ; < = > ?
#	Accepts a numeric entry from the user when setting a display message. e.g., time or date. Back at ###
<b>Conf</b>	Clear the character entry one character at a time.
<b>Hold</b>	Clear all the entries from the point of the flashing cursor and to the right.

## Operation

### To select a message:

1. Press **Speaker** + press the **Text Message** key (Program 15-07 or SC 751: 18) + enter digits to append (if needed) + **Speaker** to hang up. Skip the remaining steps.
2. (Optional for messages 1~8 and 10.)  
Dial the digits you want to append to the message.
  -  You can append messages 1~8 and 10 with digits (e.g., the time when you will be back). Enter the time in 24-hour format.


3. Press **Speaker** to hang up.

-  *Intercom calls to extensions with Selectable Display Messaging set receive a DND signal and receive the display message on their telephone display instead of ringing the extension based on the setting in Program 20-01-02.*
-  *To allow calls to ring through and have the message displayed on the calling extension display, cancel DND by pressing DND + 0.*

**To cancel a message:**

1. Press **Speaker** and the **Text Message** key (Program 15-07 or SC 751: 18).
2. Press **Speaker** to hang up.

**Using the Text Message Service Code to select a message:**

1. Press **Speaker** and dial the Text Message service code (Program 11-11-14).
2. Dial the Selectable Display Message number to be used (**01~20**).  
(Optional messages 1~8, and 10, dial the digits you want to append to the message.)
3. Press **Speaker** to hang up.
  -  *To cancel, repeat Step 1 and hang up.*



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## Selectable Ring Tones

### Enhancements

With <b>Version 8000 or higher software</b> , the number of Tone Patterns has increased from four to eight.
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### Description

An extension user can change the way trunks or internal calls ring their telephone. Selectable Ring Tones allow an extension user to set up unique ringing for their calls. This is important in a crowded work area where several telephones are close together. Because their telephone has a characteristic ring, the user always can tell when their telephone is ringing.

#### Conditions

None

#### Default Setting

Enabled

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### System Availability

#### Terminals

All Multiline Terminals

#### Required Component(s)

None

## Related Features

### Distinctive Ringing, Tones and Flash Patterns

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-20	<b>Service Code Setup (for Setup/Entry Operation) – Change Incoming CO and ICM Ring Tones</b>	If required, change the service code used for changing the incoming ring tones heard for CO and ICM calls.	MLT (default = 720)		✓	
11-11-21	<b>Service Code Setup (for Setup/Entry Operation) – Check Incoming Ring Tones</b>	If required, change the service code used for checking how the incoming ring tones sound.	MLT (default = 711)		✓	
15-02-02	<b>MultiLine Telephone Basic Data Setup – Trunk Ring Tone</b>	Set the tone (pitch) of the incoming trunk ring for the extension port you are programming.	1 = High 2 = Medium 3 = Low 4 = Ring Tone 1 5 = Ring Tone 2 6 = Ring Tone 3 7 = Ring Tone 4 8 = Ring Tone 5 (default = 2)		✓	
15-02-03	<b>Multiline Telephone Basic Data Setup – Extension Ring Tone</b>	Set the tone (pitch) of the incoming extension call ring for the extension port you are programming. Also refer to program 15-08.	1 = High 2 = Medium 3 = Low 4 = Ring Tone 1 5 = Ring Tone 2 6 = Ring Tone 3 7 = Ring Tone 4 8 = Ring Tone 5 (default = 8)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-08-01	<b>Incoming Virtual Extension Ring Tone Setup</b>	When an extension or a virtual extension is assigned to the function key on the key telephone, select the ring tone when receiving a call on that key. For ACD CAR keys, only tone pattern 1 can be used. The remaining patterns are not checked with this feature.	ICM Tone Pattern, 0 = Pattern 1 1 = Pattern 2 2 = Pattern 3 3 = Pattern 4 4 = Incoming Ring Tone Extension 5 = Pattern 5 6 = Pattern 6 7 = Pattern 7 8 = Pattern 8 (default = 0)		✓	
15-10-01	<b>Incoming Virtual Extension Ring Tone Order Setup</b>	When two or more virtual extensions are set on a function key on the telephone, and the tone pattern by which the sound of each extension differs, the priority of ring sound is set up.	Default Priority order 1 = 0 (Tone Pattern 1) 2 = 1 (Tone Pattern 2) 3 = 2 (Tone Pattern 3) 4 = 3 (Tone Pattern 4)		✓	
22-03-01	<b>Trunk Ring Tone Range</b>	Select the ring tone range for the trunk. The trunk uses a ring tone in the range selected when it rings an extension. Eight ring tones are available.	0~12 (Ring Tone Pattern 1~4) (Melody 1~ Melody 5) (Ring Tone Pattern 5~8) (default = 0)		✓	

**Table 2-78 Intercom or Trunk Ring Setting**

1 = High	5 = Ring Tone 2
2 = Mid Range	6 = Ring Tone 3
3 = Low	7 = Ring Tone 4
4 = Ring Tone 1	8 = Ring Tone 5

## Operation

### To change your extension incoming ring tones:

1. Press **Speaker**.

2. Dial **720**.
3. Dial **1** to set Intercom ring; **2** to set trunk ring.
4. Dial code for the desired ring pattern (**1~8**).
5. Press **Speaker** to hang up.

**To listen to the incoming ring choices:**

1. Press idle **Speaker**.
2. Dial **711**.
3. Dial **1** to listen to Intercom ring; **2** to listen to trunk ring.
4. *For Intercom Ring:*  
Dial the code for the ring pattern you want to hear (**1~8**).

- OR -

*For Trunk Ring:*

Dial code for the ring pattern you want to hear (Ring 1~3, Melody 4~8). If you select Ring 1~3, a second screen prompts for the tone pattern (1~4).

5. Press **Speaker** to hang up.

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## Serial Call

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### Description

Serial Call transfers a call so it automatically returns to the transferring extension. Serial Calling saves transferring steps between users. For example, a Customer Service Representative (CSR) has a client on the telephone who needs technical advice. The CSR wants to send the call to Technical Service, but needs to advise the client of certain costs when Technical Service is done. Rather than transferring the call back and forth, the CSR can use Serial Call to Technical Service and announce, "I have Ted on the telephone. I need to talk to him again. Just hang up when you're done and I'll get him back."

### Conditions

- The transferring extension can remain off-hook to auto-receive the callback or hang up and it rings back to them.
- Serial Call requires a uniquely programmed function key (Program 15-07 or SC 751: 43) or assigning the Transfer key as Call Back in (Program 15-02-05=1).
- Serial Call is not available to single line telephones.
- Serial Call can be activated only during a supervised transfer.

### Default Setting

Disabled

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### System Availability

#### Terminals

All Multiline Terminals

#### Required Component(s)

None

## Related Features

### Programmable Function Keys

#### Transfer

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-05	<b>Multiline Telephone Basic Data Setup – Transfer Key Operation Mode</b>	Set the operating mode of the extension Transfer key. The keys can be for Call Transfer, Serial Calling or Flash. When selecting Flash (2), refer also to Program 81-01-14.	0 = Transfer 1 = Call back 2 = Hook (default = 0)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a programmable key as a Serial Call key (code 43).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	

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## Operation

### To place a Serial Call to a co-worker:

1. Place or answer a call.
2. Press **Hold** or **Transfer**.
3. Dial co-worker's extension number.  
 *Co-worker must lift the handset to respond to your announcement.*
4. Press the Serial Call key (Program 15-07 or SC 751: 43).

**-OR-**

5. Press Transfer key if Program 15-02-05 is set to Call Back (Serial Call).
6. When MLT Display shows WAIT TRF extension can hang up.  
 *When your co-worker hangs up the call, the system makes an automatic live transfer back to your extension.*

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# *Single Line Telephones, Analog 500/2500 Sets*

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## **Description**

The system is compatible with 500 type (Dial Pulse) and 2500 type (DTMF) analog single line telephones (SLTs). You can install single line telephones as On-Premise or Off-Premise extensions. Single line telephone users can dial codes to access many of the features available to multiline terminal users. With single line telephones, you can have your system simulate PBX operation.

There are 320 single line telephones available (note that this number may be restricted due to system power requirements).

When installing single line telephones you must have:

- A port on an LCA blade for each single line telephone installed.
- If you have 2500 sets, at least one block reserved on the CD-CP00-US for analog extension DTMF reception.

## **DTMF Dial Out Timer Added**

A program is added for DTMF dialing, Program 20-03-07 : System Options for Single Line Telephones - Trunk Call Dial Forced Sending Start Time (Forced Dial). When Program 20-03-03 : System Options for Single Line Telephones – SLT DTMF Dial to Trunk Lines is set to 0 (receive all digits before sending), the system follows the timer in Program 20-03-04 and Program 20-03-07.

The timer in Program 20-03-04 System Options for Single Line Telephones – Dial Sending Start Time for SLT or ARS resets when the user dials another digit.

The timer in Program 20-03-07 System Options for Single Line Telephones – Trunk Call Dial Forced Sending Start Time (Forced Dial) does not reset when a digit is dialed. The user must finish dialing all the digits before this time expires (entries: 0~64800 seconds, default: 0).

## **Conditions**

- Dial Pulse (500 type) single line telephones cannot access any feature that requires the user to dial # or \*.
- A single line telephone can initiate an Internal Zone page, but cannot receive an Internal Zone Page.
- When a Ring Group call rings a single line station, the BLF indication shows busy.
- Stutter Dial Tone is supported to Single Line Telephones for Voice Mail Message Waiting.

- The CD-CP00-US has 32 resources for DTMF receiving and Dial Tone detection. When a PZ-BS10 is installed there are 64 resources available.
- When Program 10-09-01 is set to 0 (Common) and Program 14-02-10 (Caller ID) is set to 1 (Yes), all DTMF/Dial Tone Detection resources are always allocated to analog trunks, not analog extensions. However, if Program 14-02-10 (Caller ID) is set to 0 (No), all DTMF/Dial Tone Detection resources can be used for both analog trunks and analog extensions.
- The Exclusive Hold Recall Timer is used when an internal call from a Single Line Telephone is placed on hold.

## Default Setting

Single line telephones function as soon as they are installed and properly programmed.

---

## System Availability

### Terminals

DTR-1-1

DTH-1HM-1

DTH-1-1

DTP-1-2

DTP-1HM-2

DTR-1R-2

### Required Component(s)

- CD-4LCA
- PZ-4LCA
- CD-8LCA
- PZ-8LCE

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## Related Features

Single line telephone users have access to the following features:

- Speed Dialing
- Automatic Route Selection
- Call Forwarding with Follow Me
- Callback
- Conference
- Directed Call Pickup
- Flash
- Hold
- Last Number Redial
- Meet Me Paging
- Night Service
- PBX Compatibility
- Selectable Display Messages
- Trunk Queuing and Camp-On
- Warning Tone for Long Conversation
- Account Codes
- Barge-In
- Call Forwarding/DND Override
- Central Office Calls, Answering
- Department Calling
- Do Not Disturb
- Forced Trunk Disconnect
- Intercom
- Line Preference
- Meet Me Paging Transfer
- Off-Hook Signaling
- Ringdown Extension
- Toll Restriction
- Voice Mail
- Alarm
- Call Forwarding
- Call Waiting/Camp-On
- Central Office Calls, Placing
- Department Step Calling
- Door Box
- Group Call Pickup
- Handsfree Answerback/Forced Intercom Ringing
- Meet Me Conference
- Message Waiting
- Paging
- Save Number Dialed
- Transfer
- Voice Over

## Data Communications

APA and APR modules can be used with multiline terminals to provide an analog port.




Refer to the individual features for additional descriptive, programming and operational information.

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	ETU Setup (DLCA PKG Setup) – Terminal Type (B1)	Program all on-premise 500/2500 type single line telephones with circuit type 2. Set the DIOPU trunk to type 1 when trunks should be defined for off-premise extension (OPX) use.	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)		✓	
10-03-03	ETU Setup (LCA PKG Setup) – Transmit Gain Level (S-Level)	Set up and confirm the Basic Configuration data for each blade.	1~63 (-15.5 +15.5dB) [default = 32 (0dB)]		✓	
10-03-04	ETU Setup (LCA PKG Setup) – Receive Gain Level (R-Level)	Assign transmit and receive levels for 500/2500 type single line telephones.	1~63 (-15.5 +15.5dB) [default = 32 (0dB)]		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	<p>If the system has 2500 type (DTMF) single line extensions, allocate at least one circuit for analog extension DTMF reception (0 or 1).</p> <p>Use the following as a guide when allocating DTMF receivers:</p> <ul style="list-style-type: none"> <li>○ In light traffic sites, allocate one DTMF receiver for every 10 devices that use them.</li> <li>○ In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.</li> </ul> <p> <i>The CD-CP00-US has 32 resources for DTMF receiving and Dial Tone detection. When a PZ-BS10 is installed there are 64 resources available.</i></p> <p> <i>When Program 10-09-01 is set to 0 (Common) and Program 14-02-10 (Caller ID) is set to 1 (Yes), all DTMF/Dial Tone Detection resources are always allocated to analog trunks, not analog extensions. However, if Program 14-02-10 (Caller ID) is set to 0 (No), all DTMF/Dial Tone Detection resources can be used for both analog trunks and analog extensions.</i></p>	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
15-03-01	<b>Single Line Telephone Basic Data Setup – SLT Signaling Type</b>	<p>Enter 0 if single line telephone is a 500 type (dial pulse). Enter 1 if single line telephone is a 2500 type (DTMF).</p> <p> <i>Set In-Skin Voice Mail and InMail to 0.</i></p>	0 = DP 1 = DTMF (default = 1)		✓	
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	<p>Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).</p>	0 = Normal 1 = Special (default = 0)		✓	
15-03-05	<b>Single Line Telephone Basic Data Setup – Trunk Polarity Reverse</b>	<p>-- Not Used in U.S. -- Do Not Change Default Entry as DTMF issues may arise with voice mail.</p>	0 = Off 1 = On (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-03-06	Single Line Telephone Basic Data Setup – Extension Polarity Reverse	-- Not Used in U.S. -- Do Not Change Default Entry as DTMF issues may arise with voice mail.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	
15-03-07	Single Line Telephone Basic Data Setup – Enabled On-Hook When Holding (SLT)	Enable/Disable this program step.	0 = Disable 1 = Enable (default = 1)		✓	
15-03-08	Single Line Telephone Basic Data Setup – Answer On-Hook when Holding (SLT)	Enable/Disable Answer ON-Hook when Holding for SLT terminals.	0 = Disable (No) 1 = Enable (Yes) (default = 1)		✓	
15-03-09	Single Line Telephone Basic Data Setup – Caller ID Function - For External Module	Enable/Disable the Caller ID FSK signal for an external Caller ID module or a 3rd-Party vendor telephone with Caller ID display. <b>Important:</b> If voice mail is used, this setting must be disabled for the system integration codes to be correct. With a 2500 set (no Caller ID) installed, this must be set to 0 for incoming callers to have a talk path.	0 = Disable 1 = Enable (default = 0)		✓	
15-03-10	Single Line Telephone Basic Data Setup – Caller ID Name	Determine if an extension user telephone should display the Caller ID name.	0 = Disable 1 = Enable (default = 1)		✓	
15-03-11	Single Line Telephone Basic Data Setup – Caller ID Type	Determine whether the Caller ID type is FSK or DTMF.	0 = FSK 1 = DTMF (default = 0)		✓	
15-03-14	Single Line Telephone Basic Data Setup – Forwarded Caller ID Display Mode	Determine what the display shows when a multiline terminal receives a forwarded outside call.	0 = Calling Extension Number (Calling) 1 = External Caller ID (Forward) (default = 0)		✓	
20-03-01	System Options for Single Line Telephones – SLT Call Waiting Answer Mode	For a busy single line (500/2500 type) telephone, set the mode used to answer a camped-on trunk call. For ESL sets, enable this option (1) to allow the user to dial Service Code for Voice Mail Conversation Record.	0 = Hookflash (Hooking) 1 = Hookflash + Service Code 654 (default = 0)		✓	
20-03-02	System Options for Single Line Telephones – Ignore Received DP Dial on DTMF SLT Port	Define whether the system should receive dial pulse and DTMF signals (0) or ignore dial pulse and only accept DTMF signals (1).	0 = Do not ignore (No) 1 = Ignore (Yes) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-03-03	<b>System Options for Single Line Telephones – SLT DTMF Dial to Trunk Lines</b>	Set the SLT phones to (0). Collect all digits before sending or (1), send out immediately after receiving. When using a third-party external paging device, set this option to 1. In addition, set Program 20-03-04 to 1.	0 = Receive all dialed data, before sending (All) 1 = Direct through out (Direct) (default = 0)		✓	
20-03-04	<b>System Options for Single Line Telephones – Dial Sending Start Time for SLT or ARS</b>	Set the time before the first digit is sent out. When using a third-party external paging device, set this option to 1. In addition, set Program 20-03-03 to 1.	0~64800 (seconds) (default = 3)		✓	
20-03-05	<b>System Options for Single Line Telephones – SLT Operation Mode</b>	Define the Operation Mode for SLT terminals.	0 = Normal Mode 1 = Extended Mode1 2 = Extended Mode2 (default = 0)		✓	
20-03-06	<b>System Options for Single Line Telephones – Headset Ringing Start Time (for SLT)</b>	Define the headset ringing start time. After this time expires from the time when a single line telephone is off-hook, the system sets the single line telephone to headset ringing mode.	0~64800 seconds (default = 5)		✓	
20-03-07	<b>System Options for Single Line Telephones – Trunk Call Dial Forced Sending Start Time (Forced Dial)</b>	Define the Trunk Call Dial Forced Sending Start Time.	0~64800 seconds (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a unique Class of Service for Dual OPX telephones only when using Continued Dialing.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-15-01	<b>Ring Cycle Setup – Normal Incoming Call on Trunk</b>	Define the ringing cycle (1~13) for normal incoming trunk calls (DIL, ring group, etc.).	Ringing Cycle = 1~13 (default = 2)		✓	
20-15-03	<b>Ring Cycle Setup – Incoming Internal Call</b>	Define the ringing cycle (1~13) for ICM calls.	Ringing Cycle = 1~13 (default = 12)		✓	
20-15-05	<b>Ring Cycle Setup – DID/DDI</b>	Define the ringing cycle (1~13) for DID calls.	Ringing Cycle = 1~13 (default = 8)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Use Items 11~32 to set the criteria for dial tone detection for outgoing ARS calls.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1~5 = 0			✓
80-03-02	<b>DTMF Tone Receiver Setup – Start delay time</b>	Define the start delay time for DTMF Tone Receiver.	0~255 (0.25ms~64ms) default: Type 1~5 = 0			✓



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	<b>DTMF Tone Receiver Setup – Min. detect level</b>	Define the minimum detection level for DTMF Tone Receiver.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-04	<b>DTMF Tone Receiver Setup – Max. detect level</b>	Define the maximum detection level for DTMF Tone Receiver.	0~15 detect level 0: 0dBm(0) to -15dBm(15) detect level 1: -5dBm(0) to -20dBm(15) detect level 2: -10dBm(0) to -25dBm(15) detect level 3: -15dBm(0) to -30dBm(15) detect level 4: -20dBm(0) to -35dBm(15) detect level 5: -25dBm(0) to -40dBm(15) detect level 6: -30dBm(0) to -45dBm(15) detect level 7: -35dBm(0) to -50dBm(15) detect level 8: -40dBm(0) to -55dBm(15) detect level 9: -45dBm(0) to -60dBm(15) detect level 10: -50dBm(0) to -65dBm(15) detect level 11: -55dBm(0) to -70dBm(15) detect level 12: -60dBm(0) to -75dBm(15) detect level 13: -65dBm(0) to -80dBm(15) detect level 14: -70dBm(0) to -85dBm(15) detect level 15: -75dBm(0) to -90dBm(15) default: Type 1~5 = 2 (-2dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-05	<b>DTMF Tone Receiver Setup – Forward twist level</b>	Define the forward twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1 = 5 (6dBm) Type 2 = 5 (6dBm) Type 3 = 5 (6dBm) Type 4 = 5 (6dBm) Type 5 = 5 (6dBm)			✓
80-03-06	<b>DTMF Tone Receiver Setup – Backward twist level</b>	Define the backwards twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1 = 0 (1dBm) Type 2 = 0 (1dBm) Type 3 = 0 (1dBm) Type 4 = 0 (1dBm) Type 5 = 0 (1dBm)			✓
80-03-07	<b>DTMF Tone Receiver Setup – ON detect time</b>	Define the On detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1 = 1 (30ms) Type 2 = 1 (30ms) Type 3 = 1 (30ms) Type 4 = 1 (30ms) Type 5 = 1 (30ms)			✓
80-03-08	<b>DTMF Tone Receiver Setup – OFF detect time</b>	Define the Off detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1 = 1 (30ms) Type 2 = 1 (30ms) Type 3 = 1 (30ms) Type 4 = 1 (30ms) Type 5 = 1 (30ms)			✓
80-04-01	<b>Call Progress Tone Detector Setup – Detection Level</b>	If required, modify the criteria for dial tone detection and call progress tone detection for the DTMF tones received at a single line telephone.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1 (DT) – 0 (-25dBm) Type 2 (BT) – 0 (-25dBm) Type 3 (RBT) – 0 (-25dBm) Type 4, Type 5 – 0		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-04	Call Progress Tone Detector Setup – No tone time	Set No Tone Time.	0~255 (30+30-7680ms) The formula is 30+30N. When set to N=1, it means 30+30*1=60 When set to N=255, it means 30+30*255=7680 (0 =not detect) default: Type 1 (DT) – 132 (3990ms) Type 2 (BT) – 132 (3990ms) Type 3 (RBT) – 132 (3990ms) Type 4, Type 5 – 0			✓
82-11-01	LCA Initial Setup – Bounce Protect Time	Specify a time for detection of a valid off-hook indication that is long enough to prevent an unintentional bounce of the receiver from being detected as a new off-hook indication from a Single Line Telephone.	0 = No Setting 1~15 = 100ms~1.5sec (default = 3)			✓
82-11-02	LCA Initial Setup – HookFlash Start Time	Specify the minimum hookflash time from a Single Line Telephone or analog Voice Mail system before it is detected as the beginning of a valid hookflash.	0 = 40ms 1~15 = 90ms~790ms (default = 5 [290ms])			✓
82-11-03	LCA Initial Setup – HookFlash End Time	Specify the maximum hookflash duration from a Single Line Telephone to receive a second dial tone.	0 = HST+0ms 1~15 = HST+100ms~HST+1500ms (HST = Hookflash Start Time) (default = 7)			✓

## Operation

Refer to the individual features listed in the Related Features section above in this feature.

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## *SLT Adapter*

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### Description

The SLT (Single Line Telephone) Adapter allows a port of a CD-8DLCA, PZ-8DLCB, CD-16DLCA or CD-LTA to support a single line telephone. A single line telephone can be connected to the DLC port using the SLT Adapter and 2-wire cable. 64 SLTII(1)-U( ) ADP Single Line Telephone Adapters can be installed in the UNIVERGE SV8100 system.

### Conditions

- A maximum of 64 SLTII(1)-U( ) ADPs can be used in the UNIVERGE SV8100 system.
- Dial Pulse and Dual-Tone Multifrequency Single Line Telephones are supported.
- The SLTII(1)-U( ) ADP does not support voice mail.
- Message Waiting LED is not supported.
- A single line telephone connected to an SLTII(1)-U( ) ADP cannot perform a Trunk-to-Trunk Transfer or support a 1-terminal to 2-outside party conference call.

### Default Setting

None

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### System Availability

#### Terminals

Single Line Telephones

#### Required Component(s)

SLTII(1)-U( ) ADP

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### Related Features

#### Ancillary Device Connection


## Cordless Telephone Connection

### Single Line Telephones, Analog 500/2500 Sets

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 The items highlighted in gray are read only and cannot be changed.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	ETU Setup (DLCA PKG Setup) – Terminal Type (B1)	The system automatically assigns terminal type 2 for the port which has an SLT Adapter installed.	0 = Not set 1 = Multiline Terminal 2 = SLT Adapter 3 = Bluetooth Cordless Handset 6 = PGD (Paging) 7 = PGD (Tone Ringer) 8 = PGD (Doorbox) 9 = PGD (ACI) 10 = DSS Console 11 = -- Not Used -- (default = 0)		✓	
10-03-02	ETU Setup (DLCA PKG Setup) – Logical Port Number (B1)	Confirm the Basic Configuration data for logical port number (B1).	0 = Not set 1 = Multiline Terminal (1~256) 2 = SLT Adapter (1~256) 6 = PGD(2)-U10 ADP (Paging) (1~8) 7 = PGD(2)-U10 ADP (for Tone Ringer) (1~8) 8 = PGD(2)-U10 ADP (for Door Box) (1~8) 9 = PGD(2)-U10 ADP (for ACI) (1~96) 10 = DSS (1~32) 11 = -- Not Used -- (default = 0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-02-01	<b>Extension Numbering</b>	Assign extension numbers to extension ports.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513		✓	
20-07-01	<b>Class of Service Options (Administrator Level) – Manual Night Service Enabled</b>	Turn Off or On an extension user ability to manually Switch the Night Mode (Service Code 718). This option must be enabled for an extension to display the Night indication.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-02	<b>Class of Service Options (Administrator Level) – Changing the Music on Hold Tone</b>	Turn Off or On an extension user ability to change the Music on Hold tone.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-03	<b>Class of Service Options (Administrator Level) – Time Setting</b>	Turn Off or On an extension user ability to set the Time via Service Code 728.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-07-04	<b>Class of Service Options (Administrator Level) – Storing Speed Dialing Entries</b>	Turn Off or On an extension to store System or Group Speed Dialing numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-07-05	<b>Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On for an extension user ability to program the Appearance function keys using Service Code 752.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-12	<b>Class of Service Options (Administrator Level) – Trunk Port Disable</b>	Turn Off or On an extension user ability to use the Trunk Port Disable feature.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, erase or listen to VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Define if the Accumulated Extension Data is included in the SMDR printout for each COS.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Define if the Department Group (STG) Data is included in the SMDR printout for each COS.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Define if the Accumulated Account Code Data is included in the SMDR printout for each COS.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-23	<b>Class of Service Options (Administrator Level) – CO Message Waiting Indication Callback Number Programming</b>	Enable/Disable an extension user ability to receive CO Message Waiting Indication.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-24	<b>Class of Service Options (Administrator Level) – Set/Cancel Private Call Refuse</b>	Enable/Disable an extension user ability to set or cancel Private Call Refuse.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-07-25	<b>Class of Service Options (Administrator Level) – Set/Cancel Caller ID Refuse</b>	Enable/Disable an extension user ability to set or cancel Caller ID Refuse.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-07-26	<b>Class of Service Options (Administrator Level) – Dial-In Mode Switch</b>	Enable/Disable an extension user ability to set or cancel dial-in mode switch.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-07-27	<b>Class of Service Options (Administrator Level) – Do-Not-Call Administrator</b>	Enable/Disable an extension user ability to set or cancel do not call administrator.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-08-01	<b>Class of Service Options (Outgoing Call Service) – Intercom Calls</b>	Turn Off or On Intercom calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-02	<b>Class of Service Options (Outgoing Call Service) – Trunk Outgoing Calls</b>	Turn Off or On outgoing trunk calling for the extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-03	<b>Class of Service Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-04	<b>Class of Service Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-05	<b>Class of Service Options (Outgoing Call Service) – Dial Number Preview (Preset Dial)</b>	Turn Off or On an extension user ability to use Dial Number Preview.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-06	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Override</b>	Turn Off or On Toll Restricting Override (Service Code 663).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-07	<b>Class of Service Options (Outgoing Call Service) – Repeat Redial</b>	Turn Off or On an extension ability to use Repeat Redial.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-08	<b>Class of Service Options (Outgoing Call Service) – Toll Restriction Dial Block</b>	Turn Off or On an extension user ability to use Dial Block.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Ringdown Extension for extensions with this COS.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-10	<b>Class of Service Options (Outgoing Call Service) – Signal/Voice Call</b>	Turn Off or On allowing an extension to force Handsfree Answerback or Forced Intercom Ringing for outgoing Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-11	<b>Class of Service Options (Outgoing Call Service) – Protect for the Call Mode Switching from Caller</b>	When an extension is set to ring mode for ICM calls, enable this option to prevent callers from changing the call to voice announce mode.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-12	<b>Class of Service Options (Outgoing Call Service) – Department Group Step Calling</b>	Turn Off or On an extension user ability to use Department Group Step Calling.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators are to be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-14	<b>Class of Service Options (Outgoing Call Service) – Call Address Information</b>	Enable/Disable Call Address Information for each COS.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-08-15	<b>Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID</b>	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-16	<b>Class of Service Options (Outgoing Call Service) – Display E911 Dialed Extension Name and Number</b>	Turn Off or On an extension ability to display the name and number of the extension that dialed 911.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-08-17	<b>Class of Service Options (Outgoing Call Service) – ARS Override of Trunk Access Map</b>	Turn Off or On an extension user ability to override the trunk access map programming for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-19	<b>Class of Service Options (Outgoing Call Service) – Hotline for SPK</b>	Turn Off or On an extension user ability to activate hotline or ringdown when pressing the Speaker key.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-20	<b>Class of Service Options (Outgoing Call Service) – Hot Key Pad</b>	Turn Off or On an extension user ability to make a call by dialing the number without going off hook.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-08-21	<b>Class of Service Options (Outgoing Call Service) – Automatic Trunk Seizing by Pressing Speaker Key</b>	Enable/Disable an extension user ability to automatically access Trunk Route when going off hook via the Speaker key.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-08-22	<b>Class of Service Options (Outgoing Call Service) – Voice Over to busy Virtual Extension</b>	Enable/Disable an extension user ability to make Voice Over to Busy Virtual Extension.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-03	<b>Class of Service Options (Incoming Call Service) – Sub Address Identification</b>	Define whether an extension displays the Caller Sub-Address.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-04	<b>Class of Service Options (Incoming Call Service) – Notification for Incoming Call List Existence</b>	Determine whether or not the CHECK LIST message is displayed to indicate a missed call.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-05	<b>Class of Service Options (Incoming Call Service) – Signal/Voice Call</b>	Turn Off or On an extension user ability to enable Handsfree Answerback or Forced Intercom Ringing for their incoming Intercom calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-06	<b>Class of Service Options (Incoming Call Service) – Incoming Time Display</b>	If this option is set to 1, the Incoming Call Time is displayed on the multiline terminal LCD while the telephone is ringing.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-08	<b>Class of Service Options (Incoming Call Service) – Calling Party Information</b>	Turn Off or On and extension ability to display calling party information on CCIS calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-01	<b>Class of Service Options (Answer Service) – Group Call Pickup (Within Group)</b>	Turn Off or On Group Call Pickup for calls ringing an extension Pickup Group as well as ring group calls (Service Code *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-02	<b>Class of Service Options (Answer Service) – Group Call Pickup (Another Group)</b>	Turn Off or On Group Call Pickup for calls ringing outside a group (Service Code 769).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-03	<b>Class of Service Options (Answer Service) – Group Call Pickup for Specific Group</b>	Turn Off or On Group Call Pickup for a specific group using service code 768.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-04	<b>Class of Service Options (Answer Service) – Telephone Call Pickup</b>	Turn Off or On an extension ability to pick up a call ringing into a Pickup Group (Service Codes *#).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-05	<b>Class of Service Options (Answer Service) – Directed Call Pickup for Own Group</b>	Turn Off or On Directed Call Pickup for calls ringing an extension Pickup Group (Service Code 756).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-06	<b>Class of Service Options (Answer Service) – Meet-Me Conference and Paging</b>	Turn Off or On an extension user ability to use Meet-Me Conference and Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-07	<b>Class of Service Options (Answer Service) – Automatic Off-Hook Answer</b>	Turn Off or On an extension user ability to use Universal Auto Answer (no service code required).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension simply by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-10-09	<b>Class of Service Options (Answer Service) – Call Pickup Callback</b>	Turn Off or On an extension user ability to use Call Pickup to Pick up Callback calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-10-10	<b>Class of Service Options (Answer Service) – Answer Preset</b>	Enable/Disable Answer Preset for each COS.	0 = Disable 1 = Enable (default = 0 for COS 1~15)		✓	
20-11-01	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-02	<b>Class of Service Options (Hold/ Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-03	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-04	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-05	<b>Class of Service Options (Hold/ Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-06	<b>Class of Service Options (Hold/ Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-07	<b>Class of Service Options (Hold/ Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an extension incoming Transfer pre-answer display.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-09	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Initiate</b>	Turn Off or On an extension user ability to initiate a Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-10	<b>Class of Service Options (Hold/Transfer Service) – Group Hold Answer</b>	Turn Off or On an extension user ability to pick up a call on Group Hold.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Turn Off or On setting up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-13	<b>Class of Service Options (Hold/Transfer Service) – Operator Transfer After Hold Callback</b>	Turn Off or On an extension user ability to have a call which recalls from hold transfer to the operator.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is impossible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to or erase the Personal Greeting Message.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-16	<b>Class of Service Options (Hold/Transfer Service) – Call Redirect</b>	Turn Off or On an extension user ability to transfer a call to a predefined destination (such as an operator, voice mail, or another extension) without answering the call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-17	<b>Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)</b>	Turn Off or On an extension user ability in a Department Group to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	No Recall set to 1 does not stop transferred calls from recalling from a virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine whether an extension Class of Service should allow either normal or extended Park.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension ability to receive Callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem/conference call automatically when they hang up.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-22	<b>Class of Service Options (Hold/Transfer Service) – Restricted Unsupervised Conference</b>	Allow/Deny an extension user ability to initiate an unsupervised conference.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-23	<b>Class of Service Options (Hold/Transfer Service) – CAR/VE Call Forward Set/Cancel</b>	Turn Off or On an extension user ability to set or cancel Call Forwarding for a Virtual Extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-24	<b>Class of Service Options (Hold/Transfer Service) – Trunk Park Hold Mode</b>	Set the hold type when a trunk call is put on hold by an extension.	0 = Non Exclusive Hold (Off) 1 = Exclusive Hold (On) (default = 1 for COS 1~15)		✓	
20-11-25	<b>Class of Service Options (Hold/Transfer Service) – Transfer Park Call</b>	Turn Off or On an extension user ability to transfer a parked call.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-12-02	<b>Class of Service Options (Charging Cost Service) – Advice of Charge</b>	ISDN-AOC Turn Off or On a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-12-03	<b>Class of Service Options (Charging Cost Service) – Cost Display (TTU)</b>	ISDN billing information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn Off or On an extension user ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension user ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On an extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-09	<b>Class of Service Options (Supplementary Service) – Privacy Release</b>	Turn Off or On an extension user ability to initiate a Voice Call Conference.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable Barge-In Speech or Monitor Mode at the initiating extension (i.e., Barge-In initiator).	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	
20-13-11	<b>Class of Service Options (Supplementary Service) – Room Monitor, Initiating Extension</b>	Turn Off or On an extension user ability to Room Monitor other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension user ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on an extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-14	<b>Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)</b>	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On Barge-In at the receiving extension (i.e., Barge-In receive).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In (Intrusion) Tone. If disabled, this also turns off the Barge-In display at the called extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-18	<b>Class of Service Options (Supplementary Service) – Programmable Function Key Programming (General Level)</b>	Turn Off or On an extension user ability to program General function keys using Service Code 751 (by default). (Refer to Program 20-07-10 for Service Code 752.)	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-19	<b>Class of Service Options (Supplementary Service) – Selectable Display Messaging (Text Messaging)</b>	Turn Off or On an extension user ability to use Selectable Display Messaging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-20	<b>Class of Service Options (Supplementary Service) – Account Code/Toll Restriction Operator Alert (Restricted Operation Transfer)</b>	Turn Off or On operator alert when an extension user improperly enters an Account Code or violates Toll Restriction.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program its name.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-22	<b>Class of Service Options (Supplementary Service) – Busy Status Display (Called Party Status)</b>	Turn Off or On the ability to display the detailed state of the called party.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to it (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-24	<b>Class of Service Options (Supplementary Service) – Privacy Release by Pressing Line Key</b>	Turn Off or On an extension user ability to press a line key to barge into an outside call. Barge-In must be enabled if this option is used.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-26	<b>Class of Service Options (Supplementary Service) – Group Listen</b>	Turn Off or On an extension user ability to use Group Listen.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, a busy extension can be called, while someone is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be set to off for this option to work.	1 = On 0 = Off (default = 1 for COS 01~15)		✓	
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On an extension user ability to change an extension COS via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-30	<b>Class of Service Options (Supplementary Service) – Background Music</b>	Allow/Deny an extension user ability to turn Background Music on and off.	0 = Deny 1 = Allow (default = 1 for COS 1~15)		✓	
20-13-31	<b>Class of Service Options (Supplementary Service) – Connected Line Identification (COLP)</b>	Define the supplementary feature availability for each extension COS.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow/Deny an extension user from having multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-33	<b>Class of Service Options (Supplementary Service) – ACD Supervisor’s Position Enhancement</b>	Set this option to on for the operator to use service codes in Program 11-13-10 through Program 11-13-13.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp-On</b>	Turn Off or On extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn Off or On a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-38	<b>Class of Service Options (Supplementary Service) – Headset Ringing for SLT</b>	Turn Off or On an extension user ability to use Headset ringing.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-39	<b>Class of Service Options (Supplementary Service) – ACD Queue Status Display</b>	Turn Off or On the ACD Queue Status Display for an extension COS. Any extension with this option enabled also hears the queue alarm.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-40	<b>Class of Service Options (Supplementary Service) – Do Not Disturb</b>	Turn Off or On an extension user ability to set or cancel Do Not Disturb.	0 = Disable 1 = Enable (default = 1 for COS 1~15)		✓	
20-13-41	<b>Class of Service Options (Supplementary Service) – Voice Mail Message Indication on DSS</b>	Turn Off or On the Voice Mail Message Indication for an extension on a DSS console.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension user ability to use Extension Data Swap.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-44	<b>Class of Service Options (Supplementary Service) – Live Monitor Enabling</b>	Turn Off or On an extension user ability to use Live Monitor.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-45	<b>Class of Service Options (Supplementary Service) – MIC Key Mode While Call Monitoring</b>	Set per class of service, when in Call Monitoring Mode determines if the monitored parties receives the barge in alert tone when Coaching Mode is enabled.	0 = Enable 1 = Disable (default = 1 for COS 1~15)		✓	
20-13-47	<b>Class of Service Options (Supplementary Service) – Station Number Display</b>	Determine if a station Number is Displayed (1) or Not Displayed (0) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-48	<b>Class of Service Options (Supplementary Service) – Station Name Display</b>	Determine if a station Name is Displayed (1) or Not Displayed (0) in the LCD when the phone is idle.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-49	<b>Class of Service Options (Supplementary Service) – BLF Indication on CO Incoming State</b>	Determine if a BLF of the station is On when a Normal CO call is ringing the phone.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-50	<b>Class of Service Options (Supplementary Service) – AIC Agent Display Which Call is from</b>	Determine if the station logged in via AIC codes shows the queue where the call originates.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-51	<b>Class of Service Options (Supplementary Service) – Number and Name Appear in the Directory</b>	Determine if an extension name and number are Listed (1) or Unlisted (0) in the directory.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-01	<b>Class of Service Options for DISA/E&amp;M – First Digit Absorption (Delete First Digit Dialed)</b>	For Tie Lines, Enable/Disable the ability to ignore the first incoming digit to make the tie trunk compatible with 3- and 4-digit Tie Line service. This option does not apply to DISA.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-02	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Routing/ARS Access</b>	Enable/Disable a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-03	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Access</b>	Enable/Disable a DISA or tie trunk caller ability to access trunk groups for outside calls (Service Code 704).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-04	<b>Class of Service Options for DISA/E&amp;M – Outgoing System Speed Dial</b>	Enable/Disable a DISA or tie trunk caller ability to use System Speed Dialing.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-14-05	<b>Class of Service Options for DISA/E&amp;M – Operator Calling</b>	Enable/Disable a DISA or tie trunk caller ability to dial 0 for the telephone system operator.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-06	<b>Class of Service Options for DISA/E&amp;M – Internal Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use the telephone system Internal Paging.	0 =Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-07	<b>Class of Service Options for DISA/E&amp;M – External Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use the telephone system External Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-08	<b>Class of Service Options for DISA/E&amp;M – Direct Trunk Access</b>	Enable/Disable a DISA or tie trunk caller ability to use Direct Trunk Access (Service Code 715).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-09	<b>Class of Service Options for DISA/E&amp;M – Forced Trunk Disconnect &lt;Not for ISDN T-point&gt;</b>	Enable/Disable a tie trunk caller ability to use Forced Trunk Disconnect (Service Code *26). This option is not available to DISA callers.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-10	<b>Class of Service Options for DISA/E&amp;M – Call Forward Setting by Remote via DISA</b>	Enable/Disable a DISA caller ability to use the Call Forward service codes (Program 11-11-01 through Program 11-11-05).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable/Disable a DISA or tie trunk user ability to use Barge-In.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-12	<b>Class of Service Options for DISA/E&amp;M – Retrieve Park Hold</b>	Turn Off or On the ability for a DISA caller to retrieve parked or held calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	

## Operation

### To originate internal calls:

1. Lift the handset, and wait for internal dial tone.
2. Dial the applicable internal number.

3. Talk when called party answers.

**To originate outside calls:**

1. Lift the handset, and wait for dial tone.
2. Dial Trunk Access Code (default: 9).
3. Dial the number of outside party.
4. Talk when the called party answers.

**To answer outside or internal calls:**

Lift the handset, and talk.

**To transfer an outside call or internal call with a call in progress:**

1. Press the hookswitch momentarily, and wait for second dial tone.
2. Dial the station number where call is to be transferred.
3. Hang up.

**To perform a Trunk-to-Trunk Transfer with an outside call in progress:**

1. Provide hookflash. The call is placed on Exclusive Hold. Receive internal dial tone.
2. Dial the Trunk Access Code for the applicable trunk.
3. Dial the applicable number.
4. Hang up.

**To initiate a conference with a call in progress:**

1. Provide hookflash and dial #1.
2. Dial the applicable number and wait for the party to answer.
3. Provide hookflash and repeat the second step to add parties to the conference.

- OR -

1. Provide hookflash twice to set up the conference.

**To access the feature:**

1. Lift the handset, and wait for internal dial tone.
2. Dial the applicable Feature Access Code.

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# *SMB8000 Communications Analyst*

## Enhancements

With **Version 3.1 (build # 5278)**, SMB8000 Communications Analyst is supported on Windows 7 32-bit platforms.

With **Version 4.0 (build #5312)**, SMB8000 SMB8000 Communications Analyst is supported on Windows 8 and Windows 2012 Server operating systems.

For E911 Security Notification

With **Version 2.0**, SMB8000 E911 Security Notification (ESN) Application Suite is now supported on Windows 7 Professional/Ultimate, Windows 8 Professional and Windows Server 2008 editions.

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## Description

SMB8000 Communications Analyst is an easy to use, graphically oriented software package that allows you to monitor and analyze telephone calls, understand telephone usage, and cut costs. Incoming and outgoing calls are tracked accurately along with the date and time of the call. When the incoming telephone call must be tracked with name and/or telephone numbers, SMB8000 Communications Analyst requires Caller ID service from the local telephone company.

SMB8000 Communications Analyst increases productivity, facilitates billing, and helps detect toll fraud and telephone abuse. It also has powerful tabular (text) and graphic report generating ability. Reports include extension/line summaries, date, time, and department summaries, longest/most expensive calls, and most frequently called numbers. These reports can be used to analyze your telephone as a critical business communication tool, improve its business effectiveness, and reduce your telephone costs. A report can be generated showing calling patterns by volume or duration on a color-coded United States map. This can help Customer Support, Sales Order, or Telemarketing business become more focused, more productive, and more cost effective.

### **SMB8000 Communications Analyst keeps track of:**

- The date and time calls were made or received
- The duration of each call
- Which extension made or received the call
- The CID/ANI, DNIS of the caller
- The trunk or line numbers that handled the call
- Account codes and authorization codes used for the call

- CCIS calls are now logged with extension number and trunks used for CCIS. These trunks can be placed in a different line group in order to track usage across a CCIS link using the Traffic Analysis add-on feature.

### Highlights of SMB8000 Communications Analyst:

- Network based.
- CallAlert! This module can generate alarms by email, pager screen, screen pop-up, or .wav file. when it detects user defined patterns in the call records.
- Automatic report and data archival scheduling, to include automatic emailing of reports to predetermined destinations.
- Real-time inbound/outbound call monitoring.
- Changes can now be made to the call record such as Account Code Entry, DNIS, and comments field.
- Call costing and user configurable rate plans
- Time billing

### Included Reports:

- Date and time summaries
- Most frequently called numbers
- Department summaries
- Extension and line summaries
- Longest and most expensive calls
- And many more

**Table 2-79 Communications Analyst Support**

Product	IPK	IPK II	SV8100	SV8300	NEAX 2000 IPS
Communications Analyst	X	X	X	X	X
CallAnalyst Enterprise Server	X	X	–	–	–
Elite CallAnalyst	X	X	–	–	–

### Conditions

- On the SV8100, previous versions of Communications Analyst (Elite CallAnalyst/ CallAnalyst Enterprise Server) are **not** supported.



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- The following software items are installed on the PC:
    - ❑ Multi-Site Process Manager (MSPM) to collect call records from the system.
    - ❑ SMB8000 Communications Analyst to allow reports and other Communications Analyst features.
    - ❑ SQL Express 2005 database.
    - ❑ Lite package is not available for SMB8000 Communications Analyst.
    - ❑ Scheduler (default installed) to allow reports and database archival on a regularly scheduled basis.
    - ❑ SMB8000 Communications Analyst Installation Guide (default installed, PDF format).
  - The following optional modules of SMB8000 Communications Analyst Software require license upgrade:
    - ❑ Network Client  
Network clients must then call NEC for additional licensing. The license is issued on the Communications Analyst Server installation. All license information is maintained on the UNIVERGE SV8100 CD-CP00-US.
    - ❑ Traffic Analysis  
This tool allows users to view and analyze trunk capacity usage by date, time, and call direction.
    - ❑ Communications Analyst WebReports  
This module allows authorized users access to many of the available reports over the internet using a web browser.
    - ❑ Monitors for emergency (911) calls made by the SV8100 and provides detailed automatic location information to monitoring agents (refer to [SMB8000 E911 Security Notification on page 2-1379](#)).
  - Refer to the SMB8000 Communications Analyst Installation Guide installed with the software for more detailed information.
  - SMDR does not print Intercom calls (**Version 6.00 or lower**).
  - SMDR supports printing Intercom calls (**Version 7.00 or higher**).
  - The SMDR call buffer stores 320 calls (**Version 7.00 or lower**). The buffer stores calls when the SMDR device is unavailable. When the buffer fills, no new records are recorded.
  - The SMDR call buffer stores 4000 calls (**Version 8.00 or higher** and **V8000 Enhancement License** required). The buffer stores calls when the SMDR device is unavailable. When the buffer fills, no new records are collected.
  - The UNIVERGE SV8100 SMDR does not provide data to support the tracking of tandem calls or conference calls. Tandem calls appear as one call with extension number shown as the trunk it was answered on, and out with the extension number as the trunk used to make the call. Conference calls show only the last party to join the conference and the party that answered the call.

- If the Collate option is enabled in the Communications Analyst Multi-site Configuration, all legs of a call are combined into one call record. Also, the Communications Analyst will not release the call from the database until the trunk that this call was placed on is used again.

## Default Setting

None

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## System Availability

### Terminals

All Terminals:

- Incoming CO/PBX Call
- Outgoing CO/PBX Call
- Conference CO/PBX Call
- Transferred CO/PBX Call

### Required Component(s)

LAN connection for SMDR over Ethernet and connection to the SV8100 license server.

### Minimum PC Requirements:

For a detailed list of PC Requirements and Operating Systems supported, refer to the SMB Communication Analyst Installation and Configuration Guide for the version being installed.

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## Related Features

**Account Code – Forced/Verified/Unverified**

**Account Code Entry**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Clock/Calendar Display**

**E911 Compatibility****ISDN Compatibility****Multiple Trunk Types****Station Message Detail Recording****T1 Trunking (with ANI/DNIS Compatibility)****Traffic Reports****Trunk Groups**



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## Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-06	<b>Basic Trunk Data Setup – SMDR Printout</b>	Have the system Include (1) or Exclude (0) the trunk you are programming from the SMDR printout. Refer to Program 35-01 and 35-02 for SMDR printout options.	0 = No Print Out 1 = Prints Out (default = 0)	✓		
15-01-03	<b>Basic Extension Data Setup – SMDR Printout</b>	For each extension, enter 1 if an extension call should appear on the SMDR report. Enter 0 for the extension if the calls should not appear.	0 = Do not print on SMDR report 1 = Include on SMDR report (default = 1)	✓		
35-01-01	<b>SMDR Options – Output Port Type</b>	Specify the type of connection used for SMDR. The baud rate for the COM port should be set in Program 15-02-19.	0 = None 3 = LAN 4 = CTA/CTU (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-01-02	<b>SMDR Options – Output Destination Number</b>	Specify the SMDR printer output extension (CTA extension number).	Up to eight digits (default not assigned)		✓	
35-01-03	<b>SMDR Options – Header Language</b>	Specify the language used to print the SMDR header.	0 = English 1 = German 2 = French 3 = Italian 4 = Spanish (default = 0)		✓	
35-01-04	<b>SMDR Options – Omit Digits</b>	The number of digits entered for this option do not print on the SMDR Report (0~24). For example, if the entry is 10, the last 10 digits a user dials do not appear on the SMDR report.	0~24 (0 = Not applied) (default = 0)	✓		
35-01-05	<b>SMDR Options – Minimum Digits</b>	Outgoing calls must have at least this number of digits for inclusion in the SMDR report (0~24).	0~24 (0 = Not applied) (default = 0)	✓		
35-01-06	<b>SMDR Options – Minimum Call Duration</b>	A call must last at least this time to be included in the SMDR report.	0~65535 (seconds) (0 = All) (default = 0)	✓		
35-01-07	<b>SMDR Options – Minimum Ring Time (For Incoming Calls)</b>	A call must ring for at least this time to be included in the SMDR report.	0~65535 (seconds) (0 = All) (default = 0)	✓		
35-01-08	<b>SMDR Options – Format Selection</b>	Set the SMDR (Station Message Detail Recording) format for each of the eight SMDR ports.	0 = NA Type (North America) 1 = G/J Type (Overseas/ Japan) (default = 0)		✓	
35-02-01	<b>SMDR Output Options – Toll Restricted Call</b>	Determine if SMDR can include or exclude calls blocked by Toll Restriction.	0 = Not Displayed 1 = Displayed (default = 1)	✓		
35-02-02	<b>SMDR Output Options – PBX Calls</b>	When the system is behind a PBX, SMDR can include all calls (1) or just calls dialed using the PBX trunk access code (0).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-03	<b>SMDR Output Options – Trunk Number or Name</b>	Select whether the system should display the trunk Name or Number on SMDR reports.  If this option is set to 0, Program 35-02-14 must be set to 0.	0 = Name 1 = Number (default = 1)		✓	
35-02-04	<b>SMDR Output Options – Summary (Daily)</b>	Set this option to 1 to have the SMDR report provide a daily summary (at midnight every night).	0 = Not Displayed 1 = Displayed (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-05	<b>SMDR Output Options – Summary (Weekly)</b>	Set this option to 1 to have the SMDR report provide a weekly summary (every Saturday at midnight).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-06	<b>SMDR Output Options – Summary (Monthly)</b>	Set this option to 1 to have the SMDR report provide a monthly summary (at midnight on the last day of the month).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-07	<b>SMDR Output Options – Toll Charge Cost</b>	Set this option to 1 to have the SMDR report include toll charges.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-08	<b>SMDR Output Options – Incoming Call</b>	Enable this option (1) to have the SMDR report include incoming calls. If you disable this option (0), incoming calls do not print.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-09	<b>SMDR Output Options – Extension Number or Name</b>	Set this option to 1 to have the SMDR report include extension numbers. Set this option to 0 to have the SMDR report include extension names.	0 = Name 1 = Number (default = 1)	✓		
35-02-10	<b>SMDR Output Options – All Lines Busy (ALB) Output</b>	Determine if the All Lines Busy (ALB) indication should be displayed.	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-11	<b>SMDR Output Options – Walking Toll Restriction Table Number</b>	Set the SMDR (Station Message Detail Recording) walking toll restriction table number output options for each of the eight SMDR ports.	0 = Not Output 1 = Output (default = 1)		✓	
35-02-12	<b>SMDR Output Options – DID Table Name Output</b>	Determine if the DID table name should be displayed for incoming DID calls.	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-13	<b>SMDR Output Options – CLI Output When DID to Trunk</b>	Determine if the Caller ID should be displayed when the incoming DID number is transferred to an outgoing trunk.	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-14	<b>SMDR Output Options – Date</b>	Determine if the date should be displayed on SMDR reports.  <i>This option must be set to 0 if the trunk name is set to be displayed in Program 35-02-03.</i>	0 = Not Displayed 1 = Displayed (default = 0)	✓		
35-02-15	<b>SMDR Output Options – CLI/DID Number Switching</b>	Determine whether the Caller ID number, or DID number should be displayed in the SMDR output.	0 = CLI (CLIP) 1 = DID Number 2 = Caller ID Name (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-16	<b>SMDR Output Options – Trunk Name or Received Dialed Number</b>	Determine how the SMDR should print incoming calls on ANI/DNIS or DID trunks. If set to 1, ANI/DNIS trunks can print DNIS digits. For DID trunks, if the received number is not defined in Program 22-11-01, a number is not printed. If set to 0 trunk names are printed instead (assigned in Program 14-01-01).	0 = Trunk Port Name 1 = Received Dialed Number 2 = Both (default = 0)		✓	
35-02-17	<b>SMDR Output Options – Print Account Code or Caller Name of Incoming Call</b>	Determine whether the Account Code or Caller ID name should print in the SMDR record. Program 35-01-08 must be set to 0 for this entry to be followed.	0 = ACC 1 = CNAME (default = 0)		✓	
35-02-18	<b>SMDR Output Options – Print Mode for Caller Name of Incoming Call</b>	Select whether to display up to 16 characters of the Caller Name on the same line as the call record (0) or if a line feed should be added and up to 24 characters of the Caller Name are displayed on the following line (1). If the line feed option is selected, the Caller Name is displayed on the next line as : NEXT Caller Name. This setting works regardless of the setting in Program 35-02-15.  <i>With this option set to 1, if your communications program (such as HyperTerminal) has the line wrap option enabled in the ASCII setup, an additional line break may appear above the Caller name line.</i>	0 = Normal 1 = Line Feed (default = 0)		✓	
35-03-01	<b>SMDR Port Assignment for Trunk Group</b>	Assign the SMDR port for each trunk group. This is the SMDR port to which the incoming call information should be sent.	Trunk Group: 1~100, SMDR Port: 1~8 (default = 1)	✓		
35-04-01	<b>SMDR Port Assignment for Department Groups</b>	Assign the SMDR port for each department group. This is the SMDR port where the outgoing call information should be sent.	Department Group: 01~64 SMDR Port: 1~8 (default = 1)		✓	

**LAN Connection:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-09	<b>CD-CP00-US Network Setup – IP Address</b>	When using an IP connection, set up the IPLA/IPLB IP address used to connect from the CommAnalyst PC to the system.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		
10-20-01	<b>LAN Setup for External Equipment – TC Port</b>	When using an IP connection, define the TCP port used for communicating to the CommAnalyst (External Device 5 = SMDR, Entries: 0~65535). This entry must match the entry made in the CDM setup with the CommAnalyst program.	0~65535 default: External Device 1 (CTI Server) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service ) = 0	✓		
10-20-03	<b>LAN Setup for External Equipment – Keep Alive Time</b>	Define the TCP port/address/etc.	1~255 (seconds) (default = 30 seconds)		✓	

For additional SMDR programming options, see [Station Message Detail Recording on page 2-1451](#).

**Programming Notes:**

- If the system is programmed to display the date (Program 35-02-14=1), the date is displayed regardless of the setting for display of trunk name (Program 35-02-03) and only the trunk number is printed.
- For example, if trunk port 049 has a trunk name of PRI Ch1, if Program 35-02-03 = 0 (name) and Program 35-02-14 = 1 (display date), then SMDR shows 8/19 049. However, if Program 35-02-14 = 0 (date not displayed), the SMDR shows PRI Ch1.

- For proper handling of DNIS calls, the name field (Program 22-11-03) must be the same as the received DNIS digits (Program 22-11-01 and Program 35-02-12 DID Table Name must be turned On). If this is not set, SMB8000 Communications Analyst cannot track transferred calls since the system displays the DNIS number when a call is received and displays the DNIS name for transferred calls. This setting has no impact on outgoing calls, which display the trunk name instead of the DNIS name.
- Caller ID name can be displayed in SMDR records. Program 35-02-17 must be set to 0 and Program 35-02-18 set to 1.

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## Operation

Refer to [Central Office Calls, Answering on page 2-263](#) and [Central Office Calls, Placing on page 2-275](#) features for detailed operations for placing or answering calls.



## SMB8000 E911 Security Notification

### Description

The SMB8000 E911 Security Notification (ESN) Application Suite, an easy-to-use yet powerful E911 notification solution. The E911 Security Notification solution offers robust features designed specifically for business users who want to make use of the Enhanced 911 call notification during emergencies.

 This application requires the latest full build of SMB8000 Communications Analyst to be installed as a prerequisite.

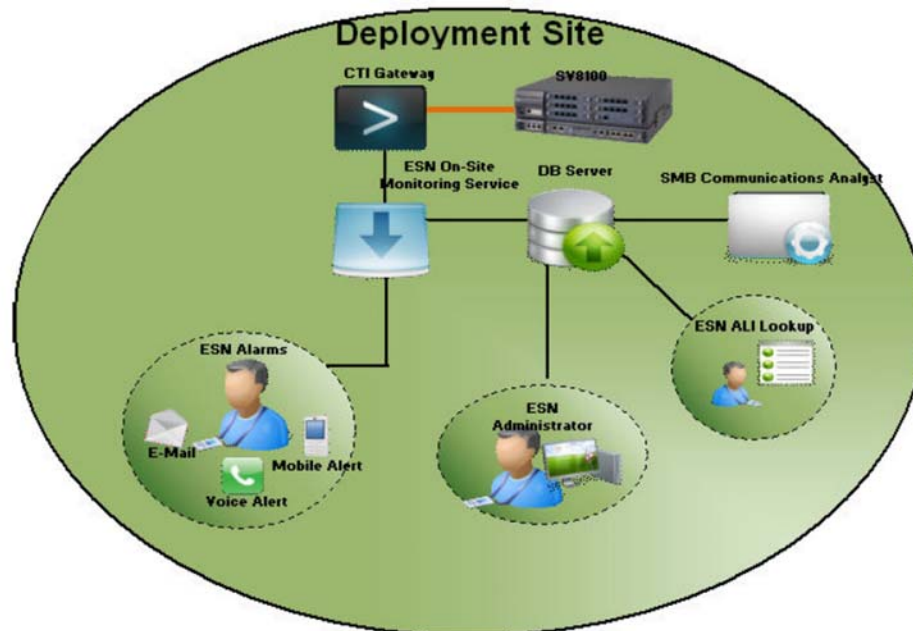


Figure 2-39 E911 Deployment Example



### Conditions

- ESN setup requires **SMB800 Communications Analyst build 5242 or higher** and **SMB patch1** to be installed prior to running the ESN installation.
- ESN Alarm and ESN ALI Lookup works with Adobe Acrobat Reader version 7.0 and above only.
- The EOMS Service needs to be restarted after SQL Server restarts, the PC restarts or whenever the Microsoft SQL Server service is started after the EOMS service enters a running state.
- Changes made in the Administrator Console requires restarting all the EOMS services to take effect.

- Propagating the changes made using the Administration Console to the ESN Alert clients will require the Admin.ini file to be shared for the clients to access them over a network.
- The Licence.lic file from the SMB8000 Communications Analyst needs to be made available to the ESN Administrator Console for the ESN related license.
- ESN Alarm clients installed on VM ware PC's can not listen to the audio alarms.
- Firewall/Antivirus rule exceptions need to be made for the services to communicate.

## Platform Requirements

Ensure the following hardware and software requirements are met before starting the E911 Security Notification solution installation.

-  *For a detailed list of PC Requirements and Operating Systems supported, refer to the E911 Security Notification (ESN) Installation, Setup & ESN Administrator Guide for the version being installed.*
-  *These recommendations are to be used as a minimum requirements guideline only. The actual requirements may vary based on the specific needs such as the call volume, number of remote locations etc.*

## ESN Solution

- Hardware:
  - Pentium 1.8 GHz core 2 duo or above
  - 4 GB RAM
  - 20 GB of free hard disk space
  - SVGA monitor 1024X 768 resolution
  - Network Interface card (NIC)
- Supported Operating Systems:
  - Windows Server 2003 with SP2
  - Windows XP Professional with SP3

## Client Side Requirements

- Hardware:
  - Pentium 4 class machine
  - At least 512 MB RAM
  - SVGA monitor 1024X 768 resolution
- Supported Operating Systems:
  - Windows Server 2003 with SP2
  - Windows XP Professional with SP3
  - Vista with SP1

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.

Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-20-01	<b>LAN Setup for External Equipment – TC Port</b>	When using an IP connection, define the TCP port used for communicating to the CommAnalyst (External Device 5 = SMDR, Entries: 0~65535). This entry must match the entry made in the CDM setup with the CommAnalyst program.	0~65535 default: External Device 1 (CTI Server) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service ) = 0	✓		
41-01-03	<b>System Options for ACD – ACD MIS Connection Ports</b>	Define what port is used for ACD MIS connection. Currently only LAN is supported.	0 = None 3 = LAN (CD-CP00-US) (default = 0)	✓		

Refer to the SMB8000 E911 Security Notification Application suite installation, setup and ESN administrator guide for detailed instructions.

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## *SMB8000 Conference Bridge*

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### **Description**

The CD-PVAA is a Conference Bridge that is used in the UNIVERGE SV8100. This ETU can be licensed to support a 8- or 16-port conference bridge. The SMB8000 Conference Bridge is configured using an Internet Browser. The Login page allows user name and password access to the web browser. Conferences can be setup to send email notification to each participant.

The Conference Bridge Application functionality includes:

#### **Preset Conference**

Enables users to start conferences without prior scheduling.

- The preset conference configuration is also called 'always on conference.
- There is no stipulated time for these conferences to occur.
- The Number of Preset conferences should be determined by the number of hardware resources (CNF ports) that will be used for the conference.
- These ports will be reserved at all times for preset conference.
- Preset conference password length may set from 1~5 digits.
- Password protection for each conference – this allows a user or group to have a personal conference by keeping the password confidential.

#### **Scheduled Conferences**

Create instant conference calls (one-time) for ad-hoc meetings and provide more flexibility allowing you to configure advanced conference functions.

- Password protection is provided for each conference. The organizer can assign a common password or utilize the applications randomly generated password.
- Email notification, when enabled, requires the organizer to enter the email address of each participant to be sent notification of a pending conference. This option is selectable when setting up new conferences.
- The SMB8000 Conference Bridge Application email configuration supports SMTP mail Server ONLY (exchange server not supported).
- Organizer Required: When enabled, the host/organizer is required to be logged into the conference before any other participant can enter. This option is selectable when setting up new conferences.

- One customized greeting can be recorded for the SMB8000 Conference Bridge Application.
- HTTP Interface for conference schedule management and conference blade administration. Remote conference programming with conference scheduler (via a Web User Interface).
- Programmable gain adjustments.
- Support for DTMF detection for manual setup options (Telephone User Interface) (volume up/down).
- Conference Mode: There are two types of conference mode:
  - Lecturer Mode – When the conference starts, all conference participants are placed in mute and remain muted for the duration of the conference. Only the participant, designated as the Lecturer, is not muted.
  - Discussion Mode – All participants can be heard when this mode is selected.

#### **Two Authentication Levels:**

- Admin Group - A member of the admin group may:
  - Create, View, Edit. Delete conferences for any user.
  - Edit the conference application settings and create new admin and user members.
  - View and modify the blade configuration options.
  - Download new firmware to the blade and reset the blade from the web interface.
- User Group - Restricted group. A member of the user group may create conferences only under their username and view conferences that are created by them.

#### **Phone XML Integration**

##### **Update Firmware via Web Interface**

**Export Conference Log Databases** – download and view conference Call flow, Web Interface, Conference and SDK Logs for Debugging.

##### **Import and Export Data:**

- Export conference database configuration.
- Import customized greeting (greeting formation CCITT, u-LAW, Sample size 8 bit, Sample Rate 8KHZ, Channel-Mono, Bit Rate 64Kbps).

**Reports** – detailed or summary conference call reports.

#### **XL Meeting Link**

With **Version 1.05 or higher** of the SMB8000 Conference Bridge, a link to XL Meeting is provided. XL Meeting is a third party vendor of audio, video, and web conferencing services.

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## Telephone Dial Pad Help utilizing DTMF digits

- Conference Organizer
  - Can make a call out and Invite a participant by pressing \*01# on the telephone dial pad.
  - Lock and Unlock the conference by pressing \*02# on the telephone dial pad.
  - Mute and Un-mute a participant by pressing \*03# on the telephone dial pad.
  - The conference host can selectively admit or reject participants from entering a conference by pressing \*04# on the telephone dial pad.
  - Can toggle Lecture and Discussion mode by pressing \*05# on the telephone dial pad.
  - Assign a lecture by pressing \*06# on the telephone dial pad.
  - Can set the option to continue the conference after the organizer has left the conference by pressing \*07# on the telephone dial pad.
  - A conference organizer End the conference by pressing \*08# on the telephone dial pad.
  - A conference organizer can Start Voting and Stop voting option by pressing \*11#(Start) and \*12#(Stop) on the telephone dial pad.
  - Extend the conference call time Conference by pressing \*13# on the telephone dial pad.
  - A conference organizer has access to set all DTMF access codes that conference participants support.
- Conference Participants
  - Conference participants can adjust the transmit volume level by pressing \*16# (increase volume) or \*17# (decrease volume) on the telephone dial pad.
  - Conference participants can adjust the receive volume level by pressing \*18# (increase volume) or \*19# (decrease volume) on the telephone dial pad.
  - Conference participants can toggle mute (on/off) by pressing \*15# on the telephone dial pad.
  - Conference participants can initiate dial pad help by pressing \*99# on the telephone dial pad.
  - Participate in voting by pressing:
    - \*20# (Vote Yes)
    - \*21# (Vote No)
    - \*22# (Vote Cant Say)

## Conditions

- SMB8000 Email notification does not support POP3 or Encryption (TLS/SSL).
- The SV8100 supports only one CD-PVAA with the SMB8000 Conference Bridge application.
- The SMB8000 Conference Bridge web interface supports Windows Internet Explorer 8 run on any Windows 7 operating system.
- The CD-PVAA is chassis specific. A UX5000 CD-PVAA cannot be used in a SV8100 chassis. Conversely a SV8100 CD-PVAA cannot be used in a UX5000 chassis
- License assignment in program 10-54-01 and 10-54-02 **must be done before the system will recognize the CD-PVAA Blade.**

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- The CD-PVAA blade with SMB8000 Conference Bridge application can be used with **Version 1.11 or higher** software on the UNIVERGE SV8100 system.
  - The support PC must be connected directly to the CD-PVAA SMB8000 Conference Bridge and not connected via a Hub or Router when performing any of the following functions:
    - Database Restoration
    - Application Upgrade
    - Application Package Upgrade
    - Service Package Upgrade
  - When the CD-PVAA blade is set for two, four-party conferences, ports 1~4 can be set to the same Master Hunt Group, and ports 5~8 can be set to a different Master Hunt Group using Program 11-07-01 (Department Group Pilot Numbers) and Program 16-02-01 (Department Group Assignment for Extensions). This allows two different Pilot Numbers for each conference.  
  
**- OR -**
  - If only one Pilot number is needed, put all eight ports in one hunt group using Program 16-02-01 (Department Group Assignment for Extensions). When the password is entered, the conference selected is the conference you enter.
  - The administrator must perform the Setting Procedures before the Conference Bridge can be used.
  - Each CD-PVAA blade reduces the number of stations by eight or 16 depending on license.
  - Each PVAA CNF 8 or 16 reduces the total number of station ports available in the SV8100 chassis by eight or 16 depending on the number of licensed ports.
  - The PVAA CNF blade uses Conference Ports (CNF) ports assigned in Program 10-03-01 Unit Configuration.
  - The PVAA CNF is a standalone Conference Bridge that cannot be linked with another CNF ETU to increase the number of conferences.
  - Conference ports should be placed in a Class of Service (COS) with no enabled alert tones.
  - In Preset conference, all participants have the same conference password. Default passwords are:
    - Conference 1 1111
    - Conference 2 2222
    - Conference 3 3333
    - Conference 4 4444



- A comparison between Preset and Scheduled mode is shown below:

Feature	Preset Conference	Scheduled Conference
Password	Per Conference	Per Participant
Number of Participants	Fixed, depending on CNF PVAA configuration.	Selected by conference organizer. From 1 to 16 participants (this number is also determined by the number of preset conferences).
Email Notification	N/A	Selected by organizer per conference.
Host Required	N/A	Selected by organizer per conference.
Conference scheduled by date and time	N/A	Selected by organizer per conference.
Assign unique password per conference	N/A	Selected by organizer per conference.

- For SV8100 systems with **Version 4000 or higher** system software and has been migrated from a UX5000, [Table 2-80 Migration Supported Blades](#) defines the application blades supported in current system chassis.

**Table 2-80 Migration Supported Blades**

Blade	Color	CHS1U-US Blue 19" Chassis	CHS2U B-US Blue 9.5" Base Chassis	CHS2U E Blue 9.5" Exp Chassis	IP3NA- 6KSU-A1 White 19" Chassis	IP3NA-3KSU- B1 White 9.5" Base Chassis	IP3WW-3KSU- E1 White 9.5" Exp Chassis
CD-RTB	Blue	S	S	S	N/S	N/S	N/S
CD-ETIA	Blue	S	S	S	N/S	N/S	N/S
CD-PVAA	Blue	S	S	S	N/S	N/S	N/S
IP3WW-RTU-B1	White	N/S	N/S	N/S	S	S	S
IP3WW-GSWU-B1	White	N/S	N/S	N/S	S	S	S
LU-PVA-CONF- PORT8-LIC	White	N/S	N/S	N/S	S	S	S

S = Supported

N/S = Not Supported

## Default Setting

None

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

- CD-PVAA
- AKS Conference Bridge Application (Compact Flash Media)

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## Related Features



None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	<p>Allocate the circuits on the CD-CP00-US that has 32 circuits initially for either DTMF receiving or dial tone detection. When the PS-BS10 is installed another 64 circuits are added. Extensions are used for DTMF receivers for single line telephones. Trunks are used as DTMF receivers for dial tone and busy tone detection for analog trunks.</p> <p>Assign at least one circuit for DTMF reception ( 0 or 1). Use the following as a guide when allocating DTMF receivers:</p> <ul style="list-style-type: none"> <li>○ In light traffic sites, allocate one DTMF receiver for every 10 devices that use them.</li> <li>○ In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.</li> </ul>	<p>0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available</p>	✓		
10-54-01	<b>License Configuration for Each Package – License Code</b>	<p>Assign licenses to the Conference Application on a per slot basis. For the slot the CD-PVAA blade is installed in, assign the number of licensed conference bridge ports. The license feature code is 6000.</p> <p> <i>License assignment in program 10-54-01 and 10-54-02 must be done before the system recognizes the CD-PVAA Blade.</i></p>	Refer to Program 10-50-01 in SV8100 Programming Manual.	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-54-02	License Configuration for Each Package – License Quantity	Assign the number of licenses to the Conference Application per slot. For the slot the CD-PVAA blade is installed in, assign the number of licensed conference bridge ports.  License assignment in program 10-54-01 and 10-54-02 must be done before the system recognizes the CD-PVAA Blade.	Refer to Program 10-50-01 in SV8100 Programming Manual.	✓		
10-55-01	Package Network Setup – IP Address	Define the IP Address for the CD-ETIA.  When the blade is deleted from the system using Program 90-05, the programming for the slot in 10-55 is set back to default.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.1.100)	✓		
10-55-03	Package Network Setup – Main/ Add-on	Use Main setting to distribute an IP Address to the blade.	0 = Main 1 = Add-on (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-55-04	Package Network Setup – Sub Net Mask	Define the subnet mask for the CD-ETIA.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
10-55-05	Package Network Setup – Default Gateway	Define the default gateway for the CD-ETIA.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
11-02-01	Extension Numbering	Assign extension numbers to extension ports. The telephone programming identity follows the port number – not the extension number.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign a Department Group pilot number for the CD-PVAA (eight digits max). The extensions are assigned to the group in Program 16-02-01.	Up to eight digits (default not assigned)	✓		
15-03-01	<b>Single Line Telephone Basic Data Setup – SLT Signaling Type</b>	For each SLT extension, this option must be set to 0.	0 = DP 1 = DTMF (default = 1)	✓		
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		
15-07-01	<b>Programmable Function Keys</b>	Program one Call Appearance (CAP) key on each SMB Conference Bridge extension.	(*08 + XXXX = CAP key where XXXX is the CAP orbit number 0001-9999) (Appearance Function Code) (Service Code 752 by default)	✓		
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Assign a name to the Extension (Department) Groups.	Maximum 12 characters (default = No Setting)		✓	
16-01-02	<b>Department Group Basic Data Setup – Department Calling Cycle</b>	Set the call routing for Department Calling. Routing can be either circular (cycle to all phones in a group) or priority (cycle to highest priority extension first).	0 = Normal Routing (Priority) 1 = Easy – UCD Routing (Circular) (default = 0)		✓	
16-01-03	<b>Department Group Basic Data Setup – Department Routing When Busy (Auto Step Call)</b>	Set how the system routes an Intercom call to a busy Department Group member. Intercom callers to the extension can either hear busy or route to the first available department number. This occurs only for direct calls to the extension, not the department number assigned in Program 11-07.	0 = Normal (Intercom caller to busy department member hears busy) 1 = Circular (Intercom callers to busy department member routes to idle member) (default = 0)		✓	
16-01-04	<b>Department Group Basic Data Setup – Hunting Mode</b>	Set the action taken when a call reaches the last extension in the Department Group. Hunting is stopped or cycling repeats.	0 = Last extension is called and hunting is stopped 1 = Circular (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-05	<b>Department Group Basic Data Setup – Extension Group All Ring Mode Operation</b>	Set whether all members of the group should ring Automatically or manually using the Service Code defined in Program 11-12-09. When set to 1, only ICM and DID calls ring all stations in the Department Group.	0 = Manual 1 = Automatic (default = 0)		✓	
16-01-06	<b>Department Group Basic Data Setup – STG Withdraw Mode</b>	Set the Department Group STG withdraw mode for each department group.	0 = Disable (Camp On) 1 = Enable (Overflow Mode) (default = 0)		✓	
16-01-07	<b>Department Group Basic Data Setup – Call Recall Restriction for STG</b>	Determine whether or not an unanswered call transferred to a Department Group should recall the extension from which it was transferred.	0 = Disable (Recall) 1 = Enable (No Recall) (default = 0)		✓	
16-01-09	<b>Department Group Basic Data Setup – Department Hunting No Answer Time</b>	Set the time a call rings a Department Group extension before hunting occurs.	64800 (seconds) (default = 15)		✓	
16-01-10	<b>Department Group Basic Data Setup – Enhanced Hunt Type</b>	Set the type of hunting for each Extension (Department) Group.	0 = No queuing 1 = Hunting When Busy 2 = Hunting When Not Answered 3 = Hunting When Busy or No Answer (default = 0)		✓	
16-02-01	<b>Department Group Assignment for Extensions</b>	Set up the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in 23-02.	Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256	✓		
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign Service Type 4 to each trunk you want to ring into the Multimedia Conference Bridge as a Direct Inward Line (DIL).	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-07-01	<b>DIL Assignment</b>	Assign the destination extension or Department Calling Group for each DIL incoming trunk.  Assign the master/pilot number of the Conference group from Program 11-07-01 as the DIL destination. If all Conference ports are in the same unique Extension (Department) Group (see Program 16-02 above), the DIL rings another Conference port if its assigned port is busy.	Extension Number (maximum eight digits) (default = No Setting)		✓	

## Operation

Refer to the SMB8000 Conference Bridge Installation Manual.



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# *SMB8000 Conference Bridge – Outlook Integration*

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## Description

Starting with SMB8000 **Version 2.0** and SV8100 **Version 8000** software a user has the ability to add Conference functionality to Outlook® 2007 and 2010. The conference add-in is downloaded directly from the Conference Bridge and installed on the PC.

Using the NEC Conference Bridge Outlook Add-in, a user can schedule, edit and delete a NEC meeting on the NEC Conference Bridge. In addition, advanced options are provided to schedule different categories of Meeting. The following operations can be performed using the Outlook Add-in:

- Schedule a simple conference.
- Schedule a recurring Conference.
- Set the number of participants and ports required for a conference.
- Set advanced meeting options:
  - Set number of participants.
  - Announce Participant.
  - Allow Early Entry.
  - Conference password.
  - Provide a Unique password to each participant.
  - Organizer required.
  - Organizer authentication.
  - Configure the Conference mode (Lecture / Discussion).
- View and Edit a scheduled conference in the Outlook calendar.
- Delete a scheduled NEC conference from the Conference Bridge.
- Delete a scheduled meeting from the Outlook calendar without deleting the NEC conference from the Conference Bridge.
- View and modify existing NEC conference using Outlook calendar.

## Conditions

- A SMTP relay server must be configured within **Configuration Utilities\System Settings>Email\SMTP Settings** for the Outlook email notification to work.
- Once Conference Bridge Version 2.0 is installed, a database from Version 1.xx Conference Bridge cannot be restored.

- The Outlook Integration feature is only supported on SV8100 systems.
- **Version 8000 or higher** system software is required to support this feature.
- The PVA Conference Enhancement license (6004) is required to support this feature. The 6004 license comes bundled with the SV8100 Version 8000 Enhancement license (0037).
- The SV8100 Version 8000 Enhancement license (0037) is required to support this feature.
- A NEC conference created from the Conference Bridge Web interface cannot be modified in Outlook.
- Only the organizer of NEC conferences created in Outlook receives an iCalendar event with the meeting ID.
- NEC conferences can only be modified in Outlook by the organizer using the iCalendar event with the meeting ID.
- The email address assigned to a NEC Conference Bridge user account must match the email address configured for that user in Outlook.
- The organizer must be the first email address listed for a meeting created in Outlook. The conference plug-in automatically populates this address when creating the meeting invitation in Outlook.
- When changing a meeting from the Outlook calendar, the meeting with the conference ID must be used for the change to affect the conference bridge settings.
- Recurring Conferences:
  - ❑ A recurring appointment with No end date can not be scheduled.
  - ❑ A Yearly recurring appointment can not be scheduled.
  - ❑ A Monthly recurring appointment with an interval value of 2 or higher, for example the “5th day of the 3rd Week of every month” can not be scheduled.
  - ❑ A Weekly recurring appointment for multiple days a week, for example on Tuesday and Friday of the same week can not be scheduled.
  - ❑ A Daily recurring appointment for multiple times on the same day, for example at 9:00 a.m. and 3:00 p.m. on the same day can not be scheduled.

## Default Setting

None

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## System Availability

### Terminals

None

### Required Component(s)

SV8100

- PVA Conference Port license (6000)
- SV8100 Version 8000 Enhancement license (0037)  
PVA Conference Enhancement license (6004) is bundled with Version 8000 Enhancement license (0037)
- CD-PVAA Blade with Service Pack 26\_10 or higher
- PVA Conference Compact Flash version 2.0 or higher
- SV8100 System Software 8.00 or higher

PC Hardware

- Pentium 1.6 GHz core 2 duo
- At least 2 - 4GB of available RAM
- 1 GB of Hard disk space
- SVGA monitor 1024X 768 resolution

PC Software

- Microsoft Outlook 2007 or Microsoft Outlook 2010
- Microsoft .Net Framework 4 Extended
- Microsoft .Net Framework 4 Client Profile
- Microsoft Visual Studio 2010 Tools for Office Runtime (x86) – 32 bit

**-OR-**

- Microsoft Visual Studio 2010 Tools for Office Runtime (x64) – 64 bit
- NEC Conference Bridge Outlook Add-in

- Supports the following Operating Systems:
  - Windows® XP+SP3
  - Windows Vista+SP1 Home/Business
  - Windows 7 Professional/Ultimate
  - Windows 2008 Server


## Related Features


### SMB8000 Multimedia Conference Bridge


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 Refer to the SMB8000 Conference Bridge feature for basic programming. The programs identified below must be configured to add the PVA Conference Enhancement License (6004) for Outlook integration support.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-54-01	License Configuration for Each Package – License Code	Assign licenses to the Conference Application on a per slot basis. For the slot the CD-PVAA blade is installed in, assign the number of licensed conference bridge ports. The license feature code is 6000, the enhancement license is 6004.  License assignment in Programs 10-54-01 and 10-54-02 must be done before the system recognizes the CD-PVAA Blade.	Refer to Program 10-50-01 in SV8100 Programming Manual. (default = Blank)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-54-02	License Configuration for Each Package – License Quantity	<p>Assign the number of licenses to the Conference Application per slot. For the slot the CD-PVAA blade is installed in, assign the number of licensed conference bridge ports. For the enhancement license, set this to 1.</p> <p> License assignment in Programs 10-54-01 and 10-54-02 must be done before the system recognizes the CD-PVAA Blade.</p>	Refer to Program 10-50-01 in SV8100 Programming Manual.	✓		

## Operation

Two installation methods (directly or manually) are provided for downloading and installing the Conference Bridge Outlook plugin.

### Conference Bridge Outlook Add-in Toolbar

The Outlook add-in is downloaded directly from the SMB8000 Conference Bridge.

 The install file is in a “zipped” format. The PC must be able support zip files for the installation to be successful.

1. Open Internet browser and connect to the Conference Bridge.
2. From the main menu click on **Download Outlook Plugin** (refer to [Figure 2-40 Conference Bridge – Schedule New Conference on page 2-1400](#)).

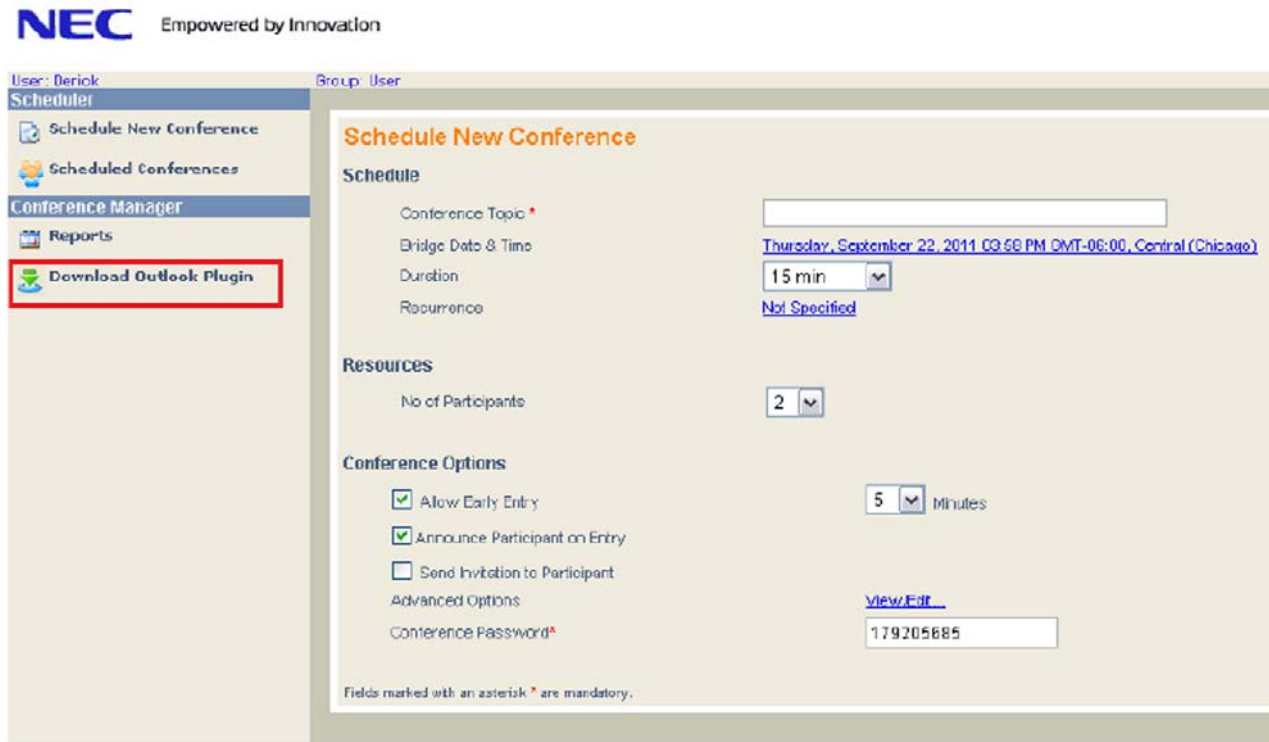


Figure 2-40 Conference Bridge – Schedule New Conference

- 3. On the displayed page select **Click here** to download.

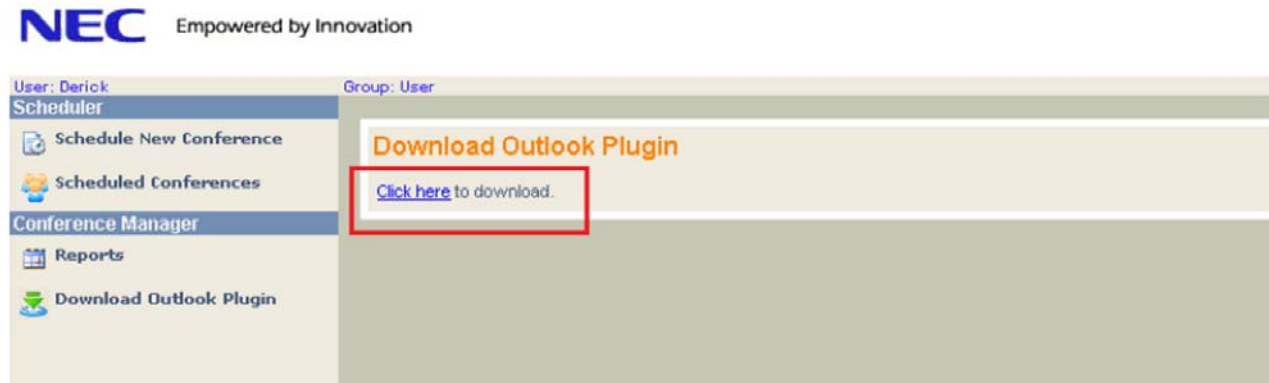


Figure 2-41 Conference Bridge – Download Outlook Plugin

- When prompted select to **Open** the file.

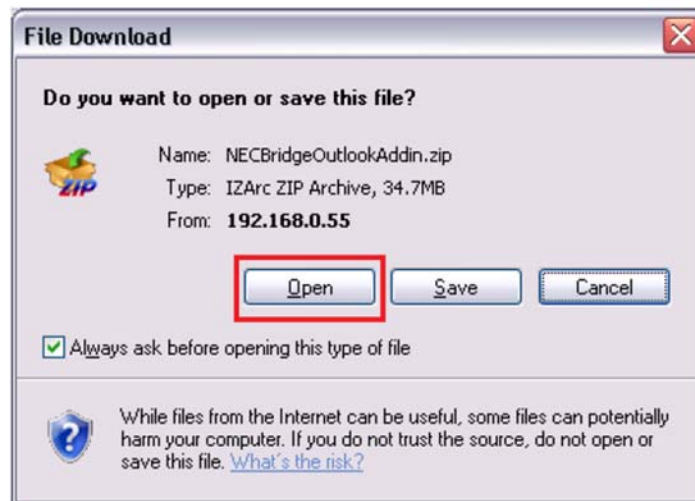



Figure 2-42 File Download – Open

- Once the file has downloaded and opened, double-click on **Setup.exe** and follow the prompts to install the add-in.
- When the installation completes, from the **Control Panel->Add Remove Programs** verify the required applications are installed:
  - Microsoft .Net Framework 4 Extended
  - Microsoft .Net Framework 4 Client Profile
  - Microsoft Visual Studio 2010 Tools for Office Runtime (x86)

**- OR -**

Microsoft Visual Studio 2010 Tools for Office Runtime (x64)

 *To support conference invitations being sent from Outlook requires a SMTP relay server set up for the Conference Bridge.*

- NEC Conference Bridge Outlook Add-in

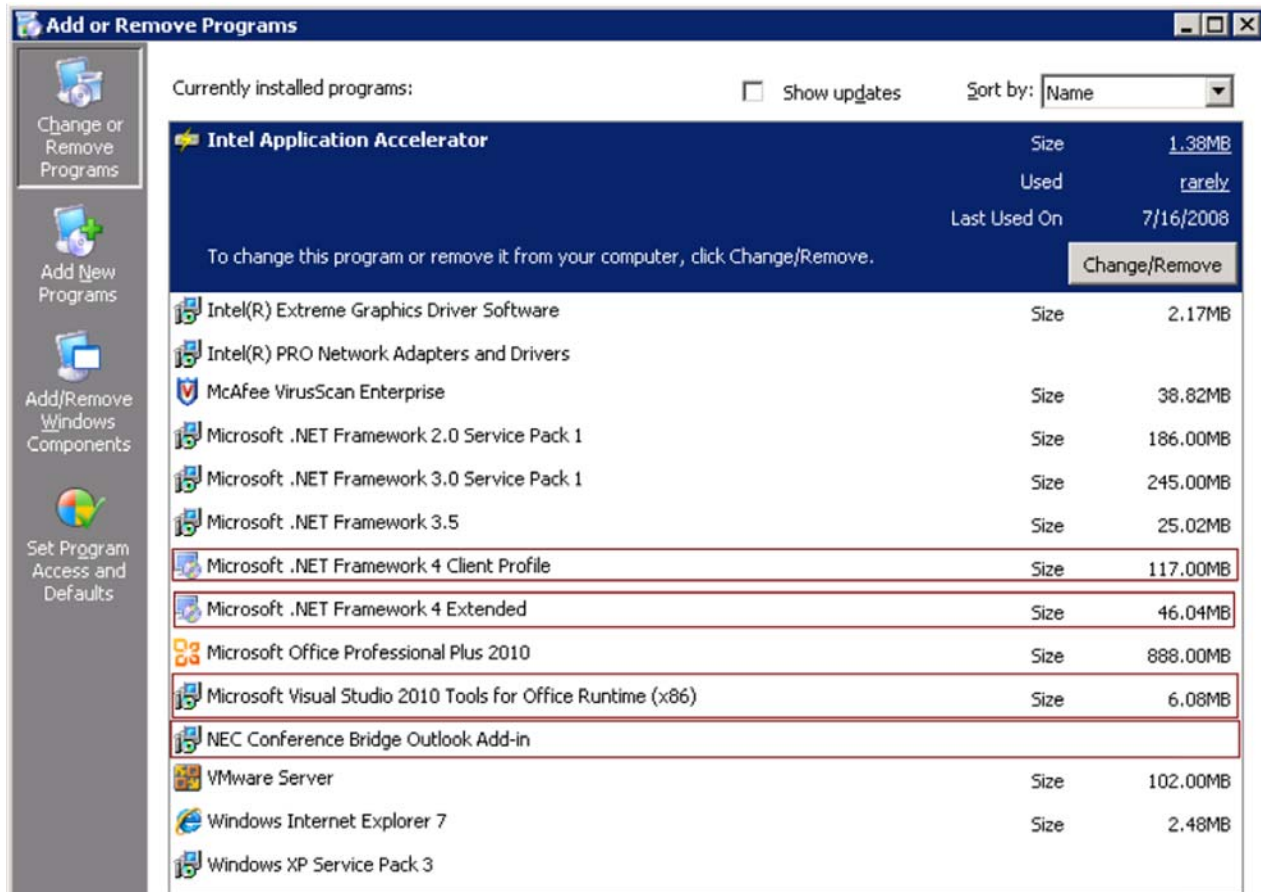


Figure 2-43 Add or Remove Programs – Currently Installed Programs Example

Once the Outlook add-in has successfully installed, the new options **Schedule NEC Meeting** and **NEC Bridge Settings** are available. For Outlook 2010, refer to [Figure 2-45 New Toolbars Added – Outlook 2010 on page 2-1403](#).

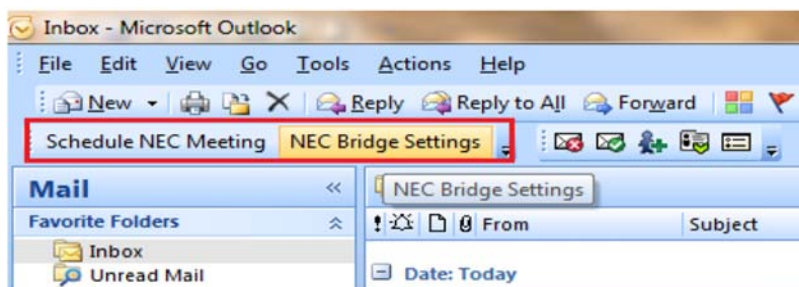


Figure 2-44 New Toolbars Added – Outlook 2007





Figure 2-45 New Toolbars Added – Outlook 2010

### Manually Installing a Software Certificate in Windows

Occasionally, group policies on a PC prevent unsigned software from being installed. If this occurs when trying to install the Outlook plugin, use the following steps to manually install the certificate on the PC requiring the plugin.

This procedure is supported on Windows XP Pro and Windows 7 provided the network group policies are not set to deny a user the rights to perform them.

1. If the Outlook plug-in zip does not reside on your PC, download and save to your PC.
2. Unzip it to a working directory, for example C:\Work.
3. Find the setup.exe file in the working directory.
4. Right click on **setup.exe**, select **Properties**.
5. Select the **Digital Signatures** tab.
6. Select **Purna-PC/purna**.
7. Click **Details**.
8. Click **View Certificate**.
9. Click **Install Certificate**, the install certificate wizard will start.
10. Click **Next**, but DO NOT let it automatically choose where to store the certificate.
11. Choose **Place all certificates in the following store**.
12. Click browse and then the **Trusted Root Certification Authorities Store** folder.
13. Select **Next**, **Finish** and **Yes** when prompted if you want to install this certificate.
14. You should get a message saying it was installed successfully.
15. Click on **OK** to close all open windows.
16. Try to the install the plug-in again from the downloaded file.

## Setting NEC Conference Bridge Login Information

1. Click on the **NEC Bridge Settings** icon and configure the **Conference Bridge URL/IP Address**, **User Name** and **Password**.



Figure 2-46 NEC Bridge Settings Screen – Outlook 2007

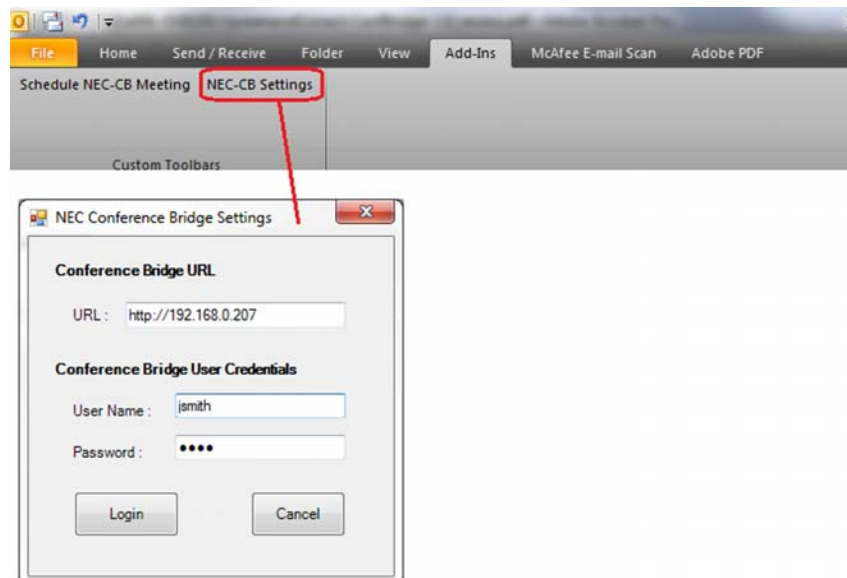



Figure 2-47 NEC Bridge Settings Screen – Outlook 2010

## Scheduling NEC Meeting

There are several different types of conferences that can be scheduled. Use the instructions below to create the desired conference type.

### Scheduling NEC Meeting with default meeting options

Figure 2-48 Schedule NEC Meeting – Using Default Options shows scheduling a conference with default meeting options. The default number of participants is two and no advanced meeting options are selected.

 The meeting organizer is also considered a participant and is included in the total.

1. Click on **Schedule NEC Meeting**.
2. Enter a **Subject**.
3. Enter the **email addresses** of the other participant.
4. Configure the **Start time** and **End time**.
5. Click on the **Send** button to schedule a NEC meeting.

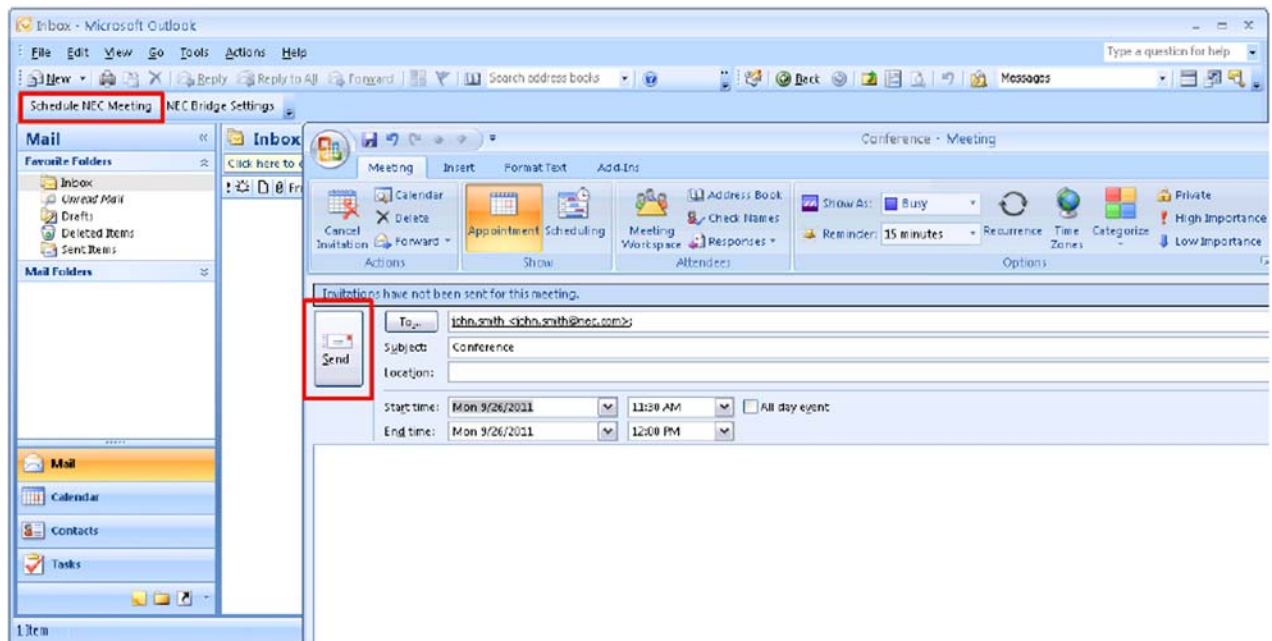


Figure 2-48 Schedule NEC Meeting – Using Default Options

The scheduled time and number of available conference ports are checked by the Conference Bridge to determine whether the requested meeting can be scheduled or not. If the resources are available, the meeting is scheduled and an information message is displayed (refer to [Figure 2-49 Meeting Scheduled with Meeting ID Example](#)). If the required resources are not available, an error message is displayed and no entry is made in the Outlook calendar.

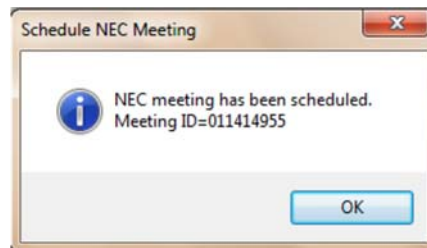


Figure 2-49 Meeting Scheduled with Meeting ID Example

The Meeting ID generated for a meeting is stored in the outlook calendar. For each conference/meeting, Conference Bridge sends two emails to each participant. The first with conference details and the second as an iCalendar event. When changing a meeting from the Outlook calendar, the meeting with the Meeting ID must be used for the change to affect the conference bridge settings.



Figure 2-50 Meeting Scheduled Example

### Scheduling NEC Meeting with Advanced meeting options

The default values for the advanced meeting options are shown in [Figure 2-51 Schedule NEC Meeting – Using Advanced Options on page 2-1407](#) shows scheduling a conference with advanced meeting options.

1. Click on **Schedule NEC Meeting**.
2. Enter a **Subject**.
3. Enter participant **email addresses**.

4. Enter the **Date**, **Start time** and **End time**.
5. Click on the **Add-Ins** tab.
6. Click on NEC Meeting Options, from here you can change the following settings:
  - Number of Participants.
  - Allow Early Entry.
  - Announce Participant on Entry.
  - Set the Conference Password.
  - Provide a Unique password to each participant.
  - Organizer Required.
  - Organizer Authorization.
  - Configure the Conference mode (Discussion or Lecture).
7. Click **Apply** and when prompted confirm setting changes.
8. Set conference **Date**, **Start Time** and **End Time**.
9. Click on the **Send** button to schedule the NEC meeting.
10. After processing the request, an appropriate success or error message is displayed.

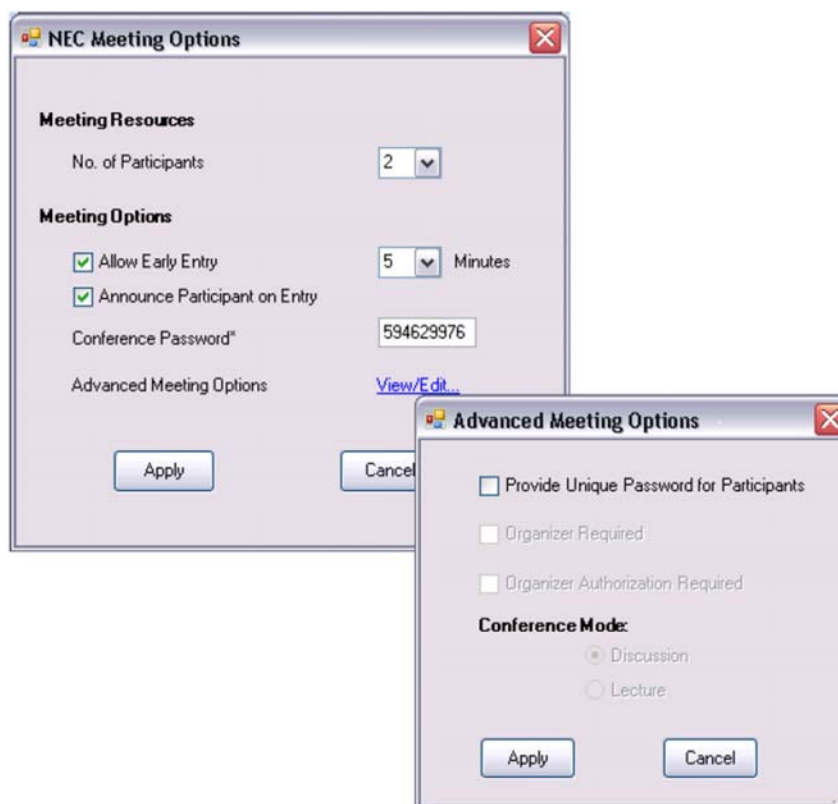


Figure 2-51 Schedule NEC Meeting – Using Advanced Options

## Scheduling a Recurring NEC Meeting

The “Recurrence pattern” in Outlook is used to schedule a recurring conference. As the Conference Bridge does not support all the recurrence patterns supported within Outlook, the Conference Add-in will restrict the use of the unsupported recurrence patterns, highlighted in the Black boxes. Supported recurrences are highlighted in the Red boxes (refer to [Figure 2-52 Schedule a Recurring NEC Meeting](#)).

1. Click on **Schedule NEC Meeting**.
2. Enter a **Subject**.
3. Click on the **Reoccurrence icon**.
4. Click on **NEC Meeting Options**, from here you can change the following settings:
  - Start time
  - End time
  - Duration
  - Daily/Weekly/Monthly
  - Start date
  - End date or number of occurrences
5. Click **OK**.
6. Click on the **Send** button to schedule a NEC meeting.
7. After processing the request, an appropriate success or error message is displayed. If trying to select unsupported recurrence patterns the error message "**The selected ‘Recurrence pattern’ is not supported by NEC Bridge.**" is displayed (refer to [Figure 2-52 Schedule a Recurring NEC Meeting on page 2-1409](#)).

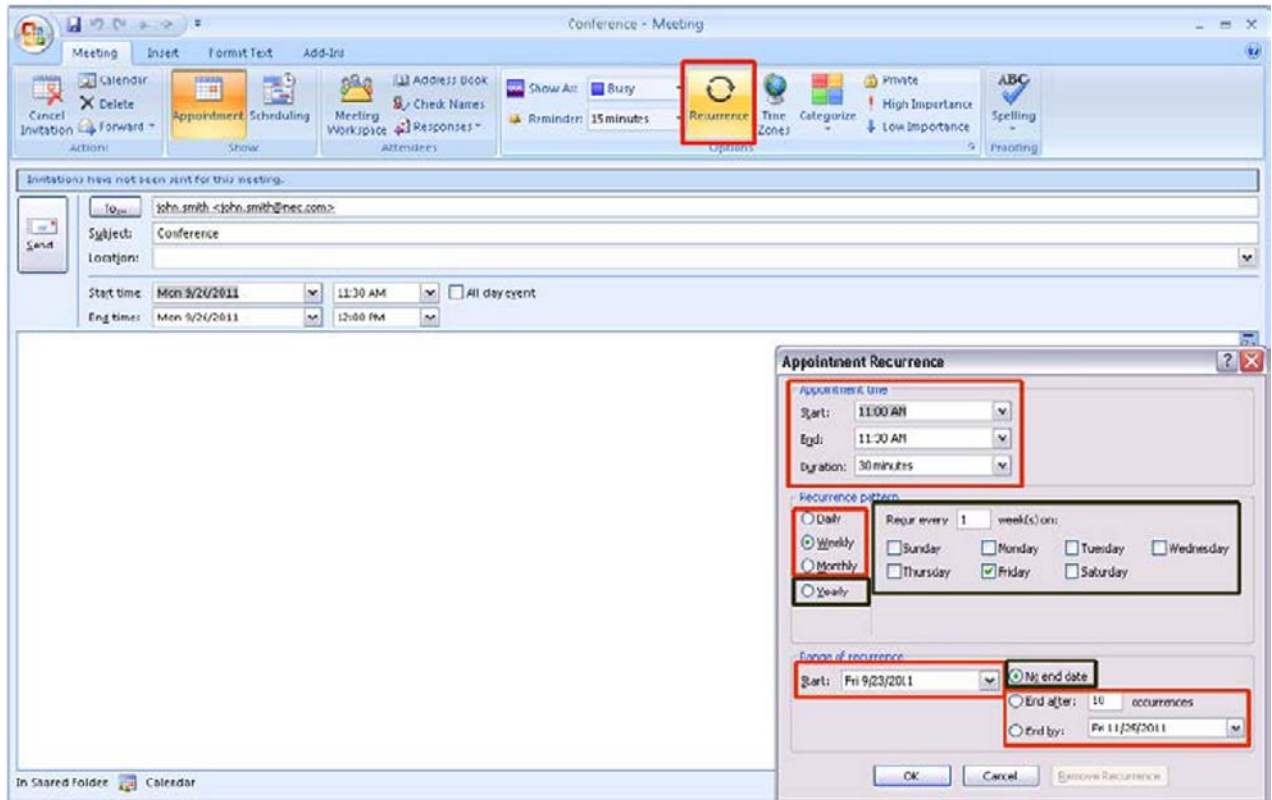


Figure 2-52 Schedule a Recurring NEC Meeting

The following recurring patterns **are not** supported by NEC Bridge:

- A recurring appointment with No end date.
- A Yearly recurring appointment.
- A Monthly recurring appointment with an interval value of 2 or higher. For example the “5th day of the 3rd Week of every month”.
- A Weekly recurring appointment for multiple days of a week. For example on Tuesday and Friday.
- A Daily recurring appointment for multiple times on the same day. For example at 9:00 a.m. and 3:00 p.m.

## Editing a NEC Meeting

A scheduled NEC meeting can be edited just as a normal Outlook appointment is edited. Double click on the calendar entry with the Meeting ID, the meeting will open for editing. Making the necessary changes and saving the appointment would reschedule the NEC meeting on the Conference Bridge (refer to [Figure 2-53 Editing a NEC Meeting](#)). After processing the request, an appropriate success or error message is displayed and updated information is sent to all participant email addresses.

1. Go to **Outlook Calendar**.
2. Locate the NEC meeting you would like to edit.
3. Open the NEC meeting by double clicking on the appointment.
4. On the appointment window, make the necessary changes.
5. Click on **Save/Send** to update the NEC meeting.
6. If resources are not available on the Conference Bridge a failure message will appear. You can then make necessary edits to the meeting.

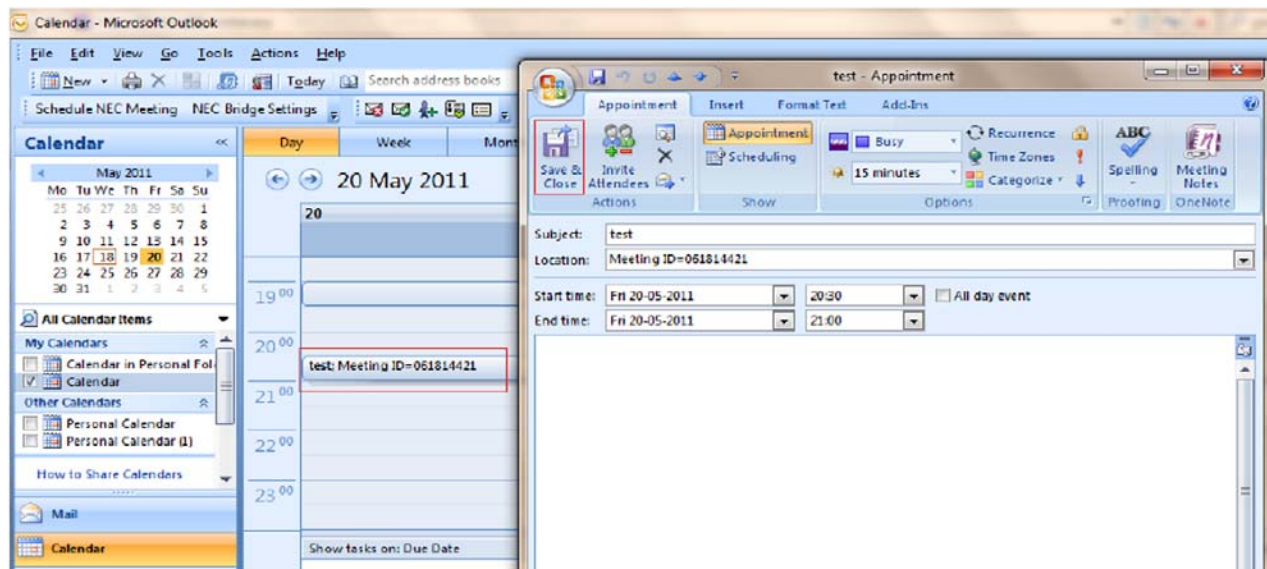


Figure 2-53 Editing a NEC Meeting



### Deleting a NEC Meeting

A scheduled NEC meeting can be deleted in a number of ways. [Figure 2-54 NEC Meeting Delete](#) illustrates one method (right-click and select delete) of deleting an appointment.

*Make sure you select the calendar entry that has the Meeting ID.*

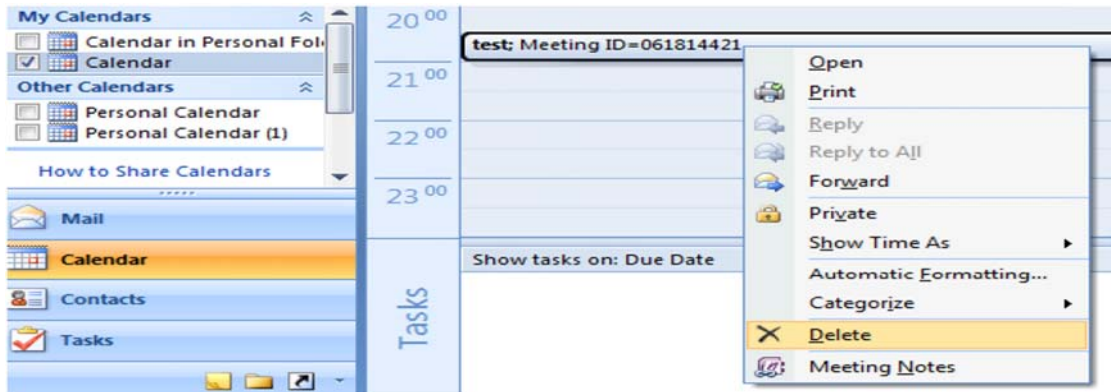


Figure 2-54 NEC Meeting Delete

You are asked to confirm the deletion. If **OK** is selected, the meeting is deleted in both Outlook and the Conference Bridge.

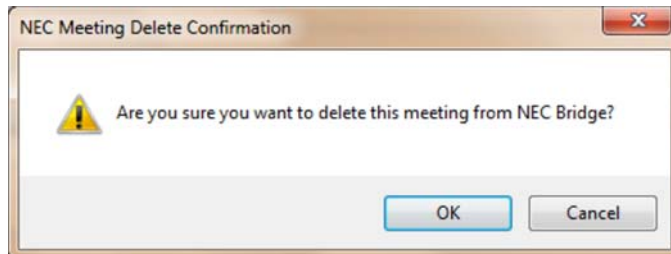


Figure 2-55 NEC Meeting Delete Confirmation

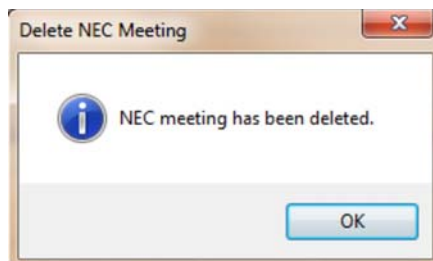


Figure 2-56 Delete NEC Meeting

If **Cancel** is selected you are prompted to only delete the meeting in Outlook. If the meeting is only deleted in Outlook it remains in the Conference Bridge and no email is sent to participants notifying them of the cancellation.



Figure 2-57 NEC Meeting Delete Confirmation

Deleting a NEC meeting from Outlook will result in deletion of the scheduled conference from the Conference Bridge. The Conference Bridge will send a cancellation email and a cancellation Outlook Calendar event to all participants once the meeting has been deleted successfully. In case of failure, an appropriate error message will be displayed and the meeting is not deleted from the outlook calendar.

**Limitations:** It is not possible to delete/edit a particular instance of a NEC recurring meeting from the Conference Bridge. All recurring instances must be deleted or edited in order to delete/edit the NEC Meeting from Conference Bridge.

## Email Invitation and iCalendar Integration

For each conference/meeting, the Conference Bridge sends two emails to each participant. The first with conference details and the second as an iCalendar event. This also applies when a meeting is edited or deleted from Outlook Add-in or the Conference Bridge Web Interface.

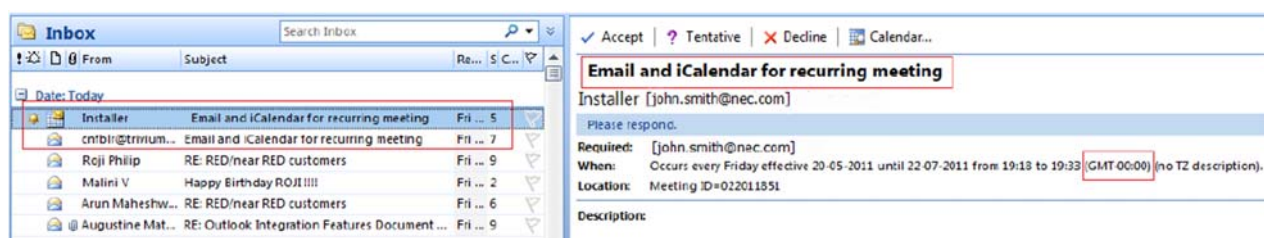


Figure 2-58 Email and iCalendar for Recurring Meeting

## Email Invitations

The email, with conference details, is same as the email invitation sent for a scheduled conference with earlier versions of Conference Bridge, prior to v2.0.

## iCalendar for Scheduled/Edited Meeting

On receiving the iCalendar event email clients which support iCalendar 2.0, such as Microsoft Outlook, should provide an option to accept/reject the appointment (refer to [Figure 2-59 Conference Scheduled from Web UI](#)). Once the invitation is accepted, the calendar is updated with the meeting details (refer to [Figure 2-60 Meeting Scheduled Example on page 2-1413](#)).

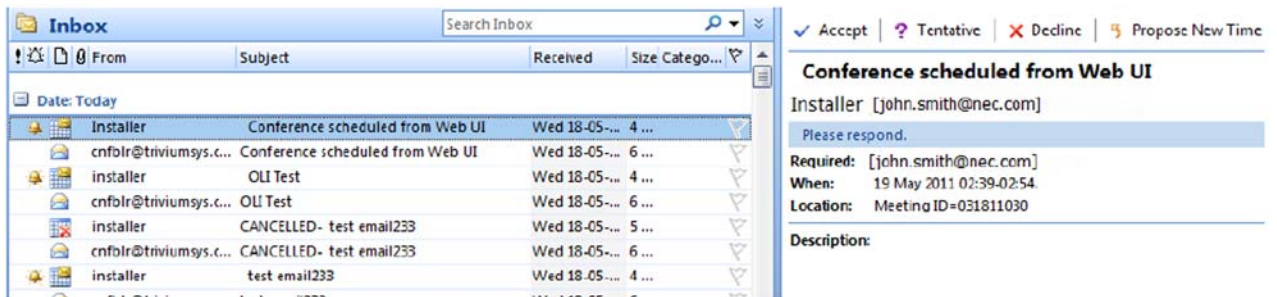


Figure 2-59 Conference Scheduled from Web UI

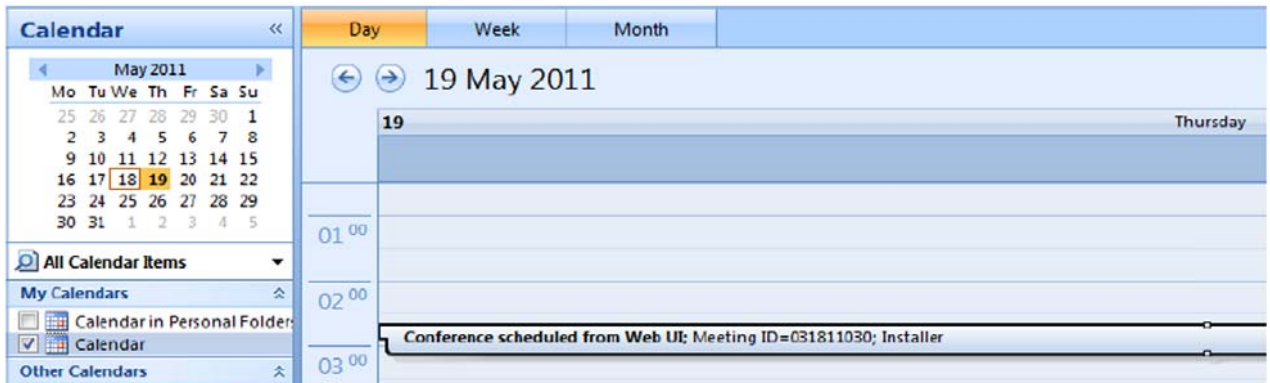


Figure 2-60 Meeting Scheduled Example

## iCalendar for Deleted/Canceled Meeting

When a NEC meeting is cancelled participants receive an email with the cancellation and the event is marked as CANCELLED in the calendar. The cancelled appointment can be removed from calendar by clicking the **Remove from Calendar** icon in the received iCalendar email (refer to [Figure 2-61 Cancelled – Conference Scheduled from Web UI on page 2-1414](#)). You can also remove an iCalendar event for deleted/canceled meetings by opening the meeting and click on the **Remove from Calendar** icon.

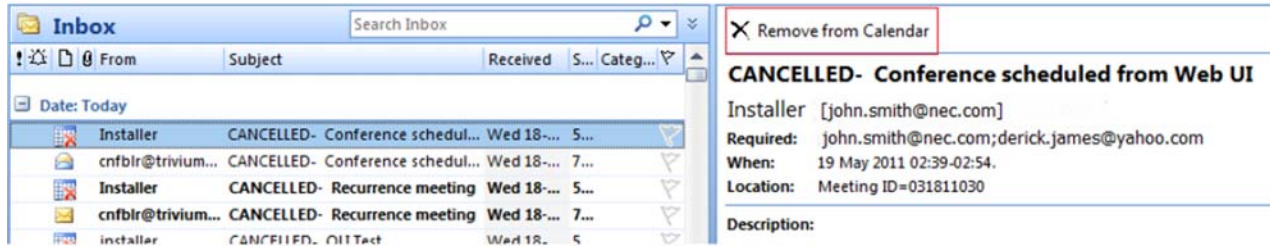


Figure 2-61 Cancelled – Conference Scheduled from Web UI

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## Description

Each display telephone provides interactive softkeys for intuitive feature access. It is not necessary to remember feature codes to access the telephone advanced features because the function of the softkeys change as the user processes calls.

Additional options allow you to fine tune the multiline terminal volume levels for handset receive and transmit, speaker volume, ringer and handset volume, and headset volume levels. You can also customize the point at which the built-in speakerphone switches from transmit to receive; a boon for noisy environments. The display telephones also have a contrast control for the LCD display.

## Conditions

- If a feature is restricted by an extension Class of Service, though the Softkey menu still displays the option, the user cannot set the feature.
- Using the Directory Dialing Softkeys, Recall can toggle the language display from English to Japanese.
- The feature must be active to change the volume (e.g., telephone must be ringing, page being heard, etc.). Press the volume keys when the telephone is idle to adjust the display contrast.
- Disabling the softkeys or limiting the menu key is supported with **Version 8000 or higher** system software.
- When a Softkey is disabled, the Softkey is not displayed on the LCD (depending on the feature it may appear) and related keys are not functional. Cursor keys and the Menu key are also disabled.

 *To use the Disable Softkey function, Program 15-02-71 must be set to 1 (On) at associated terminal.*

## Default Setting

Display shows time/date/extension/Softkey menu information.

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

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## Related Features

Directory Dialing

Volume Controls

---

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-13	<b>Service Code Setup (for Setup/Entry Operation) – Display Language Selection for Multiline Terminal</b>	Customize the service code used to select the display language for a multiline terminal.	MLT (default = 678)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-01	<b>Multiline Telephone Basic Data Setup – Display Language Selection</b> (To select options 8~10, press either 8 or Recall, then press line keys 1~3. Key 1 is option 8, Key 2 is option 9, and Key 3 is option 10.)	Set the display language for a multiline terminal.	0 = Japanese 1 = English 2 = German 3 = French 4 = Italian 5 = Spanish 6 = Dutch 7 = Portuguese 8 = Norwegian 9 = Danish 10 = Swedish 11 = Turkish 12 = Latin American Spanish 13 = Romanian 14 = Polish (default = 1)		✓	
15-02-71	<b>Multiline Telephone Basic Data Setup – Disable Softkey</b>	Disable (1) softkey buttons and limit the softkey display. Also limits the Menu key left and right buttons.	0 = Off 1 = On (default = 0)			✓

## Operation

None

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## *Speed Dial – System/Group/Station*

### Enhancements

Improved Cursor Key operation ( <b>Version 3000 or higher</b> software).
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### Description

Speed Dialing gives an extension user quick access to frequently called numbers. This saves time, for example, when calling a client with whom they deal often. Instead of dialing a long telephone number, the extension user just dials the Speed Dialing code.

There are three types of Speed Dialing: System, Group and Station. All co-workers can share the System Speed Dialing numbers. All co-workers in the same Speed Dialing Group can share the Group Speed Dialing numbers. Station Speed Dialing numbers are available only at a user's own extension. The system has 2000 Speed Dialing bins that you can allocate between System and Group Speed Dialing and a maximum of 65 Speed Dialing Groups are available. Each extension has 10 Station Speed Dial bins.

Each Speed Dialing bin can store a number with up to 24 digits.

When placing an Speed Dialing call, the system normally routes the call through Trunk Group Routing or ARS (whichever is enabled). Or, the user can preselect a specific trunk for the call. Also, the system can optionally force System Speed Dialing numbers to route over a specific Trunk Group. User preselection always overrides the system routing.

#### **System Bins Limited to 1000 with Speaker Key or #2 Service Code**

Though there are 2000 Speed Dialing bins available in the system, once programmed, these bins can currently be dialed only using the Directory Dial feature (Press Directory key + SYS softkey + use arrow keys to locate number or enter the Speed Dial bin name + Speaker to place call.)

Speaker and service code #2 operations are not available for any 4-digit Speed Dial System bin number.

## DSS Console Chaining

DSS Console chaining allows an extension user with a DSS Console to chain to a Speed Dialing number stored under a DSS Console key. The stored number dials out (chains) to the initial call. This can, for example, simplify dialing when calling a company with an Automated Attendant. You can program the bin for the company number under one DSS Console key (e.g., #200) and the client's extension number under the other (e.g., #201). The DSS Console user can press the first key to call the company, wait for the Automated Attendant to answer, then press the second key to call the client (extension 400). See the Programming section below for additional details.

The DSS Console user can also chain to an Speed Dialing number dialed manually, from a Programmable Function Key or a One-Touch Key.

## Storing a Flash

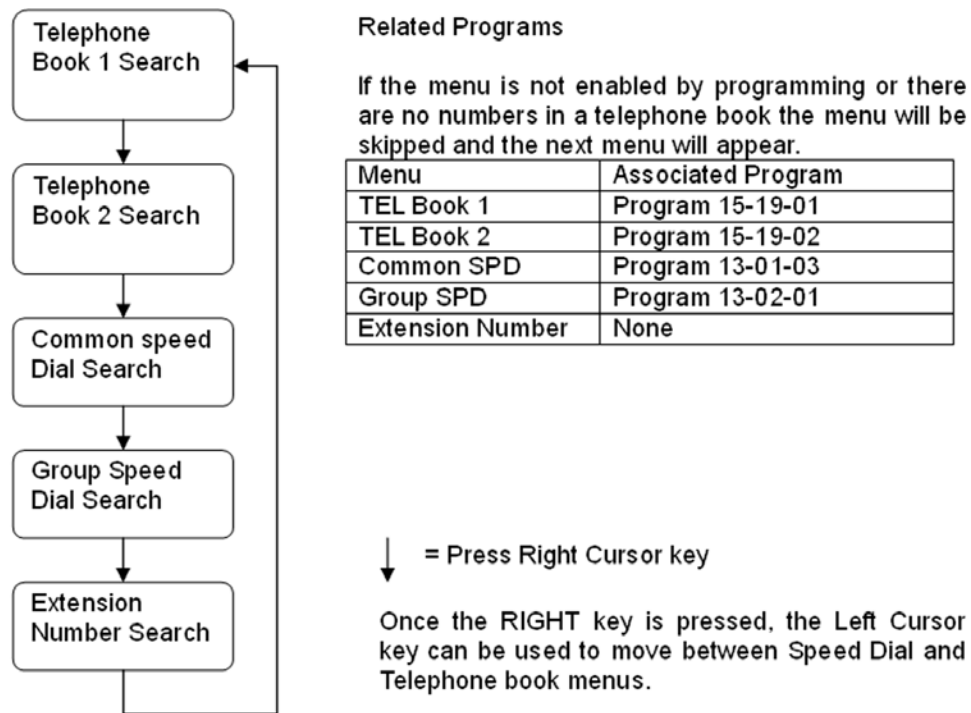
To enhance compatibility with connected Centrex and PBX lines, Speed Dialing bin can have a stored Flash command. For example, storing 9 Flash 926 5400 causes the system to dial 9, flash the line and then dial 926 5400. The Flash can be stored by the user from their telephone or by the system administrator during system programming.

## Using a Programmable Function Key

To streamline frequently-called numbers, a Speed Dialing Programmable Function Key can also store a Speed Dialing bin number. When the extension user presses the key, the telephone automatically dials out the stored number. This provides true one-touch calling via a telephone function keys.

## Cursor Key Operation

By pressing the Right Cursor key, the user can access all directory menus. The flow chart below shows the menu access sequence (refer to [Figure 2-62 Right Cursor Key Operation Flow Chart on page 2-1421](#)). If the terminal is not allowed access to Speed Dial and/or Telephone Book numbers or no telephone numbers are programmed in those areas, they are skipped.



**Figure 2-62 Right Cursor Key Operation Flow Chart**

## Conditions

- Speed Dial bins can contain stored Account Codes. To prevent them from being displayed use Program 20-07-04.
- ARS selects the trunk for the call unless the user preselects.
- A user can implement Speed Dial only if their extension has outgoing access to trunks.
- An extension can have a One-Touch Key for Speed Dial operation.
- If you enter a PBX trunk access code in a Speed Dial bin, the system automatically inserts a pause after the bin.
- Single line telephones can dial only System and Group Speed Dial numbers.
- Toll Restriction may prevent a user from using a stored Speed Dial number.
- Unless a user preselects a trunk, Trunk Group Routing selects the trunk Speed Dial uses for trunk calls.
- If the Speed Dial bin does not have a name assigned, it does not show when scrolling through the directory of speed dials.

- If Program 13-01-01 is set to 1 (Intercom Access mode), system speed dial bins require inserting a trunk access code.
- When operating the Right Cursor key, if the menu is not enabled by programming or there are no numbers in a telephone book, the menu is skipped and the next menu will appear.
- For DT3XX or DT7XX terminals, use the Feature Key to clear the characters one at a time when entering the name.

## **Default Settings**

Available (No Speed Dialing bins are assigned).

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Account Code Entry**

**Automatic Route Selection**

**Central Office Calls, Placing**

**Code Restriction**

**Dial Tone Detection**

**One-Touch Calling**

**PBX Compatibility**

**Programmable Function Keys**

## Single Line Telephones, Analog 500/2500 Sets

### Trunk Group Routing

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	If dial tone detection is enabled, allocate at least one circuit for dial tone detection (Type 0 or 2).	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available.		✓	
11-10-04	<b>Service Code Setup (for System Administrator) – Storing Common Speed Dialing Numbers</b>	Customize the service code used for storing Common Speed Dialing Numbers.	MLT (default = 753)		✓	
11-10-05	<b>Service Code Setup (for System Administrator) – Storing Group Speed Dialing Numbers</b>	Customize the service code used for storing group speed dialing numbers.	MLT (default = 754)		✓	
11-11-39	<b>Service Code Setup (for Setup/Entry Operation) – Station Speed Dial Number Entry</b>	Customize the service code used for entering station speed dial numbers.	MLT, SLT (default = 755)		✓	
11-12-10	<b>Service Code Setup (for Service Access) – Station Speed Dialing</b>	Assign Service code used for accessing System Speed Dial bins (default #2).	MLT, SLT (default = #2)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-11	<b>Service Code Setup (for Service Access) – Group Speed Dialing</b>	Customize the service code used for group speed dialing.	MLT, SLT (default = #4)		✓	
13-01-01	<b>Speed Dialing Option Setup – Speed Dialing Auto Outgoing Call Mode</b>	Designate trunk or intercom outgoing mode.	0 = Trunk Outgoing Mode 1 = Intercom Outgoing Mode (default = 0)		✓	
13-01-03	<b>Speed Dialing Option Setup – Number of Common Speed Dialing Bins</b>	Designate the bins the system uses for System Speed Dialing.	0~2000 0 = No Common Speed Dialing (default = 1000)		✓	
13-02-01	<b>Group Speed Dialing Bins</b>	Designate the starting bin number the system uses for Group Speed Dialing.	01~64 (default not assigned)		✓	
13-03-01	<b>Speed Dialing Group Assignment for Extensions</b>	For Group Speed Dialing, assign extensions to Speed Dialing groups.	01~64 (default = 1)		✓	
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	Enter the System and Group Speed Dialing numbers and names.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
13-04-02	<b>Speed Dialing Number and Name – Name</b>	Assign a name to each System Speed Dial bin.	Maximum 12 Characters (Use dial pad to enter name) (default not assigned)	✓		
13-04-03	<b>Speed Dialing Number and Name – Transfer Mode</b>	When the incoming caller ID matches the number programmed in the speed dial bin, this setting determines the destination of the call.	0 = Not Used 1 = Internal Dial 2 = Incoming Ring Group (IRG) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-04-04	<b>Speed Dialing Number and Name – Transfer Destination Number</b>	When the incoming caller ID matches the number programmed in the speed dial bin, this setting determines the destination of the call.	If Transfer mode is (Refer to 13-04-03): 1 = Internal Dial Mode 1~9, 0, *, #, P, R, @ (Maximum 24 Characters) 2 = Incoming Ring Group 0 ~ 100 (IRG Number) P=Pause R=Recall @= Additional Digits when using ISDN functionality (default not assigned)		✓	
13-04-05	<b>Speed Dialing Number and Name – Incoming Ring Pattern</b>	Define the ring tone for the caller ID routed call.	Incoming Ring Pattern 0 = Normal Pattern 1~4 = Tone Pattern (1~4) 5~9 = Scale Pattern (1~5) 10~13 = Tone Pattern (5~8) (default = 0)		✓	
13-05-01	<b>Speed Dialing Trunk Group – Trunk Group Number</b>	For each System Speed Dialing number, enter the routing option Trunk Group Number (1~100) to dial out on.	0 = No setting 1~100 (default = 0)		✓	
14-02-06	<b>Analog Trunk Data Setup – Pause at 1st digit after Line Seize in Manual Dial Mode</b>	Enable/Disable the system ability to pause after dialing the first digit.	0 = No Pause (No) 1 = Pause (Yes) (default = 1)		✓	
15-02-04	<b>Multiline Telephone Basic Data setup – Redial (Speed Dial ) Control</b>	Assign the extension Redial key for either Common or Group Speed Dialing.	0 = Common and Individual Speed Dialing 1 = Group Speed Dialing (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for System Speed Dialing (27) or Group Speed Dialing (28). You can program the key as either a general Speed Dialing key or you can choose to store a bin number with the function key. This key then always dials the associated bin number. If storing a bin number along with the code, do not store 0, 00 or 000. To bypass entering a bin number, press <b>Hold</b> ( <b>Hold</b> is also required if programming the function key using the service code 751).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
15-14-01	<b>Programmable One-Touch Keys – Station Speed Dial Data</b>	Assign the extensions Speed Dial number (1~10).	1~0, *, #, Pause, Hookflash, @ (Code for Answer-Wait) Up to 24 digits (default not assigned)	✓		
15-14-02	<b>Programmable One-Touch Keys – Station Speed Dial Name</b>	Assign the name associated with the extension Speed Dial Bin (1~10).	Name (default not assigned)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-07-04	<b>Class of Service Options (Administrator Level) – Storing Speed Dialing Entries</b>	Turn Off or On an extension user ability to store System or Group Speed Dialing numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-03	<b>COS Options (Outgoing Call Service) – System Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using system speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-08-04	<b>COS Options (Outgoing Call Service) – Group Speed Dialing</b>	Turn Off or On an extension user ability to make outbound calls using group speed dial numbers.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-03-01	<b>DSS Console Key Assignment</b>	For DSS Console Chaining, assign an Speed Dialing Service Code (or) plus a 2-digit bin number to a DSS Console key.	Key Number 001~500 0~99 (General Functional Level) 97 = Door Box Access key (additional data: 1~8 Door Box No.) * 00 ~ * 99 (Appearance Functional Level)		✓	
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Define the detect levels for the DTMF Tone Receiver.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm (default: Type 1~5 = 0)			✓
80-03-02	<b>DTMF Tone Receiver Setup – Start delay time</b>	Define the start delay times for the DTMF Tone Receiver.	0~255 (0.25ms~64ms) (default: Type 1~5 = 0)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	DTMF Tone Receiver Setup – Min. detect level	Define the minimum detect levels for the DTMF Tone Receiver.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-04	<b>DTMF Tone Receiver Setup – Max. detect level</b>	Define the maximum detect levels for the DTMF Tone Receiver.	0~15 detect level 0: 0dBm(0) to -15dBm(15) detect level 1: -5dBm(0) to -20dBm(15) detect level 2: -10dBm(0) to -25dBm(15) detect level 3: -15dBm(0) to -30dBm(15) detect level 4: -20dBm(0) to -35dBm(15) detect level 5: -25dBm(0) to -40dBm(15) detect level 6: -30dBm(0) to -45dBm(15) detect level 7: -35dBm(0) to -50dBm(15) detect level 8: -40dBm(0) to -55dBm(15) detect level 9: -45dBm(0) to -60dBm(15) detect level 10: -50dBm(0) to -65dBm(15) detect level 11: -55dBm(0) to -70dBm(15) detect level 12: -60dBm(0) to -75dBm(15) detect level 13: -65dBm(0) to -80dBm(15) detect level 14: -70dBm(0) to -85dBm(15) detect level 15: -75dBm(0) to -90dBm(15) default: Type 1~5 = 2 (-2dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-05	<b>DTMF Tone Receiver Setup – Forward twist level</b>	Define the forward twist levels for the DTMF Tone Receiver.	0~9 (1dB~10dB) [default: Type 1~5 = 5 (6dBm)]			✓
80-03-06	<b>DTMF Tone Receiver Setup – Backward twist level</b>	Define the backward twist levels for the DTMF Tone Receiver.	0~9 (1dB~10dB) [default: Type 1~5 = 0 (1dBm)]			✓
80-03-07	<b>DTMF Tone Receiver Setup – ON detect time</b>	Define the on detect times for the DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) [default: Type 1~5 = 1 (30ms)]			✓
80-03-08	<b>DTMF Tone Receiver Setup – OFF detect time</b>	Define the off detect timer for the DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) [default: Type 1~5 = 1 (30ms)]			✓
80-04-01	<b>Call Progress Tone Detector Setup – Detection Level</b>	Define the detection levels for the Call Progress Tone Detector.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1 (DT) – 0 (-25dBm) Type 2 (BT) – 0 (-25dBm) Type 3 (RBT) – 0 (-25dBm) Type 4, Type 5 – 0			✓
80-04-02	<b>Call Progress Tone Detector Setup – Min. Detection Level</b>	Define the minimum detection levels for the Call Progress Tone Detector.	0~15 detect level 0 : -15dBm (0) to -30dBm(15) detect level 1 : -30dBm (0) to -45dBm(15) detect level 2 : -40dBm (0) to -55dBm(15) default: Type 1 (DT) – 15 (-25dBm) Type 2 (BT) – 15 (-25dBm) Type 3 (RBT) – 15 (-25dBm) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-03	<b>Call Progress Tone Detector Setup – S/N Ratio</b>	Define the S/N ratio for the Call Progress Tone Detector.	0~4 (0dB ~ -20dB) default: Type 1 (DT) – 4 (-20dB) Type 2 (BT) – 4 (-20dB) Type 3 (RBT) – 4 (-20dB) Type 4, Type 5 – 0			✓
80-04-04	<b>Call Progress Tone Detector Setup – No tone time</b>	Define the no tone time for the Call Progress Tone Detector.	0~255 (30+30-7680 ms) The formula is 30+30N. When set to N=1, it means 30+30*1=60 When set to N=255, it means 30+30*255=7680 (0 =not detect) default: Type 1 (DT) – 132 (3990 ms) Type 2 (BT) – 132 (3990 ms) Type 3 (RBT) – 132 (3990 ms) Type 4, Type 5 – 0			✓
80-04-05	<b>Call Progress Tone Detector Setup – Pulse Count</b>	Define the pulse count for the Call Progress Tone Detector.	1~255 default: Type 1 (DT) – 1 Type 2 (BT) – 1 Type 3 (RBT) – 1 Type 4, Type 5 – 0			✓
80-04-06	<b>Call Progress Tone Detector Setup – ON minimum time</b>	Define the on minimum time for the Call Progress Tone Detector.	1~255 (30+30-7680ms) default: Type 1 (DT) – 9 (300ms) Type 2 (BT) – 12 (300ms) Type 3 (RBT) – 25 (780ms) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-07	Call Progress Tone Detector Setup – ON maximum time	Define the on maximum time for the Call Progress Tone Detector.	0~255 (30+30-7680ms) default: Type 1 (DT) – 0 Type 2 (BT) – 20 (450ms) [ET] Type 3 (RBT) – 40 (1230ms) Type 4, Type 5 – 0			✓
80-04-08	Call Progress Tone Detector Setup – OFF minimum time	Define the off minimum time for the Call Progress Tone Detector.	1~255 (30+30-7680ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 12 (300ms) Type 3 (RBT) – 83 (2520ms) Type 4, Type 5 – 0			✓
80-04-09	Call Progress Tone Detector Setup – OFF maximum time	Define the off maximum time for the Call Progress Tone Detector.	0~255 (30+30-7680ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 20 (450ms) Type 3 (RBT) – 115 (3480ms) Type 4, Type 5 – 0			✓

## Operation

### To store an Speed Dialing number (display telephones only):

1. Press **Speaker**.
2. Dial **753** (for system) or **754** (for group).
3. Dial system or group storage code.
  - ☞ *Initially, there are 1000 System Speed Dialing codes. There are Group Speed Dialing codes only if you define them in programming.*
4. Dial telephone number you want to store (up to 24 digits).
  - ☞ *Valid entries are 0~9, # and \*. To enter a pause, press **Transfer**. To store a Flash, press **Recall**.*
  - ☞ *Enter @ for await answer before sending following digits on ISDN.*

5. Press **Hold**.
6. Enter the name associated with the Speed Dialing number.

Table 2-81 Keys for Entering Names

Use this keypad digit . . .	When you want to . . .
1	Enter characters: 1 @ [ ¥ ] ^ _ ` {   } Æ ¨ Á À Â Ã Ç É Ê Ì Ó
2	Enter characters: <b>A-C, a-c, 2.</b>
3	Enter characters: <b>D-F, d-f, 3.</b>
4	Enter characters: <b>G-I, g-i, 4.</b>
5	Enter characters: <b>J-L, j-l, 5.</b>
6	Enter characters: <b>M-O, m-o, 6.</b>
7	Enter characters: <b>P-S, p-s, 7.</b>
8	Enter characters: <b>T-V, t-v, 8.</b>
9	Enter characters: <b>W-Z, w-z, 9.</b>
0	Enter characters: 0 ! “ # \$ % & ’ ( ) ô Õ ú ä ö ü α ε θ
*	Enter characters: * + , - . / : ; < = > ? π Σ σ Ω □ ϕ £
#	# = Accepts an entry (only required if two letters on the same key are needed – ex: TOM). Pressing # again = Space. (In system programming mode, use the right arrow Softkey instead to accept and/or add a space.)
<b>Feature</b>	Clear the character entry one character at a time.

7. Press **Hold**.
8. Press **Speaker** to hang up or repeat steps 3~7 to program another System or Group Speed Dial bin.


**To dial a System Speed Dialing number:**


1. Go off-hook.
2. Press **Redial**.

- OR -

Press the **Right Cursor** key until the Group Speed Dial menu appears.

3. Dial the System Speed Dialing storage code.

 Unless you preselect, Trunk Group Routing selects the trunk for the call. The system may optionally select a specific Trunk Group for the call.


 If you have a DSS Console, you may be able to press a DSS Console key to chain to a stored number.

**To store a System Speed Dialing number under a Programmable Function Key:**

1. At multiline terminal, press **Speaker**.
2. Dial **751**.
3. Press the key where the number is to be stored.
4. Dial **27**.
5. Dial System Speed Dial Bin number to put under the key.
6. Press **Speaker** to hang up.

**To dial a System Speed Dialing number under a Programmable Function Key:**

1. At the multiline terminal, press **Speaker**.
2. Press the key, which has the stored number to be dialed.

 The number seizes an outside line and dials out.

**To dial a Group Speed Dialing number:**


1. Go off-hook.
2. Press **Redial**.

- OR -

Press the **Right Cursor** key until the Group Speed Dial menu appears.

- OR -

Press the **Group Speed Dialing** key (Program 15-07-01 or SC 751: 28).

 To preselect, press a line key in step 1 (instead of **Speaker**) before pressing **Redial** or **Speed Dialing** key.






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3. Dial the Group Speed Dialing code.

-  *The stored number dials out.*
-  *Unless you preselect, Trunk Group Routing selects the trunk for the call.*
-  *If you have a DSS Console, you may be able to press a DSS Console key to chain to a stored number.*

### To check your stored Speed Dialing numbers (display telephone only):

1. Press the **Help** key.

2. For System Speed Dialing, press **Redial**.  
Dial the Speed Dialing Code (e.g., common code **001**).

-  *If the entire stored number is too long for your telephone display, press **\*** to see the rest of the number.*


- OR -

For Group Speed Dialing, press the **Group Speed Dialing** key.

- OR -


For System Speed Dialing key, press the **System Speed Dialing** key.

3. Press the **Exit** key.

-  *To display additional numbers, repeat from step 1.*

- OR -

Press the **Right Cursor** key until the appropriate Telephone Book, System or Group Speed Dial menu appears.

-  *Use the Volume "Down" and Volume "Up" keys to scroll through the stored numbers.*

### To store a Station Speed Dialing number (display telephones only):

1. Press **Speaker**.

2. Dial **755**.

3. Dial the Station Speed Dial buffer number to be programmed (**0~9**).


1 = Station Speed Dial buffer 1

2 = Station Speed Dial buffer 2

" " " " " "

0 = Station Speed Dial buffer 10

4. Dial the telephone number you want to store (up to 24 digits).

-  *Valid entries are 0~9, # and \*. To enter a pause, press MIC. To store a Flash, press Recall.*

5. Press **Hold**.

6. Enter the name associated with the Speed Dialing number (display telephones only).

Key for Entering Names	
Use this keypad digit . . .	When you want to. . .
1	Enter characters: 1 @ [ ¥ ] ^ _ ` {   } → ← Á À Â Ã Ç É Ê ì ó
2	Enter characters: <b>A-C, a-c, 2.</b>
3	Enter characters: <b>D-F, d-f, 3.</b>
4	Enter characters: <b>G-I, g-i, 4.</b>
5	Enter characters: <b>J-L, j-l, 5.</b>
6	Enter characters: <b>M-O, m-o, 6.</b>
7	Enter characters: <b>P-S, p-s, 7.</b>
8	Enter characters: <b>T-V, t-v, 8.</b>
9	Enter characters: <b>W-Z, w-z, 9.</b>
0	Enter characters: 0 ! “ # \$ % & ’ ( ) ô õ ú ä ö ü α ε θ
*	Enter characters: * + , - . / : ; < = > ? π Σ σ Ω □ ¢ £
#	# = Accepts an entry (only required if two letters on the same key are needed – ex: TOM). Pressing # again = Space.
<b>Feature</b>	Clears the character entry one character at a time (used when entering the name).

7. Press **Hold**.
8. Press **Speaker** to hang up.


**To store a Station Speed Dialing number (Single Line Telephones only):**


1. Lift the Handset.
2. Dial 755.

3. Dial the Station Speed Dial buffer number to be programmed (0~9).

1 = Station Speed Dial Buffer 1  
 2 = Station Speed Dial Buffer 2  
 3 = Station Speed Dial Buffer 3  
 4 = Station Speed Dial Buffer 4  
 5 = Station Speed Dial Buffer 5  
 6 = Station Speed Dial Buffer 6  
 7 = Station Speed Dial Buffer 7  
 8 = Station Speed Dial Buffer 8  
 9 = Station Speed Dial Buffer 9  
 0 = Station Speed Dial Buffer 10

4. Dial the telephone number you want to store (up to 24 digits).

 *Valid entries are 0~9, # and \*.*

 *A Single line set cannot program a pause or flash in a spd bin.*

5. Hang up.


#### To dial a Station Speed Dialing number (multiline terminal):

1. Press **Speaker**.

2. Dial **#7** (default Service Code).


- OR -


Press the **System Speed Dialing** key (Service Code 751: 27).


 *To preselect, press a line key in step 1 (instead of Speaker).*

3. Dial the Station Speed Dial buffer number (**0 ~9**).

1 = Station Speed Dial buffer 1  
 2 = Station Speed Dial buffer 2  
 :: : : : :  
 0 = Station Speed Dial buffer 10

 *The stored number dials out.*

 *Unless you preselect, Trunk Group Routing selects the trunk for the call. The system may optionally select a specific Trunk Group for the call.*

 *If you have a DSS Console, you may be able to press a DSS Console key to chain to a stored number.*

#### To dial a Station Speed Dialing number (Single Line Telephone):

1. Lift the Handset.

2. Station Speed Dial **#7**  
 Group Speed Dial **#4**  
 System Speed Dial **#2**

3. Dial the Speed Dial Memory Location.  
Station Speed Dial 0~9  
Group Speed Dial xxx (none at default)  
System Speed Dial 000~999
4. Converse.

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## *Speed Dial – Telephone Book*

### Enhancements

Speed Dial – Telephone Book feature added with <b>Version 3000 or higher</b> software.
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### Description

Speed Dial – Telephone Book is a part of the Speed Dialing system. A maximum of 100 Telephone Books are supported per system. Individual extensions can be assigned up to two Telephone Books. Each Telephone Book can contain up to 300 alphabetical entries. Each of the 100 Telephone Books can have the 300 entries separated into 20 different Telephone Book Groups providing a quicker search capability to the user.

For example, Telephone Book 1 represents equipment manufacturer ABC Corporation. The ABC Corporation is divided into three groups; Sales, Service, and Parts. When a user needs to search the ABC Corporation Telephone Book for a Sales number, the search from all 300 entries in the ABC Corporation Telephone Book can be narrowed to the entries in the Sales Group only.

### Conditions

- A maximum of 100 Telephone Books is supported.
- Each extension in the SV8100 can be assigned two different Telephone books.
- Each Telephone Book can contain 20 different Telephone Book Groups.

### Default Setting

Disabled

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### System Availability

#### Terminals

DT300 and DT700 terminals

## Required Component(s)

None

## Related Features



Speed Dial – System/Group/Station


## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-56	<b>Service Code Setup (for Setup/Entry Operation) – Telephone Book Lock Service</b>	Password to unlock telephone book. <ul style="list-style-type: none"> <li>○ Dial the password then it prompts you for an extension number to unlock. Type in the ext number you want to unlock then you will be prompted for the password. Type in the password and then the telephone book is unlocked. When you dial the password to unlock the telephone book it removes the entry in 15-19-06 so the book is not locked anymore.</li> <li>○ To lock the telephone book do the same steps as above when the book is already unlocked. It will then assign 15-19-06 for you.</li> </ul>	MLT, SLT (default = no setting)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-07-01	<b>Telephone Book Dial Number and Name – Speed Dialing Data</b>	Assign telephone numbers to entries in each book. There are 100 books with 300 hundred entries (0-299) in each book.	Maximum 24 digits 1~9, 0, *, #, Pause (Press line key 1), Recall/Flash (Press line key 2), @ = Code to wait for answer supervision in ISDN (Press line key 3) (default = no setting)	✓		
13-07-02	<b>Telephone Book Dial Number and Name – Name</b>	Assign a name to each telephone number.	Maximum 12 Characters (Use dial pad to enter name) (default = no setting)	✓		
13-07-04	<b>Telephone Book Dial Number and Name – Group Number</b>	Assign each entry in the telephone book to a group if needed.  <i>In the telephone book you can break it down further and have specific groups to search on. For example, you could have sales, support, personal, finance, etc. groups to narrow your search.</i>  <i>A name and number can be assigned to an entry and each entry can be assigned to a group.</i>	1~20 (default = 1)	✓		
13-08-01	<b>Telephone Book System Name – Telephone Book Name</b>	Assign a name to all 100 telephone books.	Up to six characters (default = no setting)	✓		
13-09-01	<b>Telephone Book Group Name – Group Name</b>	Assign a name to all 20 telephone book groups per telephone book (1-100).	Up to 12 characters Default: 1 = Group 01 2 = Group 02 3 = Group 03 : : : 20 = Group 20	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-10-01	<b>Telephone Book Routing – Outgoing Mode</b>	Assign a trunk or ICM per telephone book (1-100).  <i>If set to trunk, it follows the stations trunk group routing and you do not enter the trunk access code in the entries. If set to ICM, you must enter the trunk access code in front of the number and it will follow the trunk access code for routing.</i>	0 = Trunk Outgoing 1 = Intercom Outgoing (default = 0)	✓		
15-19-01	<b>System Telephone Book Setup for Extension – Telephone Book 1</b>	Assign a station to the first telephone book. A station can have a maximum of two telephone books assigned.	Up to eight digits 0~100 Default: Port 1 : 1 Port 2 : 2 : : Port 100 : 100	✓		
15-19-02	<b>System Telephone Book Setup for Extension – Telephone Book 2</b>	Assign a station to the second telephone book. A station can have a maximum of two telephone books assigned.	Up to eight digits 0~100 (default = 0)	✓		
15-19-06	<b>System Telephone Book Setup for Extension – Locking of Telephone Book</b>	Allows the book to be locked/unlocked. When locked, the password must be dialed to unlock the book or it can be removed via programming.	0 = Off 1 = On (default = 0)	✓		
15-09-07	<b>System Telephone Book Setup for Extension – Password</b>	Allows you to lock/unlock the telephone book per extension.	0000~9999 (Fixed four digits) (default = 0000)	✓		

## Operation

### To search for an entry in the Telephone Book:


1. Press the **DIR** softkey.
2. Press the **TELBK** softkey.
3. Press the softkey associated with the first or second book.

- OR -

Press the **Right** cursor key.



4. After selecting the book, choose one of the following search types.

 To scroll the entries in the book, press Up or Down on the cursor pad. Once you reach the last entry on the page, the display advances to the next page. To select one of the entries, press the associated number on the dial pad or the center cursor pad button.

### Search By Name

Type as many letters as you want used for the search. If searching for an entry labeled “Paul”, type “P”. A page listing all entries beginning with the letter “P” is displayed. Or, you could type “Paul” and it would display “Paul”. After typing the search criteria, press the down pad to initiate the search.

### Search By Number

Press the **NUM** softkey. Now you can do the same search as above but using a telephone number instead of a name. If searching for a number beginning with “1”, type “1”. A page listing all entries beginning with the number “1” is displayed. Or, you could type part of all of the telephone number “817” and it would display all telephone numbers beginning the “817”. After typing the search criteria, press the down pad to initiate the search.

### Search Using Softkey

Press the **Menu** softkey and choose one of the following search types.

- Select the **NAME** softkey to search by name. Use the same search criteria explained in the “Search by Name” section.
- Select the **GRP** softkey to search by groups within that phone book. Use the Up/Down arrow to search through groups (1~20). Select the group you want to search and press the center cursor pad button. All the entries in the group are selected, press the Up/Down arrows to scroll through all entries in the group.
- Select the **NUM** softkey to search by number. Use the same search criteria explained in the “Search by Number” section.
- Select the **MEM** softkey to search by registry memory area (0~299). Type in the registry memory area (0-299) to jump to that entry.

5. Once you have found entry, proceed to the change, delete or dial entry operation.

### To change entries in the Telephone Book:

1. Press the **DIR** softkey.
2. Press the **TELBK** softkey.
3. Press the softkey associated with the first or second book.  
- OR -  
Press the **Right** cursor key.
4. Search to select the telephone name, telephone number or registry memory area (0~299) to change.
5. Press the **CHG** softkey. The selected entry flashes.
6. Press the center button on the cursor pad.

7. If you want to change the **Telephone Book Entry Name**, type the new name using the telephone dial pad keys and press the center button on the cursor pad. To accept the name change, press the center button on the cursor pad again. If you do not want to change the **Telephone Book Entry Name**, press the center button on the cursor pad again. The group is displayed.

If you want to change the **Group Name** type the new name using the telephone dial pad keys and press the center button on the cursor pad. To accept the name change, press the center button on the cursor pad again. If you do not want to change the **Group Name**, press the center button on the cursor pad again. The phone number is displayed.

If you want to change the **Telephone Number** type the new number using the telephone dial pad keys and press the center button on the cursor pad. To accept the number change, press the center button on the cursor pad again. If you do not want to change the **Telephone Number**, press the center button on the cursor pad again. The registry memory is displayed.

If you want to change the **Registry Memory Area (0~299)** type the new number using the telephone dial pad keys and press the center button on the cursor pad. To accept the number change, press the center button on the cursor pad again. If you do not want to change the **Registry Memory Area**, press the center button on the cursor pad again. The registry memory area is displayed. If you select a field that is already used, you have the option to overwrite that field (the old entry will be deleted). If you do not want to overwrite it press **NO**, if you do press **YES**. If you selected a memory area that was not assigned, all the entries that you made to the new memory area are assigned and you are returned to the speed dial entry selection window.

#### To delete entries in the Telephone Book:

1. Press the **DIR** softkey.
2. Press the **TELBK** softkey.
3. Press the softkey associated with the first or second book.  
- OR -  
Press the **Right** cursor key.
4. Search to select the telephone name, telephone number or registry entry (0~299) to change. The selected entry flashes.
5. Press the **DEL** softkey.
6. If you want to delete the entry, press the **YES** softkey. If you do not want to delete the entry, press the **NO** softkey.

#### To dial entries in the Telephone Book:

1. Press the **DIR** softkey.
2. Press the **TELBK** softkey.

3. Press the softkey associated with the first or second book.

- OR -

Press the **Right** cursor key.

4. Search to select the telephone name, telephone number or registry entry (0~299) to change.

5. Press the **Dial** softkey to dial the selected number.

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## *Station Hunt*

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### **Description**

After calling a busy extension, a call immediately hunts to the next available member of the Hunt Group (Department Group). The caller does not have to hang up and place another Intercom call if the first extension called is unavailable.

### **Conditions**

- If required, use this option to change the Department Step Calling Single Digit Service Code (default code = 2).
- A function key for Department Step Calling can be assigned (code 36).
- In Program 20-08-12, enable (1) or disable (0) an extension user ability to use Department Step Calling.

### **Default Setting**

Disabled

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

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### **Related Features**


**Department Calling**

**Department Step Calling**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-03	<b>Department Group Basic Data Setup – Department Routing When Busy (Auto Step Call)</b>	Assign whether a call to busy station Hunts (1) or Not Hunts (0) to the next available member of the Hunt Group (Department Group).  Refer <a href="#">Department Calling on page 2-401</a> to set up the Department Group.	0 = Normal (Intercom caller to busy department member hears busy) 1 = Circular (Intercom callers to busy department member routes to idle member) (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On Call Queuing to the extension. Set to Off for Station Hunting to work.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually or Automatically receive off-hook signals. Set to 0 for Station Hunting to work.	0 = Manually 1 = Automatically (default = 1 for COS 1~15)	✓		



## Operation

### To make a Step Call:

1. Place a call to a busy extension.

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## *Station Message Detail Recording*

### Enhancements

SMDR tracks when an extension transfers an active call to a trunk with **Version 3100 (3.10 or higher software required)**.

With **Version 7000 or higher** software, SMDR can record/print both system trunk and internal calls. The **V7000 Enhancement License (0036)** and the **SMDR Feature License (0008)** is required.

With **Version 8000 or higher** software and the PZ-ME50-US installed, the SV8100 can buffer up to 4000 calls. The **V8000 Enhancement License (0037)** and the **SMDR Feature License (0008)** is required.

With **Version 9000 or higher** software, the option to tag calls routed through the Virtual Loopback to assist in the tracking of calls has been added.

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### Description

Station Message Detail Recording (SMDR) provides a record of both system trunk calls and internal calls. Typically, the record outputs to a customer-provided printer, terminal or SMDR data collection device. SMDR allows you to monitor the usage at each extension and trunk. This makes charge-back and traffic management easier.

#### SMDR provides:

- Abandoned Call Reporting

The SMDR report includes calls that rang into the system but were unanswered (i.e., abandoned). SMDR can include all abandoned calls or only those abandoned calls that rang longer than the specified duration. The Abandoned Call Report helps you keep track of lost business.
- Blocked Call Reporting

When Toll Restriction blocks a call, you can have SMDR print the blocked call information. Or, you can have SMDR exclude these types of calls. With Blocked Call Reporting, you can better customize Toll Restriction for the site application.
- Customized Date Format

The SMDR header can show the report date in one of three formats: American, European or Japanese. Set the format for your preference.
- Transferred Call Tracking

SMDR shows each extension share of a transferred call. If an outside call is transferred among four extensions, SMDR shows how long each of the callers stayed on the call.

Data Call Tracking

Data Call Tracking can log the system internal data calls. Since SMDR normally logs external (trunk) data calls, Data Call Tracking lets you get a complete picture of data terminal activity.

 Digit Counting

With Digit Counting, SMDR can selectively keep track of toll calls. For example, if the digit count is nine, SMDR does not include toll calls in the home area code. Digit Counting permits SMDR to include only the calls you want to monitor.

 Digit Masking

Digit Masking lets you X out portions of the number dialed on the SMDR report. A digit mask of seven, for example, masks out all exchange codes (NNXs) and local addresses. Digit Masking makes it easier to keep track of calling patterns, without having to interpret each individual number. You can also use Digit Masking to block out access and security codes.

 Duration Monitoring

SMDR can include calls of any duration, or only those that last longer than the time you specify. If you want to keep track of all trunk activity, use a short duration. To keep track of only significant usage, use a longer duration.

 Extension Exclusion

You can selectively exclude extensions from the SMDR report. This ensures privacy for high-profile callers. For example, the company attorney negotiating a merger may not want his calls to show up on an in-house report.

 PBX Call Reporting

If your system is behind a PBX, you can have SMDR monitor all traffic to the PBX or just calls placed over PBX trunks. The SMDR record can include all PBX calls (including calls to PBX extensions) or just calls that include the PBX trunk access code.

 Trunk Exclusion

Use Trunk Exclusion to exclude certain trunks not subject to per-call charges (like WATS lines) from the SMDR report. This makes call accounting easier, since you review only those calls with variable costs.

 Usage Summaries

SMDR can automatically print daily, weekly and monthly call activity summaries. Each summary includes the total number of regular trunk calls and ISDN trunk calls, and the costs for each type. The daily report prints every day at midnight. The weekly report prints every Sunday night at midnight. The monthly report prints at midnight on the last day of the month.

 *Internal SMDR is not included in the summary reports.*

 Extension Name or Number

The SMDR report can include an extension name or extension number. Choose the method that makes it easier for you to track call usage.

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(The LAN port only provides information through LAN-capable programs, such as HyperTerminal. Printing of the SMDR information must be done from that program.)

**Internal SMDR provides:** Answered Calls

SMDR records the calling extension and the extension number or name of who was called.

 Held Calls

SMDR records the extension numbers of the party on hold and the held party. The duration of the call is recorded as the time both parties are connected until one party becomes idle. Duration Time starts when both sides are connected until one side becomes idle.

 2nd Call Made While 1st is on Hold

When party A puts party B on hold and then dials party C, SMDR records the time party A and C talk until one party goes idle. If party B is picked up from hold and then either party goes idle, SMDR creates a 2nd record for that call.

 Transferred Calls

Screened Transfer – If party A calls Party B and then transfers B to party C after talking to party C, there are 2 records at this point: 1 for the A to B call and 1 for the A to C call. A 3rd record is printed once party B or C goes idle.


Unscreened Transfer – If party A calls Party B and transfers to party C without talking to party C, there is 1 record at this point. A 2nd record is printed once party B or C goes idle.

 Mobile Extension

An internal call to a mobile extension generates two records:


Internal extension to mobile extension.

Mobile extension call to trunk call.

 *The same is true if a mobile user calls in from outside the system and gets a dial tone from the mobile extension and makes an internal or trunk call.*

 AspireNet

If the call goes over two systems, both SMDR systems record the call.

 *Two systems record the call. If two SMDR records are combined into one, two recordings of the same call are made.*

 Conferences

If party A establishes a conference with party B and C and then drops out, a record prints for party A to B and party A to C. A 3rd record is printed when either B or C goes idle. Calls are printed in the order they leave the conference.

 Virtual Extension

SMDR records the extension that the virtual extension resides on.

Answering Paging

SMDR records the extension that originated the page and the extension that answers using meet me paging.

 Group Call

SMDR records the extension that answered the Department Call.

 CCIS

SMDR does not support internal calls across either system.

 Barge-In

SMDR does not record Barge-In.

 Room Monitor

SMDR does not record Room Monitor.

 Retrieving Parked Calls

SMDR prints the parked extension in the STATION column and the extension that retrieved the park in the DIALLED column.

**SMDR Enhanced for Caller ID**

The SMDR output is enhanced to include up to 16 or 24 characters of the Caller ID name information (depending on the view option selected in Program 35-02-18). You can select to display the Caller ID number or name or the DID number. If you want to display the Caller Name in the DIALLED NO./CLI and ACCOUNT area, select 2 in the updated Program 35-02-15 and 1 in Program 35-02-17.

If the Caller ID name is not received, the area for Caller ID Name is blank.

**Sample SMDR Report (Trunk)**

For example, with Program 35-01-08 = 0 (Format for NA), Program 35-01-14 = 1 (Date) and Program 35-02-17 = 1 (Caller ID Name), if a call is received with the Caller ID Name of NEC Infrontia Corporation (24 characters), the following SMDR record is displayed:

CLASS	TIME	DATE	LINE	DURATION	STATION	DIALLED No./CLI	ACCOUNT
POT	10:52	12/09	002	00:00:10	2001	2142623801	08754
PIN	10:52	12/09	001	00:00:20	2017	2142623802	NECinfrontia Corp.
PIN	10:53	12/09	002			2142623801	NO ANSWER

If Program 35-02-18 = 1 (Caller ID Name Output Method) is set to line feed, the SMDR displays as follows:

CLASS	TIME	DATE	LINE	DURATION	STATION	DIALLED No./CLI	ACCOUNT
POT	10:52	12/09	002	00:00:10	2001	2142623801	08754
PIN	10:52	12/09	001	00:00:20	2017	2142623802	NECinfrontia Corp.
NEXT NECinfrontia Corp.							
PIN	10:53	12/09	002			2142623801	NO ANSWER

**Sample SMDR Report (Internal)**

CLASS	TIME	LINE	DURATION	STATION	DIALLED No./CLI	ACCOUNT
ICM	14:35		00:00:02	101	103	
ICM	14:36		00:00:18	101	102	
ICM	14:36		00:00:14	101	103	
ICM	14:37		00:00:10	101	103	
ICM	14:37		00:00:29	101	102	
ICM	14:41		00:00:15	101	102	
ICM	14:42		00:00:03	101	103	

Figure 2-63 Example of SMDR Report

**Flexible Transfer/Virtual Loopback Enhancement**

When calls are routed through the ISDN Virtual Loopback, the SMDR information does not provide enough information to provide complete tracking of route of the call. With **Version 9000** software, this has been enhanced with the addition of a tag to any part of the call that is routed through the virtual loopback to enable complete tracking of the call.

When a call is routed through the Virtual Loopback, or more precisely its S-point, it will return as a new incoming call on the Loopback T-point trunk port.

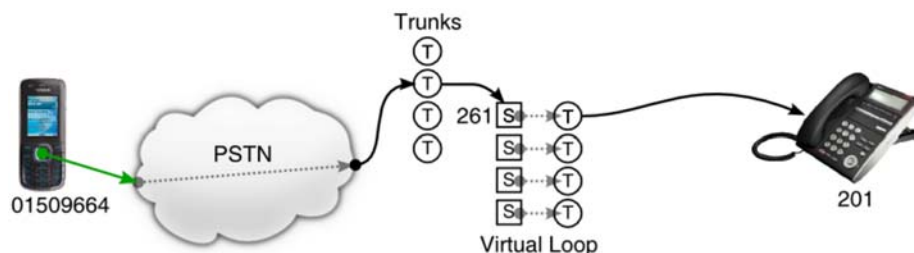


Figure 2-64 Virtual Loopback – S-Point

The SMDR will report this as follows:

01/07/2011 PAGE 004							
CLASS	TIME	LINE	DURATION	STATION	DIALLED No./CLI	RD/COST	ACCOUNT
17	IVIN	14:19 005	00:00:02	201	1509664	0:02	
18	IVIN	15:00 002	00:00:01	261	1509664	0:02	

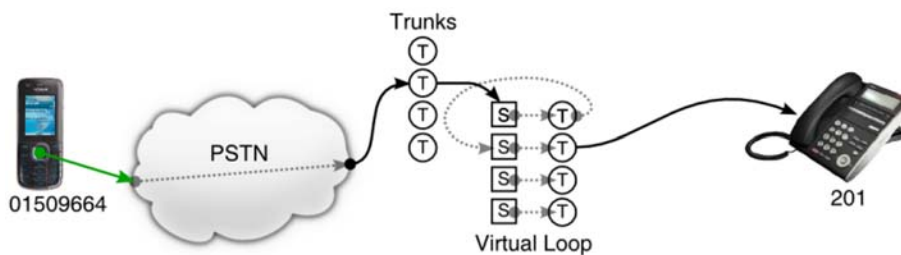
**Figure 2-65 Example of S-Point Report**

To give the SMDR software an indication that the call is not terminated on the S-point and not a new call, but an extension of the first call, the PBX puts a special flag on the appropriate fields in the SMDR records.

01/07/2011 PAGE 004							
CLASS	TIME	LINE	DURATION	STATION	DIALLED No./CLI	RD/COST	ACCOUNT
17	IVIN	14:19 005v	00:00:02	201	1509664	0:02	
18	IVIN	15:00 002	00:00:01	005v	1509664	0:02	

**Figure 2-66 Example of S-Point Report (Flagged)**

The mark provides two functions. First, by using an encoding that is not a usual number or trunk port index, the SMDR software gets the information that a virtual loopback channel is used. Additionally, on the Virtual Loopback's S-points, the station's phone number isn't used, but the trunk port index of the associated T-point, again marked as virtual. This way, the SMDR software can directly use the mark as tag to link the calls together.



**Figure 2-67 Virtual Loopback – T-Point**

Tracking the call path is even then possible if the call is routed two or more times through the Virtual Loop:

The SMDR will then show like this:

							01/07/2011 PAGE 004
CLASS	TIME	LINE	DURATION	STATION	DIALLED No./CLI	RD/COST	ACCOUNT
17	IVIN	14:19 006V	00:00:02	201	1509664	0:21	
18	IVIN	15:00 005V	00:00:01	006V	1509664	0:21	
19	IVIN	15:00 002	00:00:01	005V	1509664	0:21	

**Figure 2-68 Example of Twice Through Virtual Loop**

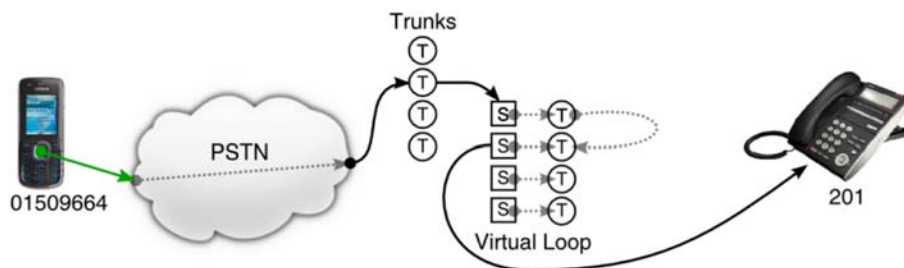
Here, the call passes twice through the Virtual Loopback, the first time using trunk #5, the second time using trunk #6. Note the reverse order which is the result of the called party clearing the call, so that the last leg is printed first. The opposite order occurs if the calling party clears first:

							01/07/2011 PAGE 004
CLASS	TIME	LINE	DURATION	STATION	DIALLED No./CLI	RD/COST	ACCOUNT
17	IVIN	15:00 002	00:00:01	005V	1509664	0:21	
18	IVIN	15:00 005V	00:00:01	006V	1509664	0:21	
19	IVIN	14:19 006V	00:00:02	201	1509664	0:21	

**Figure 2-69 Example of Twice Through Virtual Loop (Reverse Order)**

This special tagging applies anytime Virtual Loop ports are used. If an extension uses a Virtual Loop T-point to dial 'out', this port is tagged in the SMDR report accordingly; as well the associated S-point.

The same applies if internal SMDR is enabled and the S-point is called. Then, the S-point is printed as tagged associated T-point. Here is an example of an external call being routed through the T-point of the Virtual Loop:



**Figure 2-70 Virtual Loopback – External Call Routed Through T-Point**

The SMDR output looks very similar to the one before, where the call was routed through the same T- and S-point ports, but in the other direction:

							01/07/2011 PAGE 004
CLASS	TIME	LINE	DURATION	STATION	DIALLED No./CLI	RD/COST	ACCOUNT
17	IVIN	15:00 002	00:00:01	005V	1509664	0:21	
18	IVOT	14:19 006V	00:00:02	005V	1509664	0:21	
19	ICM	15:00 006V	00:00:01	201	1509664	0:21	

**Figure 2-71 Example of Twice Through Virtual Loop (Reverse Direction)**


This intended purpose of the tagging is to link the first and last port of such a chain together. Note that the internal SMDR feature needs to be switched on in this case to get the call leg from S-point to extension printed.

Limitation

These programs must be set correctly to function:

Program 35-02-03= 1: Trunk Number

Program 35-02-09= 1: Extension Number

 *This is not a real limitation however, if both are set to 0, matching names may be given to the T-point and S-point ports (e.g. "V-one", "V-two", ...) yielding the same functionality.*

Program 35-02-16 must be set to **1: Trunk Name/Number** otherwise, the received dialed number not the trunk port information is printed.

**Table 2-82 SMDR Report Definitions**

Report Headings	Definitions
<b>Call Record Number</b>	SMDR record number (consecutive)
<b>CLASS</b>	Type of call (see Class Definitions below)
<b>TIME</b>	Time call placed or answered. (For Transferred calls, shows time user picked up Transfer.)
<b>DATE</b>	Date the call was made (Program 35-02-14=1). For Extension calls, this area is blank.
<b>LINE</b>	Trunk number used for call. For Extension calls, this area is blank.
<b>DURATION</b>	The time the call lasted. (For Transferred calls, shows how long user was on call after answering the Transfer.)
<b>STATION</b>	Extension number of call owner (i.e., extension that first placed or answered call) (For Transferred calls, there can be more than one owner – depending on how many extensions shared the call.)



**Table 2-82 SMDR Report Definitions (Continued)**

<b>Report Headings</b>	<b>Definitions</b>
<b>DIALLED No./CLI</b>	For outgoing calls, the number dialed or, for incoming calls, the Caller ID information
<b>ACCOUNT</b>	Account Code number entered by extension user. For Extension call, this area blank.
<b>Class Definitions</b>	
<b>POT</b>	Outgoing trunk call
<b>POTA</b>	Outgoing trunk call placed using Toll Restriction Override
<b>PIN</b>	Incoming trunk calls
<b>ALB</b>	All lines in group are busy (group number follows TIME field)
<b>BRD</b>	Call blocked due to Toll Restriction
<b>PTRS</b>	Transferred call
<b>IVIN</b>	BRI/PRI inbound trunk call
<b>ICM</b>	Extension call

**Table 2-83 SMDR Report Format with Program 35-02-14 Set to '0'**

<b>Character Position</b>	<b>Field Definition</b>
<b>Header Line 1</b>	
<b>1~60</b>	Spaces
<b>61~70</b>	MM/DD/YYYY
<b>71</b>	Space
<b>72~75</b>	PAGE
<b>76</b>	Space
<b>77~79</b>	Report page number (e.g., 001)
<b>CR &amp; LF</b>	Carriage return and line feed
<b>Header Line 2</b>	
<b>1~5</b>	CLASS
<b>6</b>	Space
<b>7~10</b>	TIME
<b>11~14</b>	Spaces
<b>15~18</b>	LINE

**Table 2-83 SMDR Report Format with Program 35-02-14 Set to '0' (Continued)**

<b>Character Position</b>	<b>Field Definition</b>
19~22	Spaces
23~30	DURATION
31~32	Spaces
33~39	STATION
40~44	Spaces
45~51	DIALLED
52	Space
53~59	No./CLI
60~63	Spaces
64~70	ACCOUNT
CR & LF	Carriage return and line feed
LF	Line feed
<b>SMDR Record</b>	
1~4	Call type (e.g., POT for outgoing)
5	Space
6~10	Time in 24 hour clock (HH:MM)
11	Space
12~21	LINE
22	Space
23~30	Call Duration (HH:MM:SS)
31	Space
32~41	Station number or name
42	Space
43~62	Number dialed (20 digits maximum)
63	Space
64~79	Account number or NO ANSWER

Table 2-84 SMDR Report Format with Program 35-02-14 Set to '1'

Character Position	Field Definition
<b>Header Line 1</b>	
1~60	Spaces
61~70	MM/DD/YYYY
71	Space
72~75	PAGE
76	Space
77~79	Report page number (e.g., 001)
CR & LF	Carriage return and line feed
<b>Header Line 2</b>	
1~5	CLASS
6	Space
7~10	TIME
11	Spaces
12~15	DATE
16~17	Spaces
18~21	LINE
22	Space
23~30	DURATION
31~32	Spaces
33~39	STATION
40~44	Spaces
45~51	DIALLED
52	Space
53~59	No./CLI
60~63	Spaces
64~70	ACCOUNT
CR & LF	Carriage return and line feed
LF	Line feed

**Table 2-84 SMDR Report Format with Program 35-02-14 Set to '1' (Continued)**

Character Position	Field Definition
<b>SMDR Record</b>	
1~4	Call type (e.g., POT for outgoing)
5	Space
6~10	Time in 24 hour clock (HH:MM)
11	Space
12~16	DATE
17	Space
18~21	LINE
22	Space
23~30	Call Duration (HH:MM:SS)
31	Space
32~41	Station number or name
42	Space
43~62	Number dialed (20 digits maximum)
63	Space
64~79	Account number or NO ANSWER

**Table 2-85 SMDR Summary Report**

<p>OUTGOING CALL/COST SUMMARY FOR DAY OF nn/nn/nn</p> <p>TOTAL NO. OF OUTGOING PSTN CALLS: 0 TOTAL NO. OF OUTGOING ISDN CALLS: 0 NO. OF OUTGOING PSTN CALLS COSTED: 0 COST: 0 NO. OF OUTGOING ISDN CALLS COSTED: 0 COST: 0</p> <p>OUTGOING CALL/COST SUMMARY FOR WEEK ENDING nn/nn/nn</p> <p>TOTAL NO. OF OUTGOING PSTN CALLS: 49 TOTAL NO. OF OUTGOING ISDN CALLS: 0 NO. OF OUTGOING PSTN CALLS COSTED: 0 COST: 0 NO. OF OUTGOING ISDN CALLS COSTED: 0 COST: 0</p>
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Table 2-85 SMDR Summary Report (Continued)

## OUTGOING CALL/COST SUMMARY

FOR MONTH ENDING nn/nn/nn

TOTAL NO. OF OUTGOING PSTN CALLS: 49

TOTAL NO. OF OUTGOING ISDN CALLS: 0

NO. OF OUTGOING PSTN CALLS COSTED: 0 COST: 0

NO. OF OUTGOING ISDN CALLS COSTED: 0 COST: 0

**Conditions**

- SMDR data does not include internal calls **Version 6000 (V6.02 or lower)**.
- With **Version 7000 or higher** software, SMDR can record/print both system trunk and internal calls. **Version 7000 Enhancement License (0036)** and **SMDR Feature License (0008)** is required.
- With **Version 7000 or lower**, the SMDR call buffer stores 320 calls. The buffer stores calls when the SMDR device is unavailable. When the buffer fills, SMDR will not collect any new calls until the buffer is cleared.
- With **Version 8000 or higher** software and the PZ-ME50-US installed, the SV8100 can buffer up to 4000 calls. The **Version 8000 Enhancement License (0037)** and **SMDR Feature License (0008)** is required.
- When SMDR reports are enabled using the same port as the Traffic Reporting feature (example: 147), the SMDR blocks the Traffic reports. Unplug the cable and plug it back in to allow Traffic reports to print.
- SMDR requires a connection to the CD-CP00-US LAN, or a RS232 serial connection to a CT(A)-R adaptor on a DTH/DTR style phone.
- When using a CT(A)-R unit connected to a DTH/DTR style terminal for SMDR output:
  - ❑ SW1-1 and SW1-2 should be set to ON and SW1-3 ~SW1-8 set to OFF on the CT(A) unit
  - ❑ The CT(A)-R unit should be connected to the DTH/DTR terminal and connected to power before the line cord is plugged in
- DT300 and DT700 style terminals do not support a RS232 serial connection for SMDR output.
- If no answer is received, NO ANSWER is displayed regardless of the system programming for the Caller ID display option (Trunk only).
- The setting in Program 35-02-18 works regardless of the entry in Program 35-02-15 or 35-02-17.
- When Program 35-02-18 is set to 1, the first and second lines are sometimes separated. When the buffer is full, the overflowed data may not be shown.

- The special characters used in the UNIVERGE SV8100 system cannot be output to the SMDR – they are converted to (\_).
- To use the PBX Call Reporting option, program system for behind PBX operation.
- Calls made from Virtual Extensions show up in SMDR as calls made from the physical extension the VE resides on.
- Terminals that have a tandem setting is not supported in Internal SMDR feature.
- Internal SMDR is not included in the Summary Report (Programs 35-02-04, 35-02-05 or 35-02-06).
- Internal calls to or from a door phone are not included in the SMDR output.
- When using internal SMDR, blind transfers generate two records and the duration is recorded as between those two stations.
- When using internal SMDR, screened transfers generate three records, and the duration overlaps between those three extensions.
- CCIS Centralized Billing will only buffer 320 calls.
- The SMDR call records will be buffered when the system cannot output the SMDR information due to the lost connection.
- When the connection is active, the SMDR information will be immediately output and it will not be buffered.
- When the system is powered off, all current records in the buffer are deleted.
- When the buffer fills, the oldest record remains and the new record is counted as overflow records.
- When using the free license and it expires, only the first 320 calls are buffered or output.
- With **Version 9000 or higher** software, SMDR can tag Virtual Loopback calls.

## Default Setting

Disabled

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## System Availability

### Terminals

All Terminals (with Trunk SMDR)

All Terminals except Virtual extension (with Internal SMDR)

## Required Component(s)

Software License

## Related Features

PBX Compatibility

Traffic Reports

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	Assign the IP Address.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-20-01	LAN Setup for External Equipment – TCP Port	Define the TCP port (0~65535) when communicating to the SMDR (type 5).	0~65535 default: External Device 1 (CTI Server) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service) = 0 External Device 14 (IP-DECT Directory Access) = 0	✓		
10-20-03	LAN Setup for External Equipment – Keep Alive Time	Define the keep alive time for communicating to external equipment.	1~255 (seconds) (default = 30)	✓		
14-01-06	Basic Trunk Data Setup – SMDR Printout	Have the system print or Not print the trunk you are programming in the SMDR printout. Refer to Programs 35-01 and 35-02 for SMDR printout options.	0 = No Print Out 1 = Prints Out (default = 0)	✓		
14-04-01	Behind PBX Setup	For ANI/DNIS, the following additional setting is recommended: Behind PBX = 0 (Stand Alone).	0 = Stand Alone (Trunk) 1 = Behind PBX (PBX) 2 = Not Used 3 = CTX assume 9 (default = 0)		✓	
15-01-03	Basic Extension Data Setup – SMDR Printout	For each extension, enter 1 if extension calls should print on the SMDR report. Enter 0 if extension calls should not print on the SMDR report.	0 = Do not print on SMDR report 1 = Include on SMDR report (default = 1)	✓		
15-01-14	Basic Extension Data Setup – SMDR Output of Maid Intercom Calls	When set to 0 (Disable) it will not record sent internal calls.	0 = Disable 1 = Enable (default = 0)	✓		
15-01-15	Basic Extension Data Setup – SMDR Output of Answered Intercom Calls	When set to 0 (Disable) it will not record received internal calls.	0 = Disable 1 = Enable (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-19	<b>Multiline Telephone Basic Data Setup – CTA Data Communication Mode</b>	Select 0 if the dip switch settings on the CTA Adapter are set to PC connection (1=on, 2~8=off) or select 1 if the DIP switches are set to printer connection (1~2=on, 3~8=off).	0 = CTI Mode 1 = Non Procedural Mode (Non-SCS) (default = 0)	✓		
15-02-20	<b>Multiline Telephone Basic Data Setup – Baud Rate for CTA Port</b>	Select the baud rate used by the CTA adapter.	0 = 4800 1 = 9600 2 = 19200 (default = 2)	✓		
16-02-01	<b>Department Group Assignment for Extensions – Extension Group Setting</b>	Use to set up the extension group.	1-64 (default = 1)		✓	
20-07-18	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Extension Data</b>	Determine if Accumulated Extension Data is included in the SMDR report for each COS.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-19	<b>Class of Service Options (Administrator Level) – SMDR Printout Department Group (STG) Data</b>	Determine if Department Group (STG) Data is included in the SMDR report for each COS.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-07-20	<b>Class of Service Options (Administrator Level) – SMDR Printout Accumulated Account Code Data</b>	Determine if Accumulated Account Code Data is included in the SMDR report for each COS.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-13-36	<b>Class of Service Options (Supplementary Service) – Call Duration Timer Display</b>	Turn Off or On a Call Timer for the extension.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
35-01-01	<b>SMDR Options – Output Port Type</b>	Specify the type of connection used for SMDR. The baud rate for the COM port should be set in Program 15-02-19.	0 = None 3 = LAN 4 = CTA/CTU (default = 0)	✓		
35-01-02	<b>SMDR Options – Output Destination Number</b>	Specify the SMDR printer output extension (CTA extension number).	Up to eight digits (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-01-03	<b>SMDR Options – Header Language</b>	Specify the language in which the SMDR header should be printed.	0 = English 1 = German 2 = French 3 = Italian 4 = Spanish (default = 0)		✓	
35-01-04	<b>SMDR Options – Omit Digits</b>	The number of digits entered in this option do not print on the SMDR report. Enter 0 if you want to print all digits.	0~24 (0 = None omitted) (default = 0)		✓	
35-01-05	<b>SMDR Options – Minimum Digits</b>	Outgoing calls must have at least this number of digits for inclusion in the SMDR report. Enter 0 to include all outgoing calls, regardless of the number of digits dialed.	0~24 (0 = Include all) (default = 0)	✓		
35-01-06	<b>SMDR Options – Minimum Call Duration</b>	The duration of a call must be at least this time to be included on the SMDR report. Enter 0 to have calls of any duration print.	0~65535 (seconds) (0 = All) (default = 0)	✓		
35-01-07	<b>SMDR Options – Minimum Ring Time (For Incoming Calls)</b>	A call must ring for at least this time to be included on the SMDR report. Enter 0 to allow all calls to print.	0~65535 (seconds) (0 = All) (default = 0)		✓	
35-01-08	<b>SMDR Options – Format Selection</b>	<b><i>Do not change:</i></b> This option is added to allow an increased account code field from eight to 16 when used in the U.K. This allows 16 characters of the Caller ID name to be displayed. For the U.S., this option is set to 0 and should remain at this setting as 16 characters are already provided for the account code field.	0 = NA Type (North America) 1 = G/J Type (Overseas/ Japan) (default = 0)			✓
35-02-01	<b>SMDR Output Options – Toll Restricted Call</b>	SMDR can include or exclude calls blocked by Toll Restriction.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-02	<b>SMDR Output Options – PBX Calls</b>	When the system is behind a PBX, SMDR can include all calls (1) or just calls dialed using the PBX trunk access code (0).	0 = Not Displayed 1 = Displayed (default = 1)		✓	

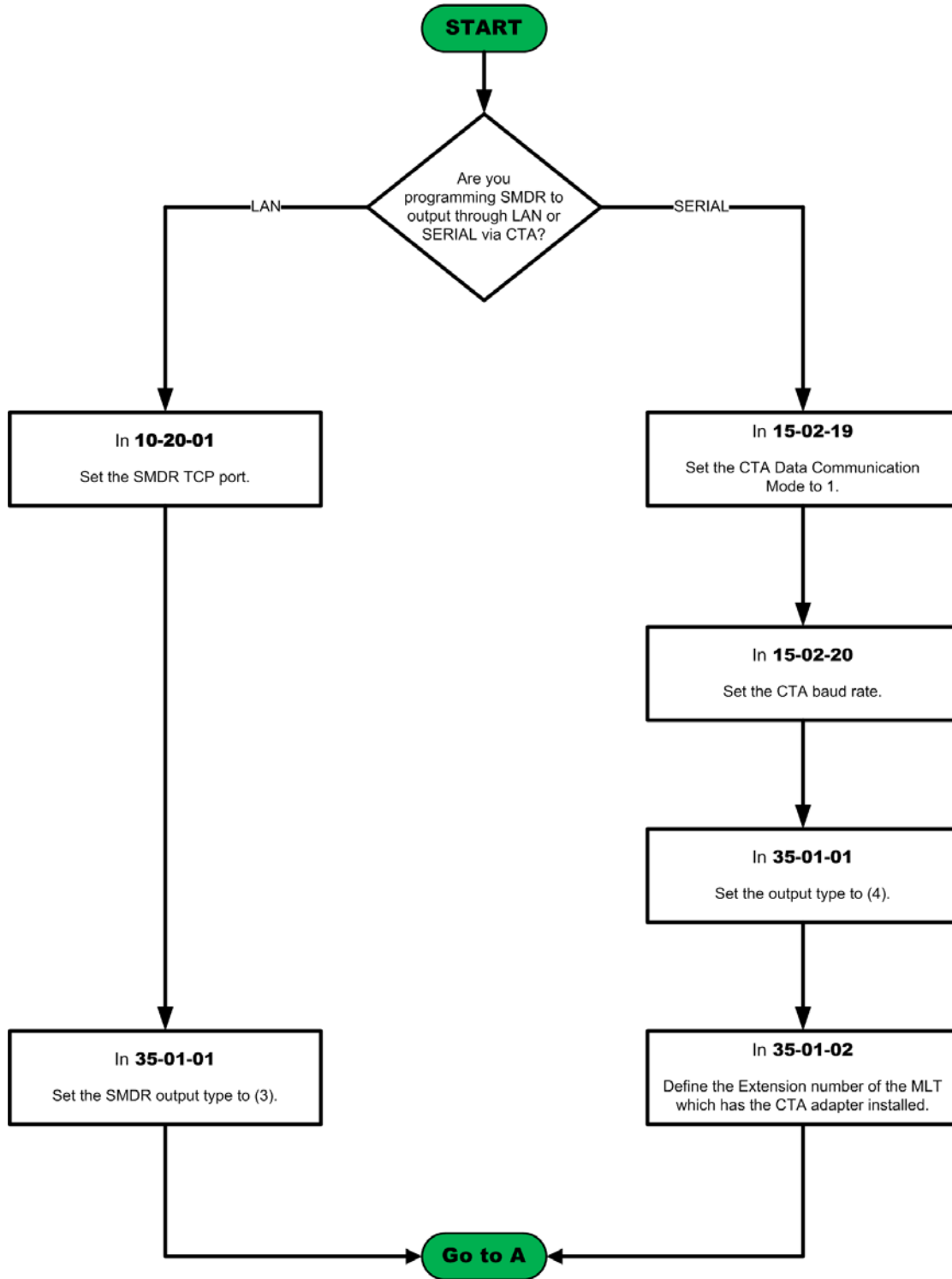
Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-03	<b>SMDR Output Options – Trunk Number or Name</b>	Select whether the system should display the trunk name or number on SMDR reports.  If this option is set to 0, Program 35-02-14 must be set to 0.	0 = Name 1 = Number (default = 1)		✓	
35-02-04	<b>SMDR Output Options – Summary (Daily)</b>	Set this option to 1 to have the SMDR report provide a daily summary (at midnight every night).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-05	<b>SMDR Output Options – Summary (Weekly)</b>	Set this option to 1 to have the SMDR report provide a weekly summary (every Saturday at midnight).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-06	<b>SMDR Output Options – Summary (Monthly)</b>	Set this option to 1 to have the SMDR report provide a monthly summary (at midnight on the last day of the month).	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-07	<b>SMDR Output Options – Toll Charge Cost</b>	Set this option to 1 have the SMDR report include toll charges.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-08	<b>SMDR Output Options – Incoming Call</b>	Enable this option (1) to have the SMDR report include incoming calls. If you disable this option (0), incoming calls do not print.	0 = Not Displayed 1 = Displayed (default = 1)		✓	
35-02-09	<b>SMDR Output Options – Extension Number or Name</b>	Set this option to 1 to have the SMDR report include extension numbers. Set this option to 0 to have the SMDR report include extension names.	0 = Name 1 = Number (default = 1)		✓	
35-02-10	<b>SMDR Output Options – All Lines Busy (ALB) Output</b>	Determine if the All Lines Busy (ALB) indication should be displayed.	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-11	<b>SMDR Output Options – Walking Toll Restriction Table Number</b>	Set the SMDR (Station Message Detail Recording) walking toll restriction table number output options for each of the eight SMDR ports.	0 = Not Output 1 = Output (default = 1)		✓	
35-02-12	<b>SMDR Output Options – DID Table Name Output</b>	Determine if the DID table name should be displayed for incoming DID calls.	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-13	<b>SMDR Output Options – CLI Output When DID to Trunk</b>	Determine if the Caller ID should be displayed when the incoming DID number is transferred to an outgoing trunk.	0 = Not Displayed 1 = Displayed (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-14	<b>SMDR Output Options – Date</b>	Determine whether or not the date should be displayed on SMDR reports.  <i>This option must be set to 0 if the trunk name is set to be displayed in Program 35-02-03.</i>	0 = Not Displayed 1 = Displayed (default = 0)		✓	
35-02-15	<b>SMDR Output Options – CLI/DID Number Switching</b>	Determine whether the CLI or DID Calling Number should be displayed.	0 = CLI (CLIP) 1 = DID Calling Number 2 = Caller ID Name (default = 0)		✓	
35-02-16	<b>SMDR Output Options – Trunk Name or Received Dialed Number</b>	Determine how the SMDR should print incoming calls on ANI/DNIS or DID trunks. If set to 1, ANI/DNIS trunks can print DNIS digits. If set to 0 trunk names are printed instead (assigned in Program 14-01-01).	0 = Trunk Port Name 1 = Received Dialed Number 2 = Both (default = 0)		✓	
35-02-17	<b>SMDR Output Options – Print Account Code or Caller Name of Incoming Call</b>	Determine whether the Account Code or Caller ID name should print in the SMDR record.  <i>Program 35-01-08 must be set to 0 for this entry to be followed.</i>	0 = ACC 1 = CNAME (default = 0)		✓	
35-02-18	<b>SMDR Output Options – Print Mode for Caller Name of Incoming Call</b>	Determine how SMDR should print Caller Name of incoming call. Select whether to display up to 16 characters of the Caller Name on the same line as the call record (0) or if a line feed should be added and up to 24 characters of the Caller Name are displayed on the following line (1). If the line feed option is selected, the Caller Name is displayed on the next line as : NEXT Caller Name. This setting works regardless of the setting in Program 35-02-15.  <i>With this option set to 1, if your communications program (such as HyperTerminal) has the line wrap option enabled in the ASCII setup, an additional line break may appear above the Caller name line.</i>	0 = Normal 1 = Line Feed (default = 0)		✓	

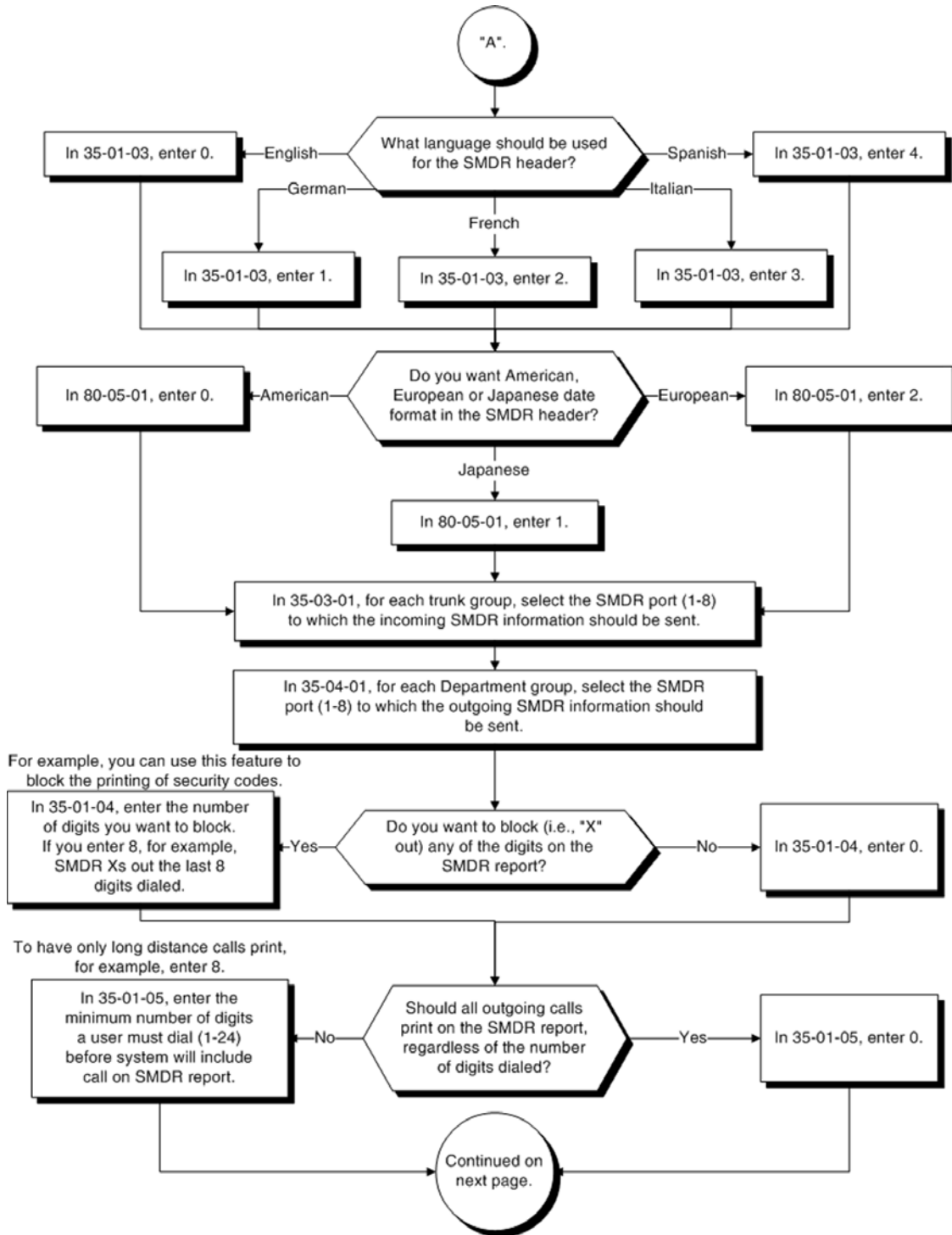
Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
35-02-21	<b>SMDR Output Options – S-Point Terminal Number</b>	Set up SMDR Port 1.	0 = MSN Number 1 = Extension Number (default = 0)			✓
35-02-22	<b>SMDR Output Options – Security Auto Dialing</b>	Select whether the system should display the SAD (Security Auto Dialing) on SMDR report.	SMDR Port 1-8: 0 = No Output 1 = Output (default = 0)		✓	
35-02-23	<b>SMDR Output Options – Watch Auto Dialing</b>	Select whether the system should display the WAD (Warning Auto Dialing) on SMDR report.	SMDR Port 1-8: 0 = No Output 1 = Output (default = 0)			✓
35-02-24	<b>SMDR Output Options – Mark Virtual Loop</b>	Define whether calls routed via the ISDN Virtual Loopback are tagged.	0 = Don't Mark 1 = Mark (default = 0)		✓	
35-03-01	<b>SMDR Port Assignment for Trunk Group</b>	Assign the SMDR port for each trunk group. For each Trunk Group, select the SMDR port to which the incoming SMDR information should be sent.	Trunk Groups: 1~100 SMDR Ports: 1~8 (default = 1)		✓	
35-04-01	<b>SMDR Port Assignment for Department Groups</b>	Assign the SMDR port for each Department Group. For each Department Group, select the SMDR port to which the outgoing SMDR information should be sent.	Department Groups: 1~64 SMDR Ports: 1~8 (default = 1)		✓	
80-05-01	<b>Date Format for SMDR and System – Date Format</b>	Set the date format for SMDR.	0 = American Format (Month / Day / Year) 1 = Japanese Format (Year / Month / Day) 2 = European Format (Day / Month / Year) (default = 0)		✓	

SMDR flowcharts are located on the following pages.

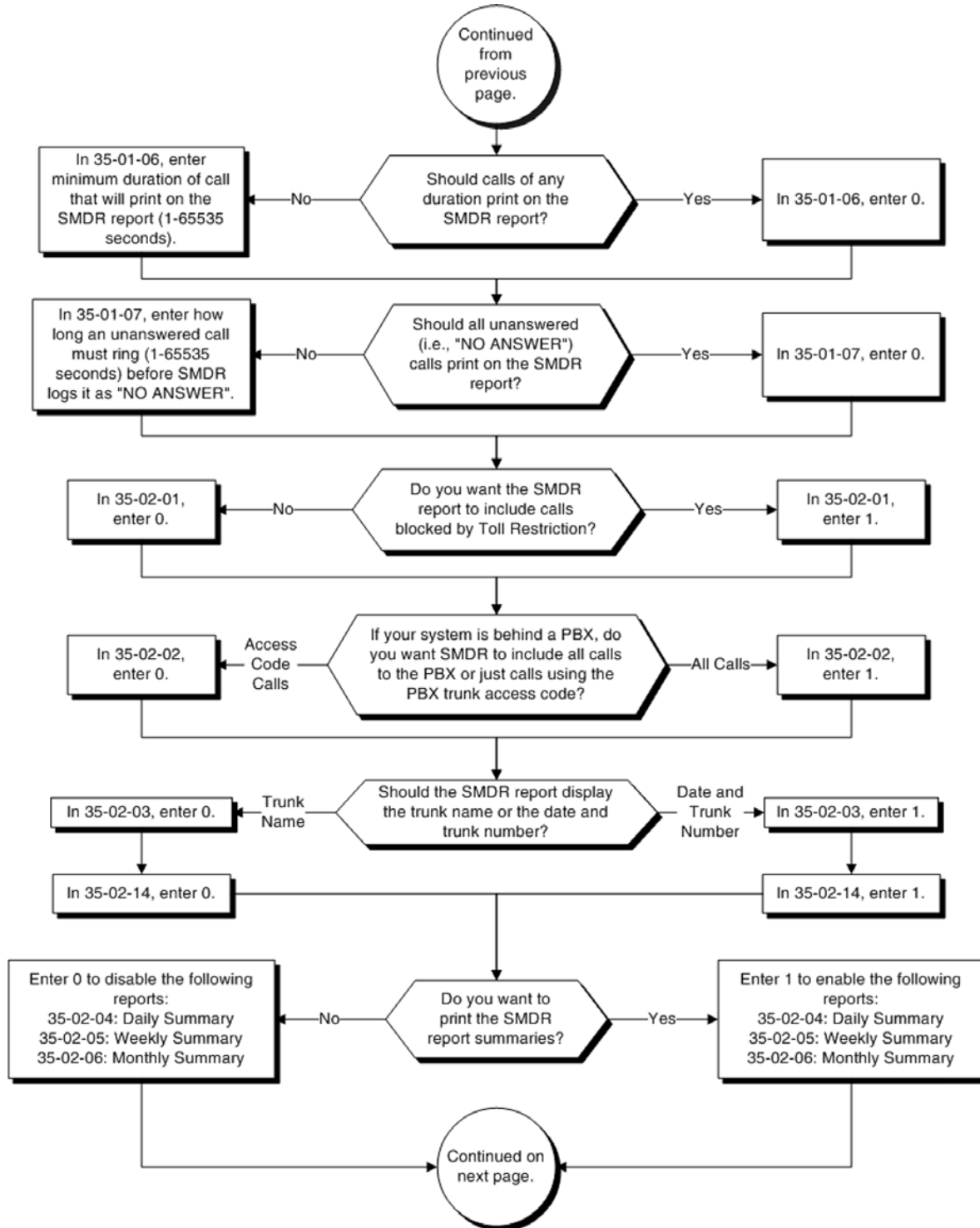
### SMDR with a CD-CP00-US Ethernet or Serial Connection via CT(A)-R Adapter on a DTH/DTR Terminal



### SMDR Flowchart

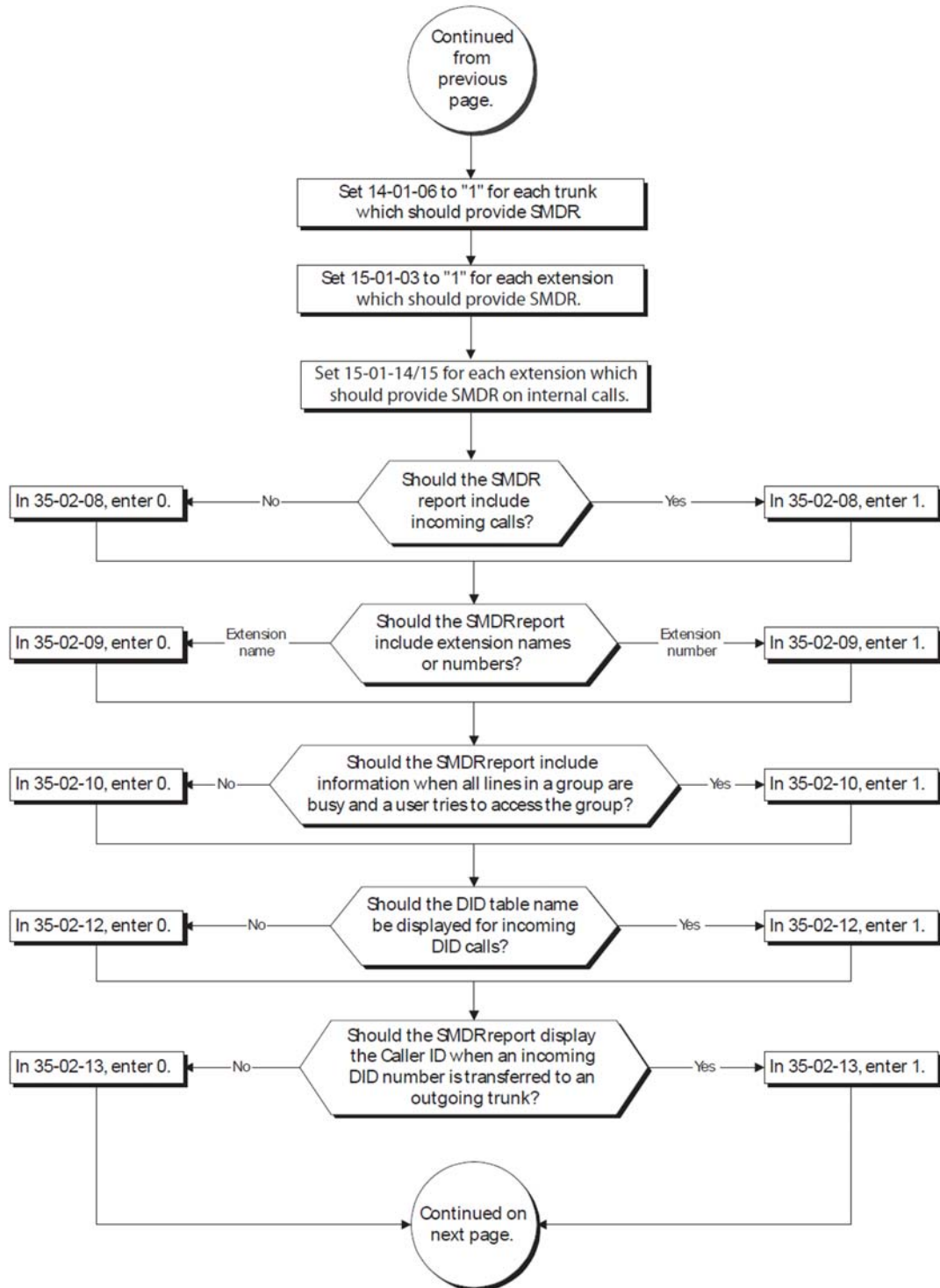


**SMDR Flowchart (Continued)**

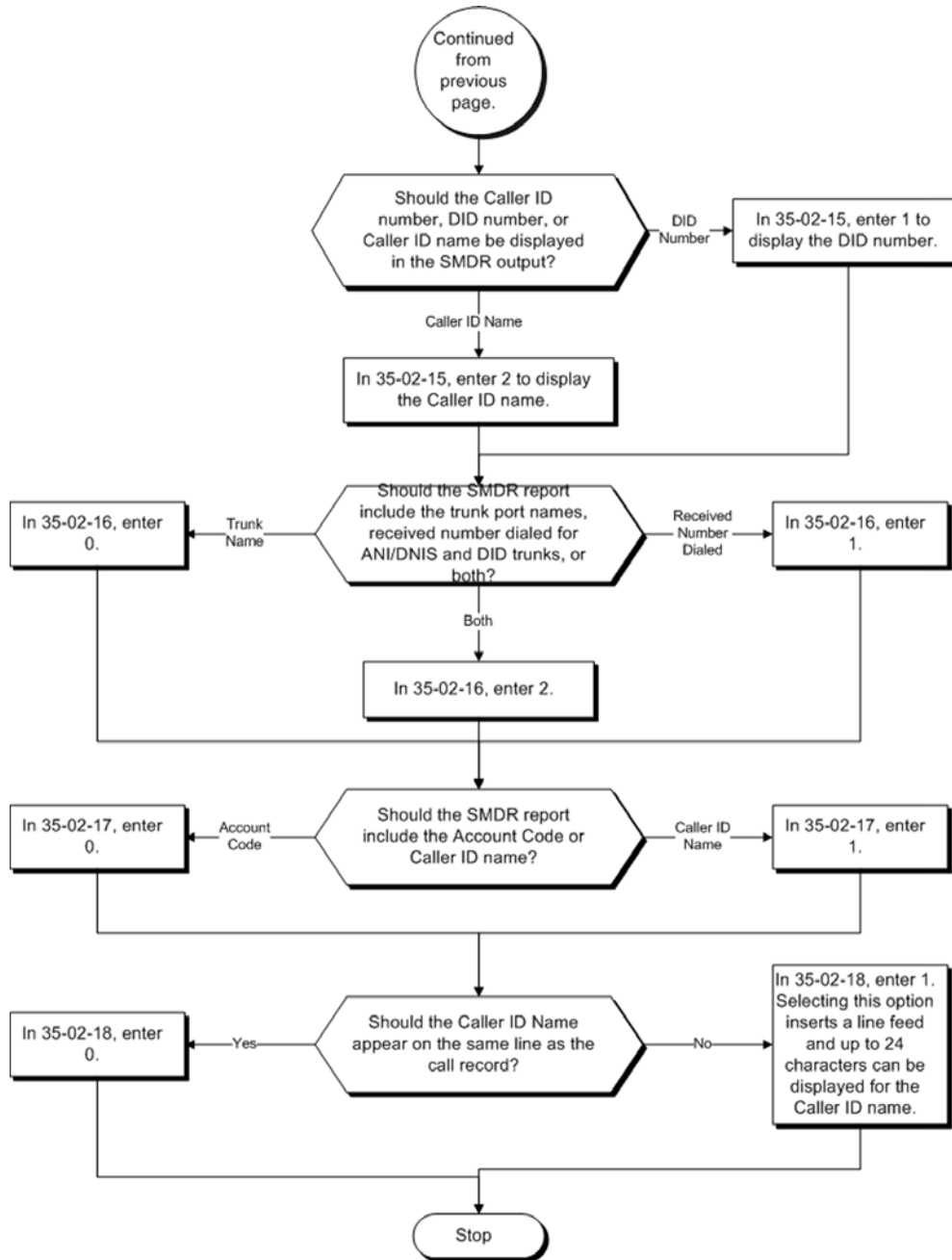




### SMDR Flowchart (Continued)



**SMDR Flowchart (Continued)**



**Operation**

Once installed and programmed, SMDR operation is automatic.

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## *Station Name Assignment – User Programmable*

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### **Description**

This feature allows a user to program the Station Name for their telephone extension or any extension in the system. The name is displayed on the multiline terminal LCD when an intercom or K-CCIS call is placed.

### **Conditions**

- Display telephones use extension names for Directory Dialing.
- Single line telephone extensions cannot program names.

### **Default Setting**

Enabled

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### **System Availability**

#### **Terminals**

All Multiline Terminals with Display

#### **Required Component**

None

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### **Related Features**

**Directory Dialing**

**Name Storing**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-22	<b>Service Code Setup (for Setup/Entry Operation) – Extension Name Programming</b>	Customize the extension name programming used for registration and setup.	MLT (default = 700)		✓	
15-01-01	<b>Basic Extension Data Setup – Extension Name</b>	Define the extension/virtual extension name.	Up to 12 characters Default: STA 101 = Ext 101 STA 102 = Ext 102, etc.	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign an Extension Name Change key (55) to extensions.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-21	<b>Class of Service Options (Supplementary Service) – Extension Name</b>	Turn Off or On an extension user ability to program its name.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	


---

## Operation

### To program your extension name:

1. Press **Speaker**.
2. Dial **700**.  
- OR -  
Press the **Extension Name Change** key (Program 15-07 or SC 751: 55).
3. Press **Hold**.
4. Enter the name. (Refer to [Table 2-76 Selectable Display Messaging Defaults on page 2-1325.](#))  
 *Your name can be up to 12 digits maximum.*
5. Press **Hold**.
6. Press **Speaker** to hang up.

### To program any extension name:

1. Press **Speaker**.
2. Dial **700**.  
- OR -  
Press the **Extension Name Change** key (Program 15-07 or SC 751: 55).
3. Enter the extension number to be named.
4. Enter a name. (Refer to [Table 2-86 Keys for Entering Names.](#))  
 *The name can be have to 12 digits maximum.*
5. Press **Hold**.
6. Press **Speaker** to hang up.

**Table 2-86 Keys for Entering Names**

Use this keypad digit . . .	When you want to . . .
1	Enter characters: 1 @ [ ¥ ] ^ _ ` {   } →← " Á À Ã Ä Æ Ç É Ê ì ó
2	Enter characters: <b>A-C, a-c, 2.</b>
3	Enter characters: <b>D-F, d-f, 3.</b>
4	Enter characters: <b>G-I, g-i, 4.</b>
5	Enter characters: <b>J-L, j-l, 5.</b>

Table 2-86 Keys for Entering Names (Continued)

Use this keypad digit . . .	When you want to . . .
<b>6</b>	Enter characters: <b>M-O, m-o, 6.</b>
<b>7</b>	Enter characters: <b>P-S, p-s, 7.</b>
<b>8</b>	Enter characters: <b>T-V, t-v, 8.</b>
<b>9</b>	Enter characters: <b>W-Z, w-z, 9.</b>
<b>0</b>	Enter characters: 0 ! “ # \$ % & ’ ( ) ô Õ ú å ä ö ü α ε θ β
<b>*</b>	Enter characters: * + , - . / : ; < = > ? π Σ σ Ω □ ϕ £
<b>#</b>	<b>#</b> = Accepts an entry (only required if two letters on the same key are needed – ex: TOM). Pressing <b>#</b> again = Space. (In system programming mode, use the right arrow Softkey instead to accept and/or add a space.)
<b>Conf</b>	Clear the character entry one character at a time.
<b>Hold</b>	Clear all the entries from the point of the flashing cursor and to the right.

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## *Station Relocation*

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### Description

Station Relocation allows a station to be moved from one location to another, without having to reprogram the station data. The station features and extension number are the same after it is moved to the new location.

### Conditions

- This feature can be used to swap or relocate multiline and single line terminals.
- This feature is not supported for IP terminals (softphone or a physical IP phone).
- Single line includes SLT adaptors.
- The destination extension must be idle. If the station is not idle, busy tone is heard.
- If the Extension Swap service code is dialed from an extension that does not have an extension swap password programmed, busy tone is heard.
- If the Extension Swap service code is dialed from an extension whose Class of Service does not allow Extension Data Swap, busy tone is heard.
- If the destination extension entered is not a valid extension, busy tone is heard.
- The following user setting data is relocated with the extension. All other user setting data is either not relocated or cleared.
  - ❑ DND
  - ❑ Call Forwarding
  - ❑ Memo Dial
  - ❑ Last Number Dial History
  - ❑ Saved Number Dial
  - ❑ Incoming History
  - ❑ MIC LED Status
  - ❑ VM MW LED Status
- When using Set Relocation, and a terminal is re-located from one physical system to another physical system, route programming must be made accordingly for 911 calls.

Refer to the Programming section in this feature for system programs that are swapped.

## Default Setting

None

## System Availability

### Terminals

All Multiline Terminals and Single Line Telephones

### Required Component(s)

None

## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-15-12	<b>Service Code Setup, Administrative (for Special Access – Extension Data Swap</b>	Ext. Data Swap = xxx (service code in accordance with Program 11-01).	MLT (default not assigned)	✓		
20-13-42	<b>Class of Service Options (Supplementary Service) – Extension Data Swap Enabling</b>	Turn Off or On an extension user ability to use Station Relocation.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
92-05-01	Extension Data Swap Password – Password	Fixed 4-Digits.	Fixed four digits (No setting at default) (default not assigned)	✓		

**The following programs are swapped when Station Relocation is used:**

- Program 11-02 Extension Numbering
- Program 12-05 Night Mode Group Assignment for Extensions
- Program 13-03 Speed Dialing Group Assignment for Extensions
- Program 15-01 Basic Extension Data Setup
- Program 15-02 Multiline Telephone Basic Data Setup
- Program 15-03 Single Line Telephone Basic Data Setup
- Program 15-06 Trunk Access Map for Extensions
- Program 15-07 Programmable Function Keys
- Program 15-08 Incoming Virtual Extension Ring Tone Setup
- Program 15-09 Virtual Extension Ring Assignment
- Program 15-10 Incoming Virtual Extension Ring Tone Order Setup
- Program 15-11 Virtual Extension Delayed Ring Assignment
- Program 15-12 Conversation Recording Destination for Extensions
- Program 15-14 Programmable One-Touch Keys
- Program 15-20 LCD Line Key Name Assignment
- Program 16-02 Department Group Assignment for Extensions
- Program 20-06 Class of Service for Extensions
- Program 21-02 Trunk Group Routing for Extensions
- Program 21-04 Toll Restriction Class for Extensions
- Program 21-07 Toll Restriction Override Password Setup
- Program 21-10 Dial Block Restriction Class Per Extension
- Program 21-11 Extension Ringdown (Hotline) Assignment
- Program 21-13 ISDN Calling Party Number Setup for Extensions

- Program 21-15 Individual Trunk Group Routing for Extensions
- Program 21-19 IP Trunk (SIP) Calling Party Number Setup for Extension
- Program 23-02 Call Pickup Groups
- Program 23-03 Universal Answer/Auto Answer
- Program 23-04 Ringing Line Preference for Virtual Extensions
- Program 24-03 Park Group
- Program 26-04 ARS Class of Service
- Program 30-02 DSS Console Extension Assignment
- Program 31-02 Internal Paging Group Assignment
- Program 41-02 ACD Group and Agent Assignments
- Program 41-17 ACD Login Mode Setup
- Program 42-02 Hotel/Motel Telephone Setup

---

## Operation

### To exchange two terminals:

1. Pick up the handset or press **Speaker**.
2. Dial the Extension Data Swap Service Code – not assigned at default (Program 11-15-12).
3. Dial the Extension Data Swap Password – not assigned at default (Program 92-05-01).
4. Dial the extension to be swapped with or relocated to.
5. When successfully completed, confirmation tone is heard and the display shows completed.
6. Press **Speaker** twice to exit.

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## *SV8100 Internal Router*

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### **Description**

The SV8100 Internal Router converged network appliance is an intelligent, all-in-one networking solution for enterprises and service providers. It reduces costs by simplifying the deployment, management, and security of converged voice, video, and data networks. The Internal Router provides the following important functions for converged networks:

#### **T1 Wide Area Network (WAN) access router**

Acts as an integrated T1 CSU/DSU (Channel Service Unit/Data Service Unit) for small and medium office connectivity.

- Fully integrated CSU/DSU
- T1 support
- Fractional T1 support
- Layer 2 protocol support for: HDLC, Cisco HDLC, PPP, Frame Relay
- On-board RJ-48 connector for easy direct connection
- T1/E1 framer and transceiver
  - B8ZS/HDB3 zero suppression
  - Response to Inband Loop codes

#### **Manual payload loop through the GUI**

- External transmit clock input and receive clock output headers
- Timing: internal or external (loop times from the network)
- Provides long haul CSU or short haul DSU signaling
- Meets FCC part 68 protection requirements

#### **Security**

Uses a stateful packet inspection firewall in combination with a voice over IP (VoIP) application layer gateway to provide comprehensive media-aware security. The Internal Router also supports IPSec for secure site-to-site networking.

## VoIP

Resolves NAT/FW traversal problems for SIP, MGCP and H.323 traffic, and allows a single public IP address to be used for multiple VoIP clients. VoIP survivability is also provided so that local SIP PSTN gateways are available for inbound and outbound calling during WAN link failures.

## Quality of Service

Maximizes WAN link use while optimizing voice quality using prioritization and shaping.

## Call quality monitoring

Provides passive call quality monitoring statistics for each VoIP call to enforce SLAs and resolve networking problems that negatively affect call quality.

## Future-proof scalability

Can be deployed initially as a low-cost WAN access router and then licensed through software for more advanced VoIP features and increased call performance. It is the ideal platform for service providers offering DIA, hosted VoIP, and managed security services or enterprises migrating to converged voice and data networks.

## Conditions

- The SV8100 Internal Router Blade CD-RTB occupies a slot in the SV8100 chassis CHS2U-US.
- The SV8100 Internal Router receives power from the backplane of the CHS2U-US chassis.
- For SV8100 systems with **Version 4000 or higher** system software and has been migrated from a UX5000, [Table 2-87 Migration Supported Blades](#) defines the application blades supported in current system chassis.

**Table 2-87 Migration Supported Blades**

Blade	Color	CHS1U-US Blue 19" Chassis	CHS2U B-US Blue 9.5" Base Chassis	CHS2U E Blue 9.5" Exp Chassis	IP3NA- 6KSU-A1 White 19" Chassis	IP3NA-3KSU- B1 White 9.5" Base Chassis	IP3WW-3KSU- E1 White 9.5" Exp Chassis
CD-RTB	Blue	S	S	S	N/S	N/S	N/S
CD-ETIA	Blue	S	S	S	N/S	N/S	N/S
CD-PVAA	Blue	S	S	S	N/S	N/S	N/S
IP3WW-RTU-B1	White	N/S	N/S	N/S	S	S	S
IP3WW-GSWU-B1	White	N/S	N/S	N/S	S	S	S

**Table 2-87 Migration Supported Blades (Continued)**

Blade	Color	CHS1U-US Blue 19" Chassis	CHS2U B-US Blue 9.5" Base Chassis	CHS2U E Blue 9.5" Exp Chassis	IP3NA- 6KSU-A1 White 19" Chassis	IP3NA-3KSU- B1 White 9.5" Base Chassis	IP3WW-3KSU- E1 White 9.5" Exp Chassis
LU-PVA-CONF- PORT8-LIC	White	N/S	N/S	N/S	S	S	S

S = Supported  
N/S = Not Supported

## Default Setting

None

## System Availability

### Terminals

IP Multiline Station (SIP)

IP Single Line Station (SIP)

### Required Component(s)

SV8100 Internal Router Blade CD-RTB

## Related Features

None

## Guide to Feature Programming

System programming is not available for SV8100 Internal Router. It receives power from the CHS2U-US chassis. Programming is done via a web interface through one of the LAN ports on the board.

## **Operation**

Reference Edgemar Internal router board Manual.

Operating procedures depend on the application.

## SV8100 NetLink

### Enhancements

This feature added with **Version 1100 (1.12 or higher)**.

With **Version 4000** software, the failover process in a Netlink environment is improved. When network communication is down, an alarm is sent to the Attendant terminal informing of the communication error on the network. Improvements also allow for a defined number of network outages per clock hour before failing over.


With **Version 4000** software, DT700 terminals connected via NAPT can be registered to either the primary or a secondary system in a NetLink environment.

With **Version 5000** software, NetLink Multi-SIP carrier has been added.

With **Version 7000 or higher** software, the SV8100 can recognize each system where the DT700 extension(s) are connected and provide an Automatic Route Selection COS based on the System (System ID) when using NetLink.

With **Version 9000 or higher** software, an improvement has been made to NetLink to reduce the number of packets transmitted over the network. The default value in Program 51-01-04 has been changed to "Buffering". When set to "Buffering" small data packets are not transmitted immediately across the network. The small data packets are buffered and sent via the network as one data packet, therefore reducing network load, in one of the following conditions:

- When an ACK Packet corresponding to the transmit packet is received.
- When the data packet reaches the maximum segment size (1460bytes for Ethernet LAN and 1452bytes for PPPoE).
- When the time buffered exceeds 120ms.

 *Software Version 8000 and below use a timer of 250ms.*

---

### Description

The NetLink feature allows up to 16 sites to be linked together over a Data Communication IP NetLink that allows Remote Sites to have the same service features as the Main Site, acting as one system. Systems can be installed separately in the same building or in remote offices connected via a qualified IP network.

With NetLink, the maximum system capacity still applies (200 Trunks and 512 Stations), but the ports can be distributed between sites using an SV8100 CHS2U-US chassis at each location.

Each site must have a PZ-(X)IPLA/IPLB daughter board and a PZ-ME50-US Memory Expansion Daughter Board installed on its CD-CP00-US blade. The CD-CP00-US blade at each Remote Site must have the same data as the Main Site CD-CP00-US blade. The Main Site automatically uploads the system data to the Remote Sites anytime it changes.

The Main Site requires a proper LK-SYS-NETLINKX-LIC license for each Remote Site.

When a communication failure occurs between the Main Site and any Remote Site, the Main Site CD-CP00-US blade automatically changes to survival mode and operates as a stand-alone system. If multiple Remote Sites are installed, a Remote Site can be assigned as a temporary Main Site to control remaining connected sites.

## Conditions

- With **Version 4000 or higher** software, systems using NetLink no longer refer to programs 10-46-06 SIP Registrar Port and 10-46-13 Subscribe Session Port. New programs 51-17-01 and 51-17-02 are used to change the ports on a per system basis when connecting IP phones via NAPT.
- The Primary System (Main Site) requires the appropriate NetLink licenses dependant upon the number of nodes in the NetLink network.
- Up to 16 Nodes can be supported in a NetLink network.
- A maximum of 240 Virtual slots are supported.
- Port assignment is performed sequentially by the requested order from the Secondary Systems.
- All nodes in a NetLink network should have the same main CD-CP00-US software.
- When a Terminal is placed on hold, the Music on Hold comes from the system where the Terminal resides.
- When a trunk is placed on hold, the Music on Hold comes from the system where the trunk resides.
- External Paging uses an output on the CD-CP00-US of the Primary System.
- A PGD(2)-U10 ADP must be used if External Paging is required in the Secondary Systems.
- License information in the Primary will be copied to the Secondary site when doing database duplication.
- Duplicate license information in the Secondary System is available for only seven days **Version 4000 (4.00 or lower)** software.
- Duplicate license information in the Secondary System is available for only 28 days. **Version 4000 (4.01 or higher)** software required.



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- After seven days, the license expires. To renew the license, a connection to the original Primary site must be re-established. (Once the connection to the Primary is recovered, if fail-over occurs again, the license is once again enabled for seven days to the new Primary System). **Version 4000 or lower** software required.
  - After twenty-eight days, the license expires. To renew the license, a connection to the original Primary site must be re-established. (Once the connection to the Primary is recovered, if fail-over occurs again, the license is once again enabled for twenty-eight days to the new Primary System). **Version 4000 (4.01 or higher)** software required.
  - If the original Primary site is in the NetLink network as a temporary secondary, the license information is available.
  - If a user wants to enter another additional feature license, it needs to be entered on the original Primary System.
  - When fail-over occurs, the Primary System is changed to another communication server. The IP applications do not know the new primary IP Address, so the following features are disabled after fail-over:
    - SMDR
    - ACD-MIS
    - SIP Terminal
    - Soft Phone
    - IP K-CCIS
  - The following Programs are not updated by the Primary System during fail-over :  
Program 10-01, Program 10-02, Program 10-12, Program 10-13, Program 10-14, Program 10-15, Program 10-16, Program 10-45, Program 51-01, Program 90-01 or Program 90-09.
  - Data in SRAM area is not transferred to the Secondary Systems during fail-over, therefore when fail-over occurs DND and Caller ID History may be lost.
  - When a Secondary System with an ETIA or RTB assigned is added to a NetLink network, the Primary Systems database does not replicate the data in Programs 10-55 or 90-61.
  - When using Netlink and UCB, the trunks and extensions on the remote sites are not supported for UCB with **Version 2500 (2.50 or lower)**.
  - When External MOH is assigned, the CN8 or CN9 on the front of the CD-CP00-US can only be utilized at the Primary Site. All Secondary sites must provide the External MOH input via an ACI Input [PGD(2)-U10 ADP]. **Version 2500 (2.51 or lower)**.
  - With **Version 3000 or higher**, both the Primary Site and Secondary Sites can have their own local MOH source connected to the CN8 or CN9 on the front of the CD-CP00-US.
  - With **Version 3000 or higher**, the T-1 CCTA and PVA-CCIS blade is supported in the primary system and/or secondary systems.
  - When using Netlink and UCB, the trunks and extensions on the remote sites are supported for UCB with **Version 2500 (2.51 or higher)**.
- 
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- When using Mobile Extension in a NetLink Network, the ISDN/PRI must be used in the Primary System.
- When using Set Relocation, and a terminal is re-located from one physical system to another physical system, route programming must be made accordingly for 911 calls.
- In a NetLink environment, IPK/IPK II Migration can only be used in the Primary system. Secondary systems do not support IPK/IPK II Migration.
- FoIP (Fax over IP) is supported in a NetLink Network.
- With **Version 4000 or higher** software, DT700 series IP terminals and wireless IP terminals can be registered to secondary systems in a NetLink environment, Softphones must still register to the primary only.
- For a network to be suitable for VoIP it must pass specific requirements. To ensure the site meets these requirements, an IP ready check and a site survey must be completed at each site before VoIP implementation.
  - ❑ One-way delay must not exceed 100ms
  - ❑ Round Trip delay must not exceed 200ms
  - ❑ Packet loss must not exceed 1%
  - ❑ Data switches must be manageable
  - ❑ Routers must provide QOS
  - ❑ Adequate bandwidth for estimated VoIP traffic
  - ❑ Depending on how QoS policies are built in the network, assignments may be needed in the CPU

Table 2-88 VoIP Resource Chart

		Primary System				Secondary 1		Secondary 2	
		TDM Terminal	IP Terminal (DT700)	CO Analog /Digital	IP Trunk	TDM Terminal	CO Analog /Digital	TDM Terminal	CO Analog /Digital
Primary System	TDM Terminal	0	P:1	0	P:1	P:1 S1:1	P:1 S1:1	P:1 S2:1	P:1 S2:1
	IP Terminal (DT700)	P:1	0	P:1	P:2	S1:1	S1:1	S2:1	S2:1
Secondary System 1	TDM Terminal	P:1 S1:1	S1:1 P:2	P:1 S1:1	P:2 S1:1	0	0	P1:1 S2:1	S1:1 S2:1

**Table 2-88 VoIP Resource Chart (Continued)**

		Primary System				Secondary 1		Secondary 2	
		TDM Terminal	IP Terminal (DT700)	CO Analog /Digital	IP Trunk	TDM Terminal	CO Analog /Digital	TDM Terminal	CO Analog /Digital
<b>Secondary System 2</b>	TDM Terminal	P:1 S2:1	S2:1 P:2	P:1 S2:1	P:2 S2:1	S1:1 S2:1	S1:1 S2:1	0	0

*P = Primary*

*S1 = Secondary System #1*

*S2 = Secondary System #2*

- The number of conference blocks in a NetLink network is the same as a stand-alone system.
- **Invalid data** is displayed in the LCD of the terminal if Program 51-01 is enabled and a PZ-ME50-US is not installed.
- When installing a Secondary System in a Netlink network and the Secondary System has CD-LCA blades installed, the CD-LCA blades will come online and assign ports before any CD-DLCA blades are assigned.
- Always connect to the Primary System when using PCPro.
- The following programs require a reset after making a change using PCPro, WebPro or Handset programming:

**Table 2-89 CPU Reset Programs**

Program	When Changed Using
10-12-01	Handset, WebPro, PCPro
10-12-02	Handset, WebPro, PCPro
10-12-09	Handset, WebPro, PCPro
51-01-01	Handset, WebPro, PCPro
51-15	WebPro, Handset Programming
84-03-06	Handset, WebPro, PCPro
90-04	Handset Programming
90-58	Handset Programming
10-46-07	PcPro
84-23	Handset, WebPro, PCPro

- With **Version 4000** software, the failover process in a Netlink environment is improved. When network communication is down, an alarm is sent to the Attendant terminal informing of the communication error on the network. Improvements also allow for a defined number of network outages per clock hour before failing over.
- With **Version 4000 or higher** software, DT700 series IP terminals and wireless IP terminals can be registered to secondary systems in a NetLink environment, Softphones must still register to the primary only.
- When the Attendant telephone exists on a secondary system, alarm information is not displayed on the Attendant telephone.
- When Fail Over occurs between the Primary System and two or more Secondary Systems, the Attendant telephone displays the System ID of the system that went into Fail-Over last.
- When using InMail in a CCIS or Netlink network, 8-digit extensions and mailboxes are not supported.
- With **Version 7000 or higher** software, the SV8100 can recognize each system where the DT700 extension(s) are connected and provide an Automatic Route Selection COS based on the System (System ID) when using NetLink.
- When NetLink is enabled, synchronous ringing (Program 14-02-17) is automatically disabled. Synchronous ringing is not supported in a NetLink environment.
- All nodes in a NetLink network should have the same setting in Program 51-01-04.

## Restrictions

- All IP Trunks must be connected to the Primary System, **Version 4000 (V4.01 or lower)**.
- The number of total ports depends on the Primary System.
- System ID (Program 51-01-02) must be unique for each system in a NetLink network.
- ACD/MIS can connect to the Primary (Main) site only.
- Only one Voice Mail can be installed in a NetLink network.
- In-Mail and VRS use the VMDB of the Primary (Main) site.
- APSU can be installed in the Secondary (Remote) System, however the NetLink time zone follows the Primary (Main) System.
- Secondary systems must follow the primary CPU software settings for Mu-law/A-law within the country where the primary system is located. SV8100 NetLink connections are only supported within the same countries/areas. For example, the SV8100 can be connected via NetLink between the US and Canada, however the SV8100 **can not** be connected via NetLink with systems in other countries (e.g., Mexico or the U.K.).
- Synchronous Ringing via NetLink is not supported.

## NetLink Multi-SIP Carrier

### Description

The **Version 5000** enhancement enables multiple SIP Trunk carriers to be utilized when NetLink is configured.

The operation of SIP Trunk is described as follows when an existing **Version 4000 (V4.01 or lower)** NetLink system is configured (refer to [Figure 2-72 Example – Version 4000 or Earlier](#) on page 2-1495). If the secondary system calls for using a SIP Trunk a total of three DSPs are required. One DSP from the secondary and two DSPs from the Primary system. Also, only 32 Register ID's are available which are programmed in the Primary system.

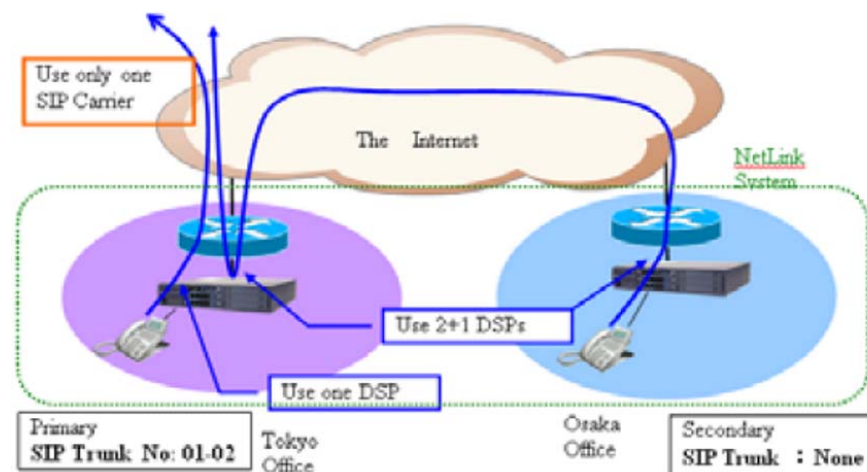


Figure 2-72 Example – Version 4000 or Earlier

- When the Secondary NetLink system calls out using its own SIP Trunk, no DSPs are used from the Primary system.
- The NetLink Nodes which have their own SIP trunks can use Register IDs independently of each other.

A Secondary NetLink system is able to utilize its own SIP trunks independently to the Primary system. Refer to [Figure 2-73 Example – Version 5000](#) to see the advantage of this feature:

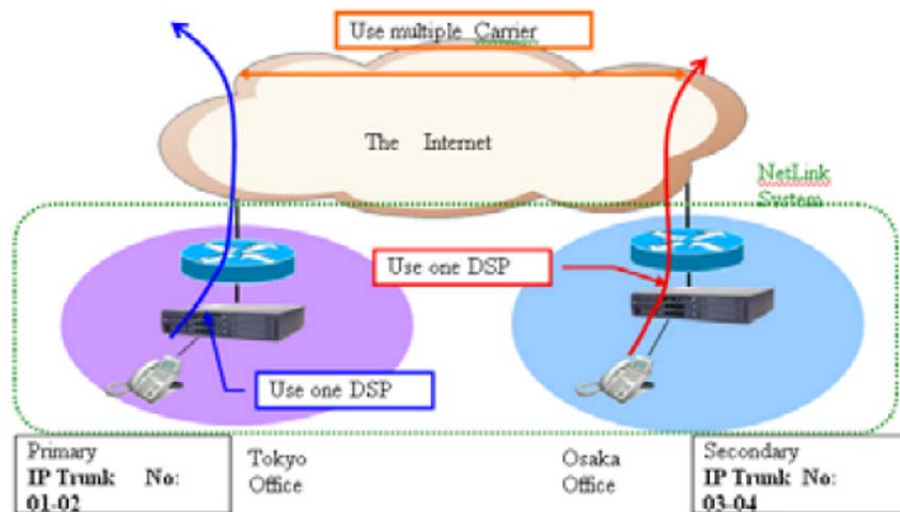


Figure 2-73 Example – Version 5000

## Conditions

- Main software **Version 5000 or higher** and the **Version 5.00 Main Version License (0034)** are required to support the NetLink Multi-SIP Carrier feature.
- It is possible to set Register ID for trunks that belong to that specific system. For example, a Register ID set in the Primary system cannot be assigned to a trunk in the Secondary system. The allocation of the trunk and Register ID of Program14-12 must be in the same system.
- In order to use CPN in a secondary system, Program 51-19 must be turned on for those extensions. Once enabled, CPN may be sent on a per station basis using Program 21-19.
- Once NetLink is established, PCPro or WebPro must be used to change the system data related to the SIP trunks.
- Any SIP trunks that are built in a system before establishing NetLink will be deleted after establishing NetLink.
- SIP trunks are assigned in the order of system set up. System ID's are needed to assign Program 10-40 data.
- With **Version 5000 (V5.00 or higher)** software, the following programs no longer replicate and can be set on a per system basis: 10-23, 10-37, 21-19, 84-13, and 84-14.
- Each NetLink system can use either SIP trunks to a provider or SIP trunk TIE line mode but not both.

- Registered SIP trunks can be utilized by any system in the NetLink network as long as trunk route programming allows it.
- When a secondary system becomes the primary after fail over, the SIP trunks will work for the effective license time.
- Program 51-01-04 selects the packet sending method whether each packet is sent immediately or after buffering some packets across the network. This program needs to be set at each system and it is recommended all systems have same setting.

### **Default Setting**

None

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

- CD-CP00-US Blade with PZ-32/64/128IPLA or PZ-32/64/128IPLB and PZ-ME50-US Daughter Boards
- LK-SYS-NETLINKX-LIC

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## **Related Features**

### **Automatic Route Selection**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	CD-CP00-US Network Setup – Default Gateway	Define the default gateway to be used by the IPLA interface.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	<b>CD-CP00-US Network Setup – Subnet Mask</b>	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
51-01-01	<b>NetLink System Property Setting – NetLink System ID</b>	This is the ID of each NetLink system. Set to insure that no overlap occurs between nodes.	0~50 (0 = No operation) (default = 0)	✓		
51-01-02	<b>NetLink System Property Setting – Primary Candidate Order</b>	When the Primary system is turned off or disconnect from network, this value is used to select a new Primary system. Smaller number is higher priority. If this value is the same number, the System ID (Program 51-01-01) is referred, and the system which has the smaller number is selected as Primary system.	1~50 (default = 30)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
51-01-03	<b>NetLink System Property Setting – Secondary System Flag</b>	If set to 0, NetLink is dynamically established based on Node List in Program 51-03-01. Primary System is selected in the order the system wakes up. If set to 1, the system connects with Top Priority Primary System. If Top Priority Primary System is not found, the system searches Primary System like this is set to 0.	0 = Disable 1 = Enable (default = 0)	✓		
51-01-04	<b>NetLink System Property Setting – Signal Transmit Method</b>	0 = Immediate This default setting does not use the Nagle Algorithm. When enabled, data packets are immediately sent across the network with no buffering delay. 1 = Buffering Nagle Algorithm enabled. Small data packets are not transmitted immediately across the network. The smaller data packets will be buffered and then sent across as larger data packets decreasing the number of packets sent across the network. When the number of packets sent across the network decreases, the amount of bandwidth also decreases.	0 = Immediate 1 = Buffering (default = 0)  ✎ <b>Version 8000 or lower</b> default = 0 ✎ <b>Version 9000 or higher</b> default = 1		✓	
51-02-01	<b>NetLink System Individual Setting – System Name</b>	Enter the name given to each system.	Up to 20 characters. (default not assigned)		✓	
51-02-02	<b>NetLink System Individual Setting – Time Zone (Hour)</b>	Determine the time offset from the Primary system. (0 = -12, 1 = -11, 2 = -10.... 24 = +12) This setting affects Time Display on MLT (see 51-13-02).	0~24 (default = 12)		✓	
51-02-04	<b>NetLink System Individual Setting – Authenticate System MAC Address</b>	Set Program 51-13-03 to 1 (enable). NetLink systems reject the connection from unauthenticated system access.	00-00-00-00-00-00~ FF-FF-FF-FF-FF-FF (default = 00-00-00-00-00-00)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
51-03-01	<b>NetLink Internet Protocol Address List Setting – Internet Protocol Address List</b>	The system seeks the Primary system based on this list. When there is no Primary system yet, or Fail Over occurs, Node List is referred to establish new link. This setting is necessary when Program 51-01-03 is 0, or Program 51-05-02 is other than 0. Once the system connects to the Primary System, this setting is updated by the Primary system when Program 51-13-01 is On. So, enter IP address of the systems which may become Primary at least.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
51-04-01	<b>IP Address Setting of Top Priority Primary System of Net-Link – Internet Protocol Address of Top Priority Primary</b>	Enter the IP address of the Top Priority Primary System. To use this feature, set Program 51-06-01 to 1(On).	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
51-05-01	<b>NetLink Timer Settings – Keep Alive Sending Interval</b>	This is the Keep Alive sending time from the Secondary system to confirm communication with the Primary system.	1~3600 (seconds) (default = 5)		✓	
51-05-02	<b>NetLink Timer Settings – Keep Alive Response Waiting Time</b>	This is the time the Secondary system waits for a response from the Primary system before cutting off communication.	0, 5~10800 (seconds) (0 = infinity) (default =20)		✓	
51-05-03	<b>NetLink Timer Settings – Primary Search Packet Sending Interval</b>	While searching the Primary system, the system sends a packet at this time.	1~3600 (seconds) (default = 5)		✓	
51-05-04	<b>NetLink Timer Settings – Primary Search Time Maximum Value</b>	Total time of Primary system seek time.	5~10800 (seconds) (default = 20)		✓	
51-05-05	<b>NetLink Timer Settings – Top Priority Primary Detection Packet Sending Interval</b>	When current Primary system is not Top Priority Primary System, the system sends packet to check if Top Priority System exists.	1~3600 (seconds) (default = 10)		✓	
51-05-06	<b>NetLink Timer Settings – Primary Compulsion Specification Trial Maximum Time</b>	When the forced change Primary command is executed, the system searches the new Primary system for this time.	1~10800 (seconds) (default = 30)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
51-05-07	<b>NetLink Timer Settings – Socket Refresh Time</b>	If the IP connection becomes unstable, the keep-alive function does not work. To avoid this, if there is no data traffic for this time, the socket is refreshed.	20~3600 (seconds) (default = 40)		✓	
51-06-01	<b>NetLink Primary Automatic Integration Setting – Primary Integration Right or Wrong</b>	When LAN cable was divided, multiple Primary systems may appear. If the LAN connection is recovered, multiple NetLinks exist in the network. When this option is enabled, NetLink is composed around Top priority Primary System.	0 = Off 1 = On (default = 0)	✓		
51-06-02	<b>NetLink Primary Automatic Integration Setting – Package Reset Timing Option</b>	When Primary System Automatic Integration is done, all packages of secondary systems reset. This option can select the timing of package reset.	0 = Reset when all packages are in idle condition 1 = Anytime (default = 0)		✓	
51-07-01	<b>NetLink Primary Compulsion Specification Setting – Forced Change Primary System Enabling</b>	Set this item whether the Forced Change Primary is available or not.	0 = Disable 1 = Enable (default = 1)		✓	
51-07-02	<b>NetLink Primary Compulsion Specification Setting – Package Reset Timing Option</b>	When Forced Change Primary System is done, all packages reset. This option can select the timing of package reset. 0 = Reset when all packages are idle, otherwise reject Primary System Integration. 1 = Anytime	0 = Off 1 = On (default = 0)		✓	
51-08-01	<b>Primary NetLink Setting – IP Address of New Primary System</b>	Enter target IP address for New Primary system. When the Forced Change Primary system is done, this setting is erased.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	
51-08-02	<b>Primary NetLink Setting – System ID of New Primary System</b>	When set to 0, top priority Primary system is assumed to be the new Primary system.	0~50 (default not assigned)		✓	
51-09-01	<b>NetLink Communication Port Settings – Primary Waiting Port</b>	Set the communication port that the Primary system uses to communicate with the Secondary system.	0~65535 (default = 58000)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
51-09-02	<b>NetLink Communication Port Settings – Communication Waiting Port</b>	Set the Port used to communicate between nodes. It is always opened by all nodes.	0~65535 (default = 58001)		✓	
51-09-03	<b>NetLink Communication Port Settings – Secondary Communication Port</b>	Secondary system communicates with Primary system at this port number. If 0 is specified, temporary port is dynamically selected.	0~65535 (default = 0)		✓	
51-09-04	<b>NetLink Communication Port Settings – Primary Search Port</b>	When Fail-Over occurred, each system communicates with other system at this port number. If 0 is set, temporary port is selected dynamically. If 0 is not specified, the number and continuous maximum 50 number is used. (e.g. 5000 is specified 5001, 5002...5049 are used).	0~65535 (default = 0)		✓	
51-09-05	<b>NetLink Communication Port Settings – Primary Detection Port</b>	Enter port number to seek the Top Priority Primary system. If 0 is specified, temporary port is selected dynamically.	0~65535 (default = 0)		✓	
51-09-06	<b>NetLink Communication Port Settings – Database Replication Communication Listening Port</b>	Set the port used to replicate database.	0~65535 (default = 58002)		✓	
51-09-07	<b>NetLink Communication Port Settings – Database Replication Primary Detection Port</b>	Set the port used to replicate database. If 0 is specified, temporary port is selected dynamically.	0~65535 (default = 0)		✓	
51-10-01	<b>Virtual Slot Setting – Number of Available Virtual Slots</b>	240 slots can be controlled in NetLink. This command can check how many slots are available.	(default not assigned)			✓
51-11-01	<b>NetLink System Information – System Name</b>	For reference only.	(default not assigned)			✓
51-11-02	<b>NetLink System Information – Connected State</b>	For reference only.	(default = 0)			✓
51-11-03	<b>NetLink System Information – IP Address</b>	For reference only.	(default = 000.000.000.000)			✓
51-11-04	<b>NetLink System Information – MAC Address</b>	For reference only.	(default = 00:00:00:00:00:00)			✓
51-11-05	<b>NetLink System Information – Primary Priority Level</b>	For reference only.	(default = 0)			✓
51-11-06	<b>NetLink System Information – Main Software Version</b>	For reference only.	(default = XX.XX)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
51-12-01	Primary System Information – System ID	For reference only.	(default = 0)			✓
51-12-02	Primary System Information – System Name	For reference only.	(default not assigned)			✓
51-12-03	Primary System Information – IP Address	For reference only.	(default = 000.000.000.000)			✓
51-12-04	Primary System Information – MAC Address	For reference only.	(default = 00:00:00:00:00:00)			✓
51-12-05	Primary System Information – Primary Priority Level	For reference only.	(default = 0)			✓
51-12-06	Primary System Information – Main Software Version	For reference only.	(default = XX.XX)			✓
51-13-01	NetLink Options– Automatic IP Address List Operation Update	When set to 1, the list in Program 51-03-01 is automatically updated.	0 = Disable (Off) 1 = Enable (On) (default = 1)	✓		
51-13-02	NetLink Options– Time Zone Option	When set to 0, the following features are affected: Clock Display, Incoming/Outgoing History List. When set to 1, the following features are affected: VRS Time Announce, Date and Time Setting Service Code, Alarm Clock setting.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	
51-13-03	NetLink Options– MAC Address Authorization Enable	Refer to Program 51-02-04 for setting MAC address.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	
51-14-01	NetLink System Control – Delete System Information	Delete system information and the slot information. The system must be disconnected.	1~50 (default = 1)		✓	
51-15-01	Demonstration Setting	Automatically set the minimum setting values in NetLink. A system reset occurs after this command is executed.  (This program is available only via telephone programming and not through PC Programming).	1 = Primary automatic setting 2 = Secondary 1 - automatic operation setting 3 = Secondary 2 - automatic operation setting 4 = Secondary 3 - automatic operation setting			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
51-16-01	<b>NetLink System Data Replication Mode Setting – System Data Replication Mode</b>	Set the synchronous mode of the system data. When set to 1, the systems are synchronized at the time set in Item 02 below. When set to 2, the systems are synchronized at regular time intervals set in Item 03 below.	0 = Disable 1 = Setting Time Mode 2 = Interval Mode (default = 2)		✓	
51-16-02	<b>NetLink System Data Replication Mode Setting – System Data Replication Time Setting</b>	Set the time of day that both systems synchronize database (when Item 01 is set to 1).	0000~2359 (default = 0000)		✓	
51-16-03	<b>NetLink System Data Replication Mode Setting – System Data Replication Interval Setting</b>	Set the time that both systems synchronize database (when Item 01 is set to 2).	15~1440 (minutes) (default = 30)		✓	
51-16-04	<b>Replication Time Stamp Show next replication time. (Read Only)</b>	Month: 0~12	(default not assigned)			✓
		Day: 0~31				✓
		Hour: 00~23				✓
		Minute: 00~59.				✓
51-16-05	<b>NetLink System Data Replication Mode Setting – System Data Replication Wait Time</b>	Set the wait time until replication starts when NetLink is created.	1~86400 (seconds) (default = 180)		✓	
51-16-06	<b>NetLink System Data Replication Mode Setting – System Data Replication Interval</b>	Set an interval time to start replication to the next node after replication to one node is completed.	0~86400 (seconds) (default = 1)		✓	
51-17-01	<b>NetLink DT700 Server Individual Information Setup – Registrar Port</b>	Use to set the SIP Register Port of each system.	0~65535 (default = 5080)	✓		
51-17-02	<b>NetLink DT700 Server Individual Information Setup – Subscribe Session Port</b>	Use to set the SIP Subscribe Session Port number of each system when NetLink is used.	0~65535 (default = 5081)	✓		
51-18-01	<b>Netlink Configuration Options – Netlink Fail-Over Limit</b>	When tear-down of network was repeated more than the specified times, NetLink is operated stand-alone.	0, 2~10 (0 = Infinity) (default = 0)		✓	
51-19-01	<b>NetLink IP Trunk (SIP) Calling Party Number Setup for Extension – NetLink CPN Transmission</b>	This program assigns transmission of Calling Party Number (CPN) from Program 21-19 for each secondary system. The transmission applies for every extension.	0 = Disable 1 = Enable (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLA.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20~ 172.16.16.0.27	✓		
84-26-02	IPL Basic Setup – RTP Port Number	Assign the RTP port number to be used for each DSP on the IPLA.  Only even numbered ports are supported.	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244		✓	
84-26-03	IPL Basic Setup – RTCP Port Number (RTP Port Number +1)	Assign the RTCP Port number to used for each DSP on the IPLA.	0~65534 Defaults: VoIP GW1 = 10021 VoIP GW2 = 10053 VoIP GW3 = 10085 VoIP GW4 = 10117 VoIP GW5 = 10149 VoIP GW6 = 10181 VoIP GW7 = 10213 VoIP GW8 = 10245		✓	

## Operation

None



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## *SV8100 PoE Gigabit Switch*

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### **Description**

The NEC PoE Gigabit Switch (GSWU) is a fully managed switch which brings gigabit speeds to users while adding a whole new level of intelligence and security to networks.

The eight 10/100/1000 Mbps ports enable users to take advantage of the Gigabit Ethernet interfaces. The NEC PoE Gigabit Switch supporting the UNIVERGE SV8100 and SV8300 system.

All user ports can support up to Gigabit Ethernet and may also support the primary Layer 2 protocols, with an emphasis on QoS features such as 802.1p and Diffserv.

The CD-ETIA blade has eight RJ45 ports for 10 BASE-T, 100 BASE-TX and 1000 Base-T along the front. The CD-ETIA design is based on one card and one software build. However, all the cards in the system are managed as a Master/Slave configuration. The Master provides full distributed Layer 2 management to all Ethernet Switch cards in the system.

The CD-ETIA card can be a standalone card providing eight Gigabit Ethernet PoE ports. However, the real advantage with this card is that additional cards can be “stacked” by external “daisy chain” connections to provide up to 76 contiguous ports (all on the same managed domain/network). Below are the primary features of the card set.

Switches, unlike hubs, use *microsegmentation* to create collision domains, one per connected segment. This way, only the Ethernet devices which are directly connected via a point-to-point link, or directly connected hubs are contending for the medium. By eliminating collisions, full-duplex point-to-point connections on the switch are possible.

When multiple blades requiring Ethernet data connections are installed in an UNIVERGE SV8100 chassis, the CD-ETIA can provide a neat and simple installation.

The CD-ETIA is an in-skin, fast Ethernet switching hub unit that provides the following services:

- Eight 10/100/1000 Gigabit Ethernet ports
- PoE
  - 802.3af compliant, supplies up to IEEE standard maximum 15.4W on eight 10/100/1000 ports Link/ACT, POE System
- Simplified QoS management using 802.1p, Diffserv or ToS traffic prioritization specifications
- Granular security and QoS implementation
- 802.1Q based VLANs enable segmentation of networks for improved performance and security

- VLAN
  - Port Based and 802.1Q Tag-based VLANS Management VLAN
- Automatic configuration of VLANs across multiple switches through GVRP/ GARP
- Auto MDI/MDIX
- Port Mirroring
  - Traffic on a port can be mirrored to another port for analysis with a network analyzer
- Firmware Upgrade
- Built in Web UI for easy browser-based configuration (HTTP)
- Rate Limiting
- Ingress Policer
- Egress rate control

### **Stacking (SV8100 Chassis Only)**

The idea of stacking allows the user the ability to manage multiple GSWU cards in one system as one switch, instead of individual units and IP addresses, etc. For example, a set of three cards would appear to the UI as a 24-port switch, instead of three 8-port switches.

Stacking will work by assigning a Master Management Card (or Main card), which will provide all the GUI information for all cards in the same stack. The CCPU will assign the Main card by issuing an IP address and configuring the Main Card assignment to the GSWU via data program. All other GSWU cards detected in the system will not be assigned an IP address and will be configured as “Add-on”, signifying them as Add-on cards.

A PBX system can have up to 12 GSWU cards per system. However, only three GSWU units can be grouped together to form a single 20-port switch. When more than three GSWU units are present within a system, the units other than the three designated will not have any of the software features specified in this document. They will behave as unmanaged Gigabit Ethernet switches.

### **Unmanaged Switch Functions**

In the Unmanaged mode, a GSWU unit will have following functions only:

- 10/100/1000 Ethernet ports (x8)
- PoE Class 1 (lowest power class)

### **Stacking Network Configuration**

The GSWU Main board will maintain the network configuration and card initialization sequence. The provision of IP address from the back plane will identify the Main board. If, during initialization, the IP address is set to “0” by the CPU, then the card is determined to be an “Add-on” card.

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The IP address for the GSWU will be assigned in program Program 10-55 on the SV8100. It contains settings for IP Address, Subnet Mask and a gateway IP address.

### Stacking Formation


When a GSWU determines that it is an “Add-on” by the configuration setting in Program 10-55-03, the Add-on GSWU will send a broadcast message to all the GSWU units in the Chassis, until it receives an acknowledge message from a Main board.

The Main board receiving this broadcast message will acknowledge by sending port identification information to the Add-on board and a board type (i.e. Add-on 1, Add-on 2, etc.).

The board type will identify the Add-on board to system (Main GSWU) of its port assignments. A board type of “Add-on 1” will be Ports 9~16. A board type of “Add-on 2” will be Ports 17~24. A GSWU that has been designated as the “Main” board will always be assigned Ports 1~8.

### Stacking Port Number Determination

When a Main board is initialized, it assigns the first eight ports as port 1 through 8. When subsequent add-on boards’ broadcast messages are received, the CCPU, by manual means or any other means, will assign a Board Type to the Add-on card. This will automatically assign its port numbers.

 *On power up, all GSWU boards are assigned as Main boards, or generic Add-on boards (by no IP address or IP address of 0). In order to include the Add-on boards as part of the managed stack and assign port numbers, the CCPU will send a “Board Type” message to the Add-on card. This will identify the port assignment of the Add-on card to the Main card for stacking.*

The grouping of the three GSWU units to form a 20-port switch is restricted to reside in a single system location. Stacking is not supported for those GSWU units in remote locations supporting the NetLink feature.

### Conditions

- When Auto Negotiation is denied and port speed is set to 100Mbps, the yellow LED (located on the RJ45 connector) is **ON**. When port speed is set to 10Mbps, this LED is **OFF**.
- The number of supported CD-ETIA blades are to be determined by the power consumption chart. Reference Hardware manual for more details.
- When linking multiple CD-ETIA cards each card must be statically assigned an IP address and each blade must be linked.
- For SV8100 systems with **Version 4000 or higher** system software and has been migrated from a UX5000, [Table 2-90 Migration Supported Blades on page 2-1510](#) defines the application blades supported in current system chassis.

Table 2-90 Migration Supported Blades

Blade	Color	CHS1U-US Blue 19" Chassis	CHS2U B-US Blue 9.5" Base Chassis	CHS2U E Blue 9.5" Exp Chassis	IP3NA- 6KSU-A1 White 19" Chassis	IP3NA-3KSU- B1 White 9.5" Base Chassis	IP3WW-3KSU- E1 White 9.5" Exp Chassis
CD-RTB	Blue	S	S	S	N/S	N/S	N/S
CD-ETIA	Blue	S	S	S	N/S	N/S	N/S
CD-PVAA	Blue	S	S	S	N/S	N/S	N/S
IP3WW-RTU-B1	White	N/S	N/S	N/S	S	S	S
IP3WW-GSWU-B1	White	N/S	N/S	N/S	S	S	S
LU-PVA-CONF- PORT8-LIC	White	N/S	N/S	N/S	S	S	S

S = Supported

N/S = Not Supported

## Default Setting

None

## System Availability

### Terminals

None

### Required Components

CD-ETIA


## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-55-01	Package Network Setup – IP Address	Define the IP Address for the CD-ETIA.  <i>When the blade is deleted from the system using Program 90-05, the programming for the slot in 10-55 is set back to default.</i>	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.1.100)	✓		
10-55-03	Package Network Setup – Main/ Add-on	Use the Main setting to distribute an IP Address to the blade.	0 = Main 1 = Add-on (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-55-04	Package Network Setup – Sub Net Mask	Define the subnet mask for the CD-ETIA.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
10-55-05	Package Network Setup – Default Gateway	Define the default gateway for the CD-ETIA.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLA.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.1.100 : Slot 4 = 172.16.1.124 VoIP GW Number 1~8 172.16.0.20~ 172.16.16.0.27		✓	



## Operation

None

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## *SV8100 UC Desktop Suite Applications*

### Enhancements

UC Desktop Applications **Version 2.0.0.0 or higher** with main CPU software **Version 2000 or higher** provides the following enhancements:

- Support for the CallTo hyperlink within Microsoft Applications or web pages. Clicking a CallTo link will initiate a call to the number via the Desktop Application.
- DNIS display for incoming calls to the Desktop station when DNIS information is provided.
- IP Softphone support for wide band codec (G.722).
- Notification by Windows toast in the system tray for missed calls and new InMail voice messages. Inmail Voice Message notification is only supported with Softphone mode, and not with Deskset modes.
- SIP/Audio RTP encryption for IP Softphone.
- Support for generic USB handsets for the IP Softphone.
- The toolbar has a new icon to bring up the phone image for an IP Softphone.
- The ability to choose Handset or Headset for incoming and outgoing calls.
- Shared Services is enhanced to include Presence. Presence indicates the Availability Status, Location, Expected Return Date and Time, Forward Settings for the user's phone, and Special Instructions.
- Outlook Add-In is enhanced to also include the ability to transfer or conference from the Outlook Contacts Folder.
- Highlight Dial – Highlight a phone number within any Windows application and have it automatically dialed by the Desktop Application.
- Recalled calls to a Desktop Station show as recalled calls instead of a new ringing call.

The same user name and password can be assigned to IP Multiline Station, MH240 and Desktop ports when automatic or manual registration is used (**Version 3000 or higher** software).

UC Desktop Applications **Version 3.5.0.0 or higher** provides the following enhancements:

- Answering Center – The Answering Center module supports additional features to be utilized with the Attendant Module to provide efficient call handling in a multi-tenant environment.
- Presence Enhancements – Customized Presence states and the ability to schedule Presence events.
- Enhanced Outlook Integration – A Presence State can be associated with an Outlook Calendar Appointment. Telephone numbers from an Outlook Contact can be added to the Desktop Speed Dial list.
- Mobility Features – Provides the user the ability to view and set the Presence status and call forwarding rules while out of the office.
- Integration with the Salesforce.com website.
- TSP enhancements for additional CRM support.
- Attendant like features without Shared Services – The Desktop Client can have the full function of Window mode with the DSS/BLF panel without shared services similar to the way it worked in 1.0. The DSS/BLF panel will not show all devices in the system, but will show DSS/BLFs that are programmed on a physical button on the terminal or DSS console attached to the terminal.

## Enhancements (Continued)

UC Desktop Applications **Version 3.6.0.0 or higher** supports:

- Microsoft Windows 7 (32- and 64-bit platforms).
- Parked Calls can be monitored in the Active Call list.

With **Version 4000 or higher** software, SOAI and 3rd Party CTI can be used at the same time in the system. This allows systems at **Version 4000 or higher** to have Desktop Applications and DTPlusware or UCB and DTPlusware.

UC Desktop Applications **Version 3.7.0.0** software provides the following enhancements (**Version 5000 or higher** system software is required):


- Support for systems that have migrated from the UX5000 to the SV8100.
- Shared Services is supported on 64-bit Windows 7.
- Call Forward Both Ring can be set from Desktop via the toolbar or from a Presence State.
- Don't Change Forwarding is a Phone Settings option when setting a Presence State.

In previous versions of software, when a 3rd party CTI server has already been connected with a main device (when 3rd party CTI is used) other 3rd party CTI devices cannot connect to the main device.


With **Version 5000 or higher** CPU software, the IP Address of the CTI server currently connected is displayed in Program (20-23-06).

UC Desktop Applications **Version 4.0.0.0** software provides the following enhancements (**Version 5000 or higher** system software is required):

- New and improved Graphical User Interface (GUI) with new icons, BLF button size options, Presence animation, Presence State Indicator relocated, BLF Active Call Detail for other users and reformatted columns and menus.
- Collaboration support for Windows 7 via the Data Conference Module for Chat, Application Sharing and Video. Data Conference requires an Enhancement Bundle license (5303) and is not available in the Deskset Only configuration.
- Group Phone Messaging – adds the ability to send a phone message to multiple recipients.
- Group Quick Messaging – adds the ability to send a quick message to multiple recipients.
- Name Extraction – Through the O&M interface the Desktop Application can retrieve the extension names from Program 15-01 and include this value as part of each entry in the Directory.
- InACD Client – From the Desktop Application a user can Login, Log Out, Wrap Up, go into Off Duty, view real time Queue statistics, monitor ACD states of other agents and initiate Emergency Call functions.

 *Part number 670184 – LK-DT Upgrade 4.0-LIC license (license code 5309 in Program 10-50-01) and SV8100 system software **Version 5.01 or higher** is required for the InACD Agent capability within Desktop.*

- Mobility – From a web browser on a PC or mobile device, mobile users can view and set presence status and call forwarding options while away from the office.

 *Part number 670981 – LK-SYS-Mobile Presence-LIC license (license code 5311 in Program 10-50-01) and SV8100 system software **Version 5.01 or higher** is required for Mobile Presence.*

- InServer Blade – The InServer is an in-skin blade for the SV8100 designed to be an application server for several of the external applications available for the SV8100 product line. Initially, the InServer will come pre-installed with Windows Embedded Standard OS and will support the setup and deployment of the NEC Desktop Suite and InACD MIS.

## Enhancements (Continued)

- ❑ With the InServer Blade, installation is made easier by allowing the technician to direct users to a URL where software files with pre-configured settings that automatically populate the configuration fields within the desktop can be downloaded.

SV8100 UC Desktop Suite Applications **Version 5.0.0.0** software provides the following enhancements (**Version 7000 or higher** system software is required):


- ❑ Park Enhancement – monitoring of all 64 park orbits in the system, one-click park, drag and drop park, valet park.
- ❑ InMail Integration with message count, message playback, archive, delete or dial number associated with message.
- ❑ Profile Sharing – Shared Services is enhanced to allow users to create and share profiles consisting of commonly used preferences and configurations.
- ❑ Salesforce.com Enhancement – Screen Pop support for Salesforce.com Professional Edition.
- ❑ Integration Toolkit – A Developers Toolkit allowing users to develop interfaces integrating third-party applications with the Desktop Suite.
- ❑ BLF Custom Layout – Drag and Drop BLFs in a custom order if the user prefers something other than extension or name order.
- ❑ Instant Messenger (IM) – real time instant messaging between Desktop users with session history.

SV8100 UC Desktop Suite Applications **Version 6.0.0.0** software provides the following enhancements (**Version 8000 or higher** system software is required):


- ❑ Enhanced audio device support for Soft Phone – In the previous release, with Windows Vista and later operating systems, the soft phone audio device had to support a sample rate that is a multiple of 8000Hz. Headsets that do not support this could not be used. With **UC Desktop Suite Version 6.0.0.0**, headsets that do not support multiples of 8000Hz sample rates can now be used on new operating systems.
- ❑ Pinning – Directory, Call Log and Voice Messages windows can be pinned to appear as a tab on the BLF/DSS Window View.

 *Part number 670638 – LK-DT Enhancement 6.0 LIC is required for Pinning.*

- ❑ Browser-based CRM support – allows Browser-based CRM applications to screen pop a record using the Calling Line ID (CLID).

 *Part number 670638 – LK-DT Enhancement 6.0 LIC and Part number 670940 LK-DT CRM Integration-LIC are required for Browser-based CRM support.*

- ❑ UM8000 Integration – Message Count, Message Playback, Archive, Delete or Dial Number Associated with the message. Associate a UM8000 Voice Mail greeting with a presence change, scheduled presence change or Outlook appointment presence change.

 *UM8000 support requires Part numbers 670786~670790 or 670935 – **UM8000 Version 11.6 or higher** and one UMS Client license (License code 1404) per Desktop user requiring UM8000 integration.*

SV8100 UC Desktop Suite Applications **Version 6.1.0.0** software provides the following enhancements (**Version 9000 or higher** system software is required):

- ❑ InMail Greeting Change with Presence Change – Users have the ability to change their InMail greeting as they make a presence state change in UC Desktop.
- ❑ UC Web Client – a browser-based client that provides many of the features available within the full UC Desktop client. This feature is supported on the InServer Blade only and requires Shared Services.

 *Part number 671022 – LK-DT-Web Client 1-LIC is required for each Web Client user.*

## Enhancements (Continued)


- Windows 8 – UC Desktop Client, Shared Services and Web Client are supported on Windows 8.
- Windows Server 2012 – Shared Services is supported on Windows Server 2012.
- Virtual Machine – VM Ware and Hyper-V support Shared Services.
- Concurrent Connection Licensing – the Web Client and Desktop Client license will release when the session is closed.

## Description

The SV8100 UC Desktop Suite Applications allows users to control their SV8100 terminal from their PC (Deskset mode) or the PC can become their SV8100 terminal (SP310 - IP Soft Phone Mode).


Through licensing control and user selection, the application can be tailored to meet the needs of a variety of end users. Additional utilities are provided as part of the Desktop Application suite:

- Answering Center – with UC Desktop Applications **Version 3.5.0.0 or higher**, the Answering Center supports additional features to be utilized with the Desktop Client to provide efficient call handling in a multi-tenant environment. For example, if a receptionist is required to answer calls for a variety of different businesses, the Answering Center module will identify the company being called and display information on the receptionist's screen to assist with handling the call.

 *Part number 670940 – LK-DT CRM Integration-LIC license (license code 5310 in Program 10-50-01) and SV8100 system software **Version 3100 or higher** is required for Answering Center.*

- Configuration Wizard – steps the user through the process of providing the settings that are required to start the desktop application.
- Outlook Add-In – allows the user to dial out, end call and perform screen pops through the Contacts folder within Microsoft Outlook. With UC Desktop Applications Version 2.0.0.0 or higher and main CPU software Version 2500 or higher, Outlook Add-In also allows the user to perform Conference and Transfer from the Contacts folder.

With UC Desktop Applications **Version 3.5.0.0 or higher**, the Outlook integration is enhanced to include the ability to associate a Presence State with an Outlook Calendar Appointment, and to add telephone numbers from an Outlook Contact to the Desktop Speed Dial list.

 *Part number 670939 – LK-DT Upgrade 3.0-LIC license (license code 5309 in Program 10-50-01) and SV8100 system software **Version 3100** is required for Presence Setting from Outlook Calendar.*

- Salesforce.com adaptor – with UC Desktop Applications Version 3.5.0.0 or higher, the Salesforce.com provides access to the following operations through the Salesforce.com interface:
  - Call contact phone number
  - Dial phone number directly
  - Answer incoming call
  - End active call
  - Hold active call


- Retrieve a Held call
- Transfer active call

Additionally, with an Enterprise or Unlimited account, the Salesforce integration module also provides the following feature:


- Pop contact on incoming call that matches phone number.

With UC Desktop Suite **Version 5.0.0.0 or higher** and **Salesforce Adapter Version 4 or higher**, Salesforce.com screen pops are also supported with the Professional edition.

The Salesforce.com integration module requires a Salesforce.com Professional, Enterprise, or Unlimited Edition account. The integration module is compatible with the following browsers: Internet Explorer® 9, Firefox® 15 and Google Chrome™ browser Version 21.

 *Part number 670940 – LK-DT CRM Integration-LIC license (license code 5310 in Program 10-50-01) and SV8100 system software **Version 3100** are required for Salesforce.com integration.*


- **Telephony Service Provider (TSP)** – with UC Desktop Applications Version 3.5.0.0 or higher, the 1st Party TSP installed with Desktop supports additional functionality such as transfer, conference, hold and unhold.

 *Part number 670940 – LK-DT CRM Integration-LIC license (license code 5310 in Program 10-50-01) and SV8100 system software **Version 3100** are required for Time Matters integration.*

- **Video Test Tool** – Helps verify that the SP310 can communicate with and utilize the video camera connected to the PC.

- **Integration Toolkit** – The Desktop Suite has the ability to support integration with a variety of popular third-party CRM applications. These integrations typically allow the third-party software to dial numbers stored within the application and screen pop entries based upon Caller ID recognition. However, many companies use CRMs (Customer Resource Management) packages that are industry-specific or, in some cases, internally developed.

In order to provide another means to integrate with third-party applications, the Integration Developer's Toolkit allows users to develop their own interface to the Desktop Suite.

 *Part number 670940 – LK-DT CRM Integration-LIC license (license code 5310 in Program 10-50-01) and SV8100 system software **Version 7000** are required for the Integration Toolkit.*


## Desktop Client

The Desktop Client enhances the operation of the NEC digital telephone set by providing easy access to common, and not so common, UNIVERGE SV8100 voice control features. This software application provides a very intuitive user interface that can be conveniently located at the top or bottom of the PC screen. The user interface can even "shrink" into the edge of the screen and become visible when a call arrives, or when the user moves the mouse to the edge of the display.


In addition to quick access to these SV8100 features, the Desktop Client provides a call log for easy viewing of recent received, missed, or made calls – just like your cell phone. It also includes a directory to keep your commonly dialed numbers close at hand, and optional features like voice recording, personal greeting, and screen pops using Microsoft Outlook, ACT! 2005 or higher, Goldmine 6.7 or higher, Salesforce.com, Time Matters and Tigerpaw®. With **UC Desktop Version 6.0.0.0 or higher**, Browser-based CRM applications can screen pop a record.

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 Part number 670940 – LK-DT CRM Integration-LIC license (license code 5310 in Program 10-50-01) and SV8100 system software **Version 3100** are required for Salesforce.com Time Matters, Tigerpaw, Answer Center integration and Browser-based CRM integration.

With UC Desktop Application **Version 4.0.0.0 or higher**, Desktop Users that are also ACD agents can perform ACD functions from within the Desktop Application. ACD functions included in the Desktop Application are Login, Logout, Off Duty, Wrap Up, view Agent Monitor, and view Queue Monitor.

 Part number 670184 – LK-DT Upgrade 4.0-LIC license (license code 5309 in Program 10-50-01) and SV8100 system software **Version 5.01 or higher** is required for the InACD Agent capability within Desktop.

Desktop Client has the following main components:

- SV8100 UC Desktop Suite Applications Software**  
This application runs on a PC and provides the PC-based GUI (Graphical User Interface) and features.
- Headset (Optional)**  
The headset can be plugged into the multiline telephone and used when making or receiving calls with the Desktop Client. Desktop Client runs on a PC and communicates with the UNIVERGE SV8100 through TCP/IP. The Desktop Client can be run for a physical deskset station or a softphone station. When calls come into the station, the Desktop Client displays it on the PC, and provides several features that allow the user to handle the call quickly. Desktop Client can be minimized to run in the background and pop to the front when call activity occurs. Calls can then be handled using either the keyboard or the mouse. The user speaks to the caller through the telephone handset, headset, or speakerphone of the multiline telephone the application is running on, or through a USB handset or headset connected to PC running the softphone.

### **InACD Agent Functionality**

With UC Desktop Application **Version 4.0 or higher**, Desktop users that are ACD Agents can perform ACD functions from the Desktop GUI. Agents can change ACD states (Login, Logout, Wrap Up and Off Duty), view real-time queue statistics, monitor ACD states for other agents and initiate Emergency Call functions from the Desktop Application.

### **Softphone**

The SP310 softphone is a software phone that functions as an IP Multiline Station (SIP). The SP310 provides access to all features of a physical IP Multiline Station with a few exceptions. Through the VoIP connection to the SV8100 system, the user can speak to the caller through a USB Handset or USB Headset connected to the PC running the SP310 softphone. The user can handle the call through a Toolbar view, Compact Phone view, or an Emulation Phone view that looks like a physical IP Multiline Station.

Audio frame (Payload) size for Softphone (SP310) supports only 20ms or 40ms according to CODEC type.

- G.711: PRG 84-24-01 setting must be 20ms or 40ms.

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- G.729: PRG 84-24-07 setting must be 20ms or 40ms.
  - G.722: PRG 84-24-32 setting must be 20ms.

Successful operation of the softphone within Vista or Windows 7 (prior to UC Desktop Application **Version 6.0**) requires audio properties be set to a supported format. Default settings for the audio device must be set within the following range of values:


- Sampling frequency (Hz) – 8000 / 16000 / 32000 / 48000
- Quantization bit – 16 bit
- Channel – all values supported

Some USB Headsets do not support this range and are not supported in UC Desktop. With UC Desktop Suite **Version 6.0.0.0 or higher**, headsets that do not support multiples of 8000Hz sample rates can be used on Vista and Windows 7.

### SV8100 InMail Integration


With UC Desktop Suite **Version 5.0.0.0 or higher**, Desktop can integrate to the SV8100 InMail providing the following features:

- Message Status
  - View new messages
  - View archived messages
- Message Access
  - Play new/archived messages through the deskset terminal or softphone
  - Set new message status to archive
  - Delete a message
  - Dial the number associated with the message

 *Part number 670999 – LK-DT InMail Integration-LIC license (license code 5312 in Program 10-50-01) and SV8100 system software **Version 7000** are required for InMail Integration. A DT InMail integration license is needed for each Desktop user requiring InMail integration.*

InMail Integration can be set to **On** in the Desktop Configuration Wizard on the **Voicemail Tab** in Preferences.

With **UC Desktop Suite Version 6.1.0.0 or higher**, users can change their InMail Greeting when changing presence states.

 *When using InMail integration, all clients must use shared services or all clients must be used without shared services. A mixture of some clients with Shared Services and some without is not supported when using InMail Integration.*


## SV8100 UM8000 Integration


With UC Desktop Suite **Version 6.0.0.0 or higher** and UM8000 **Version 11.6 or higher**, Desktop can integrate to the SV8100 UM8000 providing the following features:

- Message Status**
  - Number of new messages
  - View new messages
  - View archived messages
  - View opened messages
  - View urgent messages
- Message Access**
  - Play New, Urgent, Opened and Archived messages through PC audio device
  - Set new message status to archive
  - Delete a message
  - Return call
- Presence Voice Mail Greetings**

Assign a Voice Meeting Greeting to:

  - A presence change
  - A scheduled presence change
  - An Outlook appointment presence change

 *Users must have a mailbox in the voicemail system and have UM8000 integration configured in order to change the Voicemail Greeting for other users.*

 *UM8000 support requires Part numbers 670786-670790 or 670935 – UM8000 Version 11.6 or higher and one UMS Client license (License code 1404) per Desktop user requiring UM8000 integration.*

## Web Client

With **UC Desktop Version 6.1.0.0** on the InServer Blade with Shared Services, users can launch a UC Desktop Client from within an Internet browser window. This browser-based client provides many of the features that are available within the full UC Desktop Client. Refer to the UC Desktop Applications Manual for a comparison of features available between the full client and the Web Client.

The UC Web Client is supported on the following Internet browsers:

- Internet Explorer 10
- Firefox 20
- Google Chrome 26
- Safari® 5.0.6



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Each UC Web Client requires a UC Desktop Web Client license.

### Desktop Shared Services

The SV8100 Desktop application includes the option to install Desktop Shared Services that are available for use by all Desktop application users. This is required for the following features:


- SystemWide BLF/DSS
- Central Directory
- Phone Message
- Quick Message
- Presence

With UC Desktop Application **Version 4.0 or higher**, the InServer in-skin blade for the SV8100 is introduced. It is designed to be an application server for several of the external applications available for the SV8100 product line. Initially, the InServer will come pre-installed with Windows Embedded Standard OS and will support the setup and deployment of the NEC Desktop Suite and InACD MIS. NEC Desktop Shared Services and InACD MIS run on the InServer blade. With the InServer Blade, installation is made easier by allowing the technician to direct users to a URL where software files with preconfigured settings that automatically populate the configuration fields within the desktop can be downloaded. For more information on the InServer Blade, refer to the UNIVERGE SV8100 InServer Configuration Guide.

The Desktop Shared Services manage shared resources and provide communication facilities between user endpoints. The functionality implemented by the third-party services includes the following:

- Access to Operator or Receptionist Type Functions – An operator or receptionist type user can easily manage their call handling tasks without having to switch attention between the telephone and the PC. One or two clicks of the mouse is all it takes for the operator or receptionist to transfer a call or put a caller into a users voice mailbox. A company directory, recording ability, and PC-to-PC messaging, and Presence indication provide additional features to further enhance the operation. The Desktop Client with Shared Services can monitor all line keys and control the actions of the operator's phone, including placing calls. The application on the PC communicates with the SV8100 system through a TCP port on the telephone system. The Desktop Application with Shared Services also includes a supporting application called Quick Message. By installing the Quick Message client on individual PCs, the operator can quickly send short messages to other employees, who can respond with a single keystroke. The PC to be used requires Windows XP SP2, Windows Vista or Windows 7 and an interface to the SV8100 system through the ethernet link to monitor and control telephone activity.
- Shared Directory/Contact List – provides a shared database that includes the company directory, external contact list and personal contact list that can be accessed by all users. Without Desktop Shared Services, each Desktop user must maintain their own Directory and Contact list. The external and personal contact list can be imported via a .csv file.

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- Centralized BLF Monitoring – the Desktop Shared Services monitors the status of all stations on the system and provides updates to the individual clients. With UC Desktop Application Version 4.0 or higher, the BLF status area can expand to a larger button size and provide call details when mousing over a BLF. With Version 5.0 or higher, the user can Drag and Drop BLFs in a custom order if they prefer something other than extension or name order.
  - Common Trunk Labeling – provides a central storage for assigning labels to trunks.
  - Quick Messaging – manages delivery of messages and responses from attendant level users to end users. This is the same functionality available in the IPK II products.
  - Phone Messaging – manages the delivery of messages and responses from attendant level users to end user desksets. This is the same level of communication available in the IPK II products, with the addition of allowing users to customize the set of predefined messages.

 *With UC Desktop Application **Version 4.0 or higher**, Phone and Quick Messages can be sent to multiple recipients.*

- Presence – indicates Availability Status, Location, Expected Return Date and Time, Forward Settings, and Special Instructions. Presence status is viewable through the Shared Services Directory or the Window view DSS/BLF pane. Presence status is manually set by each Desktop user, or users with appropriate permissions can update the Presence settings for other users. The toolbar and window views support the Presence feature. UC Desktop Applications Version 2.0.0.0 with main CPU software Version 2000 or higher is required for Presence.

With UC Desktop Applications **Version 3.5.0.0 or higher**, Presence states can be customized for each site. The system administrator can determine which Presence states are valid, change the icon for the pre-defined Presence states, and define up to four custom presence states with custom labels/names and custom icons.

Also with **Version 3.5.0.0 or higher**, scheduling of Presence state changes is supported by a list of Presence Events each user defines in the new user interface or through the Outlook Calendar. Users also have the ability to view and set Presence status and call forwarding rules while they are out of the office. This can be achieved through mobile devices that support web browsing and desktop web browsers like Internet Explorer.

With UC Desktop Application **Version 4.0 or higher**, the Presence area is relocated to the title bar area to make it more visible. The Presence indicator in the BLF section is also enhanced to show animation when a users presence state changes.

- Mobility – with UC Desktop Application Version 4.0 or higher, mobile users can view and set presence status and call forwarding options while way from the office.

 *Part Number 670981 - LK-SYS-MOBILE PRESENCE-LIC (License Code 5311) and SV8100 system software **Version 5.01 or higher** is required for Mobility features.*

- Profile Sharing – With **Desktop Version 5.0.0.0 or higher**, Shared Services is enhanced to allow users to create and share profiles consisting of commonly used preferences and configurations.

All settings in the following **Preferences** tabs are saved in the Profile:

- General
- BLF/DSS
- Tool Buttons

- 
- 
- Active Call List
  - Screen Pop
  - Shortcuts
  - Dialing Rules
  - Telephony Settings
  - Voice Mail
  - Notification Settings
  - Quick Message
  - Phone Message
  - Trunk Settings
  - Phone Image

Only selected settings in the following Preferences tabs are saved in the profile:

- Recording (Record All Calls, Enable beep tone while recording)
- ACD Agent (Network Name/IP Address, Port Number)

The following General User Interface Settings are saved in the profile:

- UI Mode (Window, Toolbar, or Compact Phone)
- Sort BLF By (Extension, Name, or Drag and Drop)
- Size and position of main window in Window Mode

Users configured for Shared Services can apply a saved profile from the Tools menu in Window mode or the File menu in Toolbar mode.

- Park – With **Desktop Version 5.0.0.0 or higher**, the functionality of Park is enhanced greatly. With Shared Services, Desktop can monitor all 64 park orbits in the SV8100. A Park area at the bottom of the Window view shows the current status of the park orbits. The user can configure which park orbits are of interest to them and Desktop will only show these orbits. Each monitored park orbit will indicate when it is in use and hovering the mouse over this icon will display a pop-up box that shows the name/extension of the person parking the call, the CLID of the parked call if available, and the length of time that the call has been parked. While on an active call, the users can click one of the unoccupied orbits and park the call with one mouse click.

The Park Area can also be configured to include a Valet button which will use the Step Park function to park the call in the next available park orbit. The Valet option is also available from right clicking an active call.

Also, while on an active call, users can Drag and Drop the call to an available park orbit or the Valet button to park the call in the next available orbit.

 *Part number 670636 – LK-DT Enhancement 5-LIC license (license code 5309 in Program 10-50-01) and SV8100 system software **Version 7000** are required for the enhanced park functionality.*

- Instant Messenger – With **Desktop Version 5.0.0.0 or higher**, when using Shared Services Desktop users can instant message each other. A maximum of eight IM sessions can be established with different users. UC Desktop Suite has the ability to maintain a history of the Instant Message sessions for each user. Previous IM sessions with a particular user can be recalled to the History area at any time. When the user scrolls to the first message in a session, a button is displayed in the History area allowing the user to load the previous IM session.

## Licensing

The following table lists and describes the Desktop Suite related part numbers:

**Table 2-91 Desktop Suite Licenses**

Stock Number	Name	Description
670184	LK-DT-Enhancement 4.0 LIC	Enables Desktop Suite 4.0 features
670421	CD-INSERVER	InServer Blade
670636	LK-DT-Enhancement 5.0 LIC	Enables Desktop Suite 5.0 features
670638	LK-DT-Enhancement 6.0 LIC	Enables Desktop Suite 6.0 features
670727	LK-SYS-1st-CTI 1-Lic	1st Party CTI License (note, not used by Desktop Suite)
670731	LK-SYS-3rd-CTI Client LIC	3rd Part CTI License (note, 670919 includes this for Desktop Shared Services)
670869	LK-Desktop PC Attendant Shared SVC Upgrade-LIC	Upgrades any pre-2.0 systems with individual PC Attendant licenses to system wide Shared Services License
670903	LK-DT Client 1-LIC	Includes 1 Desktop Client License
670908	LK-DT SP E Client - IP1-LIC	Includes 1 Desktop Client, 1 Softphone, 1 Softphone Enhanced, 1 IP SP Only
670913	LK-SP E Client - IP 1 LIC	1 Softphone, 1 Softphone Enhanced, 1 IP SP Only
670919	LK-SYS-Shared SVC-LIC	System Wide Shared Services License
670940	LK-DT CRM Integration-LIC	Enables system wide Integration to 3rd Party CRMs
670981	LK-SYS-Mobile-Presence	Enables system wide Mobile Presence
670999	LK-DT-InMail Integration	Enables InMail Integration for 1 Desktop Client
671022	LK-DT-Web Client 1-LIC	Includes 1 UC Web Client license
680601	ADA-L Unit	Add on module for recording and personal greeting on desktop terminal.

## Multiple Logon

With **Version 3000 or higher** software, the same user name and password can be assigned to multiple extensions when using Automatic or Manual Registration. This makes it easier on the user by only having to remember one password. For example, if a user has an IP Multiline terminal, MH240 handset, and uses UC Desktop Applications with the Enhancement bundle controlling the IP Multiline, three different ports are used in the system. Prior to Version 3000, each IP port required a unique user name and password. With Version 3000 all three can be assigned the same user name and password.

## TCP/UDP Port and Windows Process Firewall Exceptions

When a firewall is involved in the network between the SV8100 and the Desktop Client or Shared Servers. Refer to [Table 2-92 Exceptions to Firewall for Ports](#) for exceptions to be made in the firewall for ports and [Table 2-93 Exceptions to Windows Process](#) for windows processes.

**Table 2-92 Exceptions to Firewall for Ports**

Desktop Component	TCP and/or UDP	Port Numbers	Related Program
SIP	UDP	5070~5197	
Audio RTP	UDP	60000~60254	
Video Control	TCP	6000	
Video RTP	UDP	61000~61019	
File Transfer	TCP	8282~8284	
License	TCP	6080	
DataConference Control	TCP	62010~32019	
DataConference Video	UDP	62010~32019	
Outlook Integration/Highlight Dial/CallToTag/XML API	TCP	20864~20865	
WhiteBoardSharing/Application Sharing/Chat	UDP and TCP	1024~65535	
TSP Support: UDP/TCP 972-973	UDP and TCP	972~973	
Shared Services	TCP	8888	
3rd Party Call Control	TCP	8181	10-20-1 Device 1 – CTI Server
1st Party Call Control	TCP	8282	10-20-1 Device 0 – 1st Party CTI
File and Print Sharing	UDP and TCP	137	
Operation & Maintenance (O&M)	UDP and TCP	8010	
InServer Blade and Client Configuration web pages	UDP and TCP	8080	
Web Client	UDP and TCP	8088	

**Table 2-93 Exceptions to Windows Process**

<b>Windows Process Firewall Exceptions</b>
MobilePresenceService.exe
NECPhone.exe
RPCTIService.exe
TSPStart.exe
DataMeeting.exe
RtcSvGM.exe

## Virtual Machine Support

With the increasing popularity of deploying virtual machine environments by IT organizations, **UC Desktop Version 6.1.0.0 or higher** has been enhanced allowing Shared Services to support the virtual machine environments listed below. This option provides a cost-effective alternative to implementing a physical server.

- Environment #1  
Applications: UC Desktop Shared Services, version 6.1  
Host: Windows 2012 Server, running **VMWare Workstation 9**  
Virtual: Windows 7 (32-bit)
- Environment #2  
Applications: UC Desktop Shared Services, version 6.1  
Host: Windows 2012 Server, running **VMWare ESXI 5.1**  
Virtual: Windows 7 (32-bit)
- Environment #3  
Applications: UC Desktop Shared Services, version 6.1  
Host: Windows Server 2008 R2 Enterprise, running **Hyper-V 6.1**  
Virtual: Windows 7 (32-bit and 64-bit)

## Conditions

- UC Desktop Suite does not support the Cordless DTL-8R-1 terminal.
- The UC Desktop Application must be running in order to run the Answering Center.
- The UC Desktop Application does not support Centrex trunks for transferring or call forwarding off-site.

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- The UC Desktop Application does not follow delay ringing. For example, if a virtual extension is set to delay ring and appears on a Desktop terminal, the Desktop will show the call as ringing immediately.
  - The Bluetooth Cordless Handset (BCH) is not a supported terminal when using 1st-Party CTI, 3rd-Party CTI, or with the Desktop Suite.
  - A maximum of 128 Desktop Applications connections is supported (Desktop Client, Desktop Client with Shared Services or SoftPhones). Any 1st-Party CTI over ethernet connection takes away from the 128 maximum connections.
  - The SV8100 UC Desktop Suite Applications does not support Network Address Translation (NAT). Because of this, any Desktop Application must appear to be on the same network as the SV8100 VoIP Interface (IPLA/IPLB). For remote Desktop Applications, like SP310 soft phone, this can be achieved by a VPN connection to the network the SV8100 resides on.
  - The UC Desktop Applications require a ADA-L Adapter installed on the multiline terminal with connection directly to the client PC for Call Recording and Personal Greeting voice functions when running in deskset mode.
  - With **Version 1100 or lower** software, the CD-CP00-US must be licensed for a IP Terminal license for each Desktop Application whether it is running in deskset or softphone mode.
  - With **Version 2000 or higher** software, the CD-CP00-US must be licensed for either an IP Terminal license or an IP Terminal Softphone License when using a SP310 Softphone or the Enhancement Bundle.
  - UC Desktop Application users cannot dial digits while a call is in progress.
  - If the Desktop user presses the disconnect button to abort a transfer, the call shows up in Desktop as a held call. The Desktop user is not automatically connected back to the caller.
  - When UC Desktop Application is in Toolbar mode, if the docked edge is changed from Top to Bottom or Bottom to Top, it may rearrange the icons on the PC Desktop.
  - Recording with deskset mode, either digital multiline or IP multiline, requires ADA-L adapter.
  - Recording with Softphone mode does not require an ADA adapter. Recording is done through the softphone.
  - The Voice Mail button on the tool bar is not used in the US market.
  - If the dial window is open when a new call rings into the Desktop, and the phone is on-hook, the new call takes priority and the dial window will close.
  - When using the Chat feature in the UC Desktop Applications, the maximum number of characters in a chat message is 256.
  - The integration between the desktop application and the CD-CP00-US does not support CAP keys 1000-9999. Only 0001-0999 can be supported. CAP keys above 1000 can be used elsewhere in the system, but not for CTI controlled extensions which include Desktop Suite.

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- To reset the Telephony Settings (i.e., Service Codes) to default, you must delete the c:\Documents and Settings\All Users\Application Data\Cygnus Application Suite\PC Phone\TapiConfig.xml file and it recreates with defaults on the next launch of the application.
  - Using an ADA-L for recording in Deskset mode for the Desktop applications: DIPS 1 and 6 on the ADA-L should be on with all others off.
  - With UC Desktop Applications **1.0, 2.0 and 3.5**, Intercom calls parked in the Desktop Application do not show up. Parked trunk calls will show as held calls if the trunk key is programmed on the phone. If the trunk is not programmed on the phone, parked trunk calls will be removed from Desktop.
  - With UC Desktop Applications **Version 3.6.0.0**, Parked calls can be monitored in the Active Call list and will show up as a blue Parked Call similar to the IPK II PC Attendant.
  - TAPI does not monitor all the system park orbits. Therefore, TAPI errors can occur in the application if the Desktop user attempts to park a call in an orbit that is already occupied by a call manually parked in that orbit by another user.
  - With UC Desktop Applications **Version 3.7.0.0 or higher**, Desktop users can park calls in the next available park orbit by choosing orbit 0 from the application when Program 20-11-27 is set to 1 (on).
  - Any station using UC Desktop Applications, in softphone or deskset mode, must have an ICM key programmed in 15-07 (\*00).
  - BLF indication for another station is solid green or flashing green if the BLF is for the station the application is running. There is no difference between busy or ringing for a BLF of another station.
  - If DND and CFA are set for another station, its BLF shows red.
  - In the 1st-Party solution, BLF/DSS to be monitored in the UC Desktop Application must be programmed on a physical key on the phone or DSS console attached to the phone. DSS/BLF buttons that are programmed on buttons that do not physically exist on the phone or on a DSS console that is not physically present do not show up in the UC Desktop Application.
  - Without Shared Services, ringing trunk calls show green. With the Shared Services solution, ringing trunks calls show red.
  - Application Sharing uses Microsoft Net Meeting. When application sharing is used, the Forward Control and Window Bar options are not available.
  - Usually, Windows Vista does not include NetMeeting. NEC distributes a Vista version of NetMeeting. The full installation installs NetMeeting if the OS is Vista and NetMeeting is not present.
  - Application Sharing has a 1 to 1 functionality. A desktop suite client cannot share with multiple clients.
  - When running UC Desktop Applications in deskset mode for an IP phone when the registration mode is set to automatic or manual, the user name and password must be different than that of the IP phone.



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- A soft phone that is assigned a DSS console cannot override another IP phone.
  - A soft phone cannot override an IP phone that is assigned a DSS console.
  - Once a soft phone with a DSS console is logged in, it cannot log in with a different user name and password.
  - Once a desktop is launched on one PC using a User ID and Password in deskset or soft phone mode, the same User ID and Password cannot be used on a different PC in a different mode.
  - If an IP Multiline phone is controlled by the UC Desktop Application, it cannot be overridden by another IP multiline phone or softphone (**Version 3000 or lower** software).
  - Only one 3rd-Party CTI connection to the SV8100 is supported. If an SV8100 system has UCB (Unified Communications for Business), the 3rd-Party Shared Services feature of SV8100 UC Desktop Suite Applications cannot be used. If an SV8100 system has SV8100 UC Desktop Suite Applications with the 3rd-Party Shared Services, UCB cannot be used.
  - If the desktop is launched for a phone that is on a call, the desktop will not show the active call until it is placed on hold.
  - **Version 2.x.x.x** of the UC Desktop Application has new license levels for Deskset Only. With these license levels, the Desktop controlling a Deskset phone do not register as an IP station, therefore no longer take up an additional system port.
  - The Enhancement Bundle features require a non-Deskset only license level even when controlling a Deskset phone. When a non-Deskset only license level is selected, the Desktop registers as an IP station consuming an additional system port.
  - The system sees terminal types 1 (Economy), 2 (Value), 3 (Desi-Less), 4 (Sophisticated) and 5 (Softphone) as the same terminal type.
  - When using Multiple Logon, the same Personal ID index can be assigned to an ITL/Softphone, a CTI (Desktop), and an MH240 terminal type.
  - Two ports of the same terminal type (Program 15-05-26) cannot be assigned to the same Personal ID index (Program 15-05-27).
  - Program 10-46-01 must be set to 1 (Auto) or 2 (Manual) for Multiple Logon to work.
  - When three ports are assigned the same Personal ID index in Program 15-05-27, if Program 15-05-26 is not set for those ports, the terminal types will be assigned based on order of login. If Program 15-05-26 is set, the login order does not matter and they will assign the correct port.
  - The Override feature functions the same as single login.
  - UC Desktop Applications installed on 32-bit Windows 7 support the Desktop Client, SP310 Soft Phone, Plantronics USB Headset, and Shared Services (32-bit only with UC Desktop Applications **Version 3.6.x.x or lower** software). The UTR-1W-1, UTR-1-1(BK), UTR-1-1(BK1) USB Handsets and the Enhancement Bundle (Chat, Whiteboard, Application Sharing, and File Transfer) are **not** supported on 32-bit Windows 7.

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- UC Desktop Applications installed on a 64-bit Windows 7 system support the Desktop Client, SP310 Soft Phone, Plantronics USB Headset, and UTR-1W-1 USB Handset and Shared Services (UC Desktop Applications **Version 3.7.0.0 or higher** software). UTR-1-1(BK) and UTR-1-1(BK1) handsets, the Enhancement Bundle (Chat, Whiteboard, Application Sharing, and File Transfer) are **not** supported on 64-bit Windows 7.
  - When selecting the Desktop Client (Deskset Only) license level in the Desktop Configuration Wizard with the Shared Services option checked, call control is handled by the Telephony Service Provider on the Shared Services Server.
  - The new Voice Message notification by Windows Toast is only supported in Softphone mode, and not in Desktop mode.
  - The new Voice Message notification by Windows Toast is only supported with VM8000 InMail. The UM8000 Mail does not support this Voice Message notification in UC Desktop Applications.
  - With **Version 4000 or higher** software, SOAI and 3rd Party CTI can be used at the same time in the system. This allows systems at **Version 4000 or higher** to have UC Desktop Applications and DTPlusware or UCB and DTPlusware.
  - UC Desktop Applications **Version 3.7.0.0 or higher** supports systems that have migrated from the UX5000 to the SV8100 using either UX5000 or SV8100 style telephones.
  - In systems that have migrated from the UX5000 to the SV8100 and utilize UX5000 phones, Program 20-02-23 must be set to 1 (UX5000 Special Operation Mode), and Program 20-23-05 must be set to 1 (On).
  - The Synchronization button within **Preferences** is available to the license levels shown below as long as Shared Services is not used:
    - Desktop Client + Softphone
    - SP310 – Softphone only
  - The Synchronization button within **Preferences** is **not** available to the Desktop Client (Deskset only) license level with or without Shared Services.
  - InMail Integration is not supported in a Centralized VM environment over IP or T1 CCIS.
  - When using a CS50 USB Headset for soft phone audio device, the Disable CS50 Power Saving option should be checked in the Desktop Configuration Wizard. This disables the CS50's power save/sleep mode which is not supported by UC Desktop Suite. Please note that this will decrease the CS50's battery time.
  - NAT or NAPT is only supported on the DT700 series phones. NAT or NAPT is not supported on the ML440, MH240, the Wireless DECT (SIP), SP310 or third party SIP phones.
  - If analog Caller ID trunks are being used, Program 14-02-23 must be set to **Wait Caller ID** for Salesforce to receive the caller ID for screen pops.
  - With CO lines, if TAPI is present in the system, there is a designed delay in ringing the station so TAPI can capture the CID.
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- When using InMail integration, all clients must use shared services or all clients must be used without shared services. A mixture of some clients with Shared Services and some without is not supported when using InMail Integration.
  - If an Outlook appointment is set for less than 30 minutes and you open the Presence Form, the duration is changed to 30 minutes.
  - Using up or down arrows in the Presence State fields in Web Client is not supported.
  - ACT! 2001, 2012, and 2013 are supported with the following conditions:
    - ❑ In Act>Tools>Preferences>Communications>Dialer Preferences choose **NEC Single Line Device as modem or line** and uncheck Hide dialer after dialing.
    - ❑ Windows Phone and Modem properties need to be configured for local dialing.
    - ❑ With ACT! 2012 and 2013, use either the “Hang up” button in the ACT! dialer window to disconnect the call or toggle the handset if you hang up the phone and close the ACT! dialer window. Failure to do either would hold the dialer open in ACT!
    - ❑ With ACT! 2013, a reboot is required after configuring the integration.

## Default Setting

None

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## System Availability


### Terminals


All Multiline Terminals (except DTU/DTP style terminals)

### Required Component(s)

- PC Class: Pentium 3
- Processor Speed: 1Ghz
- RAM: 512MB Minimum, 1GB Recommended
- Display: Super VGA (800x600) or higher
- 50MB Available Disk Space
- CD ROM Drive
- Network Adapter
- Sound Card

- ADA-L for Recording/Personal Greeting in deskset mode
- The desktop system supports the following operation systems:
  - Windows Server 2003, SP2
  - Windows XP Professional, SP2
  - Windows Vista Business (32-bit)
  - Windows 7 Professional (32-bit and 64-bit)
  - Windows Server 2008 (32-bit and 64-bit)
  - Windows Server 2012
  - Windows 8 Professional and Enterprise (32-bit and 64-bit)

 *Refer to the Conditions section for Windows 7 32-bit and 64-bit limitations.*

 *Microsoft .NET Framework 3.5 must be enabled for Windows 8 and Server 2012.*

### **Optional Component(s)**

- Video Camera
- Microphone/Headset/USB Handset
- Speakers

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### **Related Features**

Refer to the UNIVERGE SV8100 UC Desktop Suite Applications Manual for detailed feature information.

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 2** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	CD-CP00-US Network Setup – Default Gateway	Define the default gateway to be used by the IPLA/IPLB interface.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-20-01	<b>LAN Setup for External Equipment – TCP Port</b>	Define the TCP port number for the LAN CTI and O&M communication between the CD-CP00-US and the UC Desktop Applications.	0~65535 default: External Device 1 (CTI Server) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service ) = 0	✓		
10-46-01	<b>DT700 Server Information Setup – Register Mode</b>	If set to 0, when the phone boots up it reports the ext. assigned in the phone or chooses the next available extension in the system. No password is required. If set 1 the SIP user name and password must be entered on the actual IP phone. These settings must match 84-22/15-05-27, or the phone does not come on-line. If set to 2, when the phone boots up it prompts user to enter a user ID and password before logging in. It checks this user ID/password against 84-22/15-05-27. If there is no match, the phone does not come on-line.	0 = Normal 1 = Auto 2 = Manual (default = 0)		✓	
15-05-27	<b>IP Telephone Terminal Basic Data Setup – Personal ID Index</b>	When the SIP Multiline telephone is using manual/auto registration, assign each phone a unique personal index. Then go to command 84-22 to assign the user name and password.	0~512 (default = 0)		✓	
15-05-28	<b>IP Telephone Terminal Basic Data Setup – Addition Information Setup</b>	Set Talking Party to 0 for Desktop Application softphone.	0 = Do not inform 1 = Inform (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key to terminals.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-02-23	<b>System Options for Multiline Telephones – Phone Operation Mode</b>	For systems that have migrated from UX5000 to SV8100, define how the phones should operate 0 (Original, SV8100 phones) or 1 (UX5000, UX5000 phones).	0 = Original 1 = UX5000 (Default = 0)	✓		
20-23-05	<b>System Options for CTI – UX5000 Migration mode</b>	Define if the system should use SV8100 CTI mode 0 (Off) or UX5000 Migration mode 1 (On).	0 = Off 1 = On (Default = 0)	✓		
20-23-06	<b>System Options for CTI – 3rd Party CTI IP Address</b>	Read only program that displays the IP address of the currently connected 3rd Party CTI Server.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	
30-01-01	<b>DSS Console Operating Mode</b>	Set the DSS system Console mode.	0 = Business Mode 1 = Hotel Mode 2 = ACD Monitor Mode 3 = Business/ACD Mode (default = 0)		✓	
30-02-01	<b>DSS Console Extension Assignment – Extension Number</b>	Set the extension number for the multiline terminal connected with the DSS console (up to eight digits).	Up to eight digits. (default not assigned)	✓		
30-03-01	<b>DSS Console Key Assignment</b>	For DSS Console Chaining, assign an Speed Dialing Service Code (or) plus a 2-digit bin number to a DSS Console key.	Key Number 001~500 0~99 (General Functional Level) 97 = Door Box Access key (additional data: 1~8 Door Box No.) * 00 ~ * 99 (Appearance Functional Level)		✓	
84-20-02	<b>SIP Extension Basic Information Setup – Session Timer Value</b>	Define the periodic refresh time that allows both user agents and proxies to determine if the SIP session is still active.	0~65535 (seconds) (default = 180)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-20-03	<b>SIP Extension Basic Information Setup – Minimum Session Timer Value</b>	Define to convey the minimum allowed value for the SIP session timer.	0~65535 (seconds) (default = 180)		✓	
84-22-01	<b>DT700 Multiline Logon Information Setup – User ID</b>	Input the User ID for each Personal ID Index (1-512) when using auto or manual registration in 10-46-01.	Up to 32 characters (default not assigned)		✓	
84-22-02	<b>DT700 Multiline Logon Information Setup – Password</b>	Input the Password for each Personal ID Index (1-512) when using auto or manual registration in 10-46-01.	Up to 16 characters (default not assigned)		✓	
84-26-01	<b>IPL Basic Setup – IP Address</b>	Assign the IP address for each DSP on the IPLA/IPLB.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27		✓	

In addition to the above programming, define the programming options as required for the system features. Refer to the UNIVERGE SV8100 Programming Manual for programming details. Callback, Callback Request, and Auto Redial are not supported.

## Operation

Refer to the UNIVERGE SV8100 UC Desktop Suite Applications Manual for detailed feature information.

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## SV8100/SV8300 Terminals

### Enhancements


With **Version 3000 or higher** system software, the appropriate line key page automatically displays for incoming calls on the DTL-8LD-1 (DESI-Less) and ITL-320C-1 terminals.

When installing the DT730G terminals (ITL-12CG-3 and ITL-12DG-3), **Version 7000 or higher** software is required.

### Description

The SV8100/SV8300 is a full-featured IP based communications system providing a rich feature set with pure Voice over IP (VoIP) communications, across corporate Local and Wide Area Networks (LAN and WAN).

The DT700 series telephones provide a converged infrastructure at the desktop, with a 10Base-T/100Base-TX connection to the LAN and built-in hub for a PC connection to the telephone itself. The system can provide peer to peer connections between the DT700 series telephones with voice compression, offering existing IP telephone features with an enhanced user interface. On the WAN side, the system can provide peer to peer connections over IP networks with the voice compression, on CCIS over IP or Remote Unit over IP.

 *Remote Unit over IP is available only for the SV8300.*

The SV8100/SV8300 can provide legacy line/trunk interfaces to support the existing Time Division Multiplexing (TDM) based infrastructure, such as analog telephones, digital telephones (DT300 series), analog networks and digital networks (T1/E1, ISDN, etc.).

### Encryption

This feature is supported with main software V 2.5 or above and terminal firmware 92.2.1.0 or above.

**Table 2-94 DT700 Supported Encryption**

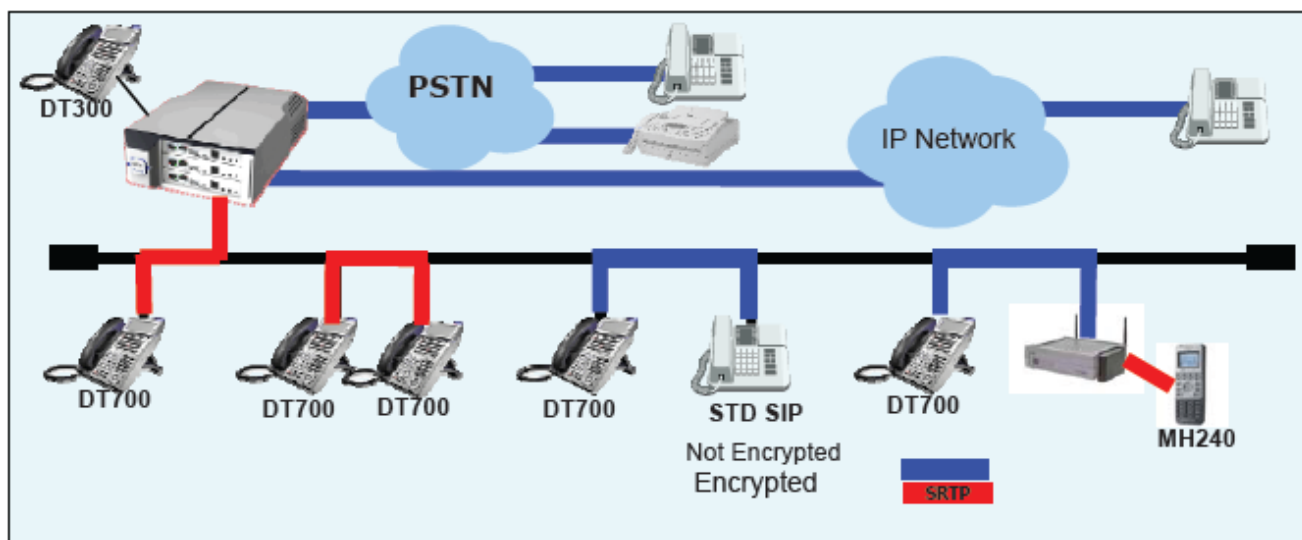
Source	Destination	SRTP	Comment
DT700	DtermIP	S	DT700 VoIPDB Encrypt between DT700 and VoIPDB
DT700	STD SIP (P2P)	N	
DT700	STD SIP (Non P2P)	S	DT700 VoIPDB Encrypt between DT700 and VoIPDB

**Table 2-94 DT700 Supported Encryption (Continued)**

Source	Destination	S RTP	Comment
DT700	DT700	S	MH240 without MH240
DT700	PSTN	S	DT700 VoIPDB Encrypt between DT700 and VoIPDB
DT700	IP Network (SIP/H323/CCIS)	S	DT700 VoIPDB Encrypt between DT700 and VoIPDB
DT700 Encryption On	DT700 Encryption Off	N	

S = Supported  
N = Not Supported

*SV8100 supports AES 128 bit encryption. Program 10-46-08 Model 1 (read only) represents AES 128 bit.*



**Figure 2-74 SV8100 Encryption Configuration**

**Conditions**

- In **Version 3000 or higher** software the system can be programmed to blink the page number of a DT300/DT700 DESI-Less terminal when it receives an incoming call, or switch to the page the incoming call is on. Furthermore, a default page can be defined for the DESI-Less terminal to change to when it goes idle or when it has answered a call.

- DT300/DT700 terminals installed in a SV8100 with the IPK/IPK II Migration system do not support the DESI-Less page switching and blinking.
- DESI-Less screen page switching only applies to idle terminals. If a terminal is not idle, the screen will not switch if another call comes in until the phone goes idle.
- [Table 2-95 Terminal Category Reference Chart \(DT300/DT700\)](#) provides a quick reference of the DT300/DT700 terminals.

**Table 2-95 Terminal Category Reference Chart (DT300/DT700)**

Series Name		Equipment ID	System Compatibility SV8100	Comments
DT 300 Series Digital Terminal (TDM)	DT 310 (Economy)	DTL-2E-( ) DTL-6DE-( ) DTL-12E-( )	✓	<ul style="list-style-type: none"> <li>○ Economical terminal providing access to basic telephony and messaging service</li> <li>○ Fully functional keypad providing standard business functions such as hold, transfer, speaker, microphone and other features</li> <li>○ 2-button terminal is non-display</li> <li>○ 6-button terminal equipped with LCD and full-featured keypad</li> <li>○ 12-button terminal is non-display</li> <li>○ Available in black</li> </ul>
	DT 330 (Value)	DTL-8LD-( ) DTL-12D-( ) DTL-24D-( ) DTL-32-D-( )	✓	<ul style="list-style-type: none"> <li>○ 8-button DESI-Less LCD telephone</li> <li>○ Also available are 12-, 24-, 32-button LCD telephones</li> <li>○ Provides access to more sophisticated system features and allowing room for growth</li> <li>○ All DT 330s come with a standard LCD display, full duplex speakerphone capability, module support for expansion and feature add-on capability</li> <li>○ Optional 60-button DSS Console provides 60 programmable keys and provides users a Busy Lamp Field (BLF) and 1-button access to extensions, trunks, and system features</li> <li>○ Available in black and white</li> </ul>
		DTL-12BT( )	✓	○ Bluetooth available in black
		DTL-12PA( )	✓	○ Power Save Adapter provides backup for analog trunk connection

Table 2-95 Terminal Category Reference Chart (DT300/DT700) (Continued)

Series Name		Equipment ID	System Compatibility SV8100	Comments
DT 700 Series IP Terminals	DT 710 (Economy)	ITL-2-( ) ITL-6D-( ) ITL-8LDE-( )	✓	<ul style="list-style-type: none"> <li>○ Economical terminal providing access to basic telephony and messaging service</li> <li>○ Fully functional keypad providing standard business functions such as hold, transfer, speaker, microphone and other features</li> <li>○ 2-button terminal is non-display</li> <li>○ 6-button terminal equipped with LCD and full-featured keypad</li> <li>○ 8-button terminal equipped with LCD and full-featured keypad</li> <li>○ Available in black</li> <li>○ IP formatted terminal has a dual port, supports compression, full-duplex handsfree operation</li> </ul>
	DT 730 (Value)	ITL-8LD-( ) ITL-12D-( ) ITL-24D-( ) ITL-32-D-( )	✓	<ul style="list-style-type: none"> <li>○ 8-button DESI-Less LCD telephone</li> <li>○ Also available are 12-, 24-, 32-button LCD telephones</li> <li>○ Provides access to more sophisticated system features allowing room for growth</li> <li>○ All DT 730s come with a standard backlit LCD display, full duplex speakerphone capability, module support for expansion and feature add-on capability</li> <li>○ Available in black and white</li> <li>○ Expands the capability by providing XML display to provide more productivity enhanced applications to the users</li> <li>○ Optional 60-button DSS Console provides 60 programmable keys and provides users a Busy Lamp Field (BLF) and 1-button access to extensions, trunks, and system features</li> </ul>
		ITL-12PA( )	✓	<ul style="list-style-type: none"> <li>○ Power Save Adapter provides backup for analog trunk connection</li> </ul>
	DT 730G (Value)	ITL-12CG-( ) ITL-12DG-( )	✓	<ul style="list-style-type: none"> <li>○ Provides access to more sophisticated system features allowing room for growth</li> <li>○ DT 730G terminals come with a standard backlit LCD display, full duplex speakerphone capability, module support for expansion and feature add-on capability</li> <li>○ Available in black only</li> <li>○ Expands the capability by providing XML display to provide more productivity enhanced applications to the users</li> <li>○ 12CG equipped with color LCD display</li> <li>○ 12CG/12DG support Gigabit Ethernet</li> </ul>
	DT 750 (Sophisticated)	ITL-320C-( )	✓	<ul style="list-style-type: none"> <li>○ IP terminal provides a 5" color touch panel</li> <li>○ Features of the telephone provide easy use of NEC Unified communications and third-party telephony XML applications</li> <li>○ Access to 32 telephony feature lines across an IP backbone, built-in full duplex speakerphone and DESI-Less line key labeling are standard</li> <li>○ Optional 60-button DSS Console provides 60 programmable keys and provides users a Busy Lamp Field (BLF) and one-button access to extensions, trunks, and system features</li> </ul>
Wireless Handset	C124	✓	SIP DECT	
	G955	✓	SIP DECT	
Cordless	DTH-4R-1	✓	Cordless II Lite	
	DTL-8R-1	✓	Cordless DECT	

- [Table 2-96 Terminal Category Reference Chart \(D<sup>term</sup> Series i Terminals\)](#) provides a quick reference of the Series i terminals.

**Table 2-96 Terminal Category Reference Chart (D<sup>term</sup> Series i Terminals)**

Series Name		Equipment ID	System Compatibility			Comments
			IPK II	SV8100	SV8300	
D <sup>term</sup> Series i	80/85	DTH-8-( ) TEL	✓	✓	—	
		DTR-8-( ) TEL	✓	✓	✓	
		DTH-8D-( ) TEL	✓	✓	—	
		DTR-8D-( ) TEL	✓	✓	✓	
		DTH-16D-( ) TEL	✓	✓	—	
		DTR-16D-( ) TEL	✓	✓	✓	
		DTH-16LD-( ) TEL	✓	✓	—	
		DTR-16LD-( ) TEL	✓	✓	✓	
		DTH-32D-1 TEL	✓	✓	—	
		DTR-32D-1 TEL	✓	✓	✓	

- [Table 2-97 Connectivity of Options](#) provides a quick overview of the options available with the DT300/DT700 Series telephones.

**Table 2-97 Connectivity of Options**

Terminal Options		IP Terminals			Digital Terminals	
		Sophisticated ITL-320C-1 TEL	Value ITL-8LD-1 ITL-12D-1 ITL-12CG-3 ITL-12DG-3 ITL-24D-1 ITL-32D-1	Economy ITL-2E-1 ITL-6DE-1 ITL-8LDE-1	Value DTL-8LD-1 DTL-12D-1 DTL-24D-1 DTL-32D-1	Economy DTL-2E-1 DTL-6DE-1 DTL-12E-1
Key Kit	Ten Key Kit	✓	✓	✓	✓	✓
	12LK Kit	N/A (Built in)	✓	N/A	✓	N/A
	8LK Unit	✓	✓ (Except 8LD-1 Unit)	N/A	✓ (Except 8LD-1 Unit)	N/A
Common	ADA: Analog Recording Adapter	✓	✓	N/A	✓	N/A
	PSA: PSTN Adapter for analog	✓	✓	N/A	✓	N/A
	DSS: 60-Button DSS Console	✓	✓	N/A	Connect to Digital Port on KTS	
Digital	APR: Analog Port adapter with Ringer				✓	N/A
	DESI-Less LK/LCD Unit				✓ (Except 8LD-1 Unit)	N/A
	Backlit LCD				✓ (Except 8LD-1 Unit)	N/A
IP	DESI-Less LK/LCD Unit	N/A (Built in)	✓	N/A	N/A	



- [Table 2-98 Terminal and Adapter Compatibility](#) shows the compatibility between the terminals and adapter used in the system.

**Table 2-98 Terminal and Adapter Compatibility**

Terminal	Adapter Unit							
	ADA-L	APR-L	ILPA	PSA-L	BCH-L	BHA-L	GBA-L	IPv6-L
<b>Digital Terminals:</b>								
DTL-2E-1 (BK) TEL	—	—	—	—	—	—	—	—
DTL-6DE-1 (BK) TEL	—	—	—	—	—	—	—	—
DTL-12E-1 (BK) TEL	—	—	—	—	—	—	—	—
DTL-8LD(BK)/(WH) TEL	✓	✓	—	✓	✓	✓	—	—
DTL-12BT-1 (BK) TEL	—	—	—	—	—	—	—	—
DTL-12D-1 (BK)/(WH) TEL	✓	✓	—	✓	✓	✓	—	—
DTL-12PA-1 (BK) TEL	✓	✓	—	✓	—	—	—	—
DTL-24D-1 (BK)/(WH) TEL	✓	✓	—	✓	✓	✓	—	—
DTL-32D-1 (BK)/(WH) TEL	✓	✓	—	✓	✓	✓	—	—
<b>IP Terminals:</b>								
ITL-2E-1 (BK) TEL	—	—	✓	—	—	—	✓	—
ITL-6DE-1 (BK) TEL	—	—	✓	—	—	—	✓	—
ITL-8LDE-1 (BK) TEL	—	—	✓	—	—	—	✓	—
ITL-8LD-1 (BK)/(WH) TEL	✓	—	✓	✓	—	—	✓	✓
ITL-12D-1 (BK)/(WH) TEL	✓	—	✓	✓	—	—	✓	✓
ITL-12CG-3 (BK) TEL	✓	—	✓ <sup>1</sup>	✓	—	—	✓ <sup>2</sup>	✓
ITL-12DG-3 (BK) TEL	✓	—	✓ <sup>1</sup>	✓	—	—	✓ <sup>2</sup>	✓
ITL-12PA-1 (BK) TEL	✓	—	✓	✓	—	—	✓	✓
ITL-24D-1 (BK)/(WH) TEL	✓	—	✓	✓	—	—	✓	✓
ITL-32D-1 (BK)/(WH) TEL	✓	—	✓	✓	—	—	✓	✓
ITL-320C-1 (BK) TEL	✓	—	✓	✓	—	—	✓	✓
<b>Console:</b>								
DCL-60-1 (BK)/(WH) CONSOLE	—	—	—	—	—	—	—	—

— = Option Not Available

✓ = Optional Available

<sup>1</sup> = When the IPLA-L is connected to a 12CG/12DG terminal, maximum connection speed drops to 100Mbps.

<sup>2</sup> = The 12CG/12DG terminals support Gigabit Ethernet, GBA-L Unit not required.

Table 2-99 DT330 Compatibility Settings

ADA-L Unit Switch Settings	Terminal Lot Number DT-330		
	xxx I Lx or lower (Version 1.E0 or lower)	xxx I Mx (Version 8.10)	xxxJSx or higher (Version 2.20 or higher)
ADA Connection for Recording Only.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.
ADA Connection for Sending Recorded Calls to the Telephone.	Dip switches 2, 3, 5, 7 and 8 are OFF. Switches 1, 4 and 6 are ON.	Dip switches 2, 3, 5, 7 and 8 are OFF. Switches 1, 4 and 6 are ON.	Dip switches 2, 3, 5, 7 and 8 are OFF. Switches 1, 4 and 6 are ON.
To Send and Receive to the Terminal	Not supported	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.	Dip switches 1, 2, 3, 5, 7 and 8 are OFF. Switches 4 and 6 are ON.

Lot Numbers: I, J – Hardware Revision

Lot Numbers: L, M, S – Software Revision



 To verify DT-330 terminal firmware, hold down keypad buttons 1, 2 and 3 while plugging the line cord into the terminal.

Table 2-100 Firmware Compatibility Matrix

		BCH-L Unit Lot Number	
		xxxDxx or lower	xxxExx or higher
<b>Terminal Lot Number DT-330</b>	xxx I xx or lower (Version 8.10 and 1, E0 or lower)	Supported	Supported
	xxxJxx or higher (Version 2.20 or higher)	Not supported	Supported

 BCH Support may differ based on terminal firmware. To verify both DT-330 terminal and BCH-L Unit firmware, hold down keypad buttons 1, 2 and 3 while plugging the line cord into the terminal.

- [Table 2-101 Terminal and Line Key/LCD Compatibility](#) shows the compatibility between the terminals and Line Key or LCD used in the system.

**Table 2-101 Terminal and Line Key/LCD Compatibility**

Terminal	Line Key/LCD					
	8 LK-L	8LKD(LD)-L	8LKI(LD)-L	12LK-L	LCD (BL)-L	DCL-60
<b>Digital Terminals:</b>						
DTL-2E-1 (BK) TEL	—	—	—	—	—	—
DTL-6DE-1 (BK) TEL	—	—	—	—	—	—
DTL-12E-1 (BK) TEL	—	—	—	—	—	—
DTL-8LD(BK)/(WH) TEL	✓	—	—	—	—	✓
DTL-12BT-1 (BK) TEL	✓	✓	—	✓	✓	✓
DTL-12D-1 (BK)/(WH) TEL	✓	✓	—	✓	✓	✓
DTL-12PA-1 (BK) TEL	✓	✓	—	✓	✓	✓
DTL-24D-1 (BK)/(WH) TEL	✓	✓	—	—	✓	✓
DTL-32D-1 (BK)/(WH) TEL	✓	✓	—	—	✓	✓
<b>IP Terminals:</b>						
ITL-2E-1 (BK) TEL	—	—	—	—	—	—
ITL-6DE-1 (BK) TEL	—	—	—	—	—	—
ITL-8LDE-1 (BK) TEL	—	—	—	—	—	—
ITL-8LD-1 (BK)/(WH) TEL	✓	—	—	—	—	✓
ITL-12D-1 (BK)/(WH) TEL	✓	—	✓	✓	—	✓
ITL-12CG-3 (BK) TEL	✓	—	—	✓	—	✓
ITL-12DG-3 (BK) TEL	✓	—	—	✓	—	✓
ITL-12PA-1 (BK) TEL	✓	—	✓	✓	—	✓
ITL-24D-1 (BK)/(WH) TEL	✓	—	✓	—	—	✓
ITL-32D-1 (BK)/(WH) TEL	✓	—	✓	—	—	✓
ITL-320C-1 (BK) TEL	✓	—	—	—	—	✓

— = Option Not Available

✓ = Optional Available

- [Table 2-102 Terminal and Ten Key Kit Compatibility](#) shows the compatibility between the terminals and Ten Key kits used in the system.

**Table 2-102 Terminal and Ten Key Kit Compatibility**

Terminal	Ten Key Kit					
	BS(F)-L	BS(S)-L	BS (Braille)-L (BK) KIT	BS(Retro)-I	BS (V-Hotel)	BS (S-Hotel)
<b>Digital Terminals:</b>						
DTL-2E-1 (BK) TEL	—	—	—	✓	—	—
DTL-6DE-1 (BK) TEL	—	—	—	✓	—	—
DTL-12E-1 (BK) TEL	—	—	—	✓	—	—
DTL-8LD(BK)/(WH) TEL	✓	✓	✓	✓	✓	—
DTL-12D-1 (BK)/(WH) TEL	✓	✓	✓	✓	✓	—
DTL-12BT-1 (BK) TEL	✓	✓	✓	✓	✓	—
DTL-12PA-1 (BK) TEL	✓	✓	✓	✓	✓	—
DTL-24D-1 (BK)/(WH) TEL	✓	✓	✓	✓	✓	—
DTL-32D-1 (BK)/(WH) TEL	✓	✓	✓	✓	✓	—
<b>IP Terminals:</b>						
ITL-2E-1 (BK) TEL	—	—	—	✓	—	—
ITL-6DE-1 (BK) TEL	—	—	—	✓	—	—
ITL-8LDE-1 (BK) TEL	—	—	—	—	—	—
ITL-8LD-1 (BK)/(WH) TEL	✓	✓	✓	✓	✓	—
ITL-12D-1 (BK)/(WH) TEL	✓	✓	✓	✓	✓	—
ITL-12CG-3 (BK) TEL	✓	✓	✓	✓	✓	—
ITL-12DG-3 (BK) TEL	✓	✓	✓	✓	✓	—
ITL-12PA-1 (BK) TEL	✓	✓	✓	✓	✓	—
ITL-24D-1 (BK)/(WH) TEL	✓	✓	✓	✓	✓	—
ITL-32D-1 (BK)/(WH) TEL	✓	✓	✓	✓	✓	—
ITL-320C-1 (BK) TEL	✓	✓	✓	✓	—	✓

— = Option Not Available

✓ = Optional Available

The BS (Braille)-L (BK) KIT kit consists of stickers to be installed.

- [Table 2-103 Adapter Compatibility](#) shows the compatibility between the adapters used in the system.

**Table 2-103 Adapter Compatibility**

Adapter	Adapter						
	ADA-L	APR-L	ILPA	PSA-L	BCH-L	BHA-L	GBA-L
ADA-L	—	—	✓	✓	—	—	✓
APR-L	—	—	—	✓	—	—	—
ILPA	✓	—	—	✓	—	—	✓
PSA-L	—	—	✓	—	—	✓	✓
BCH-L	✓	—	—	—	—	—	—
BHA-L	—	—	—	✓	—	—	—
GBA-L	✓	—	—	✓	—	—	—

— = Option Not Available

✓ = Optional Available

### Encryption

- Encryption must be turned on in the DT700 as well as the SV8100 for encryption to take place.
- Encryption is supported between the DT700 terminal and the IPLA/IPLB (VoIPDB).
- Encryption can be enabled on a per phone basis.
- CCISoIP and SIP trunking are not supported.
- Program 10-26-02 RTP forwarding is not supported with encryption.
- Multicast (paging, room monitor, etc.) is not encrypted.
- If Program 90-45-01 is used to change the temporary password, all terminals using encryption will be logged off. Terminals will then need the 1-time password to be reentered.
- Encryption is not supported on DT700 series phones that are connected via NAPT.
- Encryption is not supported on DT700 series phones that are registered to a secondary NetLink system.
- With **Version 4000 or higher** main software, DT700 series phones that are registered to a primary NetLink can fail over to a secondary system regardless of encryption settings.
- [Table 2-104 IPLA DSP Usage on page 2-1552](#) or [Table 2-105 IPLB DSP Usage on page 2-1553](#) lists the Digital Signal Processors (DSP) usage with the different CODECs available:

Table 2-104 IPLA DSP Usage

Codec	Baseline	With SRTP
32VoIP DB		
G.711	32	32
G.722	32	24
G.726	32	24
G.729ab	32	24
G.723.1	24	16
iLBC	24	16
T38	32	28
64VoIP DB		
G.711	64	64
G.722	64	48
G.726	64	48
G.729ab	64	48
G.723.1	48	32
iLBC	48	32
G3 Fax	64	56
128VoIP DB		
G.711	128	128
G.722	128	96
G.726	128	96
G.729ab	128	96
G.723.1	96	64
iLBC	96	64
G3 Fax	128	112

Table 2-105 IPLB DSP Usage

Codec	Baseline	With SRTP
32VoIP DB		
G.711	32	32
G.722	32	32
G.726	32	32
G.729ab	32	32
G.723.1	32	32
iLBC	32	32
T.38 UDPL	32	32
T.38 RTP	32	32
64VoIP DB		
G.711	64	64
G.722	64	64
G.726	64	64
G.729ab	64	64
G.723.1	64	64
iLBC	64	64
T.38 UDPL	64	64
T.38 RTP	64	64
128VoIP DB		
G.711	128	128
G.722	128	128
G.726	128	128
G.729ab	128	128
G.723.1	108	96
iLBC	128	128
T.38 UDPL	128	128
T.38 RTP	128	128

## Default Setting

None

## System Availability

### Terminals

None

### Required Component(s)

None


## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

### Encryption:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-46-07	DT700 Server Information Setup – Encryption Mode	Set encryption for signaling (requires system reset).	0 = Off 1 = On (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-46-08	DT700 Server Information Setup – Encryption Type	Read Only			✓	
10-46-09	DT700 Server Information Setup – One Time Password	Set the one-time password for encryption authentication to the DT700.	Up to 10 characters (0~9, *, #) (default = no setting)		✓	
15-25-01	DESI-less Page Setup – Incoming Call Notify Event	Enable/Disable the ability of a DESI-Less terminal to blink the page number that has an incoming call on one of the keys.	0 = Disable 1 = Enable (default = 1)		✓	
15-25-02	DESI-less Page Setup – Incoming Call Automatic Screen Switching	Enable/Disable the ability of a DESI-Less terminal to switch to the page that has an incoming call on one of the keys.	0 = Disable 1 = Enable (default = 1)		✓	
15-25-03	DESI-less Page Setup – Idle Automatic Screen Switching	Define or Disable the page to be automatically displayed when a DESI-Less terminal becomes idle.	0 = Disable 1 = Display page 1 2 = Display page 2 3 = Display page 3 4 = Display page 4 (default = 0)		✓	
15-25-04	DESI-less Page Setup – Answer Automatic Screen Switching	Define or Disable the page to be automatically displayed when a DESI-Less terminal answers a call.	0 = Disable 1 = Display page 1 2 = Display page 2 3 = Display page 3 4 = Display page 4 (default = 0)		✓	
84-23-08	DT700 Multiline Basic Information Setup – Digest Authorization Registration Expire Timer	Set the time for authentication update.	0~4294967295 (sec) (default = 0)		✓	
84-23-09	DT700 Multiline Basic Information Setup	Read Only			✓	
84-27-03	IPL Basic Setup – SRTP Mode Setup	Set the encryption of the SRTP (voice packets).	0 = Disable 1 = Enable (default = 0)		✓	
90-45-01	Temporary Password Change for Multiline Telephone – Temporary Password Change Request	Change the temporary password.	00.00.00.00~ FF.FF.F.FF Change? (Yes :1) 00.00.00.00		✓	



## Operation

Refer to individual features.

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# Synchronous Ringing

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## Description

Synchronous Ringing synchronizes CO/PBX incoming ringing with the incoming ringing pattern from a Central Office.

### Conditions

- When the multiline terminal is ringing at Secondary Extension (SE)/Virtual Extension (VE) key, Synchronous Ring works.
- Synchronous Ringing is not supported for Tie/DID incoming calls, Off-Hook Ringing, or CO/PBX Ring Transfers.
- If Synchronous Ringing is enabled, the VRS Preamble Message cannot be used.

### Default Setting

Enabled

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## System Availability

### Terminals

All Terminals except Single Line Telephones connected to AP(R)-R or APR-U Unit

### Required Component(s)

None

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-17	Analog Trunk Data Setup – Sync. Ringing	Enable/Disable per trunk.	0 = Disable 1 = Enable (default = 1)	✓		
20-15-01	Ring Cycle Setup – Normal Incoming Call on Trunk	Define the ring cycle for Normal Incoming trunk calls.	Ringing Cycle = 1~13 (default = 2)		✓	
20-15-02	Ring Cycle Setup – PBX, CES Incoming Call	Define the ring cycle for PBX and CES incoming trunk calls.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-04	Ring Cycle Setup – DID/DISA/VRS	Define the ring cycle for DID/DISA/VRS incoming calls.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-05	Ring Cycle Setup – DID/DDI	Define the ring cycle for DID/DDI incoming calls.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-06	Ring Cycle Setup – Dial-In in the E&M Tie Line	Define the ring cycle for Dial IN and E&M Tie line calls.	Ringing Cycle = 1~13 (default = 12)		✓	
20-15-07	Ring Cycle Setup – Door Box Ringing for SLT	Define the ringing cycle for Door Box Ringing for SLT terminals.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-08	Ring Cycle Setup – Virtual Extension Ring	Define the ringing cycle for Virtual Extensions.	Ringing Cycle = 1~13 (default = 8)		✓	
20-15-09	Ring Cycle Setup – Callback	Define the ringing cycle for callbacks.	Ringing Cycle = 1~13 (default = 11)		✓	
20-15-10	Ring Cycle Setup – Alarm for SLT	Define the ring cycle for Alarm for SLT terminals.	Ringing Cycle = 1~13 (default = 5)		✓	
20-15-11	Ring Cycle Setup – VRS Waiting Message Incoming Call	Define the ring cycle for incoming VRS Waiting messages.	Ringing Cycle = 1~13 (default = 6)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-03-01	<b>Trunk Ring Tone Range – Ring Tone Pattern</b>	Assign Ring Tone Ranges to trunks. Trunks ring extensions according to the Ring Tone Range selected in Program 22-03-0 and the settings made with either Service Code 720 or Program 15-02-02.	0~12 (Ring Tone Pattern 1~4) (Melody 1~ Melody 5) (Ring Tone Pattern 5~8) (default = 0)		✓	

## Operation

None

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# *T1 Trunking (with ANI/DNIS Compatibility)*

## Description

The T1/PRI Interface gives the system T1 trunking ability. This blade uses a single universal slot and provides up to 24 trunk circuits. In addition to providing digital-quality trunking, the T1/PRI Interface allows you to have maximum trunking ability with fewer blades. This in turn makes more universal slots available for other functions.

You can program each T1/PRI for any combination of the following trunks:

- CO loop start
- CO ground start
- Direct Inward Dialing
- Tie Lines<sup>2</sup>

CD-PRTA uses the first block of 24 consecutive trunks. For example, if you have a CD-4COTB with PZ-4COTF installed for trunks 1~8, the T1/PRI Interface automatically uses trunks 9~32. If you have CD-4COTB with PZ-4COTF installed for trunks 1~8 and 17~24, the T1/PRI uses trunks 25~48. The T1/PRI Interface cannot use trunks 9~16 (even if available) since they are not part of a consecutive block of 24 trunks. Each T1/PRI requires that 24 consecutive ports be available in the system even if not all the ports are used otherwise the blade does not function.

The CD-PRTA can be programmed as a 4/8/12/16/20/24 port Fractional T1/PRI.

## ANI/DNIS Compatibility

The system is compatible with Telco T1 Automatic Number Identification (ANI) and Dialed Number Information Service (DNIS) services. A compliment to Caller ID service, ANI/DNIS Compatibility provides:

- Receive Format

The Receive Format must be set as **\*ANI\*DNIS\*** in Program 34-09-01 option 4, which is treated as a Feature Group D format. (Example of ANI Information KP009727517645STKP7100ST.)

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2. Two-wire (four-lead) type 1 Tie Lines (FIC TL11M) only.

Flexible Routing

Based on the data received, the system can route the incoming ANI/DNIS call to:

- An extension
- An ACD or Voice Mail master extension number
- A VRS and play a VRS message to the caller
- A Department Group pilot number
- A trunk Ring Group

 Route According to DID Translation Table or Speed Dial Bins

Calls can be routed based on either the number of digits defined in Program 22-09-01 (digits 1~8) or by digits entered in Speed Dial bins in Program 13-04-01.

**ANI/DNIS Data Displayed as Caller ID Data** Data Error and Unanswered Call Handling

If a call cannot be completed, send it to a predetermined Ring Group or play supervisory tones to the caller.

**Conditions**

- T1 Trunking requires a T1/PRI Interface and a customer-provided CSU/DSU to interface with the Telco. Consult your sales representative and the System Hardware Manual for additional details.
- ANI/DNIS Compatibility requires using system DTMF receivers. When all receivers are busy, the incoming ANI/DNIS call waits for a receiver to become available.
- The ANI/DNIS/Address data received from the Telco can have up to 10 digits.
- An extension Class of Service (Program 20-09-02) determines whether ANI information is displayed.
- Refer to [Digital Trunk Clocking on page 2-427](#) for the specifics on how the system detects dial tone.
- The T1 Tie Line can be used for networking.
- The T1/PRI Interface provides Tie Line service. All programming parameters are the same as those used for analog Tie Lines (except for the additional T1/PRI Interface settings).
- With an UNIVERGE SV8100 – Expanded Port Package, up to 200 T1 trunks can be assigned.
- You can use T1 trunks in place of standard analog trunks. The procedures for placing and answering calls are the same for both trunks.
- The T1/PRI Interface provides DID service. All programming parameters are the same as those used for analog DID trunks (except for the additional T1/PRI Interface settings).



- SMDR can print trunk port names or received dialed number for ANI/DNIS or DID trunks. If enabled in programming, DNIS digits can be printed on the SMDR reports instead of the trunk name.
- T1 trunks follow Tie Line toll restriction programming (Program 34-01-05 and Program 34-08).
- When using Fractional T-1s, the blade comes up with zero ports until Program 10-03-06 is set to the 4/8/12/16/20/24(auto) and then reset.
- If the number of ports are changed for a fractional T-1 in Program 10-03-06, the trunk ports could be reassigned if the numerical sequence would split or it could fit into an empty gap of trunk ports.

Examples:

The CD-4COTB with PZ-4COTF is assigned for trunk ports 1~8 and 17~24 and the T-1 (12 ports) was assigned as ports 25~36, the number of T-1s change to eight ports instead of 12. The new trunk port numbers are assigned as 9~16 because the eight ports can fit into the gap between ports 8 and 17 without splitting the numerical port number sequence.

The CD-4COTB with PZ-4COTF is assigned for trunk ports 1~8 and 17~24 and the T-1 (eight ports) was assigned as 9~16 and then the T-1 was changed from eight to 12 ports. The new trunk port numbers are assigned as 25~36 because the port number sequence would have to be split to keep them within the original number sequence (9~16) and splitting the numerical port number sequence is not supported.

- Incoming calls on T1/ANI trunks can only follow Program 22-11-01. They do not follow Programs 22-11-05 and 22-11-06.

## Default Setting

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

- CD-PRTA
- Locally provided CSU/DSU

## **Required Software**

None

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## **Related Features**

**Caller ID**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Code Restriction**

**Dial Tone Detection**

**Direct Inward Dialing (DID)**


**ISDN Compatibility**

**Station Message Detail Recording**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 The items highlighted in gray are read only and cannot be changed.



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	<b>ETU Setup (DTI (T1) PKG Setup) – Logical Port Number</b>	Set various T1 trunk options for compatibility with the local Telco. For ANI/DNIS, the following settings in Program 10-03 are recommended: Item 02: Frame Type = 0 (D4) Item 03: Zero Suppression = 1 (AMI/ZCS) Item 04: Distance Between ETU and CSU = 0 (0~133') Item 05: Clock Select = 1 (Internal) Item 06: DTI No. of Ports= 0 (Auto/24), 1 (4 Ports), 2 (8 Ports), 3 (12 ports), 4 (16 ports), and 5 (20 Ports)	The start port number of a T1 line is displayed, and 24 logic ports are automatically assigned to a DTI (T1) line. 0~200 (default = 0)	✓		
10-03-02	<b>ETU Setup (DTI (T1) PKG Setup) – T1 Signal Format Selection</b>	Set up and confirm the basic configuration data for logical port number T1.	0 = D4 (12 Multi Frame) 1 = ESF (24 Multi Frame) (default = 1)	✓		
10-03-03	<b>ETU Setup (DTI (T1) PKG Setup) – Zero Code Suppression</b>	Set up and confirm the basic configuration data for the Clear Channel Selection.	0 = B8ZS 1 = AMI/ZCS (default = 0)	✓		
10-03-04	<b>ETU Setup (DTI (T1) PKG Setup) – Line Length Selection</b>	Set up and confirm the basic configuration data for the Line Length Selection.	0 = 0 feet~133 feet 1 = 133 feet~266 feet 2 = 266 feet~399 feet 3 = 399 feet~533 feet 4 = 533 feet~655 feet (default = 0)	✓		
10-03-05	<b>ETU Setup (DTI (T1) PKG Setup) – T1 Clock Source</b>	Set up and confirm the basic configuration data for the DTI trunk type assignment.	0 = Internal 1 = External (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-06	<b>ETU Setup (DTI (T1) PKG Setup) – Number of Ports</b>	Set up and confirm the basic configuration data for the number of ports required.	0 = Auto 1 = 4 Ports 2 = 8 Ports 3 = 12 Ports 4 = 16 Ports 5 = 20 Ports (default = 0)	✓		
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	For ANI/DNIS, reserve at least one DTMF receiver for DTMF reception (entry 0 or 2). Use the following as a guide when allocating DTMF receivers: In light traffic sites, allocate one DTMF receiver for every 10 devices that use them. In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
10-39-01	<b>Fractional Setup – Fractional</b>	Enable/Disable T1/PRI fractional function.	0 = Disable 1 = Enable (default = 0)		✓	
14-01-02	<b>Basic Trunk Data Setup – Transmit Level</b>	Select transmit level of CODEC Gain (signal amplification) for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-03	<b>Basic Trunk Data Setup – Receive Level</b>	Select receive level of CODEC Gain (signal amplification) for each trunk.	Trunks 1~200 1~63 (-15.5 ~ +15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-07	<b>Basic Trunk Data Setup – Outgoing Calls</b>	Allow/Deny outgoing calls on the trunk you are programming.	0 = Deny (No) 1 = Allow (Yes) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-01	<b>Analog Trunk Data Setup – Signaling Type (DP/DTMF)</b>	For ANI/DNIS, the following additional settings in Program 14-02 are recommended: <ul style="list-style-type: none"> <li>○ Item 1: Signaling Type (DP/DTMF) = 2 (DTMF)</li> <li>○ Item 2: Ring Detect Type = 1 (Immediate)</li> <li>○ Item 3: Flash Type = 0 (Open Loop Flash)</li> <li>○ Item 4: Flash for Time Flash or Disconnect = 0 (Timed Flash)</li> <li>○ Item 5: Dial Tone Detection for Manually Dialed Calls = 1 (Outgoing calls allowed)</li> </ul>	0=Dial Pulse (10 PPS) 1=Dial Pulse (20 PPS) 2=DTMF (default = 2)	✓		
14-02-02	<b>Analog Trunk Data Setup – Ring Detect Type</b>	Set the trunks for Extended Ring Detect or Immediate Ring Detect. For T1 loop/ground start trunks, set this option to 1 for the trunks to ring and light correctly.	Trunks 1~200 0 = Normal/delayed 1 = Immediate Ringing (default = 1)		✓	
14-04-01	<b>Behind PBX Setup</b>	For ANI/DNIS, Stand Alone (Trunk) setting is recommended: Behind PBX.	0 = Stand Alone (Trunk) 1 = Behind PBX (PBX) 2 = Not Used 3 = CTX Assume 9 (default = 0)		✓	
14-05-01	<b>Trunk Group – Trunk Group Number</b>	For ANI/DNIS, place all your ANI/DNIS trunks in Trunk Groups as required.	Trunks 1~200 Trunk Port 1~200, Group 1, Priority 1~200	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extensions 101 = Class 15 All other extensions = Class 1	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-14-01	<b>Class of Service Options for DISA/E&amp;M – First Digit Absorbtion (Delete First Digit Dialed)</b>	For Tie Lines, Enable/Disable the ability to ignore the first incoming digit. Use this to make the tie trunk compatible with 3- and 4-digit Tie Line service. This option does not apply to DISA.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-02	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Routing/ARS Access</b>	Enable/Disable a DISA or tie trunk caller ability to dial 9 for Trunk Group Routing or Automatic Route Selection.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-03	<b>Class of Service Options for DISA/E&amp;M – Trunk Group Access</b>	Enable/Disable a DISA or tie trunk caller ability to access trunk groups for outside calls (Service Code 704).	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-04	<b>Class of Service Options for DISA/E&amp;M – Outgoing System Speed Dial</b>	Enable/Disable a DISA or tie trunk caller ability to use System Speed Dialing.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-05	<b>Class of Service Options for DISA/E&amp;M – Operator Calling</b>	Enable/Disable a DISA or tie trunk caller ability to dial 0 for the telephone system operator.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-06	<b>Class of Service Options for DISA/E&amp;M – Internal Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use telephone system Internal Paging.	0 =Off 1 = On (default = 1 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-14-07	<b>Class of Service Options for DISA/E&amp;M – External Paging</b>	Enable/Disable a DISA or tie trunk caller ability to use telephone system External Paging.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-14-08	<b>Class of Service Options for DISA/E&amp;M – Direct Trunk Access</b>	Enable/Disable a DISA or tie trunk caller ability to use Direct Trunk Access (Service Code 715).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-09	<b>Class of Service Options for DISA/E&amp;M – Forced Trunk Disconnect &lt;Not for ISDN T-point&gt;</b>	Enable/Disable a tie trunk caller ability to use Forced Trunk Disconnect (Service Code *26). This option is not available to DISA callers.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-10	<b>Class of Service Options for DISA/E&amp;M – Call Forward Setting by Remote via DISA</b>	Enable/Disable a DISA caller ability to use the Call Forward service codes (Program 11-11-01 through Program 11-11-05).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-11	<b>Class of Service Options for DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable/Disable a DISA or tie trunk user from using the Barge-In feature.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-12	<b>Class of Service Options for DISA/E&amp;M – Retrieve Park Hold</b>	Turn Off or On the ability for a DISA caller to retrieve parked or held calls.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
22-02-01	<b>Incoming Call Trunk Setup – Incoming Type</b>	For each T1 trunk, set the Trunk Service Type to match the Telco connected T1 service. For each T1 trunk that should support ANI/DNIS service, enter 7. (ANI/DNIS trunks must be immediate start or wink start T1 trunks with E&M signaling.) For T1 loop/ground start trunks defined as 0, Program 14-02-02 must be set to 1 for the trunks to ring and light correctly.	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-11-01	<b>DID Translation Number Conversion – Received Number</b>	For each DID Translation Table entry (1~2000), specify the digits received by the system.	Maximum eight digits (default not assigned)	✓		
22-11-02	<b>DID Translation Number Conversion – Target Number</b>	For each DID Translation Table entry (1~2000), specify the extension the system dials after translation.	Maximum 24 digits (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-11-03	<b>DID Translation Number Conversion – DID Name</b>	For each DID Translation Table entry (1~2000), specify the name that should show on the dialed extension display when it rings.	Maximum 12 digits (default not assigned)	✓		
22-13-01	<b>DID Trunk Group to Translation Table Assignment</b>	Assign DID translation tables to trunk groups.	DID Translation Tables: 1~20 Trunk Groups: 1~100 0~20 (0 = No Setting) (default = 1)		✓	
34-01-01	<b>E&amp;M Tie Line Basic Setup – DID/E&amp;M Start Signaling</b>	For each ANI/DNIS trunk, set the start signaling mode to 1.	0 = 2nd Dial Tone 1 = Wink (default) 2 = Immediate 3 = Delay (default = 1)		✓	
34-01-02	<b>E&amp;M Tie Line Basic Setup – Receive Dial Type for E&amp;M Tie Line</b>	For DID and tie trunks, set the trunk signaling type (Dial Pulse or DTMF).  <i>Program 34-01-02 must be set to (2) = MF in order for T1 ANI to work.</i>	0 = DP 1 = DTMF 2 = MF (default = 1)	✓		
34-01-03	<b>E&amp;M Tie Line Basic Setup – E&amp;M Dial-In Mode</b>	Determine if the incoming Tie Line call should be directed as an intercom call (0) or if it should follow the DID Translation Table in Program 22-11 (1).	0 = Specify Extension Number (Intercom) 1 = Use Conversion Table (NTT) (default = 0)		✓	
34-01-04	<b>E&amp;M Tie Line Basic Setup – E&amp;M Line Dial Tone</b>	Enter 1 if the Tie Line should send dial tone to the calling system after the call is set up. Enter 0 if the Tie Line should not send dial tone.	0 = Disable (No) 1 = Enable (Yes) (default = 1)		✓	
34-02-01	<b>E&amp;M Tie Line Class of Service</b>	Assign a Class of Service (1~15) to a Tie Line. The Class of Service options are defined in Program 20-14. For each Tie Line, you make a separate entry for each Night Service mode.	Day/Night Mode 1~8 Class: 1~15 (default = 1)		✓	
34-09-01	<b>ANI/DNIS Service Options – Receive Format</b>	Specify the format of the ANI/DNIS data received from the Telco. Make sure your entry is compatible with the service the Telco provides (4 = *ANI*DNIS* [* = Delimiter Code]).  <i>If Program 34-01-02 is set to (2) = MF, this Program works only as 4 = *ANI*DNIS*</i>	0 = Address 1 = *ANI* 2 = *DNIS* 3 = *ANI*Address* 4 = *ANI*DNIS* 5 = *DNIS*ANI* (* = Delimiter Code) (default = 0 for COS 1~15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
34-09-02	<b>ANI/DNIS Service Options – Delimiter Dial Code</b>	Define the character Telco uses as a delimiter (see entries 1~5 in Program 34-09-01). Valid entries are: 0~9, #, and *.	1~9, 0, *, # (default = * for COS 1~15)		✓	
34-09-03	<b>ANI/DNIS Service Options – Route Setup of Receive Dial</b>	Specify the source of the data the system uses to route incoming ANI/DNIS calls. If 2 is selected, refer to Program 34-09-04.	0 = Fixed Route (Item 08) (No Routing) 1 = Routes on Received DNIS or Address Data 2 = Routes on Received ANI Data (default = 0 for COS 1~15)		✓	
34-09-04	<b>ANI/DNIS Service Options – Route Table Setup of Target Dial</b>	Set how the system uses the route data (gathered in Item 03) to route incoming ANI/DNIS calls.  If option 2 is selected and the call is routed using the DID table, up to eight digits can be matched. The number of expected digits set in Program 22-09-01 must match the ANI digits defined in Program 22-11-01. For example, if an ANI/DNIS number received was *2035551234*3001* and Program 22-09-01=4, then the entry in Program 22-11-01 must be 1234 with the defined target extension.  If the call is routed using the ABB table (0), up to 24 digits can be matched. Define the range of the ABB table to be used in Program 34-09-06. The data is then compared to the entries in Program 13-04-01 and then routed according to Program 13-04-03.	0 = SPD Table (Program 13-03) 1 = DID Table (Program 22-11) (default = 0 for COS 1~15)		✓	
34-09-05	<b>ANI/DNIS Service Options – ANI/DNIS Display as Target Dial Name</b>	Set whether or not ANI data should be displayed on telephone displays as part of Caller ID display.	Caller ID Display: 0 = Display Off 1 = Display On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
34-09-06	<b>ANI/DNIS Service Options – Routing SPD Table Setup</b>	Define which part of the SPD Dial Table set up in Program 13-04 the system uses for ANI/DNIS Caller ID look-ups and ANI/DNIS routing (Start = 0, 100~1900, End = 0, 99~1999). This is required if Items 4 and 5 above are 1 (Caller ID on). When you specify a starting and end address, the system uses the part of the table for look-ups. When you specify a starting address and length, the system uses that part of the table for routing. If the incoming ANI/DNIS number data matches the Number entry in the table, the system routes according to the associated Name data. That data can be an extension, Department Group pilot number, the voice mail master number or a trunk ring group.	Start=0, 100~1900 End= 0, 99~1999 Default: COS 1~15 Start = 0 End = 0		✓	
34-09-07	<b>ANI/DNIS Service Options – Routing on ANI/DNIS Error</b>	Determine how the system handles an ANI/DNIS call if a data error is detected in the incoming data string.	0 = Play Busy Tone to Caller 1 = Route Caller to Ring Group Specified in Program 25-03 (Transfer) (default = 0 for COS 1~15)		✓	
34-09-08	<b>ANI/DNIS Service Options – Routing When Destination Busy or No Answer</b>	Determine how the system handles an ANI/DNIS call if destination is busy or does not answer.	0 = Play Busy or Ringback Tone to Caller (Busy/ NoAns) 1 = Route Caller to Ring Group Specified in Program 25-04 (Transfer) (default = 0 for COS 1~15)		✓	
34-09-09	<b>ANI/DNIS Service Options – Calling Number Address Length</b>	When Item 01 = 0 (ANI/DNIS receive format is address), specify the address length. The choices are 1~8 digits.	1~8 (default = 7 for COS 1~15)		✓	
34-10-01	<b>Digits Delete for T1 ANI Assignment</b>	Define the number of digits to delete from the information element received from Telco.	0~9 (default = 2)		✓	

## Operation

Refer to the operation for the following features:

- Central Office Calls, Answering
- Central Office Calls, Placing
- Direct Inward Dialing (DID)
- Tie Lines

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## *Tandem Ringing*

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### **Description**

Tandem Ringing allows an extension user to have two telephones with one telephone number. For example, extension 105 (the master telephone) sets Tandem Ringing with extension 106. When extension 105 receives an incoming call, both extensions 105 and 106 ring. Callers would dial the master extension number (extension 105 in this example). When either the master telephone or slave telephone is in use, the other telephone cannot be used for outgoing calls or incoming calls.

The multiline terminal must be paired with a single line telephone. It cannot be paired with another multiline terminal.

A single line telephone must be paired with another single line telephone. It cannot be paired with a multiline telephone.

### **Conditions**

- The slave telephone cannot call the master telephone.
- DT700 IP Multiline terminals do not support Tandem Ringing.
- Extension numbers up to eight digits can be registered on the Tandem Ringing key. Extension numbers over nine digits cannot be registered.
- If Tandem Ringing is enabled, and one of the extensions is busy, no additional calls can be received or placed from either telephone.
- Tandem Ringing can support up to 128 pairs of Tandem Ringing extensions.
- The extension user which enables Tandem Ringing is the master, while the slave telephone is the extension entered by the user while setting up the feature.
- A slave telephone ignores the settings for DND and follows the master telephone settings instead.
- Voice Call is not supported on a multiline terminal with Tandem Ringing.
- Calls placed on Hold while Tandem Ringing is active, immediately recall if the handset is placed on-hook.
- A slave telephone ignores the settings for Ring Groups and follows the master telephone settings instead.
- To transfer calls between the two Tandem Ringing stations, a System Park Orbit should be used.
- A message waiting indication set for the master telephone only lights the message waiting LED on the master telephone.

- Tandem Ringing is not supported with extensions defined as Operator Extensions in Program 20-17-01.

## **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

Master Telephone:  
TDM Multiline Terminals or Single Line Telephones

Slave Telephone:  
Single Line Telephones

### **Required Component(s)**

None

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## **Related Features**

**Call Forwarding**

**Call Forwarding/Do Not Disturb Override**

**Direct Station Selection (DSS) Console**

**Do Not Disturb**

**Hold**

**Intercom**

**Message Waiting**

**Ring Groups**

**Multiple Trunk Types**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-41	<b>Service Code Setup (for Setup/Entry Operation) – Tandem Ringing</b>	Define a service code to be used to set up Tandem Ringing.	MLT, SLT (default not assigned)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Tandem Ringing (code 80).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
30-03-01	<b>DSS Console Key Assignment</b>	Assign a DSS function key for Tandem Ringing (code 80).	Key Number 001~500 0~99 (General Functional Level) 97 = Door Box Access key (additional data: 1~8 Door Box No.) * 00 ~ * 99 (Appearance Functional Level)		✓	

## Operation

### To set up Tandem Ringing:

1. Press **Speaker** at the extension considered to be the master telephone (optional).
2. Press the Tandem Ringing key (Program 15-07 or SC 751: 80).
3. Dial **1** to set the feature.

4. Enter the extension number to be considered the slave telephone (the telephone that rings when the master extension rings).  
A confirmation tone is heard (if **Speaker** was used).
5. Press **Speaker** to hang up (if the key is lit).  
While the feature is active, if either the master or slave telephone is on a call, no calls can be placed or answered at the other extension until the busy telephone has hung up. Multiline terminals indicate TANDEM IN USE in the display and single line telephone users hear a busy signal when the handset is lifted.

**To cancel Tandem Ringing:**

1. Press the Tandem Ringing key (Program 15-07 or SC 751: 80).
2. Dial **0** to cancel the feature.



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## *Tandem Trunking (Unsupervised Conference)*

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### Description

Tandem Trunking allows an extension user to join two outside callers in a Trunk-to-Trunk Conference. The extension user can then drop out of the call, leaving the trunks in an Unsupervised Conference. The extension user that established the conference is not part of the conversation. The conference continues until either outside party hangs up. The extension user that set up the conference can end the tandem call anytime.

The number of simultaneous conference calls is limited by the number of conference circuits in the system. The maximum number of conference calls cannot exceed the limits defined below:

The CD-CP00-US provides two blocks of 32 conference circuits, allowing each block to have any number of conferences with any number of internal or external parties conferenced as long as the total number of conference channels used does not exceed the block limit of 32.

Tandem Trunking could help an office manager, for example, put two outside sales people in touch. The office manager could:

- Answer a call from one salesperson
- Place a call to the second salesperson
- Set up the Trunk-to-Trunk Conference
- Drop out of the call

The office manager could terminate the conference anytime.

Tandem Trunking methods include:

- Method A - Tandem Trunking from Conference

An extension user can set up Tandem Trunking (Unsupervised Conference) by dialing a 2-digit service code (#8) or a uniquely programmed Transfer key.

- Method B - Tandem Trunking with Transfer Key

This method allows an extension user to easily set up an Unsupervised Conference with a call they have placed on Hold. It uses a uniquely programmed Transfer key to set up a tandem call.

- Method C - Automatic Tandem Trunking on Hang Up

This method allows an extension user to easily set up an Unsupervised Conference without having to place the conference call on Hold. A Class of Service option is available, which allows or denies an extension user from automatically setting up a Conference/Tandem Trunking call after hanging up the telephone.

## Method D - Automatic Tandem Trunking Setup to Speed Dial Number

This method allows an extension user to easily set up an Unsupervised Conference with a call they have placed on Hold. A Class of Service option is available, which allows or denies an extension user from automatically setting up a Conference/Tandem Trunking call after hanging up the telephone.

## Trunk Continue/Disconnect Codes Added

Software enhances the forced trunk release option with the Tandem Trunking and DISA features. Users can use a Continue or Disconnect service code. The Continue service code extends the conversation a programmed time. If the user enters the Disconnect service code, the call is disconnected immediately.


### EXAMPLE:

The following example indicates how a call is handled with the system programmed as follows:

- Program 14-01-25: 1 (Continued/Discontinued Trunk-to-Trunk Conversation)
  - Program 20-28-01: # (Conversation Continue Code)
  - Program 20-28-02: No Setting (No Conversation Disconnect Code is entered)
  - Program 20-28-03: 180 (Conversation Continue Time)
  - Program 24-02-07: 600 (Only used with Trunk-to-Trunk Transfer Release Warning Tone)
  - Program 24-02-10: 30 (Only used with Disconnect Trunk-to-Trunk)
  - Program 25-07-07: 600 (Long Conversation Warning Tone Timer)
  - Program 25-07-08: 30 (Long Conversation Disconnect)
1. An external call connects to an external number (either by transferring with Tandem Trunking or by DISA caller).
  2. After 10 minutes (Tandem Trunking = Program 24-02-07 or DISA = Program 25-07-07), a warning tone is heard and the user dials # (Program 20-28-01) to extend the conversation.
  3. After three minutes (Program 20-28-03), the warning tone is heard again. After 30 seconds (Tandem Trunking = Program 24-02-10 or DISA = Program 25-07-08), the call is disconnected.

## Conditions

- Tandem Trunking requires either loop start trunks with disconnect supervision or ground start trunks.
- The maximum number of simultaneous trunk-to-trunk conferences allowed is determined by the Conference feature setup. Refer to the [Guide to Feature Programming on page 2-1582](#) for this feature.
- The Continue/Disconnect code must be DTMF.

- With an analog trunk, the Continue/Disconnect code may work using DTMF sounds from the opposite side trunk. With an ISDN trunk, Program 14-01-25 must be enabled to detect the Continue/Disconnect code.
  - The Continue/Disconnect code is not accepted while dialing a trunk.
  - Continue/Disconnect codes do not work if all receivers are busy.
  - When used with the Networking feature, both systems must be programmed the same for the Continue/Disconnect codes.
  - A trunk can be set up to automatically tandem trunk/forward to an outside telephone number or Speed Dial – System/Group Dialing bin.
  - Other programmed options for incoming and outgoing calls can affect how calls are handled. Refer to Central Office Calls, Answering/Central Office Calls, Placing and check or program these options as needed.
  - DISA calls also use the same Continue/Disconnect codes.
  - After initiating an unsupervised conference, selecting one of the CAP keys or line keys allows you to barge-in to the conference.
  - If the station that barges into an unsupervised conference hangs up, the conference is terminated.
  - A Trunk-to-Trunk transfer can be established by the following operation:
    1. While talking to an outside party, press **Hold**.
    2. Access a second outside line and dial the desired number.
    3. Press **Transfer** to complete the Trunk-to-Trunk transfer.
-  *When the second call is to be transferred to another station (Not Trunk-to-Trunk), the user should press **Hold** at step 3, then dial the desired station, and press **Transfer** to complete the transfer.*

## Default Setting

Disabled

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## System Availability

### Terminals

All Multiline Terminals and Single Line Telephones

## Required Component(s)

None

## Related Features

Call Forwarding, Off-Premise

Central Office Calls, Answering

Central Office Calls, Placing

Direct Inward System Access (DISA)

## Guide to Feature Programming

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- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### Method A – Tandem Trunking from Conference:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-57	Service Code Setup (for Service Access) – Tandem Trunking	If the default service code (#8) for Tandem Trunking is not acceptable, change the code as required.	MLT, SLT (default = #8)		✓	
14-01-04	Basic Trunk Data Setup – Transmit Gain Level for Conference and Transfer Calls	Select the Transmit CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-05	Basic Trunk Data Setup – Receive Gain Level for Conference and Transfer Calls	Select the Receive CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 16 (-8dB)]		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	For each trunk that should be able to participate in a tandem call, enter 1.	0 = Disable 1 = Enable (default = 1)	✓		
15-07-01	<b>Programmable Function Keys</b>	(Optional) Assign a function key for Transfer (code 06).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension to disconnect an unsupervised conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-11-22	<b>Class of Service Options (Hold/Transfer Service) – Restricted Unsupervised Conference</b>	Allow/Deny an extension user ability to initiate an unsupervised conference.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-13-08	<b>Class of Service Options (Supplementary Service) – Conference</b>	Turn Off or On extension user ability to initiate a conference or Meet Me Conference.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the extension Barge-In Mode to be speech or Monitor mode.	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	This timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer, outgoing from trunk, Tandem Trunking). When this time expires, a warning tone is heard. If Program 24-02-10 is set, the conversation disconnects after time expires. This time is set again when the external digit time expires. One of the trunks used must be an analog trunk (or leased line).	0~64800 (seconds) (default = 1800)		✓	
24-02-10	<b>System Options for Transfer – Disconnect Trunk-to-Trunk</b>	This timer starts after the Trunk-to-Trunk warning tone is heard.	0~64800 (seconds) (default = 0)		✓	
25-07-07	<b>System Timers for VRS/DISA – Ling Conversation Warning Tone Time</b>	Determine the time a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	

### Method B – Tandem Trunking with Transfer Key:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-04	<b>Basic Trunk Data Setup – Transmit Gain Level for Conference and Transfer Calls</b>	Select the Transmit CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-05	<b>Basic Trunk Data Setup – Receive Gain Level for Conference and Transfer Calls</b>	Select the Receive CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 16 (-8dB)]		✓	
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	For each trunk, enter 1 to enable loop supervision.	0 = Disable 1 = Enable (default = 1)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Transfer (code 06).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension user to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the extension Barge-In Mode to be speech or Monitor mode.	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	This timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer, outgoing from trunk, Tandem Trunking). When this time expires, a warning tone is heard. If Program 24-02-10 is set, the conversation disconnects after time expires. This time is set again when the external digit time expires. One of the trunks used must be an analog trunk (or leased line).	0~64800 (seconds) (default = 1800)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-10	<b>System Options for Transfer – Disconnect Trunk-to-Trunk</b>	This timer starts after the Trunk-to-Trunk warning tone is heard.	0~64800 (seconds) (default = 0)		✓	
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA or any trunk-to-trunk (such as Tandem Trunking) call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	

### Method C – Tandem Trunking on Hang up:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-04	<b>Basic Trunk Data Setup – Transmit Gain Level for Conference and Transfer Calls</b>	Select the Transmit CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-05	<b>Basic Trunk Data Setup – Receive Gain Level for Conference and Transfer Calls</b>	Select the Receive CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 16 (-8dB)]		✓	
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	For each trunk, enter 1 to enable loop supervision.	0 = Disable 1 = Enable (default = 1)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension user to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Turn Off or On the Trunk-to-Trunk Transfer Restriction. If enabled, Trunk-to-Trunk Transfer is not possible.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-21	<b>Class of Service Options (Hold/Transfer Service) – Restriction for Tandem Trunking on Hang Up</b>	Allow/Deny an extension user ability to set up a tandem call automatically when they hang up.	0 = Allow 1 = Deny (default = 0 for COS 1~15)		✓	
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	This timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer, outgoing from trunk, Tandem Trunking). When this time expires, a warning tone is heard. If Program 24-02-10 is set, the conversation disconnects after time expires. This time is set again when the external digit time expires. One of the trunks used must be an analog trunk (or leased line).	0~64800 (seconds) (default = 1800)		✓	
24-02-10	<b>System Options for Transfer – Disconnect Trunk-to-Trunk</b>	This timer starts after the Trunk-to-Trunk warning tone is heard.	0~64800 (seconds) (default = 0)		✓	
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA or any trunk-to-trunk (such as Tandem Trunking) conversation call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	

**Method D – Tandem Trunking to Speed Dial Number:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-06	<b>Service Code Setup (for System Administrator) – Setting the Automatic Transfer for Each Trunk Line</b>	If the default service code (733) for enabling Automatic Tandem Trunking feature is not acceptable, change the code as required.	MLT (default = 733)		✓	
11-10-07	<b>Service Code Setup (for System Administrator) – Canceling the Automatic Transfer for Each Trunk Line</b>	If the default service code (734) for canceling Automatic Tandem Trunking feature is not acceptable, change the code as required.	MLT (default = 734)		✓	
11-10-08	<b>Service Code Setup (for System Administrator) – Setting the Destination for Automatic Trunk Transfer</b>	If the default service code (735) for setting the destination of the Automatic Tandem Trunking feature is not acceptable, change the code as required.	MLT (default = 735)		✓	
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	Enter the number and name for the bins used to hold the Automatic Tandem Trunking destination.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
13-04-02	<b>Speed Dialing Number and Name – Name</b>	Assign a name to each System Speed Dial bin.	Maximum 12 Characters (Use dial pad to enter name) (default not assigned)		✓	
13-04-03	<b>Speed Dialing Number and Name – Transfer Mode</b>	Assign the transfer mode for each System Speed Dial bin.	0 = Not Used 1 = Internal Dial 2 = Incoming Ring Group (IRG) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-04-04	<b>Speed Dialing Number and Name – Transfer Destination Number</b>	Store transfer destination number data in the Speed Dialing areas.	If Transfer mode is (Refer to 13-04-03): 1 = Internal Dial Mode 1~9, 0, *, #, P, R, @ (Maximum 24 Characters) 2 = Incoming Ring Group 0 ~ 100 (IRG Number) P=Pause R=Recall @= Additional Digits when using ISDN functionality (default not assigned)		✓	
13-04-05	<b>Speed Dialing Number and Name – Incoming Ring Pattern</b>	Store incoming ring pattern data in the Speed Dialing areas.	Incoming Ring Pattern 0 = Normal Pattern 1 ~ 4 = Tone Pattern (1~4) 5 ~ 9 = Scale Pattern (1~5) 10 ~ 13 = Tone Pattern (5~8) (default = 0)		✓	
14-01-04	<b>Basic Trunk Data Setup – Transmit Gain Level for Conference and Transfer Calls</b>	Select the Transmit CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 32 (0dB)]		✓	
14-01-05	<b>Basic Trunk Data Setup – Receive Gain Level for Conference and Transfer Calls</b>	Select the Receive CODEC gain level used by the trunk when it is part of an Unsupervised Conference.	1~63(-15.5dB~+15.5dB in 0.5dB intervals) [default = 16 (-8dB)]		✓	
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	For each trunk, enter 1 to enable loop supervision.	0 = Disable 1 = Enable (default = 1)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-07-05	<b>Class of Service Options (Administrator Level) – Set/Cancel Automatic Trunk-to-Trunk Transfer</b>	Turn Off or On an extension user ability to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-11	<b>Class of Service Options (Administrator Level) – Forced Trunk Disconnect (analog trunk only)</b>	Turn Off or On an extension user ability to use Forced Trunk Disconnect. This allows the extension user to disconnect an Unsupervised Conference in progress.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	This timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer, outgoing from trunk, Tandem Trunking). When this time expires, a warning tone is heard. If Program 24-02-10 is set, the conversation disconnects after time expires. This time is set again when the external digit time expires. One of the trunks used must be an analog trunk (or leased line).	0~64800 (seconds) (default = 1800)		✓	
24-02-10	<b>System Options for Transfer – Disconnect Trunk-to-Trunk</b>	This timer starts after the Trunk-to-Trunk warning tone is heard.	0~64800 (seconds) (default = 0)		✓	
24-04-01	<b>Automatic Trunk-to-Trunk Transfer Target Setup</b>	Assign the Speed Dialing number (0~1999) to be used as the destination for the Trunk-to-Trunk Transfer.	Trunks: 1~200 0~1999 (default = 1999)	✓		
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA or any trunk-to-trunk (such as Tandem Trunking) call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	

**Trunk Disconnect Continue/Disconnect Codes:**


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-25	<b>Basic Trunk Data Setup – Continued/Discontinued Trunk-to-Trunk Conversation</b>	Enable/Disable the ability to dial a service code to continue or disconnect the trunk-to-trunk conversation after the alert tone is heard.	0 = Disable 1 = Enable (default = 0)	✓		
20-28-01	<b>Trunk to Trunk Conversation – Conversation Continue Code</b>	Input the code that can be dialed to continue the conversation after the Trunk-to-Trunk Release Warning tone is heard.	0~9, #, * (default not assigned)		✓	
20-28-02	<b>Trunk to Trunk Conversation – Conversation Disconnect Code</b>	Input the code that can be dialed to disconnect the conversation after the Trunk-to-Trunk Release Warning tone is heard.	0~9, #, * (default not assigned)		✓	
20-28-03	<b>Trunk to Trunk Conversation – Conversation Continue Time</b>	Input the time the conversation extends when the Conversation Continue Code is dialed.	0~64800 (seconds) (default = 0)		✓	
24-02-07	<b>System Options for Transfer – Trunk-to-Trunk Transfer Release Warning Tone</b>	This timer starts when a trunk begins talking with another trunk (for example: Trunk-to-Trunk Transfer/Tandem Trunking). When this time expires, a warning tone is heard. If Program 24-02-10 is set, the conversation disconnects after time expires. This time is set again when the external digit timer expires. One of the trunks used must be an analog trunk (or leased line).	0~64800 (seconds) (default = 1800)	✓		
24-02-10	<b>System Options for Transfer – Disconnect Trunk-to-Trunk</b>	Determine the time a conversation continues after the timer in Program 24-02-07 expires. If this option is set to 0, the conversation is disconnected immediately. This program has no affect if Program 24-02-07 is set to 0. One of the trunks used must be an analog trunk (or leased line).	0~64800 (seconds) (default = 0)		✓	
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any trunk-to-trunk (such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA or any trunk-to-trunk (such as Tandem Trunking) conversation call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	
80-01-02 (35)	<b>Service Tone Setup – Basic Tone Number</b>	Edit the warning service tone in the system.	1~33 0 = No Tone 33 = Default Time Slot Please refer to the VS8100 Programming manual for defaults			✓

## Operation


### Method A – Tandem Trunking from Conference:

#### To set up a Tandem Call:


1. Place or answer first trunk call.
2. Press **Conf** softkey.
3. Place or answer second trunk call.
4. To set up the tandem call, press **Conf** twice.
  -  *This sets up a Conference between you and both outside parties.*
5. Press **Transfer**.

- OR -

Press **Hold** and dial **#8** or the service code set for Unsupervised Conference/Tandem Trunking in Program 11-12-57.

 *The line keys for the trunks blink green as long as the Unsupervised Conference continues.*



#### To end the Tandem Call:

1. Press either flashing **line** key.
  -  *The line keys light steadily (green). You can listen (i.e., monitor) to the call or rejoin the conversation, based on the setting in Program 20-13-10.*

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2. Press **Speaker** or hang up.

-  *If Program 20-13-10 is set to 0, the Conference ends and the line keys go out.*
-  *If Program 20-13-10 is set to 1, to manually disconnect the Conference, Forced Trunk Disconnect (i.e., Press the line key + \*3 or the service code set of Forced Trunk Disconnect in Program 11-10-26) must be used by an extension other than the originating extension.*

## Method B – Tandem Trunking with Transfer Key:


### Multiline Terminal:

#### To set up a Tandem Call:

1. Place or answer first trunk call.
2. Press **Hold** to place the first trunk call on hold.
3. Place a second trunk call.
4. Press **Transfer**.
  -  *This sets up an Unsupervised Conference with both outside parties.*
  -  *The line keys for the trunks light solid red.*
  -  *To disconnect the Conference, use Forced Trunk Disconnect (i.e., Press the line key + \*3 or the service code set of Forced Trunk Disconnect in Program 11-10-26) must be used by an extension other than the originating extension.*

### Single Line Telephone:

#### To set up a Tandem Call:




1. Place or answer first trunk call.
2. Press hookflash and dial **#1**.
3. Place or answer second trunk call.
4. To set up the tandem call, press hookflash and dial **#8**.
5. Hang up.
  -  *This sets up a Conference between both outside parties.*

## Method C – Tandem Trunking on Hang up:

### Multiline Terminal:



#### To set up a Tandem Call:

1. Place or answer first trunk call.

2. Press **Hold** to place the first trunk call on hold.
3. Place a second trunk call.
4. Hang up.
  -  *This sets up an Unsupervised Conference with both outside parties.*
  -  *The line keys for the trunks light solid red.*
  -  *To disconnect the Conference, use Forced Trunk Disconnect (i.e., Press line key + \*3 or the service code set of Forced Trunk Disconnect in Program 11-10-26).*



### Single Line Telephone:

#### To set up a Tandem Call:


1. Place or answer first trunk call.
2. Press hookflash.
3. Place or answer second trunk call.
4. To set up the tandem call, hang up.
  -  *This sets up a Conference between both outside parties.*
  -  *To disconnect the Conference, use Forced Trunk Disconnect [i.e., Dial the trunk access code (#9 + trunk number) + \*3 or the service code set of Forced Trunk Disconnect in Program 11-10-26].*

### Method D – Automatic Tandem Trunking Using Speed Dialing:

#### To set Automatic Tandem Trunking:


1. Dial service code **733** (or the service code set for Set Automatic Transfer per Trunk).
2. Dial the desired trunk number (Trunk Number: 001~200).
3. Hang up.
  -  *The line key for the trunk is solid red as long as the Unsupervised Conference continues.*
  -  *To disconnect the Conference, use Forced Trunk Disconnect (i.e., Press the line key or #9 plus the trunk number + \*3).*

#### To cancel Automatic Tandem Trunking:

1. Dial service code **734** (or the service code set for Disable Automatic Transfer per Trunk).
2. Dial the desired trunk number (Trunk Number: 001~200).
3. Hang up.
  -  *To disconnect the Conference, Forced Trunk Disconnect (i.e., Press the line key or #9 plus the trunk number + \*3 or the service code set of Forced Trunk Disconnect in Program 11-10-26).*



**To set and change the destination of the Automatic Tandem Trunk call:**

1. Dial service code **735** (or the service code set for Set Destination for Automatic Trunk-to-Trunk Transfer).
2. Dial the desired trunk number (Trunk Number: 001~200).
3. Dial the destination Number (trunk access code is not needed).
4. Dial the desired time mode (Time Mode: 1~8).
5. Press **Hold**.
6. Hang up.
  -  To disconnect the Conference, use *Forced Trunk Disconnect* (i.e., Press the line key or **#9** plus the trunk number + **\*3**).

**Continue/Disconnect Codes:****To use the Continue code to extend a Tandem Trunk call:**

1. An external call connects to an external number either by transferring with Tandem Trunking or by DISA caller.
2. After the programmed time (Program 24-02-07), a warning tone is heard and the user dials the Continue code (Program 20-28-01) to extend the conversation.
3. After the programmed time (Program 20-28-03), the warning tone is heard again. After the programmed time (Program 24-02-10), the call is disconnected.

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# TAPI Compatibility

## Enhancements

With **Version 4000 or higher** software, SOAI and 3rd Party CTI can be used at the same time in the system. This allows systems at **Version 4000 or higher** to have Desktop Applications and DTPlusware or UCB and DTPlusware.

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## Description

The system has Telephony Applications Programming Interface (TAPI) compatibility that provides:

- Reduced TAPI Feature Set (see the Supported TAPI Commands chart below)
- Caller ID data to the PC for data base lookups and screen pops (see the Caller ID Data chart below)
- Telephone control (Off-Hook, On-Hook and dialing)

The 1st-Party TAPI Ethernet Driver provides an interface that allows the user personalized control of the telephone system from a desktop or laptop PC when used in conjunction with a TAPI-compliant application. The telephone system and PC are connected by installing an adapter on the telephone multiline terminal, allowing the PC user to access sophisticated communications services via the telephone lines.

## Conditions

- UC Desktop Suite does not support the Cordless DTL-8R-1 terminal.
- Prior to **Version 3000** software, if a 3rd-Party CTI connection is used on the SV8100, the Override function for IP multiline terminals and Softphones is not supported.
- The Bluetooth Cordless Handset (BCH) is not a supported terminal when using 1st-Party CTI, 3rd-Party CTI, or with the Desktop Suite.
- A maximum of 128 1st-Party CTI over ethernet connections is supported. Any Desktop Application connection takes away from the 128 maximum connections.
- Caller ID and Call status are available from the TAPI interface functions.
- Only one 3rd-Party CTI connection to the SV8100 is supported. If a SV8100 system has UCB (Unified Communications for Business), then the 3rd-Party Shared Services feature of SV8100 Desktop Applications cannot be used. If a SV8100 system has SV8100 Desktop Applications with the 3rd-Party Shared Services, then UCB cannot be used.

- Refer to [Table 2-106 TAPI Commands](#) for a list of supported TAPI commands.
- The TAPI Compatibility feature does not support CAP keys 1000~9999. Only 0001~0999 can be supported.
- With **Version 4000 or higher** software, SOAI and 3rd Party CTI can be used at the same time in the system. This allows systems at **Version 4000 or higher** to have Desktop Applications and DTPlusware or UCB and DTPlusware.

**Table 2-106 TAPI Commands**

lineAddProvider	lineAnswer
lineConfigDialog	lineBlindTransfer
lineGetAddressCaps	lineCompleteCall
lineGetDevCaps	lineCompleteTransfer
lineGetDevConfig	lineDevSpecific
lineGetIcon	lineDial
lineGetID	lineDrop
lineInitializeEx	lineForward
lineNegotiateAPIVersion	lineHold
lineNegotiateExtVersion	lineMakeCall
lineRemoveProvider	linePark
lineSetDevConfig	linePickup
lineShutdown	linePrepareAddToConference
lineClose	lineRedirect
lineDeallocateCall	lineRemoveFromConference
lineGetAddressStatus	lineSetupConference
lineGetCallInfo	lineSetupTransfer
lineGetCallStatus	lineSwapHold
lineGetLineDevStatus	lineUncompleteCall
lineOpen	lineUnhold
lineSetAppSpecific	lineUnpark
lineSetLineDevStatus	lineGatherDigits
lineSetMediaMode	lineGenerateDigits
lineSetStatusMessages	lineGenerateTone
lineMonitorDigits	

- When SOAI (Simplified OAI, used by DT Plusware) and 3rd Party TAPI (i.e. Desktop Applications Shared Services) are used in the same system, the following limitations apply to only the SOAI application.
  - Multiple Call Handling (Operator Terminal, Call Queueing, etc.) is not supported for extensions controlled by SOAI.
  - SOAI controlled extensions cannot be the destination for Call Forward Both Ring or Tandem Ringing.
  - SOAI controlled extensions cannot have direct CO line keys (752: \*01).
  - SOAI controlled extensions do not support Park Holding.

- SOAI controlled extensions cannot be used with the Mobile Extension feature.
- AspireNet is not supported when SOAI and 3rd Party TAPI are used in the same system.
- CCIS Link Reconnect is not supported when SOAI and 3rd Party TAPI are used in the same system.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

SV8100 Multiline Terminals and SV8100 SIP Multiline Terminals

### **Required Component(s)**

- CD-CP00-US should have LAN connection ability
- Compatible system software version
- PC Driver for the 1st-Party TAPI over Ethernet (CTE): PC running Windows XP, Vista or Windows 7.
- A TAPI compatible Windows application

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## **Related Features**

### **Headset Operation**

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	Assign the IP Address.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-02	CD-CP00-US Network Setup – Subnet Mask	The setting of Subnet Mask is invalid when all Host Addresses are 0. If the network section is: 0, 127, 128.0, 191.255, 192.0.0, 223.255.255 The setting of Subnet Mask is invalid.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.255.0)	✓		
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-20-01	LAN Setup for External Equipment – TCP Port	Define the TCP port/address/etc. for communicating to external equipment.	0~65535 default: External Device 1 (CTI) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service ) = 0	✓		



## Operation

TAPI operation is automatic once programmed in the telephone system and enabled in the PC TAPI application, unless a headset is used.

### Using the Headset with Automatic Answer:

1. With the multiline terminal in an idle state, press the **Help** key.
2. Press the **Headset** key (Program 15-07 or SC 751: 05) twice.
3. Press the **Exit** key to return the display to idle.
  -  *The Headset key blinks when Automatic Headset is activated.*
  -  *To cancel Automatic Headset, repeat these steps.*

### To redirect calls to the headset and disable the hookswitch (required for some TAPI features):

1. With the multiline terminal in an idle state, press the **Help** key.
2. Press the **Headset** key (Program 15-07 or SC 751: 05) twice.
3. Press the **Exit** key to return the display to idle.
  -  *The Headset key blinks when Automatic Headset is activated.*
  -  *To cancel Automatic Headset, repeat these steps.*
4. Press the **Headset** key (Program 15-07 or SC 751: 05) to go off-hook.



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## *Tone Override*

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### **Description**

The multiline terminal user that calls a busy station and receives a call waiting tone can generate a Tone Override that is heard by the originator and busy station. The busy station user can place the existing call on hold to answer the Override.

### **Conditions**

- One Tone Override at a time can be received at a multiline terminal.
- Tone Override can be accomplished only after receiving a BUSY tone.
- Tone Override originate is allowed from a single line telephone until the PBR times out.
- Virtual Extensions do not support Tone Override.

### **Default Setting**

None

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### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

None

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### **Related Features**

**Call Waiting/Camp-On**


**Data Line Security**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-03	<b>Service Code Setup (for Service Access) – Override (Off-Hook Signaling)</b>	Assign the service code used for off-hook Signaling Override.	MLT, SLT (default = 709)		✓	
11-16-04	<b>Single Digit Service Code Setup – Intercom Off-Hook Signaling</b>	Assign the one-digit service code used for off-hook Signaling.	(default = *)		✓	
15-02-12	<b>Multiline Telephone Basic Data Setup – Off-Hook Ringing</b>	Set the telephone off-hook signaling that occurs when a telephone user receives a second call while busy on a handset call. To enable or disable off-hook signaling for an extension Class of Service, use Program 20-13-06.	0 = Muted Off-Hook Ringing 1 = No Off-Hook Ringing 2 = Not Used 3 = Beep in Speaker (SP) 4 = Beep in Handset (HS) 5 = Speaker & Handset Beep (default = 5)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for off-hook Signaling (code 33).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M Override</b>	Turn Off or On an extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension user to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-34	<b>Class of Service Options (Supplementary Service) – Block Manual Off-Hook Signaling</b>	Turn Off or On an extension user ability to block off-hook signals manually sent from a co-worker.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-18-06	<b>Service Tone Timers – Interval of Call Waiting Tone</b>	Set the time between off-hook signaling alerts.	0~64800 (seconds) (default = 10)		✓	
80-01-01 (39)	<b>Service Tone Setup – Basic Tone Number</b>	Customize the service tones in the system. Tone Override is tone 39.	Refer to <a href="#">Table 2-33 Service Tone Setup Defaults, Program 80-01-01 on page 2-703</a>			✓
80-01-02 (39)	<b>Service Tone Setup – Ring Busy Tone</b>	Define Ring Busy Tone.	Refer to <a href="#">Table 2-34 Service Tone Setup, Program 80-01-02 on page 2-707</a>			✓

## Operation

### To send Off-Hook signals to an extension busy on a call:

 *Your extension may send Off-Hook signals automatically.*

1. Dial \* (Program 11-16-04).


- OR -

Dial **709** (Program 11-12-02).

- OR -

Press the **Off-Hook Signaling** key (Program 15-07-01 code 33).

 *You hear Ring Busy Tone.*

 *The called extension hears Call Alert Notification.*

### To answer Tone Override:

1. Receive Tone Override.
2. Press **Hold** and talk with the party.

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## Traffic Reports

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### Description

The system can send data to a PC connected to the UNIVERGE SV8100. The telephone call traffic data for each extension is captured for use with the Station Message Detail Recording (SMDR) feature.

### Call Traffic

The total of outgoing call frequency, outgoing call duration, incoming call frequency, answer frequency, incoming call duration, ringing duration for each line and extension, and abandon call frequency for each line is logged. The total of incoming calls, answer frequency, call duration for each line and extension, and abandon call frequency of each line is logged and the data is outputted to the PC. The system totals the hour, day, week, and month for each terminal and trunk number. This information is used by the SMDR feature. The extension which is totaled is determined by system programming. The system outputs this data to the PC for the total period.

### Conditions

- The SMDR call buffer stores 320 calls. The buffer stores calls when the SMDR device is unavailable. When the buffer fills, the oldest record is deleted to allow the new record to be saved.
- If connected to the output device, the reports print hourly. If not connected and the data is not output at the end of the hour, the traffic data is overwritten by new incoming data.
- The traffic data is lost if power failure occurs.
- Additional programming is required. Refer to the UNIVERGE SV8100 System Hardware Manual for more on setting up and connecting to the UNIVERGE SV8100 system.
- SMDR provides additional information about the system trunk calling patterns. Refer to [Station Message Detail Recording on page 2-1451](#) for more information.

### Default Setting

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

Software Licenses for SMDR

### Traffic Total Report – Sample Report

Terminal	OTG	Duration	Cost	ICM	Answer	Duration	Ringling	Abandon
301	54	01:45:14	720	326	115	02:11:52	00:09:36	
301	92	02:37:22	1855	84	84	01:58:31	00:04:19	
LINE001	--	--	--	79	71	01:05:26	--	8

Term	Definition
<b>Terminal</b>	Terminal Number/Called Party Number (maximum 24 digits)
<b>OTG</b>	Outgoing Call Frequency/number of outgoing calls (maximum 65535 calls)
<b>Duration</b>	Call Duration for an Outgoing Call
<b>Cost</b>	Call Charge (Not Used)
<b>ICM</b>	Incoming Call Frequency/number of incoming calls (maximum 65535 calls)
<b>Answer</b>	Answer Frequency (maximum 65535 calls)
<b>Duration</b>	Call Duration for an Incoming Call
<b>Ringling</b>	Ringling Duration
<b>Abandon</b>	Number of Abandoned Calls (maximum 65535 calls)

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## Related Features

### Station Message Detail Recording

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-20-01	Traffic Report Data Setup – Call Traffic Output	Determine whether or not the Call Traffic Output should be measured.	0 = Not Measured 1 = Measure (default = 0)	✓		
90-21-01	Traffic Report Output – Output Port Type	Define the output port to be used for the traffic reports. The reports print hourly when connected to the output device.	0 = No Setting 3 = LAN Port CD-CP00-US (default = 0)	✓		

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## Operation

None

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# Transfer

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## Description

Transfer permits an extension user to send an active Intercom or outside call to any other extension in the system. With Transfer, any extension user can quickly send a call to the desired co-worker. A call a user transfers, automatically recalls if not picked up at the destination extension. This assures that users do not lose or inadvertently abandon their transfers. While a transferred call is ringing an extension the system can optionally play ringback tone or Music on Hold to the caller.

The system allows the following types of transfers:

- Screened Transfer**  
The transferring user announces the call to the destination before hanging up.
- Unscreened Transfer**  
The transferring party extends the call without an announcement.
- Extension (Department) Groups Transfer**  
The Transferring party sends the call to a Department instead of an extension.
- Transfer Without Holding**  
A user presses a busy line key or the same (busy) CAP key and waits for the call to complete. The system automatically sends them the call when the internal caller hangs up.

### Automatic On-Hook Transfer Operation

With Automatic On-Hook Transfer, a transfer goes through as soon as the transferring user hangs up. For example, extension 104 can answer a trunk, press Transfer, dial 105 and hang up. The system extends the call to extension 105. Without Automatic On-Hook Transfer, the call would stay on Hold at extension 104 when the user hangs up. To extend the call, the user at extension 104 would have to press the Transfer key again before hanging up.

Each method has advantages. Automatic On-Hook Transfer makes transferring calls easier. However, users have to be more aware of how they handle their calls on Hold. Without Automatic On-Hook Transfer, extending a call becomes a two-step operation – but separate from placing calls on Hold.

### Prevent Recall of Transferred Call

The Class of Service program allows you to prevent a Transferred call from recalling the originating extension if the call is not answered.

## **Transfer Call into Conference/Existing Call**

This feature allows either a multiline terminal or single line telephone user with Barge-In ability to transfer a call into an existing call. This call can be a 2-party call, a Conference call, or a Barge-In Conference. The system allows Intercom and trunk calls to be transferred into a Conference call. This allows, for example, an attendant to locate co-workers and then transfer them into an existing telephone meeting. There is no need for the attendant to locate all the parties at the same time and sequentially add them into the Conference.

## **Transfer to Trunk Ring Group Available**

It is possible to transfer a trunk call to the trunk defined ring group (defined in Program 22-05-01: Incoming Trunk Ring Group Assignment). The trunk then rings the defined extensions for the ring group.

This also allows the transferred call to ring over the External Paging (Program 31-05: Universal Night Answer/Ring Over Page) so that an employee can answer the call from any available telephone.

To enable this feature, the system has a program option, Program 11-15-09: Service Code Setup Administrative (for Special Access) – Transfer to Trunk Ring Group Code (not assigned at default). When a call is transferred using this service code, it is transferred to the ring group destination for that incoming trunk. For example, trunk 2 is in Ring Group 4. When the call is transferred using this service code, the trunk rings all extensions programmed for Ring Group 4 or rings the External Paging Group for Ring Group 4, depending on how the system is programmed.

Program 22-04-01: Extension Ring Group Assignment and Program 22-05-01: Incoming Trunk Ring Group Assignment must be programmed to allow an extension access to the ring groups. If the call is not answered, it can overflow to the destination defined in Program 22-08-01: DIL/IRG No Answer Destination.

This service code can also be used with the VRS. This provides the caller listening to the VRS message with the ability to transfer their call and have it ring the external page. The code the caller would dial is defined in Program 25-06-02: VRS/DISA One-Digit Code Attendant Setup.

## **Transfer Key Can Place Call on Hold**

While on a call, press Transfer to place the call on hold.

### **Conditions**

- An existing call can be transferred into a call with Barge-In enabled.
- Unscreened Transfers from voice mail show pre-answer Caller ID information.

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- With Transfer to Busy Extensions enabled (Program 24-02-01 = 1), Call Forwarding with Both Ringing offers a unique option. A transferred call waits for either the forwarding or destination extension to become free. The call goes through to the extension that first becomes available. If neither extension becomes free in the Transfer Recall Time, the call recalls the transferring extension.
    - ✎ *With Transfer to Busy Extensions disabled (Program 24-02-02 = 0), you must also set Program 20-09-07 for the extensions COS to 0 to disable call queuing and Program 20-13-06 to set Automatic Off-hook Signaling to manual.*
  - An existing call can be transferred into a conference call.
  - Meet Me Paging Transfer allows the user to page a co-worker and have the call automatically transferred when the co-worker answers the page.
  - When transferring, an extension user can press a One-Touch key instead of dialing the extension number.
  - Serial call allows transferring a call so it automatically returns to the transferring extension when completed.
  - When a multiline terminal user is on a call, they can transfer to another station by pressing a DSS key for that station. It is not necessary to press Transfer to transfer to another station with a DSS key.
    - ✎ *When a multiline terminal user is on a call, they must press transfer to transfer a call off site with a DSS key.*
  - The following features require certain tones be changed in Program 80-01-02. Refer to the table in the [VM8000 InMail](#) feature programming section for settings:
    - Call Holding
    - Busy Greeting
    - Call Screening
    - Await Answer Transfer
  - A Trunk-to-Trunk transfer can be established by the following operation:
    1. While talking to an outside party, press **Hold**.
    2. Access a second outside line and dial the desired number.
    3. Press Transfer to complete the Trunk-to-Trunk transfer.
    - ✎ *When the second call is to be transferred to another station (Not Trunk-to-Trunk), the user should press Hold at step 3, then dial the desired station and press Transfer to complete the transfer.*
  - If station A calls Station B, and station A puts station B on hold and then calls station C, station C cannot transfer the call.
  - When transfer recall is disabled, unanswered transferred calls to a Virtual Extension or Virtual Loopback port will always recall once the transfer recall timer expires.
- 
-

## **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

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## **Related Features**

**Barge-In**

**Call Waiting/Camp-On**

**Caller ID**

**Call Forwarding**

**Conference**

**Meet Me Paging Transfer**

**One-Touch Calling**

**Quick Transfer to Voice Mail**

**Serial Call**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-58	<b>Service Code Setup (for Service Access) – Transfer into Conference</b>	Assign the code a user dials to Transfer a call into a Conference call. This code is normally 624.	MLT, SLT (default = 624)		✓	
11-15-09	<b>Service Code Setup Administrative (for Special Access) – Transfer to Incoming Ring Group</b>	When a call is transferred using this service code, it is transferred to the ring group destination for that incoming trunk. For example, trunk 2 is in Ring Group 4. When the call is transferred using this service code, the trunk rings all extensions programmed for Ring Group 4 or ring the External Paging Group for Ring Group 4, depending on how the system is programmed.	(default not assigned)		✓	
15-02-05	<b>Multiline Telephone Basic Data Setup – Transfer Key Operation Mode</b>	Set the operating mode of the extension Conf key. The keys can be for Call Transfer, Serial Calling or Flash. When selecting 2, refer also to Program 81-01-14.	0 = Transfer 1 = Call back 2 = Hook (default = 0)		✓	
15-02-24	<b>Multiline Telephone Basic Data Setup – Conference Key Mode</b>	Program an extension Conf key for Conference or Transfer. When set for Transfer, the user places a call on hold, dials the extension to which it should be transferred, then presses Conf. The call is then transferred. When set for Conference, with an active call, the user can press Conf, place a second call, then press Conf twice. All the calls are then connected.	0 = Conference 1 = Transfer (Default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Extension users may want a function keys programmed for Transfer (code 06).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-02-04	<b>System Options for Multiline Telephones – Retrieve the Line After Transfer</b>	Enable/Disable an extension user ability to answer a call after it is transferred, but before it is answered.	0 = Not Holding (No Keep) 1 = Holding (Keep) (default = 1)		✓	
20-03-01	<b>System Options for Single Line Telephones – SLT Call Waiting Answer Mode</b>	For a busy single line (500/2500 type) telephones, set the mode used to answer a camped-on trunk call.	0 = Hookflash (Hooking) 1 = Hookflash + Service Code 654 (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-06	<b>Class of Service Options (Hold/Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-11-07	<b>Class of Service Options (Hold/Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-11-08	<b>Class of Service Options (Hold/Transfer Service) – Transfer Information Display</b>	Turn Off or On an extension ability for incoming Transfer preanswer display.	0 = Off 1 = On (default = 1 for COS 01~15)	✓		
20-11-11	<b>Class of Service Options (Hold/Transfer Service) – Automatic On-Hook Transfer</b>	Turn Off or On an extension user ability to use Automatic On-Hook Transfer.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-11-18	<b>Class of Service Options (Hold/Transfer Service) – No Recall</b>	No Recall set to 1 does not stop transferred calls from recalling from a virtual extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-20	<b>Class of Service Options (Hold/Transfer Service) – No Callback</b>	Turn Off or On an extension user ability to receive callbacks.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable extension Barge-In as Speech or Monitor mode (i.e., Barge-In initiator). This is required to transfer a call to a conference.	0 = Speech 1 = Monitor (default = 0 for COS 1~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On an extension user ability to have other extensions Barge-In on calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-17	<b>Class of Service Options (Supplementary Service) – Barge-In Tone/Display (Intrusion Tone)</b>	Turn Off or On the Barge-In Tone. If set to 1, callers hear an alert tone and their display indicates the Barge-In when another extension barges into their conversation. If set to 0, there is no alert tone or display indication.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-32	<b>Class of Service Options (Supplementary Service) – Deny Multiple Barge-Ins</b>	Allow/Deny an extension user ability to have multiple users Barge-In to their conversation.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-14-11	<b>Class of Service Options For DISA/E&amp;M – DISA/Tie Trunk Barge-In</b>	Enable/Disable a DISA or tie trunk user ability to use Barge-In.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-18-07	<b>Service Tone Timers – Intrusion Tone Repeat Time</b>	After a call is interrupted (such as Barge-In, Voice Mail Conversation Recording or Voice Over) the system repeats the Intrusion tone after this time. Normally, you should enter 0.	0~64800 (seconds) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	The system waits for this time to expire before placing the call in a talk state (Call Timer starts after time expires, Voice Over and Barge-In are not allowed until after time expires).	0~64800 (seconds) (default = 5)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions to ring groups.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	Define a trunk ring group. When transferring a DID or trunk call to the trunk defined ring group, the trunk then rings the defined extensions for the ring group.	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
22-08-01	<b>DIL/IRG No Answer Destination</b>	Assign the DIL No Answer Ring Group where an unanswered call should overflow.	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
24-02-01	<b>System Options for Transfer – Busy Transfer</b>	Enable/Disable an extension user ability to Transfer calls to busy extensions. If disabled, calls transferred to busy extensions recall immediately.	0 = Disable (No) 1 = Enable (Yes) (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-02	<b>System Options for Transfer – MOH or Ringback on Transferred Calls</b>	Enable (0)/Disable (1) MOH on Transfer. If enabled, a transferred caller hears Music on Hold while their call rings the destination extension. If disabled, a transferred caller hears ringback while their call rings the destination extension. For this option to work with voice mail, the transferred call must be an unscreened transfer.	0 = Hold Tone 1 = Ring Back Tone (default = 0)		✓	
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	If activated at an extension, Delayed Call Forwarding occurs after this time. This also sets the time a Transferred call waits at an extension forwarded to Voice Mail before routing to the called extension mailbox.	0~64800 (seconds) (default = 10)		✓	
24-02-04	<b>System Options for Transfer – Transfer Recall Time</b>	Set the Transfer Recall Time. An unanswered transferred call recalls to the extension that initially transferred it after this time.	0~64800 (seconds) (default = 30)		✓	
24-02-05	<b>System Options for Transfer – Message Wait Ring Interval Time</b>	For Single Line Telephones (SLTs) without message waiting lamps, this is the time between intermittent ringing. If this value is 0, the system rings once.  <i>A release transfer to a busy Department Group only follows this time if the Department Group is set to 0 = No Queue in Program 16-01-10, if set to 1, 2 or 3 it follows the time in Program 24-02-04.</i>	0~64800 (seconds) (default = 30)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-06-01	<b>VRS/DISA One-Digit Code Attendant Setup – Next Attendant Message Number</b>	<p>Set up single digit dialing through the VRS. This gives VRS callers single-key access to extensions, the company operator, Department Calling Groups and Voice Mail. For each VRS message set to answer outside calls (see Program 25-02 and Program 25-05), you specify:</p> <ul style="list-style-type: none"> <li>○ The digit the VRS caller dials (0~9, *, #). (Keep in mind that if you assign destinations to digits, outside callers cannot dial system extensions, starting with that digit.</li> <li>○ The destination reached (eight digits maximum) when the caller dials the specified digit. The destination can be an extension, a Department Calling pilot number or the Voice Mail master number. A one-digit code can be assigned for each Automated Attendant message.</li> </ul>	0~100 (0 = No Setting) 101 = Voice MAil Answers 104 = Refer to 25-04: VRS/DISA Transfer Ring Group with No Answer/ Busy 105 = Dial the other extension (default = 0)		✓	
25-06-02	<b>VRS/DISA One-Digit Code Attendant Setup – Destination Number</b>	Define the digit used by a VRS caller which allows their call to be transferred to the external page.	Up to eight digits (default not assigned)		✓	
31-05-01	<b>Universal Night Answer/Ring Over Page</b>	For each trunk which should ring the external page, set the External Page zone (1~9) to allow ringing.	0 = No Ringing (No) 1 = Ringing (Yes) (default = 0)		✓	
81-10-07	<b>COI Initial Data Setup – Hookflash Time Selection 1</b>	Set the flash duration for analog trunk calls (1~255 in 16ms steps).	0 = 20ms 1 = 40ms 2 = 60ms 3 = 80ms 4 = 100ms 5 = 140ms 6 = 160ms 7 = 200ms 8 = 400ms 9 = 600ms 10 = 800ms 11 = 1.0 seconds 12 = 1.5 seconds 13 = 2.0 seconds 14 = 3.0 seconds 15 = 5.0 seconds [default = 9 (600ms)]		✓	

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## Operation


### Transferring Trunk Calls:

#### To Transfer a trunk call to a co-worker's extension:


1. At the multiline terminal, press Transfer.


- OR -

At 500/2500 single line telephone, hookflash.


 *You hear Transfer dial tone.*


2. Dial the co-worker's extension number.


 *If the extension is busy or does not answer, you can dial another extension number or press the line key to return to the call. In addition, you may be able to hang up and have the call Camp-On.*


 *Single line telephone users can press hookflash to retrieve the call. If a call was transferred and the 500/2500 user has hung up the handset, the call can be retrieved by dialing \*\* and the extension number to which it had been transferred.*

3. Announce the call and press Transfer (Program 15-07 or SC 751: 06) or hang up.

 *If you do not have Automatic On-Hook Transfer, you must press Conf (Program 15-02-24=1) or your Transfer Programmable Function Key to Transfer the call.*

 *If your co-worker does not want the call, press the flashing line key to return to the call.*

 *Single line telephone users can press hookflash to retrieve the call. If a call was transferred and the 500/2500 user has hung up the handset, the call can be retrieved by dialing \*\* and the extension number to which it had been transferred.*

 *If you do not want to screen the call, hang up without making an announcement.*

#### To answer a call transferred to your extension:

1. Lift the handset or press **Speaker** when a co-worker announces the call.

### Transferring without Holding:

#### To Transfer without holding (multiline terminal only):

1. Lift the handset.
2. Press busy line or press **Speaker**.
3. When original caller hangs up, you are connected.

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## Transferring Intercom Calls:


### To Transfer your Intercom call:


1. At the multiline terminal, press **Hold**.

- OR -


At single line telephone, hookflash.


2. Dial extension to receive your call.

 *If the extension is busy, does not answer or does not want the call, you can dial another extension number or press the lit line key to return to the call. In addition, you may be able to hang up and have the call Camp-On.*

 *Single line telephone users can press hookflash to retrieve the call. If a call was transferred and the 500/2500 user has hung up the handset, the call can be retrieved by dialing \*\* and the extension number to which it transferred.*

3. Announce your call and press Transfer (Program 15-07 or SC 751: 06) or hang up.


 **With Automatic On-Hook Transfer**  
*When you hang up, the call is automatically transferred.*

 **Without Automatic On-Hook Transfer**  
*You must press your Transfer Programmable Function Key to Transfer the call.*


*To Transfer the call unscreened, press your Transfer Programmable Function Key and hang up without making an announcement.*


### Transferring a Call Into a Conference/Existing Call:

1. While on a call, press Transfer and dial service code **624**.


 *The display shows the Transfer to Conf. ICM Dial.*


2. Enter the extension number of the co-worker currently on a Conference call to which the call should be transferred.

 *To cancel the transfer, press the flashing line key to retrieve the call.*

 *If an error tone is heard, Barge-In is not enabled for the extension and the call does not go through. Press the flashing line key to retrieve the call or hang up, and the call recalls the extension.*

3. The transferred call is incorporated into the conference call.

 *The callers hear the Barge-In tone if enabled in Program 20-13-17.*


 *If a call is transferred into a Barge-In Conference (an existing 2-party call into which an extension user has used the Barge-In feature to join), the Conference becomes a regular 4-party Conference call.*

4. Hang up.


### Transferring a Call to a Trunk Ring Group:

1. While on a call, press Transfer.

2. Dial the Transfer to Ring Group service code defined in Program 11-15-09.

 *You hear confirmation tone.*

3. Hang up.

-  *The call is transferred to the trunk ring group defined in Program 22-05-01 and all assigned extensions in the group (Program 22-04-01) ring or it rings the External Paging, enabling anyone to answer the call.*

**Transferring an Intercom or Trunk Call using a DSS/One-Touch Key:**

1. While on a call, press the **DSS/One-Touch** key.
2. Announce the call or hang up.

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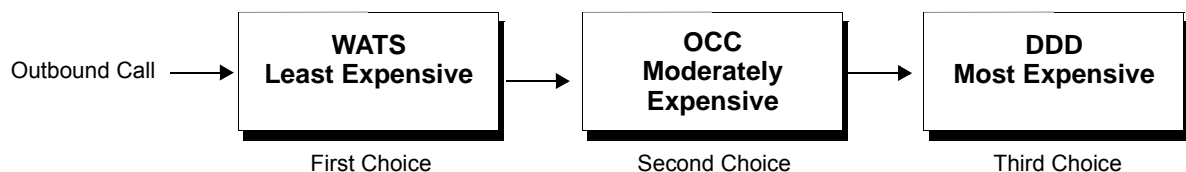
## Trunk Group Routing

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### Description

Trunk Group Routing sets outbound call routing options for users that dial the Trunk Group Routing code (9) for trunk calls. Trunk Group Routing routes calls in the order specified by system programming. If a user dials 9 and all trunks in the first group are busy, the system may route the call to another group. When you are setting up your system, Trunk Group Routing helps you minimize the expense of toll calls. For example, if your system has outbound WATS lines, OCC lines and DDD lines, use Trunk Group Routing to route calls to the WATS lines first.

There are 100 available Trunk Groups and 100 Routes.



### Conditions

- DISA (Program 25-10) and Tie Lines (Program 34-03) have separate Trunk Group Routing programs.
- The system uses Trunk Group Routing programming (Program 14-06) when setting up Ringing Line Preference.
- Use trunk group programming to set the order in which users access trunks within a specific trunk group.
- Dialing 9 activates ARS, overriding trunk group routing if ARS service is turned on.
- Call Forwarding, Off-Premise is not supported when using Alternate Trunk Group Routing.

### Default Setting

Enabled (All trunks are in Group 1)

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Automatic Route Selection**

**Central Office Calls, Placing**

**Direct Inward Dialing (DID)**

**Dial Tone Detection**

**Multiple Trunk Types**

**Programmable Function Keys**

**Prime Line Selection**

**Trunk Groups**



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	<b>System Numbering – Service Code</b>	Set up a Service Code for Alternate Trunk Route Access.	Refer to UNIVERGE SV8100 System Program Manual		✓	
11-09-01	<b>Trunk Access Code – Trunk Access Code</b>	If required, change the single-digit Trunk Access Code (normally 9). This is the code extension users dial to access Automatic Route Selection. If you change this code, you must make corresponding changes in Program 11-01.	Dial (up to four digits) (default = 9)		✓	
11-09-02	<b>Trunk Access Code – 2nd Trunk Route Access Code</b>	Define additional trunk access codes. When a user dials the Alternate Trunk Route Access Code, the system routes their call to the. Alternate Trunk Route.	Dial (up to four digits) (default not assigned)		✓	
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to trunk groups.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number (1~4).	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified).	✓		
14-07-01	<b>Trunk Access Map Setup – Trunk Port Number</b>	Access Map programming may limit Trunk Group Routing options.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Access Map programming may limit Trunk Group Routing options.	Trunk Access Maps: 1~200 (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Trunk Group Routing access (code *02 + trunk group #).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
21-02-01	<b>Trunk Group Routing for Extensions</b>	Assign the trunk routes to extensions.	Trunk Group Routes: 1~100 Day/Night Mode: 1~8 Route Table Number: 0~100 (0 = No Setting) (default = 1)		✓	
21-15-01	<b>Individual Trunk Group Routing for Extensions</b>	Designate the trunk route accessed when a user dials the Alternate Trunk Route Access Code assigned in Program 11-09-02. Trunk Group Routing is set up in Program 14-06.	Trunk Group Routes: 1~100 0~100 (0 = No Setting) (default = 0)		✓	
23-03-01	<b>Universal Answer/Auto Answer</b>	Let an extension user automatically answer trunk calls that ring other extensions. When the user lifts the handset, they automatically answer the ringing calls based on Trunk Group Routing programming (defined in Program 14-06).	Maximum eight digits Day/Night Mode 1~8 Route Table Number 0~100 (default = 0)		✓	
25-10-01	<b>Trunk Group Routing for DISA</b>	Assign the Trunk Group Route chosen when a user places a DISA call into the system and dials 9. The Trunk Group Routing is defined in Program 14-06. If the system has ARS, dialing 9 accesses ARS. The route chosen is based on the DISA Class of Service, which is determined by the password the caller dials.	Trunk Group Routes: 1~100 Day/Night Mode = 1~8 Route Table Number = 0~100 (0 = No Setting) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-12-01	Alternate Trunk Group Routing for DISA	Define the trunk route selected when a DISA caller dials the Alternate Trunk Access Code assigned in Program 11-09-02. The route selected is based on the DISA caller Class of Service, which is in turn determined by the password the caller dials. Program 14-06 is used to set up the Trunk Group Routing.	Trunk Group Routes: 1~100 Day/Night Mode = 1~8 Route Table Number = 0~100 (0 = No Setting) (default = 1)		✓	
34-03-01	Trunk Group Routing for E&M Tie Lines	Assign the Trunk Group Route chosen when a user seizes a Tie Line and dials 9. Set Trunk Group Routing in Program 14-06. If the system has ARS, dialing 9 accesses ARS.	Trunk Group Routes: 0~100 (0 = No Setting) (default = 1)		✓	

## Operation

### To place a call using Trunk Group Routing:

- At the multiline terminal, press **Speaker**.

- OR -

At single line telephone, lift the handset.

- Dial **9**.
- Dial number.

- OR -

- At the multiline terminal, press Trunk Group Routing key (Program 15-07 or SC 752: \*05).

 Also refer to the [Call Appearance \(CAP\) Keys on page 2-153](#).

- Dial the number.

## Trunk Groups

### Description

Trunk Groups let you optimize trunk usage for incoming and outgoing calls. Each group can be accessed by an Access Code plus the group number. There are 100 available Trunk Groups and you set the access order in trunk group programming. Using Call Appearance (CAP) Keys give an extension user more available function keys, since the user does not need a separate line key for each trunk.

Like Trunk Group Routing, Trunk Groups help you minimize the expense of toll calls. For example, if your system has outbound WATS lines, OCC lines and DDD lines, program the trunk group to route to the WATS lines first.

Priority	Type of Trunk
1	WATS
2	OCC
3	DDD

### Conditions

- Unless a user preselects a trunk, Trunk Group programming selects the trunk Speed Dialing used for trunk calls.
- If a user dials a number that is not programmed in ARS, the system can route the call to a trunk group.
- All DID trunks of the same type should be placed in the same trunk group. These trunk groups must then be assigned to a DID Translation Table.
- Trunks ring extensions according to Ring Group programming.

### Default Setting

All trunks are in group 1.

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

None

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## **Related Features**

**Automatic Route Selection**

**Call Appearance (CAP) Keys**

**Central Office Calls, Placing**

**Dial Tone Detection**

**Direct Inward Dialing (DID)**

**Programmable Function Keys**

**Ring Groups**

**Speed Dial – System/Group/Station**

**Trunk Group Routing**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Allocate the circuits on the CD-CP00-US for either DTMF receiving or dial tone detection.	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
11-12-14	<b>Service Code Setup (for Service Access) – Trunk Group Access</b>	If the service code for Trunk Group Access (704 by default) is not acceptable, change it as necessary.	MLT, SLT (default = 704)		✓	
14-02-11	<b>Analog Trunk Data Setup – Next Trunk in Rotary if No Dial Tone</b>	Enable/Disable the system ability to skip over a trunk if dial tone is not detected. This pertains to calls using Speed Dial, ARS, Last Number Redial, or Save Number Dialed. It does not pertain to line keys or Direct Trunk Access calls.	0 = Disable 1 = Enable (default = 0)		✓	
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to trunk groups.	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-06-01	<b>Trunk Group Routing – Priority Order Number</b>	Set the priority order number 1~4.	0 = Not Specify 1~100 : (Trunk Group Number) 1001~1100 : (1000 + Route Table Number) Default: Route 1, Order Number 1 = 1 (Trunk Group 1) Order Numbers 2, 3, 4 = 0 (Not Specified) All Other Routes (2~100) and Order Numbers (1~4) = 0 (Not Specified).	✓		
14-07-01	<b>Trunk Access Map Setup – Trunk Port Number</b>	Assign trunks to Access Maps.	0 = No access 1 = Outgoing access only 2 = Incoming access only 3 = Access only when trunk on Hold 4 = Outgoing access and access when trunk on Hold 5 = Incoming access and access when trunk on Hold 6 = Incoming and Outgoing access 7 = Incoming access, outgoing access and access when trunk on Hold Trunk Access Maps: 1~200 Default: Access Maps 1~200 = Trunk Ports 1~200 assigned with option 7 access (incoming and outgoing access and access when trunk is on Hold).		✓	
15-06-01	<b>Trunk Access Map for Extensions</b>	Assign Access Maps to extensions.	Trunk Access Maps: 1~200 Trunks 1~200 (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign function keys for trunk group access (code *02 + group) or Call Appearance (CAP) Keys (code *08 + CAP Key orbit 0001~9999 (or 0000 for auto assign).	Trunk Groups: 1~100 Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-02-02	<b>System Options for Multiline Telephones – Trunk Group Access Key Operating Mode</b>	Set the operating mode of the extension trunk group keys.	0 = Outgoing / Incoming 1 = Outgoing 2 = Incoming (default = 0)		✓	
20-29-01	<b>Timer Class for Extension – Day/ Night Mode 1~8, Class Number</b>	Assign the timer class to each extension. There are 16 Classes that can be assigned. You make eight entries for this Program, one for each Night Service Mode. This entry includes virtual extension numbers.	0~15 0 = Not assigned (default = 0)		✓	
20-31-04	<b>Timer Class Timer Assignment – Intercom Interdigits Time (Intercom I/D Timer)</b>	When placing Intercom calls, extension users must dial each digit in this time.	0~64800 (seconds) (default = 10)		✓	
21-01-02	<b>System Options for Outgoing Calls – Intercom Interdigit Time</b>	When placing Intercom calls, extension users must dial each digit in this time.	0~64800 (seconds) (default = 10)		✓	
21-01-05	<b>System Options for Outgoing Calls – Disconnect Time When Dial Tone Not Detected</b>	If 14-02-11 is enabled, the system skips over a trunk if dial tone is not detected. This option pertains to calls placed using Speed Dial, ARS, Last Number Redial or Save Number dialed. It does not pertain to line key or Direct Trunk Access calls.	0~64800 (seconds) (default =3)		✓	

## Operation

### To place a call over a trunk group:

1. At the multiline telephone, press **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
2. Dial **704**.
3. Dial trunk group number (1~9 or 001~100).
4. Dial number.  
- OR -
  1. Press the **Trunk Group** key (Program 15-07 or SC 752: \*02 + group).
  2. Dial the number.

### To answer an incoming trunk group call:

1. Lift the handset.
2. Press the flashing **Trunk Group** key.

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# Trunk Queuing/Camp-On

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## Description

Trunk Queuing permits an extension user to queue (wait in line) on-hook for a busy trunk or trunk group to become free. The system recalls the queued extension as soon as the trunk is available. The user does not have to manually retry the trunk later. Trunk Queuing lets the caller know when the call can go through. If the extension user does not answer the Trunk Queuing ring, the system cancels the queue request.

With Trunk Camp-On, an extension user can queue (wait in line) *Off-Hook* for a busy trunk or trunk group to become free. The caller connects to the trunk when the trunk becomes free. As with Trunk Queuing, the user does not have to manually retry the trunk later.

Any number of extensions may simultaneously queue or Camp-On for the same trunk or trunk group. When a trunk becomes free, the system connects the extensions in the order that the requests were left.

## Conditions

- With Automatic Route Selection (ARS), Trunk Queuing automatically queues for the least costly route.
- A user can camp-on or leave a callback request for an extension.
- Other programmed options for outgoing calls can affect how a call is placed. Check or program these options as needed (e.g., access line/Call Appearance (CAP) Keys, etc.).
- Using a Programmable Function Key can simplify the trunk queuing operation.

## Default Setting

Enabled

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## Related Features

**Automatic Route Selection**

**Call Waiting/Camp-On**

**Callback**

## Central Office Calls, Placing

### Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-04	<b>Service Code Setup (for Service Access) – Set Camp-On</b>	Customize the Service Code used for setting Camp-On.	MLT, SLT (default = 750)		✓	
11-12-05	<b>Service Code Setup (for Service Access) – Cancel Camp-On</b>	Customize the Service Code, used for cancelling Camp-On.	MLT, SLT (default = 770)		✓	
11-16-05	<b>Single Digit Service Code Setup – Camp-On</b>	Customize the 1-digit Service Code used for setting Camp-On.	(default = #)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Trunk Queuing and Trunk Camp-On (code 35).	Trunk Groups: 1~100 Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-01-08	<b>System Options – Trunk Queuing Callback Time</b>	Set the Trunk Queuing Callback Time. Trunk Queuing Callback rings an extension for this time.	0~64800 (seconds) (default = 15)		✓	
20-01-09	<b>System Options – Callback/Trunk Queuing Cancel Time</b>	Set the Callback/Trunk Queuing Cancel Time. The system cancels an extension Callback or Trunk Queuing request after this time.	0~64800 (seconds) (default = 64800)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-11-07	<b>Class of Service Options (Hold/Transfer Service) – Transfer Without Holding</b>	Turn Off or On an extension user ability to use Transfer Without Holding.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-29-01	<b>Timer Class for Extensions</b>	Assign the timer class (0~15) to each extension for each Night mode. This entry includes virtual extension number.	0~15 0 = Not assigned (default = 0)		✓	
20-31-01	<b>Timer Class Timer Assignment – Trunk Queuing Callback Duration Time</b>	Trunk Queuing Callback rings an extension for this time.	0~64800 (seconds) (default = 15)		✓	
20-31-02	<b>Timer Class Timer Assignment – Callback / Trunk Queuing Cancel Time</b>	The system cancels an extension Callback or Trunk Queuing request after this time.	0~64800 (seconds) (default = 64800)		✓	

## Operation

### To queue for a busy trunk:

1. Try to access the busy trunk.
2. Dial # or press Trunk Queuing/Camp-On key (Program 15-07 or SC 751: 35).
3. Hang up to leave a Trunk Queuing request.

- OR -

Wait Off-Hook to Camp-On to the trunk.

### To answer when Trunk Queuing calls you back:

1. Lift the handset.

**To cancel a Trunk Queuing/Camp-On request:**

1. At the multiline terminal, press idle **Speaker**.  
- OR -  
At the single line telephone, lift the handset.
2. Dial **770**.
3. At the multiline terminal, press **Speaker** to hang up.  
- OR -  
At the single line telephone, hang up.

# *UCB (Unified Communications for Business)*

## Enhancements

This feature added with **Version 1100 (1.10 or higher)**.

UCB Fax is supported with UCB software **Version 5.00SP2**.

UCB functionality has been enhanced with SV8100 **Version 5000, UCB 5.1 and TSP 4.00 or higher** software.

- Virtual Extensions are supported for Queues (Agent and Operator) and pilot numbers (Voice Mail, Hold, & Executive Conference).
- Mobile Extension is supported in the same system as UCB.
- Application keys are used instead of Blank keys when programming the Dterm Keys for UCB.
- The TSP and UCB have been enhanced to limit when the TSP requires a reset and how it can be reset.

In previous versions of software, when a 3rd party CTI server has already been connected with a main device (when 3rd party CTI is used) other 3rd party CTI devices cannot connect to the main device.

With **Version 5000 or higher** CPU software, the IP Address of the CTI server currently connected is displayed in Program (20-23-06).

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## Description

UCB is a modular multimedia Contact Center solution providing skills-based routing (SBR) and blending customer contacts using Telephone, Email, Web Callback, Web Chat, Voicemail and Fax. UCB provides much more than a conventional Automatic Call Distribution system.

UCB is licensed according to the modules required by the customer, and the number of concurrent users. For specific information regarding each module, refer to the separate product manuals. These manuals are common for all NEC platforms, and the feature restrictions described in the document may limit availability of some features for installations on the SV8100 telephone system.

Telephone calls (incoming DIT, ANA, DID, CO, or ring Transfer) terminate to a programmed queue. Each queue is programmed as a virtual extension so the number of queues depends on the total number of virtual extensions in the SV8100 system. Any agent can take calls from any queue, based on customer Caller ID, agent skills, or routing choices made using the UCB graphical user interface (GUI) administration tool. UCB delivers the incoming call either to the agent that has been idle the longest or in accordance with a programmed preference level. Consideration can be made for concurrent activity by the agent on other medias (for example, queue Telephone calls can be blocked when the agent is currently engaged in a Web Chat with another customer).

Refer to the Q-Control product manual for additional information.

### **The UCB Announce Module**

This module helps improve customer service levels and reduce abandonment rates to improve the effectiveness of the customer contact center. Up to 99 queue progress announcements can be defined for each queue to provide Estimated Time To Answer (ETA) and position in queue (PIQ) that update dynamically to keep the customer informed of the progress while waiting in queue. The customer can control the Announce module using the GUI Administration tool on their PC desktop. Queue specific delay messages can be prerecorded and real-time customer announcements can be made.

An example follows:

When you are calling about a problem with your email, please be aware that we are currently working to resolve a problem with the email server; we expect to have this resolved by midday. When you require assistance for another matter please hold for the first available team member.

For additional information, refer to the Q-Announce product manual.

### **The Q-Callback Module**

This module enhances the Q-Announce Module to give a customer waiting in queue the option of leaving a callback request. This helps to both reduce abandonment and balance call center workloads during peak periods. Q-Callback takes the telephone number and a message and allows the caller to drop out of queue. The callback request becomes a virtual call, and when an agent becomes available, the call is returned to the customer. When the customer is unavailable when the agent calls back, the request is scheduled again and the original caller message, complete with callback attempt history, is presented to another agent at a later date and time. Callbacks and Callback attempts are tracked and extensively incorporated in the Q-Reports. Q-Callback is commonly used to allow customers to leave messages during CSR team meetings and after call center normal business hours. Customer requests are queued and agents can address requests as soon as they log in.

For additional information refer to the Q-Callback product manual.



### **The Desktop Application**

This application interfaces the agent with the multimedia contact center and provides a real-time indication of contact center activity. Details include the number of calls in queue (including individual Caller ID and wait time) and the number and status of agents available to answer calls from each queue. Q-Desktop also provides after call resolution or wrap-up.

For additional information, refer to the Q-Desktop product manual.

### **The Q-Email Module**

This module integrates the telephone system with the email server for a blended call center where configured skill profiles determine which agent should receive the call. The administration can specify the time to recover and present the unanswered emails to another available agent, restrict the number of concurrent emails each agent can handle, and determine whether or not an agent is allowed to receive an email while on a queue telephone call. NEC professional services are frequently required to support the initial deployment of this module.

For additional information, refer to the Q-Email Whitepaper and product manual.

### **The Q-Web Module**

This module provides web users an Internet form that generates the request for either an agent callback or a web chat. Q-Web Callback presents the agent with a text message to initiate a telephone call back to the web user. Q-Web Chat is a direct text-based interaction between the agent and the external web user. Both modules allow customer contacts from an Internet Web site to be blended with other customer contact activities, such as Telephone Calls and Queue emails. NEC professional services are frequently required to support the initial deployment of this module.

For additional information, refer to the Q-Web Callback and Q-Web Chat Whitepapers and product manuals.

### **The Q-IVR Module**

This optional module allows customer self-help solutions to be implemented. IVR voice prompts are administered using the standard UCB Administration GUI tool, and call flows are implemented as customer-specific professional services using Java Script or Visual Basic coding. Customer information (for example, account numbers) can be passed to an agent where personal assistance is required. Queue statistics can be reported using the Q-Reports application, and detailed call flow reporting can be incorporated in the call flow scripting when required.

Please contact the NEC sales support team for assistance with quotations for this module, and for more information refer to the Q-IVR Whitepaper and product manual.

## The Q-Outdial Application

This application allows significant improvement to agent productivity by blending outbound customer calls with incoming customer contact activity, reducing agent reluctance between calls, and managing customer call campaigns. Call lists can be imported from a formatted .CSV/text file or scheduled to be dynamically pulled from a live database based on a schedule. Campaigns can be Prevue Dial (agents can review information and then click to dial) or Power Dial (agent telephone is presented with a call and the telephone number is automatically dialed without delay). NEC professional services are frequently required to support the initial deployment of this module.

For additional information, please refer to the Q-Outdial Whitepaper and product manual.

One unique aspect of the UCB solution is support for migration directly to the NEC IPS or IPX telephone system when customer requirements change, and they need more than the 60-agent limit of the UNIVERGE SV8100 system (Maximum of 64 trunks are supported). Customers that upgrade can retain all their end-user environmental tools, including the Q-Desktop GUI application and in some cases the physical telephone set.

## The Voice Messaging Module

This module adds a voicemail function to the UCB suite. Voice messaging allows the user to customize voicemail greetings based on current availability, personalize greetings for specific callers, inform callers about their availability based on an Outlook Calendar, receive voicemail notification in Microsoft Outlook, remotely manage greetings and manage voicemail settings from their computer desk top. Voice messaging is modular, giving the customer flexibility to choose components that best fit their organizational needs.

For additional information, refer to the Voice messaging product manual.

## Conditions

### General:

- SV8100 **Version 7000 or higher, UCB 6.1 or higher and TSP 5.1 (in Advanced Mode) or higher** required to run UCB.
- Any station using UCB must have an ICM key programmed in 15-07-01 (\*00).
- The UCB connects to the customer LAN using a standard RJ45 Ethernet adapter; a patch cable should be provisioned from the telephone system to the LAN data switch prior to installation.
- The end-user GUI software for Administration, Reports, and real-time agent status is installed to an existing customer file server and is accessed using a shortcut from the desktop of the Agent Client PC.
- The client software and the server communicate using TCP/IP; the customer network should support this network protocol before implementation (most do).

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- Between queue progress announcements, the caller is parked and hears the Music on Hold (MOH).
  - When a K-CCIS trunk is on hold, the specified Line Seizure access code is used by the system to retrieve the call from a held state for delivery to an available agent, or play a queue delay announcement.
  - The UCB can support and distribute incoming calls from remote K-CCIS offices. However, incoming calls into UCB that result in link reconnect are not supported. These calls must be answered by the local station, and then transferred into the UCB.
  - As part of the software installation process, the software must be registered through the internet. This process can be accomplished from the server or from any PC on the customer LAN that has access to both the server and the Internet. The server should be configured for Internet access. The server leaves the factory configured for DHCP and therefore automatically gets this access for most customer installations.
  - Application keys (76+XX) are used instead of blank keys for the Dterm functions of the SV8100 **Version 5000, UCB 5.1 and TSP 4.00 or higher** software.
  - UCB supports a maximum of 1500 BHCA.
  - Supported Capacities:
    - ❑ A maximum of 30 CC Agents.
    - ❑ A maximum of 120 UC users (Executive Desktop/Insight).
    - ❑ A maximum of 200 Voice Mail boxes.
  - UCB supports a maximum of 200 TSP interactions per second sent from/to UCB.
    - ❑ Light key (Application key, Message Waiting light).
    - ❑ Update display (number of VM messages, Queue ringing, presence change, etc.).
    - ❑ Dial number, Pickup call, etc.
  - The TSP and UCB have been enhanced to limit when the TSP is required to be reset. Both have been enhanced to allow UCB to be reset in the following (SV8100 **Version 5000, UCB 5.1 and TSP 4.00 or higher** software required):
    - ❑ Automatic Always – Resets the TSP at the scheduled time (no matter if TSP reset is needed or not).
    - ❑ Automatic Yes – Resets the TSP at a scheduled time when a Reset is required.
    - ❑ Manually – Manually reset the TSP.

Table 2-107 SV8100 Configuration

SV8100 Configuration Change	UCB TSP Reset Required	PC Reset Required	No Reset Required
New Station Card Added	X		
New Trunk Card Added	X		
New IP Trunks (SIP, H.323, K-CCIS added)	X		
New IP Phone Registered	X		
Extension Number Changed		X	
Station Card Removed (Program 90-05-01)		X	
Trunk Card Removed (Program 90-05-01)		X	
IP Trunks (SIP, H.323, K-CCIS) Removed (Programs 10-40-01, 10-40-02, 10-40-04)	X		
IP Phone Unregistered (Program 90-23-01)	X		
Function Keys Changed (Note 3)	X (Note 1)		X (Note 2)

Note 1: TSP needs to be reset when adding/changing an application key or virtuals.

Note 2: CAP, ICM, Headset, etc. do not require a reset of the TSP.

Note 3: Change of Function Keys using Webpro, PCPro and Handset Programming and Access Codes.

## Restrictions

- UCB is not supported for Centralized Voice Mail.
- Prior to resetting (powering off and on), the system for any reason, stop the UCB. Restart UCB after the system comes back up.
- Two SIP extensions are needed for each Aculab SIP port SV8100 **Version 4000 (4.01), UCB 5.0 SP4 and TSP 3.03 or lower** software.
- Each queue requires a SIP extension.
- One SIP extension is needed for each Aculab SIP port. SV8100 **Version 5000, UCB 5.1, and TSP 4.00 or higher** software required.
- Call Pick Up is not supported for ringing Queue calls at agent's station.
- DNIS display is not supported for incoming calls to the UCB.
- When using Netlink and UCB, the trunks and extensions on the remote sites are not supported for UCB with **Version 2500 (2.50 or lower)**.
- When using Netlink and UCB, the trunks and extensions on the remote sites are supported for UCB with **Version 2500 (2.51 or higher)**.

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- Analog phones cannot be used for Agents.
  - Agents can not have Hotline, Prime Line or Ringdown setup on the telephone.
  - Up to 64 calls can be queued up at one given moment.
  - When using the UCB for VM, the Large LED does not light when a new VM is received. A key in the UCB must be set to light when a new message is received. (SV8100 **Version 2000, UCB 5.0 SP1 and TSP 1.01 or lower**).
  - When using the UCB for VM, the Large LED lights when a new VM is received. A key in the UCB can also be set to light when a new message is received (SV8100 **Version 2500, UCB 5.0 SP2 and TSP 3.01 or higher** software is required).
  - Only one 3rd-Party CTI connection to the SV8100 is supported. If a SV8100 system has UCB (Unified Communications for Business), the 3rd-Party Shared Services feature of SV8100 Desktop Applications cannot be used. If a SV8100 system has SV8100 Desktop Applications with the 3rd-Party Shared Services, UCB cannot be used.
  - When using K-CCIS, link reconnect is not supported back to UCB.
  - Virtual Extension Keys assigned as code \*03 do not support Voice Mail Message Indication on Line Keys for UCB.
  - UCB does not support the use of Virtual Extensions as Queues (Agents and Operators) and Pilots (Voice Mail, Hold and Executive Conference). SV8100 **Version 4000 (4.01), UCB 5.0 SP4**, and **TSP 3.03 or lower** software.
  - Only one Codec can be assigned for SIP extensions. Different SIP extensions cannot use different Codecs.
  - Virtual Extensions are supported for Queues (Agent and Operator) and pilot numbers (Voice Mail, Hold, & Executive Conference). SV8100 **Version 5000, UCB 5.1 and TSP 4.00 or higher** software required.
  - Programs 45-01-01 or 45-01-14 cannot be set to the Department Group of the UCB.
  - Mobile Extension and UCB (Unified Communications for Business) are not supported within the same system SV8100 **Version 4000 (4.01), UCB 5.0 SP4**, and **TSP 3.03 or lower**.
  - Mobile Extension and UCB are supported within the same system. SV8100 **Version 5000, UCB 5.1**, and **TSP 4.00 or higher** required.
  - When using Call Forward Both Ring (twinning) calls will not forward back to the UCB VM.
  - CAP keys over 999 are not supported on the phones when using UCB.
  - Hot Keypad is not supported when using UCB.
  - Boss/Secretary scenario (same Virtual on multiple phones) is not supported.
  - UCB cannot use Virtual Extensions for making outbound calls.
  - Message Waiting Lights can not be set for Virtual Extension mailboxes.

- Trunk Keys are not supported on Phones when using UCB.
- UCB ports and phones must be in the same Park Group.
- Application keys have to be from 1~32. SV8100 **Version 5000**, **UCB 5.1**, and **TSP 4.00 or higher** required.
- When UCB is in a K-CCIS network, agents cannot be on a remote system.
- In systems that have migrated from the UX5000 to the SV8100 and utilize UX5000 phones, Program 20-02-23 must be set to 0 (Original mode) and Program 15-02-53 for each phone must be set to 1 (CTI Special).

## Call Processing

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### Description

#### Abandoned Call Search

Abandoned incoming calls are not connected to agent positions. The system removes them from the queue on trunks that provide calling party disconnect supervision. Q-Reports can be run to provide details of queue abandonment including time of arrival, wait time and (subject to trunk type and telco services provided) Caller Line Identification (CLI/ANI).

#### Call Transfer to ACD Queue

Trunk calls that terminate to a normal station, ACD agent, or supervisor can be transferred to an ACD queue. Calls must be blind transferred to the queue (the transferring party cannot wait with the caller on line and announce the caller). In some cases, transferred calls may create an extra call record; to ensure accuracy of reporting, the transfer timer or minimum abandon timer must be configured in the Administrator.

#### Queuing

When no agents are available, all incoming calls for ACD queues are placed in the queue that provides first in/first out call processing. This can be overridden (higher or lower priority) based on either customer PIN entry or ANI/CLI recognition. UCB skills-based routing (SBR) allows an agent to take calls from any queue; each queue is defined with a relative priority that can escalate over time. Unlike many ACD systems, UCB does not escalate caller priority by moving calls from one queue to another; instead more agents become available to answer the call as it gets older. Reporting is based on the one queue.

#### Pilot Numbers

A system-programmed pilot number is the entry point for callers to an ACD queue. The Pilot number corresponds to a virtual extension in the SV8100 system. Each Queue has an individual virtual extension.

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## Conditions

### General:

- Calls are answered first in/first out unless specifically identified for higher or lower priority.
- Calls are distributed to the longest idle agent or according to the priority level assigned to an agent.
- When an ACD agent does not answer a call after a programmed time, the call is pulled back to the front of the queue and offered to the next available agent.
- UCB uses a weekly schedule to determine the queue mode. Queue modes determine the initial action to be taken for the call. Each queue is programmed typically for different modes: for day and night, team meetings, or emergencies (to allow for building evacuation, drills, or other such activities). Queue modes allow Auto Attendants, Greeting Announcements, Customer PIN queries, Q-Callback (callers are prompted to leave a message and telephone number that is treated as a virtual call), IVR (optional), Greet and Transfer, or redirect to an internal extension number (after hours mailbox). Call Center supervisors can change the queue mode in real time to reflect current activity.
- Maximum programming assignments for ACD queues and agents are listed below:
  - 9999 Agent and Supervisor IDs can be assigned.
  - 9999 Agents and Supervisors can be assigned to one Queue.
- The UCB schedule can be programmed per queue to automatically change mode for individual holidays or entire date ranges such as New Year holiday, state holidays, and Yom Kippur. These holidays can be programmed years in advance and viewed by the administrator using the GUI tool.
- SIP Peer to Peer is not supported.

### Restrictions:

- For multiline terminals, direct trunk appearances of CO lines are not supported system wide. Multiline terminals must have a Call Appearance (CAP) key assigned to answer the calls.
- For the following UCB functionality, the extension must be monitored by the UCB system: Logging into queues, advanced UCB/Q-Desktop telephone control features, or display of extension real-time status regardless of login. During this time UCB takes over control of the softkeys, and softkey interaction is not supported.

## Agent and Supervisor Functions

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### Description

#### Assistance

During an ACD queue call, an agent can click a button in the Q-Desktop application to request supervisor assistance (Visual and Audio alert to supervisor running Q-Desktop).

#### Break Mode

Using Q-Desktop, an agent can sign out of ACD mode for a break without logging off. The agent can choose a predefined break reason or build a custom reason (depending on agent permissions).

#### Work Mode

An agent can be put in momentary Worktime to process the previous call. This can be done automatically after the previous call for a programmed time or manually entered/ended using a Q-Desktop button. During this time, queue calls are not presented. Each queue can have a Worktime Override set so that when too many callers are waiting in queue, the agent is automatically denied after call Worktime.

#### Logon/Logoff

An agent can log on or off using the Q-Desktop application. Operating statistics are collected until the agent logs off. Agent hot seating is supported because UCB tracks agent skill profile and statistics against the agent logon ID instead of the station number. When hot seating is not required, the agent extension can be set to also log non-queue activity when logged on and report inbound/outbound calls for the agent. This feature requires that the always monitor option be selected against the agent extension.

#### Non-ACD Call

An agent or supervisor can receive a transferred call or a direct trunk call (e.g., Day/Night Ringing, DIT, DID, or Tie line call). Transferred ACD calls from another agent, or ACD queue calls when the caller is placed on hold and subsequently picked up by another agent are considered non-ACD calls.

#### Headset Answer/Release

An agent using a headset can press a programmed Headset ON/Off Line Key to answer or release an ACD queue call; UCB can be set to activate this key automatically for queue calls delivered to the agent.

#### Headset Volume Control

An agent can control the volume of the headset independent of the volume of the handset.



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## Monitoring (Barge-In)

The supervisor can monitor agent calls using a key operation on the supervisor terminal.

### Conditions

#### General:

- When a call is transferred to the ACD Pilot number using a call appearance key, the LED for that key remains on until the UCB answers the call in typically 1~5 seconds depending on the traffic volume.
- Call forward and DND do not affect calls offered from UCB. An agent with these functions set is still delivered a queue call.
- A default alert tone (that can be disabled in system programming) is provided for Barge-In monitoring.
- An agent in an ACD queue can log out to prevent receiving ACD calls. The station user can then originate calls or receive calls directed to the station number but cannot receive calls from the ACD queue.
- An agent can log on/off from the telephone using the UCB Analog Login feature. The agent dials the analog login number and is answered and prompted for the Agent login ID.

#### Restrictions:

- Incoming ACD queue calls cannot be received when the agent is on break; a queue depth parameter allows calls to deliver through Worktime when callers have been waiting longer than the prescribed threshold.
- When an ACD queue call is being offered to an agent and the agent receives a non-ACD call, the queue call is recalled and offered to the next available agent.
- SLT, SIP DECT, and third-party SIP phones can not be agents.

## Announcement Function

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### Description

There are no Default announcements, Progress announcements, or Position in Queue announcements for the UCB. Each announcement can be recorded either using the Administrator application audio editor with audio recorded from the telephone or PC microphone or by importing it from .WAV or .VOX files. Optimum recording settings for studio recordings are available in the online help. Each announcement can be used by any queue. Each announcement can be edited using the Administrator GUI .WAV editor to delete or paste audio content. All announcements are stored in the UCB internal database.

## Conditions

### General:

- When all agents in the ACD queue are busy, the caller waits in queue until an agent becomes available. In addition to MOH, the caller can receive Welcome and Please Hold progress announcements that can include Position in Queue and Estimated Time to Answer.
- Each caller hears every announcement from the beginning; an optional system-wide setting allows callers hearing delay messages to be interrupted and delivered to an agent when one becomes available during a queue progress announcement.

### Restrictions

- When all UCB ports are busy, the caller continues to hear ringback or MOH until a UCB port becomes available. The number of licensed Q-Announce ports determines the number of available ports. UCB exception reporting allows auditing of how often callers had to wait for an announcement port to become available.
- A maximum of 64 trunks can be queued up waiting for agents at one time.

## Voicemail Function

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### Description

User mailboxes are assigned to a mailbox class that defines a maximum number of new, saved, and deleted messages that the mailbox can contain and the number of days before purging each type of message.

There are Company and User mailboxes. The company mailbox defines the main greeting, company schedule, and available default one touch keys. User mailboxes are for individuals and can have customized settings that can be changed anytime from the Administrator GUI, user computer desktop, or the telephone interface.

### Profiles

Mailboxes can be configured with several different User Profiles. The Profile defines the greeting to be played to callers, available one touch keys, and whether or not it sets the user's telephone to Call Forward – All Call to the telephone voicemail. The mailbox can then be scheduled to follow different profiles at different times of day. Mailboxes can also be configured with Caller Profiles that define the greeting to be played for specific callers based on Caller ID. These specific callers can be greeted with a different greeting and different one touch options.

## Distribution Lists

Personal or system distribution lists can be defined to send or forward messages to a group of people.

## Schedule

Based on profile settings, the company and user mail boxes can be scheduled to follow a different profile at different times on different days (e.g., on holidays callers hear a different greeting and are offered different one touch options).

## One Touch Keys

One touch keys can be assigned in the company and user mailboxes. The system decides what to do when a certain key is pressed based on the following order:

1. When the caller is in a user mailbox and presses a one touch key, the system does what is defined in the currently active user profile.
2. When nothing is defined there, the system does what is defined in the mailbox default one-touch keys.
3. When nothing is defined there, the system does what is defined in the company mailbox currently active profile.
4. When nothing is defined there, the system does what is defined in the company mailbox default one-touch keys.

## Conditions

### General:

- To access the UCB Voicemail, the caller dials the Voice Messaging Pilot number.
- Unheard and saved voicemails are deleted when they exceed the number of days before purging messages defined in the mailbox profile.
- Mailbox users can access and recover deleted voicemail messages when the message has less than the number of days before purge defined in the user mailbox class. The Access deleted messages option is in the Mailbox Options.
- The PIN for mailbox login is the same as the agent PIN when logging into the Desktop application.
- Message Waiting lights to Single Line and SIP phones are not supported.

### Restrictions:

- The Call Forward – All Call option for a mailbox profile automatically sets or cancels the forwarding of a telephone. It sets or cancels forwarding when the telephone is set to Always Monitor in the UCB database.

- The Call Forward – All Call option for a mailbox profile automatically sets or cancels the forwarding of a call.

## InUCB Blade

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### Description

InUCB is a Server Blade (CD-SVRU) with the UCB (Unified Communication for Business) installed with reduced capacities and functionalities. The CD-SVRU blade can be installed in any vacant slot within the SV8100. SV8100 **Version 5000, UCB 5.1, and TSP 4.00 or higher** software required.



*Installation of unauthorized software on the InUCB Blade will void the warranty.*

### Conditions

#### General:

- **UCB 6.2 or higher** is not supported on InUCB.
- InUCB can be migrated to an external UCB.
- Executive Conference is not supported with InUCB.
- The IP address for the InUCB is provided by the OS (Embedded XP) on the Blade and does not follow SV8100 system programming (Program 10-55-01).
- Locally provided Keyboard, Monitor and Mouse will be required for initial setup of the InUCB IP Address.
- Locally provided Keyboard, Monitor and Mouse can be used for Setup and Administration of InUCB (OS and UCB Application).
- InUCB has the same Service Conditions and Restrictions as UCB on an External Server.
- InUCB has reduced capacities and functionalities compared to UCB on an External Server. Refer to tables below.

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## InUCB Supported Features

### Networking

Function Name	Description	Supported (Yes/No)
Networked Queuing	Bi-Directional Mirror Queues	No
	One-to-One Mirror Queues	No
	Many-to-One Mirror Queues	No
	Routing to Longest Idle Agent (Round Robin Delivery)	No

### PBX

Function Name	Description	Supported (Yes/No)
Lines	Analog Line	Yes
	PSII Remote	N/A
	<i>D<sup>term</sup></i> Functions	Yes
	Trunk	Yes
	Line Appearance	No
	Dynamic Monitoring	No
	Tenant	No
	Default UCD Agent	No

### Phone

Function Name	Description	Supported (Yes/No)
Message Waiting Light		Yes

Function Name	Description	Supported (Yes/No)
Keys	Profile	Yes
	Call Voicemail	Yes
	Voicemail Transfer	Yes
	Redirect to Voicemail	Yes
	Voicemail Transfer	Yes
	Record Conversation	Yes
	Login/Logout	Yes
	Select Break Type	No
	Enter Break Duration	Yes
	Enter Worktime	Yes
	Callback Wrap-up	Yes
	Demand Call	Yes
	Enter Worktime	Yes
	Login/Logout	Yes (20) <sup>1</sup>
	Supervisor: Remote Login	Yes
	Supervisor: Mode Override	Yes
Keys	Supervisor: Set (predefined) Emergency Mode	Yes
	Supervisor: Monitor Agent	Yes
	Supervisor: Record Monitored Agent Conversation	No

Function Name	Description	Supported (Yes/No)
LCD Display	CLI	Yes
	Caller Name	No
	Agent First Name	Yes
	Display Mailboxes Sharing the Phone Status	No
	Display Number of New Messages	Yes <sup>2</sup>
	Display Number of Urgent Messages	Yes
	Display Login State	Yes
	Display Agent ID	Yes
	Display Class	Yes
	Display Break Status	Yes
	Display Queue Name	Yes
	Display Number of Calls Waiting	Yes
	Display Wait Time of Longest Call	Yes
	Display Wait Time Delivery Message	Yes
	Display Queue Name Delivery Message	Yes
	Display Query Information	Yes
Display Callback Number	Yes	
LCD Display	Use Message Key	No (NEC Phone)
LCD Display	Use Soft Keys	No (NEC Phone)

<sup>1</sup> = Maximum configuration allows 20 agents, including 20 agents running Agent Desktop or via the telephone.

<sup>2</sup> = Only displays one mailbox at a time.

## Presence Buttons

Function Name	Description	Supported (Yes/No)
Presence Display	Display Phone Status	Yes
	Display Call Forward Status	Yes
Presence Actions	Send Message to Digital Phone	Yes <sup>1</sup>
	Park and Page	No
	Set/Cancel Call Forward Status of Remote Extension	Yes

<sup>1</sup> = Cannot send a text message to an SV8100 phone while a call is offering at the phone.

## Queues

Function Name	Description	Supported (Yes/No)
Limits	System Wide Maximum	(256)
Display	View Status of Selected Monitored Extensions	Yes
	Enter Resolution Codes Through Phone	Yes <sup>1</sup>
	Indial Modifier Name	Yes
Snow Day Mode <sup>2</sup>	Remote Interactive TUI Activation	Yes
	Record Announcements for System Remotely	Yes
Call Delivery	Mode Transfer Call to External Number	Yes
	Busy Tone Mode	Yes
	Mode Transfer to Voice Messaging	Yes
	Allow Networking	No
Administration	Change Mode via Digital Phone	Yes

<sup>1</sup> = If a wrapup is performed while the call is still connected, the caller hears the DTMF tones.

<sup>2</sup> = Emergency mode is set from *D<sup>term</sup>* function key.

## WAV Editor

Function Name	Description	Supported (Yes/No)
WAV Editor	Play	Yes
	Record	Yes

## Multimedia Queuing Modules

Function Name	Description	Supported (Yes/No)
Activity Queuing		No
Email Queuing	Exchange	No
	Desktop SMTP	No
Fax Messaging	Send/Resend Faxes using Print to Fax via Microsoft Fax Console	No
	Cancel/Delete Transmitting Faxes	No
Fax Queuing	Inbound Fax Queuing and Outbound Reply	No



Function Name	Description	Supported (Yes/No)
Outdial Queuing	Outbound Campaigns	No
Web Callback Queuing		No
Web Chat Queuing		No

### All Other Modules and Applications

Function Name	Description	Supported (Yes/No)
Core Client Applications	User Clients: Executive Desktop, Executive Insight, Dashboard	Yes (100 total) <sup>1</sup>
	Agent Client: Agent Desktop	Yes (20)
	Operator Client: Console	Yes (3)
	Administrative Clients: Administrator, Application Manager, Reports	Yes
Alert Notification		Yes
Autodial	Uses IVR	No
Callback Queuing		Yes (1)
Custom Reporting		No
Executive Conference	Licensed Audio Conference Module	No
Mobility	Intelligent Mobility: Call Handoff and Retrieval	No
	Intelligent Mobility: One Mailbox	No
	Executive Mobile	No
	Mobility Call Screening <sup>2</sup>	No
Post-Call Survey		No
SDK, PA Applications	Software Development Kit and Associated Process Automation Applications such as CRM Integration, Web Browser pop, Salesforce plug-in, etc.	No (Not Currently)
Redundancy Monitor		No
Remote Voiceport		No

Function Name	Description	Supported (Yes/No)
Unified Messaging	Exchange (Includes mailbox synchronization and Calendar integration).	Yes (100)
	SMTP Notification (no license required).	Yes (200)

<sup>1</sup> = Agent Desktops take away from the 100 Desktops limit.

<sup>2</sup> = Requires Executive Mobile.


## Default Setting

None

## System Availability

### Terminals

All Terminals (except DTU/DTP style terminals)

 *SLT, SIP DECT and third Party SIP phones can not be agents.*

### Required Component(s)

- Local PC for each agent (for desktop applications)
- A server PC loaded with the UCB application

**-OR-**

SV8100 InUCB Blade Version 5000 or higher

## Related Features

Call Forwarding

Mobile Extension


Park

Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.



- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	<b>CD-CP00-US Network Setup – IP Address</b>	Assign the IP Address.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-02	CD-CP00-US Network Setup – Subnet Mask	The setting of Subnet Mask is invalid when all Host Addresses are 0. If the network section is: 0, 127, 128.0, 191.255, 192.0.0, 223.255.255 The setting of Subnet Mask is invalid.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.255.0)	✓		
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-20-01	LAN Setup for External Equipment – TCP Port	Define the TCP port (0~65535) when communicating to the CTI server (type 1).	0~65535 default: External Device 1 (CTI Server) = 0 External Device 2 (ACD MIS) = 4000 External Device 5 (SMDR Output) = 0 External Device 6 (DIM Output) = 0 External Device 11 (O&M Server) = 8010 External Device 12 (Traffic Report Output) = 0 External Device 13 (Room Data Output for Hotel Service ) = 0	✓		
10-26-01	IP System Operation Setup – Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.  Set Peer to Peer to 0 when using UCB.	0 = Off 1 = On (default = 1)	✓		
10-26-03	IP System Operation Setup – SIP Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.  Set Peer to Peer to 0 when using UCB.	0 = Off 1 = On (default = 1)	✓		
11-02-01	Extension Numbering	Assign extension numbers to extension ports. The telephone programming identity follows the port number – not the extension number.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513	✓		
11-04-01	Virtual Extension Numbering	Assign virtual extension numbers.	Up to eight digits 1 201 2 202 3 203 ~ ~ 99 299 100 3601 ~ ~ 256 3857	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign a Department Group pilot number for the Voice Mail (eight digits maximum). The extensions are assigned to the group in Program 16-02-01.	Up to eight digits (default not assigned)	✓		
14-02-23	<b>Analog Trunk Data Setup – Caller ID Receiving Method</b>	Rings extension before receiving Caller ID (1) or after receiving Caller ID (0).	0 = Wait Caller ID 1 = Immediate Ring (default = 1)		✓	
15-02-53	<b>Multiline Telephone Basic Data Setup – UCB</b>	Set to CTI Special (1) for UX5000 terminals to function with UCB.	0 = Original 1 = CTI Special (default = 0)		✓	
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		
15-03-09	<b>Single Line Telephone Basic Data Setup – Caller ID Function - For External Module</b>	Enable/Disable the Caller ID FSK signal for an external Caller ID Module or a 3 <sup>rd</sup> -Party vendor telephone with Caller ID display. If voice mail is used, set this to 0 for the system integration code to be correct.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	
15-05-18	<b>IP Telephone Terminal Basic Data Setup – IP Duplication Allowed Group</b>	If an adapter has one IP address coming into it but multiple extensions off of it, assign all the extensions to a group so the CPU knows that the one IP address is assigned to multiple extensions.	0 = Not Used 1 = Group 1 2 = Group 2 3 = Group 3 4 = Group 4 5 = Group 5 6 = Group 6 7 = Group 7 8 = Group 8 9 = Group 9 10 = Group 10 (default = 0)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a function key as an Account Code key (code 50). Use this key instead of the dial pad to enter the * before and after the Account Code. ICM key required. CAP, Headset and Application keys are optional. CO keys are not supported.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Assign a name to the Extension (Department) Groups.	Maximum 12 characters (default not assigned)	✓		
16-01-03	<b>Department Group Basic Data Setup – Department Routing When Busy (Auto Step Call)</b>	Set how the system routes an Intercom call to a busy Department Group member. The caller can hear busy tone (0) or overflow to the first available Department Group member (1). This option is for Intercom calls to an extension, not a pilot number. Needs to be set to circular.	0 = Normal (Intercom caller to busy department member hears busy) 1 = Circular (Intercom callers to busy department member routes to idle member) (default = 0)	✓		
16-01-04	<b>Department Group Basic Data Setup – Hunting Mode</b>	Set the action taken when a call reaches the last extension of the department group. Needs to be set to circular.	0 = Last extension is called and hunting is stopped 1 = Circular (default = 0)	✓		
16-01-09	<b>Department Group Basic Data Setup – Department Hunting No Answer Time</b>	Set the time a call rings a Department Group extension before hunting occurs.	64800 (seconds) (default = 15)	✓		
16-01-10	<b>Department Group Basic Data Setup – Enhanced Hunt Type</b>	Set the type of hunting for each Extension (Department) Group. Needs to be set to Busy	0 = No queuing 1 = Hunting When Busy 2 = Hunting When Not Answered 3 = Hunting When Busy or No Answer (default = 0)	✓		
16-02-01	<b>Department Group Assignment for Extensions</b>	Set up the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in 23-02. Assign Virtual Route Extension into the UCB Department Group SV8100 <b>Version 5000, UCB 5.1 and TSP 4.00 or higher.</b> Assign the SIP extensions for Announce ports to the UCB Department Group SV8100 <b>Version 4000 (4.01), UCB 5.0 SP4 and TSP 3.03 or lower.</b>	Department Groups 1~64 Priority 1-999 Default = All extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-23	<b>System Options for Multiline Telephones – Phone Operation Mode</b>	Selects the Loop Key operation like the UX5000 terminal, or the CAP Key operation like the SV8100 terminal.  Set to 0 when using UCB.	0 = Original operation mode (CAP Key) 1 = UX5000 Special operation mode (Loop Key) (default = 0)		✓	
20-01-10	<b>System Options – Trunk Guard Timer</b>	The time the system waits to seize the next outside line after the system releases an outside line.	0~64800 (seconds) (default = 1) Set to 0	✓		
20-02-12	<b>System Options for Multiline Telephones – Forced Intercom Ring (ICM Call Type)</b>	Enable/Disable Forced Intercom Ringing. If enabled, incoming Intercom calls normally ring. If disabled, Intercom calls voice-announce.	0 = Disable (Voice) 1 = Enable (Signal) (default = 0)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign Class of Service (1~15) for extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension ports = Class 1	✓		
20-08-05	<b>Class of Service Options (Outgoing Call Service) – Dial Number Preview (Preset Dial)</b>	Turn Off or On extension user ability to use Dial Number Preview (SV8100 <b>Version 4000 (4.01)</b> , <b>UCB 5.0 SP4</b> and <b>TSP 3.03</b> or <b>lower</b> ).	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
20-08-09	<b>Class of Service Options (Outgoing Call Service) – Hotline/Extension Ringdown</b>	Turn Off or On Ringdown Extension for extensions with this COS.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-08-13	<b>Class of Service Options (Outgoing Call Service) – ISDN CLIP</b>	Determine if the ISDN calling line identity presentation and screening indicators are to be allowed.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-11-19	<b>Class of Service Options (Hold/Transfer Service) – Hold/Extended Park</b>	Determine if an extension Class of Service should either allow a normal or extended Park. (1 = Extended for Program 24-01-07).	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-10	<b>Class of Service Options (Supplementary Service) – Barge-In Monitor</b>	Enable the extension Barge-In as Speech or Monitor Mode.	0 = Speech 1 = Monitor (default = 0 for COS 1~15)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On an extension user ability to have other extensions Barge-In on calls.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-23-06	<b>System Options for CTI – 3rd Party CTI IP Address</b>	Read only program that displays the IP address of the currently connected 3rd Party CTI Server.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)		✓	
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type:</b>	Assign Call Forwarding Type and the destination numbers for each extension/virtual extension.	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)	✓		
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign CO Call Forwarding Destination for ring, all call and no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-03	<b>Call Forward Split Settings – Intercom Call Forwarding Destination for Both ring, All Call, No Answer</b>	Assign Intercom Call Forwarding Destination for ring, all call and no answer.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-04	<b>Call Forward Split Settings – CO Call Forwarding Busy Destination</b>	Assign CO Call Forwarding for busy destinations.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-05	<b>Call Forward Split Settings – Intercom Call Forwarding Busy Destination</b>	Assign Intercom Call Forwarding for busy destinations.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-06	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/ PBX for All Call, No Answer</b>	Assign Call Forwarding for CTX/ PBX all call, no answer destinations.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-09-07	<b>Call Forward Split Settings – Call Forwarding Destination for CTX/PBX for Busy</b>	Assign Call Forwarding destinations for busy CTX/PBX calls.	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
84-19-32	<b>SIP Extension IP CODEC Information Basic Setup – DTMF Relay Mode</b>	Define the DTMF Relay Mode to be RFC2833.	0 = Disable 1 = RFC2833 (default = 0)	✓		

## Operation

UCB provides a comprehensive suite of online help for end users, customer administrators, and call center supervisors. Refer to the product manuals for the core applications: Q-Control, Q-Reports, Q-Desktop and the supplementary products such as Q-Callback, Q-Chat, Q-IVR, Q-Outdial, and Voice Messaging for a more detailed review of specific functions. Alternately, refer to the online help for configuration information.

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## UM8000 Mail

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### Description

The UM8000 Mail voice mail system, using the UNIVERGE SV8100 system and a Local Area Network, provide Unified Messaging services for voice, fax and email messages with access at either the desktop PC or the telephone. Unified Messaging lets the PC control telephone calls and information about each inbound and outbound call.

Automated Attendant automatically answers the system incoming calls. After listening to a customized message, an outside caller can dial a system extension or use Voice Mail.

Integrated Voice Mail enhances the telephone system with the following features:

- Expanded Schedule, added in 11.5.0.54 software

 *New system language prompt sets may be required for new features. Download and install the appropriate language prompt set for your system.*

With previous software, the UM8000 Mail software version had three schedules (1-3) and each schedule had an A, B and C option. Starting with **Version 11.5.0.54 UM8000 Mail** software, a maximum of 99 custom schedules are available in addition to the three standard schedules. Each custom schedule can support a maximum of nine time intervals.

These schedules can be applied to Opening Boxes, Transaction Boxes and Voice Detect Boxes. You can also assign a supported box type to inherit its schedule from the previous box the call came from or from the voice mail port the call came in on. This flexibility allows for much more detailed scheduling of different groups within a system. The new Expanded Schedules provide the following:

- A maximum of 99 Custom Schedules.
- A maximum of nine time intervals per schedule.
- Each schedule can be set to follow or ignore holidays.
- The following box types can use custom schedules:
  - Opening Boxes
  - Transaction Boxes
  - Voice Detect Boxes
- Boxes can be configured to follow:
  - One of the three standard schedules.
  - A particular custom schedule.
  - Inherit their schedule from the previous box.
  - Inherit their schedule from the voice mail port the call came in on.
  - The All hours All Day schedule, this schedule is fixed to Day Mode.

Call Forwarding to Voice Mail

An extension user can forward their calls to Voice Mail. Once forwarded, calls to the extension connect to that extension mailbox. The caller can leave a message in the mailbox instead of calling back later. Forwarding can occur for all calls immediately, for unanswered calls or only when the extension is busy. When a user transfers a call to an extension forwarded to Voice Mail, the call waits for the Delayed Call Forwarding time before routing to the called extension mailbox. This gives the transferring party the option of retrieving the call instead of having it go directly to the mailbox.

 Leaving a Message

Voice Mail lets a multiline terminal extension user easily leave a message at an extension that is unanswered, busy or in Do Not Disturb. The caller presses their Voice Mail key to leave a message in the called extension mailbox. There is no need to call back later.

 Transferring to Voice Mail

By using Transfer to Voice Mail, a multiline terminal extension user can Transfer a call to their own or a co-worker's mailbox. After the Transfer goes through, the caller can leave a message in the mailbox.

 Live Record

While on a CO/Trunk call, an extension user can have Voice Mail record the conversation. The multiline terminal user presses the Voice Mail Record key; the single line telephone user dials a code. Once recorded, the Voice Messaging System stores the conversation as a new message in the user's mailbox. After calling their mailbox, a user can save, edit or delete the recorded conversation. The Live Record feature is supported only for External CO/Trunk calls. Internal/Intercom calls are not supported.

 Live Monitor

A multiline terminal user can have their idle extension emulate a personal answering machine. This lets InMail screen their calls, just like their answering machine at home. If activated, the extension incoming calls route to the user's subscriber mailbox. The Live Monitor feature is supported for external and internal calls. After the mailbox answers, the user's phone changes to show that a caller is leaving a message, no audible tone is provided. The multiline terminal user can then:

- Choose **Exit** to let the call go through to their mailbox.
- Choose **ANSW** to intercept the call before it goes to their mailbox.
- Choose **MON** to monitor the message being left by the caller.

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Voice Mail Overflow

If Voice Mail automatically answers trunks, Voice Mail Overflow can reroute those trunks to other extensions when all Voice Mail ports do not answer or, with certain software, are busy. During periods of high traffic, this prevents the outside calls from ringing Voice Mail for an inordinate amount of time. There are two types of Voice Mail Overflow: Immediate and Delayed. With immediate overflow, calls immediately reroute to other extensions when all Voice Mail ports do not answer or, with certain software, are busy. With delayed overflow, calls reroute after a preset interval. Without any type of overflow, the outside calls ring Voice Mail until a port becomes available or the outside caller hangs up.

Voice Mail Caller ID

The Voice Mail can use ANI/DNIS information to identify the outside caller that left a message in a user's mailbox. When the message recipient dials 0 or presses the CID softkey while listening to a message, they hear the outside telephone number of the message sender.

The message recipient can also return the call from their mailbox if allowed by system programming by pressing the CALL softkey or #,0. Press **Speaker** to hang up.

Quick Transfer to Voice Mail

A station user transferring a call can transfer the call to the called party voice mail box after an internal station number is dialed while performing a screened transfer, or during intercom calls. The user simply calls the extension and then dials the quick transfer dial access code (default = 8) and hangs up. The call is placed in the mailbox and the caller hears the personal greeting.

### **Voice Mail Queuing**

When accessing the voice mail, the system provides a voice mail queue. If all the voice mail ports are busy, any call trying to get to the voice mail is placed in queue. As the voice mail ports become available, the calls are connected to the voice mail in the order in which they were received.

As the Voice Mail Queue follows Department Hunting programming, the queue can hold a maximum of 10 calls. If the queue is full or if the voice mail ports are not assigned to a Department Group, the calls are handled as though there were no voice mail queuing feature enabled. The calls either access voice mail if a port is available or they receive a busy signal.

The Voice Mail Queuing feature does not work with the Conversation Record feature.

### **Message Key will Operate as Voice Mail Key**

The system enhances a telephone Message key function when connected to a system which has voice mail installed. When an extension receives a voice mail, the Message key can be used to check the number of messages in voice mail, or call the voice mail to listen to the messages. If no Voice Mail Programmable Function Key is defined (Program 15-07-01, code 77), the telephone Message Waiting LED flashes to indicate new messages.

This option is not available with a networked voice mail – the voice mail must be local.

## Directory Dialing

Directory Dialing allows an Automated Attendant caller to reach an extension by dialing the first few letters in the extension user's name. With Directory Dialing, the caller does not have to remember the extension number of the person they wish to reach – just their name. Here is how Directory Dialing works:

1. When the Automated Attendant answers, it sends the call to the Main Greeting box. The caller must dial a digit to access Directory Dialing.
2. The Directory Dialing Mailbox plays the Directory Dialing Message which asks the caller to dial letters for the name of the person they wish to reach.
3. The caller dials the first three letters for the person's name. They can dial by first name or last name, depending on how the Directory Dialing Message was recorded and the Directory Dialing Mailbox was set up.
4. Voice Mail searches the list of programmed extension names for a match of the caller-entered letters.
5. The caller dials the digit for the extension they wish to reach, and Voice Mail sends the call to that extension. The call is sent as a Screened or Unscreened transfer, depending on programming.

For callers to use Directory Dialing, the system must have a name programmed for each extension. Each extension should also have a name recorded in their Subscriber Mailbox. In addition, each extension used by Directory Dialing must be installed.

## Optional UM8000 Mail TeLANophy Module Features

### Text-to-Speech Using Nuance® RealSpeak™

The UM8000 Text-to-Speech (TTS) package enables subscribers to have 24-hour, two-way access to Microsoft Exchange, Novell GroupWise, or Lotus Notes Email messages without a laptop or modem connection. Subscribers can manage email messages using a telephone. Subscribers can listen to any plain text email message using TTS conversion and record a reply that is sent as a voice mail message or an email message with a WAV file attachment. Subscribers use touchtone keypads over a phone to reply, redirect, save and delete email messages, making subscribers more efficient and accessible when they are away from the office.

### ViewMail® with Live Record Module

All voice and fax messages are visible at a glance on the PC screen and can be sorted in any order. An intuitive Microsoft® Windows interface shows the sender name, subject, and the date and time messages were sent so the user can quickly prioritize them and respond immediately.



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 ViewFax®

UM8000 Mail software **Version 11.1.1.28 or higher** is required to support the fax features. The fax feature works in ViewMail (VM) and View Mail for Microsoft Messaging (VMM) to display faxes on screen and lets you send them to any printer. When a fax is received, a fax icon is displayed next to the message in VM/VMM. Double click to open the message, and press the play button to listen to any voice annotation sent with the fax. Fax ports are built-in on the CD-VM00 based UM8000 Mail and are activated as a system licensing option. Fax on Demand and Fax Server functions are not supported.

- Up to four ports of fax are supported when using the “Full” version of UM8000 Mail on 2G or 8G drives.
- Up to two ports of fax are supported when using the “Lite” version of UM8000 on a 2G drive.

 ViewCall® Plus

All inbound and outbound calls can be controlled from your PC. Outbound call control requires a TAPI adaptor on the user telephone. By managing calls on the PC instead of the telephone, ViewCall Plus lets you communicate more easily with people inside and outside the office. Three integrated windows are provided to control telephone calls, log all telephone activity, and manage data about each call. With a click of the mouse you can take a call, ask a caller to hold, route the call to another extension, or send the call to voice mail.

 Hospitality Package

The Hospitality package is used specifically by hotels and resorts to provide guests with personal, accurate, and timely messages. Features include personal greetings, security codes, guest directory, and wake up calls. This feature also supports Property Management System (PMS) integration.

 Additional Hospitality Languages

See Multilingual support below for list of supported languages. The Hospitality Package supports five languages at default. Additional languages can be purchased (up to the limit of 18).

 Networking

This allows the networking of multiple Active Net (AMIS Only) and PlusNet compatible voice mails systems.

 Multilingual Support

Add Languages, only United States English is on the drive at default. New languages can be added in the field from the support CD. Additional languages can be added in the field with an upgrade code.

Both the UM8000 and UM8000 Lite systems support three languages (American English, Mexican Spanish and Canadian French) by default. Both systems can support a maximum of 20 active languages. However, if all language prompts are loaded, recording time is severely reduced. For an installation requiring 20 languages, 8G or higher media is recommended.

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### Supported Languages:

ar = Argentinean	ja = Japanese (hospitality only)
au = Australian English	la = Latin America Spanish
ca = Catalan Spanish	md = Mandarin Chinese
ct = Cantonese Chinese	nl = Dutch
de = German	nz = New Zealand English
dk = Danish	pi = Iberian Portuguese
ed = Madrid Spanish	pt = Portuguese
es = Mexican Spanish	se = Swedish
fc = Canadian French	uk = UK English
fr = Parisian French	us = US English
he = Hebrew	ru = Russian
it = Italian	

### EMail Integration

With email integration, subscribers can forward all voice messages to their email inbox automatically and forward all incoming faxes to their email inbox as well. Email integration provides users with 24-hour access to email from any touchtone phone. Email integration uses standard protocols to access, read and send email messages on the voice messaging system.

**Warning:** *When voice messages forwarded to an email address using email integration are deleted from the user mailbox the following features are not supported: Pager Notification, Message Waiting Indication.*

The following email protocols are supported:

#### IMAP

Internet Message Access Protocol (IMAP) allows the voice messaging system to access an email inbox. Using IMAP, the voice messaging system can obtain email message headers and body information from a variety of email users. This information is then delivered to the text-to-speech engine to convert the text into audio for playback.

#### MIME

Multipurpose Internet Mail Extension (MIME), ensures that the voice messaging system can read the message header and body information. Multipart MIME messages enable the email system to send enhanced versions of the message for messaging clients such as Lotus Notes or Microsoft Outlook. In addition, multipart MIME messages contain plain text messages that can be read to subscribers over the phone.



***If HTML tags are heard when listening to an email message by phone, the system skips the message. Messages encoded only in HTML are not supported by text-to-speech at this time. Messages containing HTML must be encoded using multipart MIME for text-to-speech to work properly.***

- SMTP

Simple Mail Transport Protocol (SMTP), sends outgoing email messages to email boxes using the voice messaging system. The Forward voice mail to the email system, Forward faxes to the email system, Receive email notification of new fax/voice mail and Reply to email messages via voice mail features use SMTP to send outgoing messages. SMTP can also be configured to restrict the type of messages sent, such as only allowing SMTP mail to be sent to other users on the same domain. Refer to your Exchange, Domino, or GroupWise documentation, or consult your administrator on which settings work best for your organization.

## Conditions

- The Expanded Schedule feature has the following conditions:
  - Requires **Version 11.5.0.XX or higher** UM8000 Mail software.
  - A maximum of 99 Custom Schedules are supported.
  - A maximum of nine time intervals per custom schedule are supported to set multiple day or week and hour of day options.
  - If two time intervals within a customer schedule contradict each other the numerically lower time interval is followed.
- Constant Message Count requires SV8100 **Version 3000 or higher** software.
- Constant Message Count is displayed on a telephone's display until another activity needs the display (For instance, if a call is made or received on the telephone). To get the message count to display again, the telephone needs to receive a new voice mail message or call into the voice mailbox.
- The CD-VM00 supports two media sizes: 2G with 110 Hours of recording time and 8G with 550 Hours of recording time.
- Live Record does not work for monitored calls, conference calls or internal calls.
- Audible tones are **not** provided to the multiline terminal when using Live Monitor, only visual notifications are provided for incoming monitored calls.
- The UM8000 Lite is only supported on a 2G drive.
- Up to two ports of fax are supported when using the "Lite" version of UM8000.
- Up to four ports of fax are supported when using the "Full" version of UM8000 on 2G or 8G drives.
- Fax on demand is not supported.
- Fax server is not supported.
- UM8000 Mail software **Version 11.1.1.28 or higher** is required to support fax features.
- UM8000 Mail software **Version 11.2.1.3 or higher** is required to support the AMIS/PlusNet (Networking) and text-to-speech (TTS) features.

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- Up to two ports of TTS are supported when using the "Full" version of UM8000 on 2G or 8G drives.
  - The TTS feature is NOT supported when using the "Lite" version of UM8000.
  - The Networking feature (AMIS/PlusNet) is supported when using the "Full" version of UM8000 on 2G or 8G drives.
  - The Networking feature (AMIS/PlusNet) is NOT supported when using the "Lite" version of UM8000.
  - The UM8000 supports up to 20 languages and 10 Hospitality languages.
  - Caller ID Return Call may require ARS programming to properly route outgoing calls.
  - Updating the system time also updates the UM8000 Mail time.
  - When setting up hunt group priorities in 16-02-01 the VM ports must be assigned as port 1 = priority 1, port 2 = priority 2 and so on. Failure to do this causes the VM to answer but no audio is heard.
  - The Live Record feature is supported only for External CO/Trunk calls. Internal/Intercom calls are not supported.
  - The Live Record feature is supported only for Multiline telephones. Single Line Telephones do not support this feature.
  - The following databases can be migrated to the UM8000:
    - ❑ OS/2 based EliteMail CTI
    - ❑ DOS based EliteMail Q51731 or higher
    - ❑ Linux based EliteMail CTI LX
    - ❑ Linux based EliteMail CTI LX Lite
  - Voice messages forwarded to an email address using email integration can be set to be automatically deleted, saved as new or saved as old, in a user's mailbox.
  - When a mailbox is set to delete or save as old voice messages forwarded to an email address using email integration, the following features are not supported: Pager Notification, Message Waiting Indication.
  - The UM8000 Mail can be configured for 4, 8, 12, or 16 ports.
  - Email integration refers to forwarding voice messages to an email server and does not apply to the client applications ViewMail®, VMM, VMG and VML.
  - The operating system is Linux.
  - Extension numbers cannot start with 0 or 9.
  - Extension numbers cannot include \* or #.
  - VM8000 InMail and UM8000 Mail cannot be used at the same time in the same system.
  - Ring Group calls do not follow extension call forwarding to voice mail.
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- Caller ID information is passed from the voice mail to an extension for pre-answer display on an unscreened transfer from voice mail.
- Off-premise notification and external extensions require access to outside lines.
- To have the Voice Mail Automated Attendant answer a trunk, program the trunk as a DIL to the Voice Mail pilot.
- When the voice mail places a call on hold, it uses Group Hold. Any line appearances for the trunk shows the hold flash rate, however, users cannot pick up these calls (a busy signal is heard).
- If the Message Waiting LED is also used for Message Waiting Indication, and there are both voice mail messages and Message Wait indications, the color set for Message Wait overrides the color used for voice mail indications (red).
- During a Conversation Record session, DTMF digits are not transmitted. If the End softkey is used to stop the Conversation Record, DTMF to the outside party is restored. If you press the Conversation Record button to end the recording DTMF is not restored.
- Stutter Dial Tone is supported to Single Line Telephones (SLTs) for Voice Mail Message Waiting.
- When a Department Group is assigned as the VM Department Group in Program 45-01-01 it works only as priority mode no matter what Program 16-01-02 is set to for that Department.
- In SV8100 software **Version 2000 or lower** the green LED on a DSS console will activate, signaling the station has a voice mail even if Program 30-05-21 is set to 0.
- A modem for remote maintenance is built into the CD-VM00 blade.
- When the system has the Hotel Motel license (0007), the Message Waiting Indication (MWI) on a DSS Console for an extension is a Green LED. Without the Hotel Motel license the MWI on a DSS Console for an extension is a Red LED.
- UCB is not supported in conjunction with UM8000.

## Default Settings

Disabled

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## System Availability

### Terminals

All Terminals

## Required Component(s)

- CD-VM00
- UM8000 Mail Media Kit
- CPU License

## Required Software

When using ViewMail for Microsoft Messaging (VMM) with Office XP/2002 or Office 2000 you must have at least Service Pack 3 for Office installed prior to installing VMM. Failure to do so requires removing and installing the entire Office software suite again. Microsoft Outlook needs Corporate or Workgroup version.

The following versions of Microsoft Outlook work with VMM:

- Outlook 2000 with Service Pack 3
- Outlook 2002 (XP) with Service Pack 3
- Outlook 2003 with Service Pack 2
- Outlook 2007 (Vista 32-bit only)
- Outlook 2007 (XP)
- Outlook 2010 (Windows 7 32- and 64-bit)

 *Only 32-bit email clients are supported.*

The supported TeLANophy applications include:

- ViewMail
- ViewMail for Microsoft Messaging (VMM)
- ViewCall Plus
- ViewMail for GroupWise (VMG)
- ViewMail for Lotus Notes (VML)
- ViewFax (VF)

These TeLANophy applications work on the following operating systems:

- Windows XP
- Windows Vista (32-bit only)
- Windows 7 (32- and 64-bit)

## **Related Features**

**Barge-In**

**Call Forwarding**

**Caller ID**

**Central Office Calls, Answering**

**Central Office Calls, Placing**

**Direct Inward Line (DIL)**

**Hold**

**Message Waiting**

**One-Touch Calling**


**Programmable Function Keys**

**Transfer**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.


- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Assign at least one circuit for DTMF reception (type 0 or 1). Use the following as a guide when allocating DTMF receivers: <ul style="list-style-type: none"> <li>○ In light traffic sites, allocate one DTMF receiver for every 10 devices that use them.</li> <li>○ In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.</li> </ul>	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available			✓
10-55-01	<b>Package Network Setup – IP Address</b>	Define the IP Address for the CD-ETIA.  <i>When the blade is deleted from the system using Program 90-05, the programming for the slot in 10-55 is set back to default.</i>	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.1.100)	✓		
10-55-03	<b>Package Network Setup – Main/ Add-on</b>	Set to 0 to distribute an IP Address to the blade.	0 = Main 1 = Add-on (default = 1)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-55-04	Package Network Setup – Sub Net Mask	Define the subnet mask for the CD-ETIA.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
10-55-05	Package Network Setup – Default Gateway	Define the default gateway for the CD-ETIA.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
11-07-01	Department Group Pilot Numbers – Dial	Assign a Department Group pilot number for the Voice Mail (eight digits maximum). The extensions are assigned to the group in Program 16-02-01.	Up to eight digits (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-22	<b>Basic Trunk Data Setup – Caller ID to Voice Mail</b>	Enable/Disable the system ability to send the Caller ID digits to voice mail.	Trunks 1~200 0 = Disable 1 = Enable (default = 0)	✓		
14-02-10	<b>Analog Trunk Data Setup – Caller ID</b>	Enable/Disable a trunk user ability to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-02-08	<b>Multiline Telephone Basic Data Setup – Automatic Handsfree</b>	Set whether pressing a key accesses a One-Touch Key or preselects the key.	0 = Preselect 1 = One-Touch (Automatic Handsfree) (default = 1)		✓	
15-02-26	<b>Multiline Telephone Basic Data Setup – MSG Key Operation Mode</b>	Determine whether an extension MSG key should function as a Message key or Voice Mail key. If set as a Message key, users can press the key to call the voice mail only when they have new messages.	0 = Message Key 1 = Voice Mail Key (default = 0)		✓	
15-02-28	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Color</b>	Determine whether an extension Message Waiting Lamp lights Green or Red when a message is received.	0 = Green 1 = Red (default = 1)		✓	
15-02-37	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Color</b>	Set up various message wait lamp cycle options for lamp color.	0 = Green 1 = Red (default = 1)		✓	
15-02-38	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Cycle</b>	Select the cycle method that the Large LED flashes when the extension has a VM Message Waiting set to the extension.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 3)		✓	
15-03-01	<b>Single Line Telephone Basic Data Setup – SLT Signaling Type</b>	For each UNIVERGE SV8100 voice mail extension, set this option to 1.	0 = DP 1 = DTMF (default = 1)		✓	
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-03-09	<b>Single Line Telephone Basic Data Setup – Caller ID Function - For External Module</b>	Enable/Disable the Caller IFD FSK signal for an external Caller ID Module or a 3 <sup>rd</sup> -Party vendor telephone with Caller ID display. If voice mail is used, set this to 0 for the system integration code to be correct.	0 = Disable (Off) 1 = Enable (On) (default = 0)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a Voice Mail key to an extension. You must enter the Voice Mail key code (code 77) followed by: <ul style="list-style-type: none"> <li>○ Your own extension number if you are setting up your own Voice Mail key.</li> <li>○ A virtual extension number if you are setting up a Message Center key for a virtual extension.</li> <li>○ A co-worker's extension number if you are setting up a Message Center key for an installed extension.</li> <li>○ An uninstalled extension number if you are setting up a Message Center key for an uninstalled extension.</li> <li>○ (Optional) Assign a Voice Mail Record key to an extension (code 78).</li> <li>○ (Optional) Assign a Personal Answering Machine Emulation key (code 16).</li> <li>○ (Optional) Use a Call Redirect key (49) to allow a user to transfer a call to another extension or voice mail without answering the call.</li> </ul>	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
16-02-01	<b>Department Group Assignment for Extensions</b>	Set the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in 23-02.  <i>When setting up hunt group priorities the VM ports must be assigned as port 1 = priority 1, port 2 = priority 2 and so on. Failure to do this causes the VM to answer but no audio is heard.</i>	Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-02-09	<b>System Options for MultiLine Telephones – Disconnect Supervision</b>	Enable/Disable disconnect supervision for the system trunks.	0 = Disable 1 = Enable (default = 1)			✓
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to the voice mail extensions. Use COS 14 for all time modes.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-11-01	<b>Class of Service Options (Hold/Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward All.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-02	<b>Class of Service Options (Hold/Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-03	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-04	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-05	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forwarding with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call forwarding)</b>	Turn Off or On an extension user ability to set up Call Forwarding Off-Premise at their extension. For voice mail, set this option to off.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal On ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	Turn Off or On an extension user ability to barge-in on other's calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On an extension user ability to have other extensions Barge-In on calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On an extension user ability to change COS via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp On</b>	Turn Off or On an extension user ability to block callers from dialing to Camp -On. Set this option to 0 for voice mail.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this time diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-02	<b>System Options for Transfer – MOH or Ring back on Transferred Calls</b>	Enable/Disable MOH on Transfer. If set to 0, a transferred caller hears Music on Hold while their call rings the destination extension. If set to 1, a transferred caller hears ring back while their call rings the destination extension. For this option to work with voice mail, the transferred call must be an unscreened transfer.	0 = Hold Tone 1 = Ring Back Tone (default = 0)		✓	

### Assign Trunks As Automated Attendant Trunks – Method 1:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign Service Type 4 to each trunk you want to ring into Voice Mail as a Direct Inward Line (DIL).	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-07-01	<b>DIL Assignment</b>	Assign the destination extension or Department Calling Group for each DIL incoming trunk. A DIL rings an extension directly, without any other Access Map or Ring Group Programming. Use Program 22-02 to designate a DIL trunk. If all Voice Mail ports are in the same Extension (Department) Group, the DIL rings another Voice Mail port if its assigned port is busy.	Extension Number (maximum eight digits) (default not assigned)	✓		

## Assign Trunks As Automated Attendant Trunks – Method 2:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	Incoming Call Trunk Setup	Assign 0 to each trunk you want to ring into Voice Mail as a normal line.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)	✓		
22-04-01	Incoming Extension Ring Group Assignment	Assign Ring Group 102 for an In-Skin/External Voice Mail, or 103 for a Central Voice Mail as the destination.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	

### For Either Method:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-42	Service Code Setup (for Service Access) – Flash on Trunk Lines	Program the dial access code used for sending a hook flash to Telco. This code is used for Centrex Transfer using Digital Voice Mail ports. If this code starts with #, Program 45-01-05 must be set to 0.	SLT (default = #3)		✓	
22-04-01	Incoming Extension Ring Group Assignment	Assign extensions to Ring Groups. Calls ring extensions according to Ring Group Programming To enable Voice Mail Overflow, assign selected extensions to a Ring Group that ring for unanswered DILs to Voice Mail ports. In Program 22-06, enter 1 to enable overflow ringing.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-08-01	<b>DIL/IRG No Answer Destination</b>	For Voice Mail Overflow, enter the Ring Group that unanswered DILs to Voice Mail ring after the DIL Call Waiting time expires (Program 22-01-04).	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	If activated at an extension, Delayed Call Forwarding occurs after this time  This also sets the time a Transferred call waits at an extension forwarded to voice mail before routing to the called extension mailbox.	0~64800 (seconds) (default = 10)		✓	
45-01-01	<b>Voice Mail Integration Options – Voice Mail Department Group Number</b>	Assign which Extension (Department) Group number is to be assigned as the voice mail group. This program defines the Quick Transfer to Voice Mail destination. A 0 entry means no voice mail is installed.	0~64 0 = No Voice Mail (default = 0)	✓		
45-01-02	<b>Voice Mail Integration Options – Voice Mail Master Name</b>	Enter the Voice Mail master name.	Up to 12 Characters (default = Voice Mail)		✓	
45-01-04	<b>Voice Mail Integration Options – Park and Page</b>	Enable/Disable the system ability to process the Voice Mail Park and Page (*) commands. You should normally enable this option.	0 = Off 1 = On (default = 1)	✓		
45-01-05	<b>Voice Mail Integration Options – Message Wait</b>	Enable/Disable the system ability to process the Voice Mail Message Wait (#) commands. You should normally enable this option. If enabled be sure the Programmed Message notification strings do not contain the code for trunk access.  When using Centrex transfer from a voice mail port the following items must be considered: <ul style="list-style-type: none"> <li>○ If the Feature Access Code starts with # in Program 11-12-42 set Program 45-01-05 to 0.</li> <li>○ When assigning the dial string in voice mail, one or more "Pauses" may be needed too, depending on what Telco needs.</li> </ul>	0 = Off 1 = On (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
45-01-06	Voice Mail Integration Options – Record Alert Tone Interval Time	Set the time between Voice Mail Conversation Record alerts.	0~64800 (seconds) (default = 30)		✓	
45-01-18	Voice Mail Integration Options – Trunk Number Mapping	Assign the digits of trunk number mapping.	Options 2~3 (default = 2)		✓	
80-01-02	Service Tone Setup – Basic Tone Number	Customize the systems service tones.	1~33 0 = No Tone 33 = Default Time Slot (refer to the SV8100 Programming Manual for default values)		✓	
80-03-01	DTMF Tone Receiver Setup – Detect Level	Customize the Detect Level for DTMF Tone Receivers.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1~5 = 0			✓
80-03-02	DTMF Tone Receiver Setup – Start Delay Time	Define the start delay time for DTMF Tone Receiver.	0~255 (0.25ms~64ms) default: Type 1~5 = 0		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	DTMF Tone Receiver Setup – Min. Detect Level	Define the minimum detection level for DTMF Tone Receiver.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-04	<b>DTMF Tone Receiver Setup – Max. Detect Level</b>	Define the maximum detection level for DTMF Tone Receiver.	0~15 detect level 0: 0dBm(0) to -15dBm(15) detect level 1: -5dBm(0) to -20dBm(15) detect level 2: -10dBm(0) to -25dBm(15) detect level 3: -15dBm(0) to -30dBm(15) detect level 4: -20dBm(0) to -35dBm(15) detect level 5: -25dBm(0) to -40dBm(15) detect level 6: -30dBm(0) to -45dBm(15) detect level 7: -35dBm(0) to -50dBm(15) detect level 8: -40dBm(0) to -55dBm(15) detect level 9: -45dBm(0) to -60dBm(15) detect level 10: -50dBm(0) to -65dBm(15) detect level 11: -55dBm(0) to -70dBm(15) detect level 12: -60dBm(0) to -75dBm(15) detect level 13: -65dBm(0) to -80dBm(15) detect level 14: -70dBm(0) to -85dBm(15) detect level 15: -75dBm(0) to -90dBm(15) default: Type 1~5 = 2 (-2dBm)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-05	<b>DTMF Tone Receiver Setup – Forward Twist Level</b>	Define the forward twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1~5 = 5 (6dBm)		✓	
80-03-06	<b>DTMF Tone Receiver Setup – Backward Twist Level</b>	Define the backwards twist level for DTMF Tone Receiver.	0~9 (1dB~10dB) default: Type 1~5 = 0 (1dBm)		✓	
80-03-07	<b>DTMF Tone Receiver Setup – ON Detect Time</b>	Define the On detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1~5 = 1 (30ms)		✓	
80-03-08	<b>DTMF Tone Receiver Setup – OFF Detect Time</b>	Define the Off detection time for DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) default: Type 1~5 = 1 (30ms)		✓	
80-04-01	<b>Call Progress Tone Detector Setup – Detection Level</b>	Define the various levels and timers for the Call Progress Tone Detector. Use this option to set the Detection Level.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1 (DT) = 0 (-25dBm) Type 2 (BT) = 0 (-25dBm) Type 3 (RBT) = 0 (-25dBm) Type 4, Type 5 = 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-02	<b>Call Progress Tone Detector Setup – Min. Detection Level</b>	Define the various levels and timers for the Call Progress Tone Detector. Use this option to set the minimum detection level.	0~15 detect level 0: -15dBm(0) to -30dBm(15) detect level 1: -30dBm(0) to -45dBm(15) detect level 2: -40dBm(0) to -55dBm(15) default: Type 1 (DT) = 15 (-25dBm) Type 2 (BT) = 15 (-25dBm) Type 3 (RBT) = 15 (-25dBm) Type 4, Type 5 = 0		✓	
80-04-03	<b>Call Progress Tone Detector Setup – S/N Ratio</b>	Define the various levels and timers for the Call Progress Tone Detector.	0~4 (0dB ~ -20dB) default: Type 1 (DT) = 4 (-20dB) Type 2 (BT) = 4 (-20dB) Type 3 (RBT) = 4 (-20dB) Type 4, Type 5 = 0		✓	
80-04-04	<b>Call Progress Tone Detector Setup – No Tone Time</b>	Define the various levels and timers for the Call Progress Tone Detector. Use this option to set No Tone Time.	0~255 (30+30-7680ms) The formula is 30+30N. When set to N=1, it means 30+30*1=60 When set to N=255, it means 30+30*255=7680 (0 =not detect) default: Type 1 (DT) = 132 (3990ms) Type 2 (BT) = 132 (3990ms) Type 3 (RBT) = 132 (3990ms) Type 4, Type 5 = 0		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-05	<b>Call Progress Tone Detector Setup – Pulse Count</b>	Define the various levels and timers for the Call Progress Tone Detector. Use this option to set the Pulse Count.	1~255 default: Type 1 (DT) = 1 Type 2 (BT) = 1 Type 3 (RBT) = 1 Type 4, Type 5 = 0		✓	
80-04-06	<b>Call Progress Tone Detector Setup – ON Minimum Time</b>	Define the various levels and times for the Call Progress Tone Detector. Use this option to set the minimum On time.	1~255 (30+30-7680ms) default: Type 1 (DT) = 9 (300ms) Type 2 (BT) = 12 (300ms) Type 3 (RBT) = 25 (780ms) Type 4, Type 5 = 0		✓	
80-04-07	<b>Call Progress Tone Detector Setup – ON Maximum Time</b>	Define the various levels and times for the Call Progress Tone Detector. Use this option to set the maximum On time.	0~255 (30+30-7680ms) default: Type 1 (DT) = 0 Type 2 (BT) = 20 (450ms) [ET] Type 3 (RBT) = 40 (1230ms) Type 4, Type 5 = 0		✓	
80-04-08	<b>Call Progress Tone Detector Setup – OFF Minimum Time</b>	Define the various levels and times for the Call Progress Tone Detector. Use this option to set the minimum Off time.	1~255 (30+30-7680ms) default: Type 1 (DT) = 1 (60ms) Type 2 (BT) = 12 (300ms) Type 3 (RBT) = 83 (2520ms) Type 4, Type 5 = 0		✓	
80-04-09	<b>Call Progress Tone Detector Setup – OFF Maximum Time</b>	Define the various levels and times for the Call Progress Tone Detector. Use this option to set the maximum Off time.	0~255 (30+30-7680ms) default: Type 1 (DT) = 1 (60ms) Type 2 (BT) = 20 (450ms) Type 3 (RBT) = 115 (3480ms) Type 4, Type 5 = 0		✓	



## Operation

Refer to [VM8000 InMail on page 2-1785](#) for complete telephone operation procedures.

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## *uMobility – Server Based*

### Enhancements

This feature added with <b>Version 3000</b> .
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### Description

The uMobility system is designed to enhance the mobile user's experience by bringing features and functionality from office or residential services right to the smart phone. The uMobility system allows the user to:

- Answer the office desktop telephone directly from your smart phone – anytime, anywhere.
- Make calls from the smart phone that uses your office telephone system's default number.
- Enjoy greatly improved cellular phone coverage while inside the office.
- Never miss an important call again while away from your desk.
- Talk on the smart phone and not use any cellular network minutes when in a Wi-Fi hotspot, at the office, at home or at a public hotspot (VPN required).
- Access work voice mail directly from your smart phone.
- Stop juggling between the cell phone and the office desktop telephone or home telephone.

The uMC Server is the gateway for uMobility mobile devices to access the SV8100 system. It also knows when the mobile device is in the Wi-Fi or Cellular domain and will direct CO and internal calls to the mobile device using the appropriate method.

Refer to the Feature Support Table for a complete list of supported system features.

### Conditions

- This feature requires **Version 3100 (3.13 or higher)** SV8100 software.
- Voice quality is dependent on the network infrastructure when in the Wi-Fi domain and on the cellular network when in the cell domain. As such, voice quality can vary between locations.
- The maximum number of uMobility Client devices that can be supported is dictated by the PZ-XXIPLA and the number of desk IP Phones already in the system.

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- The setting in Program 99-01-60 affects SIP messages when using the Call Forward with Both Ring feature (Twinning). For the uMobility and Desk phone to work together properly, this must be set to 1 (On). The default is 0 (Off).
  - The following conditions apply when using an iPhone®:
    - ❑ Call handoff between Wi-Fi and cellular domains is supported but can only be accomplished manually. Automatic handoff is not supported.
    - ❑ An iPhone limitation in allowing multitasking for third party applications causes the uMobility client to exit when there is an incoming call to the cellular number or the user starts an additional application.
    - ❑ If a call is made via uMobility while in the cell domain, when the call has ends the user is presented with the native iPhone dialer.
    - ❑ If the uMobility client application is activated while on a Wi-Fi call, features such as Mute, Speaker phone and DND are deactivated when a hand-off call to cellular is answered.
    - ❑ If the uMobility client application is activated while on a cellular call, Mute and Speaker phone are deactivated when a hand-off to Wi-Fi happens.
  - When using Call Transfer the following conditions apply to all client devices:
    - ❑ Transfer is only supported when the uMobility client phone is in the Wi-Fi domain.
    - ❑ Only Supervised/Announce Call Transfer of CO or internal calls is supported from any uMobility client device.
    - ❑ Direct/Blind/Unsupervised Call Transfer of CO or internal calls is not supported from any uMobility client device.
  - When using code restriction for uMobility client devices the following conditions apply to all client devices:
    - ❑ Code Restriction Override is not supported.
    - ❑ Code Restriction should be applied to the uMobility client device only.
    - ❑ Code Restriction should not be applied to any of the uMC Server ports.
  - When using voice mail the following conditions apply to all client devices:
    - ❑ Voice mail Message Waiting Indication (MWI) is only supported when the uMobility mobile device resides in the Wi-Fi domain.
    - ❑ The uMobility feature cannot be used with VM8000 InMail.
    - ❑ The uMobility feature cannot be used with UCB (Unified Communications for Business).
    - ❑ If the uMobility client is in the cell domain and the “Reject” or “Decline” option is selected for an incoming call, the caller goes to the cell carrier voice mail, not the enterprise voice mail.
  - For Call Forwarding the following conditions apply to all client devices:
    - ❑ Call Forwarding with Both Ring is used to have calls directed to the desk phone ring at both the desk phone and the uMobility client phone. To get callers to voice mail, the uMobility client phone should then be forwarded BNA to voice mail. The caller goes to the mailbox of the desk phone. Refer to Call Forward with Both Ring for more information.

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- When a uMobility device is on a call, a second call to that device does not follow forwarding.
  - Call Forward with Both Ring is not supported across K-CCIS networks. Therefore, the desk phone, the uMC Server and the uMobility mobile device must be in the same phone system.
  - The UCB (Unified Communications for Business) feature cannot be used with Call Forward Both Ring. Therefore, the uMobility client phone cannot be used with UCB.
  - When using Call Forward with Both Ring, the voice mail should be configured so the Message Waiting Indication is provided for desk phone as the uMobility mobile device cannot display message waiting unless it is in the Wi-Fi domain.
  - If an extension has Call Forward with Both Ring set to another extension, it will only continue to forward if the Both Ring destination is forwarded (B/NA or NA) to VM only.
  - For uMobility client devices to utilize dial access codes for system features the dial access codes must be all numbers and cannot contain \* or #.
  - On a Trunk call that originates on the SV8100 via the wireless LAN but is handed off to the cellular network, the SMDR print out will show the call ends when the user leaves the wireless LAN and hands off to the cellular network.
  - Internal calls from an uMobility mobile device displays the station name as assigned in Program15-01-01 not on the uMobility telephone.
  - For station name display to work on internal calls to a uMobility mobile device that resides in the Wi-Fi domain set all station names, including IP and TDM telephones, in Program 15-05-04.
  - The following 3-digit emergency numbers are automatically routed by a Nokia client and device to the cellular network and cannot be used or dialed by uMobility Nokia client extensions:
    - 019, 100, 101, 104, 107, 112, 110, 119, 120, 122, 123, 180, 190, 191, 192, 193, 197, 198, 199, 311, 911, 991, 993, 994, 995, 999.
      - These should not be used as extensions for users, or must require a prefix to be dialed before these numbers in order to distinguish these from the emergency numbers.*
  - Emergency calls (911 and E911) from uMobility client devices should not be routed through the uMobility or SV8100 system and are not supported.
  - When an uMobility client device is outside of the Wi-Fi network and receives an incoming call via uMobility, audible DTMF tones are generated by the uMobility client and heard by both parties (when the uMobility user answers).
  - When an uMobility client device is outside of the Wi-Fi network and makes an internal or outgoing CO call via uMobility, audible DTMF tones are generated by the uMobility client and heard by the uMobility user (after a slight delay when the user enters the number).
  - The Pilot plus the number of Reserve Pool Users defined in the uMC Server configuration determines the maximum number of uMobility client devices residing in the cellular domain that can simultaneously make calls through the SV8100 system.

- There should be three reserve pool users for every 10 uMobility users that are connected to your IP-PBX system. For example, if you have 25 uMobility users then you should create eight reserve pool users in both IP-PBX and uMobility.
- Caller ID information for inbound trunks calls is only provided if the following conditions are met:
  - ❑ The uMobility client device resides in the Wi-Fi domain.
  - ❑ The inbound call is on an ISDN trunk.
  - ❑ The inbound calls are directed using the DID or Ring Group assignment to the uMobility client, transferred calls will not show CID information.
- When a uMobility mobile device is in the cellular domain only (not in Wi-Fi), Caller ID information for inbound trunk calls that route through the SV8100 is not passed to the uMobility device.
- When a uMobility mobile device is in the cellular domain only (not in Wi-Fi), Station Name Assignment information for internal calls from SV8100 extensions is not passed to the uMobility device.
- uMobility client software for the iPhone must be downloaded from the iPhone App Store<sup>SM</sup>.
- There is a known Wi-Fi driver limitation with the Touch Pro 2 adversely impacting proper Handoff (HO) operations. This issue is currently being addressed with the device manufacturer (HTC).
- There is a known platform limitation with Windows Mobile devices that cause the device to reset to factory default settings when the battery is allowed to fully discharge before recharging.
- When uMobility client calls are transferred using a Touch Pro 2 Windows Mobile device there is no voice path for the transferred parties.
- Call Move or Fetch cannot be performed during hand off between Wi-Fi and Cellular.
- Once installed the uMobility Client cannot be removed from Nokia devices unless the Nokia OS is reinstalled. Refer to the Nokia User Guide FAQ for more information.
- Mobile network carriers may prohibit or restrict voice over 3G/4G on their network. Or, carriers may add additional charges to use this functionality. (NEC is not responsible for any charges, or quality issues because of prohibition/restriction from carrier).

## Default Setting

Disabled

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## System Availability

### Terminals

Refer to the NECWorx website for application note ANSV8100-09-007 containing the current list of supported mobile devices.

### Required Component(s)

- **Version 3000 or higher** software and appropriate licenses
- Third Party SIP License for system
- PZ-32IPLA/IPLB, PZ-64IPLA/IPLB and PZ-128IPLA/IPLB
- Available SIP station ports

### uMobility Server Hardware Requirements:

The uMC software requires a Linux server that meets the following specifications:

- Processor: X86 processor (e.g., Pentium® 4, Xeon, or AMDxxx)
- Hard Disk Space: 40 GB minimum
- RAM: 1 GB minimum
- Network Interface Card: 100/1000 Mbps
- Operating System: CentOS 5.0/5.1/5.2 32 bit
- If CentOS is already installed please ensure that:
  - ❑ IPTables are turned off
  - ❑ SELinux is disabled

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## Related Features

### Call Forwarding

### IP Single Line Telephone (SIP)

### Mobile Extension

### UM8000 Mail

### VM8000 InMail

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**Feature Support Tables for Each Supported Mobile Device:**
**Table 2-108 Windows Mobile Devices**



<b>Feature Name/Description</b>	
<b>uMobility</b>	<b>NEC SV8100</b>
Dual Mode Operations (uMobility features and services in both Wi-Fi and Cellular Domain)	Yes
Handoff Operations (HO)	Yes
Single Number Reach (SNR)	Yes
Over-the-Air (OTA) Client Delivery	Yes
Device Mobility – Call Move & Fetch  <i>Functionality unique to WM capable devices.</i>	Yes
<b>Basic Telephony (PBX/CM Dependent)</b>	
<b>Enterprise Dialing (ED)</b>	
Call Forward All (CFA)	Yes
Call Forward Busy (CFB)	Yes
Call Forward No Answer (CFNA)	Yes
Call Hold and Resume	Yes
Call Waiting	No
Conference Call	Yes (Participant Only)
Calling Line Identification (Calling Name)	Yes
Abbreviated extension dialing	Yes
Mid-call DTMF  <i>Numeric keys, excluding * and #.</i>	Yes
<b>Basic Telephony (Device Dependent)</b>	
Speed Dial	Yes
Missed Call Indication	Yes
Call Logs	Yes
Contact Dialing	Yes
Speakerphone	Yes
Volume Control	Yes
Do Not Disturb (DND)	Yes
Bluetooth	No
<b>Presentation (PBX/CM Dependent)</b>	
Blind Call Transfer	No

Table 2-108 Windows Mobile Devices (Continued)


Feature Name/Description	
Consultative Call Transfer	Yes (Only in Wi-Fi Domain)
Mid-call DTMF  Numeric keys, excluding * and #.	Yes
<b>Voicemail</b>	
Message Waiting Indicator (MWI)	Yes (Cellular Data Network dependent. Enterprise indication is only supported in Wi-Fi Domain.)

Table 2-109 Nokia Devices


Feature Name/Description	
<b>uMobility</b>	<b>NEC SV8100</b>
Dual Mode Operations (uMobility features and services in both Wi-Fi and Cellular Domain)	Yes
Handoff Operations (HO)	Yes
Single Number Reach (SNR)	Yes
Over-the-Air (OTA) Client Delivery	Yes
Over-the-Air (OTA) Configuration Delivery	Yes
<b>Basic Telephony (PBX/CM Dependent)</b>	
<b>Enterprise Dialing (ED)</b>	
Call Forward All (CFA)	Yes
Call Forward Busy (CFB)	Yes
Call Forward No Answer (CFNA)	Yes
Call Hold and Resume	Yes
Call Waiting	No
Conference Call	Yes (Participant Only)
Calling Line Identification (Calling Name)	Yes
Abbreviated extension dialing	Yes
Mid-call DTMF  Numeric keys, excluding * and #.	Yes
<b>Basic Telephony (Device Dependent)</b>	
Speed Dial	No
Missed Call Indication	Yes (Both Wi-Fi and Cellular)

Table 2-109 Nokia Devices (Continued)


Feature Name/Description	
Call Logs	Yes
Contact Dialing	Yes
Mute/Unmute	Yes
Speakerphone	Yes
Volume Control	Yes
Do Not Disturb (DND)	Yes (Both Wi-Fi and Cellular)
Bluetooth	No
<b>Presentation (PBX/CM Dependent)</b>	
Blind Call Transfer	No
Supervised Call Transfer	Yes (Only in Wi-Fi Domain)
<b>Voicemail</b>	
Message Waiting Indicator (MWI)	Yes (Cellular Data Network dependent. Enterprise indication is only supported in Wi-Fi Domain.)

Table 2-110 iPhone Devices

Feature Name/Description	
<b>uMobility</b>	<b>NEC SV8100</b>
Dual Mode Operations (uMobility features and services in both Wi-Fi and Cellular Domain)	Yes
Handoff Operations (HO)	Yes (User manage handoff)
Single Number Reach (SNR)	Yes
Over-the-Air (OTA) Client Delivery Over-the-Air (OTA) Configuration Delivery	No (Available via Apple Store) Yes
<b>Basic Telephony (PBX/CM Dependent)</b>	
<b>Enterprise Dialing (ED)</b>	
Call Forward All (CFA)	Yes
Call Forward Busy (CFB)	Yes
Call Forward No Answer (CFNA)	Yes
Call Hold and Resume	Yes
Call Waiting	No
Conference Call	Yes (Participant Only)



Table 2-110 iPhone Devices (Continued)

<b>Feature Name/Description</b>	
Calling Line Identification (Calling Name)	Yes
Abbreviated extension dialing	Yes
Mid-call DTMF  Numeric keys, excluding * and #.	Yes
<b>Basic Telephony (Device Dependent)</b>	
Speed Dial	No
Missed Call Indication	Yes in Wi-Fi
Call Logs	Yes
Contact Dialing	Yes
Mute/Unmute	Yes
Speakerphone	Yes
Volume Control	Yes
Do Not Disturb (DND)	Yes in Wi-Fi
Bluetooth	No
<b>Presentation (PBX/CM Dependent)</b>	
Blind Call Transfer	No
Supervised Call Transfer	Yes (Only in Wi-Fi Domain)
<b>Voicemail</b>	
Message Waiting Indicator (MWI)	Yes (Cellular Data Network dependent. Enterprise indication is only supported in Wi-Fi Domain.)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	If required, change the IP Address so it does not conflict with Program 10-12-09.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-04	CD-CP00-US Network Setup – Time Zone	Set correct time zone for system.	(default = Eastern Time Zone)		✓	
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Set the subnet mask of the IPLA.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
11-07-01	Department Group Pilot Numbers – Dial	Assign pilot numbers to each Department Group set up.	Up to eight digits (default not assigned)	✓		
11-12-29	Service Code Setup (for Service Access) – Direct Extension Call Pickup	Customize the Service Codes for direct extension call pickup.  For the Direct Call Pickup feature to work on <b>all mobile devices</b> the access code in Program 11-12-29 must be changed from ** to an all number access code, for example 758.	MLT, SLT (default = * *)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-23	<b>Analog Trunk Data Setup – Caller ID Receiving Method</b>	Rings extension before receiving Caller ID (1) or after receiving Caller ID (0).  If Caller ID is received on a trunk that is in the same ring group as a <b>uMobility client</b> device this should be set to 1 (Wait Caller ID).	0 = Wait Caller ID 1 = Immediate Ring (default = 1)		✓	
15-05-04	<b>IP Telephone Terminal Basic Data Setup – Nickname</b>	Assign nick name to all system phones. This is the name displayed on internal calls to a uMobility client device.	Station Name (default not assigned)		✓	
15-05-16	<b>IP Telephone Terminal Basic Data Setup – Authentication Password</b>	Assign the authentication password for SIP single line telephones.  If using authentication for the <b>uMobility Client</b> devices the password should be entered here.	Up to 24 characters (default not assigned)		✓	
15-05-18	<b>IP Telephone Terminal Basic Data Setup – IP Duplication Allowed Group</b>	For an adapter that has one IP address coming into it but multiple extensions off of it. Assign all the extensions to a group so the CPU knows that the one IP address is assigned to multiple extensions.  Assign all <b>uMobility client</b> and server extensions to the same group. This group should not be used by any non-uMobility ports.	0 = Not Used 1 = Group 1 2 = Group 2 3 = Group 3 4 = Group 4 5 = Group 5 6 = Group 6 7 = Group 7 8 = Group 8 9 = Group 9 10 = Group 10 (default = 0)	✓		
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Set the function mode for each department group.  Set <b>uMC</b> server hunt group name.	Maximum 12 characters (default not assigned)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-03	<b>Department Group Basic Data Setup – Department Routing when Busy (Auto Step Call)</b>	Set how the system routes an Intercom call to a busy Department Group member. Intercom callers to the extension can either hear busy or route to the first available department number. This only occurs for calls to the extension directly, not the department number assigned in Program 11-07.  Set <b>uMC</b> Server hunt group to routes to idle member (1).	0 = Normal (Intercom caller to busy department member hears busy) 1 = Circular (Intercom callers to busy department member routes to idle member) (default = 0)	✓		
16-01-04	<b>Department Group Basic Data Setup – Hunting Mode</b>	Set if an unanswered call should hunt once stopping at the last member tried (0) or continually hunt through the idle members (1).  Set <b>uMC</b> Server Hunt Group to Circular (1).	0 = Last extension is called and hunting is stopped 1 = Circular (default = 0)	✓		
16-02-01	<b>Department Group Assignment for Extensions</b>	Set up the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in Program 23-02.  Department Group – Assign <b>uMC</b> Server pilot and Reserve users only to this hunt group. Do not assign <b>uMobility</b> client devices.  Priority Order – Assign <b>uMC</b> Server pilot as priority 1 followed by Reserve users	Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256	✓		
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	Set the Delayed Call Forwarding interval. For an unanswered call, Call Forward No Answer occurs after this interval.  Set Call Forward No Answer time to 30 seconds or more for <b>uMobility phones</b> . This will give them time to ring when they are in the cellular domain.	0~64800 (seconds) (default = 10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-04	<b>System Options for Transfer – Transfer Recall Time</b>	<p>Set the Transfer Recall Time. An unanswered transferred call recalls to the extension that initially transferred it after this time. This also sets the time a transferred call camps-on to a busy extension.</p> <p>Set Transfer Recall Time at least 5 seconds longer than Delayed Call Forward Time (Program 24-02-03) for <b>uMobility phones</b>.</p>	0~64800 (seconds) (default = 30)	✓		
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type:</b>	<p>Assign Call Forwarding Type and the destination numbers for each extension/virtual extension.</p> <p>Set all <b>uMobility client</b> phones to forward BNA (4).</p>	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)	✓		
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	<p>Assign CO Call Forwarding Destination for ring, all call and no answer.</p> <p>Set all <b>uMobility client</b> phones to forward BNA to SV8100 voice mail.</p>	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-03	<b>Call Forward Split Settings – Intercom Call Forwarding Destination for Both ring, All Call, No Answer</b>	<p>Assign Intercom Call Forwarding Destination for ring, all call and no answer.</p> <p>Set all <b>uMobility client</b> phones to forward BNA to SV8100 voice mail.</p>	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
84-20-01	<b>SIP Extension Basic Information Setup – Registrar/Proxy Port</b>	Define SIP station Proxy Port.	1~65535 (default = 5070)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLA.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW 1~8: 172.16.0.20~ 172.16.0.27	✓		
99-01-60	Options 60	This setting affects SIP messages when using the Call Forward with Both Ring feature. For the uMobility and Desk phone to work properly this must be set to 1 (On).	0 = Off 1 = On (default = 0)	✓		

### uMC Server Configuration for SV8100:

Parameter Name	Required Data Assignment	Level		
		1	2	3
<p>In addition to the settings below you should create a pool of reserve users. There should be three reserve pool users for every 10 uMobility users that are connected to your IP-PBX system. For example, if you have 25 uMobility users then you should create eight reserve pool users both in the IP-PBX and in uMobility. The exact number of reserve pool users for your particular system depends on call profiles and feature usage. These reserve pool users are used by the uMC server for certain call control functions and should all be included in the hunt group defined in the SV8100 programming section. The number of Reserve Pool Users defined in uMC Server configuration determines the maximum number of uMobility client devices that reside in the cellular domain that can simultaneously make calls through the SV8100 system.</p>		✓		
Registration_With_CM	ON	✓		
UMC_IP	Set uMC Server IP Address.	✓		
User Domain	Enter the SV8100 IP Address from Program 10-12-09 here.	✓		
Call Manager IP	Enter the SV8100 IP Address from Program 10-12-09 here.	✓		
Call Manager Port	Enter SV8100 SIP port from Program 84-20-01 here. Default is 5070.	✓		
CM_Side_Auth	If the uMC server port must enter a password to register with the SV8100 set this field to on. Otherwise set to off.		✓	
Client_Side_Auth	If the uMobility client device must enter a password to register with the SV8100 set this field to on. Otherwise set to off.		✓	
Enforce_Dial_Plan	ON  This field is used to enable or disable the server from following the Outgoing_Prefix and Handoff_Prefix fields. If this is set to off the client devices will always have to dial a trunk access code. This means their cell phone contact list numbers would need the trunk access code.	✓		

Parameter Name	Required Data Assignment	Level		
		1	2	3
<b>HO_Cell_AutoAnswer_CLID</b>	This field should have all possible outgoing trunk Caller ID for the uMC Server port. This information is provided to the uMobility client device so it knows when an incoming call is from the uMC Server. Refer to the uMC Server System Administrator's Guide for information on how to enter number ranges.	✓		
<b>MWI_Out_Of_Dialog_From_CM</b>	FALSE	✓		
<b>CM_Side_DTMF</b>	rfc2833	✓		
<b>Reserve_User_Pool</b>	ON	✓		
<b>Multiple_Transport_Supported</b>	ON	✓		
<b>Cell_Vm_Direct_Answer_Timeout</b>	Use the appropriate setting below: For Analog lines = Blank For ISDN lines = 3	✓		
<b>Long_Distance_Prefix</b>	Blank	✓		
<b>DTMF_Info_Support</b>	FALSE  <b>Warning:</b> If this field is set to TRUE the uMC Server will not be able to make outgoing CO calls.	✓		
<b>Outgoing_Prefix</b>	Used by the uMobility server to make calls to client devices in the Cell Domain. Should be set to the trunk access code used to dial out. This is normally the same as the Handoff_Prefix setting. On a default system this should be set to 9.	✓		
<b>Handoff_Prefix</b>	Used by the uMobility server when handing a call off from the WiFi to the Cell Domain. Should be set to the trunk access code used to dial out. This is normally the same as the Outgoing_Prefix setting. On a default system this should be set to 9.	✓		

## Operation

None



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## *uMobility – Wi-Fi Client*

### Enhancements

This feature added with <b>Version 7000</b> .
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### Description

The uMobility Wi-Fi Client functions as a Standard SIP station on Blackberry<sup>®</sup>, iPhone and Android<sup>™</sup> smart phones. The uMobility Wi-Fi Client allows the user to:

- Answer incoming calls to the office telephone system directly from your smart phone.
- Make calls from the smart phone that uses your office telephone system's default number.
- Hold and Transfer calls to other stations in the telephone system.
- Talk on the smart phone and not use any cellular network minutes when using the uMobility Wi-Fi Client in a Wi-Fi hotspot at the office, at home or at a public hotspot (VPN required).
- Access work voice mail directly from your smart phone.

Refer to the Feature Support Table for a complete list of supported system features.

### Conditions

- This feature requires **Version 7000 (7.00 or higher)** SV8100 Software.
- Voice quality is dependent on the network infrastructure when in the Wi-Fi domain. As such, voice quality can vary between locations.
- The maximum number of uMobility Wi-Fi Client devices that can be supported is dictated by the PZ-XXIPLA/IPLB and the number of desk IP Phones already in the system.
- The setting in Program 99-01-60 affects SIP messages when using the Call Forward with Both Ring feature (Twinning). For the uMobility and Desk phone to work together properly, this must be set to 1 (On). The default is 0 (Off).
- When using voice mail the following conditions apply to all client devices:
  - The uMobility feature can be used with UM8000 InMail.
  - The uMobility feature cannot be used with VM8000 InMail.
  - The uMobility feature cannot be used with UCB (Unified Communications for Business).

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- For Call Forwarding the following conditions apply to all client devices:
    - ❑ Call Forwarding with Both Ring is used for Twinning to have calls directed to the desk phone ring at both the desk phone and the uMobility client phone. To get callers to voice mail, the uMobility client phone should then be forwarded BNA to voice mail. The caller goes to the mailbox of the desk phone. Refer to Call Forward with Both Ring for more information.
    - ❑ When using Call Forward Both Ring, when a uMobility device is on a call, a second call to that device does not follow forwarding.
    - ❑ Call Forward with Both Ring is not supported across K-CCIS networks. Therefore, the desk phone and the uMobility Wi-Fi Client device must be in the same phone system.
    - ❑ The UCB (Unified Communications for Business) feature cannot be used with Call Forward Both Ring. Therefore, the uMobility client phone cannot be used with UCB.
    - ❑ When using Call Forward with Both Ring, the voice mail should be configured so the Message Waiting Indication is provided for desk phone.
    - ❑ If an extension has Call Forward with Both Ring set to another extension, it will only continue to forward if the Both Ring destination is forwarded (B/NA or NA) to VM only.
    - ❑ For uMobility client devices to utilize dial access codes for system features the dial access codes must be all numbers and cannot contain \* or #.
  - Internal calls from an uMobility mobile device displays the station name as assigned in Program15-01-01 not on the uMobility telephone.
  - Emergency calls (911 and E911) from uMobility client devices should not be routed through the uMobility or SV8100 system and are not supported.
  - Caller ID information for inbound trunks calls is only provided if the following conditions are met:
    - ❑ The inbound call is on a trunk that provides CID.
    - ❑ The inbound trunk is set to 0 (Wait for CID) in Program 14-02-23.
    - ❑ The inbound calls are directed using the DID, DIL or Ring Group assignment to the uMobility client, transferred calls will not show CID information.
  - NEC recommends Call Forwarding for the uMobility client be set by the SV8100 Administrator, instead of at the device. Call Forwarding can be set up by access code, but a confirmation tone is not available.
  - uMobility WiFi client only supports the G.711 Codec with a 20ms payload/packetization time.
  - On Blackberry, a missed call notification is provided only as an audible notification. It does not provide a visual pop up notification like iPhone and Android phones.

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## Limitations

### ***NON-AVAILABILITY of TRADITIONAL EMERGENCY ACCESS SERVICES (EAS)***

*The software does not support traditional EAS, for example 911 or E911 in the US or 999 in the UK. Therefore, the user must route emergency calls through the cellular network rather than Voice over IP (VoIP) facilities. The user of the software and any such parties shall inform all users, guests and other third persons, who may or may not be present at the physical location where you utilize the service, of the non-availability of traditional EAS in all circumstances through the software. The user of the software must understand the limitation and plan for EAS while using the software in their country, while roaming in different countries, using other networks, and other such locations either with or without provision for EAS services.*



- Depending on Android device, bluetooth® functionality might not function properly. For example, switching audio from device audio to bluetooth device etc. NEC is not responsible for bluetooth/device connectivity issues.
- Due to OS Limitations, QoS value of uMobility may differ depending on OS:
  - ❑ iPhone/iPad: SIP packet: Fixed CS5, RTP packet: Configurable on uMobility setting.
  - ❑ Android: SIP packet: Fixed Default(0x00), RTP packet: Configurable on uMobility setting.
  - ❑ Blackberry: SIP and RTP packet: Fixed Default (0x00).
- iPhone4 shuts down Wi-Fi connection when in sleep mode. Due to this OS limitation, uMobility Wi-Fi connection will be lost and service will not be available.

## Required Settings for Remote SIP Access

For a remote SIP connection from outside to inside the SIP server, it is necessary to consider "NAT" for SIP. The diagrams below show typical scenarios when connecting SIP soft phones remotely from outside.

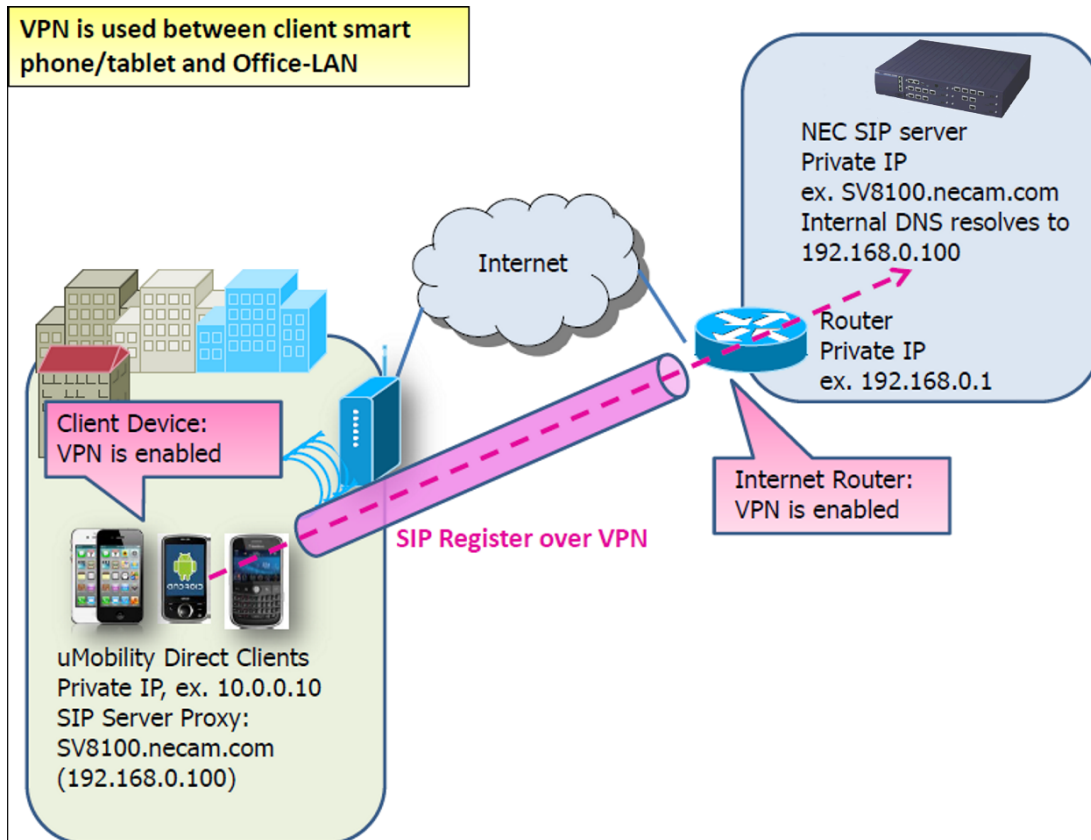


Figure 2-75 VPN Between Smart Device and Office LAN

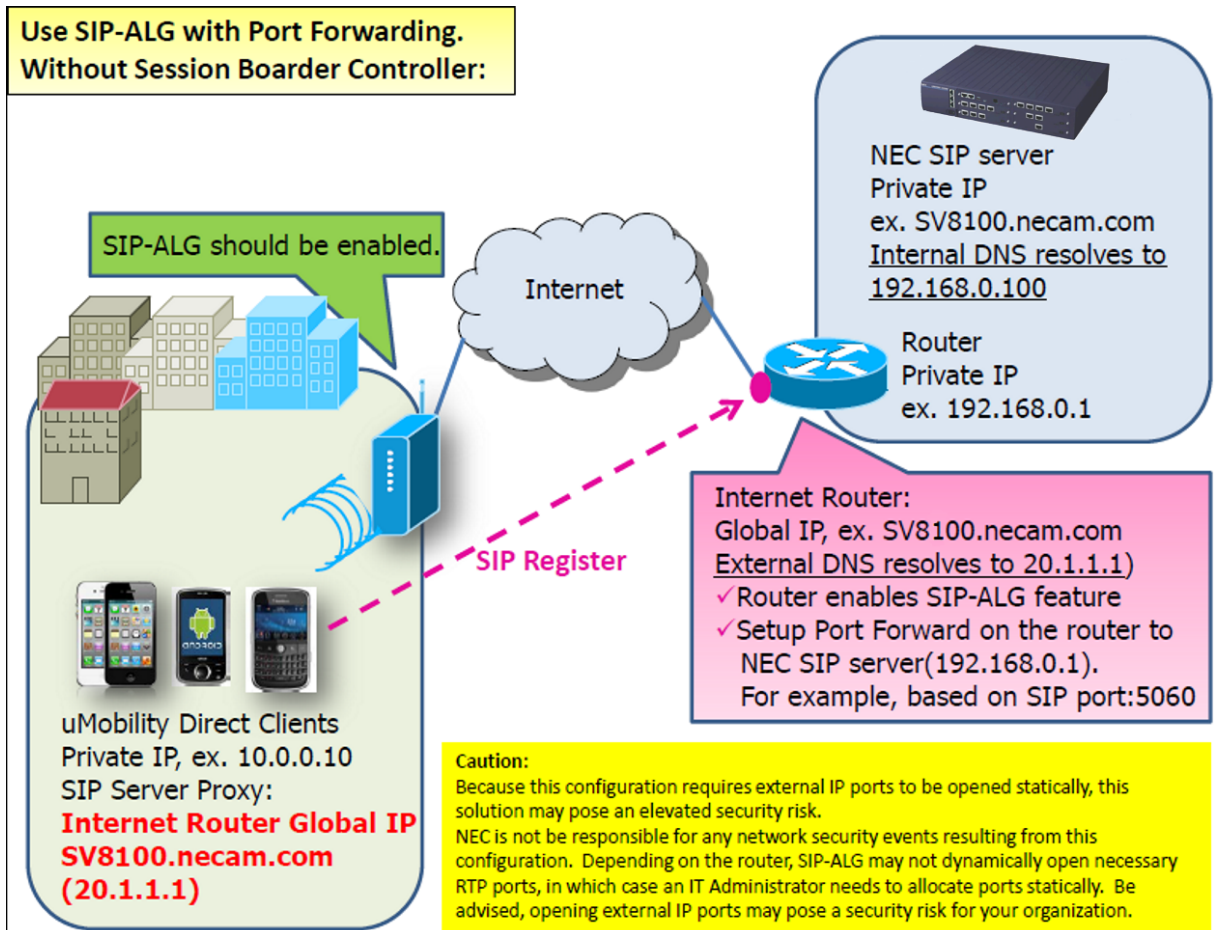


Figure 2-76 Port Forwarding without Session Border Controller

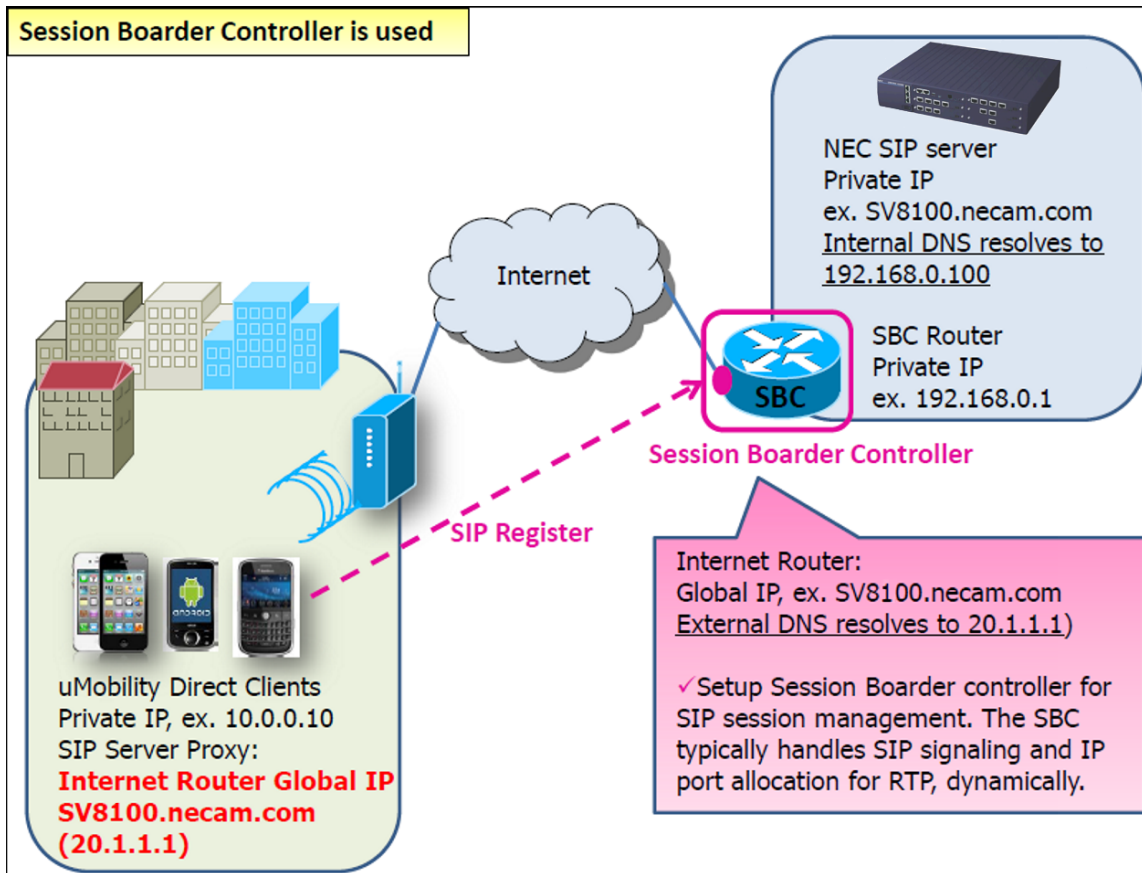


Figure 2-77 Port Forwarding with Session Boarder Controller

## Default Setting

Disabled

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## System Availability

### Terminals

**Table 2-111 Mobile Device Requirements**

Device	Required OS	Tested Device
iPhone	Version 5.5.1 or higher	iPhone 3GS iPhone 4 iPhone 4S See <b>Note 1</b>
Android phone	Version 2.3.0 or higher	Motorola MB865 LG Nitro HD Samsung Galaxy SII See <b>Note 2</b>
Blackberry phone	Version 7 or higher	Blackberry Bold 9900

**Note 1:** The iPhone 4S sleep mode shuts down Wi-Fi, uMobility cannot be used when the iPhone 4S is in sleep mode.

**Note 2:** NEC uMobility may function without problems on Android devices not listed above.

### Required Component(s)

- **Version 7000 or higher** software and appropriate licenses
- Third Party SIP License for each uMobility Wi-Fi Client
- PZ-32IPLA/IPLB, PZ-64IPLA/IPLB and PZ-128IPLA/IPLB
- Available SIP station ports

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## Related Features

### Call Forwarding

### IP Single Line Telephone (SIP)

### UM8000 Mail

Table 2-112 Feature Support Table

Feature Name/Description	
<b>Basic Telephony (PBX/CM Dependent)</b>	<b>NEC SV8100</b>
<b>Enterprise Dialing (ED)</b>	
Call Forward All (CFA)	Yes
Call Forward Busy (CFB)	Yes
Call Forward No Answer (CFNA)	Yes
Call Hold and Resume	Yes
Call Waiting	No
Conference Call	Yes (Participant Only)
Calling Line Identification (Calling Name)	Yes
Abbreviated extension dialing	Yes
Mid-call DTMF  <i>Numeric keys, excluding * and #.</i>	Yes
<b>Basic Telephony (Device Dependent)</b>	
Speed Dial	No
Missed Call Indication	Yes
Call Logs	Yes
Contact Dialing	Yes
Mute/Unmute	Yes
Speakerphone	Yes
Volume Control	Yes
Do Not Disturb (DND)	Yes
Bluetooth	Yes (See Conditions)
<b>Presentation (PBX/CM Dependent)</b>	
Blind Call Transfer	Yes
Supervised Call Transfer	Yes
<b>Voicemail</b>	
Message Waiting Indicator (MWI)	Yes



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-01	CD-CP00-US Network Setup – IP Address	If required, change the IP Address so it does not conflict with Program 10-12-09.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 192.168.0.10)	✓		
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-04	CD-CP00-US Network Setup – Time Zone	Set correct time zone for system.	(default = Eastern Time Zone)		✓	
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Set the subnet mask of the IPLA.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)	✓		
10-33-02	SIP Registrar/Proxy Information Basic Setup – Authentication Mode	Enable if a password is desired for the uMobility clients to register. When checked, Program 15-05-16 must have a password entered and the uMobility client must have the same password configured. When using Authentication, the station number is the authorization name.	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-29	<b>Service Code Setup (for Service Access) – Direct Extension Call Pickup</b>	<p>Customize the Service Codes for direct extension call pickup.</p> <p>For the Direct Call Pickup feature to work on <b>all mobile devices</b> the access code in Program 11-12-29 must be changed from ** to an all number access code, for example 758.</p>	MLT, SLT (default = * *)		✓	
14-02-23	<b>Analog Trunk Data Setup – Caller ID Receiving Method</b>	<p>Rings extension before receiving Caller ID (1) or after receiving Caller ID (0).</p> <p>If Caller ID is received on a trunk that is in the same ring group as a <b>uMobility client</b> device this should be set to 0 (Wait Caller ID).</p>	0 = Wait Caller ID 1 = Immediate Ring (default = 1)		✓	
15-05-04	<b>IP Telephone Terminal Basic Data Setup – Nickname</b>	Assign nick name to all system phones. This is the name displayed on internal calls to a uMobility client device.	Station Name (default not assigned)		✓	
15-05-16	<b>IP Telephone Terminal Basic Data Setup – Authentication Password</b>	<p>Assign the authentication password for SIP single line telephones.</p> <p>If using authentication for the <b>uMobility Client</b> devices the password should be entered here.</p>	Up to 24 characters (default not assigned)		✓	
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	<p>Set the Delayed Call Forwarding interval. For an unanswered call, Call Forward No Answer occurs after this interval.</p> <p>Set Call Forward No Answer time to 30 seconds or more for <b>uMobility phones</b>. This will give them time to ring when they are in the cellular domain.</p>	0~64800 (seconds) (default = 10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-04	<b>System Options for Transfer – Transfer Recall Time</b>	<p>Set the Transfer Recall Time. An unanswered transferred call recalls to the extension that initially transferred it after this time. This also sets the time a transferred call camps-on to a busy extension.</p> <p>Set Transfer Recall Time at least 5 seconds longer than Delayed Call Forward Time (Program 24-02-03) for <b>uMobility phones</b>.</p>	0~64800 (seconds) (default = 30)	✓		
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type</b>	<p>Assign Call Forwarding Type and the destination numbers for each extension/virtual extension.</p> <p>Set all <b>uMobility client</b> phones to forward BNA (4).</p>	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)	✓		
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	<p>Assign CO Call Forwarding Destination for ring, all call and no answer.</p> <p>Set all <b>uMobility client</b> phones to forward BNA to SV8100 voice mail.</p>	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
24-09-03	<b>Call Forward Split Settings – Intercom Call Forwarding Destination for Both ring, All Call, No Answer</b>	<p>Assign Intercom Call Forwarding Destination for ring, all call and no answer.</p> <p>Set all <b>uMobility client</b> phones to forward BNA to SV8100 voice mail.</p>	1~9, 0, #, *, R, @ (Up to 24 digits) (default not assigned)	✓		
84-20-01	<b>SIP Extension Basic Information Setup – Registrar/Proxy Port</b>	Define SIP station Proxy Port.	1~65535 (default = 5070)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLA.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW 1~8: 172.16.0.20~ 172.16.0.27	✓		
99-01-60	Options 60	This setting affects SIP messages when using the Call Forward with Both Ring feature. For the uMobility and Desk phone to work properly this must be set to 1 (On).	0 = Off 1 = On (default = 0)	✓		

## Operation

None

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## *Unicast/Multicast Paging Mode*

### Enhancements

This feature added with <b>Version 3000</b> .
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### Description

With **Version 3000 or higher** software the IP terminals (DT7XX) can now receive an Internal Page via a Unicast or Multicast packet based upon system programming. This feature allows IP terminals (DT7XX) to be assigned to Unicast Mode, Multicast Mode, or Auto. Prior to Version 3000, Unicast paging was not an available option.

When the phone is set to **Unicast Mode** the internal paging is sent to the phone via a Unicast Packet.

When the phone is set to **Multicast Mode** the internal page is sent to the phone via a Multicast Packet.

When the phone is set to Auto, the internal page is sent to the phone either by Multicast or Unicast based on the subnet of the IP station. If the DT7XX terminal is in the same subnet as the IPLA then it will receive the Internal Page via a Multicast Packet. If the DT7XX terminal is in a different subnet than the IPLA the DT7XX will receive the Internal Page via a Unicast Packet.

When phones are set to receive Unicast packets the IPLA will send a separate RTP stream to each phone that is set to receive the page. E.g. If there are five DT7XX IP phones in the page group and they are all set to Unicast Page Mode the IPLA will send five separate RTP streams utilizing five DSP resources.

When the phones are set to receive Multicast packets the IPLA will send one RTP stream. Multicast is a protocol that allows one device to communicate to multiple devices without the need to stream to the individual end point. E.g. If there are five DT7XX IP phones in the page group that are set to Multicast Mode, the IPLA will send one RTP stream utilizing only one DSP resource.

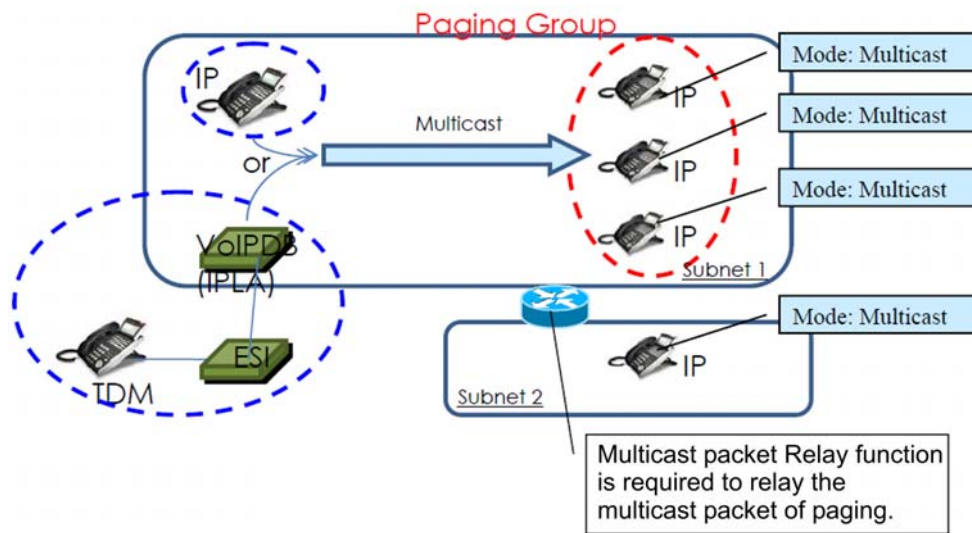


Figure 2-78 Multicast Mode Example

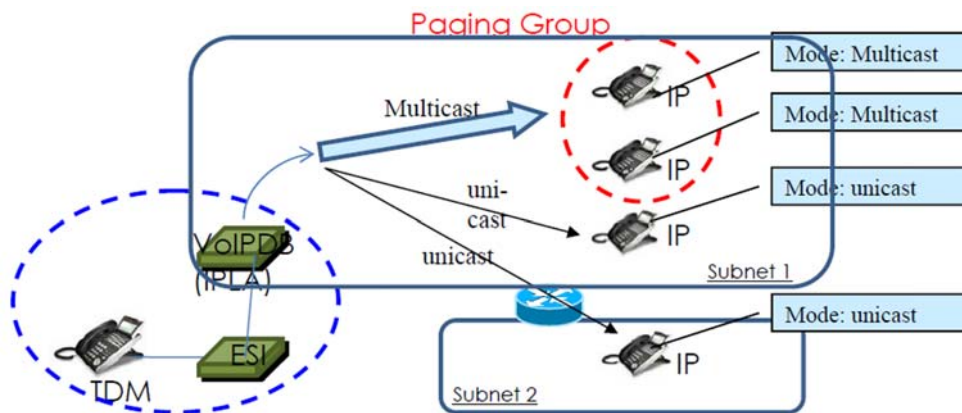


Figure 2-79 Unicast Mode Example



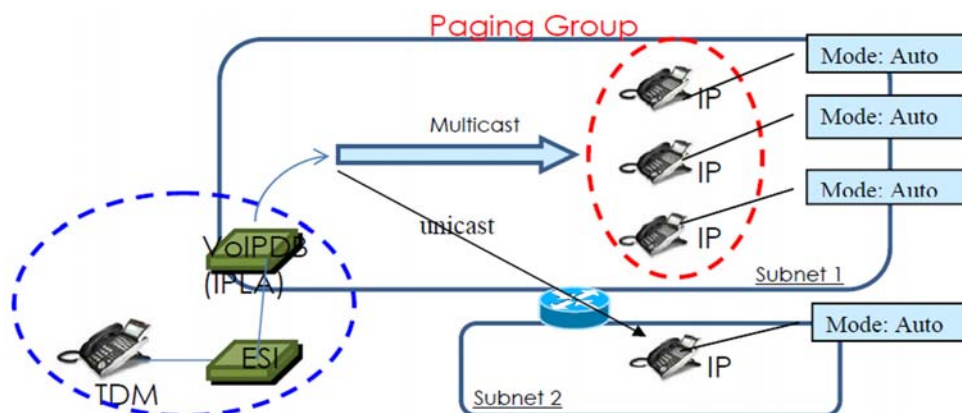


Figure 2-80 Auto Mode Example

- ✎ *By default routers do not pass Multicast packets between subnets. If you have IP phones in different subnets than the IPLA, and you are trying to utilize Multicast paging, you have to program the router to pass the Multicast packet. Routing of Multicast Packets is not a default routing feature and should be confirmed with the manufacturer of the routing equipment.*
- ✎ *The default multicast address utilized by the SV8100 is 224.0.0.10. It should be noted that many routing devices available do not support multicast within the range of 224.0.0.0/24 and may require the default address to be changed in the SV8100.*

### IPLA DSP Resource Selection

With **Version 3000** software three additional IPLA DSP resource assignments are available. The new assignments are: **Common without Unicast Paging**, **Multicast Paging**, and **Unicast Paging**. The new assignments assist with keeping IP phones from using all available DSP resources when utilizing Unicast Paging.

When the DSP resource is set to **Common without Unicast Paging** the resource can be accessed by anything but a Unicast page.

When the DSP resource is set to **Multicast Paging** the resource can only be accessed by a Multicast page no other device/feature can access this resource.

When the DSP resource is set to **Unicast Paging** the resource can only be accessed by a Unicast page no other device/feature can access this resource.

### Conditions

- **Version 3000 or higher** software is required to switch between Multicast and Unicast Paging. Prior to Version 3000 software IP phones utilized Multicast Paging.

- You can assign up to 16 IP phones in an Internal or All call paging group.
- When using Unicast mode, there must be an available DSP resource for each IP phone in the page group at the time of the internal page. If the resources are less than the number of IP phones, the page will be delivered to the IP phones with the lowest port numbers. IP phones that cannot obtain a DSP resource will not receive the page.
- IP terminals (DT7XX) via NAT cannot utilize Multicast paging. These terminals must use Unicast paging.
- The ability to assign Unicast or Multicast on an IP phone basis, is restricted to internal paging only. Other Multicast features (External MOH, Background Music, Room Monitor) cannot utilize Unicast.
- For an IP terminal to utilize the Multicast feature the IP terminal must have a gateway programmed to accomplish the multicast transmission. When an actual gateway device does not exist on the network, a dummy gateway address on the same subnet must be defined.
- When utilizing Multicast mode and a page group consists of all IP phones, the page is sent via a multicast message from the initiating phone. If a paging group has IP and TDM phones, when an IP phone initiates the page, a message is sent to the IPLA and the IPLA sends the Multicast message for the IP phones.
- MH240 and SIP Dect Wireless phones cannot receive an Internal Page.
- When using the G.711 Codec for multicast paging, only 10ms, 20ms, 30ms, and 40ms frame sizes can be used.

## Default Setting

Multicast

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## System Availability

### Terminals

All DT7XX IP Terminals

### Required Component(s)

- Version 3000 or higher software
- DT7XX IP terminal
- CD-CP00-US and CD-(XX)IPLA

- Router that supports Multicast Packets if utilizing Multicast Mode

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## Related Features

### IP Multiline Station (SIP)

### Meet Me Paging

### Meet Me Paging Transfer

### Paging, External

### Paging, Internal

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-19-01	<b>VoIP DSP Resource Selection</b>	Select type of VoIP ETU DSP Resource. This program setting has no affect on the terminal/trunk port assignment or usage.	0 = Common use for both IP extensions and trunks 1 = IP Extension 2 = SIP Trunk 3 = CCIS 4 = Use for NetLink 5 = Blocked Default: Resource 1 = 1 Resource 2~128 = 0		✓	
10-46-11	<b>DT700 Server Information Setup – Multicast IP Address</b>	Set the Multicast IP address so that two or more main devices don't overlap on the same network, or if Multicast is used by other IP services.	224.0.0.0~ 239.255.255.255 (default = 224.0.0.10)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-46-12	<b>DT700 Server Information Setup – Multicast Port</b>	Sets the starting port number used by Multicast.	0~65535 (default = 30000)			✓
11-12-19	<b>Service Code Setup (for Service Access) – Internal Group Paging</b>	Service code setup.	MLT, SLT (default = 701)		✓	
15-05-38	<b>IP Telephone Terminal Basic Data Setup – Paging Protocol Mode</b>	Sets the protocol mode for the Paging function.	0 = Multicast 1 = Unicast 2 = Auto (default = 0)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign function keys for Internal Paging Zones (code 21 + page zone) and Internal All Call Paging (code 22).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-13-29	<b>Class of Service Options (Supplementary Service) – Paging Display</b>	Turn Off or On an extension user ability to display paging information.	0 = Off 1 = On (default = 1 for COS 1~15)			✓
31-01-01	<b>System Options for Internal/ External Paging – All Call Paging Zone Name</b>	Assign a name to the All Call Internal Paging Zone. The name shows on the display of the telephone making the announcement.	Up to 12 Characters (default = Group All)			✓
31-01-02	<b>System Options for Internal/ External Paging – Page Announcement Duration</b>	Set the maximum allowable duration for a Paging announcement (External Paging only).	0~64800 (seconds) (default = 1200)			✓
31-02-01	<b>Internal Paging Group Assignment – Internal Paging Group Number</b>	Assign extensions to Internal Paging Zones. An extension must be assigned to a 2-digit zone to access any 2-digit zone.	Internal Page Zones: 0, 1~9, 00, 01~64 0~64 (0 = No Setting) Default: 0 for IP Station 1 for TDM Station	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
31-02-02	<b>Internal Paging Group Assignment – Internal All Call Paging Receiving</b>	Turn Off or On All Call Internal Paging for each extension. If allowed, extensions can make and receive All Call Internal Paging announcements. If prevented, extension can make only All Call Internal Paging announcements.	0 = Off 1 = On (default = 0)	✓		
31-03-01	<b>Internal Paging Group Settings – Internal Paging Group Name</b>	Program names for the Internal Paging Zones.	Up to 12 Characters 01 = Group 1 02 = Group 2 : 64 = Group 64			✓
31-07-01	<b>Combined Paging Assignments</b>	For each External Paging Group (1~8 and 0 for All Call), assign a corresponding Internal Zone for Combined Paging.	Internal Page Zones: 0, 1~9, 00, 01~64 0~64 (0 = All internal paging) (default = 1)		✓	

## Operation

### To make an Internal Page announcement:

#### Multiline Terminal/IP Terminal/MH240

1. Press the zone **Internal Paging** key (Program 15-07 or SC 751: 21 + 0 or 1~9 or 01~64 for zones (0 or 00 for All Call).

- OR -


Press **Speaker** or lift the handset.


Dial **701** and the Paging Zone number (0~9 or 00~64).

 *Dialing 0 or 00 calls All Call Internal Paging.*

- OR -



Dial **\*1** and the Combined Paging Group code 1~8 or 0 (for Internal/External All Call).

 *Display indicates the Combined Paging as an External Page.*

 *If the Internal Page Zone is busy or if there are no extensions in a page group, the page is announced as an External Page only.*

2. Make announcement.
3. Press **Speaker** to hang up.

**Single Line Telephone/SIP DECT Wireless**

1. Lift the handset.
2. Dial **701** and the Paging Zone number (0~9 or 00~64).
  -  *Dialing 0 or 00 calls All Call Internal Paging.*
  -  *Dial \*1 and the Combined Paging Group code 1~8 or 0 (for Internal/External All Call).*
3. Make announcement.
4. Hang up.

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# *Uniform Call Distribution (UCD)*

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## **Description**

With Uniform Call Distribution (UCD), an extension user can call an idle extension in a preprogrammed UCD Group (Department Group – 64 Department Groups available) by dialing the group pilot number. For example, this would let a caller dial the Sales department just by knowing the Sales department pilot number. The caller would not have to know any of the Sales department extension numbers.

## **User Log Out/Log In**

An extension user can log out and log in to a UCD (Department) group. By logging out, the user removes their extension from the group. Once logged out, UCD (Department Calling) bypasses their extension. When they log back in, UCD (Department Calling) routes to their extension normally. All users can dial a code to log in or log out of their UCD (Department Calling) Group. A multiline terminal can optionally have a function key programmed for one-button log in and log out.

## **Enhanced Hunting**

UCD (Department Calling) is enhanced with expanded hunting abilities. Hunting sets the conditions under which calls to a UCD (Department Group) pilot number cycles through the members of the group. The hunting choices are:

**Busy**

A call to the pilot number only hunts past a busy group member to the first available extension. A call rings on an unanswered extension until it is answered, or the caller hangs up.

**Not Answered**

A call to the pilot number cycles through the idle members of a UCD (Department Calling) group. The call continues to cycle until it is answered or the calling party hangs up. However, if the next station in the cycle is busy when a new call comes in, the call queues to the busy agent. New calls do not hunt past a busy agent.

**Busy or Not Answered**

A call to the pilot number cycles through the idle members of a UCD (Department Calling) group. The call continues to cycle until it is answered or the calling party hangs up.

If all members of the UCD (Department) group are busy, an incoming or transferred call to the group pilot number queues for an available member. Each group has a queue that can hold any number of waiting calls. If a display telephone is waiting in queue, the user sees: *WAITING (group name)*. If a transferred call in queue is an outside call, and the system has a DSP daughter board installed with the VRS compact flash, the queued caller hears, *“Please hold on. All lines are busy. Your call will be answered when a line becomes free.”*

The VRS can also transfer calls to UCD (Department) groups. Refer to the [Voice Response System \(VRS\) on page 2-1973](#) feature for more information on setting up the VRS.

The system prevents hunting to a UCD (Department) group extension if it is:

- Busy on a call
- In Do Not Disturb
- Call Forwarded
- Logged Out

### **Conditions**

- When a DIL rings to a UCD (Department) groups, the DIL may follow overflow programming (Program 22-01-04 and Program 22-08-01).
- If an extension has Call Forwarding set, the system does not hunt to the forwarded extension.

### **Default Setting**

Disabled



### Priority Routing

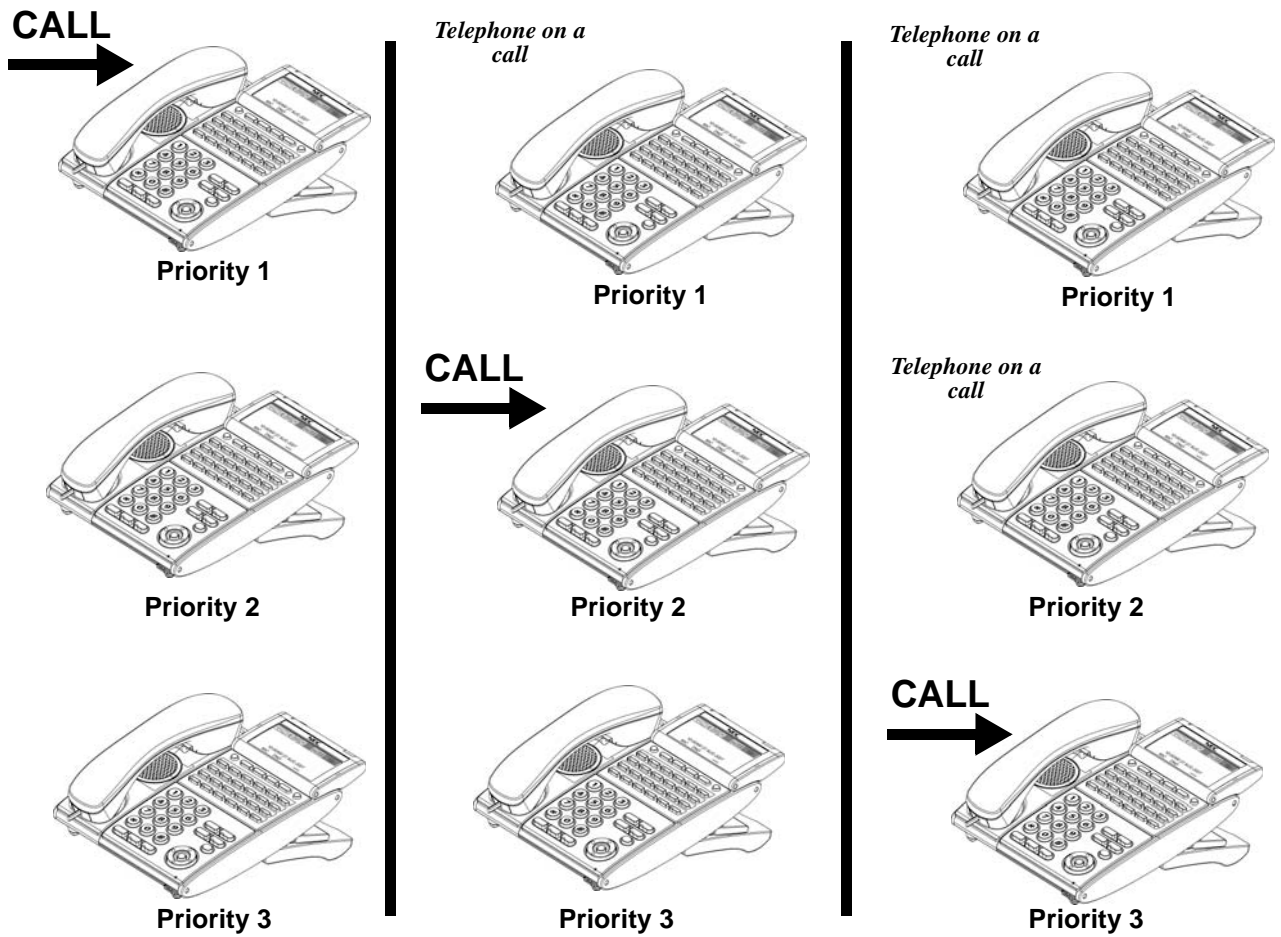


Figure 2-81 Uniform Call Distribution (UCD) Priority Call Routing

### Circular Routing

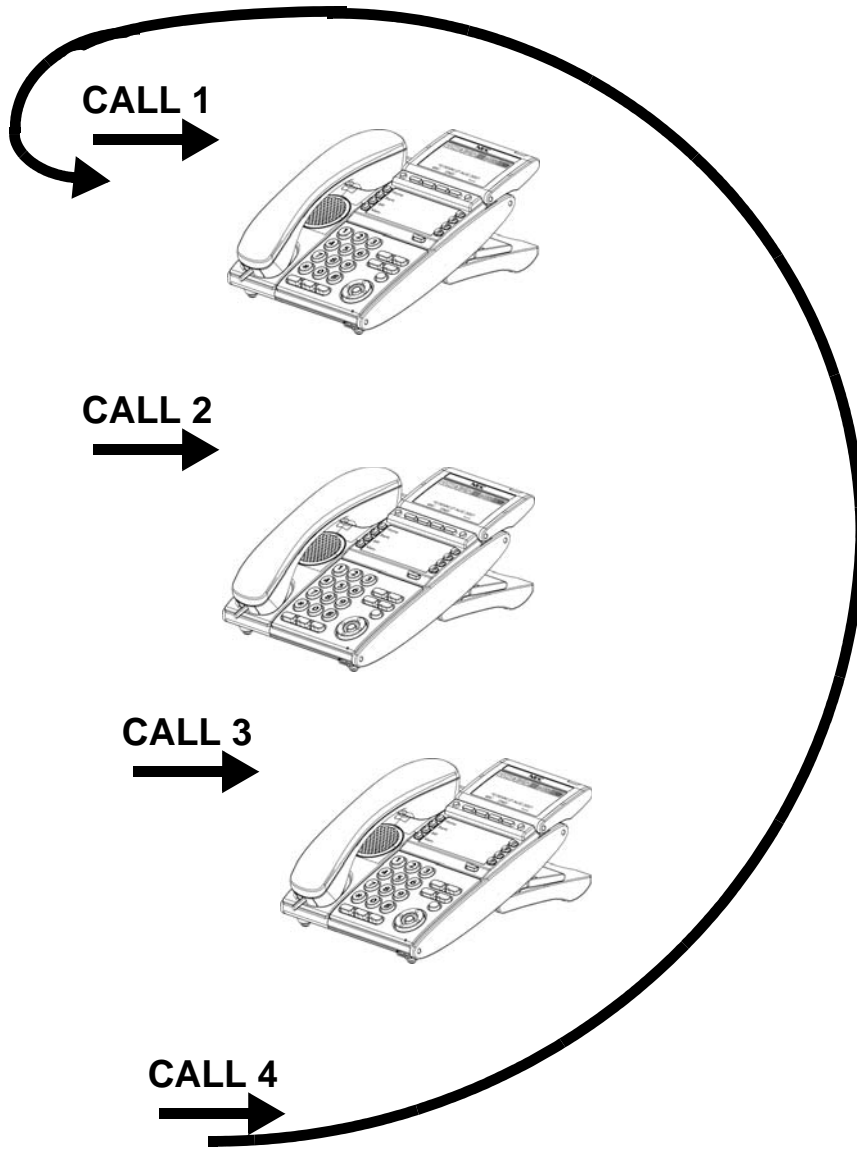


Figure 2-82 Uniform Call Distribution (UCD) Circular Routing

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

PZ-VM21 and VRS Compact Flash (for Delay Announcements)

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## **Related Features**

**Automatic Call Distribution (ACD)**

**Call Forwarding**

**Call Arrival (CAR) Keys**

**Transfer**

**VM8000 InMail**

**Voice Response System (VRS)**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign pilot numbers to the Extension (Department) Groups you set up in Program 16-02-01~Program 16-02-10.	Up to eight digits (default not assigned)	✓		
15-07-01	<b>Programmable Function Keys</b>	Assign a Uniform Call Distribution key (46) so extension users can install or remove themselves from the Uniform Call Distribution Group. Additional keys can also be assigned for Department Group features Automatic Transfer (56), immediate calling destination (58), delayed calling destination (59), and DND destination (60).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Assign a name to the Extension (Department) Groups.	Maximum 12 characters (default not assigned)	✓		
16-01-02	<b>Department Group Basic Data Setup – Department Calling Cycle</b>	Set the call routing for Department Calling. Routing can be either circular (cycles to all phones in group) or priority (cycles to highest priority extension first) Set to 1 for UCD.	0 = Normal Routing (Priority) 1 = Easy – UCD Routing (Circular) (default = 0)	✓		
16-01-03	<b>Department Group Basic Data Setup – Department Routing When Busy (Auto Step Call)</b>	Set how the system routes an Intercom call to a busy Department Group member. Intercom callers can hear busy or route to the first available Department Group member. This occurs only for calls to the extension directly, not the department number assigned in Program 11-07.	0 = Normal (Intercom caller to busy department member hears busy) 1 = Circular (Intercom callers to busy department member routes to idle member) (default = 0)	✓		


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-04	<b>Department Group Basic Data Setup – Hunting Mode</b>	Set the action taken when a call reaches the last extension of the department group.	0 = Last extension is called and hunting is stopped 1 = Circular (default = 0)	✓		
16-01-05	<b>Department Group Basic Data Setup – Extension Group All Ring Mode Operation</b>	Determine whether calls ringing a Department Group should ring all extensions in the group simultaneously automatically or manually when using the service code defined in Program 11-12-09. When set to 1 only ICM and DID calls ring all stations in the Department Group.	0 = Manual 1 = Automatic (default = 0)	✓		
16-01-06	<b>Department Group Basic Data Setup – STG Withdraw Mode</b>	Set the STG withdraw mode for each department group.	0 = Disable (Camp On) 1 = Enable (Overflow Mode) (default = 0)	✓		
16-01-07	<b>Department Group Basic Data Setup – Call Recall Restriction for STG</b>	Determine whether or not an unanswered call transferred to a Department Group should recall the extension from which it was transferred.	0 = Disable (Recall) 1 = Enable (No Recall) (default = 0)	✓		
16-01-09	<b>Department Group Basic Data Setup – Department Hunting No Answer Time</b>	Set how long a call rings a Department Group extension before hunting occurs.	0~64800 (seconds) (default = 15)	✓		
16-01-10	<b>Department Group Basic Data Setup – Enhanced Hunt Type</b>	Set the type of hunting for each Department Group.	0 = No queuing 1 = Hunting When Busy 2 = Hunting When Not Answered 3 = Hunting When Busy or No Answer (default = 0)	✓		
16-02-01	<b>Department Group Assignment for Extensions</b>	Set up the Department Group called by the pilot number and the extension priority when a group is called. Call Pickup Groups are set up in 23-02.	Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-03-01	Secondary Department Group	Assign extensions to multiple Department Groups and set the priority assignment. Each Secondary Department Group can have up to 16 extensions assigned.	Extension Number Maximum eight digits Priority Order 0~999 (default not assigned)		✓	
20-06-01	Class of Service for Extensions	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-09-07	Class of Service Options (Incoming Call Service) – Call Queuing	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-17	Class of Service Options (Hold/Transfer Service) – Department Group Trunk-to-Trunk Transfer (Each Telephone Group Transfer)	Turn Off or On an extension user ability in a Department Group to use the Trunk-to-Trunk Forwarding service codes.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook Signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-14	Class of Service Options (Supplementary Service) – Department Calling (PLT No Called Extension)	Turn Off or On an extension user ability to call a Department Group Pilot.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
22-02-01	Incoming Call Trunk Setup	If you want a trunk to be a DIL to a Department Group, assign Service Type 4 for each Night Service Mode. Also see Program 22-07-01.	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-07-01	DIL Assignment	For each trunk assigned Service Type 4 in Program 22-02 above, assign the DIL destination as the Department Group pilot number (as assigned in Program 11-07-01). (Department: Groups 1~64).	Extension Number (maximum eight digits) (default not assigned)		✓	
24-02-05	System Options for Transfer – Message Wait Ring Interval Time	For Single Line Telephones (SLTs) without message waiting lamps, this is the time between intermittent ringing. If this value is 0, the system rings once.	0~64800 (seconds) (default = 30)		✓	
24-02-08	System Options for Transfer – Delayed Transfer Timer for All Department Groups	Determine the time a call should ring a Department Group before transferring the call.	0~64800 (seconds) (default = 10)		✓	
24-05-01	Department Group Transfer Target Setup	Use the Speed Dialing area to program the destination number of the transferred telephone number when a Department Group call is transferred using Trunk-to-Trunk Forwarding.	0~1999 (default = 1999)		✓	

## Operation

### To call a UCD Group:

- At the multiline terminal, press **Speaker**.  
- OR -  
At single line telephone, lift the handset.
- Dial the UCD group (department) extension or pilot number.  
 *The system routes the call to the first free telephone in the (UCD group) department.*

### To log out of your UCD (Department Calling) Group:

-  *While you are logged out, UCD (Department Calling) cannot route calls to your extension.*
- Press **Speaker**.
  - Dial **650** and **1**.  
- OR -  
Press **Uniform Call Distribution Log In** key (Program 15-07 or SC 751: 46).  
 *The key lights while you are logged out.*


**To log back in to your UCD (Department Calling) Group:**

 While you log back in, Uniform Call Distribution routes calls to your extension.

1. Press **Speaker**.
2. Dial **650** and **0**.

- OR -

Press **UCD (Department Calling) Log In** key (Program 15-07 or SC 751: 46).

 The key goes out when you log back in.



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# *Uniform Numbering Network*

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## **Description**

Uniform Numbering Network allows multiple or compatible systems to be connected in a network using Tie Lines. A station user can dial a system number and a station number (open numbering) or dial the station number only (closed numbering) to access any station. When the calling and called systems are not directly connected, several Tie Lines may be accessed to route the call. Each system extends the call to the next system until the final destination is reached. Networking provides a seamless connection of multiple systems into a single “virtual” communications system using Tie Lines with a unified numbering plan. Networking allows many companies to connect their telephone systems so they appear as one. An extension user in the network can easily dial another extension or transfer a call in the Networking System. Calls are passed from network node to network node using a protocol that contains information about the source, type, and destination of the call.

## **Flexible Network Routing**

Use network routes to set up single-channel networking between many separate systems – or use multiple networking channels per system for greater network performance. Data tables in the system program define the routing for each extension in each network node. These tables are easily customized to meet the requirements of each networking configuration. Users may place an intercom call or transfer a call to any extension at any location by dialing an extension number. The system analyzes each extension number received and determines how to route the call to its final destination. The feature which handles this route selection is called Flexible Routing (F-Routing). F-Routing also can select alternate routes to the destination extension if the primary destination is busy. Up to 120 routes are available for networking. After an extension number is dialed, the system checks the routing, accesses the assigned trunk group and places the call. Each extension is assigned a route or routes that decide which trunk group to access and any modified dialed data if required.

## **Conditions**

- Monitor the Uniform Numbering Network Access Code plan to avoid loss of Access Codes and to prevent duplicating codes.
- The distant system number can be programmed as 2~8 digits.
- The UNIVERGE SV8100 system has 500 ARS/F-Route Tables that can be shared by outgoing Tie lines, ISDN CO/PBX, and FT1 lines.
- When a call from/to the remote-end is made to a busy station in the UNIVERGE SV8100 system, the caller cannot set features such as Callback Message, Step Call, or Camp-On.
- A maximum of 120 Dial Analysis Tables allow a maximum of 121 connected systems per Uniform Numbering Network.
- DID Full Digit Conversion can access the Uniform Numbering Network.

## **Default Setting**

None

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## **System Availability**

### **Terminals**

All Terminals

### **Required Component(s)**

CD-4ODTA

**-OR-**

CD-PRTA

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## **Related Features**

**Automatic Route Selection**

**Flexible System Numbering**

**K-CCIS – IP**

**K-CCIS – T1**

**Multiple Trunk Types**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-01-01	<b>System Numbering – Service Code</b>	Set the systems internal (Intercom) numbering plan. The numbering plan assigns the first and second digits dialed and affects the digits an extension user must dial to access other extensions and features, such as service codes and trunk codes. If the default numbering plan does not meet the site requirements, use this program to tailor the system numbering to the site. <b>Caution</b> Improperly programming this option can adversely affect system operation. Make sure you thoroughly understand the default numbering plan before proceeding. <b>Before changing your numbering plan, use PCPro or WebPro to make a backup copy of your system data.</b>	Refer to UNIVERGE SV8100 Programming Manual.	✓		
11-02-01	<b>Extension Numbering</b>	Set the extension number. The extension number can have up to eight digits. The first/second digit(s) of the number should be assigned in Program 11-01-01. This allows an employee to move to a new location (port) and retain the same extension number.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513	✓		
14-02-09	<b>Analog Trunk Data Setup – Busy Tone Detection</b>	Enable/Disable busy tone detection for trunk ports.	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-14	<b>Analog Trunk Data Setup – Loop Start/Ground Start</b>	Define an analog trunk as Loop Start or Ground Start.	0 = Loop Start 1 = Ground Start (default = 0)	✓		
14-05-01	<b>Trunk Group – Trunk Group Number</b>	Assign trunks to trunk groups (1~100).	Trunk Group Number: 0~100 Priority Number: 1~200 (default = Trunk Group 1, with priority in ascending order.)	✓		
44-01-01	<b>System Options for ARS/F-Route – ARS/F-Route Time Schedule</b>	Set this option to 0 so the F-Route table selected is determined only by the digits dialed without any relation to the day or time of the call. If 1 is selected, the system refers to Program 44-10. If there is a match, the pattern defined in that program is used. If not, the F-Route pattern in Program 44-09 and the time set in 44-08 are used.	0 = Not Used 1 = Used (default = 0)		✓	
44-02-01	<b>Dial Analysis Table for ARS/F-Route Access – Dial</b>	Set the number of digits to be analyzed by the system for ARS routing.	Up to eight digits (Use line key 1 for a 'Don't Care digit, @) (default not assigned)	✓		
44-02-02	<b>Dial Analysis Table for ARS/F-Route Access – Service Type</b>	Select the Service Type.	0 = No Setting (None) 1 = Extension Call (Own) 2 = ARS/F-Route Table (F-Route) 3 = Dial Extension Analyze Table (Option) (default = 0)	✓		
44-02-03	<b>Dial Analysis Table for ARS/F-Route Access – Additional Data</b>	Enter the additional data required for the service type selected in Program 44-02-02, either the number of digits to be deleted or the table number to be used.	1 = Delete Digit = 0~255 (255 : Delete All Digits) 2 = 0~500 (0 = No Setting) 3 = Dial Extension Analyze Table Number = 0~4 (0 = No Setting) (default = 0)	✓		
44-02-04	<b>Dial Analysis Table for ARS/F-Route Access – Dial Tone Simulation</b>	If Enabled (1), this option sends dial tone to the calling party after the routing is determined. This may be required if the central office at the destination does not send dial tone.	0 = Off 1 = On (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-03-01	Dial Analysis Extension Table – Dial	Set the Dial digits (24 digits maximum) 1~9, 0 *, #, @) to be used for the Dial Extension Analysis Table. When Program 44-02-02 is set to 3, this program sets the dial extension analysis table. These tables are used when the analyzed digits must be more than eight digits. To enter a wild card/don't care digit, press Line Key 1 to enter an @ symbol.	Up to 24 digits Digits = 1~9, 0, *, #, @ (Press Line Key 1 for wild character @) (default = Not assigned)		✓	
44-03-02	Dial Analysis Extension Table – ARS/F-Route Select Table Number	When dialed digits match the setting in Program 44-03-01, select the ARS/R-Route table number (0~500) to be used for the Dial Extension Analysis Table.	0~500 (ARS/F-Route Table Number) With Program 44-01 set to 0, Program 44-05 is checked. With Program 44-01 set to 1, Program 44-04 is checked. (default = 0)		✓	
44-03-03	Dial Analysis Extension Table – ARS/F-Route Select Table Number	If the received digits are not identified in tables 1~250, the F-Route selection table number (0~500) defined in table 251 is used.	0~500 (ARS/F-Route Table Number) With Program 44-01 set to 0, Program 44-05 is checked. With Program 44-01 set to 1, Program 44-04 is checked. (default = 0)		✓	
44-03-04	Dial Analysis Extension Table – Next Table Area Number (252)	If the received digits do not match the digits set in tables 1~250, table number 252 is used refer to the next Extension Table Area (1~4) to be searched.	0~4 (default = 0)		✓	
44-04-01	ARS/F-Route Selection for Time Schedule	Assign each ARS/F-Route Selection number (1~500) to an ARS/F-Route table number for each ARS/F-Route time mode.	ARS/F-Route Time Mode: 1~8 ARS/F-Route Table Number = 0~500 (default = 0)		✓	
44-05-01	ARS/F-Route Table – Trunk Group Number	Select the trunk group number used for the outgoing ARS call (1~100).	0~100, 255 0 = No Setting 255 = Extension Call (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-05-02	<b>ARS/F-Route Table – Delete Digits</b>	Enter the number of digits to be deleted from the dialed number [0~255 (255 = Delete all)].	0~255 (255 = Delete All) (default = 0)	✓		
44-05-03	<b>ARS/F-Route Table – Additional Dial Number Table</b>	Enter the table number defined in Program 44-06 for additional digits to be dialed (0~1000).	0~1000 (default = 0)	✓		
44-05-04	<b>ARS/F-Route Table – Beep Tone</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Turn Off or On a beep tone if a lower priority trunk group is used.	0 = Off 1 = On (default = 0)		✓	
44-05-05	<b>ARS/F-Route Table – Gain Table Number for Internal Calls</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the gain table number used for internal call (defined in Program 44-07).	0~500 0 = No Setting (default = 0)		✓	
44-05-06	<b>ARS/F-Route Table – Gain Table Number for Tandem Connections</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the gain table number used for the tandem call (defined in Program 44-07).	0~500 0 = No Setting (default = 0)		✓	
44-05-07	<b>ARS/F-Route Table – ARS Class of Service</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the Class of Service used for ARS. An extension ARS COS is determined in Program 26-04-01.	0~16 (default = 0)		✓	
44-05-08	<b>ARS/F-Route Table – Dial Treatment</b>	For each ARS/F-Route table (1~500) assign a priority number (1~4). Select the Dial Treatment to be used for the table. The Dial Treatments are determined in Program 26-03-01.	0~15 (default = 0)	✓		
44-05-09	<b>ARS/F-Route Table – Maximum Digit</b>	Input the maximum number of digits to send when using the F-Route.	0~24 (default = 0)		✓	
44-05-10	<b>ARS/F-Route Table – CCIS over IP Destination Point Code</b>	Input the Destination Point Code to send when using F-Route.	0~16367 (default = 0)		✓	
44-05-11	<b>ARS/F-Route Table – Network Specified Parameter Table</b>	Enter a table number from Program 26-12.	0~16 (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-06-01	<b>Additional Dial Table</b>	Set the additional dial table to add prior to the dialed ARS/F-Route Number. The Additional Dial Table used is determined in Program 44-05-03. Define the additional dial table (1~1000) to add digits in front of the dialed ARS/F-Route number.	Up to 24 digits Enter: 1~9, 0, *, #, Pause (press line key 1 to enter a pause) (default = No Setting)		✓	
44-07-01	<b>Gain Table for ARS/F-Route Access – Incoming Transmit</b>	Set the gain table to be used (1~500). If an extension dials ARS/F-Route number;	1~63 (-15.5 ~ +15.5dB) (default = 32)		✓	
44-07-02	<b>Gain Table for ARS/F-Route Access – Incoming Receive</b>	The Extension Dial Gain Table assigned in Program 44-05 is activated.	1~63 (-15.5 ~ +15.5dB) (default = 32)		✓	
44-07-03	<b>Gain Table for ARS/F-Route Access – Outgoing Transmit</b>	The Extension Dial Gain Table follows Outgoing transmit and Outgoing receive settings.	1~63 (-15.5 ~ +15.5dB) (default = 32)		✓	
44-07-04	<b>Gain Table for ARS/F-Route Access – Outgoing Receive</b>	If the incoming call is transferred to another line using ARS/F-Route; the Tandem Gain Table assigned in Program 44-05 is activated. The Tandem Gain Table follows the Incoming transmit and Incoming receive settings for incoming line, and Outgoing transmit and Outgoing receive settings for the outgoing line. For ARS/F-Route calls, the CODEC gains defined in Program 14-01-02 and Program 14-01-03 are not activated.	1~63 (-15.5 ~ +15.5dB) (default = 32)		✓	
44-08-01	<b>Time Schedule for ARS/F-Route</b>	Define the daily pattern of the ARS/F-Route feature. ARS/F-Route has 10 time patterns. These patterns are used in Program 44-09 and Program 44-10. The daily pattern consists of 20 time settings.	Time Number: 01~20 Start Time = 0000~2359 End Time = 0000~2359 Mode: 1~8 Default = All Schedule Patterns: 0:00 – 0:00, Mode 1		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
44-09-01	<b>Weekly Schedule for ARS/ F-Route</b>	Define a weekly schedule for using ARS/F-Route day numbers 1~7, pattern numbers (1~10). The pattern number is defined in Program 44-08-01.	1 = Sunday (Pattern 1~10) (default Pattern = 1) 2 = Monday (Pattern 1~10) (default Pattern = 1) 3 = Tuesday (Pattern 1~10) (default Pattern = 1) 4 = Wednesday (Pattern 1~10) (default Pattern = 1) 5 = Thursday (Pattern 1~10) (default Pattern = 1) 6 = Friday (Pattern 1~10) (default Pattern = 1) 7 = Saturday (Pattern 1~10) (default Pattern = 1)		✓	
44-10-01	<b>Holiday Schedule for ARS/ F-Route</b>	Define a yearly schedule for ARS/F-Route. This schedule is used for setting special days such as national holidays (pattern numbers 1~10). The pattern number is defined in Program 44-08-01.	Date: 0101~1231 Schedule Pattern Number = 0~10 0 = No Setting (default = 0)		✓	

## Operation

None



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## Universal Slots

### Enhancements

SV8100 **Version 2000** software now supports a 3-slot 9.5" chassis.

This feature added with **Version 2000** software.

The SV8100 now supports a 3-slot 9.5" base chassis and a 3-slot 9.5" expansion chassis that can be combined to make a 6-slot chassis.

This feature added with **Version 3000** software.

The SV8100 now supports two CD-LTA (Combo) blades installed in a single 9.5" Base chassis, a total of eight CD-LTA's in a four chassis system and 23 in a networked system. The PZ-ME50 is required for this configuration.

This feature added with **Version 3000** software.

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### Description

The UNIVERGE SV8100 has six universal slots, and up to four cabinets can be installed. The system uses the same chassis for the 64, 256 and unlimited systems to support up to 24 Universal Slots.

Up to four combined CHS2U B-US/CHS2U E (3-Slot Base/3-Slot Expansion) or CHS2U-US (6-Slot) chassis can be connected locally to reach the system's maximum port capacity.

#### EXAMPLE:

0 CHS2U-US (19" Chassis) & 4 CHS2U B-US/CHS2U E (9.5" Base Chassis/9.5" Expansion Chassis)

1 CHS2U-US (19" Chassis) & 3 CHS2U B-US/CHS2U E (9.5" Base Chassis/9.5" Expansion Chassis)

2 CHS2U-US (19" Chassis) & 2 CHS2U B-US/CHS2U E (9.5" Base Chassis/9.5" Expansion Chassis)

3 CHS2U-US (19" Chassis) & 1 CHS2U B-US/CHS2U E (9.5" Base Chassis/9.5" Expansion Chassis)

4 CHS2U-US (19" Chassis) & 0 CHS2U B-US/CHS2U E (9.5" Base Chassis/9.5" Expansion Chassis)

### Conditions


- Two software packages (Basic Port Package and Expanded Port Package) are available for the UNIVERGE SV8100 system using the CD-CP00-US. Refer to [Table 2-113 SV8100 Maximum System Capacities – Trunks/Ports/Channels on page 2-1756](#) for maximum system capacities for each software package.

Table 2-113 SV8100 Maximum System Capacities – Trunks/Ports/Channels

Number of:		9.5" Chassis	19" Chassis				System Maximum
		x 1 (CPU + 2 Slots)	x 1 (6 Slots)	x 2 (12 Slots)	x 3 (18 Slots)	X4 (24 Slots)	
Number of Timeslots *1	PCM	48	104	208	312	416	444
	Data	7	7	14	21	28	28
$D^{term}$ (-48V)		32	80	176	272	368	Total 512
SLT (-28V)		32	80	176	272	368	
SLT (-48V)		8	20	44	68	92	
$D^{term}_{IP}$		512					
Desktop Applications (Desktop Client, Desktop Client with Shared Services and SoftPhones)		128					Total 128
SIP/WLAN		512					Total 512
Analog Trunks (COT)		16	40	88	136	184	Total 200
BRI		16	40	88	136	184	
PRI (1.5M)		48	96	192	192	192	
IP Trunk (SIP)		200					
DTMF Receivers			32	32	32	32	96 *2
VoIP Channels		128					128
Voice Mail Channels on CPU		16 channels					16
V34 Modem		1 channel					1

\*1 = For  $\mu$ -law countries 104 timeslots per chassis are assigned the G.711 PCM communications (e.g., voice communications) and 7 timeslots per chassis are assigned for the Data communications (e.g., HDLC over ISDN). Thus the simultaneous data communications are limited up to seven per chassis.

\*2 = An additional 64 DTMF Receivers are available when the PZ-BS10 is installed.

 An additional 64 DTMF Receivers are available when the PZ-BS10 is installed.


If using Caller ID to analog trunks and DSP resources are set to common, DSP resources will only be used for analog trunks and not analog stations.

Table 2-114 SV8100 9.5" (Base and Expansion) Maximum System Capacities – Trunks/Ports/Channels

Number of:		9.5" Base	9.5" Base + Expansion				System Maximum
		x 1 (CPU + 2 Slots)	x 1 (6 Slots)	x 2 (12 Slots)	x 3 (18 Slots)	X4 (24 Slots)	
Number of Timeslots *1	PCM	48	104	208	312	416	444
	Data	7	7	14	21	28	28
$D^{term}$ (-48V)		32	80	176	272	368	Total 512
SLT (-28V)		32	80	176	272	368	
SLT (-48V)		8	20	44	68	92	
$D^{term}_{IP}$		512					
Desktop Applications (Desktop Client, Desktop Client with Shared Services and SoftPhones)		128					Total 128
SIP/WLAN		512					Total 512
Analog Trunks (COT)		16	40	88	136	184	Total 200
BRI		16	40	88	136	184	
PRI (1.5M)		48	96	192	192	192	
IP Trunk (SIP/K-CCIS – IP)		200					
DTMF Receivers			32	32	32	32	96 *2
VoIP Channels		128					128
Voice Mail Channels on CPU		16 channels					16
V34 Modem		1 channel					1

\*1 = For  $\mu$ -law countries 104 timeslots per chassis are assigned the G.711 PCM communications (e.g., voice communications) and 7 timeslots per chassis are assigned for the Data communications (e.g., HDLC over ISDN). Thus the simultaneous data communications are limited up to seven per chassis.

\*2 = An additional 64 DTMF Receivers are available when the PZ-BS10 is installed.

 An additional 64 DTMF Receivers are available when the PZ-BS10 is installed.

If using Caller ID to analog trunks and DSP resources are set to common, DSP resources will only be used for analog trunks and not analog stations.

- Each Universal Slot is capable of 24 ports.
- The Basic Port Package is limited to one chassis.
- The PRTA blades can be programmed as a 4/8/12/16/20/24 port Fractional T1/PRI. Program 10-39-01 must be Enabled).
- If trying to assign an blade which would exceed the maximum number of ports for the Basic Port Package you do not get an error, but it does not let you program the related programs.
- The 9.5" chassis can now accommodate two CD-LTA (combo) blades in the universal slots. Both blades can be viewed and accessed via PC Pro.
- The available interface blades and maximum capacities for Universal Slots with the UNIVERGE SV8100 system are shown in [Table 2-115 Maximum System Capacities for Station Interface Blades](#), [Table 2-116 Maximum System Capacities for Trunk Interface Blades](#) and [Table 2-117 Maximum System Capacities for Application Interface Blades](#).

**Table 2-115 Maximum System Capacities for Station Interface Blades**

Station Interface Units	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
PZ-VM21 with InMail Compact Flash card installed.	This unit is a daughter board that is installed on the CD-CP00-US and is used for the VRS or InMail Compact Flash.	1	1	–
CD-8DLCA	<p>This 8-port Digital Line Blade contains eight circuits. Each circuit can support any Attendant Console, multiline terminal, or Single Line Telephone adapter.</p> <p>This blade is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other station blades installed. This blade shares the total number of extension ports in the system.</p> <p>No more than 80 DLC ports are supported in a single chassis.</p>	5	20	Note: 1

**Table 2-115 Maximum System Capacities for Station Interface Blades (Continued)**

Station Interface Units	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
CD-16DLCA	<p>These blades are 16-port. Each circuit can support any Attendant Console, multiline terminal, or Single Line Telephone adapter.</p> <p>This blade is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other station blades installed. This blade shares the total number of extension ports in the system.</p> <p>No more than 80 ESI ports are supported in a single chassis.</p>	5	23	Note: 1
CD-4DIOPA	<p>This 4-port Analog DID or Off-Premise Extension blade provides termination and operation of four analog DID trunks or four off premise extensions. Each blade has a built-in ringer signal generator (RSG). Up to 1600 ohms of resistance (including the single line instrument) is acceptable between the blade and the single line telephone.</p> <p>This blade is installed in slots 2~6 of a chassis with CPU or slots 1~6 of expansion chassis and shares the number of station ports in the system.</p>	5	23	Note: 1

**Table 2-115 Maximum System Capacities for Station Interface Blades (Continued)**

Station Interface Units	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
CD-4LCA	<p>This 4-port Single Line Interface blade supports four Single Line Telephones and/or analog voice mail ports. Each blade provides a built-in ringer signal generator (RSG) and Message Waiting (MW) LED voltage to single line telephones.</p> <p>This blade is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other station blades installed. This blade shares the total number of station ports in the system.</p>	5	23	Note: 1
CD-8LCA	<p>This 8-port Single Line Interface blade supports eight Single Line Telephones and/or analog voice mail ports. Each blade provides a built-in ringer signal generator (RSG) and Message Waiting (MW) LED voltage to single line telephones.</p> <p>This blade is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other station blades installed. This blade shares the total number of station ports in the system.</p>	5	23	Note: 1

**Table 2-115 Maximum System Capacities for Station Interface Blades (Continued)**

Station Interface Units	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
PZ-4LCA	<p>This daughter board is a 4-port Single Line Interface. The PZ-4LCA is installed on the CD-4LCA, and supports four single line telephones with built-in ringer signal generator (RSG) and Message Waiting (MW) LED voltage to single line telephones.</p> <p>The CD-4LCA with a PZ-4LCA is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other station blades installed. This daughter board shares the total number of station ports in the system.</p>	4	23	Note: 1

Note 1: Calculating maximum capacities is based on the system having a minimum of eight Digital Line (DLC) ports, four trunk ports.

Note 2: A maximum of 32 Digital Voice Mail ports are available.

Note 3: Refer to the Board Power Factor Chart.

Note 4: The PZ-VM21 with an VM8000 InMail Compact Flash is installed on the CD-CP00-US, it does not use any ports from the maximum station port capacity of a basic port package, but it does use eight ports from the maximum station port capacity of an expanded port package.

**Table 2-116 Maximum System Capacities for Trunk Interface Blades**

Trunk Interface Blades	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
CD-2BRIA/ PZ-2BRIA	This 2/4-port Basic Rate Interface for up to eight trunks provides four channels (eight voice channels) for an ISDN-Basic Rate Interface. Caller ID is supported. This blade is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other trunk blades installed. This blade shares the total number of CO/PBX lines in the system.	5	23	Note: 1
CD-4COTB	This 4-port CO/PBX Line Interface has built-in fuses (posistors), supports four outside (CO/PBX) lines, and provides circuitry for ring detection, holding and dialing. The outside lines must be Loop Start DTMF trunks. This blade is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other trunk blades installed.  This blade shares the total number of CO/PBX lines in the system.	5	23	Note: 1
PZ-4COTF Daughter Board	This 4-port CO/PBX Line Interface has built-in fuses (posistors), supports eight outside (CO/PBX) lines, and provides circuitry for ring detection, holding and dialing. The outside lines must be Ground Start DTMF trunks. This daughter board is installed on a CD-4COTB or CD-LTA The maximum number depends on other trunk blades installed.  This daughter board shares the total number of CO/PBX lines in the system.	5	23	Note: 1



**Table 2-116 Maximum System Capacities for Trunk Interface Blades (Continued)**

Trunk Interface Blades	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
CD-PRTA	<p>This T1/FT1 Trunk Interface or ISDN-Primary Rate digital trunk terminates Fractional T1 trunks (Up to 24 DS-0 channels). This blade supports ANI/DNIS trunks, and CSU less function on T1. A combination of ground start and loop start signaling can be used on the CD-PRTA. Dial pulse dialing, DTMF, Tie Line (E&amp;M), and DID are supported. This blade has 24 built-in DTMF detectors. Trunks are assigned in groups of four.</p> <p>When channels are assigned to ANI, Feature Group D is supported. Feature Group D incoming MF/ outgoing DTMF signaling with point-to-point E&amp;M Tie Lines are also supported.</p> <p>This blade is installed in slots 2~6 of a chassis with CPU and slots 1~6 of expansion chassis. The maximum number depends on other trunk blades installed. This blade shares the total number of CO/PBX lines in the system.</p>	4	16	Note: 1
CD-CCTA	<p>The CD-CCTA (Common Channel Handler) is an optional blade that provides a common channel signal through the CD-CCTA to a K-CCIS network and controls the signaling between the KTS and the CP00. Each CD-CCTA blade supports one K-CCIS link.</p> <p>Four CD-CCTA blades can be installed per system. The T1 interface has a single 24 channel 64kb/s digital signal circuit which can be configured either for T1 trunking.</p>	4	4	—

**Table 2-116 Maximum System Capacities for Trunk Interface Blades (Continued)**

Trunk Interface Blades	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
CD-4ODTA	<p>The CD-4ODTA Tie Line blade is an out band dial type analog tie line interface blade. This blade supports system connections to either 2-wire (four lead, tip/ring) or 4-wire (eight lead, tip/ring/tip 1/ ring 1) E&amp;M signalling tie lines (determined in Program 10-03). System programming is also used to select the connection types with Type 1 or Type V.</p> <p>The CD-4ODTA consumes 4 ports ranging between ports 001~200. This blade is installed in slots 2-6 of a chassis with CPU and slots 1-6 of expansion chassis. The maximum number depends on other trunk blades installed. This blade shares the total number of CO/PBX lines in the system.</p>	5	23	–

Note 1: Calculating maximum capacities are based on the system having a minimum of eight Digital Line (DLC) ports, four trunk ports.

Note 2: Refer to [Table 2-118 Board Power Factor on page 2-1765](#).

**Table 2-117 Maximum System Capacities for Application Interface Blades**

Application Interface Blades	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
CD-VM00	This CD-VM00 is a PC platform that contains data storage for voice recording and application software supporting a maximum of 16 ports.	1	1	Note: 1
CD-RTB	The Router blade is an 4-port switching hub which complies with the ethernet specification for both 100Base-TX and 10Base-T. This blade is compatible in LAN applications using 10Mbps and 100Mbps. All ports automatically identify and switch 100Base-TX, 10Base-T and Full/Half Duplex.	1	1	Note: 1

**Table 2-117 Maximum System Capacities for Application Interface Blades (Continued)**

Application Interface Blades	Description	Maximum Capacities		Notes
		Basic Port Package	Expanded Port Package	
CD-ETIA	The CD-ETIA is an 8-port Gigabit Switch that provides Power over Ethernet (POE).	1	1	Note: 1
CD-PVAA	The CD-PVAA is a 16-port blade for the Multimedia Conference Bridge or IVR applications.	2	2	Note: 1

Note 1: Refer to [Table 2-118 Board Power Factor](#).



- Refer to the SV8100 General Description Manual or System Hardware Manual for more information.
- The following Blade Calculator allows you to determine the maximum power consumption for each cabinet.

**Table 2-118 Board Power Factor**

Board Power Factor	
Total	=<7
Item	Power Factor
CD-CP00-US	1
CD-RTB	2
CD-VM00	2
CD-ETIA	2
CD-PVAA	1
PZ-32IPLA	1
PZ-64IPLA	2
PZ-128IPLA	2
CD-SVRU	2

Table 2-119 Terminal Power Factor

Terminal Power Factor	
19 inch Metal Chassis with Fan	=<80
9.5 inch Plastic Chassis without Fan	=<64
Item	Power Factor
DTL-24D-1 TEL	0.8
DTL-8LD-1 TEL	0.8
BHA-L UNIT	2
ADA-L UNIT	2
APR-L UNIT	DT300 series : 2 $D^{term}$ series i : 3
BCH-L (BK) UNIT	2
PSA-L UNIT	1.2
8LK-L UNIT	0
DCL-60-1 CONSOLE	2
ITL-320C-1 TEL	6
ITL-24D-1 TEL	4
ITL-12CG-3 TEL	4
ITL-12DG-3 TEL	4
ITL-2E-1 TEL	4
ITL-6DE-1 TEL	4
SLT (-24V)	0.8
SLT (-48V)	2
PGD(2)-U10 ADP	2
SLT Adapter	5

-  *ITL factors are calculated using the CD-ETIA blade.*
-  *Power requirements for the 9.5 " chassis are the same as the 19" chassis.*

**Table 2-120 Maximum Number of Packages Installed**

Board (Power Factor)	Maximum Number of Package Installed			
	9.5 inch with CCPU	19 inch with CCPU	19 inch without CCPU	4 x 19 inch
CD-ETIA (2)	2	3	3	12
CD-PVAA (1)	2	5	6	23
CD-RTB (2)	1	2	2	8

- For SV8100 systems with **Version 4000 or higher** system software and has been migrated from a UX5000, [Table 2-121 Migration Supported Application Blades](#) defines the application blades supported in current system chassis.

**Table 2-121 Migration Supported Application Blades**

Blade	Color	CHS1U-US Blue 19" Chassis	CHS2U B-US Blue 9.5" Base Chassis	CHS2U E Blue 9.5" Exp Chassis	IP3NA- 6KSU-A1 White 19" Chassis	IP3NA-3KSU- B1 White 9.5" Base Chassis	IP3WW-3KSU- E1 White 9.5" Exp Chassis
CD-RTB	Blue	S	S	S	N/S	N/S	N/S
CD-ETIA	Blue	S	S	S	N/S	N/S	N/S
CD-PVAA	Blue	S	S	S	N/S	N/S	N/S
IP3WW-RTU-B1	White	N/S	N/S	N/S	S	S	S
IP3WW-GSWU-B1	White	N/S	N/S	N/S	S	S	S
LU-PVA-CONF- PORT8-LIC	White	N/S	N/S	N/S	S	S	S

S = Supported  
N/S = Not Supported

## Default Setting

None

---

## System Availability

### Terminals

None

### Required Component(s)

Any Blade

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## Related Features


None

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

 *The items highlighted in gray are read only and cannot be changed.*

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-03-01	ETU Setup	Set up and confirm the basic configuration data for each blade. This program represents different data depending on the blade installed in the slot. Please refer the SV8100 Programming Manual for a more detailed description of this program.	The assigned data varies depending on the blade installed in the slot. Please refer to the SV8100 Programming Manual for a more detailed description of the 10-03-XX programs.	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-34-01	Firmware Information – Pkg Name	List the package type and firmware for the packages installed.	The data varies depending on the card in the slot.	✓		
90-34-02	Firmware Information – Firmware Version Number	View the package name and firmware for each blade.	The data varies depending on the card in the slot.	✓		

## Operation

None

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## *User Programming Ability*

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### **Description**

A station user can perform programming functions. Speed Group Dialing and Function Keys are just two features programmable from a station.

### **Conditions**

- Multiline terminals must be idle and Off-Hook and have entered the service code when programming any function.

### **Default Setting**

None

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### **System Availability**

#### **Terminals**

All Terminals

#### **Required Component(s)**

None

---

### **Related Features**

**Clock/Calendar Display**

**Code Restriction**

**One-Touch Calling**

**Programmable Function Keys**

**Speed Dial – System/Group/Station**

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**Guide to Feature Programming**

None

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**Operation**

None

# Virtual Extensions

## Enhancements

With **Version 3000 or higher** system software, the appropriate line key page automatically displays for incoming calls on the DTL-8LD-1 (DESI-Less) and ITL-320C-1 terminals.

Calls can be parked from a virtual extension (**Version 3000 or higher** software).

With **Version 7000 or higher** software:

- A special ringtone is provided when a pre-assigned extension places an Intercom call.
- Distinctive ringing on the Virtual Extension is supported which can distinguish between external and internal calls.

With **Version 8000 or higher** software:

- A virtual extension can now display the caller ID of an internal caller (Callers station name is displayed, if station name is not available the extension number is displayed). Also, a virtual extension can now display the caller ID of an internal or external caller when the virtual is not set to ring (Previously the virtual extension must be set to ring or CID is not displayed).
- The number of Tone Patterns has increased from four to eight.



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## Description

Virtual Extensions are available software extensions on the Basic and Expanded Port Packages. A Virtual Extension assigned to a line key can appear and ring on an individual station or multiple stations and be used for outbound access.

Virtual Extensions (VE) are shared with Call Arrival (CAR) Keys. In virtual extension mode, the key acts as a secondary extension. Up to 256 CAR/VE keys are provided.

## Conditions

- There are 256 available ports/Extensions shared between CAR keys and Virtual Extensions.
- The 256 available ports/Extensions are assigned per extension for CAR key mode or Virtual Extension key mode.
- More than one extension can share a Virtual Extension key.
- An extension can have more than one Virtual Extension key assigned.

 *Assigning a Virtual Extension key of the extension the key is assigned on is not supported.*

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- Up to 32 incoming calls can be queued to busy Virtual Extension key.
  - You cannot have a CAR key and Virtual Extension on the same telephone.
  - Virtual Extensions do not support the following features:
    - Barge-In
    - Conference
    - Conference, Voice Call/Privacy Release
    - Reverse Voice Over
    - Tone Override
    - Voice Over
  - When a valid system station calls a Virtual Extension appearing on another station, Voice and MW softkeys appear in the display of the calling station, but they do not operate.
  - When talking on a Virtual Extension you cannot mute the handset.
  - Calls on Virtual Extension keys cannot be put in Personal Park if Program 15-18-01 is set to Land on the key (1).
  - If multiple CAR/SIE/VE keys are ringing on a station at the same time, the CAR/SIE/VE key on the lowest Line Key is answered first.
  - Virtual Extension Keys assigned as code \*03 do not support Voice Mail Message Indication on Line Keys.
  - Busy Virtual Extensions cannot be Tone overridden.
  - Class of service feature Program 20-11-20: No Call Back (transfer recall disable) is not supported for calls from a physical extension to a virtual extension.
  - In **Version 3000 or higher** software, the system can be programmed to blink the page number of a DT300/DT700 DESI-Less terminal when it receives an incoming call, or switch to the page the incoming call is on. Also a default page can be defined for the DESI-Less terminal to change to when it goes idle or when it has answered a call.
  - DT300/DT700 terminals installed in a SV8100 with the IPK/IPK II Migration system do not support the DESI-Less page switching and blinking.
  - DESI-Less screen page switching only applies to idle terminals. If a terminal is not idle, the screen will not switch if another call comes in until the phone goes idle.
  - When a call is parked from a virtual extension, the virtual extension is released.
  - When parking a call from a virtual extension, Programs 15-02-21 and 15-18-01 must be set to 1.
  - Park Group assignment is by terminal extension, not the virtual extension.
  - When a call parked from a virtual extension recalls, it will ring the terminal where the virtual extension is programmed to, not the virtual extension key.
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- 
- When an internal station-to-station call is made to a virtual extension, the name and number of the calling party does not appear in the display of the station the virtual extension resides on until the call is answered.
  - A door box cannot ring a virtual extension.
  - UCB does not support the use of Virtual Extensions (**SV8100 Version 4000, UCB 5.0 SP4 and TSP 3.03 or lower**).
  - Virtual Extensions are supported with UCB (**SV8100 Version 5000, UCB 5.1 and TSP 4.00 or higher**).
  - If a user dials a number not programmed in ARS, Program 26-01-03 determines if the system should route over the trunk group settings defined in Program 21-02 or play an error tone.
  - When using ARS Class of Service, with Program 26-01-03 set to (1) “Play Warning Tone”, any trunk (except a CCIS trunk) pointed or transferred to a virtual that is Call Forward Off-Premise will not complete. For a virtual to Call Forward Off-Premise, Program 26-01-03 must be set to “Route to trunk group” and the call will follow the trunk group settings of the trunk, assigned in Program 21-03.
  - When using ARS Class of Service, with Program 26-01-03 set to (1) “Play Warning Tone”, a CCIS trunk pointed or transferred to a virtual that is call forwarded off premise will always follow ARS Class 1 routing properties.
  - Calls made from Virtual Extensions will show up in SMDR as calls made from the physical extension the VE resides on.
  - Virtual Extension Ring Assignment (command 15-09) will follow the ring assignment for the Night Mode Group the virtual extension is assigned to (default Night Mode Group 1) and not the Night Mode Group of the keyset the virtual is appearing on.
  - With **Version 7000 or higher** software, a special ringtone is provided when a pre-assigned extension places an Intercom call.
  - With **Version 7000 or higher** software, distinctive ringing on VE is supported which can distinguish between external and internal calls. When Program 20-04-05 is set to “On”, an outside call to VE follows the trunk incoming ringtone configured in Program 22-03-01 and Program 15-02-02.
  - The incoming ringtone from a pre-assigned extension (set in Program 15-01-13) is limited to calls to the actual extension, not the Virtual Extension. Incoming calls to the VE follows Program 15-08-1 settings.
  - With **Version 8000 or higher** software a virtual extension can now display the caller ID of an internal caller (Callers station name is displayed, if station name is not available the extension number is displayed). Also, a virtual extension can now display the caller ID of an internal or external caller when the virtual is not set to ring (Previously the virtual extension must be set to ring or CID is not displayed).

- With **Version 8000 or higher** software, the number of Tone Patterns increased from four to eight. After setting new system data (Tone Patterns 5 - 8), downgrading to **Version 7000 or lower** may cause incoming rings to not function properly.

## Default Settings

Extensions 201~299 and 3301~3457 are the default for CAR/VE.

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

None

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## Related Features

Call Waiting/Camp-On

Call Arrival (CAR) Keys

Secondary Incoming Extension

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-04-01	Virtual Extension Numbering	Assign Extension Number for the Virtual Extensions (1~256).	Up to eight digits 1 201 2 202 3 203 ~ ~ 99 299 100 3601 ~ ~ 256 3857	✓		
14-02-17	Analog Trunk Data Setup – Sync. Ringing	Enable or Disable ringing per trunk.	0 = Disable 1 = Enable (default = 1)		✓	
15-01-01	Basic Extension Data Setup – Extension Name	Define the extension/virtual extension name.	Up to 12 characters Default: STA 101 = Ext 101 STA 102 = Ext 102, etc.		✓	
15-02-02	Multiline Telephone Basic Data Setup – Trunk Ring Tone	Set the tone (pitch) of the incoming trunk ring for the extension port you are programming.	1 = High 2 = Medium 3 = Low 4 = Ring Tone 1 5 = Ring Tone 2 6 = Ring Tone 3 7 = Ring Tone 4 8 = Ring Tone 5 (default = 2)		✓	
15-02-03	Multiline Telephone Basic Data Setup – Extension Ring Tone	Set the tone (pitch) of the incoming extension call ring for the extension port you are programming. Also refer to Program 15-08.	1 = High 2 = Medium 3 = Low 4 = Ring Tone 1 5 = Ring Tone 2 6 = Ring Tone 3 7 = Ring Tone 4 8 = Ring Tone 5 (default = 8)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-21	<b>Multiline Telephone Basic Data Setup – Virtual Extension Access Mode (when idle Virtual Extension key pressed)</b>	Determine whether an extension Virtual Extension Key should be used as a DSS key to the extension and for receiving calls (0), answering incoming calls and ability to place outgoing ICM or CO calls (1), or just receiving incoming calls (2). If the key is used for outgoing calls, the extension number of the key must be a real extension or virtual extension number. When the extension number of the key is a real extension number, and the key is pressed, the real extension cannot be used.	Virtual Extension Key Mode 0 = DSS 1 = OTG (Outgoing) 2 = Ignore (default = 2)	✓		
15-02-30	<b>Multiline Telephone Basic Data Setup – Toll Restriction Class</b>	Assign if the phone uses the Toll Restriction class of the VE (0) or the Real Extension when making outbound calls from the VE.	0 = Vir. Ext. (Virtual Extension Class) 1 = Real Ext. (Real Extension Class) (default = 1)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign Virtual Extension function keys on Multiline telephones (code *03 + extension number).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
15-08-01	<b>Incoming Virtual Extension Ring Tone Setup</b>	When an extension or a virtual extension is assigned to the function key on the key telephone, select the ring tone when receiving a call on that key. For ACD CAR keys, only tone pattern 1 can be used. The remaining patterns are not checked with this feature.	0 = Tone Pattern 1 1 = Tone Pattern 2 2 = Tone Pattern 3 3 = Tone Pattern 4 4 = Incoming Ring Tone Extension 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 (default = 0)		✓	
15-09-01	<b>Virtual Extension Ring Assignment</b>	Individually program an extension Virtual Extension key(s) to either Ring or Not Ring.	Day Night/Mode: 1~8 Ringing: 0 = Not Ring 1 = Ring (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-10-01	Virtual Incoming Extension Ring Tone Order Setup	When two or more virtual extensions are set on a function key on the telephone, and the tone pattern by which the sound of each extension differs, the priority of ring sound is set up.	0 = Tone Pattern 1 1 = Tone Pattern 2 2 = Tone Pattern 3 3 = Tone Pattern 4 4 = Incoming Extension Ring Tone 5 = Tone Pattern 5 6 = Tone Pattern 6 7 = Tone Pattern 7 8 = Tone Pattern 8 Order 1 Pattern 0 = Pattern 1 (default) Order 2 Pattern 1 = Pattern 2 (default) Order 3 Pattern 2 = Pattern 3 (default) Order 4 Pattern 3 = Pattern 4 (default)		✓	
15-11-01	Virtual Extension Delayed Ring Assignment	Individually program an extension Virtual Extension key(s) for Delayed Ringing (1) or Immediate Ringing (0).	KY01 Mode 1: 0 = Immediate Ring 1 = Delayed Ring (default = 0)		✓	
15-18-01	Virtual Extension Key Enhanced Options – Virtual Extension Key Operation Mode	Assign if a call to a VE Holds (1) on the VE or Releases to the phone that answered the VE.	0 = Release 1 = Land On the Key (default = 0)	✓		
15-18-02	Virtual Extension Key Enhanced Options – Display Mode when pacing a call on Virtual Extension Key	Define if calls to or from a Virtual Extension Key display the Virtual Extension Key name or the name of the extension where it resides.	0 = Secondary Extension Name 1 = Actual Station Name (default = 0)		✓	
15-18-03	Virtual Extension Key Enhanced Options – Show CLI	When set to a <b>0</b> , the caller ID of a trunk call/station call pointed to a virtual extension <b>will not</b> be displayed if the virtual extension is not set to ring. When set to a <b>1</b> , the caller ID of a trunk call pointed to a virtual extension <b>WILL be</b> displayed if the virtual extension is not set to ring. Station calls to a virtual that is not assigned to ring will display the station name or number if Program 15-18-04 is set to a 1.	0 = No CLI info 1 = Show CLI info (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-18-04	Virtual Extension Key Enhanced Options – Show Internal Caller Information	When set to a <b>0</b> , internal calls to the virtual extension <b>will not</b> show the name or number of the extension that is calling. When set to <b>1</b> , internal calls to the virtual extension <b>WILL</b> show the name or number of the extension that is calling if the virtual is assigned to ring or if Program 15-18-03 is set to a 1.	0 = Do not show 1 = Show (default = 0)		✓	
15-18-05	Virtual Extension Key Enhanced Options – One Ring	When set to a <b>0</b> , the virtual extension follows the normal ring cycle. When set to a <b>1</b> , the virtual extension will only ring one time (the virtual extension must be first set to ring in Program 15-08).	0 = Normal Ring Cycle 1 = One Ring (default = 0)		✓	
15-25-01	DESI-less Page Setup – Incoming Call Notify Event	Enable/Disable the ability of a DESI-Less terminal to blink the page number that has an incoming call on one of the keys.	0 = Disable 1 = Enable (default = 1)	✓		
15-25-02	DESI-less Page Setup – Incoming Call Automatic Screen Switching	Enable/Disable the ability of a DESI-Less terminal to switch to the page that has an incoming call on one of the keys.	0 = Disable 1 = Enable (default = 1)	✓		
15-25-03	DESI-less Page Setup – Idle Automatic Screen Switching	Define or Disable the page to be automatically displayed when a DESI-Less terminal becomes idle.	0 = Disable 1 = Display page 1 2 = Display page 2 3 = Display page 3 4 = Display page 4 (default = 0)	✓		
15-25-04	DESI-less Page Setup – Answer Automatic Screen Switching	Define or Disable the page to be automatically displayed when a DESI-Less terminal answers a call.	0 = Disable 1 = Display page 1 2 = Display page 2 3 = Display page 3 4 = Display page 4 (default = 0)	✓		
20-02-19	System Options for Multiline Telephones – Virtual Extension Mode	Set the mode of a virtual extension key that appears on a DSS console.	0 = No 1 = Yes (default = 0)		✓	
20-04-03	System Options for Virtual Extensions – CAR/SIE/Virtual Extension Delay Interval	CAR Keys/SIE Keys/Virtual Extensions set for Delayed Ringing (see Program 15-11) ring the extension after this time.	0~64800 (seconds) (default = 10)		✓	
20-04-05	System Options for Virtual Extensions – Ringtone Mode for Incoming to Virtual Extension	Assign distinctive ringtone to incoming Virtual extension.	0 = Off 1 = On (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign the Extension to a Class of Service.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-07-10	<b>Class of Service Options (Administrator Level) – Programmable Function Key Programming (Appearance Level)</b>	Turn Off or On an extension user ability to program the Appearance function keys using Service Code 752.	1 = Off 0 = On (default = 1 for COS 01~15)	✓		
20-10-08	<b>Class of Service Options (Answer Service) – Virtual Extension Off-Hook Answer</b>	Turn Off or On an extension user ability to answer an incoming call on a Call Arrival (CAR)/Secondary Incoming Extension (SIE)/ Virtual Extension by lifting the handset.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-27	<b>Class of Service Options (Supplementary Service) – Busy on Seizing Virtual Extension</b>	If set to 1, you can call a busy extension which is talking on a virtual extension key. Program 20-13-06 (Call Waiting) must be Off for this option to work.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-15-03	<b>Ring Cycle Setup – Incoming Internal Call</b>	Define ringing cycle for incoming Internal calls.	1~13 - Ringing Cycle (default = 12)		✓	
21-01-15	<b>System Options for Outgoing Calls – Outgoing Disable on Incoming Line (Toll Restriction)</b>	Enable/Disable the Outgoing Disable on Incoming Line feature.	0 = Disable 1 = Enable (default = 0)		✓	
22-03-01	<b>Trunk Ring Tone Range</b>	Select the ring tone range for the trunk. The trunk uses a ring tone in the range selected when it rings an extension. Eight ring tones are available.	0~12 (Ring Tone Pattern 1~4) (Melody 1~ Melody 5) (Ring Tone Pattern 5~8) (default = 0)		✓	
23-04-01	<b>Ring Line Preference for Virtual Extensions</b>	When an extension has a virtual extension on Function Key, this program determines the priority (1~4) for a Ring Group for automatically answering ringing calls when the handset is lifted. If (00) is selected for the Ring Group, when the handset is lifted, the user can answer a ringing call from any group.	00~64 (0 or 00=Don't Care) (default = 00)		✓	


## Operation

### To answer a call ringing a Virtual Extension:

1. Press the flashing **Virtual Extension** key.


- OR -

Go off-hook.


 *Program 20-10-08 needs to be set to on (1) for extension Class of Service.*

### To place a call to a Virtual Extension:

1. Go off-hook.
2. Dial the Virtual Extension, or press the **Virtual Extension** key.

 *The operation depends on the setting in Program 15-02-21.*

### To place a call from a Virtual Extension:

1. Press the **Virtual Extension** key.  
 *The operation depends on the setting in Program 15-02-21.*
2. Place an intercom call or dial a trunk access code to seize an outside line and place your call.

### To program a Virtual Extension key on a telephone:

1. Press **Speaker**.
2. Dial **752**.
3. Press the key you want to program.
4. Dial **\*03**.
5. Dial the number of the extension you want to appear on the key.
6. Press **Hold** once for Immediate Ring (skip to step 8 for Delayed Ring).
7. Dial the mode number in which the key rings.
  - 1 = Day 1
  - 2 = Night 1
  - 3 = Midnight 1
  - 4 = Rest 1
  - 5 = Day 2
  - 6 = Night 2
  - 7 = Midnight 2
  - 8 = Rest 2

8. Press **Hold** for a second time for Delayed Ring, or Skip to step 10.
9. Dial the mode number in which the key delay rings.
  - 1 = Day 1
  - 2 = Night 1
  - 3 = Midnight 1
  - 4 = Rest 1
  - 5 = Day 2
  - 6 = Night 2
  - 7 = Midnight 2
  - 8 = Rest 2
10. Press **Speaker**.

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## VM8000 InMail

### Enhancements

**Version 4000 or higher** software provides the following:

- Security Code Enhancement. After a subscriber sets their Security Code, they can choose to make it required for all logons or just remote logons. When enabled for all logons, the subscriber must always enter their Security Code to access voice mail, even from their own extension. If enabled just for remote logons, the subscriber can go right into voice mail from their own telephone. However, the Security Code is still required from another extension or from outside the system.

The Security Code logon option is a convenience for those who normally leave their office locked or otherwise secure. Those who work in open areas should normally set their mailbox to always require a Security Code.

- VM8000 InMail voice mail is supported for centralized voice mail in a Netlink network.
- VM8000 InMail supports a maximum of 16 ports.

**Version 5000 or higher** software provides the following:

- VM8000 InMail supported for Centralized Voice Mail in a CCIS Network.

**Version 6000 or higher** software provides the following:

- Find-Me Follow-Me supports day of week scheduling in addition to time of day. This applies to station and group subscriber mailboxes. This feature requires **Version 6000 Enhancement License (0035)**.
- Message Notification supports day of week scheduling in addition to time of day. This applies to station and group subscriber mailboxes. This feature requires **Version 6000 Enhancement License (0035)**.
- Email Notification supports options to Save, Delete or Keep as New any voice message forwarded to the email system. This applies to station and group subscriber mailboxes.
- Auto Play: Mailboxes can now be set to automatically start playing new messages on log in for station and group subscriber mailboxes. This applies when logging in remotely or from inside the system. This feature requires **Version 6000 Enhancement License (0035)**.
- Save as New: This allows users the ability to mark a message as "New" after play back has finished. InMail currently marks messages as "to be saved" (auto-save) or "to be deleted" (auto-erase) after listening has finished. This new feature allows users to override the "to be saved" or "to be deleted" setting and return the message back to the "New" state. This feature requires **Version 6000 Enhancement License (0035)**.

With **SV8100 Version 8000 or higher** software, the following are supported:

- 32 Dial Action Tables
- 16 Answer Schedules

## Description

The VM8000 InMail is a low cost voice mail solution that mounts on the CD-CP00-US. Its programming is fully integrated with chassis programming. This system offers most voice mail system features customers expect.

Automated Attendant automatically answers the system incoming calls. After listening to a customized message, an outside caller can dial a system extension or use Voice Mail.

Up to 16 VM8000 InMail voice mail ports are available. Configurations available are 2-, 4- and 16-port. Each reduces the total station ports available by the same number of licensed VM8000 ports. Integrated Voice Mail enhances the telephone system with the following features:

### **Call Forwarding to Voice Mail**

An extension user can forward their calls to Voice Mail. Once forwarded, calls to the extension connect to that extension mailbox. The caller can leave a message in the mailbox instead of calling back later. Forwarding can occur for all calls immediately, for unanswered calls or only when the extension is busy. When a user transfers a call to an extension forwarded to Voice Mail, the call waits for the Delayed Call Forwarding time before routing to the called extension mailbox. This gives the transferring party the option of retrieving the call instead of having it go directly to the mailbox.

### **Leaving a Message**

Voice Mail lets a multiline terminal extension user easily leave a message at an extension that is unanswered, busy or in Do Not Disturb. The caller presses their Voice Mail key to leave a message in the called extension mailbox. There is no need to call back later.

### **Transferring to Voice Mail**

By using Transfer to Voice Mail, a multiline terminal extension user can Transfer a call to the user's or a co-worker's mailbox. After the Transfer goes through, the caller can leave a message in the mailbox.

A station user transferring a call can transfer the call to the called party voice mail box after an internal station number is dialed while performing a screened transfer, or during intercom calls. The user calls the extension then dials the quick transfer dial access code (default = 8) and hangs up. The call is placed in the mailbox and the caller hears the personal greeting.



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**Live Record**

While on a CO/Trunk call, an extension user can have VM8000 InMail record the conversation. The multiline terminal user just presses the VM8000 InMail Record key; the ESL user dials a code. Once recorded, the Voice Messaging System stores the conversation as a new message in the user's mailbox. After calling their mailbox, a user can save, edit or delete the recorded conversation. This feature is supported only on CO, Tie, or DID calls. It is not supported on internal calls. The recording time limit is set by multiplying Program 47-01-03 x 10 with a maximum recording limit of 65 minutes. At the default (120 seconds) this will allow a 20 minute Live Recording message to be made. The initial recording beep is controlled with Program 47-02-07. The repeating beep interval is controlled with Program 45-01-06. Once Live Record is started, dialed DTMF digits are no longer sent to the outside system for the duration of that call.

**Live Monitor**

A multiline terminal user can have their idle extension emulate a personal answering machine. This lets InMail screen their calls, just like their answering machine at home. If activated, the extension incoming calls route to the user's subscriber mailbox. The Live Monitor feature is supported for external and internal calls. After the mailbox answers, the user's phone changes to show that a caller is leaving a message, no audible tone is provided. The multiline terminal user can then:

- Choose **Exit** to let the call go through to their mailbox.
- Choose **ANSW** to intercept the call before it goes to their mailbox.
- Choose **MON** to monitor the message being left by the caller.

**Personal Answering Machine Emulation**

A multiline terminal user can have their idle extension emulate a personal answering machine. This lets In-Mail screen their calls, just like their answering machine at home. If activated, the extension's incoming calls route to the user's subscriber mailbox. Once the mailbox answers, the user hears the caller's incoming message. The multiline terminal user can then:

- Let the call go through to their mailbox
- Intercept the call before it goes to their mailbox

**Voice Mail Overflow**

If Voice Mail automatically answers trunks, Voice Mail Overflow can reroute those trunks to other extensions when all Voice Mail ports do not answer or, with certain software, are busy. During periods of high traffic, this prevents the outside calls from ringing Voice Mail for an inordinate amount of time. There are two types of Voice Mail Overflow: Immediate and Delayed. With immediate overflow, calls immediately reroute to other extensions when all Voice Mail ports do not answer or, with certain software, are busy. With delayed overflow, calls reroute after a preset interval. Without overflow, the outside calls ring Voice Mail until a port becomes available or the outside caller hangs up.

**Message Center Mailbox**

A Message Center Mailbox is shared by more than one extension. Any multiline terminal that has a Message Center Key for the shared mailbox can:

- Listen to the messages stored in the shared mailbox
- Transfer calls to the shared mailbox

- Use many other Voice Mail features previously available only at an extension individual mailbox

A Message Center Mailbox helps co-workers that work together closely – such as members of the same Department Hunt Group or ACD Group. For example, an ACD Group Supervisor can send important messages to the shared Message Center Mailbox, to which any ACD Group member can respond when time allows. Each ACD Agent's Message Center Key flashes when messages are waiting. (The Message Center Mailbox can be a mailbox for an installed, uninstalled or virtual extension.)

#### ❑ **Voice Mail Caller ID**

VM8000 InMail can use ANI/Caller ID information to identify the outside caller that left a message in a user's mailbox. When the message recipient presses T1 after hearing a message, they hear the time the message was sent and the outside telephone number of the message sender. Refer to [Caller ID on page 2-237](#) and [T1 Trunking \(with ANI/DNIS Compatibility\) on page 2-1561](#) for more information on setting up this feature.

#### **Voice Mail Queuing**

When accessing the voice mail, the system provides a voice mail queue. If all the voice mail ports are busy, any call trying to get to the voice mail is placed in queue. As the voice mail port becomes available, the calls are connected to the voice mail in the order in which they were received.

As the Voice Mail Queue follows Department Hunting programming, the queue can hold a maximum of 10 calls. If the queue is full or if the voice mail ports are not assigned to a Department Group, the calls are handled as though no voice mail queuing feature was enabled. The calls either access voice mail if a port is available or they receive a busy signal.

The Voice Mail Queuing feature does not work with the Conversation Record feature.

#### **Message Key will Operate as Voice Mail Key**

The system enhances a telephone Message key function when connected to a system which has voice mail installed. When an extension receives a voice mail, the MSG key can be used to check the number of messages in voice mail, as well as call the voice mail to listen to the messages. If no Voice Mail Programmable Function Key is defined (Program 15-07-01, code 77), the telephone Message Waiting LED flashes to indicate new messages.

This option is not available with a networked voice mail – the voice mail must be local.

#### **VM8000 InMail Available**

VM8000 InMail is a plug-in “in-skin” full-featured, DSP-based integrated Voice Mail with Automated Attendant. It is available in two models:

The VM8000 InMail Automated Attendant answers incoming calls and routes them quickly and efficiently. Integrated Voice Mail features include Conversation Record, Answering Machine Emulation, and Caller ID with Return Call. Interactive Softkeys guide the display telephone user through the extensive VM8000 InMail feature set.

**Table 2-122 SV8100 VM8000 InMail Part Numbers and Capacities**

P/N 670966	SV8100 VM8000 InMail 1G Drive ○ (1) 64-Hour CompactFlash Card with software.
P/N 670784	SV8100 VM8000 InMail 8-Port License
P/N 670843	SV8100 VM8000 InMail 16-Port License
P/N 670872	SV8100 VM8000 InMail 2-Port License
P/N 670873	SV8100 VM8000 InMail 4-Port License
P/N 670874	Language License
P/N 670103	(1) PZ-VM21 Daughter Board Interface for InMail CompactFlash
Mailboxes	Station Mailboxes = 512 Routing Mailboxes = 32 Group Mailboxes = 32 Total Mailboxes = 576

**VM8000 InMail: External Transfer Available**

The software allows the VM8000 InMail to perform an external transfer. This allows the VM8000 InMail to route an incoming Automated Attendant call out of the UNIVERGE SV8100 system on a new trunk based on an Speed Dial number stored in a Dial Action Table.

**VM8000 InMail: Softkey With Security Code Programming**

VM8000 InMail provides softkeys when programming the security code. These softkeys allow a user to select OK, CLEAR or EXIT following an entry of a new code.

**VM8000 InMail: Internal Message Notification Timer**

When Message Notification places a call out, the system waits up to 30 seconds for ringback, reorder, or busy tone from the trunk. If detected, notification call out processing begins normally. If not detected, the system abandons the call and decrements the Ring No Answer (RNA) count.

**VM8000 InMail: Directory Dialing**

Directory Dialing allows an Automated Attendant caller to reach an extension by dialing the first few letters in the extension user's name. With Directory Dialing, the caller does not have to remember the extension number of the person they wish to reach – just the name.

The following conditions apply to InMail Directory Dialing:

- Remote CCIS extensions are not supported in a centralized directory.

- When set for Unscreened Transfer, calls from the InMail ring at the extension like other transferred calls and display the incoming Caller ID data (if provided by Telco and enabled in programming) while the phone is ringing.
- When set for Screened Transfers, calls from the InMail ring like Intercom calls but do not display incoming Caller ID data (if provided by Telco and enabled in programming) until after the call is answered.

The following steps describe Directory Dialing:

1. When the Automated Attendant answers, it sends the call to the Main Greeting box. The caller must dial a digit to access Directory Dialing.
2. The Directory Dialing Mailbox plays the Directory Dialing Message which asks the caller to dial letters for the name of the person they wish to reach.
3. The caller dials the letters for the person's name plus #. They can dial by first name or last name, depending on how the Directory Dialing Message was recorded and the Directory Dialing Mailbox was set up.
4. VM8000 InMail searches the list of programmed extension names for a match of the caller-entered letters.
5. Voice prompts announce the first three matches, and allow the caller to dial a digit (1~3) to reach one of the announced matches. Additionally, the caller can dial 4 to hear additional matches (if any).
6. The caller dials the digit for the extension they wish to reach, and VM8000 InMail sends the call to that extension. The call is sent as a Screened or Unscreened transfer, depending on programming.

For callers to use Directory Dialing, the system must have a name programmed for each extension (up to 15 characters, A~Z, using upper and lower case letters). Each extension user should also have a name recorded in their Subscriber Mailbox. In addition, each extension used by Directory Dialing must be installed and have an active Subscriber Mailbox (Personal or Group).

An outside caller can route to a Master Mailbox or a Routing Mailbox programmed as a Directory Dialing Mailbox from:

- The Answer Tables Answer Schedule Override mailbox, Default mailbox, or Routing mailbox.
- A GOTO action in the Dial Action Table of a Call Routing Mailbox.

### **VM8000 InMail: Multiple Greetings**

The mailbox subscriber can record up to three greetings and make any of the three active. When a caller leaves a message in the subscriber's mailbox, they hear the active greeting. This allows the subscriber, for example, to record a greeting for work hours, after work, and during vacation. Instead of changing their greeting when they leave the office, they can activate the after work greeting instead.

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If the active greeting has not been recorded, a caller leaving a message in the subscriber mailbox hears, *“At the tone, you can leave your message for (extension number or name).”*

Refer to the VM8000 InMail System Guide for complete details on setting these features.

### **VM8000 InMail: Message Playback Options**

The following functions are available:

Auto Play

If Auto Play is enabled, New Messages play automatically when an extension user accesses their Mailbox without having to dial 5.

Change Playback Order

Playback Order (FIFO: Playback from received call order and LIFO: Playback from New Messages First) can be set by UserPro or mailbox setup.

Ability to mark message as New

The user can mark a message as "New" after playback of the message is complete.

### **Conditions**

- When the VM8000 InMail CF and PZ-VM21 are installed, the system provides two VRS ports (VRS license not required).
- Once Live Record is started, dialed DTMF digits are no longer sent to the outside system for the duration of that call.
- Remote CCIS extensions are not supported in a centralized directory.
- When set for Unscreened Transfer, calls from the InMail ring at the extension like other transferred calls and display the incoming Caller ID data (if provided by Telco and enabled in programming) while the phone is ringing.
- When set for Screened Transfers, calls from the InMail ring like Intercom calls but do not display incoming Caller ID data (if provided by Telco and enabled in programming) until after the call is answered.
- When creating a distribution list, do not use blank destinations within the list. The system considers blank entries to be the end of the list and does not use entries following the blank.
- When using **Version 4000 or lower** software, InMail is not supported for centralized voice mail in a KTS to KTS CCIS network.
- When using **Version 5000 or higher** software, InMail is supported for centralized voice mail in a KTS to KTS CCIS network.
- When more than eight ports are to be enabled, the PZ-ME50-US is required.

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- When using **Version 4000 or higher** software, InMail is supported for centralized voice mail in a NetLink network. However, replication should be scheduled for non-peak hours of operation.
  - Email forwarding requires the PZ-ME50-US, and licenses 1013 and 1014.
  - Constant Message Count is displayed on a telephone display until another activity needs the display (i.e., if a call is made or received on the telephone). To have the message count display again, the telephone needs to receive a new voice mail message or a new call into the voice mailbox.
  - With **Version 3000 or lower** software, a maximum of eight VM8000 InMail ports are supported.
  - With **Version 4000 or higher** software, a maximum of 16 VM8000 InMail ports are supported.
  - Answering Machine Emulation is only supported on VM8000 InMail.
  - Audible tones are **not** provided to the multiline terminal when using Live Monitor, only visual notifications are provided for incoming monitored calls.
  - The Quick Transfer to Voice Mail feature is allowed when:
    - Listening to the Ring Back Tone (RBT).
    - Listening to the Call Waiting Tone (CWT).
    - In Handsfree Answerback Mode.
    - In Voice Over Mode.
  - When Quick Transfer to Voice Mail is accessed, the Voice Over feature is canceled.
  - The Quick Transfer to Voice Mail is not allowed when caller is:
    - Listening to the busy tone (BT).
    - Talking on an internal line.
    - Talking on an outside line.
    - Making a conference call.
  - The following features require **Version 6000 or higher** software and **Version 6000 Enhancement license (0035)**:
    - Email notification Save, Delete or Keep as New.
    - Message notification by day of week scheduling.
    - Find-Me Follow-Me by day of week scheduling.
    - Message Auto Play.
  - The following options must be changed from WebPro, PCPro or system programming for *group subscriber* mailboxes:
    - Email Notification
- 
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- Message Notification
  - Find-Me Follow-Me
  - Auto Play
  - The following options can only be changed from UserPro, WebPro, PCPro or system programming for *station subscriber* mailboxes:
    - Email Notification
    - Message Notification
    - Find-Me Follow-Me
    - Auto Play
  - While on an intercom (ICM) call, dial the Quick Transfer Access Code (default: 8) to automatically transfer to that station Voice Mail box.
  - Extension ID numbers cannot start with 0, 9, \* or #.
  - Mailboxes with extension IDs of 10-32 are not supported as these are already used by fixed system resources.
  - Distribution List members can only have 2 or 3 digit extension IDs.
  - Live Record does not work for monitored calls.
  - Live Record does not work for conference calls.
  - Fixed Call Forwarding can be used to transfer a user's unanswered calls to their voice mail. Call Forwarding does not have to be programmed manually by each user.
  - Off-premise notification and external extensions require access to outside lines.
  - When the voice mail places a call on hold, it uses Group Hold. Any line appearances for the trunk shows the hold flash rate, however, a user cannot pick up this call (a busy signal is heard).
  - Updating the system time also updates the VM8000 InMail time.
  - VM8000 InMail and UM8000 Mail cannot be used at the same time in the same system.
  - The displayed message count for New and Saved messages does not update until the mailbox user hangs up and calls back into the VM8000 InMail.
  - VM8000 InMail and Analog Voice Mail cannot be used at the same time in the same system.
  - The first port of VM8000 InMail must start with the first port of a group of eight station ports that are not already used by telephones. For example one of the following ports: 1, 5, 9, 13, .....233, 237, 241, 245, 249, etc. and uses the first port assigned + the next eight consecutive ports.

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- With **Version 3000 or lower** software, the following rules apply when programming VM8000 InMail ports in program 47-01-17 on a system that has the basic 64 port license:
    - When a PZ-ME50-US is NOT mounted to CCPU-US:
      - The first port of VM8000 InMail must be assigned to port 57 or lower.
      - The number of licensed VM8000 InMail ports do not take away from the 64 port license. There can still be a combination of 64 trunks, TDM phones and IP phones.
    - When a PZ-ME50-US is mounted to CCPU-US:
      - The first port of VM800 InMail can be assigned above port 64.
      - The number of licensed VM8000 InMail ports do not take away from the 64 port license. There can still be a combination of 64 trunks, TDM telephones and IP telephones.
  - With **Version 4000 or higher** software, the following rules apply when programming VM8000 InMail ports in Program 47-01-17 on a system that has the basic 64 port license:
    - When a PZ-ME50-US is NOT mounted to CCPU-US:
      - The first port of VM800 InMail must be assigned to port 49 or lower.
      - The number of licensed VM8000 InMail ports do not take away from the 64 port license. There can still be a combination of 64 trunks, TDM phones and IP phones.
    - When a PZ-ME50-US is mounted to CCPU-US:
      - The first port of VM8000 InMail can be assigned above port 64.
      - The number of licensed VM8000 InMail ports do not take away from the 64 port license. There can still be a combination of 64 trunks, TDM telephones and IP telephones.
  - The number of speech path channels on the CD-CP00-US (CPU) for the VM8000 (In Mail) and the VRS feature are shared and depends if the PZ-ME50 daughter board is installed.
    - Without a PZ-ME50 daughter board installed the systems supports a maximum of eight channels for VRS and/or In-Mail.
    - With a PZ-ME50 daughter board installed, the system supports a maximum of 16 channels for VRS and/or In-Mail. The maximum number of channels supported for In-Mail is eight.
  - When the system has the Hotel Motel license (0007), the Message Waiting Indication (MWI) on a DSS Console for an extension is a Green LED. Without the Hotel Motel license the MWI on a DSS Console for an extension is a Red LED.
  - When using InMail in a CCIS or Netlink network, 8-digit extensions and mailboxes are not supported.
  - UCB is not supported in conjunction with InMail.
  - VM8000 InMail does not support Unified Messaging.
  - Group mailboxes do not provide a constant message count display.



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## Default Setting

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

- PZ-VM21
- VM8000 InMail CF
- CPU License

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## Related Features

**Automatic Call Distribution (ACD)**

**Barge-In**

**Caller ID**

**Call Forwarding**

**Central Office Calls, Placing**

**Clock/Calendar Display**

**Direct Inward Line (DIL)**

**Hold**

**Message Waiting**

**One-Touch Calling**

**Programmable Function Keys**

## Transfer

### Guide to Feature Programming


The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Assign at least one circuit for DTMF reception ( 0 or 1). Use the following as a guide when allocating DTMF receivers: <ul style="list-style-type: none"> <li>○ In light traffic sites, allocate one DTMF receiver for every 10 devices that use them.</li> <li>○ In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.</li> </ul>	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available.			✓
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign a Department Group pilot number for the Voice Mail (eight digits maximum). The extensions are assigned to the group in Program 16-02-01.	Up to eight digits (default not assigned)	✓		
11-12-08	<b>Service Code Setup (for Service Access) – Barge-In</b>	Customize the Service Codes used for barge-in service.	MLT, SLT (default = 710)		✓	
11-12-52	<b>Service Code Setup (for Service Access) – Live Monitoring (SV8100 InMail)</b>	Define access code used for InMail Live Monitoring (VRS).	MLT (default not assigned)		✓	
14-01-22	<b>Basic Trunk Data Setup – Caller ID to Voice Mail</b>	Enable/Disable the system ability to send the Caller ID digits to voice mail.	Trunks 1~200 0 = Disable 1 = Enable (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-10	Analog Trunk Data Setup – Caller ID	Enable/Disable a trunk ability to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-02-26	Multiline Telephone Basic Data Setup – MSG Key Operation Mode	Determine whether an extension MSG key should function as a Message key or Voice Mail key. If set as a Message key, the user can press it to call the voice mail only when they have new messages. If set as a Voice Mail key, it functions as a normal Voice Mail key (it is not active if Centralized Voice Mail is used).	0 = Message Key 1 = Voice Mail Key (default = 0)		✓	
15-02-28	Multiline Telephone Basic Data setup – Message Waiting Lamp Color	Determine whether an extension Message Waiting Lamp lights Green or Red when a message is received.	0 = Green 1 = Red (default = 1)		✓	
15-03-01	Single Line Telephone Basic Data Setup – SLT Signaling Type	For each UNIVERGE SV8100 voice mail extension, set this option to 0.	0 = DP 1 = DTMF (default = 1)		✓	
15-03-03	Single Line Telephone Basic Data Setup – Terminal Type	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)		✓	
15-03-09	Single Line Telephone Basic Data Setup – Caller ID Function – for External Module	This option <i>must</i> be 0 when voice mail is used or the integration code for the disconnect function is incorrect.	0 = Disable (Off) 1 = Enable (On) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	<p>Assign a Voice Mail key to an extension. You must enter the Voice Mail key code (code 77) followed by:</p> <ul style="list-style-type: none"> <li>○ Your own extension number if you are setting up your own Voice Mail key.</li> <li>○ A virtual extension number if you are setting up a Message Center key for a virtual extension.</li> <li>○ A co-worker's extension number if you are setting up a Message Center key for an installed extension.</li> <li>○ An uninstalled extension number if you are setting up a Message Center key for an uninstalled extension.</li> </ul> <p>(Optional) Assign a Voice Mail Record key to an extension (code 78).</p> <p>(Optional) Assign a Personal Answering Machine Emulation key (code 16).</p> <p>(Optional) Use a Call Redirect key (49) to allow a user to transfer a call to another extension or voice mail without answering the call.</p>	<p>Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)</p>		✓	
16-02-01	<b>Department Group Assignment for Extensions</b>	<p>Set up the Department Group called by the pilot number and the extension priority when a group is called.</p> <p>Call Pickup Groups are set up in 23-02.</p>	<p>Department Groups 1~64 Priority 1~999 Default = 1 extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256</p>	✓		
20-02-09	<b>System Options for Multiline Telephones – Disconnect Supervision</b>	<p>Enable/Disable disconnect supervision for the system.</p>	<p>0 = Disable 1 = Enable (default = 1)</p>		✓	
20-06-01	<b>Class of Service for Extensions</b>	<p>Assign a Class of Service (1~15) to the voice mail extensions. You should use COS 14 for all time modes.</p>	<p>Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1</p>		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/E&amp;M</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller.  <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-09-02	<b>Class of Service Options (Incoming Call Service) – Caller ID Display</b>	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-11-01	<b>Class of Service Options (Hold/Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward Immediate.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-02	<b>Class of Service Options (Hold/Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forwarding when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-03	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forwarding when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-04	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forwarding with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-05	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off-Premise (External Call Forwarding)</b>	Set this option to 0 for voice mail.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 01~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn On or Off an extension ability to receive off-hook Signals.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-15	<b>Class of Service Options (Supplementary Service) – Barge-In, Initiate</b>	You should set this option to 1 for voice mail.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On an extension user ability to have other extensions barge-in on calls.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On an extension user ability to change COS via Service Code 677.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp On</b>	Set this option to 0 for voice mail.	0 = Off 1 = On (default = 0 for COS 01~15)		✓	
22-01-04	<b>System Options for Incoming Calls – DIL No Answer Recall Time</b>	A DIL that rings its programmed destination longer than this time diverts to the DIL No Answer Ring Group (set in Program 22-08).	0~64800 (seconds) (default = 0)		✓	
22-08-01	<b>DIL/IRG No Answer Destination</b>	Assign the DIL No Answer Ring Group.	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-02	<b>System Options for Transfer – MOH or Ringback on Transferred Calls</b>	Enable/Disable MOH on Transfer. If set to 0, a transferred caller hears Music on Hold while their call rings the destination extension. If set to 1, a transferred caller hears ringback while their call rings the destination extension. For this option to work with voice mail, the transferred call must be an unscreened transfer.	0 = Hold Tone 1 = Ring Back Tone (default = 0)		✓	

### Assign Trunks As Automated Attendant Trunks – Method 1:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign Service Type 4 to each trunk you want to ring into Voice Mail as a Direct Inward Line (DIL).	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-07-01	<b>DIL Assignment</b>	Assign the master/pilot number of the voice mail group from Program 11-07-01 as the DIL destination. If all Voice Mail ports are in the same unique Extension (Department) Group (see Program 16-02 above), the DIL rings another Voice Mail port if its assigned port is busy.	Extension Number (maximum eight digits) (default not assigned)		✓	

**Assign Trunks As Automated Attendant Trunks – Method 2:**


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign Service Type 0 to each trunk you want to ring into Voice Mail as a normal line.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign Ring Group 102 for an In-Skin/External Voice Mail, or 103 for a Central Voice Mail as the destination.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	

**For Either Method:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	To enable Voice Mail Overflow, assign selected extensions to a Ring Group that rings for unanswered DILs to Voice Mail ports. In Program 22-06, enter 1 to enable overflow ringing.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-08-01	<b>DIL/IRG No Answer Destination</b>	For Voice Mail Overflow, enter the Ring Group that unanswered DILs to Voice Mail ring after the DIL Call Waiting time (Program 22-01-04).	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	Set the time a transferred call waits at a forwarded extension before routing to the called extension mailbox.	0~64800 (seconds) (default = 10)		✓	
45-01-01	<b>Voice Mail Integration Options – Voice Mail Department Group Number</b>	Assign which Extension (Department) Group number is used for the voice mail group.	Department Groups: 0~64 0 = No Voice Mail (default = 0)	✓		
45-01-02	<b>Voice Mail Integration Options – Voice Mail Master Name</b>	Assign the Voice Mail master name.	Up to 12 Characters (default = Voice Mail)		✓	
45-01-04	<b>Voice Mail Integration Options – Park and Page</b>	Enable/Disable the system ability to process the Voice Mail Park and Page (*) commands. You should normally enable this option.	0 = Off 1 = On (default = 1)		✓	
45-01-05	<b>Voice Mail Integration Options – Message Wait</b>	Enable/Disable the system ability to process the Voice Mail Message Wait (#) commands. You should normally enable this option. If enabled, be sure that the programmed Message Notification strings do not contain the code #9 for trunk access. When using an external voice mail and centrex transfer, this option should be disabled or the service code #3 in Program 11-12-42 must be changed.	0 = Off 1 = On (default = 1)		✓	
45-01-06	<b>Voice Mail Integration Options – Record Alert Tone Interval Time</b>	Set the time between Voice Mail Conversation Record alerts.	0~64800 (seconds) (default = 30)		✓	
45-01-14	<b>Voice Mail Integration Options – CCIS Centralized Voice Mail Number</b>	Assign the pilot number to Centralized Voice Mail over CCIS link. Assign only in remote switches.	Dial (up to eight digits) (default = No Setting)		✓	
45-01-15	<b>Voice Mail Integration Options – Analog Voice Mail Protocol Selection</b>	Assign whether fixed codes or codes used in Program 45-04 are used for analog voice mail protocol.	0: Fixed 1: Program (default = 0)		✓	
45-01-16	<b>Voice Mail Integration Options – Voice Mail Fax Digit Add Assignment</b>	Assign up to four digits in front of the station number sent to the SLT port when a call is forwarded.	Up to four digits (default not assigned)		✓	
45-01-17	<b>Voice Mail Integration Options – Reply Mailbox Number</b>	Determine Whether or not to include the mailbox number in the analog voice mail protocol.	0 = No 1 = Yes (default = 1)	✓		
45-01-18	<b>Voice Mail Integration Options – Trunk Number Mapping</b>	Assign the digits of trunk number mapping.	2~3 (default = 2)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-02	<b>SV8100 InMail System Options – SV8100 InMail Master Name</b>	The CHS2U GW-US must be reset for a change to this program to take effect. Use this option to modify the name for all VM8000 InMail ports. The system briefly displays this name when a display multiline terminal user calls a Voice Mail port (either by pressing Message, their voice mail key, or by dialing the master number). You should always end the name with the ## characters. The system substitutes the port number for the last #. Using the default name InMail ##, for example, the telephone display shows VM8000 InMail #1 when calling port 1.	Up to 12 characters Default: InMail ## (The system substitutes the port number for the # when calling the port).		✓	
47-01-03	<b>SV8100 InMail System Options – Subscriber Message Length</b>	Set the maximum time for recorded messages for: <ul style="list-style-type: none"> <li>○ Subscriber Mailbox users dialing RS to record and send a message.</li> <li>○ Extension users leaving a message in a Subscriber Mailbox.</li> <li>○ Outside Automated Attendant callers accessing a mailbox via a GOTO command and then dialing <b>RS</b> to record and send a message.</li> <li>○ Subscriber Mailbox Greetings.</li> <li>○ Announcement Messages.</li> <li>○ Call Routing Mailbox Instruction Menus.</li> </ul> <p> <i>The Conversation Record time is 10 times the Subscriber Message time. Since the Conversation Record time cannot exceed 4095 seconds, any setting in Subscriber Message time longer than 409 has no effect on the length of recorded conversations.</i></p>	1~4095 (seconds) (default = 120)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-04	SV8100 InMail System Options – Non-Subscriber Message Length	Set the maximum time for recorded messages for: <ul style="list-style-type: none"> <li>○ Automated Attendant callers leaving a message or Quick Message in a Subscriber Mailbox.</li> <li>○ Outside callers transferred by an extension user to a Subscriber Mailbox.</li> </ul>	1~4095 (seconds) (default = 120)		✓	
47-01-05	SV8100 InMail System Options – Message Backup/Go Ahead Time	Set the time for how far VM8000 InMail backs up when a user dials <b>B</b> while listening to a message. This time also sets how far VM8000 InMail jumps ahead when a user dials <b>G</b> while listening to a message.	1~60 (seconds) (default = 5)		✓	
47-01-07	SV8100 InMail System Options – Digital Pager Callback Number	Set the <i>Digital Pager Callback Number part of the message Notification callout number</i> for a digital pager. This part of the callout number is appended to the pager service telephone number. Normally, this option should be <b>X*M#</b> , where <ul style="list-style-type: none"> <li>○ <b>X</b> is the number of the extension that generated the notification.</li> <li>○ <b>*</b> is a visual delimiter (to make the pager display easier to read).</li> <li>○ <b>M</b> is the number of new messages in the extension mailbox.</li> <li>○ <b>#</b> is the digit normally used by the pager service for positive disconnect.</li> </ul>	<b>Digits</b> (12 maximum, using 0~9, <b>#</b> and <b>*</b> ) <b>M</b> (Number of messages – entered by pressing <b>LK1</b> ) <b>No entry</b> (Entered by pressing <b>HOLD</b> ). <b>X</b> (Extension number – entered by pressing <b>LK2</b> ) VM8000 InMail automatically replaces the X command with the number of the extension that initially received the message. (default = <b>X*M#</b> )		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-08	<b>SV8100 InMail System Options – Delay in Dialing Digital Pager Callback Number</b>	<p>Set the time delay (0~99 seconds) that occurs just before VM8000 InMail dials the Digital Pager Callback Number portion of the Message Notification callout number for a digital pager. Set this delay so the pager service has enough time to connect to the digital pager before sending the callback number. Your pager service may be able to help you determine the best value for this option (0~99 seconds). When placing a digital pager notification, the system:</p> <p>Seizes the trunk specified. Dials the user-entered notification number (in <b>Message + OP + N</b>). Waits the <b>47-01-08: Delay in Dialing Digital Pager Callback Number</b> interval. Dials the number entered in <b>47-01-07: Digital Pager Callback Number</b>. The system assumes that the notification number completes dialing approximately four seconds after trunk seizure. This means that, by default, the Digital Pager Callback Number is dialed into the pager service about 13 seconds after trunk seizure.</p>	0~99 (seconds) (default = 9)		✓	
47-01-09	<b>SV8100 InMail System Options – Wait Between Digital Pager Callout Attempts</b>	<p>Set the minimum time between unacknowledged or unanswered digital pager Message Notification callouts. (A subscriber acknowledges a digital pager notification by logging onto their mailbox.) After this time expires, VM8000 InMail tries the callout again (for up to the number of times set in <b>47-01-14: Number of Callout Attempts</b>). If the system dials the callout number and the pager service is busy, it retries the number in one minute.</p>	1~255 (minutes) (default = 15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-10	<b>SV8100 InMail System Options – Wait Between Non-Pager Callout Attempts</b>	Set the minimum time between non-pager Message Notification callouts in which the destination answers, says Hello, dials 1 to acknowledge and then enters the wrong security code.	1~255 (minutes) (default = 20)		✓	
47-01-11	<b>SV8100 InMail System Options – Wait Between Busy Non-Pager Callout Attempts</b>	Set the time VM8000 InMail waits after it dials a busy non-pager callout destination, before retrying the callout number.	1~255 (minutes) (default = 15)		✓	
47-01-12	<b>SV8100 InMail System Options – Wait Between RNA Non-Pager Callout Attempts</b>	Set the time VM8000 InMail waits, after it dials an unanswered non-pager callout destination, before retrying the callout number. There are three types of unanswered nonpager callouts: <ul style="list-style-type: none"> <li>○ If the callout rings the destination longer than the 47-01-13: Wait for Answer Non-Pager Callout Attempts option.</li> <li>○ If the destination answers, says Hello (or the system detects answer supervision) and then hangs up without dialing 1 to log onto their mailbox. This typically happens if someone unfamiliar with notification answers the callout, or if the callout is picked up by an answering machine.</li> <li>○ If the destination answers, and then hangs up without saying Hello. This typically happens if someone unfamiliar with the notification answers the callout (like the above example), or if the call is picked up by an answering machine with insufficient outgoing message volume.</li> </ul>	1~255 (minutes) (default = 30)		✓	
47-01-13	<b>SV8100 InMail System Options – Number of RNA Rings</b>	If a non-pager callout rings the destination longer than this number of times, VM8000 InMail marks the call as unanswered (Ring No Answer) and hangs up.	1~99 (rings) (default = 5)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-14	<b>SV8100 InMail System Options – Number of Cascading Attempts</b>	Set how many times VM8000 InMail retries an incomplete Message Notification callout. This total includes unacknowledged callouts, callouts to a busy destination, and callouts to an unanswered destination. This option applies to pager and non-pager callouts.	1~99 (rings) (default = 5)InMail		✓	
47-01-15	<b>SV8100 InMail System Options – Send Pager Callout Until Acknowledged</b>	When this option is set to 1, VM8000 InMail continues to retry a digital pager Message Notification callout until the notification is acknowledged. If this option is set to 0, VM8000 InMail retries a digital pager Message Notification the number of times specified in <b>47-01-14 Number of Callout Attempts</b> . This option does not apply to Message Notification callouts to telephone numbers. A digital pager notification is acknowledged when the recipient logs onto the mailbox.	0 = No (Disabled) 1 = Yes (Enabled) (default = 0)		✓	
47-01-16	<b>SV8100 InMail System Options – Name Format</b>	Specify how names are displayed.	0 = 1st Last 1 = Last 1st (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-17	SV8100 InMail System Options – InMail Port	<p>Specify the port number of the first InMail Port.</p> <p> <i>Setting this program requires a CD-CP00-US reset for the changes to take effect.</i></p> <p> <i>With software <b>Version 1.11 or higher</b> the following rules apply when programming VM8000 InMail ports in program 47-01-17 on a system that has the basic 64 port license:</i></p> <ul style="list-style-type: none"> <li>○ When a PZ-ME50 is NOT mounted to CCPU-US.</li> <li>○ The first port of VM8000 InMail must be assigned to port 57 or lower.</li> <li>○ The number of licensed VM8000 InMail ports do not take away from the 64 port license. There can still be a combination of 64 trunks, TDM phones and IP phones.</li> <li>○ When a PZ-ME50 is mounted to CCPU-US:</li> <li>○ The first port of VM8000 InMail can be assigned above port 64.</li> </ul>	<p>0~497</p> <p>The first port of In-Mail must start with one of the following ports: 1, 5, 9, 12, 16, .....237, 241, 245, 249 and uses the first port assigned + next three consecutive ports. (default = 0)</p>	✓		
47-02-01	SV8100 InMail Station Mailbox Options – Mailbox Type	<p>Enable/Disable the mailbox. An extension mailbox is not accessible when it is disabled (even though its stored messages and configuration are retained in memory.) If disabled, a user pressing <b>Message</b> initiates a remote logon and is asked to enter their mailbox number. A voice prompt then announces: <i>That mailbox does not exist.</i></p> <p>To make programming easier, consider associating a mailbox number with a station port. For example, mailbox 1 could correspond to port 1, which in turn corresponds to extension 101.</p>	<p>0 = None                      1 = Personal                      2 = Group                      (default = 1)</p>	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-02-02	<b>SV8100 InMail Station Mailbox Options – Mailbox Number</b>	Select the extension number associated with the mailbox you are programming. Normally, mailbox 1 should use Mailbox Number 101, mailbox 2 should use Mailbox Number 102, etc. To make programming easier, consider associating a mailbox number with a station port. For example, mailbox 1 could correspond to port 1, which in turn corresponds to extension 101.	Digits (eight maximum, using 0~9) Default: Mailbox 1 = 101 Mailboxes 2~64 = 102~164 Mailboxes 65~512 = No Entry	✓		
47-02-03	<b>SV8100 InMail Station Mailbox Options – Number of Messages</b>	Set the maximum number of messages that can be left in the Subscriber Mailbox. If a caller tries to leave a message after this limit is reached, they hear, "That mailbox is full." VM8000 InMail then hangs up.	0~99 messages To conserve storage space, enter 0 for all unused mailboxes. Default: 99 for mailbox 1 20 for all other mailboxes		✓	
47-02-04	<b>SV8100 InMail Station Mailbox Options – Message Playback Order</b>	Set the Subscriber Mailbox message playback order. When a subscriber listens to their messages, VM8000 InMail can play the oldest message or the newest message first.	0 = FIFO (first-in/first-out, or oldest messages first). 1 = LIFO (last-in/first-out, or newest messages first) (default = 0)		✓	
47-02-05	<b>SV8100 InMail Station Mailbox Options – Auto Erase/Save of Messages</b>	Determine what happens when a Subscriber Mailbox user listens to a complete new message and then exits the mailbox without either saving ( <b>SA</b> ) or erasing ( <b>E</b> ) the message. Depending on the setting of this option, VM8000 InMail either automatically saves or erases the message. If the mailbox user hangs up before listening to the <i>entire</i> new message, VM8000 InMail retains the message as a new message.	0 = Erase After the subscriber listens to the entire new message and hangs up, VM8000 InMail erases the message. 1 = Save After the subscriber listens to the entire new message and hangs up, VM8000 InMail saves the message. (default = 1)		✓	
47-02-06	<b>SV8100 InMail Station Mailbox Options – Message Retention</b>	Determine how long a Subscriber Mailbox retains held and saved messages. If a message is left in a Subscriber Mailbox longer than this interval, VM8000 InMail deletes it.	1~99 Days 0 (Indefinite) (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-02-07	<b>SV8100 InMail Station Mailbox Options – Recording Conversation Beep</b>	<p>Enable/Disable the Conversation Record beep. If enabled, all parties on a call hear the voice prompt <i>Recording</i> followed by a single beep when the extension user initiates Conversation Record. If disabled, the voice prompt and beep do not occur. When you disable the Conversation Record beep, the following voice prompts do not occur while VM8000 InMail records the conversation:</p> <p><i>Recording (followed by a beep)</i>  <i>That mailbox is full (if the mailbox message storage capacity is reached)</i>  <i>You have reached the recording limit (if the recorded message is too long)</i></p> <p>The SV8100 telephone system software provides an additional Conversation Record beep. This beep repeats according to the setting of <b>Program 45-01-06: Voice Mail Integration Options: Record Alert Tone Interval Time.</b></p>	0 = Disable 1 = Enable (default = 1)		✓	
47-02-08	<b>SV8100 InMail Station Mailbox Options – Message Waiting Lamp</b>	<p>Enable/Disable Message Waiting lamp at the extension associated with the Subscriber mailbox. For Subscriber Mailboxes, you should enable this option. For Guest Mailboxes, you should disable it.</p>	0 = Disable 1 = Enable (default = 1)		✓	
47-02-09	<b>SV8100 InMail Station Mailbox Options – Auto Attendant Direct to Voice Mail</b>	<p>Enable/Disable Auto Attendant Do Not Disturb. When a subscriber enables this option, an Automated Attendant caller routes directly to the mailbox, hears the greeting, and is asked to leave a message. A subscriber can also enable this option while recording their mailbox greeting.</p>	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-02-10	<b>SV8100 InMail Station Mailbox Options – Forced Unscreened Transfer</b>	Enable/Disable Automated Attendant Forced Unscreened Transfer for the Subscriber Mailbox. If enabled, each Screened Transfer (TRF) to the extension is converted to an Unscreened Transfer (UTRF). If disabled, Screened Transfers from the Automated Attendant occur normally.	0 = Disable 1 = Enable (default = 0)		✓	
47-02-11	<b>SV8100 InMail Station Mailbox Options – Auto Time Stamp</b>	Enable/Disable Auto Time Stamp for the Subscriber Mailbox. If enabled, after the subscriber listens to a message VM8000 InMail announces the time and date the message was left. Auto Time Stamp also announces the message sender (if known). A subscriber can also enable Auto Time Stamp from their mailbox.	0 = Disable 1 = Enable (default = 0)		✓	
47-02-12	<b>SV8100 InMail Station Mailbox Options – System Administrator</b>	Designate the Subscriber Mailbox as a System Administrator. This allows the subscriber to use the <b>SA</b> options after logging into their mailbox.	0 = No (Disable) 1 = Yes (Enable) Default: Mailbox 1 (101)=1 Other mailboxes=0		✓	
47-02-13	<b>SV8100 InMail Station Mailbox Options – Dialing Option</b>	Dialing Option provides additional dialing options for Next Call Routing Mailbox calls (see <i>Next Call Routing Mailbox</i> below). If enabled, a caller who accesses the Subscriber Mailbox to leave a message can dial any option in the Next Call Routing Mailbox Dial Action Table. If disabled, the caller can dial only 0 (to use the Next Call Routing Mailbox 0 action).	0 = Disable 1 = Enable (default = 0)		✓	
47-02-14	<b>SV8100 InMail Station Mailbox Options – Next Call Routing Mailbox</b>	Assign a Next Call Routing Mailbox to the Subscriber Mailbox. This provides callers with additional dialing options while listening to a Subscriber Mailbox recorded or default greeting. The digits the caller can dial depends on the setting of the Next Call Routing Mailbox and Alternate Next Call Routing Mailbox options.	Call Routing Mailbox Number (1~3 digits, 01~016) No entry (Entered by pressing CLEAR) Default: 1 (Call Routing Mailbox 01) By default, Call Routing Mailbox numbers are 01~08		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-02-15	<b>SV8100 InMail Station Mailbox Options – Directory List Number</b>	Set up a station/extension mailbox directory list.	0 = None 1~8 = List Number * = All (default = 0)		✓	
47-02-26	<b>SV8100 InMail Station Mailbox Options – Auto Play</b>	Use this option to set the Subscriber Mailbox message Auto Play option. When a subscriber logs into their mailbox, InMail can automatically play new messages, or not.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-03-02	<b>SV8100 InMail Group Mailbox Options – Mailbox Number</b>	The Group Mailbox Number is the same as the Department Group master (pilot) number. Use this option to select the Department Group master (pilot) number associated with the Master Mailbox you are programming.	Digits (eight maximum, using 0~9) No Setting (entered by pressing <b>Hold</b> ) (default not assigned)		✓	
47-03-03	<b>SV8100 InMail Group Mailbox Options – Mailbox Type</b>	Set the Master Mailbox type.	0 = None 1 = Subscriber 2 = Routing (default = 1)		✓	
47-06-01	<b>Group Mailbox Subscriber Options – Number of Messages</b>	Set the maximum number of messages that can be left in the Subscriber Mailbox. If a caller tries to leave a message after this limit is reached, they hear, " <i>That mailbox is full</i> ". VM8000 InMail then hangs up.	0~99 messages To conserve storage space, enter 0 for all unused mailboxes. (default = 20)		✓	
47-06-02	<b>Group Mailbox Subscriber Options – Message Playback Order</b>	Set the Subscriber Mailbox message playback order. When a subscriber listens to their messages, VM8000 InMail can play the oldest messages or the newest messages first.	0 = FIFO (first-in/ first-out, or oldest messages first). 1 = LIFO (last-in/ first-out, or newest messages first). (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-06-03	<b>Group Mailbox Subscriber Options – Auto Erase/Save of Messages</b>	Determine what happens when a Subscriber Mailbox user completely listens to a new message and then exits the mailbox without either saving (SA) or erasing (E) the message. Depending on the setting of this option, VM8000 InMail either automatically saves or erases the message. If the mailbox user hangs up before listening to the entire new message, VM8000 InMail retains the message as a new message.	0 = Erase After the subscriber listens to the entire new message and hangs up, VM8000 InMail erases the message. 1 = Save After the subscriber listens to the entire new message and hangs up, VM8000 InMail saves the message. (default = 1)		✓	
47-06-04	<b>Group Mailbox Subscriber Options – Message Retention</b>	Determine how long a Subscriber Mailbox retains held and saved messages. If a message is left in a Subscriber Mailbox longer than this interval, VM8000 InMail deletes it.	1~90 days 0 (Indefinite) (default = 0)		✓	
47-06-05	<b>Group Mailbox Subscriber Options – Recording Conversation Beep</b>	Enable/Disable the Conversation Record beep. If enabled, all parties on a call hear the voice prompt <i>Recording</i> followed by a single beep when the extension user initiates Conversation Record. If disabled, the voice prompt and beep do not occur. When you disable the Conversation Record beep, the following voice prompts do not occur while VM8000 InMail records the conversation: Recording (followed by a beep) That mailbox is full (if the mailbox message storage capacity is reached). You have reached the recording limit (if the recorded message is too long). The SV8100 telephone system software provides an additional Conversation Record beep. This beep repeats according to the setting of Program 45-01-06: Voice Mail Integration Options: Record Alert Tone Interval Time.	0 = No (Disable) 1 = Yes (Enable) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-06-06	<b>Group Mailbox Subscriber Options – Message Waiting Lamp</b>	Enable/Disable Message Waiting lamp at the extension associated with the Subscriber mailbox. For Subscriber Mailboxes, you should enable this option. For Guest Mailboxes, you should disable this option.	0 = Disable 1 = Enable (default = 1)		✓	
47-06-07	<b>Group Mailbox Subscriber Options – Auto Attendant Do Not Disturb</b>	Enable/Disable Auto Attendant Do Not Disturb. When a subscriber enables Auto Attendant Do Not Disturb, an Automated Attendant caller routes directly to the mailbox, hears the greeting, and is asked to leave a message. A subscriber can also enable Auto Attendant Do Not Disturb while recording their mailbox greeting.	0 = Disable 1 = Enable (default = 0)		✓	
47-06-08	<b>Group Mailbox Subscriber Options – Forced Unscreened Transfer</b>	Enable/Disable Automated Attendant Forced Unscreened Transfer for the Subscriber Mailbox. If enabled, each Screened Transfer (TRF) to the extension is converted to an Unscreened Transfer (UTRF). If disabled, Screened Transfers from the Automated Attendant occur normally.	0 = Disable 1 = Enable (default = 0)		✓	
47-06-09	<b>Group Mailbox Subscriber Options – Auto Time Stamp</b>	Enable/Disable Auto Time Stamp for the Subscriber Mailbox. If enabled, after the subscriber listens to a message VM8000 InMail announces the time and date the message was left. Auto Time Stamp also announces the message sender (if known). A subscriber can also enable Auto Time Stamp from their mailbox.	0 = Disable 1 = Enable (default = 0)		✓	
47-06-10	<b>Group Mailbox Subscriber Options – System Administrator</b>	Designate the Subscriber Mailbox as a System Administrator. This allows the subscriber to use the options after logging into their mailbox.	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-06-11	<b>Group Mailbox Subscriber Options – Dialing Option</b>	Dialing Option provides additional dialing options for Next Call Routing Mailbox calls (see <i>Next Call Routing Mailbox</i> below). If enabled, a caller who accesses the Subscriber Mailbox to leave a message can dial any option in the Next Call Routing Mailbox Dial Action Table. If disabled, the caller can dial only 0 (to use the Next Call Routing Mailbox 0 action).	0 = Disable 1 = Enable (default = 0)		✓	
47-06-12	<b>Group Mailbox Subscriber Options – Next Call Routing Mailbox</b>	Assign a Next Call Routing Mailbox to the Subscriber Mailbox. This provides callers with additional dialing options while listening to a Subscriber Mailbox recorded or default greeting. The digits the caller can dial depends on the setting of the Next Call Routing Mailbox and Alternate Next Call Routing Mailbox options.	Call Routing Mailbox Number (0~32) No entry (entered by pressing <b>CLEAR</b> ) (default = 1) (Call Routing Mailbox 01) By default, Call Routing Mailbox numbers are 01=16		✓	
47-06-13	<b>Group Mailbox Subscriber Options – Directory List Number</b>	Specify the Directory List Number to which the Group Mailbox belongs. Use to set up a Master Mailbox assigned as a Subscriber Mailbox in 47-03-03.	0 = None 1~8 = List Number * = All (default = 0)		✓	
47-06-24	<b>Group Mailbox Subscriber Options – Auto Play</b>	Use this option to set the Group Subscriber Mailbox message auto play option. When a user logs into the group mailbox, InMail can automatically play new messages, or not.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-07-02	<b>SV8100 InMail Routing Mailbox Options – Routing Mailbox Type</b>	Set the Routing Mailbox type.	0 = None 1 = Call Routing 2 = Announcement 3 = Directory 4 = Distribution Default: Mailboxes 01~08 = 1 (Call Routing) Mailboxes 09~32 = 2 (Announcement)		✓	
47-08-01	<b>Call Routing Mailbox Options – Dial Action Table</b>	Assign the Dial Action Table to the Call Routing Mailbox. The Dial Action Table defines the dialing options for the call Routing Mailbox.	1~32 (Dial Action Table 1~32) Default: 1 (Dial Action Table 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-08-02	<b>Call Routing Mailbox Options – Screened Transfer Timeout</b>	Set the time a Screened Transfer (TRF) from the Automated Attendant rings an unanswered extension before recalling. This option has a similar function as Customize: Mailbox Options: Call Routing: [Call Handling] Options: Delay Rings Before Redirect Transfer in VM8000 InMail.	0~255 (seconds) Entering 0 causes immediate recall. (default = 15)		✓	
47-08-03	<b>Call Routing Mailbox Options – Time Limit for Dialing Commands</b>	Determine the time VM8000 InMail waits for an Automated Attendant caller to dial before routing the call to the Timeout destination. <i>Be sure your Dial Action Tables have a Timeout action programmed.</i> If the caller waits too long to dial: When the associated Dial Action Table has a Timeout action programmed, the caller routes to that destination. When the associated Dial Action Table does not have a Timeout action programmed, the Instruction Menu repeats three times and then VM8000 InMail hangs up.	0~99 (seconds) Entering 0 causes the Automated Attendant to immediately route callers to the Timeout destination programmed in the active Dial Action Table. (default = 5)		✓	
47-08-04	<b>Call Routing Mailbox Options – Fax Detection</b>	Enable/Disable Fax detection for the Call Routing Mailbox. When Enabled, the VM8000 InMail Automated Attendant (when using this mailbox) detects incoming Fax CNG tone. The Fax then routes to the company Fax Machine according to the setting in Program 47-01-06: Fax Extension. When Disabled, the Automated Attendant does not detect incoming Fax calls.	0 = Disabled 1 = Enabled (default = 0)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-09-01	<b>Announcement Mailbox Options – Next Call Routing Mailbox</b>	If you set up an Announcement Mailbox to answer Automated Attendant calls, use this option to provide additional routing options to the Automated Attendant callers. This option interacts with <i>Repeat Count</i> and <i>Hang Up After</i> below. For more detail on this interaction, refer to Direct Announcement Mailbox Routing and Routed Announcement Mailbox Routing in the VM8000 InMail System Guide.	Call Routing Mailbox Number (1~32) 0 = Undefined (default = 0)		✓	
47-09-02	<b>Announcement Mailbox Options – Repeat Count</b>	Enter the number of times you want the Announcement Mailbox message to repeat to callers. After an Announcement Mailbox caller initially listens to the message, it repeats the number of times specified in this option. This option interacts with <i>Next Call Routing Mailbox</i> and <i>Hang Up After</i> when providing routing options. For more detail on this interaction, refer to Direct Announcement Mailbox Routing and Routed Announcement Mailbox Routing in the VM8000 InMail System Guide.	0 (No Repeats) 1~10 (Announcement repeats 1~10 times) (default = 0)		✓	
47-09-03	<b>Announcement Mailbox Options – Hang Up After</b>	Use this option along with <i>Next Call Routing Mailbox</i> and <i>Repeat Count</i> above to provide additional routing options to Automated Attendant callers. For more detail on this interaction, refer to Direct Announcement Mailbox Routing and Routed Announcement Mailbox Routing in the VM8000 InMail System Guide.	0 = None 1 = Goodbye 2 = Silent (default = 0)		✓	
47-10-01	<b>SV8100 InMail Trunk Options – Answer Table Assignment</b>	Assign an InMail Answer Table to each Direct Inward Line (DIL) the Automated Attendant should answer. The Automated Attendant follows the routing specified by the selected Answer Table.	Answer Table (1~16) (default = 1)		✓	




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Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-11-01	<b>VM8000 InMail Answer Table Options – Answer Schedule Override</b>	Enable/Disable Answer Schedule Override for the selected Answer Table. If enabled (and you make an entry for <i>Override Mailbox</i> below), the active Answer Table routes calls to the Override Mailbox.	0 = Disable 1 = Enable (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-11-02	<b>VM8000 InMail Answer Table Options – Override Mailbox Category</b>	<p>Specify the category of the mailbox where Automated Attendant calls should route when you enable Answer Schedule Override.</p> <p>VM8000 InMail mailbox categories are Subscriber Mailbox, Master Mailbox, and Routing Mailbox. VM8000 InMail handles the routing according to the type of mailbox (Subscriber, Call Routing, or Announcement) within the specified category:</p> <ul style="list-style-type: none"> <li>○ If the Override Mailbox is a Subscriber Mailbox, the outside caller hears the mailbox greeting (if recorded) and can leave a message.</li> <li>○ If the Override Mailbox is an Announcement Mailbox, the outside caller hears the recorded announcement. Depending on how the Announcement Mailbox is programmed, InMail then hangs up, reroutes the call, or provides additional dialing options.</li> <li>○ If the Override Mailbox is a Call Routing Mailbox, the outside caller hears the instruction menu and can dial any option allowed by the associated Dial Action Table.</li> </ul> <p> <i>If any Input Data value is entered, the terminal displays the Override Mailbox Number selection below.</i></p>	0 = Undefined 1 = Subscriber Mailbox – STA 2 = Group Mailbox 3 = Routing Mailbox (default = 0)		✓	
	<b>Override Mailbox Number</b>	<p>Specify the mailbox where Automated Attendant calls should route when you enable Answer Schedule Override. The mailbox number you select in this option should match the mailbox category specified in <b>47-11-02: Override Mailbox Category</b> above.</p>	Digits (three maximum, using 0~9) (default = No Entry)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-11-03	<b>VM8000 InMail Answer Table Options – Default Mailbox Category</b>	<p>Specify the category of mailbox used as the Default Mailbox. VM8000 InMail mailbox categories are Subscriber Mailbox, Master Mailbox, and Routing Mailbox. VM8000 InMail uses the Default Mailbox when an Answer Schedule is not in effect. InMail handles the routing according to the type of mailbox (Subscriber, Call Routing, or Announcement) within the specified category:</p> <ul style="list-style-type: none"> <li>○ If the Default Mailbox is a Subscriber Mailbox, the outside caller hears the mailbox greeting (if recorded) and can leave a message.</li> <li>○ If the Default Mailbox is an Announcement Mailbox, the outside caller hears the recorded announcement. Depending on how the Announcement Mailbox is programmed, VM8000 InMail then hangs up, reroutes the call, or provides additional dialing options.</li> <li>○ If the Default Mailbox is a Call Routing Mailbox, the outside caller hears the instruction menu and can dial any option allowed by the associated Dial Action Table.</li> </ul> <p> <i>If any Input Data value is entered, the terminal displays the Default Mailbox Number selection (below).</i></p>	0 = Undefined 1 = Subscriber Mailbox - STA) 2 = Group Mailbox 3 = Routing Mailbox Default : Answer Table 1 = 3 Answer Table 2~8=0		✓	
	<b>VM8000 InMail Answer Table Options – Default Mailbox Number</b>	<p>Set the Answer Table Default Mailbox number. VM8000 InMail uses the Default Mailbox when an Answer Schedule is not in effect. By default, this occurs at all times <i>other than</i> Monday through Friday from 8:30 AM to 5:00 PM.</p>	Digits (Three maximum, using 0~9) Default: Answer Table 1 = 1 Answer Table 2~8 = No Entry		✓	
47-11-04	<b>VM8000 InMail Answer Table Options – Next Answer Table</b>	<p>When 10 Answer Schedules in an Answer Table are not enough, use this option to link two Answer Tables together. VM8000 InMail treats the two linked tables as a single 20 entry Answer Table.</p>	Answer Table (1~16) 0 = Undefined (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-12-01	VM8000 InMail Answer Schedules – Schedule Type	<p>Assign a Schedule Type to the selected Answer Schedule. The Schedule Type determines how the Answer Schedule answers calls.</p> <p>The schedule can be one of the following types:</p> <ul style="list-style-type: none"> <li>○ <b>1. Day of the Week</b> A Type 1 Answer Schedule runs on a specific day of the week. For this type of schedule, you select: <ul style="list-style-type: none"> <li>The day of the week the schedule should run:</li> <li>The schedule start time.</li> <li>The schedule end time</li> <li>The Call Routing or Announcement Mailbox used to answer calls.</li> </ul> </li> <li>○ <b>2. Range of Days</b> A Type 2 Answer Schedule runs for a range of days. For this type of schedule, you select: <ul style="list-style-type: none"> <li>The day of the week the schedule should start.</li> <li>The day of the week the schedule should stop.</li> <li>The time on the start day the schedule should start.</li> <li>The time on the stop day the schedule should stop.</li> <li>The Call Routing or Announcement Mailbox used to answer the calls.</li> </ul> </li> <li>○ <b>3. Date</b> A type 3 Answer Schedule runs only on a specific day of the year. For this type of schedule, you select: <ul style="list-style-type: none"> <li>The specific date the schedule should run.</li> <li>On the selected date, the time the schedule should start.</li> <li>On the selected date, the time the schedule should stop.</li> <li>The Call Routing or Announcement Mailbox used to answer the calls.</li> </ul> </li> </ul>	<p>0 = Undefined  1 = Day of the Week  2 = Range of Days  3 = Date  Default:  Answer Table 1/  Schedule 1 = 2  All other  schedules = 0</p>		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-12-02	<b>VM8000 InMail Answer Schedules – Answering Mailbox Category</b>	<p>Specify the category of mailbox to which Automated Attendant calls should route when the schedule is in effect. VM8000 InMail mailbox categories are Subscriber Mailbox, Master Mailbox, or Routing Mailbox.</p> <p>VM8000 InMail handles the routing according to the exact type of Subscriber, Master, or Routing Mailbox specified.</p> <p>If the Answering Mailbox is a Subscriber Mailbox, the outside caller hears the mailbox greeting (if recorded) and can leave a message.</p> <p>If the Answering Mailbox is an Announcement Mailbox, the outside caller hears the recorded announcement. Depending on how the Announcement Mailbox is programmed, VM8000 InMail then hangs up, reroutes the call, or provides additional dialing options.</p> <p>If the Answering Mailbox is a Call Routing Mailbox, the outside caller hears the instruction menu and can dial any option allowed by the associated Dial Action Table.</p>	<p>0 = Undefined                      1 = Subscriber Mailbox - STA                      2 = Group Mailbox                      3 = Routing Mailbox (default = 3)</p>		✓	
	<b>Answering Mailbox Number</b>	<p>Set the number of the Answering Mailbox the Automated Attendant uses when the selected schedule is in effect. This mailbox is defined in 47-12-02: Answering Mailbox Category.</p>	<p>Digits (three maximum, using 0~9)                      Default:                      Answer Table 1/                      Schedule 1 = 1                      All Other Answer Schedules = No Entry</p>		✓	
47-12-03	<b>VM8000 InMail Answer Schedules – Day of the Week</b>	<p>For Day of the Week (Type 1) Answer Schedules, select the day of the week the Answer Schedule should be active.</p>	<p>1 = Sunday                      2 = Monday                      3 = Tuesday                      4 = Wednesday                      5 = Thursday                      6 = Friday                      7 = Saturday (default = 1)</p>		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-12-04	VM8000 InMail Answer Schedules – Start Day	For Range of Days (Type 2) Answer Schedules, select the day of the week the Answer Schedule should start.	1 = Sunday 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday Default: 1 Answer Table 1/ Schedule 1 = 2 All Other Schedules = 1		✓	
47-12-05	VM8000 InMail Answer Schedules – End Day	For Range of Days (Type 2) Answer Schedules, select the day of the week the Answer Schedule should end.	1 = Sunday 2 = Monday 3 = Tuesday 4 = Wednesday 5 = Thursday 6 = Friday 7 = Saturday Default: Answer Table 1/ Schedule 1 = 6 All Other Answer Schedules = 1		✓	
47-12-06	VM8000 InMail Answer Schedules – Date	For Date (Type 3) Answer Schedules, select the date the Answer Schedule should be active.	MMDD For example: - 0101 = January 1 - 1231 = December 31 - 0000 = No date set (default = 0000)		✓	
47-12-07	VM8000 InMail Answer Schedules – Schedule Start Time	Specify the time the Answer Schedule should start. It applies to Day of the Week (Type 1), Range of Days (Type 2), and Date (Type 3) schedules. (To make a schedule run continuously, make the same entry for 47-12-07: Schedule Start Time and 47-12-08: Schedule End Time.)	HHMM (24-hour clock) For example: - 0130 = 1:30AM - 1700 = 5:00PM Default: Answer Table 1/ Schedule 1 = 08:30 (8:30AM) All other schedules are 0000		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-12-08	<b>VM8000 InMail Answer Schedules – Schedule End Time</b>	Specify the time the Answer Schedule should start. It applies to Day of the Week (Type 1), Range of Days (Type 2), and Date (Type 3) schedules. (To make a schedule run continuously, make the same entry for 47-12-07: Schedule Start Time and 47-12-08: Schedule End Time.)	HHMM (24-hour clock) For example: - 0130 = 1:30AM - 1700 = 5:00PM - 0000 = Undefined Default: Answer Table 1/ Schedule 1 = 1700 All Other Schedules = 0000		✓	
47-13-01	<b>SV8100 InMail Dial Action Tables</b>	Refer to the UNIVERGE SV8100 InMail System Guide, for complete programming details.			✓	
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Set the criteria for DTMF dial, ringback and busy tones.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1~5 = 0			✓
80-04-01	<b>Call Progress Tone Detector Setup – Detect Level</b>	Define the various levels and timers for the Call Progress Tone Detector. Use this option to set the Detection Level.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1 (DT) – 0 (-25dBm) Type 2 (BT) – 0 (-25dBm) Type 3 (RBT) – 0 (-25dBm) Type 4 (SBT) – 0 (-25dBm) Type 5 – 0			✓

**ACD Delay Announcement:**

Only use if Master Mailboxes are used for ACD Delay Announcements.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
41-19-01	<b>ACD Voice Mail Delay Announcement – Delay Message Start Timer</b>	Determine the time the system waits before playing the Delay Message.	0~64800 (seconds) (default = 0)	✓		
41-19-02	<b>ACD Voice Mail Delay Announcement – Mailbox Number for 1st Announcement Message</b>	Assign Voice Mail ACD Announcement Mailbox as the message source for the 1st Announcement Message.	Dial (up to eight digits) (default = No Setting)	✓		
41-19-03	<b>ACD Voice Mail Delay Announcement – 1st Delay Message Sending Count</b>	Determine the 1st Delay Message Sending Count. This entry must be set to 1 or higher for the message to play.	0 = No message is played. 1~255 (default = 0)		✓	
41-19-04	<b>ACD Voice Mail Delay Announcement – Mailbox Number for 2nd Announcement Message</b>	Assign Voice Mail ACD Announcement Mailboxes as the message source for the 2nd Announcement Message.	Dial (up to eight digits) (default = No Setting)		✓	
41-19-05	<b>ACD Voice Mail Delay Announcement – 2nd Delay Message Sending Count</b>	Determine the 2nd Delay Message Sending Count. This entry must be set to 1 or higher for the message to play.	0 = No message is played. 1~255 (default = 0)		✓	
41-19-06	<b>ACD Voice Mail Delay Announcement – Wait Tone Type at Message Interval</b>	Determine what the caller hears between the messages.	0 = Ring Back Tone 1 = Music On Hold Tone 2 = Background Music Source (default = 0)		✓	
41-19-07	<b>ACD Voice Mail Delay Announcement – ACD Forced Disconnect Time after 2nd Announcement</b>	Assign the time the system waits after the end of the ACD delay message before disconnecting.	0~64800 (seconds) (default = 0)		✓	
41-19-08	<b>ACD Voice Mail Delay Announcement – Delayed Message Interval Time</b>	Set the time between Delayed Messages.	0~64800 (seconds) (default = 20)		✓	
47-03-02	<b>SV8100 InMail Group Mailbox Options – Mailbox Number</b>	The Group Mailbox Number is the same as the Department Group master (pilot) number. Use this option to select the Department Group master (pilot) number associated with the Master Mailbox you are programming.	Digits (eight maximum, using 0~9) No Setting (entered by pressing <b>Hold</b> ) (default not assigned)		✓	
47-03-03	<b>SV8100 InMail Group Mailbox Options – Mailbox Type</b>	Set the Master Mailbox type.	0 = None 1 = Subscriber 2 = Routing (default = 1)		✓	



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## Operation

### Calling Your Mailbox:

#### To call your mailbox:

*With a multiline terminal, your Voice Mail key flashes green and your Message Center keys flash red when they have messages waiting. If you do not have a Voice Mail key, your Message Waiting LED flashes instead.*

#### Multiline Terminal


1. Press your **Voice Mail** key (Program 15-07 or SC 751: 01 + \*8).

- OR -

Press the **Vmsg** softkey.

- OR -


Press the **Message** key on the telephone, if equipped.


 *Your mailbox number is normally the same as your extension number. You may optionally dial a co-worker's mailbox - or use this procedure to call your mailbox from a co-worker's telephone.*

- OR -

Press **Speaker** and dial \*8.


2. If requested by Voice Mail, enter your security code.

 *Ask your Voice Mail system administrator for your security code.*

 *Normally, your Message Waiting (MW) LED goes out (if applicable). If it continues to flash, you have unanswered Message Waiting requests or a new General Message. See "To check your messages" below.*

#### Single Line Telephone






1. Lift the handset and dial \*8.

 *If you are at a co-worker's telephone, you can dial the Voice Mail master number and your mailbox number instead. You can also use this procedure from your own telephone to call a co-worker's mailbox.*




2. If requested by Voice Mail, enter your security code.

## Checking Messages:

### If Program 15-02-26 = 0 (Message Key):


1. Press the **Message** key once.
  -  *The user can use the VOL UP and VOL DOWN keys to view the new messages. If there are both voice mail messages and Message Waiting calls, the display indicates the number of new voice mail messages and then each Message Waiting call is shown.*
  -  *When there are new messages, the Message Waiting LED on the telephone will flash red.*
  -  *To return a displayed Message Waiting, press the Speaker key or lift the handset.*
2. To return a displayed Message Waiting, press **Speaker** or lift the handset.  
To listen to the voice messages, with Voice Message displayed, press **Speaker** or lift the handset.
  -  *The voice mail is called.*
  -  *The voice mail is only called if there are new messages. If the display indicates Check Messages No Messages, press the Exit key to return the telephone to idle.*

### If Program 15-02-26 = 1 (Voice Mail Key):

1. Press the **Message** key once.
  -  *The voice mail is called.*
  -  *When there are new messages, the Message Waiting LED on the telephone flashes red.*
  -  *With this option set, the MSG key can be used as a Voice Mail key for any function [calling voice mail or transfer call a to voice mail (Hold + MSG + Extension Number), etc.].*

## Leaving A Message (multiline terminal Only):

### To leave a message in the mailbox of an unanswered extension (*the extension you call can be busy, in DND or unanswered*):

1. Press the **Voice Mail** key (Program 15-07 or SC 751: code 77 + VM8000 InMail pilot).
  - OR -
  - Press the **Message** key on telephone, if equipped.
  - OR -
  - Dial **8**.
  -  *The Voice Mail System prompts you to leave a message.*

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## Forwarding Calls to Your Mailbox:




### To activate or cancel Call Forwarding:

1. Press **Speaker** (or lift the handset at the single line telephone) and choose from the following dial access codes:
  - 741 = Call Forward – Immediate (Program 15-07 or SC 751: code 10)
  - 742 = Call Forward – Busy (Program 15-07 or SC 751: code 11)
  - 743 = Call Forward – No Answer (Program 15-07 or SC 751: code 12)
  - 744 = Call Forward – Busy/No Answer (Program 15-07 or SC 751: code 13)
2. Dial the Voice Mail master number.
3. Press **Speaker** to hang up (or hang up handset at the single line telephone).


## Transferring Calls to a Mailbox:

### To transfer your active call to a mailbox:

#### Multiline Terminal

1. Press **Hold**.
2. Press the **Voice Mail** key (Program 15-07 or SC 751: code 77 + VM8000 InMail pilot).
  - OR -
  - Press the **Message** key on the telephone, if equipped.
3. Dial the number of mailbox to receive the transfer.
  -  *This number can be a mailbox number or a co-worker's mailbox number.*
  - OR -
  - Press the **DSS Console** or **One-Touch** key for extension user's mailbox, which receives the transfer.
    -  *If the Transfer destination is an extension forwarded to Voice Mail, the call waits before routing the called user's mailbox. This gives you the option of retrieving the call instead of having it picked up by Voice Mail.*
4. Hang up.
  -  *Voice Mail prompts your caller to leave a message in the mailbox you selected.*
  - OR -
  - 1. Dial extension number or press a DSS Console key for the extension mailbox which receives the transfer.
  - 2. Press the Voice Mail key (Program 15-07 or SC 751: code 77 + VM8000 InMail pilot)
    - OR -
    - Press the **Message** key on the telephone, if equipped.


## 3. Hang up.

 *Voice Mail prompts your caller to leave a message in the mailbox you selected.*

Single Line Telephone


## 1. Hookflash.


Dial Voice Mail master number followed by destination mailbox.

 *If the Transfer destination is an extension forwarded to Voice Mail, the call waits before routing the called user's mailbox. This gives you the option of retrieving the call instead of having it picked up by Voice Mail.*

## 2. Hang up.


**Recording Your Call:****To record your active call in your mailbox:**Multiline Terminal1. Press the **Voice Mail Record** key (Program 15-07 or SC 751: code 78)


 *You hear a beep and your Record key flashes. The system beeps periodically to remind you that you are recording.*

 *To stop recording, press the Voice Mail Record key again. You can restart and stop recording as required.*

**- OR -**

1. Press **Hold**.2. Dial **654**.


 *The system automatically reconnects you to your call.*


 *To stop recording, place the call on hold then pick the call back up. You can restart and stop recording as required.*

Single Line Telephone

## 1. Hookflash.

2. Dial **654**.

 *The system automatically reconnects you to your call.*

 *To stop recording, hookflash twice. You can restart and stop recording as required.*

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## Personal Answering Machine Emulation (Multiline Terminal Only):

### To enable or cancel Personal Answering Machine Emulation:

1. Press **Speaker** (or lift the handset at the single line telephone) and choose from the following dial access codes:
  - 741 = Call Forward – Immediate
  - 742 = Call Forward – Busy
  - 743 = Call Forward – No Answer
  - 744 = Call Forward – Busy/No Answer
  - 745 = Call Forward – Both Ring
  - 746 = Call Forwarding – Follow Me
2. Dial the Voice Mail master number.
3. Press **Speaker** to hang up (or hang up handset at the single line telephone).

### When Personal Answering Machine Emulation broadcasts your caller's message, you can:

*Your telephone must be idle (not on a call).*


1. Do nothing.
  -  *The message is automatically being recorded in your mailbox. The broadcast stops when your caller hangs up.*
  - OR -
1. Lift the handset to intercept the call.
  -  *You connect to the caller. The system records the first part of the message in your mailbox. The line key changes from red to green.*
  - OR -
  - Press **Speaker** to cut off the message broadcast and send the call to your mailbox.
  -  *Voice Mail records the entire message in your mailbox.*

## Checking Your Messages (Multiline Terminal Only):

### To check your messages:

1. Press the **Message** key.

2. Dial **\*0**.

 You can have any combination of the message types in the table below on your telephone.

If you see. . .	You have. . .
<b>VOICE MESSAGE n MESSAGES</b>	New messages in your Voice Mail mailbox
<b>CHECK MESSAGE VRS GENERAL MESSAGE</b>	Not listened to the current General Message
<b>CHECK MESSAGE (name)</b>	Message Waiting requests left at your telephone by your co-workers

## 3. Press VOL ▲ or VOL ▼ to scroll through your display.

4. When you find the message you want to answer, press **Speaker**. You can either:

- Go to your Voice Mail mailbox.
- Listen to the new General Message.
- Automatically call the extension that left you a Message Waiting.

**Directory Dialing:****Recording a Directory Dialing message:**

1. Log onto the System Administrator's mailbox: **SA** (72) or press **0** to play a Help message.
2. Select Instruction Menus: **I** (4).
3. Enter the Directory Dialing Mailbox number or press **#** to go back to the System Administrator Options.
4. Select one of the following options:
  - L** (5) = Listen to the current Directory Dialing Message (if any)
  - #** = Exit listen mode
  - R** (7) = Record a new Directory Dialing Message
    - **\*** = Pause or restart recording
    - **E** (3) = Erase recording
    - **#** = Exit recording mode
  - E** (3) = Erase the Directory Dialing Message
  - #** = Go back to the System Administrator options

**Using Directory Dialing:**

1. After the Automated Attendant answers, wait for the Directory Dialing Message.  
The Automated Attendant may ask you to dial a digit for Directory Dialing.
2. Dial the letters that correspond to the name of the person you wish to reach + #.
  - The Directory Dialing Message tells you how many letters you need to dial, and whether you should enter the person's first name or last name.
  - To exit Directory Dialing without selecting a name, dial #.
3. The Automated Attendant announces the name matches, and tells you which digit to dial (1~3) to reach each of the announced names.
  - To hear additional name matches (if any), dial 6 instead.
4. After you make your selection, the Automated Attendant routes your call to the name you select.

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## *VM8000 InMail Park and Page*

### Enhancements

This feature added with <b>Version 1100</b> .
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### Description

VM8000 InMail Park and Page can automatically Park a call at an extension and Page the user with a recorded Paging Message announcing the parked call. The called extension user can then go to any telephone and implement Personal Park to pick up the call. With VM8000 InMail Park and Page, InMail tries to locate the person instead of just sending the call to their mailbox. Additionally, there is no need for an operator or receptionist to manually answer the call, park it, and then try to track down the employee.

The Paging Message is usually recorded in the user's own voice and typically says something like, "Mike Smart, you have a call." If the Paging Message is not recorded for the extension, a built-in message announces the called party's name or extension number (if the name is not recorded).

VM8000 InMail Park and Page is available for all trunk calls that are redirected to voice mail via forwarding or overflow, including transferred calls, Direct Inward Lines, and Direct Inward Dialing. Park and Page is also available for Automated Attendant Screened (STRF) and Unscreened (UTRF) Transfers. Optionally, an extension can have calls from the Automated Attendant immediately Park and Page without trying their extension first.

When VM8000 InMail Park and Page intercepts the call, it normally offers the caller three options:

1. Dial **1** to leave a message in the called extension's mailbox.  
(The caller hears the mailbox Greeting, if recorded.)
2. Dial **2** to Park and Page.  
(The caller returns to these options if the Park is not picked up.)
3. Dial **3** to have the system try and locate this person.  
(The Find-Me Follow-Me feature returns the caller to these options if the user is not located.)
4. Dial **4** for other options.  
(Normally, this routes to the extensions Next Call Routing Mailbox).

VM8000 InMail Park and Page is available at Personal and Group Subscriber Mailboxes, and can be enabled through system programming or via the subscriber's Mailbox Options Menu. VM8000 InMail Park and Page is not applicable to Intercom calls.

## Automated Attendant Direct to Voice Mail (DVM)

When an extension has Automated Attendant Direct to Voice Mail (DVM) enabled, all calls from the Automated Attendant go directly to the subscriber's mailbox. The extension does not ring for Automated Attendant calls. The caller hears the mailbox greeting and can leave a message, but unlike Park and Page is not normally offered any other routing options. A subscriber typically turns on DVM when they need to work at their desk undisturbed by outside calls from the Automated Attendant.

DVM can be enabled by the installer from system programming or by the extension user from their Mailbox Options Menu.

Keep in mind that DVM does *not* block Intercom calls from co-workers or any other outside call not routed through the Automated Attendant. For example, with DVM enabled, Direct Inward Lines and transferred outside calls to an extension work normally.

### Conditions

- The Park and Page feature uses the extensions personal park location only.
- Enabling Automated Attendant Direct to Voice Mail (DVM) for a mailbox bypasses the Park and Page feature.
- The Park and Page feature uses the All Zone paging only; this cannot be changed or configured.
- Virtual extensions are not supported for Park and Page.

### Default Setting

Park and Page and Automated Attendant Direct to Voice Mail are disabled.

For transferred outside calls, direct inward lines and direct inward dialing refer to [Table 2-123 Park and Page Call Handling](#).

**Table 2-123 Park and Page Call Handling**

Park and Page (Call Handling) For Transferred Outside Calls, Direct Inward Line and Direct Inward Dialing			
47-02-14: Next Call Routing Mailbox	47-02-13: Dialing Option	47-02-17: Enable Park and Page	Result
Undefined	0 (No)	0 (No)	If unanswered, caller hears greeting and can leave a message.
Undefined	0 (No)	1 (Yes)	If unanswered, caller can dial <b>1</b> to leave a message or <b>2</b> to Park and Page.
Undefined	1 (Yes)	0 (No)	If unanswered, caller hears greeting and can leave a message.

**Table 2-123 Park and Page Call Handling (Continued)**

<b>Park and Page (Call Handling)</b> For Transferred Outside Calls, Direct Inward Line and Direct Inward Dialing			
<b>47-02-14: Next Call Routing Mailbox</b>	<b>47-02-13: Dialing Option</b>	<b>47-02-17: Enable Park and Page</b>	<b>Result</b>
Undefined	1 (Yes)	1 (Yes)	If unanswered, caller can dial <b>1</b> to leave a message or <b>2</b> to Park and Page.
Defined	0 (No)	0 (No)	If unanswered, caller hears greeting and can leave a message.
Defined	0 (No)	1 (Yes)	If unanswered, caller can dial <b>1</b> to leave a message, <b>2</b> to Park and Page, and <b>3</b> for other options (from the Next Call Routing Mailbox).
Defined	1 (Yes)	0 (No)	If unanswered, caller hears greeting, can leave a message, and dial options (from the Next Call Routing Mailbox).
Defined	1 (Yes)	1 (Yes)	If unanswered, caller can dial: <b>1</b> to leave a message, <b>2</b> to Park and Page, <b>3</b> to have the system try and locate the user and <b>4</b> for other options (from the Next Call Routing Mailbox).

For automated attendant unscreened (UTRF) and screened (STRF) transfers refer to [Table 2-124 Park and Page Call Handling](#).

**Table 2-124 Park and Page Call Handling**

<b>Park and Page (Call Handling)</b> For Automated Attendant Unscreended (UTRF) and Screened (STRF) Transfers			
<b>47-02-17: Enable Park and Page</b>	<b>47-02-18: Paging Option</b>	<b>47-02-09: Auto Att Direct to VM</b>	<b>Result</b>
0 (No)	0 (RNA)	0 (No)	If unanswered, caller hears greeting and can leave a message.
0 (No)	0 (RNA)	1 (Yes)	Caller immediately hears greeting and can leave a message.
0 (No)	1 (IMM)	0 (No)	If unanswered, caller hears greeting and can leave a message. <sup>1</sup>
0 (No)	1 (IMM)	1 (Yes)	Caller immediately hears greeting and can leave a message.
1 (Yes)	0 (RNA)	0 (No)	<u>STRF</u> : If unanswered, caller hears greeting and can leave a message. <sup>1</sup> <u>UTRF</u> : If unanswered, caller can dial <b>1</b> to leave a message or <b>2</b> to Park and Page. <sup>1</sup>
1 (Yes)	0 (RNA)	1 (Yes)	Caller immediately hears greeting and can leave a message.

**Table 2-124 Park and Page Call Handling (Continued)**

<b>Park and Page (Call Handling)</b> For Automated Attendant Unscreened (UTRF) and Screened (STRF) Transfers			
<b>47-02-17: Enable Park and Page</b>	<b>47-02-18: Paging Option</b>	<b>47-02-09: Auto Att Direct to VM</b>	<b>Result</b>
1 (Yes)	1 (IMM)	0 (No)	Park and Page occurs immediately.
1 (Yes)	1 (IMM)	1 (Yes)	Caller immediately hears greeting and can leave a message.

<sup>1</sup> For an Unscreened Transfer (UTRF) with a Next Call Routing Mailbox assigned, caller can dial **1** to leave a message, **2** to Park and Page, and **4** for other options.

## System Availability

### Terminals

All Terminals

### Required Component(s)

- CD-CP00-US with PZ-VM21 Daughter Board
- VM8000 InMail CompactFlash
- CPU License for VRS

## Related Features

Park

Paging, Internal

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### Setting Up Park and Page for Extension:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-02-09	<b>SV8100 InMail Station Mailbox Options – Auto Attendant Direct to Voice Mail</b>	Enable/Disable Auto Attendant Do Not Disturb. When a subscriber enables this option, an Automated Attendant caller routes directly to the mailbox. For Subscriber Mailboxes you should enable this option. For Guest Mailboxes you should disable this option.	0 = Disable 1 = Enable (default = 0)			✓
47-02-14	<b>SV8100 InMail Station Mailbox Options – Next Call Routing Mailbox</b>	Assign a Next Call Routing Mailbox to the Subscriber Mailbox. This provides callers with additional dialing options while listening to a subscriber Mailbox recording or default greeting. The digits the caller can dial depend on the setting of the Next Call Routing Mailbox and Alternate Next Call Routing Mailbox options.	1~32 (default = 1) By default Call Routing Mailboxes numbers are 01~08.	✓		
47-02-17	<b>SV8100 InMail Station Mailbox Options – Enable Paging</b>	Enable the paging option for the appropriate mailbox. This call can also be changed via telephone in the extension's mailbox options.	0 = Disabled 1 = Enabled (default = 0)	✓		
47-02-18	<b>SV8100 InMail Station Mailbox Options – Paging Option</b>	Determine if calls from auto attendant ring the phone first or go directly to the Park and Page feature options. This setting can be overridden by Program 47-02-09.	0 = RNA (Ring No Answer) 1 = Immediately (default = 0)	✓		

### Setting Up Park and Page for a Group Mailbox:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-06-07	<b>Group Mailbox Subscriber Options – Auto Attendant Do Not Disturb</b>	Enable/Disable Auto Attendant Direct to VM. When enabled, an Auto Attendant caller routes directly to the mailbox, hears the greeting, and is asked to leave a message. A subscriber can enable this option while recording their mailbox greeting.	0 = Disable 1 = Enable (default = 0)			✓
47-06-12	<b>Group Mailbox Subscriber Options – Next Call Routing Mailbox</b>	Assign a Next Call Routing Mailbox to the Subscriber Mailbox. This provides additional dialing option while listening to a Subscribe Mailbox recording or default greeting. The digits the caller can dial depends on the setting of the Next Call Routing Mailbox or alternate Next Call Routing Mailbox options.	1~32 (default = 1) By default, Call Routing Mailbox numbers are 01~16.	✓		
47-06-15	<b>Group Mailbox Subscriber Options – Enable Paging</b>	Enable the paging option for the appropriate Group Mailbox. This call can be changed via telephone in the extension mailbox options.	0 = Disable (No) 1 = Enable (Yes) (default = 0)	✓		
47-06-16	<b>Group Mailbox Subscriber Options – Paging Option</b>	Determine if calls from auto attendant ring the Group first or go directly to the Park and Page feature options. This setting can be overridden by Program 47-06-07.	0 = RNA (Ring No Answer) 1 = Immediate (default = 0)	✓		

## Operation

To record your paging message refer to [Table 2-125 Recording Your Paging Message](#).

**Table 2-125 Recording Your Paging Message**

Recording Your Paging Message		In these Instructions: [Telephone Softkey]
<b>To record your Paging Message:</b>		
1.	Log onto your Subscriber Mailbox.	
2.	<b>[More&gt; + More&gt; + Page]</b>	Select Paging Message. ○ Alternately dial <b>PG</b> (74).
3.	Do one of the following:	
a.	<b>[Lstn]</b>	Select to listen to the current Paging Message (if any). ○ Alternately dial <b>L</b> (5).
		<b>#</b> Exit the listen mode.
b.	<b>[Rec]</b>	Select to record the Paging Message. ○ Alternately dial <b>R</b> (7).
	<b>[Pause]</b>	Select to pause recording. ○ Alternately dial <b>*</b> .
	<b>[Resume]</b>	Select to resume recording (if paused). ○ Alternately dial <b>*</b> .
	<b>[Cncl]</b>	Select to erase the recording. ○ Alternately dial <b>E</b> (3).
	<b>[Done]</b>	Select to confirm the recording and exit the recording mode. ○ Alternately dial <b>#</b> .
c.	<b>[Del]</b>	Select to erase the Paging Message. ○ Alternately dial <b>E</b> (3).
d.	<b>[Back]</b>	Select to go back to the Mailbox Main Menu. ○ Alternately dial <b>#</b> .

To set your call handling options refer to [Table 2-126 Setting the Call Handling Options](#).

**Table 2-126 Setting the Call Handling Options**

Recording Your Paging Message		In these Instructions: [Telephone Softkey]
<b>To set your Call Handling options:</b>		
○ This includes Automated Attendant Direct to Voice Mail as well as Park and Page.		
1.	Log onto your Subscriber Mailbox.	
2.	[More> + Setup]	Select Mailbox Options. (You are at the Mailbox Options Menu). ○ Alternately dial <b>OP</b> (67).
	[CallH]	Select Call Options. (You are at the Call Handling Options Menu). ○ Alternately dial <b>CO</b> (26).
3.	Do one of the following:	
	a. [DVM]	Select to turn Automated Attendant Direct to Voice Mail on or off. ○ Alternately dial <b>O</b> (6).
	[Paging]	Select to turn Park and Page on or off. Alternately dial <b>E</b> (3).
	[Back]	Select to go back to the Mailbox Options Menu.

To retrieve a call parked in a personal parked orbit refer to [Table 2-127 Picking Up a Parked Call](#).

**Table 2-127 Picking Up a Parked Call**

Picking Up a Parked Call		In these Instructions: [Telephone Softkey]
<b>To retrieve a call parked in a Personal Orbit:</b>		
1.	Dial <b>**</b> .	
2.	Dial the number of the extension at which the call is parked.	



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## *VM8000 InMail Upload Download Audio*

### Enhancements

This feature added with **Version 3000**.

With **Version 4000** software, the User Admin (UA Mode) can change Routing Mailbox greetings for the following Routing mailbox types: Instruction (Call Routing), Announcement and Group.

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### Description

The VM8000 InMail Upload Download Audio feature allows the upload of mailbox greetings up to 1MB in size, recorded on a PC or professionally, to any valid subscriber mailbox in the system. It also allows users to listen to, download and/or delete voice mail messages from callers. Access to the InMail compact flash drive is via the HTML User Pro (WebPro).

### Audio Prompt Format

In order for uploaded greetings to properly play on the VM8000 InMail they must be in the proper format. Audio files not recorded in the proper format may not playback on the InMail. The proper format is:

Bit Rate	64kbps
Sampling Size	8 bits
Channel	1 (Mono)
Sampling Rate	8 KHz
Audio Format	CCITT u-law

### User Pro Access Options

There are two different User Pro logins available to make changes. To login, open an Internet browser and enter the IP of the SV8100 LAN port in the address line. At default, the IP address is 192.168.0.10.

**User Admin Mode (UA Mode):** This mode allows the user admin to access any telephone and mailbox in the system. This mode must be used to change VRS and Routing Mailbox greetings. At default the login ID is USER1 and the password is 1111.

**User Mode (UB Mode):** This mode allows a user to access only their own telephone and mailbox when logged in. They will not be able to change any other telephone, mailbox, VRS or Routing Mailbox. At default the login ID is the "Extension Number" and the password is 1111.

The following details the page layout diagram of the two different User Pro login IDs:

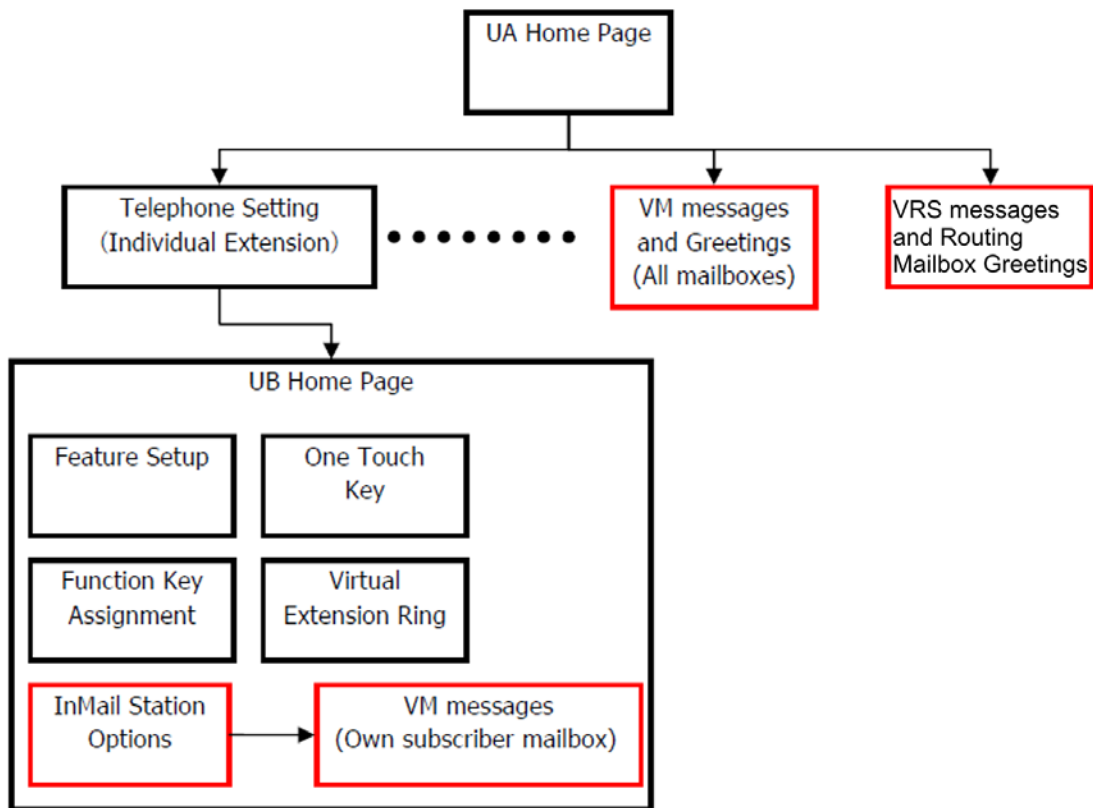


Figure 2-83 VM8000 InMail User Pro Login Diagram

### Message Name Format

Downloaded messages are automatically assigned a name by the SV8100. This name includes the mailbox number the message was left in, type of message, the message number and the date and time to the second the message was left. The table below shows how to interpret the message name to determine this information.

Table 2-128 Default Incoming Ringing Tone


File Name Format	BTNNN_YYYYMMDD_HHMMSS.wav (maximum 32 characters)
B	Mailbox number (maximum eight digits) or VRS for the VRS message
T	Message Type + : Greeting or VRS message - : Recorded message

Table 2-128 Default Incoming Ringing Tone (Continued)

File Name Format	BTNNN_YYYYMMDD_HHMMSS.wav (maximum 32 characters)
NNN	Message number (three digits)
YYYY	Year
MM	Month (1~12)
DD	Date (1~31)
HH	Hour (00~23)
MM	Minute (00~59)
SS	Second (0 ~59)

## Conditions

- With **Version 3000 or lower** software, uploading audio files to any type of Call Routing box and Group mailboxes are not supported. Auto attendant and group mailbox greetings cannot be uploaded or deleted in the End User WebPro interface.
- With **Version 4000 or higher** software, uploading audio files to any type of Call Routing box and Group mailboxes is supported. Auto attendant and group mailbox greetings can be uploaded or deleted using End User WebPro interface with the UA login.
- VRS and InMail messages are recorded in an ADPCM format which may not be easily opened on the support PC.
- It is not possible to upload/download/delete multiple files simultaneously.
- The mailbox will be inaccessible from the telephone under these conditions:
  - Mailbox XXX will not be accessible when opening the telephone setup screen of extension XXX by UA or UB mode in User Pro.
  - Mailbox XXX will not be accessible when selecting the extension XXX on the file upload/download screen of UA mode User Pro.
  - Mailbox XXX will be inaccessible when logging in the UB mode User Pro for extension XXX.
- While uploading an audio file via User Pro the greeting is not accessible by telephone.
- When downloading/deleting an audio file via User Pro, the file is not accessible by another User Pro session or from the telephone.
- This feature is only supported using a LAN connection.
- When uploading an audio file the extension will be checked whether it is WAV or not. However, the format of the uploaded file will not be checked. If the uploaded file is not in the proper format it may not playback properly.

- When a mailbox has a new message and the message is downloaded using the User Pro interface, the MWI of the mailbox will NOT be cancelled. If the message is deleted from User Pro the MWI is turned off.
- The largest allowed upload file size is approximately 1MB. Files larger than this cannot be uploaded.
- There is no size limitation when downloading audio files.
- User Pro does not check the uploaded file for correct naming format (i.e., BTNNN\_YYYYMMDD\_HHMMSS.wav). The file name will be automatically changed when the file is written in the CF.
- The actual file name of the messages is not displayed in User Pro. The message number, modified date and file size are displayed instead. If there is no message file, “-” will be displayed and the download/delete icon will not be displayed.
- The User Pro message page does not refresh automatically, to see new messages the page must be refreshed. For instance, if a new message is received via regular operation on the system while a user is viewing the upload/download screen, the new message is not shown until the page is reloaded by clicking the  icon.
- At default, Microsoft Windows will automatically open and play the downloaded WAV. To make **Open** or **Save** selectable, the following settings are required:
  - ❑ Windows XP
    1. Select **Control Panel** then **Folder Options**.
    2. Click on the **Files** tab.
    3. Select the **WAV** extension from the list, then click **Advanced**.
    4. Check **Confirm to open the file after download**, then click **OK**.
    5. Close the folder option by clicking **OK** again.
  - ❑ Windows Vista: It is not possible to change the save to folder option. The downloaded file is automatically opened for playback.

## Default Setting

None

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## System Availability

### Terminals

All Terminals

## Required Component(s)

- PZ-VM21
- VM8000 InMail CF
- CPU License

## Related Features

### VM8000 InMail


### Voice Response System (VRS) Upload Download Audio

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-02-01	Programming Password Setup – User Name	Set the system passwords.	Maximum 10 characters Refer to the SV8100 Programming Manual for default settings.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-02-02	<b>Programming Password Setup – Password</b>	Configure the administrator accounts that are used when connecting to the KTS via PCPro/ WebPro. If using PCPro, these are the accounts that are used to <i>connect</i> . If using WebPro, these are the accounts that are used to login.  <i>If calls are answered by an Auto attendant first, instead of the DIL setup on Program 22-01 and Program 22-07, set the transfer destination in the Auto Attendant to the Modem Access Service Code.</i>	Up to eight digits. Refer to the SV8100 Programming Manual for default settings.		✓	
90-02-03	<b>Programming Password Setup – User Level</b>	Set the system password user levels.	0 = Prohibited User 1 = MF (Manufacturer Level) 2 = IN (Installer Level) 3 = SA (System Administrator Level 1) 4 = SB (System Administrator Level 2) 5 = UA (User Programming Level 1) Refer to the SV8100 Programming Manual for default settings.		✓	

## Troubleshooting

The table below shows possible Error messages and Causes:

**Table 2-129 Error Messages and Causes**

Error Message	Cause
VMDB is not attached	The PZ-VM21 is not attached.
Mailbox XXX does not exist. (XXX = mailbox number)	The mailbox does not exist
The mailbox is being used by another session	When the mailbox is being used by another session, either PC or telephone.
There is no available space in the CF.	When there is no available space in the CF.
The file is being used by another session. Please try again later.	When the file to be downloaded is being used by another session, either PC or telephone.
The selected file has already been deleted.	When the file selected for download has already been deleted.


**Table 2-129 Error Messages and Causes (Continued)**

Error Message	Cause
The file is being used by another session. Please try again later.	When the file selected for deletion is being used by another session.
The selected file has already been deleted.	When the file selected for deletion has already been deleted.
Cannot upload the file since the original file is being used by another session. Please try again later.	When the file to be replaced is being used when trying to upload the replacement.

## Operation


### Listening to Voice Mail Messages using User Admin Mode (UA):

All messages stored on the InMail can be accessed via the Mailbox User Mode for playback or deletion.

1. To login, open an Internet browser and enter the IP of the SV8100 LAN port in the address line. At default, the IP address is 192.168.0.10.
2. At the login screen enter username = USER1 and password = 1111.
3. You will then see the main menu, click on the InMail Audio Up/Download icon.
4. Choose the extension number to be changed and make sure Audio Data is set to Incoming Messages.
  -  *The message numbers correspond to the same message number when accessed via the telephone. Message 1 is the first message, message 2 is the second message, etc.*
5. To delete a message, click on the red X to the right of the appropriate message.
6. To listen to a message:
  - Click on the download icon to the right of the message you want to hear.
  - Depending on browser settings, a security prompt may appear.
  - Click on the menu and choose to allow the file to download.
  - Depending on Windows configuration, you may be prompted again to either Open or Save the message. To listen, click Open and the default WAV file player will play the message. To save the message, click on the Save icon and browse to the location where the message will be saved on a local PC.

### Listening to Voice Mail Messages using Mailbox User Mode (UB):


1. To login, open an Internet browser and enter the IP of the SV8100 LAN port in the address line. At default, the IP address is 192.168.0.10.
2. At the login screen enter username = Extension Number and password = 1111.

3. You will then see the main menu, click on the InMail Audio Up/Download icon.
  -  *The message numbers correspond to the same message number when accessed via the telephone. Message 1 is the first message, message 2 is the second message, etc.*
4. To delete a message, click on the red X to the right of the appropriate message.
5. To listen to a message:
  - Click on the download icon to the right of the message you want to hear.
  - Depending on browser settings, a security prompt may appear.
  - Click on the menu and choose to allow the file to download.
  - Depending on Windows configuration, you may be prompted again to either Open or Save the message. To listen, click Open and the default WAV file player will play the message. To save the message, click on the Save icon and browse to the location where the message will be saved on a local PC.

### Changing Mailbox Greetings using User Admin Mode (UA):

Audio files up to 1MB may be uploaded to the InMail for any mailbox greeting. In order for uploaded greetings to play on the VM8000 they must be in the proper format. Audio files not recorded in the proper format may not playback on the Inmail. The proper format is:

Bit Rate	64kbps
Sampling Size	8 bits
Channel	1 (Mono)
Sampling Rate	8 KHz
Audio Format	CCiTT u-law

1. To login, open an Internet browser and enter the IP of the SV8100 LAN port in the address line. At default, the IP address is 192.168.0.10.
2. At the login screen enter username = USER1 and password = 1111.
3. You will then see the main menu, click on the InMail Audio Up/Download icon.
4. Choose the extension number to be changed and make sure Audio Data is set to Incoming Messages.
  -  *The greeting numbers correspond to the same greeting number when accessed via the telephone. Greeting 1 is GR1, greeting 2 is GR2 and greeting 3 is GR3. Greeting 7 is the paging greeting used with the park and page feature.*
5. To delete a greeting, click on the red X to the right of the appropriate greeting.
6. To upload a greeting:
  - Under Message No, enter the greeting number to be replaced on the voice mail.
  - Browse to find the location where the greeting file is stored.
  - Click on the upload icon to the right of the selected file name.
  - Depending on file size and LAN speed, it may take several minutes to upload the greeting.
  - The uploaded greeting will appear in the assigned location.




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### Changing Mailbox Greetings using Mailbox User Mode (UB):

Audio files up to 1MB may be uploaded to the InMail for any mailbox greeting. In order for uploaded greetings to play on the VM8000 they must be in the proper format. Audio files not recorded in the proper format may not playback on the Inmail. The proper format is:

Bit Rate	64kbps
Sampling Size	8 bits
Channel	1 (Mono)
Sampling Rate	8 KHz
Audio Format	CCITT u-law

1. To login, open an Internet browser and enter the IP of the SV8100 LAN port in the address line. At default, the IP address is 192.168.0.10.
2. At the login screen enter username = Extension Number and password = 1111.
3. You will then see the main menu, click on the InMail Audio Up/Download icon.
  -  *The greeting numbers correspond to the same greeting number when accessed via the telephone. Greeting 1 is GR1, greeting 2 is GR2 and greeting 3 is GR3. Greeting 7 is the paging greeting used with the park and page feature.*
4. To delete a greeting, click on the red X to the right of the appropriate greeting.
  - Under Message No, enter the greeting number to be replaced on the voice mail.
  - Browse to find the location where the greeting file is stored.
  - Click on the upload icon to the right of the selected file name.
  - Depending on file size and LAN speed, it may take several minutes to upload the greeting.
  - The uploaded greeting will appear in the assigned location.

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# VM8000 InMail – Automatic Access to VM by Caller ID

## Enhancements

This feature added with **Version 5000**.

## Description

Before, when a user outside the system accessed their InMail mailbox, they dialed voice mail, then entered an access code followed by their mailbox number and password (if enabled). Starting with **Version 5000** software a VM8000 InMail mailbox can be associated with a specific caller ID (CID) number. When the CID number is presented to the InMail it will automatically log the user into their mailbox. This enhancement improves VM accessibility for outside callers, allowing them to simply dial the main voice mail number and be automatically logged into their mailbox.

Two types of voice mail access modes exist for this feature.

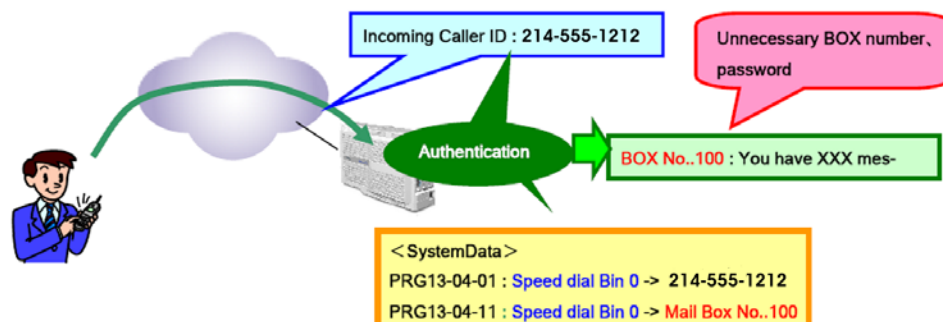
1. Specifying the VM Pilot number as a DID/DIL/DISA/VRS destination.

- OR -

Dialing the VM pilot number after calling in from a Mobile Extension.

2. Program to forward a call to VM (102) by any of following Programs.

- Program 22-05-01 (Incoming Ring Group)
- Program 22-11-05 (Transfer Target number -1)
- Program 22-11-06 (Transfer Target number -2)
- Program 25-03-01 (Incoming Ring Group No.)
- Program 25-04-01 (VRS/DISA Transfer Ring Group at No answer/Busy)



**Figure 2-84 Example – User Access to Voice Mail**

## Conditions

- The VM8000 InMail – Automatic Access to VM by Caller ID (CID) feature requires **Version 5000 or higher** software and the **Version 5000 Enhancement** license.
- When using this feature the InMail does not prompt for a password on a call from the set CID number.
- Incoming calls across CCIS are not supported.
- Two different mailboxes can not be tied to the same inbound CID number. If two mailboxes are set for the same inbound CID number the system uses the first match it finds.
- To use this feature, the phone number must be set in Program 13-04-01 and the voice mail box number in Program 13-04-11. If both are not set, the system requires the normal log in procedure of entering a valid mailbox number and security code to login.
- This feature is only supported for external calls to the InMail.
- Mobile Extension users can use this feature by setting the VM box number in Program 13-04-11 which corresponds to the Speed Dial number registered in Program 15-22-01.
- Common Speed Dial area is used for this feature. Group or Station Speed Dial areas are not supported with this feature.
- When a number in the Common Speed Dial includes a trunk access code or end code (#), the Redial name indication will work if the number matches completely.
- If the same number is registered in the Common Speed Dial bin, the latest Speed Dial number is used.
- The Flexible ringing feature has priority over the VM8000 InMail – Automatic Access to VM by Caller ID feature.
- The UM8000 does not support setting this feature in SV8100 system programming. To set this feature for the UM8000, refer to the on line UM8000 system administration guide.
- To enable this feature, Program 14-01-22 (Caller ID to Voice Mail) must be set to 1.

## Default Setting

Disabled

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## System Availability

### Terminals

All Multiline Terminals

## Trunks

The following Trunks support sending Caller ID:

- Analog Line
- ISDN Line (BRI)
- ISDN Line (PRI)
- SIP Line
- H.323 Line

## Required Component(s)

- PZ-VM21
- VM8000 InMail Compact Flash
- CPU license for VM

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## Related Features

**Speed Dial – System/Group/Station**

**Caller ID – Flexible Ringing**

**Mobile Extension**

**VM8000 InMail**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
13-04-01	<b>Speed Dialing Number and Name – Speed Dialing Data</b>	This program stores Speed Dial data into the Speed Dial areas, and defines the Speed Dial names.	1~9, 0, *, # Pause (Press line key 1) Recall/Flash (Press line key 2) @ = Code to wait for answer supervision in ISDN (Press line key 3) (maximum 24 digits) (default not assigned)	✓		
13-04-02	<b>Speed Dialing Number and Name – Name</b>	Assign a name to each System Speed Dial bin.	Maximum 12 Characters (Use dial pad to enter name) (default not assigned)		✓	
13-04-11	<b>Speed Dialing Number and Name – Automatic Access to Voice Mail by Caller ID</b>	Per Speed dial Bin No. (0000-1999), set the VM BOX number (001-544). Incoming Caller ID number will be checked against Speed Dial data (Program 13-04-01). From matched Speed Dial Bin No, system then finds the associated VM Box number with this Program.	Mailbox Number 0-544 (default = 0)	✓		
14-01-22	<b>Basic Trunk Data Setup – Caller ID to Voice Mail</b>	Enable/Disable the system ability to send the Caller ID digits to voice mail.	Trunks 1~200 0 = Disable 1 = Enable (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-22-01	<b>Mobile Extension Setup – Mobile Extension Target Setup</b>	<p>For each Mobile Extension number, select the Abbreviated Dial bin number to be associated with it.</p> <p>When using this feature with Mobile Extension, set the associated VM Box number in Program 13-04-11. The incoming Extension number will be checked with Program 15-22-01. From matched Speed Dial Bin No, system finds the VM Box number with Program 13-04-11.</p>	0~1999 (0 = No setting 1~1999 = target of mobile extension) (default = 0)	✓		
22-02-01	<b>Incoming Call Trunk Setup</b>	Assign the incoming trunk type for each trunk.	Incoming Type for Day/Night Mode (1~8): 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-05-01	<b>Incoming Trunk Ring Group Assignment</b>	<p>Assign trunks to incoming Ring Groups. Use this program to assign Normal Ring Trunks (Program 22-02) to Incoming Ring Groups (Program 22-04).</p> <p>It sets arriving group of the outside line set by Program 22-02 as "General arrival call".</p>	Incoming Group Number for Day/Night Mode (1~8): 0 (No Setting) 001~100 (Incoming Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) 103 Centralized VM (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-11-05	<b>DID Translation Table Number Conversion – Transfer Destination Number 1</b>	For each DID Translation Table entry (1-2000), specify the first and second Transfer Destinations if the callers receives a busy or no answer (action defined in Program 22-11-04). <i>If the Transfer Destinations are busy or receive no answer, those calls are transferred to the final transfer destination (Program 22-10).</i>	0 = No Setting 1~100 = Incoming Group 101 = (Not Used) 102 = In-Skin/External Voice Mail or InMail 103 = Centralized VM 201~264 = Department Group 400 = DUD 401 = DISA 501~599 = DISA/VRS Message 1000~999 = Speed Number (000~999) (default = 0)	✓		
22-11-06	<b>DID Translation Table Number Conversion – Transfer Destination Number 2</b>			✓		
25-03-01	<b>VRS/DISA Transfer Ring Group With Incorrect Dialing</b>	For each trunk port, set what happens to a call when the DISA or Automated Attendant caller dials incorrectly or waits too long to dial. The call can either disconnect (0) or Transfer to an alternate destination (a ring group, In-Skin/External, Centralized). When setting the DISA and DID Operating Mode, you make an entry for each Night Service mode.  This program defines the Incoming Ring Group when dial tone is timed-out or the wrong dialing is received in DID, DISA.	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 101 DSPDB-VM 102 (In-Skin/External Voice Mail or VM8000 InMail) 103 Centralized VM 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-04-01	<b>VRS/DISA Transfer Ring Group With No Answer/Busy</b>	<p>For each trunk port (001~200), set the operating mode of each DISA trunk. This sets what happens to the call when the DISA or Automated Attendant caller calls a busy or unanswered extension. The call can either disconnect (0) or Transfer to an alternate destination (a ring group, In-Skin/ External, Centralized). When setting the DISA and DID Operating Mode, you make an entry for each Night Service mode.</p> <p>This program defines the Incoming Ring Group when Target extension has no answer or is busy in DID.</p>	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 101 DSPDB-VM 102 (In-Skin/External Voice Mail or VM8000 InMail) 103 Centralized VM 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)		✓	

## Operation

### Retrieve VM Messages:

**To retrieve VM messages from outside of office:**

**If incoming analog trunks are used in the system**

Main Number: 214-555-5678

Outside party number: 214-555-1212

- Program 22-02-01: Trunk 1 DIL
- Program 22-07-01: VM Pilot number, 200
- Program 13-04-01: Speed Dial area No.0 -> 2145551212
- Program 13-04-11: Speed Dial area No.0 -> 001 (VM BOX number, not extension number)

1. Call the main number from 214-555-1212.
2. After the VM answers the user can listen to and manage voice messages or change mailbox settings.

**If incoming DID trunks are used in the system**

Main Number: 214-555-5678

Outside party number: 214-555-1212

- Program 22-02-01: Trunk 1 DID
  - Program 22-11-05: Set transfer destination, 102 InMail
  - Program 13-04-01: Speed Dial area No.0 -> 2145551212
  - Program 13-04-11: Speed Dial area No.0 -> 001 (VM BOX number, not extension number)
1. Call the main number from 214-555-1212.
  2. After the VM answers the user can listen to and manage voice messages or change mailbox settings.

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## *VM8000 InMail – Cascade Message Notification*

### Enhancements

This feature added with **Version 4000**.

**Version 6000 or higher** software provides the following:

- Message Notification supports day of week scheduling in addition to time of day. This applies to station and group subscriber mailboxes. This feature requires **Version 6000 Enhancement license (0035)**.
- Cascade Message Notification options can be configured from UserPro.
- In addition to User Pro, when language prompt **Version 2.30 or higher** is installed on the InMail CF, the Cascade Message Notification Day of Week schedule options can be set from the mailbox telephone interface.

With **Version 8000 or higher** software, the Message Notification can either Ignore or Queue notification requests for messages left when there is no active notification destination. Ignore is the common operation and operates the same as Message Notification in prior software releases. If a message is received outside an active schedule, the message is ignored when the schedule becomes active. The Queue feature stores the requests and will attempt to deliver the stored requests as soon as a destination becomes active. This feature requires **Version 8000 Enhancement license (0037)**.

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### Description

If an extension user receives a new message in their mailbox, Cascading Message Notification will call them at up to five preset destinations to let them know a new voice mail message has arrived. A destination can be an outside number (such as a cell phone, pager, or home office) or a co-worker's extension.

The Cascading Message Notification destinations are set up in the Notification Schedule. Each of the five schedule entries can be individually enabled or disabled and provides options for:

- Type: Voice call or pager.
- Start Hour: The time the destinations become active.
- End Hour: The time the destinations become inactive.
- Number: The destination telephone, pager, or extension number.
- Busy Attempts: The number of times the system will try the destination when it is busy. The system cancels notification callouts for this entry when the Busy Attempts number is met.
- RNA Attempts: The number of times the system will try the destination when it is unanswered. The system cancels notification callouts for this entry when the RNA Attempts number is met.

- Security:** Enables or disables the Security Code requirement for the notification destinations. For example, you may want to disable the Security Code when the destinations is your cell phone and it may be inconvenient to dial digits after answering the notification callout.

When the extension user enables Cascading Message Notification, the system will try each enabled destination that is active for the current day (**Version 6000 or higher**) and time (i.e., in-schedule). The system will not try any destinations that are disabled or are not in-schedule. When the retries for a particular destination have been met the system will immediately move to the next destination.

With **Version 8000 or higher** software, each mailbox can be set to queue notification options. When this feature is enabled, messages received when destinations are not in-schedule are queued until a destination is in-schedule at which time the notification process will start.

## Conditions

- When a mailbox has a new message and the message is deleted using the User Pro interface, the MWI of the mailbox is turned off but Message Notification is not cancelled.
- The Message Notification Queue feature requires **Version 8000 or higher** software and the **Version 8000 Enhancement license (0037)**.
- The Message Notification Queue feature can be changed using system programming only.
- The Message Notification Queue feature is set on a per mailbox basis.
- Main software **Version 4000 (4.00 or higher)** and the **Version 4000 Main Version license** are required to support this feature.
- The InMail language prompts installed on the CF must be **Version 2.10 or higher**. The VM8000 InMail Utility is used to update the installed language prompts.
- If the InMail CF has **Version 2.00 instead of Version 2.10 or higher** prompt sets installed, only a single destination Message Notification is available using Notification Schedule entry 1.
- Retry Interval timers are set on a system wide basis only.
- The pager dial string is set on a system wide basis only.
- Notification settings can be changed using the Telephone Mailbox Option Interface or system programming only.
- When the retries for a particular destination have been met the system will immediately move to the next destination even if there is only one destination active.
- Once the notification process begins, a new message does not restart the process if it is already in progress. Once the process ends (e.g., if the message is acknowledged or the maximum number of callout attempts is reached), the next new message will restart the process.
- The system determines which numbers are internal extensions or external numbers by the system dial plan settings.

- Depending on the system ARS routing maybe needed to properly route external calls.
- If no trunks are available when an outside destination is attempted it is counted as a Busy No Answer attempt.
- Cascade Message notification scheduling by day of week requires **Version 6000 or higher** software and **Version 6000 Enhancement license (0035)**.
- If language prompt **Version 2.30 or higher** is *not* installed on the InMail CF, Cascade Message Notification schedule options can only be changed from WebPro, PCPro or system programming for either *station subscriber* or *group subscriber* mailboxes.
- When language prompt **Version 2.30 or higher** is installed on the InMail CF, Cascade Message Notification schedule options can be set from the mailbox telephone interface interface for both *station* and *group subscriber* mailboxes.

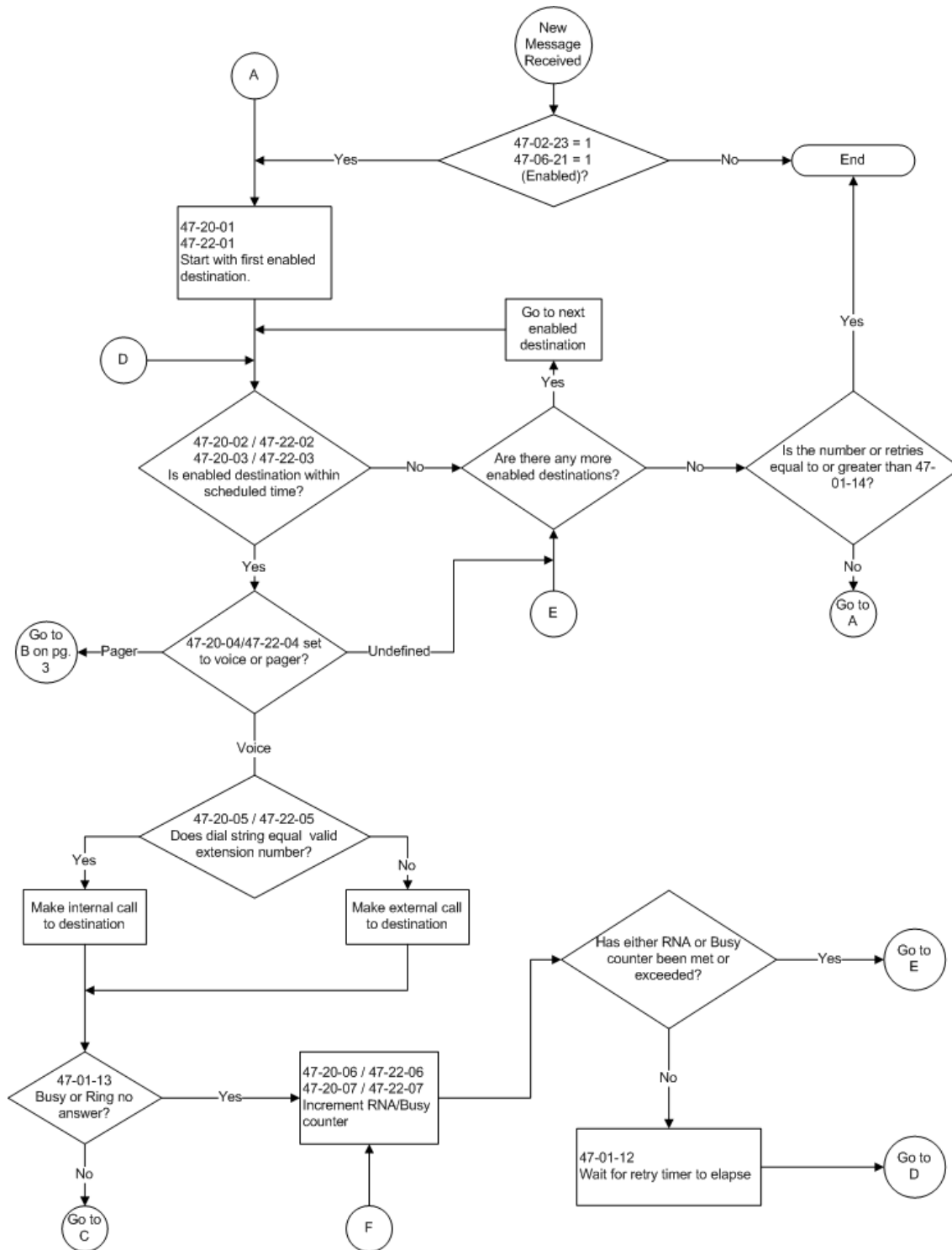


Figure 2-85 Cascade Message Notification Flow Chart-1

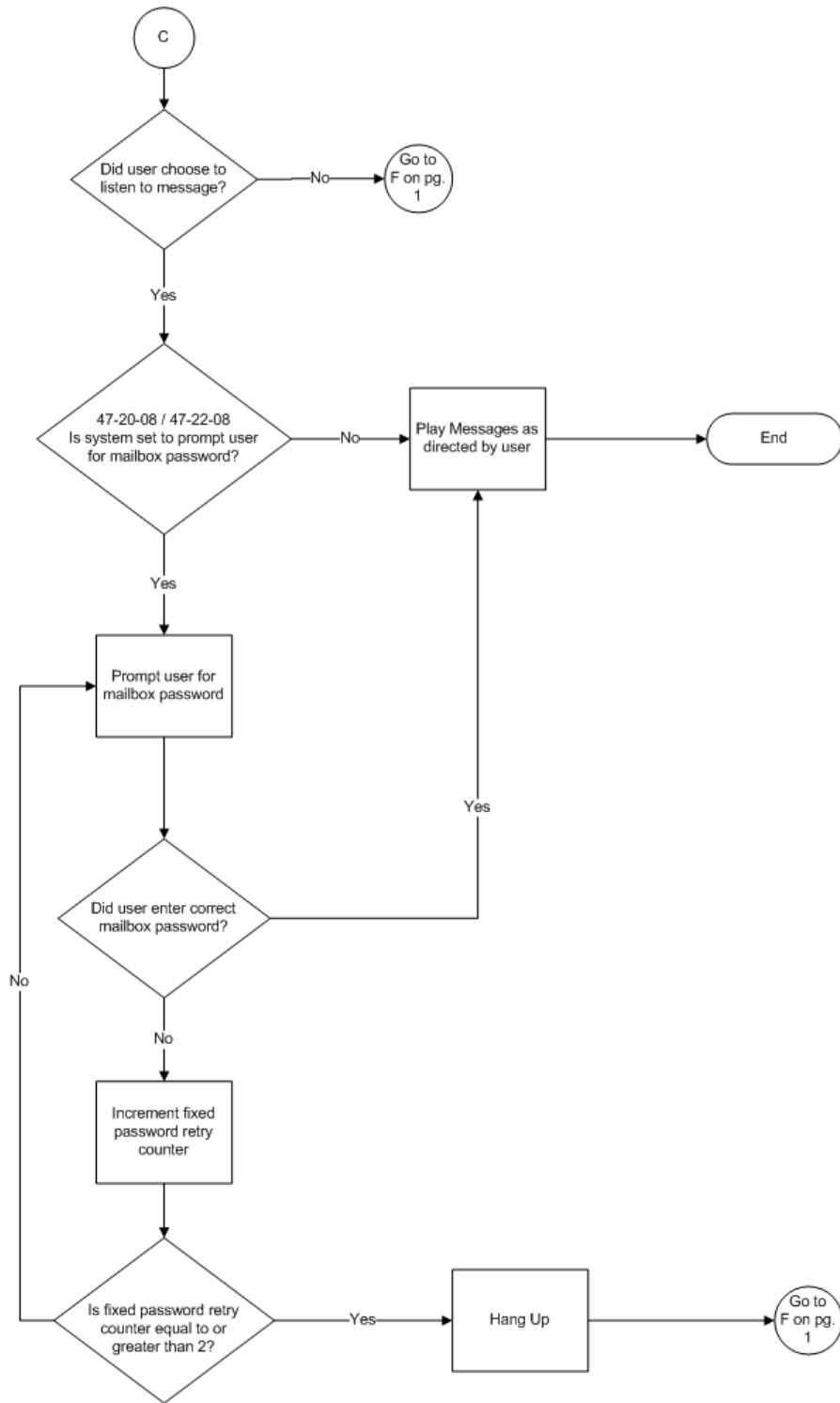


Figure 2-86 Cascade Message Notification Flow Chart-2

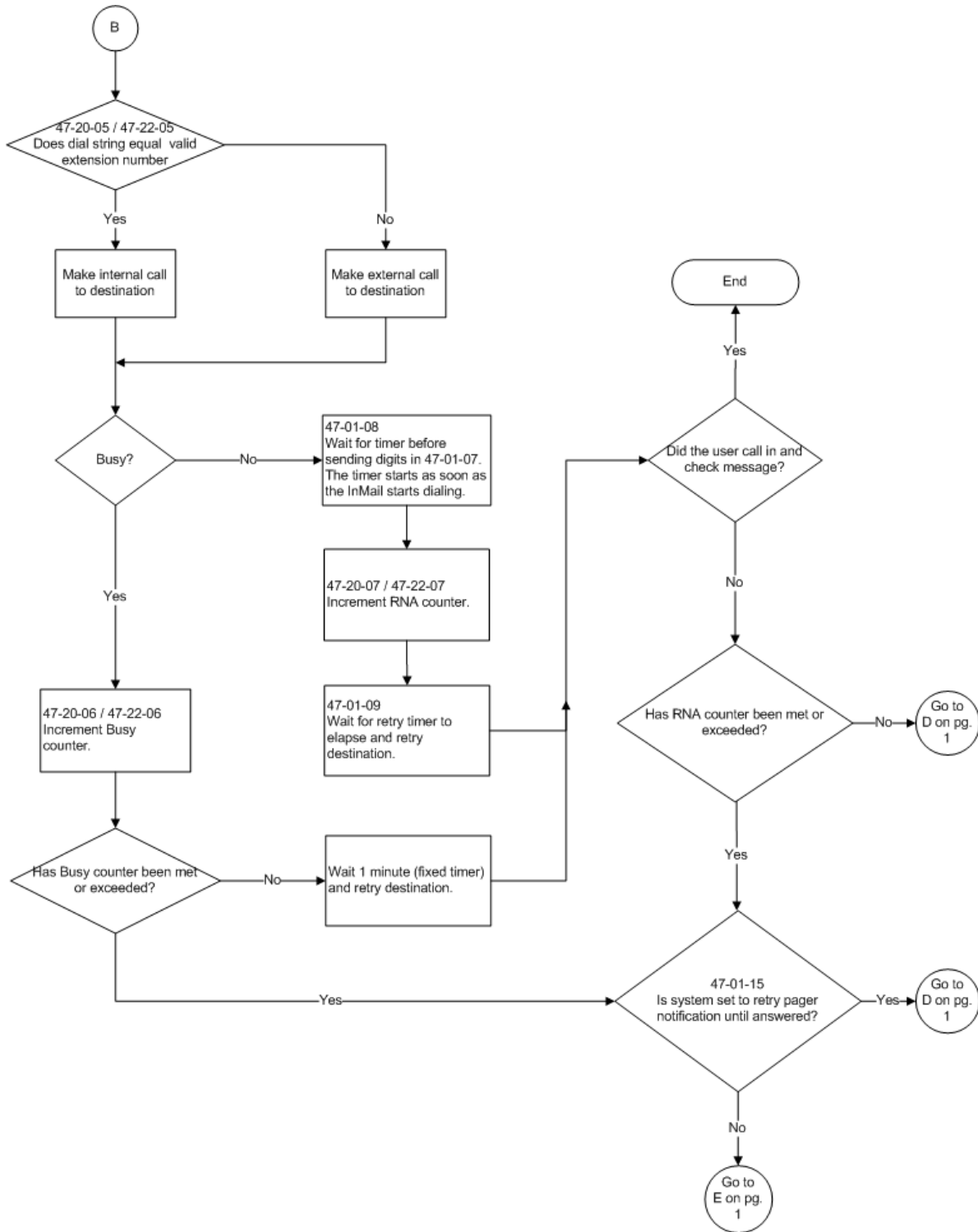


Figure 2-87 Cascade Message Notification Flow Chart-3



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## Message Notification to Normal Telephone Numbers

This is a basic overview of how Message Notification works to phone numbers assuming the retry attempts are at default. The system determines which numbers are internal extensions or external numbers by the system dial plan settings. Depending on the system, ARS routing maybe needed to properly route external calls.

1. The subscriber activates Message Notification for their mailbox.
2. When the subscriber receives a new message, the InMail dials the first active destination in the cascade that should receive the Message Notification.
  - InMail waits up to 30 seconds (approximately five rings) for ringback, reorder, busy or voice activity from the called number. If nothing is detected, the callout is considered unanswered (RNA).
3. If the recipient answers, InMail plays the notification message (“Hello, I have a message for”) and asks the recipient to dial 1 to log onto their mailbox. The recipient hears the notification message if:
  - They say “Hello” after answering the callout, or
  - The system receives answer supervision from the telco after the recipient answers the call. (Note that the recipient can skip the announcement by dialing 1 to log onto their mailbox after answering the callout – without saying “Hello”)., or
  - The notification is to a system extension.
4. Once the recipient logs onto the mailbox, the notification is considered acknowledged and will not reoccur until the subscriber receives new messages.
5. If the recipient doesn’t answer, the system follows the Cascading Message Notification retry attempt settings and notification will eventually stop if the call is not answered.
6. Once the notification process begins, a new message does not restart the process if it is already in progress. Once the process ends (e.g., if the message is acknowledged or the maximum number of callout attempts is reached), the next new message will restart the process.

## Message Notification to Pager Numbers

This a basic overview of how Message Notification works to pager numbers assuming the retry attempts are at default. The system determines which numbers are internal extensions or external numbers by the system dial plan settings. Depending on the system, ARS routing maybe needed to properly route external calls.

1. The subscriber activates Message Notification for their mailbox.
2. When the subscriber receives a new message, InMail immediately dials the pager service.
  - InMail waits up to 30 seconds (approximately five rings) for ringback, reorder, busy or voice activity from the called number. If nothing is detected, the callout is considered unanswered.

3. After the pager service answers, InMail waits for the timer 47-01-08 then sends the dial string in 47-01-07 which causes the pager display to show the subscriber's mailbox number as well as the number of new messages in the mailbox.
- The notification is considered acknowledged if the subscriber logs onto their mailbox.
  - If the notification is not acknowledged (within a programmable time frame, 47-01-12) the pager notification is repeated (up to the RNA attempts count, 47-20-07).
  - If the pager service doesn't answer, the system follows the Cascading Message Notification rules and notification will eventually stop if the call is not answered.

### **Default Settings**

None

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

Version 4000 System Software

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## **Related Features**

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-07	SV8100 InMail System Options – Digital Pager Callback Number	Set the <i>Digital Pager Callback Number part of the message Notification callout number</i> for a digital pager. This part of the callout number is appended to the pager service telephone number. Normally, this option should be <b>X*M#</b> , where <ul style="list-style-type: none"> <li>○ <b>X</b> is the number of the extension that generated the notification.</li> <li>○ <b>*</b> is a visual delimiter (to make the pager display easier to read).</li> <li>○ <b>M</b> is the number of new messages in the extension mailbox.</li> <li>○ <b>#</b> is the digit normally used by the pager service for positive disconnect.</li> </ul>	Digits (12 maximum, using 0~9, # and <b>*</b> ) <b>M</b> (Number of messages – entered by pressing <b>LK1</b> ) <b>No entry</b> (Entered by pressing <b>HOLD</b> ). <b>X</b> (Extension number – entered by pressing <b>LK2</b> ) VM8000 InMail automatically replaces the X command with the number of the extension that initially received the message. (default = X*M#)		✓	
47-01-08	SV8100 InMail System Options – Delay in Dialing Digital Pager Callback Number	Set the delay that occurs just before SV8100 InMail dials the Digital Pager Callback Number portion of the Message Notification callout number for a digital pager. Set this delay so the pager service has enough time to connect to the digital pager before sending the callback number.	0~99 (seconds) (default = 30)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-09	<b>SV8100 InMail System Options – Wait Between Digital Pager Callout Attempts</b>	Use this option to set the minimum time (1-255 minutes) between unacknowledged or unanswered digital pager Message Notification callouts. (A subscriber acknowledges a digital pager notification by logging onto their mailbox.) After this interval expires, InMail will try the callout again.	1~255 (minutes) (default = 15)		✓	
47-01-11	<b>SV8100 InMail System Options – Wait Between Busy Non-Pager Callout Attempts</b>	Callout Attempts (Notify Busy Intvl) Set the time SV8100 InMail waits after it dials a busy non-pager callout destination, before retrying the callout number.	1~255 (minutes) (default = 15)		✓	
47-01-12	<b>SV8100 InMail System Options – Wait Between RNA Non-Pager Callout Attempts</b>	Wait Between RNA Non-Pager Callout Attempts (Notify RNA Intvl) Set the time SV8100 InMail waits, after it dials an unanswered non-pager callout destination, before retrying the callout number.	1~255 (minutes) (default = 30)		✓	
47-01-13	<b>SV8100 InMail System Options – Number of RNA Rings</b>	Wait for Answer Non-Pager Callout Attempts (Notify RNA Rings) If a non-pager callout rings the destination longer than this number of rings, SV8100 InMail marks the call as unanswered (Ring No Answer) and hangs up.	1~99 (rings) (default = 5)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-01-14	<b>SV8100 InMail System Options – Number of Cascading Attempts</b>	Notify Call Attempt With Cascade Pager Notification: Set how many times a mailboxes enabled pager notification destinations are tried. For example if 47-01-14 is set to 10 and a mailbox has 5 enabled pager destinations and each destination has three retries for BNA/RNA (47-20-06 and 47-20-07). The InMail will call each destination three times and will retry all the enabled destinations 10 times. This means each enabled destination will be called a total of 30 times (10 x 3). With Normal Pager Notification Set how many attempts SV8100 InMail retries an incomplete Message Notification callout. This total includes unacknowledged callouts, callouts to a busy destination, and callouts to an unanswered destination. This option applies to pager and non-pager callouts.	1~99 (rings) (default = 5)	✓		
47-02-23	<b>SV8100 InMail Station Mailbox Options – All Message Notification Enabled</b>	Use this option to enable or disable notification for the subscriber mailbox. If disabled, enabling the individual notification entries has no effect.	0 = Disabled 1 = Enabled (default = 1)		✓	
47-02-28	<b>SV8100 InMail Station Mailbox Options – Message Notification Queuing Option</b>	Use this option to enable or disable message notification queuing. If enabled, message notification is stored in queue when there is no active notification destination.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-06-21	<b>Group Mailbox Subscriber Options – All Message Notification Enabled</b>	Use this option to enable or disable notification for the group mailbox. If disabled, enabling the individual notification entries has no effect.	0 = Disabled 1 = Enabled (default = 1)		✓	
47-06-26	<b>Group Mailbox Subscriber Options – Message Notification Queuing Option</b>	Use this option to enable or disable message notification queuing. If enabled, message notification is stored in queue when there is no active notification destination.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-20-01	<b>Station Mailbox Message Notification – Notification</b>	For the selected entry (1-5), use this option to enable or disable Message Notification. If enabled, notification will occur when the mailbox receives a new message according to the settings for Type, Start Hour, End Hour, and notification Phone Number. If disabled, Message Notification will not occur. There are five separately programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)	✓		
47-20-02	<b>Station Mailbox Message Notification – Notification Begin Hour</b>	For the selected entry (1-5), use this option to set the hour when Message Notification will start. Notification will occur only for new messages received between this setting and the End Hour setting. This entry is in 24-hour (military time). For example, 08 is 8:00 AM and 20 is 8:00 PM. For 24-hour notification, make the Start Hour the same as the End Hour. There are five separately programmed Message notification entries for each Subscriber Mailbox.	0-23 (24 Hour Clock) (default = 0)	✓		
47-20-03	<b>Station Mailbox Message Notification – Notification End Hour</b>	For the selected entry (1-5), use this option to set the hour when Message Notification will stop. Notification will occur only for new messages received between the Start Hour and this setting. This entry is in 24-hour (military time). For example, 08 is 8:00 AM and 20 is 8:00 PM. For 24-hour notification, make the Start Hour the same as the End Hour. There are five separately programmed Message notification entries for each Subscriber Mailbox.	0-23 (24 Hour Clock) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-20-04	<b>Station Mailbox Message Notification – Notification Type</b>	For the selected entry (1-5), use this option to set the Message Notification type. The choices are Voice and Pager. Choose Voice when the Phone Number entry is to a regular office, home, or mobile telephone. Choose Pager when you want to deliver the notification to a digital pager. There are five separately programmed Message notification entries for each Subscriber Mailbox.	0 = Undefined 1 = Voice 2 = Pager (default = 1)	✓		
47-20-05	<b>Station Mailbox Message Notification – Notification Number</b>	For the selected entry (1-5), use this option to set the telephone number (16 digits maximum) Message Notification will dial to notify the subscriber of new messages. Enter the number exactly as you want the system to dial it (including a leading 1 for toll calls, if required), but do not include a line access code (such as 9). If the number you enter is extension number, it will be an Intercom call. Otherwise, it will be an outside call. (The system decides by referring its numbering plan.) There are five separately programmed Message notification entries for each Subscriber Mailbox.	Valid number up to 16 digits (default not assigned)	✓		
47-20-06	<b>Station Mailbox Message Notification – Notification Busy Attempts</b>	For the selected entry (1-5), use this option to set how many times InMail will retry an incomplete Message Notification callout to a busy destination. This option applies to pager and non-pager callouts. If the Busy Attempts and RNA Attempts are both met, the notification callout to the selected entry is cancelled. There are five separately programmed Message notification entries for each Subscriber Mailbox.	1-99 Attempts (default = 5)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-20-07	<b>Station Mailbox Message Notification – Notification RNA Attempts</b>	For the selected entry (1-5), use this option to set how many times InMail will retry an incomplete Message Notification callout when the destination does not answer. This option applies to pager and non-pager callouts. If the Busy Attempts and RNA Attempts are both met, the notification callout to the selected entry is cancelled. There are five separately programmed Message notification entries for each Subscriber Mailbox.	1-99 Attempts (default = 5)	✓		
47-20-08	<b>Station Mailbox Message Notification – Notification Security</b>	For the selected entry (1-5), use this option to enable or disable Security Code protection for the callout. If enabled, the user is required to enter their security in order to log on and hear the new message. If disabled, the Security Code is not required. There are five separately programmed Message notification entries for each Subscriber Mailbox.	0 = Security code not required 1 - Security code required (default = 0)	✓		
47-20-09	<b>Station Mailbox Message Notification – Day of Week Sunday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Sunday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-20-10	<b>Station Mailbox Message Notification – Day of Week Monday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Monday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-20-11	<b>Station Mailbox Message Notification – Day of Week Tuesday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Tuesday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-20-12	<b>Station Mailbox Message Notification – Day of Week Wednesday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Wednesday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-20-13	<b>Station Mailbox Message Notification – Day of Week Thursday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Thursday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-20-14	<b>Station Mailbox Message Notification – Day of Week Friday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Friday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-20-15	<b>Station Mailbox Message Notification – Day of Week Saturday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Saturday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-22-01	<b>Group Mailbox Notification Options – Notification</b>	For the selected entry (1-5), use this option to enable or disable Message Notification. If enabled, notification will occur when the mailbox receives a new message according to the settings for Type, Start Hour, End Hour, and notification Phone Number. If disabled, Message Notification will not occur.  There are five separately programmed Message notification entries for each Group Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-22-02	<b>Group Mailbox Notification Options – Notification Begin Hour</b>	For the selected entry (1-5), use this option to set the hour when Message Notification will start. Notification will occur only for new messages received between this setting and the End Hour setting. This entry is in 24-hour (military time). For example, 08 is 8:00 AM and 20 is 8:00 PM. For 24-hour notification, make the Start Hour the same as the End Hour. There are five separately programmed Message notification entries for each Group Mailbox.	0-23 (24 Hour Clock) (default = 0)		✓	
47-22-03	<b>Group Mailbox Notification Options – Notification End Hour</b>	For the selected entry (1-5), use this option to set the hour when Message Notification will stop. Notification will occur only for new messages received between the Start Hour and this setting. This entry is in 24-hour (military time). For example, 08 is 8:00 AM and 20 is 8:00 PM. For 24-hour notification, make the Start Hour the same as the End Hour. There are five separately programmed Message notification entries for each Group Mailbox.	0-23 (24 Hour Clock) (default = 0)		✓	
47-22-04	<b>Group Mailbox Notification Options – Notification Type</b>	For the selected entry (1-5), use this option to set the Message Notification type. The choices are Voice and Pager. Choose Voice when the Phone Number entry is to a regular office, home, or mobile telephone. Choose Pager when you want to deliver the notification to a digital pager. There are five separately programmed Message notification entries for each Group Mailbox.	0 = Undefined (Disabled) 1 = Voice 2 = Pager (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-22-05	<b>Group Mailbox Notification Options – Notification Number</b>	For the selected entry (1-5), use this option to set the telephone number (16 digits maximum) Message Notification will dial to notify the subscriber of new messages. Enter the number exactly as you want the system to dial it (including a leading 1 for toll calls, if required), but do not include a line access code (such as 9). If the number you enter is extension number, it will be an Intercom call. Otherwise, it will be an outside call. (The system decides by referring its numbering plan.) There are five separately programmed Message notification entries for each Group Mailbox.	Valid number up to 16 digits (default not assigned)		✓	
47-22-06	<b>Group Mailbox Notification Options – Notification Busy Attempts</b>	For the selected entry (1-5), use this option to set how many times InMail will retry an incomplete Message Notification callout to a busy destination. This option applies to pager and non-pager callouts. If the Busy Attempts and RNA Attempts are both met, the notification callout to the selected entry is cancelled. There are five separately programmed Message notification entries for each Group Mailbox.	1-99 Attempts (default = 5)		✓	
47-22-07	<b>Group Mailbox Notification Options – Notification RNA Attempts</b>	For the selected entry (1-5), use this option to set how many times InMail will retry an incomplete Message Notification callout when the destination does not answer. This option applies to pager and non-pager callouts. If the Busy Attempts and RNA Attempts are both met, the notification callout to the selected entry is cancelled. There are five separately programmed Message notification entries for each Group Mailbox.	1-99 Attempts (default = 5)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-22-08	<b>Group Mailbox Notification Options – Notification Security</b>	For the selected entry (1-5), use this option to enable or disable Security Code protection for the callout. If enabled, the user is required to enter their security in order to log on and hear the new message. If disabled, the Security Code is not required. There are five separately programmed Message notification entries for each Group Mailbox.	0 = Security code not required 1 - Security code required (default = 0)		✓	
47-22-09	<b>Group Mailbox Notification Options – Day of Week Sunday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Sunday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-22-10	<b>Group Mailbox Notification Options – Day of Week Monday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Monday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-22-11	<b>Group Mailbox Notification Options – Day of Week Tuesday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Tuesday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-22-12	<b>Group Mailbox Notification Options – Day of Week Wednesday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Wednesday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-22-13	<b>Group Mailbox Notification Options – Day of Week Thursday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Thursday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-22-14	<b>Group Mailbox Notification Options – Day of Week Friday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Friday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-22-15	<b>Group Mailbox Notification Options – Day of Week Saturday</b>	For the selected entry (1-5), use this option to enable or disable Message Notification on Saturday.  There are five separately-programmed Message notification entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	

## Operation

### To set up Cascade Notification:

1. Access the All Message Notification Setting menu.  
Log onto Subscriber Mailbox.

V	m	a	i	l	-	M	a	i	l	b	o	x	:	1	0	1					
M	s	g	s	N	e	w	:	0				A	r	c	h	:	0				
	L	s	t	n	G	r	e	e	t			L	v	M	s	g	M	o	r	e	>

↓ Dial OP(67) / Press "More >" → "Setup"

Mailbox Options menu.

C	o	n	f	i	g	u	r	e	M	b	o	x	1	0	1						
	C	o	d	e	N	o	t	f	y	C	a	l	l	H			M	o	r	e	>

↓ Dial N(6) / Press "Notfy"

Notification Type Selection menu.

M	e	s	s	a	g	e		N	o	t	i	f	i	c	a	t	i	o	n				
P	h	o	n	e		E	m	a	i	l									B	a	c	k	

↓ Dial P(7) / Press "Phone"

All Message Notifications Setting menu.

P	h	o	n	e		N	o	t	i	f	i	c	a	t	i	o	n	:		O	f	f	
		O	n			O	f	f				D	e	s	t				B	a	c	k	

2. All message Notifications Setting menu.

P	h	o	n	e		N	o	t	i	f	i	c	a	t	i	o	n	:		O	f	f	
		O	n			O	f	f				D	e	s	t				B	a	c	k	

↓ Dial O(6) / Press "On"    ↑Dial O(6) / Press "Off"

P	h	o	n	e		N	o	t	i	f	i	c	a	t	i	o	n	:		O	n		
		O	n			O	f	f				D	e	s	t				B	a	c	k	

- Soft key Operation (3-Line Phone/Super Display Phone)
  - On/On Turn                      All Notifications on
  - Off/Off                              Turn All Notifications off
  - Dest/Destinations              Proceed to Notification Destination Selection menu
  - Back/Back                              Go back to Notification Type Selection menu
  
- Key Operation
  - Key 3                                      Proceed to Notification Destination Selection menu
  - Key 6                                      Toggle All Notifications on/off
  - Key 9                                      Exit from mailbox
  - Key #                                      Go back to Notification Type Selection menu

3. Notification Destination Selection menu.

P	h	o	n	e		N	o	t	i	f	i	c	a	t	i	o	n	:		O	n			
D	e	s	t	1		D	e	s	t	2		D	e	s	t	3				M	o	r	e	>

↓ Press "More>"    ↑Press "More>"

P	h	o	n	e		N	o	t	i	f	i	c	a	t	i	o	n	:		O	n			
D	e	s	t	4		D	e	s	t	5			B	a	c	k				M	o	r	e	>

- ❑ Soft key Operation (3-Line Phone/Super Display Phone)
  - Dest1/Destination1            Proceed to Phone Notification Destination 1 menu
  - Dest2/Destination2            Proceed to Phone Notification Destination 2 menu
  - Dest3/Destination3            Proceed to Phone Notification Destination 3 menu
  - Dest4/Destination4            Proceed to Phone Notification Destination 4 menu
  - Dest5/Destination5            Proceed to Phone Notification Destination 5 menu
  - Back                              Go back to All Message Notifications Setting menu
- ❑ Key Operation
  - Key 1                              Proceed to Phone Notification Destination 1 menu
  - Key 2                              Proceed to Phone Notification Destination 2 menu
  - Key 3                              Proceed to Phone Notification Destination 3 menu
  - Key 4                              Proceed to Phone Notification Destination 4 menu
  - Key 5                              Proceed to Phone Notification Destination 5 menu
  - Key 9                              Exit from mailbox
  - Key #                              Go back to All Message Notifications Setting menu

4. Message Notification main menu

InMail plays a summary of your Message Notification settings.

D	e	s	t	1		D	i	s	a	b	l	d	1	2	A	M	-	1	2	A	M		
P	h	o	n	e	:																		
	E	n	b	l		D	i	s	b	l		C	h	n	g	e				B	a	c	k

If phone number already exists

D	e	s	t	1		D	i	s	a	b	l	d	0	8	A	M	-	0	6	P	M		
P	h	o	n	e	:	2	0	3	9	2	6	5	4	0	0								
	E	n	b	l		D	i	s	b	l		C	h	n	g	e				B	a	c	k

↓ Dial E(3) / Press "Enbl"    ↑ Dial D(3) / Press "Disbl"

D	e	s	t		1		E	n	a	b	l	e	d		0	8	A	M	-	0	6	P	M	
P	h	o	n	e	:	2	0	3	9	2	6	5	4	0	0									
	E	n	b	l		D	i	s	b	l		C	h	n	g	e			B	a	c	k		

- Soft key Operation (3-Line Phone/Super Display Phone)
  - Enbl/Enable            Turn destination[x] notifications on
  - Disbl/Disable        Turn destination[x] notifications off
  - Chnge/Change        Go to destination[x] notification setting menus
  - Back/Back            Go back to Notification Destination Selection menu
- Key Operation
  - Key 2                 Go to destination[x] notification setting menus
  - Key 3                 Toggle destination[x] notifications on/off.
  - Key #                 Go back to Notification Destination Selection menu

5. Message Notification Programming (Begin Hour)

N	o	t	i	f	i	c	a	t	i	o	n		B	e	g	i	n	:		1	2	A	M
													N	e	x	t			E	x	i	t	

6. Message Notification Programming (End Hour)

N	o	t	i	f	i	c	a	t	i	o	n		E	n	d	:		1	2	A	M		
													N	e	x	t			E	x	i	t	

7. Message Notification Programming (Notification Type)

N	o	t	i	f	y		V	i	a	:		N	u	m	b	e	r						
		N	u	m			P	a	g	e	r		N	e	x	t			E	x	i	t	

8. Message Notification Programming (Number)

N	u	m	b	e	r	:																	
		O	K			C	l	e	a	r		N	e	x	t			E	x	i	t		



9. Message Notification Programming (Security Code Required)

S	e	c	u	r	i	t	y		C	o	d	e		O	p	t	i	o	n				
	R	e	q			N	o	R	e	q				N	e	x	t			E	x	i	t

- Soft key Operation (3-Line Phone/Super Display Phone)
  - Req/Required Turn "Security Code Required" flag On
  - NoReq/Not Required Turn "Security Code Required" flag Off
  - Next/Next Keep current setting and proceed to Busy Attempt count menu
  - Exit/Exit Keep current setting and return to main Notification menu
- Key Operation
  - Key 7 Turn "Security Code Required" flag On
  - Key 6 Turn "Security Code Required" flag Off
  - Key \* Keep current setting and proceed to Busy Attempt count menu
  - Key # Keep current setting and return to main Notification menu

10. Message Notification Programming (Busy Attempt count)

B	u	s	y		A	t	t	e	m	p	t	s	:		0	5							
														N	e	x	t			E	x	i	t

- Soft key Operation (3-Line Phone/Super Display Phone)
  - Next/Next Keep current setting and proceed to RNA Attempt menu.
  - Exit/Exit Keep current setting and return to main Notification menu
- Key Operation
  - Key 0-9 Set Busy Attempt count
  - Key \* Keep current setting and proceed to RNA Attempt count menu
  - Key # Keep current setting and return to main Notification menu

11. Message Notification Programming (RNA Attempt count)

R	N	A		A	t	t	e	m	p	t	s	:		0	5								
														N	e	x	t			E	x	i	t

- Soft key Operation (3-Line Phone/Super Display Phone)
  - Next/Next Keep current setting and proceed to main Notification menu
  - Exit/Exit Keep current setting and return to main Notification menu
- Key Operation
  - Key 0-9 Set RNA Attempt count
  - Key \* Keep current setting and proceed to main Notification menu
  - Key # Keep current setting and return to main Notification menu

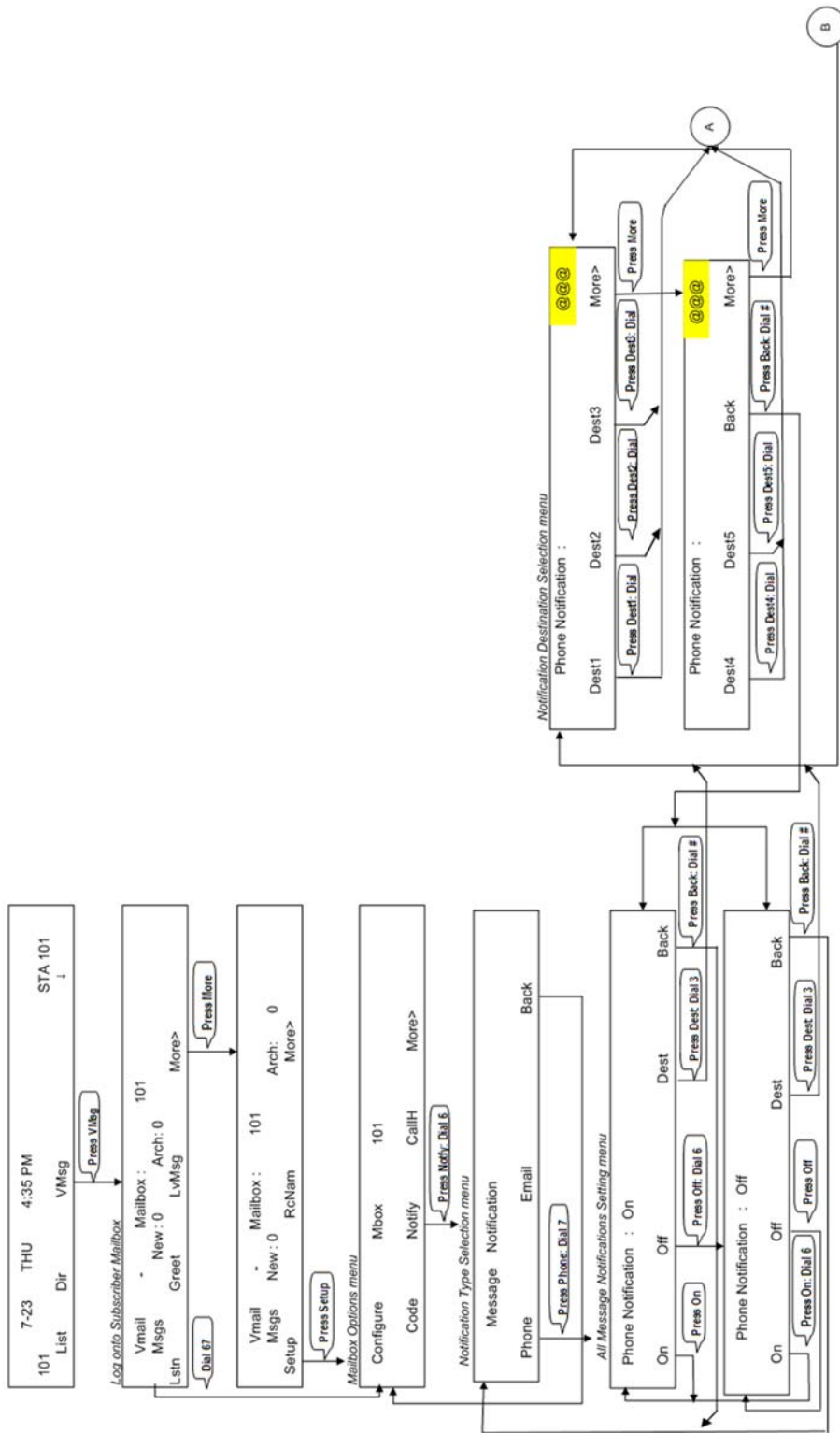


Figure 2-88 Cascade Message Flow Chart 1

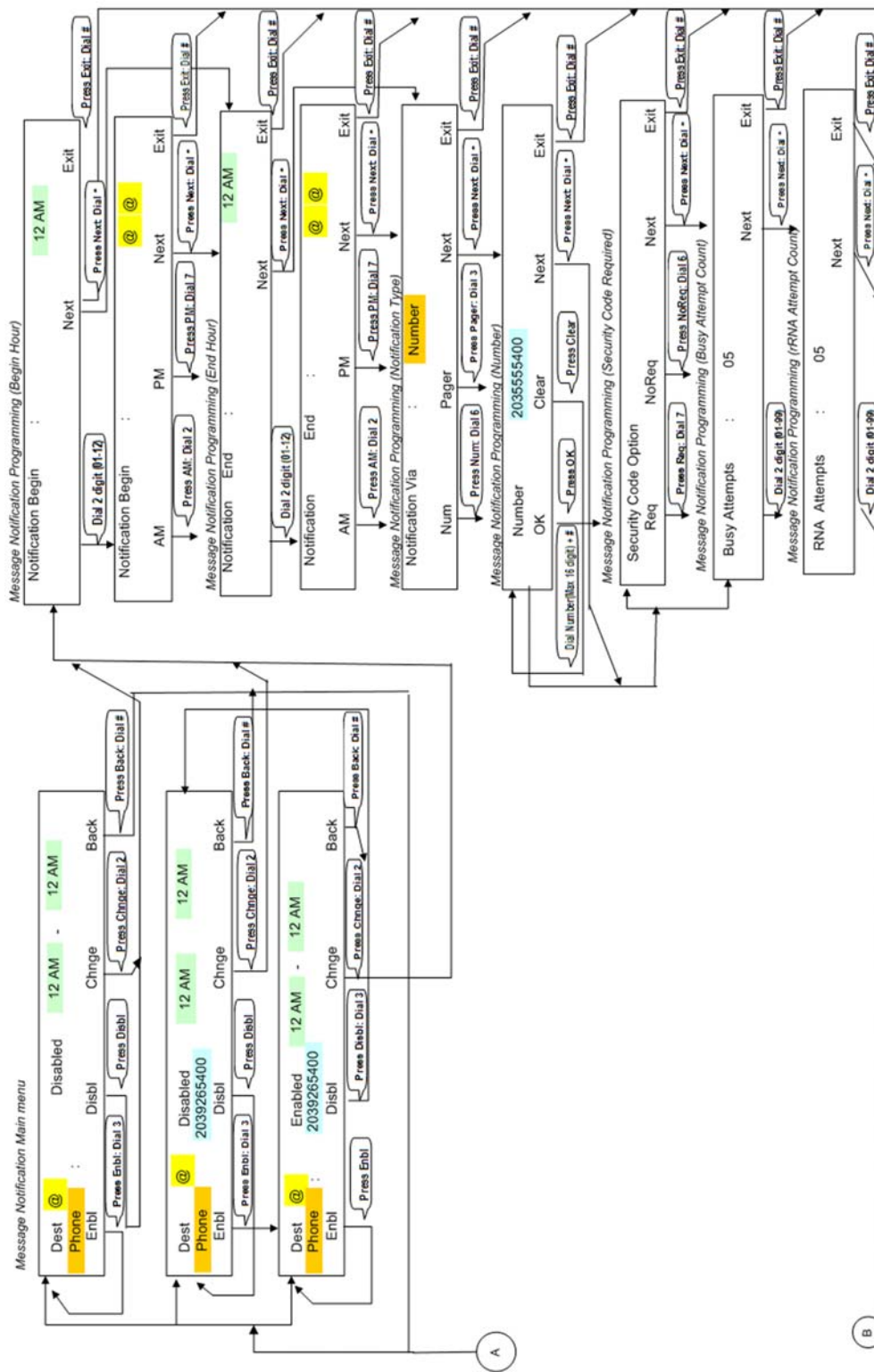


Figure 2-89 Cascade Message Flow Chart 2

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## *VM8000 InMail – Email Notification*

### Enhancements

SV8100 software **Version 3000 or higher** is required to support this feature.

**Version 6000 or higher** software provides the following:

- Email Notification supports options to Save, Delete or Keep as New any voice message that is forwarded to the email system. This applies to station and group subscriber mailboxes. This feature requires **Version 6000 Enhancement License (0035)**.

---

### Description

Email Notification automatically sends an email notification when a Subscriber Mailbox receives a new message. The email can optionally include the recorded message as a .wav file attachment. To hear the message, the email recipient double-clicks the .wav attachment to have the message play in their wav player (such as Windows Media Player).

Email Notification uses SMTP (Simple Mail Transfer Protocol) to deliver messages to the recipient's email account. If the message recipient has a mobile telephone service provider with an SMS (Short Message Service) portal, they can optionally choose to have text messages delivered right to their cell phone. In either case, Email Notification does not provide synchronization – the email account and the voice mailbox operate independently. For example, deleting the voice mail message does not automatically delete the email and visa-versa.

If Email Notification tries to deliver an email and it doesn't go through because of a connection problem (i.e., no connection or a dropped connection), it will retry every 15 minutes for 24 hours. If the email still can't go through, Email Notification cancels the delivery. Email deliveries that fail because authentication fails or the encryption mode is incorrect are immediately cancelled.

### Collecting the Email Notification Data

In order for the installation site's VM8000 to send email notifications, it must have a valid SMTP email account assigned. To save time during programming, use the following table to help collect the system's email account information. The email account provider can supply this information. See Programming in this feature for more.


Table 2-130 VM8000 Email Account Information

Item	Description	System's Email Account Data
SMTP Email Account	The email account that will handle notifications sent from the VM8000 (e.g., <i>yourname@emailserver.com</i> ).	
SMTP Server Name	The SMTP server (email provider) that will handle email for the SMTP email account. The SMTP server name is typically similar to <i>smtp.emailserver.com</i> .	
SMTP Port Number	The port the SMTP server uses for SMTP delivery.	
SMTP Encryption	Determines whether or not the SMTP server accepts plain text (unencrypted) or encrypted email (Yes or No).	
SMTP Authentication	Enter Yes if the SMTP server requires the <i>SMTP Email Account's</i> user name and password each time the system logs on. Otherwise, enter No.	
SMTP User Name	In the <i>SMTP Email Account</i> , this is normally the <i>your-name</i> portion of <i>yourname@emailserver.com</i> .	
SMTP Password	This is the password for the account specified in <i>SMTP Email Account</i> above.	
Email Reply To	If a notification recipient replies to a notification email, this is the address to which the reply is sent.	

### Explanation of the Message Sender (From) Field

Like any other email client, Email Notification uses the *From* field to identify the person that left the message being delivered. In the email message, the data in the *From* field is formatted as *Name [Reply To]*, where:

- Name* identifies the person that left the message.
- Reply To*<sup>3</sup> is the email address used when the email recipient replies to the message.

 This information is not provided in the recipient's inbox – just the actual email message.

For messages left by **Intercom** callers:

- Name* is:
  - The extension name (if programmed).
  - **OR** -
  - The extension number (if there is no name programmed).

---

3. The recipient's inbox only shows the Name portion of the From field. The Reply To portion is not included.

- Reply To*<sup>4</sup> is:
  - The email address of the person that left the message (if programmed).
  - **OR** -
  - The *Reply To Email Address* data from Program 47-18-09.
  - **OR** -
  - The *Send From Email Address* data from Program 47-18-09.

For messages left by **Outside** callers:

- Name* is always the text “Outside Caller”.
- Reply To*<sup>4</sup> is:
  - The *Reply To Email Address* data from Program 47-18-09.
  - **OR** -
  - The *Send From Email Address* data from Program 47-18-09.

### SMS Text Message Delivery to a Cell Phone

The table below shows the basic format of a VM8000 InMail email notification delivered to a cell phone as an SMS Text Message. The information is much the same as that delivered to an email account. There may be more than one text message for each notification, depending on the number of characters the provider allows in each text message (typically 120-160 characters). SMS will not send the wav file attachment, even if enabled in programming.



*An extension set up for notification via SMS Text Messaging should have the **Email Message as Attachment** option disabled in system programming. Attempting to deliver a wav file attachment to an SMS messaging service may have undesirable results.*

- SMS Text Message Notification

The following shows a typical SMS Text Message when the VM8000 InMail is set up to provide email notification only (no wav file of the actual message). In this case, the provider divided the message into two parts: one for the message header and one for the message body. This is only an example – your provider may handle similar content differently.

**Table 2-131 Typical SMS Notification (No Wav File)**

Description	Text
<b>Text Message for Message Header</b>	
Text Message Inbox:	InMail [2 OF 2]

- 
4. The recipient's inbox only shows the Name portion of the From field. The Reply To portion is not included.

**Table 2-131 Typical SMS Notification (No Wav File) (Continued)**

Description	Text
Text Message Body: <sup>1</sup>	MESSAGE FROM: VM8000 InMail [2 OF 2] SENT: 3:51PM 9/17
<b>Text Message for Message Body</b>	
Text Message Inbox:	SBJ:VOICE MESSAGE
Text Message Body: <sup>1</sup>	MESSAGE FROM: XXXX SUBJ: VOICE MESSAGE FROM XXXX- (0M6S) VOICE MESSAGE ARRIVED ON MONDAY, SEPT 17@3:51 PMDURATION: 0M 6S -----NEC [1 OF 2] SENT: 3:51PM 09/17

*1 Your cell phone display will automatically break the text lines to best fit the screen.*

### POP3 Login

VM8000 InMail Email Notification supports POP3 Login. The logic of this method is that it allows a user to send e-mail from any location, as long as they can demonstrably also fetch their mail from the same place. Check with your email provider to see if this type of login is required.

### Some Common SMTP Settings

**Table 2-132 Common Email Notification SMTP Server Settings**

Provider	Server Name and Account (1105-02, 08)	SMTP Port (1105-03)	Encryption (1105-04)	Authentication (1105-05, 06, 07)	Updated	Comments
<b>Yahoo</b>	smtp.mail.yahoo.com	465	Yes	Yes	6/28/07	Requires POP Yahoo! Mail Plus
<b>GMail</b>	smtp.gmail.com	465	Yes	Yes	6/28/09	
<b>Optimum Online</b>	mail.optonline.net	587	Yes	Yes	6/28/07	
<b>AOL</b>	smtp.aol.com	587	Yes	Yes	6/28/07	



## Some Common SMS Portals

**Table 2-133 Some Common Mobile Telephone Service Provider SMS Portals**

Provider	Email Address for SMS Text Message
<b>Some Popular Provider-Specific SMS Portals</b>	
Alltel	yourcellphonenumber@message.alltel.com
AT&T Wireless	yourcellphonenumber@mobile.att.net OR yourcellphonenumber@mmode.net
Boost Mobile	yourcellphonenumber@myboostmobile.com
Cingular	yourcellphonenumber@mobile.mycingular.com OR yourcellphonenumber@cingularme.com
Nextel	yourcellphonenumber@messaging.nextel.com OR yourcellphonenumber@page.nextel.com
Sprint PCS	yourcellphonenumber@messaging.sprintpcs.com
T-Mobile	yourcellphonenumber@tmail.com OR yourcellphonenumber@tmomail.net
Verizon	yourcellphonenumber@vtext.com
Virgin Mobile	yourcellphonenumber@vmobl.com
<b>A Universal SMS Portal</b>	
Teleflip	yourcellphonenumber@teleflip.com
<b>A More Complete SMS Portal Listing</b>	
For a more complete SMS portal list, see <a href="http://www.livejournal.com/tools/textmessage.bml?mode=details">http://www.livejournal.com/tools/textmessage.bml?mode=details</a> .	

### Conditions

- SV8100 software **Version 3000 or higher** is required to support this feature.
- A PZ-ME50-US must be mounted on the CD-CP00-US to support this feature.
- The Email Notification feature (1014) is licensed on a per mailbox basis.
- When the Email Notification feature is licensed in the system (1013), five Email Notification license seats (1014) are included. Subsequent license seats must be purchased.
- Refer to the VM8000 InMail System Guide for more information about this feature.
- The Email Notification Save, Delete or Keep as New feature requires **Version 6000 or higher** software.
- With **Version 6.00** software, a mailbox set for E-mail Notification can use the following settings for the forwarded message:
  - Save: A forwarded voice message is archived and kept in the mailbox.
  - Delete: A forwarded voice message is deleted from the Mail Box.
  - No Change: A forwarded voice message is kept as "New" in the mailbox.

- Email Notification options can only be changed from WebPro, PCPro or system programming for *group subscriber* mailboxes.
- Email Notification options can only be changed from UserPro, WebPro, PCPro or system programming for *station subscriber* mailboxes.

## Default Settings

Disabled

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## System Availability

### Terminals

All Multiline Terminals

### Required Component(s)

- PZ-VM21
- PZ-ME50-US
- VM8000 InMail CF
- Licensing for InMail voice ports (1002) and the Email Notification feature (1013 and 1014).

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-02-20	<b>SV8100 InMail Station Mailbox Options – Enable E-mail Notification</b>	Enables the email notification feature on a per mailbox basis.	0 = Off 1 = On (default = 0)	✓		
47-02-21	<b>SV8100 InMail Station Mailbox Options – E-mail Address</b>	Assigns the destination email address on a per mailbox basis.	Up to 48 characters (default = No Setting)	✓		
47-02-22	<b>SV8100 InMail Station Mailbox Options – Include Message as Attachment</b>	Determines if the email notification includes the voice message as a WAV file attachment. This should be set to 0 if sending an SMS text message to a cell phone.	0 = Off 1 = On (default = 0)	✓		
47-02-27	<b>SV8100 InMail Station Mailbox Options – Email Message Save/Delete Option</b>	When email notification is enabled, use this option to set how notification handles new voice mail message content. If <b>No Change</b> is selected, the message remains New in their mailbox after a successful SMTP delivery. If <b>Save</b> is selected, the message is marked as "Saved" in their mailbox after a successful SMTP delivery. If <b>Delete</b> is selected, the message will be deleted from their mailbox after a successful SMTP delivery.	0 = No Change 1 = Save 2 = Delete (default = 0)		✓	
47-06-18	<b>Group Mailbox Subscriber Options – Enable E-mail Notification</b>	Enables email notification feature on a per mailbox basis.	0 = Off 1 = On (default = 0)		✓	
47-06-19	<b>Group Mailbox Subscriber Options – E-mail Address</b>	Assigns the destination email address on a per mailbox basis.	Up to 48 characters (default = No Setting)		✓	
47-06-20	<b>Group Mailbox Subscriber Options – Include Message as Attachment</b>	Determines if the email notification includes the voice message as a WAV file attachment. This should be set to 0 if sending an SMS text message to a cell phone.	0 = Off 1 = On (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-06-25	<b>Group Mailbox Subscriber Options – Email Message Save/Delete Option</b>	When email notification is enabled, use this option to set how notification handles new voice mail message content. If <b>No Change</b> is selected, the message remains New in their mailbox after a successful SMTP delivery. If <b>Save</b> is selected, the message is marked as "Saved" in their mailbox after a successful SMTP delivery. If <b>Delete</b> is selected, the message will be deleted from their mailbox after a successful SMTP delivery.	0 = No Change 1 = Save 2 = Delete (default = 0)		✓	
47-18-01	<b>VM8000 InMail SMTP Setup – SMTP Enabled</b>	Enables the SMTP forwarding feature for the system.	0 = Off 1 = On (default = 0)	✓		
47-18-02	<b>VM8000 InMail SMTP Setup – Server Name</b>	Sets the SMTP server name. If the DNS server setting is not assigned in Program 90-11-11, the IP Address must be used instead of the name.	Up to 48 characters (default = No Setting)	✓		
47-18-03	<b>VM8000 InMail SMTP Setup – SMTP Port</b>	Sets the SMTP server port.	0~65535 (default = 25)		✓	
47-18-04	<b>VM8000 InMail SMTP Setup – Encryption</b>	Enable SSL Encryption.	0 = Off 1 = On (default = 0)		✓	
47-18-05	<b>VM8000 InMail SMTP Setup – Authentication</b>	Enables authentication, when set to 2 (POP3) refer to Programs 47-19-xx.	0 = Off 1 = On 3 = POP3 (default = 0)		✓	
47-18-06	<b>VM8000 InMail SMTP Setup – User Name</b>	Set the user name for SMTP authentication.	Up to 48 characters (default = No Setting)		✓	
47-18-07	<b>VM8000 InMail SMTP Setup – Password</b>	Set the password for SMTP authentication.	Up to 48 characters (default = No Setting)		✓	
47-18-08	<b>VM8000 InMail SMTP Setup – E-mail Address</b>	Set the email address for the system. This is the "from address" for outgoing emails.	Up to 48 characters (default = No Setting)	✓		
47-18-09	<b>VM8000 InMail SMTP Setup – Reply to Address</b>	Set the email address for replies to outgoing emails. This email account is not monitored by the system and must be checked manually.	Up to 48 characters (default = No Setting)	✓		
47-19-01	<b>VM8000 InMail POP3 Setup – Server Name</b>	Set the POP3 server name. If the DNS server setting is not assigned in Program 90-11-11 the IP Address must be used instead of the name.	Up to 48 characters (default = No Setting)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-19-02	VM8000 InMail POP3 Setup – POP3 Port	Set the POP3 server port.	0~65535 (default = 110)		✓	
47-19-03	VM8000 InMail POP3 Setup – SSL Encryption	Enable SSL encryption.	0 = Off 1 = On (default = 0)		✓	
47-19-04	VM8000 InMail POP3 Setup – User Name	Set the user name for POP3 authentication.	Up to 48 characters (default = No Setting)		✓	
47-19-05	VM8000 InMail POP3 Setup – Password	Set the password for POP3 authentication.	Up to 48 characters (default = No Setting)		✓	
90-11-11	System Alarm Report – DNS Primary Address	Assign the primary DNS IP Address. If this setting is not assigned, the IP Address must be used in Program 47-18-02 and 47-19-01 instead of the name.	0.0.0.0~ 255.255.255.255 (default = 0.0.0.0)	✓		
90-11-12	System Alarm Report – DNS Secondary Address	Assign the secondary DNS server IP Address.	0.0.0.0~ 255.255.255.255 (default = 0.0.0.0)	✓		

## Operation

**Table 2-134 Turn Email Notification On or Off**

To Turn Email Notification On or Off			
1.	Log onto Subscriber Mailbox		
2.	<b>[Optns]</b>	Select Mailbox Options. ○ Alternately dial <b>OP</b> (67)	
3.	<b>[Notfy]</b>	Select Notification. ○ Alternately dial <b>N</b> (6)	
4.	<b>[Email]</b>	Select Email. ○ Alternately dial <b>E</b> (6)	
5.	Do one of the following:		
	a.	<b>[On]</b>	Select to turn email notification on. ○ Alternately dial <b>O</b> (6)
	b.	<b>[Off]</b>	Select to turn email notification off. ○ Alternately dial <b>O</b> (6)
	c.	<b>[Back]</b>	Select to exit without making any changes. ○ Alternately dial <b>#</b>

Refer to the VM8000 InMail System Guide for more information about this feature.

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## *VM8000 InMail – Find-Me Follow-Me*

### Enhancements

This feature added with **Version 4000**.

**Version 6000 or higher** software provides the following:

- Find-Me Follow-Me supports day of week scheduling in addition to time of day. This applies to station and group subscriber mailboxes. Requires **Version 6000 Enhancement License (0035)**.
- Find-Me Follow-Me options can be configured from UserPro.
- In addition to User Pro, when language prompt **Version 2.30 or higher** is installed on the InMail CF, the Find-Me Follow-Me Day of Week schedule options can be set from the mailbox telephone interface.

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### Description

Find-Me Follow-Me helps an outside caller locate an extension user who is not at their desk. If their call is unanswered and is picked up by voice mail, the caller has the option of dialing a digit to try up to three alternate Find-Me Follow-Me destinations. A destination can be an outside number (such as a cell phone or home office) or a co-worker's extension.

The Find-Me Follow-Me destinations are set up in the Notification Schedule. Each of the three entries can be individually enabled or disabled and provides options for:

- Start Hour: Time the destinations become active.
- End Hour: Time the destinations become inactive.
- Number: The destination telephone, pager or extension number.
- Days of Week: Days of the week the destinations are active or inactive.

If the caller chooses the Find-Me Follow-Me option, the system will try each enabled entry that is active for the current date and time (i.e., in-schedule). The system will not try any entries that are disabled or are not in-schedule.

When trying the destinations, Find-Me Follow-Me skips an active, in-schedule number that is busy, in DND, or is unanswered. If a destination is answered the party must dial 1 and if enabled enter the security code to hear new messages. If the system is forwarded to a voice mail system since the destination does not enter a 1 it will be counted as a failed attempt and the system will move on to the next destination. When all active in-schedule destinations have been tried the caller can then choose to try Find-Me Follow-Me again or select another option.

You can set up Find-Me Follow-Me for an extension in system programming. In addition, an extension user can set up Find-Me Follow-Me from their Mailbox Options.

## Conditions

- Main software **Version 4000 or higher** is required to support this feature.
- The features requires the SV8100 R4 Enhancement license (0033).
- The InMail language prompts installed on the CF must be **Version 2.10 or higher**. The VM8000 InMail Utility is used to update the installed language prompts.
- Find-Me Follow-Me settings can be changed using the Telephone Mailbox Option Interface and system programming only.
- Find-Me Follow-Me can be used for standard subscriber mailboxes and Group Mailboxes set to subscriber in Program 47-03-03.
- Find-Me Follow-Me does not work for internal callers.
- Find-Me Follow-Me does not work for calls forwarded to InMail, this includes DID/DIL calls.
- Find-Me Follow-Me requires that Tandem Trunking be enabled on the line that rings into the Automated Attendant. If Tandem Trunking is not enabled, the Find-Me Follow-Me options are not available.
- The Find-Me Follow-Me schedule by day or week requires **Version 6000 or higher** software and **Version 6000 Enhancement License (0035)**.
- If language prompt **Version 2.30 or higher** is *not* installed on the InMail CF, Find-Me Follow-Me schedule options can only be changed from WebPro, PCPro or system programming for either *station subscriber* or *group subscriber* mailboxes.
- When language prompt **Version 2.30 or higher** is installed on the InMail CF, Find-Me Follow-Me schedule options can be set from the mailbox telephone interface for both *station* and *group subscriber* mailboxes.

## Default Setting

Enabled

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## System Availability

### Terminals

All Multiline Terminals



## Required Component(s)

None

## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-13	<b>Basic Trunk Data Setup – Trunk-to-Trunk Transfer</b>	Enable/Disable loop supervision for the trunk.	0 = Disabled 1 = Enabled (default = 1)		✓	
20-11-14	<b>Class of Service Options (Hold/Transfer Service) – Trunk-to-Trunk Transfer Restriction</b>	Make sure this option is disabled or Find-Me Follow-Me will not work for CO calls.	0 = Disabled 1 = Enabled (default = 0)			✓
47-02-24	<b>SV8100 InMail Station Mailbox Options – All Find-Me Follow-Me Enabled</b>	Use this option to enable or disable Find-Me Follow-Me for the extension. If disabled, enabling the individual notification entries has no effect.	0 = Disabled 1 = Enabled (default = 0)	✓		
47-06-22	<b>Group Mailbox Subscriber Options – All Find-Me Follow-Me Enabled</b>	Use this option to enable or disable Find-Me Follow-Me for the group mailbox. If disabled, enabling the individual notification entries has no effect.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-21-01	<b>Station Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me</b>	Use this option to enable or disable a Find-Me Follow-Me destination. If enabled, Find-Me Follow-Me will occur according to the settings for Start Hour, End Hour, days of week and Find-Me Follow-Me Phone Number. If disabled, Find-Me Follow-Me will not occur.	0 = Disabled 1 = Enabled (default = 0)	✓		
47-21-02	<b>Station Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me Begin Hour</b>	Use this option to set the hour when Find-Me Follow-Me will start. Find-Me Follow-Me will occur only between this setting and the End Hour setting.	0-23 (24 Hour Clock) (default not assigned)	✓		
47-21-03	<b>Station Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me End Hour</b>	Use this option to set the hour when Find-Me Follow-Me will end. Find-Me Follow-Me will occur only between this the Start Hour and this setting.	0-23 (24 Hour Clock) (default not assigned)	✓		
47-21-04	<b>Station Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me Number</b>	Use this option to set the telephone number Find-Me Follow-Me will dial. Enter the number exactly as you want the system to dial it (including a leading 1 for toll calls, if required), but do not include a line access code (such as 9). If the number you enter is extension number, it will be an Intercom call. Otherwise, it will be an outside call. (The system decides by referring its numbering plan.)	Up to 16 digits (default not assigned)	✓		
47-21-05	<b>Station Mailbox Find-Me Follow-Me Options – Day of Week Sunday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Sunday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-21-06	<b>Station Mailbox Find-Me Follow-Me Options – Day of Week Monday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Monday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-21-07	<b>Station Mailbox Find-Me Follow-Me Options – Day of Week Tuesday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Tuesday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-21-08	<b>Station Mailbox Find-Me Follow-Me Options – Day of Week Wednesday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Wednesday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-21-09	<b>Station Mailbox Find-Me Follow-Me Options – Day of Week Thursday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Thursday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-21-10	<b>Station Mailbox Find-Me Follow-Me Options – Day of Week Friday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Friday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-21-11	<b>Station Mailbox Find-Me Follow-Me Options – Day of Week Saturday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Saturday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-23-01	<b>Group Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me</b>	Use this option to enable or disable a Find-Me Follow-Me destination. If enabled, Find-Me Follow-Me will occur according to the settings for Start Hour, End Hour, days of week and Find-Me Follow-Me Phone Number. If disabled, Find-Me Follow-Me will not occur.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-23-02	<b>Group Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me Begin Hour</b>	Use this option to set the hour when Find-Me Follow-Me will start. Find-Me Follow-Me will occur only between this setting and the End Hour setting.	0-23 (24 Hour Clock) (default not assigned)		✓	
47-23-03	<b>Group Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me End Hour</b>	Use this option to set the hour when Find-Me Follow-Me will end. Find-Me Follow-Me will occur only between this the Start Hour and this setting.	0-23 (24 Hour Clock) (default not assigned)		✓	
47-23-04	<b>Group Mailbox Find-Me Follow-Me Options – Find-Me Follow-Me Number</b>	Use this option to set the telephone number Find-Me Follow-Me will dial. Enter the number exactly as you want the system to dial it (including a leading 1 for toll calls, if required), but do not include a line access code (such as 9). If the number you enter is extension number, it will be an Intercom call. Otherwise, it will be an outside call. (The system decides by referring its numbering plan.)	Up to 16 digits (default not assigned)		✓	
47-23-05	<b>Group Mailbox Find-Me Follow-Me Options – Day of Week Sunday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Sunday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-23-06	<b>Group Mailbox Find-Me Follow-Me Options – Day of Week Monday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Monday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-23-07	<b>Group Mailbox Find-Me Follow-Me Options – Day of Week Tuesday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Tuesday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
47-23-08	<b>Group Mailbox Find-Me Follow-Me Options – Day of Week Wednesday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Wednesday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-23-09	<b>Group Mailbox Find-Me Follow-Me Options – Day of Week Thursday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Thursday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-23-10	<b>Group Mailbox Find-Me Follow-Me Options – Day of Week Friday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Friday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	
47-23-11	<b>Group Mailbox Find-Me Follow-Me Options – Day of Week Saturday</b>	For the selected entry (1-5), use this option to enable or disable Find-Me Follow-Me on Saturday.  There are three separately-programmed Find-Me Follow-Me entries for each Subscriber Mailbox.	0 = Disabled 1 = Enabled (default = 0)		✓	

## Operation

Setting Up Message Notification					
Log On to Subscriber Mailbox.					
<b>OP (67)</b>	Access the Mailbox Options menu. [Not applicable]				
	N (6)	Access the Message Notification Options Menu. [Notif]			
		VM8000 InMail plays a summary of your Message Notification settings. The your telephone display shows your current notification settings (see sample below). For telephone numbers Notify On 8am- 5pm Number: 12039265400 <b>- OR -</b> For Pager Numbers Notify On 8am- 5pm Pager: 12039265400			
		O (6)	Turn Message Notification on or off. [On] [Off]		
		C (2)	Change your Message Notification setup. [Chnge]		
When you see: Notification Begin					
			Enter the hour you want Message Notification to begin. Enter 2 digits for the hour		
			A (2)	Select AM [AM]	
			P (7)	Select PM [PM]	
			*	Skip this option without changing your entry. [Next]	
			#	Back up to the previous level without changing your entry. [Exit]	
When you see: Notification End					
			Enter the hour you want Message Notification to end. o Enter 2 digits for the hour. o For 24-hour notification, make the End Time the same as the Start Time.		
			A (2)	Select AM [AM]	
			P (7)	Select PM [PM]	

Setting Up Message Notification (Continued)					
				*	Skip this option without changing your entry. [Next]
				#	Back up to the previous level without changing your entry. [Exit]
When you see: Notify Via					
				N (6)	The notification destination is a telephone number. [Num]
				D (3)	The notification destination is a digital pager. [Pager]
				*	Skip this option without changing your entry. [Next]
				#	Back up to the previous level without changing your entry. [Exit]
When you see: Number					
					Enter the Message Notification callout number (16 digits max). <ul style="list-style-type: none"> <li>o Enter the number exactly as you want the system to dial it (including a leading 1 for toll calls, if required).</li> <li>o If the number you enter is 4 digits or less, it is an Intercom call. If it is more than 4 digits, it is an outside call.</li> </ul>
					# Accept the number entered and back up to the previous level. [OK]
					[Clear] Erase the number you just entered.
				*	Skip this option without changing your entry. [Next]
				#	Back up to the previous level without changing your entry. [Exit]
		#	Go back to the Mailbox Options menu. [Exit]		
	#	Go back to the Main Menu. [Exit]			
0	Plays Help message.				

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## *VM8000 InMail – Language Setting*

### Enhancements

This feature added with <b>Version 4000</b> .
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### Description

The Language setting feature allows the telephone display language and the InMail mailbox language to be changed from the telephone. This can be used to change either the user's phone or another specified telephones display and InMail language if allowed in system programming. Either a dial access code or Softkey operation is available.

### Conditions

- Main software **Version 4000 or higher** is required to support this feature.
- The InMail prompt version must be **2.10 or higher** to support this feature.
- The telephone display language can be changed using dial access codes or softkeys only.
- The InMail language can be changed using dial access codes or softkeys only.
- The ability to change other extensions language options is allowed on a class of server basis in Program 20-13-53.
- The system will not allow an InMail language to be selected if that language prompt set has not been loaded onto the InMail CF. When an invalid language is selected an error tone is heard.

### Supported Languages

- 01 (US English)
- 02 (UK English)
- 03 (Australian English)
- 04 (French Canadian)
- 05 (Dutch)
- 06 (Mexican Spanish)
- 07 (Latin America Spanish)

- 08 (Italian)
- 09 (German)
- 10 (Madrid Spanish)
- 11 (Norwegian)
- 12 (Parisian French)
- 13 (Brazilian Portuguese)
- 14 (Japanese)
- 15 (Mandarin Chinese)
- 16 (Korean)
- 17 (Iberian Portuguese)
- 18 (Greek)
- 19 (Danish)
- 20 (Swedish)
- 21 (Thai)
- 22 (Taiwan)
- 23 (Flemish)
- 24 (Turkish)

### **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

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## Related Features

None

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-13	<b>Service Code Setup (for Setup/Entry Operation) – Display Language Selection for Multiline Terminal</b>	If needed, redefine the service code used to select the language for display multiline terminals.	MLT (default = 678)		✓	
11-11-68	<b>Service Code Setup (for Setup/Entry Operation) – IntraMail Language Selection for own Extension</b>	This setting is needed if the dial access code to this feature is desired.	MLT (default not assigned)		✓	
11-11-69	<b>Service Code Setup (for Setup/Entry Operation) – IntraMail Language Selection for Specific Extension</b>	This setting is needed if the dial access code to this feature is desired.	MLT (default not assigned)		✓	
20-13-53	<b>Class of Service Options (Supplementary Service) – Language Selection for Specific Extension</b>	This setting must be Enabled (1) for a telephones Class of Service for this feature to function.	0 = Disabled 1 = Enabled (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
40-07-01	Voice Prompt Language Assignment for VRS	Specify the language to be used for the InMail prompts.	1 = US English 2 = UK English 3 = AU English 4 = CA French 5 = Dutch 6 = Mex Spanish 7 = LA Spanish 8 = Italian 9 = German 10 = ES Spanish 11 = Norwegian 12 = ParisFrench 13 = BR Portugue 14 = Japanese 15 = MandChinese 16 = Korean 17 = IB Portugue 18 = Greek 19 = Danish 20 = Swedish 21 = Thai 22 = Taiwan 23 = Flemish 24 = Turkish 25 = Arabic 26 = Russian (default = 1)		✓	

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## Operation

**Table 2-135 Language Setting Operation**

From an Idle Display Phone	
↓	Press down arrow
Prog	Press Program Softkey
↓	Press down arrow
↓	Press down arrow
Lang	Press Language Softkey
Disp	To change telephone display language press Display Softkey.
Own	To change your own extension display language press Own Softkey.
Choose Lang	Select desired language, press down arrow to advance to next page. Press softkey for desired language.
	Press Speaker Exit
Other	To change another extension display language press Other softkey.
Ext #	Enter the extension number to be changed.
Choose Lang	Select desired language, press down arrow to advance to next page. Press softkey for desired language.
	Press Speaker Exit
VMail	To change spoken InMail mailbox language press VMail Softkey.
Own	To change your own extension display language press Own Softkey.
Choose Lang	Select desired language, press down arrow to advance to next page. Press softkey for desired language.
	Press Speaker Exit
Other	To change another spoken mailbox language press Other softkey.
Ext #	Enter the extension number to be changed.
Choose Lang	Select desired language, press down arrow to advance to next page. Press softkey for desired language.
	Press Speaker Exit

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# Voice Call Recording

## Enhancements

The NEC IP Recorder SonicView™ feature added with **Version 3000 or higher** software.

With **SonicView Version 2.7 or higher** software, Windows® 7 and Windows 2008 Server (32- and 64-bit) is supported.

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## Description

When using NEC DT 300 and DT 700 desktop terminals, telephone calls can be monitored, recorded and stored. For DT 300 (TDM) terminals, the NEC 4-Port Digital Call Logging Unit – VSR (Voice Security Recorder) is used. For DT 700 (IP) terminals, the NEC SonicView IP Recorder is used.

## *D<sup>term</sup>*® Voice Security Recorder (VSR)

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## Description

The *D<sup>term</sup>*® Voice Security Recorder is a USB device that taps across the digital extension pair of the NEC telephone system allowing digital recording of the telephone user's conversation. The file created is saved either to the local PC or to a network location, depending on the application blade used. This adapter is for use with IP or digital multiline terminals. It cannot be used to record VoIP phone conversations in a Netlink or CCIS configuration.

Two options are available for playing back calls recorded by your VSR(s). The first is the Desktop Player which is used by an individual user to play back their own archive of calls or to play back NEC Dterm VSR calls stored on their PC or network. It easily manages calls from one storage location. It does not offer many of the advanced functions of the VSR Manager, such as establishing preset shortcuts to any number of storage folders for quick and easy access.

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The second player option is the **VSR Manager**. Take your call recording environment to the next level with NEC VSR application software. **VSR Manager** provides advanced visibility, access, retrieval, and playback tools for the VSR Recorder administrators. It provides an intuitive interface for establishing shortcuts to any number of storage folders and allows the supervisor to search across all storage folders for specific call information such as User, Time/Date, Length of Call, etc. The application can be used to access and manage VSR recordings whether created by the single port VSR or the 4-Port Digital Call Logging Unit. **VSR Manager** is built on the robust Microsoft.net frame-work and manipulates large volumes of recordings. It is a workhorse that delivers truly feature rich productivity tools in a familiar, ergonomic and easy to use MS Office style interface.

These two players can be combined in any number of configurations in the company, providing control and management where needed and simple playback in other locations.

Refer to the documentation included with the *D<sup>term</sup>*® VSR (P/N 780275) for details on setting up and using the Desktop Player.



*The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversation or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal or state laws. Legal advice should be sought prior to implementing any practice that monitors or records any telephone conversation. Some federal and state laws require some form of notification to all parties to a telephone conversation, such as using a beep tone or other notification methods or requiring the consent of all parties to the telephone conversation, prior to monitoring or recording the telephone conversation. Some of these laws incorporate strict penalties.*

## Conditions

- The PC hosting Back Office should have the power save functionality turned off.
- Encryption is only supported at 256-bit setting.
- Does not support recording of VoIP phone conversations in a Netlink or CCIS configuration.
- No Wireless terminal support.
- Encryption Feature – Requires VSR Manager or VSR Reporter for playback.
- Network Port monitoring for IP Extensions.
- Peer to Peer not supported.
- VoIP calls placed on hold or conference will break into two call recordings.

## Default Settings

None



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## System Availability

### Terminals

NEC DT300/DT700 Series Desktop Terminals – *D<sup>term</sup>*® VOICE SECURITY RECORDER (VSR)

### Required Component(s)

- 4-Port Digital Call Logging Unit
- PC Hardware and Software:

#### 4-Port Digital Call Logging Unit

- Pentium 4 processor
- 512 Mb RAM
- One USB Controller Card for each four devices – powered USB hubs can be used however, no more than four devices should be connected to a USB Controller Card
- An available PCI slot for each USB Controller Card
- LAN connection for remote access to stored calls
- NEC BackOffice Recorder software
- Supported Operating Systems:

Windows XP

Windows 7

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## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-02-10	Analog Trunk Data Setup – Caller ID	Enable/Disable a trunk ability to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-03-10	Single Line Telephone Basic Data Setup – Caller ID Name	Determine whether or not a single line telephone should display the Caller ID name.	0 = Disable 1 = Enable (default = 1)	✓		
20-08-15	Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-02	Class of Service Options (Incoming Call Service) – Caller ID Display	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 01~15)	✓		
20-19-01	System Options for Caller ID – Caller ID Displaying Format (If displaying digits are more than 12 digits)	Determine whether the first 10 digits or last 10 digits should be displayed when Caller ID exceeds 12 digits.	0 = First 10 digits (Upper) 1 = Last 10 digits (Lower) (default = 0)		✓	

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## Operation

Refer to the UNIVERGE SV8100 System Hardware Manual, Chapter 11, Section 11 *D<sup>term</sup>*® Voice Security Recorder (VSR) for detailed information.

## NEC SonicView™ IP Recorder (1.0)

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### Description

The NEC SonicView™ IP Recorder application is an easy-to-use yet powerful web-based call recording solution. The SonicView software offers robust features designed specifically for business users who want to make use of Enterprise call data for reporting, analysis and monitoring. The different components that make up the SonicView application are:

- Application Server
- Database Server
- Recording Engine
- Network Infrastructure to Enable Call Recording

### Web Server

The SonicView application uses the Apache Tomcat server as a web container, or web server. Apache Tomcat implements the necessary Java Servlet and Java Server Pages (JSP) specifications from Sun Microsystems. Thus, providing an environment for the SonicView application to run in conjunction with a web server. It adds tools for configuration and management but can also be configured by editing configuration files that are normally XML-formatted. Tomcat includes its own internal HTTP server.

Refer to the NEC IP Recorder SonicView User Guide and Installation Manual located on the AK System PC Apps CD (P/N 670830) for additional information.

### Database Server

The SonicView application uses PostgreSQL server as the database server for storing all the call information captured from the network. The PostgreSQL database server can be implemented in a straightforward manner as a separate node (on a network) dedicated to running database-management software. This node provides an interface to client nodes (the end users of the SonicView application) such that the same data is accessible to all nodes. The SonicView application interface allows users to submit requests to the database server and retrieve call information. The database server manages the processor-intensive work such as data manipulation, compilation, and optimization. It then, sends only the final results back to the SonicView application.

Refer to the NEC IP Recorder SonicView User Guide and Installation Manual located on the AK System PC Apps CD (P/N 670830) for additional Information.

## Recording Engine

The SonicView application uses the recording engine component to sniff and record all call information captured from the network. Typically, the recording engine should be installed on a server class machine with a network card that interfaces with a managed switch. After installing the SonicView application using the setup CD, the recording engine will not record any VoIP calls by default. To make this happen, you must ensure that the necessary network infrastructure and configurations are in place. For a detailed description of the network infrastructure required for call capture, refer to the Network Infrastructure section.

To make the necessary configurations on the recording engine to enable call capturing, refer to Configuring the Recorder subsection under the Administrative tasks section.

Refer to the NEC IP Recorder SonicView User Guide and Installation Manual located on the AK System PC Apps CD (P/N 670830) for additional Information.

## SonicView On-Demand Recording (ODR) Client

The SonicView On-Demand Recording client is a convenient tool to record and view calls as they happen in real-time. This standalone desktop application can be downloaded and installed from the login page of the main application. For instructions to download and install this client, refer to the NEC IP Recorder SonicView installation and configuration guide.



*The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversation or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal or state laws. Legal advice should be sought prior to implementing any practice that monitors or records any telephone conversation. Some federal and state laws require some form of notification to all parties to a telephone conversation, such as using a beep tone or other notification methods or requiring the consent of all parties to the telephone conversation, prior to monitoring or recording the telephone conversation. Some of these laws incorporate strict penalties.*

## Conditions

- NEC IP Recorder SonicView - The PC hosting the recording engine component should be on the same subnet as the PBX for it to capture calls. Unless this configuration is made, no calls will be recorded.

- NEC IP Recorder Sonic View - A Vista “Master Administrator” account (“Administrator”) is required to install the application. The user must enable the Vista Master Administrator account and log into this account to perform the installation. The Apache Tomcat web server, Apache Derby Database server and Recording Engine will not be installed correctly in non-master administrator accounts.
- NEC IP Recorder Sonic View - A single-/multi-port managed switch with port mirroring setup is mandatory to enable call capturing over the network. The server hosting the recording engine should be connected to a managed switch (customer provided) such that the PBX’s traffic mirrored to the port on which the recording engine server is connected.

## Default Settings

Not Installed

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## System Availability

### Terminals

NEC DT700 (IP) Terminals – NEC SonicView IP Recorder

### Required Component(s)

- Hardware:
  - Pentium 1.8 GHz core 2 duo or above
  - 4 GB RAM
  - 250 GB of free hard disk space (30000 hours of continuous recording)
  - SVGA monitor 1024 X 768 resolution
  - Network Interface Card (NIC)
- Supported Operating Systems:
  - Windows Server 2003 with SP2
  - Windows Vista Business Edition with SP1
  - Windows XP Professional with SP3

- Recording Server Requirements
  - Hardware:
    - Pentium 1.6 GHz core 2 duo
    - A minimum of 2 GB RAM
    - 250 GB of free hard disk space (30000 hours of continuous recording)
    - SVGA monitor 1024 X 768 resolution
    - Network Interface Card (NIC)
  - Supported Operating Systems:
    - Windows Server 2003 with SP2
    - Windows Vista Business Edition with SP1
    - Windows XP Professional with SP3
- Application and Recording Server Requirements (both features on same server)
  - Hardware:
    - Pentium 2.66 GHz core 2 duo
    - A minimum of 4 GB RAM
    - 250 GB of free hard disk space (30000 hours of continuous recording)
    - SVGA monitor 1024 X 768 resolution
    - Network Interface Card (NIC)
  - Supported Operating Systems:
    - Windows Server 2003 with SP2
    - Windows Vista Business Edition with SP1
    - Windows XP Professional with SP3
  - Client Side Requirements:
    - Pentium 4 class machine
    - A minimum of 512 MB RAM
    - SVGA monitor 1024 X 768 resolution
    - Adobe® Flash® player plug-in version 9 or above
    - Adobe® Acrobat Reader® 7 or above (if client needs to view/edit reports)
    - Microsoft Excel 2000 (if client needs to view/edit reports)

- ❑ Supported Internet Browsers:
  - Microsoft Internet Explorer 7 and above
  - Mozilla<sup>®</sup> Firefox<sup>®</sup> version 2.0 or above
  - Google<sup>™</sup> Chrome
- ❑ SV8100 CPU License (NEC IP Recorder SonicView)

Table 2-136 IP Recorder Basic Licenses

<b>670863 LKS-IP Recorder Basic Pkg-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3200	4 Stations 1 Supervisor 4 ODRs (On-Demand Recording)	Provides the ability to have four stations, one Supervisor and up to four On-Demand Recording clients.
<b>670864 LKS-IP Recorder Basic Port Add-on 4-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3202	4 Additional Stations	Provides the ability to record four additional stations over the initial four received with 670863.
<b>670865 LKS-IP Recorder Basic Port Add-on 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3202	1 Additional Station	Provides the ability to record one additional station over the initial four received with 670863.
<b>67082 LKS-IP Recorder Basic SUPV Add-on 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3201	1 Additional Supervisor	Provides one additional Supervisor Login.

## Related Features

None

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-26-04	IP System Operation Setup – DT700 Peer to Peer Mode	Use to Enable (1) or Disable (0) the Peer to Peer feature for SIP MLT and SIP IP stations.	0 = Off 1 = On (default = 1)	✓		
14-02-10	Analog Trunk Data Setup – Caller ID	Enable/Disable a trunk ability to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-03-10	Single Line Telephone Basic Data Setup – Caller ID Name	Determine whether or not a single line telephone should display the Caller ID name.	0 = Disable 1 = Enable (default = 1)	✓		
20-08-15	Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-02	Class of Service Options (Incoming Call Service) – Caller ID Display	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 01~15)	✓		
20-19-01	System Options for Caller ID – Caller ID Displaying Format (If displaying digits are more than 12 digits)	Determine whether the first 10 digits or last 10 digits should be displayed when Caller ID exceeds 12 digits.	0 = First 10 digits (Upper) 1 = Last 10 digits (Lower) (default = 0)		✓	



## Operation

Refer to the SonicView User Guide for operational details.

Refer to the following manuals for detailed information regarding the NEC SonicView IP Recorder:

NEC SonicView IP Recorder Installation and Setup Guide

NEC SonicView IP Recorder Application User Guide

## NEC SonicView Recorder (TDM and IP) (2.0)

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### Description

The NEC SonicView™ Recorder application is an easy-to-use yet powerful web-based call recording solution use for both IP and TDM calls. The SonicView software offers robust features designed specifically for business users who want to make use of Enterprise call data for reporting, analysis and monitoring. The different components that make up the SonicView application are:

- Application Server
- Database Server
- Recording Engine
- Network Infrastructure to Enable Call Recording

### Web Server

The SonicView application uses the Apache Tomcat server as a web container, or web server. Apache Tomcat implements the necessary Java Servlet and Java Server Pages (JSP) specifications from Sun Microsystems. Thus, providing an environment for the SonicView application to run in conjunction with a web server. It adds tools for configuration and management but can also be configured by editing configuration files that are normally XML-formatted. Tomcat includes its own internal HTTP server.

Refer to the NEC SonicView Recorder User Guide and Installation Manual located on the AK System PC Apps CD (P/N 670830) for additional Information.

## Database Server

The SonicView application uses PostgreSQL server as the database server for storing all the call information captured from the network. The PostgreSQL database server can be implemented in a straightforward manner as a separate node (on a network) dedicated to running database-management software. This node provides an interface to client nodes (the end users of the SonicView application) such that the same data is accessible to all nodes. The SonicView application interface allows users to submit requests to the database server and retrieve call information. The database server manages the processor-intensive work such as data manipulation, compilation, and optimization. It then, sends only the final results back to the SonicView application.

Refer to the NEC SonicView Recorder User Guide and Installation Manual located on the AK System PC Apps CD (P/N 670830) for additional Information.

## Recording Engine

The SonicView application uses the recording engine component to sniff and record all call information captured from the network. Typically, the recording engine should be installed on a server class machine with a network card that interfaces with a managed switch. After installing the SonicView application using the setup CD, the recording engine will not record any VoIP calls by default. To make this happen, you must ensure that the necessary network infrastructure and configurations are in place. For a detailed description of the network infrastructure required for call capture, refer to the Network Infrastructure section.

To make the necessary configurations on the recording engine to enable call capturing, refer to Configuring the Recorder subsection under the Administrative tasks section.

Refer to the NEC IP SonicView Recorder User Guide and Installation Manual located on the AK System PC Apps CD (P/N 670830) for additional Information.

## SonicView On-Demand Recording (ODR) Client

The SonicView On-Demand Recording client is a convenient tool to record and view calls as they happen in real-time. This standalone desktop application can be downloaded and installed from the login page of the main application. For instructions to download and install this client, refer to the NEC IP Recorder SonicView installation and configuration guide.



*The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversation or other sound activities, whether or not contemporaneous with transmission, may be illegal in certain circumstances under federal or state laws. Legal advice should be sought prior to implementing any practice that monitors or records any telephone conversation. Some federal and state laws require some form of notification to all parties to a telephone conversation, such as using a beep tone or other notification methods or requiring the consent of all parties to the telephone conversation, prior to monitoring or recording the telephone conversation. Some of these laws incorporate strict penalties.*

## Conditions

- If NEC Sonic View IP Recorder 1.0 has been installed previously, then the SonicView IP Recorder 1.0 must be uninstalled prior to installing NEC SonicView recorder 2.0.
- The PC hosting the recording engine component should be on the same subnet as the PBX for it to capture calls. Unless this configuration is made, no calls will be recorded.
- A Vista “Master Administrator” account (“Administrator”) is required to install the application. The user must enable the Vista Master Administrator account and log into this account to perform the installation. The Apache Tomcat web server, Apache Derby Database server and Recording Engine will not be installed correctly in non-master administrator accounts.
- A single-/multi-port managed switch with port mirroring setup is mandatory to enable call capturing over the network. The server hosting the recording engine should be connected to a managed switch (customer provided) such that the PBX’s traffic mirrored to the port on which the recording engine server is connected.
- Recording Digital terminals is now possible after adding the NEC-4 port digital call logging device via USB to the system that has the Digital recorder installed. See the SonicView Installation and Configuration guide for detailed information.
- Recording of internal Digital calls will result in no direction, name or number indication. Only the Receiving Terminal will show name and number. Recording of Digital terminals that have been assigned to trunk configuration will result in no number indication. Outgoing or incoming trunk calls with a Digital terminal will not show direction.
- Recording both IP and Digital terminals on the same server requires an additional NIC (network interface card).

## Default Settings

Not Installed

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## System Availability

### Terminals

NEC DT700 series (IP) Terminals – NEC SonicView Recorder

NEC DT300 series (Digital) Terminals- NEC SonicView Recorder

## Required Component(s)

### Only Application

- Hardware:
  - Pentium 1.8 GHz core 2 duo or above
  - A minimum of 4 GB RAM
  - 250 GB of free hard disk space (30000 hours of continuous recording)
  - SVGA monitor 1024 X 768 resolution
  - Network Interface Card (NIC)
- Supported Operating Systems:
  - Windows Server 2008, Windows 7, Windows Server 2003 with SP2, Windows Vista Business Edition with SP2, Windows XP Professional with SP3.

### Only Recording Server

- Hardware:
  - Pentium 1.6 GHz core 2 duo or above
  - A minimum of 2 GB RAM
  - 250 GB of free hard disk space (30000 hours of continuous recording)
  - SVGA monitor 1024 X 768 resolution
  - Network Interface Card (NIC)
- Supported Operating Systems:
  - Windows Server 2008, Windows 7, Windows Server 2003 with SP2, Windows Vista Business Edition with SP2, Windows XP Professional with SP3.
- Application & Recording Server (both components on same server) Hardware:
  - Pentium 2.66 GHz core 2 duo or above
  - A minimum of 4 GB RAM
  - 250 GB of free hard disk space (30000 hours of continuous recording)
  - SVGA monitor 1024 X 768 resolution
  - Network Interface Card (NIC)
- Supported Operating Systems:
  - Windows Server 2008, Windows 7, Windows Server 2003 with SP2, Windows Vista Business Edition with SP2, Windows XP Professional with SP3.
- Client Side Requirements
  - Pentium 4 class machine

- A minimum of 1 GB RAM
- SVGA monitor 1024 X 768 resolution
- Adobe Flash player plug-in version 10 or above
- Adobe Acrobat Reader 7 or above (if client needs to view/edit reports)
- Microsoft Excel 2000 (if client needs to view/edit reports)
- Supported Internet browsers:
  - Microsoft Internet Explorer 7 and above
  - Mozilla Firefox version 3.2 or above
  - Google Chrome 3.0 or above

### Digital Terminal Recording Requirements

NEC – 4-Port Digital Call Logging Hardware via USB.

## Related Features

None

**Table 2-137 SV8100 CPU License (NEC SonicView Recorder)**

<b>670863 LKS-Recorder Basic Pkg-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3200	4 Stations 1 Supervisor 4 ODRs (On-Demand Recording)	Provides the ability to have four stations, one Supervisor Login and up to four On-Demand Recording clients.
<b>670864 LKS-Recorder Basic Port Add-on 4-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3202	4 Additional Stations	Provides the ability to record four additional stations over the initial four received with 670863.
<b>670865 LKS-Recorder Basic Port Add-on 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3202	1 Additional Station	Provides the ability to record one additional station over the initial four received with 670863.
<b>670862 LKS-Recorder Basic SUPV Add-on 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3201	1 Additional Supervisor	Provides one additional Supervisor Login.

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-26-04	IP System Operation Setup – DT700 Peer to Peer Mode	Use to Enable (1) or Disable (0) the Peer to Peer feature for SIP MLT and SIP IP stations.	0 = Off 1 = On (default = 1)	✓		
14-02-10	Analog Trunk Data Setup – Caller ID	Enable/Disable a trunk ability to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-03-10	Single Line Telephone Basic Data Setup – Caller ID Name	Determine whether or not a single line telephone should display the Caller ID name.	0 = Disable 1 = Enable (default = 1)	✓		
20-08-15	Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-02	Class of Service Options (Incoming Call Service) – Caller ID Display	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 01~15)	✓		
20-19-01	System Options for Caller ID – Caller ID Displaying Format (If displaying digits are more than 12 digits)	Determine whether the first 10 digits or last 10 digits should be displayed when Caller ID exceeds 12 digits.	0 = First 10 digits (Upper) 1 = Last 10 digits (Lower) (default = 0)		✓	

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## Operation

Refer to the SonicView User Guide for operational details.

Refer to the following manuals for detailed information regarding the NEC SonicView Recorder:

NEC SonicView Recorder Installation and Setup Manual

NEC SonicView Recorder Application User Guide

## NEC SonicView Recorder (2.7)

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### Description

The NEC SonicView™ Recorder application is an easy-to-use yet powerful web-based call recording solution. The SonicView software offers robust features designed specifically for business users who want to make use of Enterprise call data for reporting, analysis and monitoring.

### Conditions

**Table 2-138 Known Limitations**

ID	Item Description	Comments
1	<b>Installation - Windows Vista &amp; 7 Specific Restrictions</b>	
1.1	A Windows Vista, Windows 7 Professional/Ultimate "Master Administrator" account ("Administrator") is required to install the application.	The user must enable the Windows Vista, Windows 7 Professional/Ultimate Master Administrator account and log into this account to perform the installation. The Apache Tomcat web server, Apache Derby Database server and Recording Engine will not be installed correctly in non-master administrator accounts.
1.2	A Windows 7 Professional/Ultimate, Program Compatibility Assistant.	During SonicView™ installation on Windows 7 Professional/Ultimate, you will see Program Compatibility Assistant window for 'StopRemoval LicenseServer.EXE', so user should select 'This Program is installed Correctly' option to proceed further.
2	<b>Network Infrastructure dependencies</b>	
2.1	A single/multi port managed switch with port mirroring setup is mandatory to enable call capturing over the network.	The server hosting the recording engine should be connected to a managed switch such that the PBX's traffic mirrored to the port on which the recording engine server is connected.

**Table 2-138 Known Limitations (Continued)**

ID	Item Description	Comments																																										
3	<b>Known Limitations of the Solution</b>																																											
3.1	Outbound and internal calls are recorded even if the called party does not answer the call. Such recordings include the DTMF tones as well as the phone ringing activities.	For example, if a call is established between STA131 and 503 429 8643 – even if the outbound party does not answer the call, the recording will begin and show in the application. If the user plays the recorded audio, he\she will be able to hear the DTMF and the phone ring tones.																																										
3.2	If an extension number is the same as a trunk line number, then calls to and from this extension show as an Outbound and Inbound call respectively.	For example, if a you have a trunk number 101 and an extension number 101 then the call details are shown as: <table border="1"> <thead> <tr> <th>Direction</th> <th>Ext</th> <th>Agent Name</th> <th>Name</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>In</td> <td>101</td> <td>STA101</td> <td>STA131</td> <td>131</td> </tr> <tr> <td>Out</td> <td>131</td> <td>STA131</td> <td>STA101</td> <td>101</td> </tr> </tbody> </table>	Direction	Ext	Agent Name	Name	Number	In	101	STA101	STA131	131	Out	131	STA131	STA101	101																											
Direction	Ext	Agent Name	Name	Number																																								
In	101	STA101	STA131	131																																								
Out	131	STA131	STA101	101																																								
3.3	When a party drops and rejoins a conference, the new call will show as a separate call.	For example, if conference calls are established between three parties – STA 130, STA 131 and STA 132. If STA 130 drops from the conference, and reconnects back in to the same conference again, then technically this is identified as a new conference call.																																										
3.4	Answering multiple calls within intervals of 5 seconds causes the calls to display with incorrect caller ID.																																											
3.5	Participant’s details are missing in the conference.	For example, if a In call is landed on 101, later 101 consulted with 102 and initiated 3-party conference then the call details are shown as: <table border="1"> <thead> <tr> <th>Type</th> <th>Direction</th> <th>Ext</th> <th>Agent Name</th> <th>Name</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Conf</td> <td>Int</td> <td>102</td> <td>STA102</td> <td>STA101</td> <td>101</td> </tr> <tr> <td>Conf</td> <td>Int</td> <td>101</td> <td>STA101</td> <td>STA102</td> <td>102</td> </tr> <tr> <td></td> <td>Int</td> <td>102</td> <td>STA102</td> <td>STA101</td> <td>101</td> </tr> <tr> <td></td> <td>Int</td> <td>101</td> <td>STA101</td> <td>STA102</td> <td>102</td> </tr> <tr> <td></td> <td>In</td> <td>101</td> <td>STA103</td> <td>Unavailable</td> <td>5034391111</td> </tr> </tbody> </table>	Type	Direction	Ext	Agent Name	Name	Number	Conf	Int	102	STA102	STA101	101	Conf	Int	101	STA101	STA102	102		Int	102	STA102	STA101	101		Int	101	STA101	STA102	102		In	101	STA103	Unavailable	5034391111						
Type	Direction	Ext	Agent Name	Name	Number																																							
Conf	Int	102	STA102	STA101	101																																							
Conf	Int	101	STA101	STA102	102																																							
	Int	102	STA102	STA101	101																																							
	Int	101	STA101	STA102	102																																							
	In	101	STA103	Unavailable	5034391111																																							
3.6	When a call is being transferred multiple times between VOIP and Digital extension, the recording will show Duplicate calls for the last-1 VoIP extension.	For example, if a In call is landed on VoIP extension number 130, consulted and transferred through multiple extension (102, 106, 103 & 131). Assume last-1 VoIP extension is 131, then the call details are shown as: <table border="1"> <thead> <tr> <th>Type</th> <th>Direction</th> <th>Ext</th> <th>Duration</th> <th>Name</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Trf</td> <td>In</td> <td>131</td> <td>01:12:00</td> <td>STA131</td> <td>5034391111</td> </tr> <tr> <td>Trf</td> <td>In</td> <td>131</td> <td>01:12:00</td> <td>STA131</td> <td>5034391111</td> </tr> <tr> <td></td> <td>Int</td> <td>103</td> <td>00:02:00</td> <td>STA103</td> <td>105</td> </tr> <tr> <td></td> <td>Int</td> <td>106</td> <td>00:06:10</td> <td>STA106</td> <td>107</td> </tr> <tr> <td></td> <td>Int</td> <td>102</td> <td>00:05:00</td> <td>STA102</td> <td>104</td> </tr> <tr> <td></td> <td>In</td> <td>130</td> <td>00:02:00</td> <td>STA130</td> <td>5034391111</td> </tr> </tbody> </table>	Type	Direction	Ext	Duration	Name	Number	Trf	In	131	01:12:00	STA131	5034391111	Trf	In	131	01:12:00	STA131	5034391111		Int	103	00:02:00	STA103	105		Int	106	00:06:10	STA106	107		Int	102	00:05:00	STA102	104		In	130	00:02:00	STA130	5034391111
Type	Direction	Ext	Duration	Name	Number																																							
Trf	In	131	01:12:00	STA131	5034391111																																							
Trf	In	131	01:12:00	STA131	5034391111																																							
	Int	103	00:02:00	STA103	105																																							
	Int	106	00:06:10	STA106	107																																							
	Int	102	00:05:00	STA102	104																																							
	In	130	00:02:00	STA130	5034391111																																							



Table 2-138 Known Limitations (Continued)

ID	Item Description	Comments
3.7	Configure License Server tool to modify PBX IP address, Port, MAC address, Web Server IP address & Port will not support modifying the Web Server IP address & Port.	Known issues with modifying the Web Server IP address & Port from Configure License Server tool.
3.8	License Server drops the license after making configuration changes on secondary NIC card.	Scenario where you have configured the primary NIC card in the application to capture the licenses from SV8100 phone system. Assume you have got the licenses and are registered with Primary NIC card. Sometimes later if you uninstall/install/modify secondary NIC card that was configured for another recorder will result in license loss from the primary NIC card. Recommended solution to get licenses back is to reconfigure correct primary NIC card in the application.
3.9	EXTERNAL calls posted from Digital Recovery service shows direction as INTERNAL instead of INBOUND or OUTBOUND.	Known limitation with NEC 4-Port Digital Call Logging Hardware device. i.e., it is unable to capture right direction of the call.
3.10	VoIP Recovery: Outbound/ Inbound call that has Hold and Un-hold scenarios will split single call in to two different calls when posted through Recovery service.	Outbound/ Inbound call that has Hold and Un-hold scenarios experience a SonicView recorder crash will recover this call, but when it is posted to an application you will observe two calls, one call will have recording till Hold and another call is from where you Un-hold the call.
3.11	Recording Rules: The rules perform exact match for dialed number in outgoing calls.	If a recording rule is made for 503 429 8643 and the user dials 503 429 86431111 instead, then the call will not be captured in the application even if it was established via the PBX.
3.12	Recording Rules: The application will not permit creation of more than one active <b>Recording Rule</b> per extension.	You may create a rule for STA 131, and enable the rule. However, if another rule is created for STA 131, then this rule will be disabled by default. The user will have to disable the first rule to be able to enable the newer rule.
3.13	The IP Recorder and/or Digital Recorder should be restarted to apply the configuration changes to new recordings.	The user will have to restart the 'SonicView VoIP Recorder' or the 'SonicView Digital Recorder' service to apply changes in the <b>Recorder Configuration</b> and <b>Recording Rules</b> sections to the new recordings.
3.14	Default recording rule for Call Duration: Default minimum threshold for recording calls is 20 seconds.	The default minimum call duration threshold value is 20 seconds; therefore you may not see calls shorter than this duration show up in the application. The value of this threshold can be changed using the Administration Console.
3.15	Recording Rules based on caller & dialed numbers will not work for UC Desktop Suite calls.	Recording rules for outbound calls from UC Desktop Suite should be created with the '*' wildcard or dialed numbers prefixed with the trunk access code to work correctly. Similarly, recording rules for inbound calls to UC Desktop Suite should be created with the '*' wildcard or caller ID to work correctly.
3.16	The Recording Engine will not record calls over a SIP trunk.	Not supported in this release.
3.17	Statistics – The Extension-Duration statistic will not display when only one call is being displayed in the call information grid.	An area chart cannot be displayed for the Extension-Duration statistic for one data point as an area chart requires at least 2 data points (or calls) to render.

Table 2-138 Known Limitations (Continued)

ID	Item Description	Comments															
3.18	Advanced 'Player Controls': The transport controls in media player in the application do not work as intended for short duration call recordings.	The rewind, forward, pause controls and dragging the slider may cause the stream to stop playing and not resume.															
3.19	Live monitor: The automatic refresh interval for recordings using 'Live Monitor' should not be very short. This may degrade the application performance in a high call volume environment.	It is recommend that the user performs a manual 'Refresh' when more than 500 calls are displayed at a time in the call recording grid (WorkArea of the application).															
3.20	The 'Do not record Calls lesser than...' option in the recorder configuration will not apply to calls recorded using the On-Demand recording client application.	If this value is set to 30 seconds, then a call recorded from the On-Demand client will be saved even if it is less than 30 seconds in duration.															
3.21	When a call recording is initiated from the ODR client and the client is closed, the recording will continue till the call is terminated.	If a user initiates a call using the ODR client and closes the client without clicking on the stop icon, then a prompt warning the user about recordings being terminated comes up. However, irrespective of the user action, the complete call is recorded and saved.															
3.22	Supervised transfers will show, as linked calls in the application but blind transfers will not be linked.	Blind transfer calls will show as independent calls in the SonicView™ application.															
3.23	When the ODR toolbar experiences network problem, the active call during this process may end up in losing the call information.	For example, if a call is established between STA131 and 503 429 8643 an outbound party and user experiences network problem, the respective call will end up in showing incomplete information in the SonicView™ application and also user cannot play back this call.															
3.24	Initiating Outbound and internal calls from ODR toolbar able to record and playback calls even though they were not actually established.	For example, if a call is established between STA131 and 503 429 8643 – even if the outbound party does not answer the call, clicking on ODR's recording button at STA131 will record the voice file of the ODR user.															
3.25	When the ODR toolbar experiences SonicView recorder crashing due to unexpected circumstances, you will observe TWO calls, one call with 00:00:00 duration and another call with actual duration (i.e, recovered call during engine crash).	For example, if a Out call is initiated by extension 101 then the SonicView Recorder crash in between and now call details are shown as: <table border="1"> <thead> <tr> <th>Direction</th> <th>Ext</th> <th>Duration</th> <th>Name</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Out</td> <td>101</td> <td>00:00:00</td> <td>STA101</td> <td>5034392222</td> </tr> <tr> <td>Out</td> <td>101</td> <td>02:17:40</td> <td>STA101</td> <td>5034392222</td> </tr> </tbody> </table>	Direction	Ext	Duration	Name	Number	Out	101	00:00:00	STA101	5034392222	Out	101	02:17:40	STA101	5034392222
Direction	Ext	Duration	Name	Number													
Out	101	00:00:00	STA101	5034392222													
Out	101	02:17:40	STA101	5034392222													
3.26	The SonicView™ application will fail to display licensing information correctly if the Recorder MAC Address entered during the installation and in the Recorder Configuration screen in the application are entered differently.	For instance if the Recorder MAC address entered during the installation is 00-0F-04-05-6D and the MAC address entered in the Recorder Configuration screen is 000f04056d (note that the alphabets are in lower casing) – in this case, the licensing information will not be fetched from the PBX and the application will remain unlicensed.															
3.27	The SonicView™ application will register license details either against the VoIP or the Digital recorder depending on which MAC address is being used for licensing.	If license is registered to either VoIP or Digital recorder, then only port details belonging to registered recorder will be displayed in the License screen. But the calls between VoIP and Digital extensions will record as intended to record.															
3.28	Re-installation over an existing installation is not supported.	Installing the Hybrid Installer over an existing Hybrid recorder installation will result in a corrupt installation and unusable system.															

Table 2-138 Known Limitations (Continued)

ID	Item Description	Comments										
3.29	Digital recorder: Recordings details for TDM/Digital extensions will not show the call direction.	For example, if a you have a TDM/Digital extension 101 that was part of an Outbound/Inbound/Internal call then the call details are shown as: <table border="1"> <thead> <tr> <th>Direction</th> <th>Ext</th> <th>Agent Name</th> <th>Name</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td></td> <td>101</td> <td>STA101</td> <td>Unavailable</td> <td>Unavailable</td> </tr> </tbody> </table>	Direction	Ext	Agent Name	Name	Number		101	STA101	Unavailable	Unavailable
Direction	Ext	Agent Name	Name	Number								
	101	STA101	Unavailable	Unavailable								
3.30	Digital recorder: Recordings details for TDM/Digital extensions will not show the Caller ID for Inbound calls.	For example, if a you have a TDM/Digital extension 101 that was part of an Inbound call then the call details are shown as: <table border="1"> <thead> <tr> <th>Direction</th> <th>Ext</th> <th>Agent Name</th> <th>Name</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td></td> <td>101</td> <td>STA101</td> <td>Unavailable</td> <td>Unavailable</td> </tr> </tbody> </table>	Direction	Ext	Agent Name	Name	Number		101	STA101	Unavailable	Unavailable
Direction	Ext	Agent Name	Name	Number								
	101	STA101	Unavailable	Unavailable								
3.31	Digital recorder: Recordings details for TDM/Digital extensions will not show the Calling Party number for Outbound calls.	For example, if a you have a TDM/Digital extension 101 that was part of an Outbound call then the call details are shown as: <table border="1"> <thead> <tr> <th>Direction</th> <th>Ext</th> <th>Agent Name</th> <th>Name</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td></td> <td>101</td> <td>STA101</td> <td>Unavailable</td> <td>Unavailable</td> </tr> </tbody> </table>	Direction	Ext	Agent Name	Name	Number		101	STA101	Unavailable	Unavailable
Direction	Ext	Agent Name	Name	Number								
	101	STA101	Unavailable	Unavailable								
3.32	Digital recorder: Linking of Trf/Conf calls and call types for TDM/Digital extensions in SV8100 phone system.	Linking of Trf/Conf calls and call types will not support for TDM/Digital extensions. The entire Trf/Conf call details will show in a single call.										
3.33	Schedule Reports will not 'Play' the records from EXCEL sheet.	Schedule Reports will show 'Play' link, if you have configured SonicView reports to be delivered as EXCEL sheet. But user cannot able to play the recording using this option.										
3.34	The Recording Engine will not record calls over a NAT environment in case of SV8300 Phone system.	Not supported in this release.										
4	<b>Required Configuration\Settings</b>											
4.1	The server hosting the recording engine software should be configured to have the same subnet as that of the PBX.											
4.2	Silence activity detection should be disabled in the PBX.	If Silence activity detection is enabled, then the recorded calls will have overlapping voice channels and will sound as though both the parties involved in the call are speaking simultaneously.										
4.3	Recording internal calls between IP Telephones: Peer to Peer Media (RTP Traffic) must be disabled if a single port-mirroring switch is used.	Peer to Peer Media (RTP Traffic) must be disabled on all the registered telephones to force their RTP traffic to traverse via the PBX. Alternatively, a managed Ethernet switch that supports the ability to mirror many ports to a single port as well as writing from the mirrored port is required.										

**Table 2-138 Known Limitations (Continued)**

ID	Item Description	Comments
4.4	Archiving data to a remote destination will not work unless the database server service (PostgreSQL or Microsoft SQL server – as the case may be) has domain credentials to write to the particular location in question.	If a user is trying to archive calls to a system other than the system on which PostgreSQL or Microsoft SQL server is installed, then the archive file will not be created unless the database service has domain credentials to write to the remote location.
4.5	Application supports recording only for calls that involve at least one VoIP/Digital extension.	Only calls where at least one of the participating members is a VoIP/Digital extension will be recorded in the present release.

## Default Settings

Not Installed

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## System Availability


### Terminals

NEC DT700 series (IP) Terminals – NEC SonicView Hybrid Recorder

NEC DT300 series (Digital) Terminals- NEC SonicView Hybrid Recorder

### Required Component(s)

Ensure the following hardware and software requirements are met before starting the SonicView installation:

-  *These recommendations are to be used as a minimum requirements guideline only. Actual requirements may vary based on specific needs such as recording call volume, number of ports to be recorded and number of remote locations etc.*

## Minimum System Requirements

**Table 2-139 System Minimum Requirements**

Recording Capacity	Server Hardware Specifications (See Note 1)	Recommended Operating Systems (See Note 2)
Up to 40 Stations	1	1, 2, 3, 4, 5
Up to 100 Stations	2	1 & 4 (Windows Server OS)
Up to 256 Stations	3	1 & 4 (Windows Server OS)
Greater than 256 Stations	Consult with NEC	1 & 4 (Windows Server OS)
Digital 04s (up to 3 devices per PC)	1	1, 2, 4, 5
Digital 16s (up to 2 devices per PC)	1	1, 2, 4, 5

Note 1: Refer to [Table 2-140 Server Hardware Matrix](#) for Hardware Specifications ID.

Note 2: Refer to [Table 2-143 Supported Operating Systems on page 2-1937](#) for Operating Systems ID.

### Hardware

- Server:

**Table 2-140 Server Hardware Matrix**

ID	Hardware	Specifications
1	Processor	Intel Core 2 Duo (2.8 GHz or higher)
	Harddrive	200 GB hard disk space (138 hours of recording per GB)
	Other	Refer to <a href="#">Table 2-141 Common Hardware Requirements on page 2-1936</a>
2	Processor	Quad Core XEON 2.0 GHz (dual processors preferred)
	Harddrive	500 GB hard disk space (138 hours of recording per GB)
	Other	Refer to <a href="#">Table 2-141 Common Hardware Requirements on page 2-1936</a>
3	Processor	Dual Processor Quad Core XEON 2.4 GHz
	Harddrive	1TB hard disk space (138 hours of recording per GB)
	Other	Refer to <a href="#">Table 2-141 Common Hardware Requirements on page 2-1936</a>

- Common:

**Table 2-141 Common Hardware Requirements**

Hardware	Specification
RAM	Minimum 4 GB RAM or higher, 16 GB where Windows Server OS is used
Ethernet Card	2 NICs (Gigabit Ethernet Cards)
Sound Card	General MIDI capable sound card
Monitor/Display	SVGA monitor 1024 X 768 resolution
USB (only with Digital Devices)	1.1 or 2.0 – One dedicated USB port per device
USB Controller (only with Digital 16 Devices)	1 Dedicated USB Controller per device

- NICs (2 Required):

One (1) Network Interface card (NIC) is sufficient provided the Managed Switch performing port mirroring supports both Ingress and Egress traffic on the mirrored port. Two (2) Network Interface cards (NIC) are required in case of Hybrid installation (one for associating with IP Recorder and other NIC for Digital Recorder) OR if the Managed Switch does not support bi-directional (Ingress and Egress) traffic on the mirrored port.

*When using two NIC cards, only one of the NIC cards should be configured to connect to the LAN (with Gateway and DNS). The other NIC should only be configured to connect to the mirrored port on the Managed Switch and can be associated with the IP Recorder. When used in Hybrid mode to record both Digital and IP stations, the NIC connected to the LAN can be associated with the Digital Recorder.*

- When using SonicView with Digital Recorder units (VSR Hardware) for Digital Station recording, mixing different phone models within a single installation of SonicView is not recommended.
  - The PC and Digital Recorder units need to be installed within at least six feet of the pbx/mdf/ tap points. This is to avoid distortion in the recordings when not installed to specification.
- SonicView Supervisor/Agent Recommendations:

**Table 2-142 Supervisor/Agent Studio PC Recommendations**

System Minimums	Specification (See Note 1)
Processor	Intel Pentium 4 class machine
RAM	Minimum 2 GB RAM or higher
Harddrive	20 GB hard disk space
Ethernet Card	1 NIC (10/100 or GB)
Sound Card	General MIDI capable sound card

**Table 2-142 Supervisor/Agent Studio PC Recommendations (Continued)**

<b>System Minimums</b>	<b>Specification (See Note 1)</b>
Monitor Display	SVGA monitor 1024 X 768 resolution
Software Requirements	Adobe Flash player plug-in version 10 or above
	Adobe Acrobat Reader 7 or above (to view PDF reports)
	Microsoft® Excel 2000 (to view/edit reports)
	Microsoft® Internet Explorer 7 or above, Mozilla Firefox version 3.0 or above; Google Chrome 3.0 or above, Opera 4 or above, Safari 10.01 or above
. NET 3.0 and above	
Operating Systems	1, 2, 3, 4, 5

Note 1: Refer to [Table 2-143 Supported Operating Systems](#) for Operating Systems ID.

○ Operating System:

**Table 2-143 Supported Operating Systems**

<b>Operating System</b>	<b>ID</b>
Windows Server 2008 with SP1	1
Windows 7 Professional	2
Windows Vista Business Edition with SP2	3
Windows Server 2003 with SP2	4
Windows XP Professional with SP3	5

○ Database:

**Table 2-144 Supported Databases**

<b>Database Type</b>
32-bit/64-bit Microsoft SQL Server 2008
32-bit/64-bit Microsoft SQL Server 2005
32-bit PostgreSQL Server 8.3 only

## Related Features

None

**Table 2-145 SV8100 CPU License (NEC SonicView Recorder)**

<b>670863 LKS-Recorder Basic Pkg-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3200	4 Stations 1 Supervisor 4 ODRs (On-Demand Recording)	Provides the ability to have four stations, one Supervisor Login and up to four On-Demand Recording clients.
<b>670864 LKS-Recorder Basic Port Add-on 4-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3202	4 Additional Stations	Provides the ability to record four additional stations over the initial four received with 670863.
<b>670865 LKS-Recorder Basic Port Add-on 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3202	1 Additional Station	Provides the ability to record one additional station over the initial four received with 670863.
<b>670862 LKS-Recorder Basic SUPV Add-on 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3201	1 Additional Supervisor	Provides one additional Supervisor Login.
<b>670889 LKS-Recorder Call Scoring 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3204	1 IP Recorder Call Scoring	Provides one IP recorder call scoring.
<b>670990 LKS-Recorder Automated Reports 1-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3205	1 IP Recorder Automated Reporting	Provides one IP recorder automated reporting.
<b>670991 LKS-Recorder Add On 256 Port-LIC</b>		
<b>Feature Code</b>	<b>Quantity Included</b>	<b>Comments</b>
3204	1 256 Port Add-on to Record 256 Stations	Provides one additional 256 port to record 256 stations.



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-26-04	IP System Operation Setup – DT700 Peer to Peer Mode	Use to Enable (1) or Disable (0) the Peer to Peer feature for SIP MLT and SIP IP stations.	0 = Off 1 = On (default = 1)	✓		
14-02-10	Analog Trunk Data Setup – Caller ID	Enable/Disable a trunk ability to receive Caller ID information.	Trunks 1~200 0 = No 1 = Yes (default = 0)	✓		
15-03-10	Single Line Telephone Basic Data Setup – Caller ID Name	Determine whether or not a single line telephone should display the Caller ID name.	0 = Disable 1 = Enable (default = 1)	✓		
20-08-15	Class of Service Options (Outgoing Call Service) – Block Outgoing Caller ID	Turn Off or On a user Class of Service from automatically blocking outgoing Caller ID information when a call is placed. If block is enabled, the system automatically inserts the Caller ID block code *67 (defined in Program 14-01-21) before the user dialed digits (this requires Program 14-02-10 to be enabled). If block is disabled, the system outdials the call just as it was dialed by the user.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-09-02	Class of Service Options (Incoming Call Service) – Caller ID Display	Turn Off or On the Caller ID display at an extension.	0 = Off 1 = On (default = 0 for COS 01~15)	✓		
20-19-01	System Options for Caller ID – Caller ID Displaying Format (If displaying digits are more than 12 digits)	Determine whether the first 10 digits or last 10 digits should be displayed when Caller ID exceeds 12 digits.	0 = First 10 digits (Upper) 1 = Last 10 digits (Lower) (default = 0)		✓	

## **Operation**

Refer to the SonicView User Guide for operational details.

Refer to the following manuals for detailed information regarding the NEC SonicView Recorder:

NEC SonicView Recorder Installation and Setup Manual

NEC SonicView Recorder Application User Guide

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## *Voice Mail Integration (Analog)*

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### **Description**

The system provides telephone users with comprehensive Voice Mail features. Voice Mail ends the frustration and cost of missed calls, inaccurate written messages and telephone tag. This frees busy receptionists and secretaries for more productive work.

External voice mail requires available analog station ports based on the number of voice mail ports connected.

Integrated voice mail enhances the telephone system with the following features:

**Call Forwarding to Voice Mail**

An extension user can forward their calls to Voice Mail. Once forwarded, calls to the extension connect to that extension mailbox. The caller can leave a message in the mailbox instead of calling back later. Forwarding can occur for all calls immediately, for unanswered calls or only when the extension is busy. When a user transfers a call to an extension forwarded to Voice Mail, the call waits for the Delayed Call Forwarding time before routing to the called extension mailbox. This gives the transferring party the option of retrieving the call instead of having it go directly to the mailbox.

**Leaving a Message**

Voice Mail lets a multiline terminal extension user easily leave a message at an extension that is unanswered, busy or in Do Not Disturb. The caller can press their Voice Mail key to leave a message in the called extension mailbox. There is no need to call back later.

**Transferring to Voice Mail**

By using Transfer to Voice Mail, a multiline terminal extension user can Transfer a call to the user's or a co-worker's mailbox. After the Transfer goes through, the caller can leave a message in the mailbox.

### **Voice Mail Queuing**

When accessing the voice mail, the system provides a voice mail queue. If all the voice mail ports are busy, calls trying to get to the voice mail are placed in queue. As the voice mail ports become available, the calls are connected to the voice mail in the order in which they were received.

As the Voice Mail Queue follows Department Hunting programming, the queue can hold a maximum of 10 calls. If the queue is full or if the voice mail ports are not assigned to a Department Group, the calls are handled as though no voice mail queuing feature is enabled. The calls either access voice mail if a port is available or they receive a busy signal.

The Voice Mail Queuing feature does not work with the Conversation Record feature.


## MSG Key will Operate as Voice Mail Key

The system enhances a telephone MSG key function when connected to a system which has voice mail installed. When an extension receives a voice mail, the MSG key can be used to check the number of messages in voice mail, or call the voice mail to listen to the messages.

## Analog Voice Mail Protocol Leading and Trailing Digits Assignment

The Analog Voice Mail Protocol Leading Digits (chassis to VM) and the Trailing Digits format can be changed.

The following chart illustrates the input data for Program 45-04-01~Program 45-04-09 (Voice Mail Digit Add Assignment) based on the setting in Program 45-01-15 (Analog Voice Mail Protocol Selection) and Program 45-01-17 (Reply Mailbox Number). If Program 45-01-15 is set to 0 it uses the Fixed Memory Location for the Leading Digits or, if set to 1 it uses Program 45-04-01~Program 45-04-09 for the Leading Digits. If Program 45-01-17 is set to 0, it does not have the calling party in the Trailing Digits.

 The default values for Program 45-04-01~Program 45-04-09 are not assigned.

Use the chart below to determine what leading and trailing digits are sent to the Analog Voice Mail System.

Program	Program 45-01-15 (0 = Fixed) Program 45-01-17 (1=Yes or 0=No)	Program 45-01-15 (1 = Program) Program 45-01-17 (1=Yes)	Program 45-01-15 (1=Program) Program 45-01-17 (0=No)	Description
45-04-01 - Remote Logon (Internal) Up to four digits * Default not assigned	***1XXX	Up to four digits + XXX	Up to four digits + XXX	Remote Log-On (Internal)  <input type="radio"/> Internal call to VM from extension XXX. <input type="radio"/> User has not indicated intent to enter mail box.
45-04-02 - Direct Logon Up to four digits * Default not assigned	#XXX	Up to four digits + XXX	Up to four digits + XXX	Direct Log-On  <input type="radio"/> Connect user to mail box for extension XXX.
45-04-03 - Transfer Message   Up to four digits * Default not assigned	***2YYY ***2XXXYYY	Up to four digits + YYY Or Up to four digits + XXXYYY	Up to four digits + YYY	Transfer Message  <input type="radio"/> User is transferring a call to VM <input type="radio"/> Record a message to be placed in mail box of extension YYY. Record Message for Called Extension (QVM) <input type="radio"/> Record a message to be placed in mail box of extension YYY. <input type="radio"/> Store source extension number XXX for automatic reply feature.
45-04-04 - Forward-All   Up to four digits * Default not assigned	***3UUZZZ	Up to four digits + UUZZZ	Up to four digits + ZZZ	Forward-All  <input type="radio"/> Extension or Trunk UUU that called extension ZZZ and was forwarded to the Voice Mail Box of extension ZZZ.

Program	Program 45-01-15 (0 = Fixed) Program 45-01-17 (1=Yes or 0=No)	Program 45-01-15 (1 = Program) Program 45-01-17 (1=Yes)	Program 45-01-15 (1=Program) Program 45-01-17 (0=No)	Description
45-04-05 - <b>Forward-Busy</b>  Up to four digits * Default not assigned	***4UUZZZ	Up to four digits + UUZZZ	Up to four digits + ZZZ	Forward-Busy  ○ Extension or Trunk UUU that called extension ZZZ and was forwarded to the Voice Mail Box of extension ZZZ.
45-04-06 - <b>Forward RNA</b>  Up to four digits * Default not assigned	***5UUZZZ	Up to four digits + UUZZZ	Up to four digits + ZZZ	Forward RNA  ○ Extension or Trunk UUU that called extension ZZZ and was forwarded to the Voice Mail Box of extension ZZZ.
45-04-07 - <b>Remote Logon</b>  Up to four digits * Default not assigned	***6TTT	Up to four digits + TTT	Up to four digits + TTT	Remote Log-on  ○ External call to Voice Mail from Trunk TTT. ○ Play welcome greeting and connect user to prompt.
45-04-08 - <b>Conversation Recording</b> Up to four digits * Default not assigned	***8NNN	Up to four digits + NNN	Up to four digits + NNN	Conversation Recording  ○ Record a message to be placed in voice mail box of extension NNN.
45-04-09 - <b>Clear Down String</b> Up to four digits * Default not assigned	9999	Up to four digits	Up to four digits	Clear down string.  ○ Terminate

\*=If leading digits are blanks, nothing will be sent to the Analog VM as integration.

## Conditions

- The periodic reminder message requires a DSP daughter board for Voice Response System (VRS).
- Ring Group calls do not follow extension call forwarding to voice mail.
- Only one Voice Mail system can be installed in an SV8100 system (Analog or Digital, but not both in same system). This restriction is because only one Department Group can be assigned for Voice Mail.
- If installing an Analog Voice Mail System, any Analog station port (Single line telephone port) can be assigned to support the Analog Voice Mail system. With an Expanded Port Package, the SV8100 supports up to 176 Analog station ports (22 x 8 ports = 176).
- If installing a VM8000 InMail system (In-Skin product), an Analog station port (Single line telephone port) can be assigned to support the sending of DTMF tones and Disconnect Signal to support a Fax server or other like products.
- When using Programmed (45-01-15 = 1) integration and 45-04-XX is blank, no trailing digits are sent. You can allow only the trailing digits to be sent by setting 45-05-XX to 1.
- Stutter Dial Tone is supported to Single Line Telephones for Voice Mail Message Waiting.
- UCB is not supported in conjunction with Analog Voice Mail.

## Default Setting

Disabled

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## System Availability

### Terminals

All Terminals

### Required Component(s)

- CD-4LCA (4-Port main blade)
- PZ-4LCA (4-Port daughter board)
- CD-8LCA (8-Port main blade)
- PZ-8LCE (8-Port daughter board)

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## Related Features

**Barge-In**

**Caller ID**

**Direct Inward Line (DIL)**

**Hold**

**Message Waiting**

**One-Touch Calling**

**Programmable Function Keys**

**Transfer**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-09-01	<b>DTMF and Dial Tone Circuit Setup</b>	Assign at least one circuit for DTMF reception (0 or 1). Use the following as a guide when allocating DTMF receivers: In light traffic sites, allocate one DTMF receiver for every 10 devices that use them. In heavy traffic sites, allocate one DTMF receiver for every five devices that use them.	0 = Common Use 1 = Extension Only 2 = Trunk Only Default: Circuit/Resource 01~08 = 1 (Extensions) Circuit/Resource 09~32 = 2 (Trunks) Circuit/Resource 33~96 = 0 (Not Used) Circuit/Resource 97~160 = 0 (Common) When PZ-BS10 is installed, 97~160 are available		✓	
11-07-01	<b>Department Group Pilot Numbers – Dial</b>	Assign a Department Group pilot number for the Voice Mail. The extensions are assigned to the group in Program 16-02-01.	Up to eight digits (default not assigned)	✓		
11-11-50	<b>Service Code Setup (for Setup/Entry Operation) – Set Message Waiting Indication</b>	Assign a Service Code to set a Message Waiting light from an Analog Voice Mail port.	SLT Up to eight digits		✓	
11-11-51	<b>Service Code Setup (for Setup/Entry Operation) – Cancel Message Waiting Indication</b>	Assign a Service Code to cancel a Message Waiting light from an Analog Voice Mail port.	SLT Up to eight digits		✓	
15-02-26	<b>Multiline Telephone Basic Data Setup – MSG Key Operation Mode</b>	Determine whether an extension MSG key should function as a Message key or Voice Mail key . If set as a Message key, the user can press the key to call the voice mail only when they have new messages. If set as a Voice Mail key, it functions as a normal Voice Mail key.	0 = Message Key 1 = Voice Mail Key (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-35	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Cycle for Calling Extension</b>	Select the Message Waiting flash pattern for the station that set the Message Waiting reminder.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 7)		✓	
15-02-36	<b>Multiline Telephone Basic Data Setup – Message Waiting Lamp Cycle for Called Extension</b>	Select the Message Waiting flash pattern for the station that receives the Message Waiting reminder.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 3)		✓	
15-02-37	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Color</b>	Select the color of the large LED when a voice mail message is waiting at the extension.	0 = Green 1 = Red (default = 1)		✓	
15-02-38	<b>Multiline Telephone Basic Data Setup – Voice Mail Message Wait Lamp Cycle</b>	Select the cycle method that the large LED flashes when the extension has a VM Message Waiting set to an extension.	1 = Cycle 1 2 = Cycle 2 3 = Cycle 3 4 = Cycle 4 5 = Cycle 5 6 = Cycle 6 7 = Cycle 7 (default = 3)		✓	
15-03-01	<b>Single Line Telephone Basic Data Setup – SLT Signaling Type</b>	For each UNIVERGE SV8100 voice mail extension, set this option to 0.	0 = DP 1 = DTMF (default = 1)	✓		
15-03-03	<b>Single Line Telephone Basic Data Setup – Terminal Type</b>	Enter 1 for this option to allow a single line port to receive DTMF tones after the initial call setup. Enter 0 to have the port ignore DTMF tones after the initial call setup. For Voice Mail, always enter 1 (e.g., receive DTMF tones).	0 = Normal 1 = Special (default = 0)	✓		
15-03-09	<b>Single Line Telephone Basic Data Setup – Caller ID Function – For External Module</b>	Set to 0 when voice mail is used or the integration code for the disconnect function is incorrect.	0 = Disable 1 = Enable (default = 0)	✓		
15-03-16	<b>Single Line Telephone Basic Data Setup – Special DTMF Protocol Send</b>	Determine whether or not to send the extension number of the phone forwarded to the extension when Program 15-03-03 is set to 1 and not in the VM group.	0 = No 1 = Yes (default = 0)		✓	




Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	<p>Assign a Voice Mail key to an extension. You must enter the Voice Mail key code (code 77) followed by:</p> <ul style="list-style-type: none"> <li>○ Your own extension number if you are setting up your own Voice Mail key.</li> <li>○ A virtual extension number if you are setting up a Message Center key for a virtual extension.</li> <li>○ A co-worker's extension number if you are setting up a Message Center key for an installed extension.</li> <li>○ An uninstalled extension number if you are setting up a Message Center key for an uninstalled extension.</li> </ul> <p>(Optional) Assign a Voice Mail Record key to an extension (code 78).</p> <p>(Optional) Assign a Personal Answering Machine Emulation key (code 16).</p> <p>(Optional) Use a Call Redirect key (49) to allow a user to transfer a call to another extension or voice mail without answering the call.</p>	<p>Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)</p>		✓	
16-01-01	<b>Department Group Basic Data Setup – Department Name</b>	Assign a name to the Extension (Department) Groups.	Maximum 12 characters (default = No Setting)	✓		
16-01-02	<b>Department Group Basic Data Setup – Department Calling Cycle</b>	Set the call routing for Department Calling. Routing can be either circular (cycles to all phones in a group) or priority (cycles to the highest priority first).	0 = Normal Routing (Priority) 1 = Easy – UCD Routing (Circular) (default = 0)	✓		
16-01-03	<b>Department Group Basic Data Setup – Department Routing When Busy (Auto Step Call)</b>	Set how the system routes an Intercom call to a busy Department Group member. Intercom callers to the extension can either hear busy or route to the first available department number. This occurs only for direct calls to the extension, not the Department number assigned in Program 11-07.	0 = Normal (Intercom caller to busy department member hears busy) 1 = Circular (Intercom callers to busy department member routes to idle member) (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
16-01-04	Department Group Basic Data Setup – Hunting Mode	Set the action taken when a call reaches the last extension in the department group. Hunting is stopped or circular search continues.	0 = Last extension is called and hunting is stopped 1 = Circular (default = 0)	✓		
16-01-05	Department Group Basic Data Setup – Extension Group All Ring Mode Operation	Determine whether calls ringing a Department Group should ring all extensions in the group simultaneously automatically or manually when using the service code defined in Program 11-12-09. When set to 1, only ICM and DID calls ring all stations in the Department Group.	0 = Manual 1 = Automatic (default = 0)	✓		
16-01-06	Department Group Basic Data Setup – STG Withdraw Mode	Set the STG Withdraw Mode for each department group.	0 = Disable (Camp On) 1 = Enable (Overflow Mode) (default = 0)	✓		
16-01-07	Department Group Basic Data Setup – Call Recall Restriction for STG	Determine whether or not an unanswered call transferred to a Department Group should recall the extension from which it was transferred.	0 = Disable (Recall) 1 = Enable (No Recall) (default = 0)	✓		
16-01-09	Department Group Basic Data Setup – Department Hunting No Answer Time	Set the time a call rings a Department Group extension before hunting occurs.	64800 (seconds) (default = 15)	✓		
16-01-10	Department Group Basic Data Setup – Enhanced Hunt Type	Set the type of hunting for each Extension (Department) Group.	0 = No queuing 1 = Hunting When Busy 2 = Hunting When Not Answered 3 = Hunting When Busy or No Answer (default = 0)	✓		
16-02-01	Department Group Assignment for Extensions	Set up the Department Group called by the pilot number and the extension priority when the group is called. Call Pickup Groups are set up in Program 23-02.	Department Groups 1~64 Priority 1~999 Default = All extensions in Department Group 1 with priority in port order: Port 1 priority = 1 Port 256 priority = 256		✓	
20-02-09	System Options for Multiline Telephones – Disconnect Supervision	Enable/Disable disconnect supervision for the system trunks.	0 = Disable 1 = Enable (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-03-01	<b>System Options for Single Line Telephones – SLT Call Waiting Answer Mode</b>	For a busy single line (500/2500) telephone, set the mode used to answer a camped-on trunk call. The default setting should be used.	0 = Hookflash (Hooking) 1 = Hookflash + Service Code 654 (default = 0)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to the voice mail extensions. You should use COS 14 for all time modes.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-11-01	<b>Class of Service Options (Hold/Transfer Service) – Call Forward All</b>	Turn Off or On an extension user ability to set Call Forward All.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-02	<b>Class of Service Options (Hold/Transfer Service) – Call Forward When Busy</b>	Turn Off or On an extension user ability to set Call Forward when Busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-03	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding When Unanswered</b>	Turn Off or On an extension user ability to set Call Forward when Unanswered.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-04	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding (Both Ringing)</b>	Turn Off or On an extension user ability to set Call Forward with Both Ringing.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-05	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding with Follow Me</b>	Turn Off or On an extension user ability to set Call Forward with Follow Me.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-11-12	<b>Class of Service Options (Hold/Transfer Service) – Call Forwarding Off Premise (External Call Forwarding)</b>	Turn Off or On an extension user ability to set up Call Forwarding Off-Premise at the extension.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-02	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Incoming)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for incoming calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-03	<b>Class of Service Options (Supplementary Service) – Long Conversation Cutoff (Outgoing)</b>	Turn Off or On an extension user ability to use Long Conversation Cutoff for outgoing calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-04	<b>Class of Service Options (Supplementary Service) – Call Forward/DND Override (Bypass Call)</b>	Turn Off or On an extension user ability to use Call Forwarding/DND Override.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-07	<b>Class of Service Options (Supplementary Service) – Message Waiting</b>	Turn Off or On an extension user ability to leave Message Waiting.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-12	<b>Class of Service Options (Supplementary Service) – Room Monitor, Extension Being Monitored</b>	Turn Off or On an extension user ability to be monitored by other extensions.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-13	<b>Class of Service Options (Supplementary Service) – Continued Dialing (DTMF) Signal on ICM Call</b>	Turn Off or On an extension user ability to use Continued Dialing, which allows DTMF signal sending while talking on extension.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-16	<b>Class of Service Options (Supplementary Service) – Barge-In, Receive</b>	Turn Off or On an extension user ability to Barge-In on calls.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-28	<b>Class of Service Options (Supplementary Service) – Allow Class of Service to be Changed</b>	Turn Off or On an extension user ability to change COS via Service Code 677.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-13-35	<b>Class of Service Options (Supplementary Service) – Block Camp On</b>	Turn Off or On an extension user ability to block callers from dialing # to camp-on.	0 = Off 1 = On (default = 0 for COS 1~15)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup – Incoming Type</b>	Assign the incoming trunk type for each trunk. There is one item for each Mode. When using Trunk-to-Trunk Forwarding the trunk must be set to 0.	0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions (up to 32) to Ring Groups. Calls ring extensions according to Ring Group programming.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-07-01	<b>DIL Assignment</b>	Assign the destination extension for each DIL incoming trunk (001~200).  For this selection to work, set Program 22-02-01 to 4 = DIL.	Extension Number (maximum eight digits) (default not assigned)		✓	
22-08-01	<b>DIL/IRG No Answer Destination</b>	For Voice Mail Overflow, enter the Ring Group that unanswered DILs to Voice Mail ring after the DIL Call Waiting time (Program 22-01-04).	0 (No Setting) 001~100 (Incoming Ring Group) 102 (In-Skin/ External Voice Mail or VM8000 InMail) (default = 1)		✓	
24-02-02	<b>System Options for Transfer – MOH or Ringback on Transferred Calls</b>	Enable (0)/Disable (1) MOH on Transfer. If enabled, a transferred caller hears Music on Hold while their call rings the destination extension. If disabled, a transferred caller hears ringback while their call rings the destination extension. For this option to work with voice mail, the transferred call must be an unscreened transfer.	0 = Hold Tone 1 = Ring Back Tone (default = 0)		✓	
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	Set the time a transferred call waits at an extension forwarded to Voice Mail before routing to the called extension mailbox.	0~64800 (seconds) (default = 10)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
40-07-01	<b>Voice Prompt Language Assignment for VRS</b>	Specify the language to be used for the VRS prompts.	1 = US English 2 = UK English 3 = AU English 4 = CA French 5 = Dutch 6 = Mex Spanish 7 = LA Spanish 8 = Italian 9 = German 10 = ES Spanish 11 = Norwegian 12 = ParisFrench 13 = BR Portuguese 14 = Japanese 15 = MandChinese 16 = Korean 17 = IB Portuguese 18 = Greek 19 = Danish 20 = Swedish 21 = Thai 22 = Taiwan 23 = Flemish 24 = Turkish 25 = Arabic 26 = Russian (default = 1)		✓	
45-01-01	<b>Voice Mail Integration Options – Voice Mail Department Group Number</b>	Assign which Extension (Department) Group number is assigned as the voice mail group. An entry of 0 means no voice mail is installed.	Department Groups: 0~64 0 = No Voice Mail (default = 0)	✓		
45-01-02	<b>Voice Mail Integration Options – Voice Mail Master Name</b>	Enter the Voice Mail master name up to 12 characters.	Up to 12 Characters (default = VOICE MAIL)		✓	
45-01-04	<b>Voice Mail Integration Options – Park and Page</b>	Turn Off or On the system ability to process the Voice Mail Park and Page (*) commands. You should normally enable this option.	0 = Off 1 = On (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
45-01-05	Voice Mail Integration Options – Message Wait	Turn Off or On the system ability to process the Voice Mail Message Wait (#) commands. You should normally <i>enable</i> this option. If enabled, be sure that the programmed Message Notification strings do not contain the code #9 for trunk access. When using an external voice mail and centrex transfer, this option should be disabled or the service code #3 in Program 11-12-42 must be changed.	0 = Off 1 = On (default = 1)		✓	
45-01-06	Voice Mail Integration Options – Record Alert Tone Interval Time	Set the time between Voice Mail Conversation Record alerts.	0~64800 (seconds) (default = 30)		✓	
45-01-14	Voice Mail Integration Options – CCIS Centralized Voice Mail Number	Assign the pilot number to Centralized Voice Mail over CCIS Link. Assign this only in the remote switches.	Dial (up to eight digits) (default = No Setting)		✓	
45-01-15	Voice Mail Integration Options – Analog Voice Mail Protocol Selection	Assign whether Fixed codes or the codes used in Program 45-04 are used for analog voice mail protocol.	0: Fixed 1: Program (default = 0)		✓	
45-01-16	Voice Mail Integration Options – Voice Mail FAX Digit Add Assignment	Assign up to four digits in front of the station number sent to the SLT port when a call is forwarded.	Up to four digits (default not assigned)		✓	
45-01-17	Voice Mail Integration Options – Reply Mail Box Number	Set whether or not to include the mailbox number in the analog voice mail protocol.	0 = No 1 = Yes (default = 1)		✓	
45-01-18	Voice Mail Integration Options – Trunk Number Mapping	Assign the digits of trunk number mapping.	2~3 (default = 2)		✓	
45-04-01	Voice Mail Digit Add Assignment – Remote Logon (Internal)	Define the digits for remote logon (internal).	Up to four digits (default not assigned)		✓	
45-04-02	Voice Mail Digit Add Assignment – Direct Logon	Define the digits for direct logon.	Up to four digits (default = None)		✓	
45-04-03	Voice Mail Digit Add Assignment – Transfer Message	Define the digits for transfer message.	Up to four digits (default = None)		✓	
45-04-04	Voice Mail Digit Add Assignment – Forward-All	Define the digits for forward all.	Up to four digits (default = None)		✓	
45-04-05	Voice Mail Digit Add Assignment – Forward-Busy	Define the digits for forward busy.	Up to four digits (default = None)		✓	
45-04-06	Voice Mail Digit Add Assignment – Forward RNA	Define the digits for forward RNA.	Up to four digits (default = None)		✓	
45-04-07	Voice Mail Digit Add Assignment – Remote Logon	Define the digits for remote logon.	Up to four digits (default = None)		✓	
45-04-08	Voice Mail Digit Add Assignment – Conversation Recording	Define the digits for conversation recording.	Up to four digits (default = None)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
45-04-09	Voice Mail Digit Add Assignment – Clear Down String	Define the digits for clear down string.	Up to four digits (default = None)		✓	
45-05-01	Voice Mail Send Protocol Signal Without Additional Digits – Remote Log-On Internal	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-02	Voice Mail Send Protocol Signal Without Additional Digits – Direct Log-On	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-03	Voice Mail Send Protocol Signal Without Additional Digits – Transfer Message/QVM	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-04	Voice Mail Send Protocol Signal Without Additional Digits – Forward-All	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-05	Voice Mail Send Protocol Signal Without Additional Digits – Forward-Busy	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-06	Voice Mail Send Protocol Signal Without Additional Digits – Forward RNA	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-07	Voice Mail Send Protocol Signal Without Additional Digits – Remote Log-On	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-08	Voice Mail Send Protocol Signal Without Additional Digits – Conversation Recording	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	
45-05-09	Voice Mail Send Protocol Signal Without Additional Digits – Clear Down String	Send trunk number and/or station number information if integrating to Voice Mail when Program 45-04-XX is left blank and 45-01-15 is set to Program.	0:Off 1:On (default = 0)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-01	<b>DTMF Tone Receiver Setup – Detect Level</b>	Define the Detect Level for DTMF Tone Receiver.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm (default: Type 1~5 = 0)			✓
80-03-02	<b>DTMF Tone Receiver Setup – Start Delay Time</b>	Customize the Start delay time for DTMF Tone Receivers.	0~255 (0.25ms~64ms) (default: Type 1~5 = 0)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-03	DTMF Tone Receiver Setup – Min. Detect Level	Define the various minimum detect levels for the DTMF Tone Receiver.	0~15 detect level 0: -10dBm(0) to -25dBm(15) detect level 1: -15dBm(0) to -30dBm(15) detect level 2: -20dBm(0) to -35dBm(15) detect level 3: -25dBm(0) to -40dBm(15) detect level 4: -30dBm(0) to -45dBm(15) detect level 5: -35dBm(0) to -50dBm(15) detect level 6: -40dBm(0) to -55dBm(15) detect level 7: -45dBm(0) to -60dBm(15) detect level 8: -50dBm(0) to -65dBm(15) detect level 9: -55dBm(0) to -70dBm(15) detect level 10: -60dBm(0) to -75dBm(15) detect level 11: -65dBm(0) to -80dBm(15) detect level 12: -70dBm(0) to -85dBm(15) detect level 13: -75dBm(0) to -90dBm(15) detect level 14: -80dBm(0) to -95dBm(15) detect level 15: -85dBm(0) to -100dBm(15) default: Type 1 = 10 (-20dBm) Type 2~3 = 15 (-25dBm) Type 4~5 = 10 (-20dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-04	DTMF Tone Receiver Setup – Max. Detect Level	Define the various maximum detect levels for the DTMF Tone Receiver.	0~15 detect level 0: 0dBm(0) to -15dBm(15) detect level 1: -5dBm(0) to -20dBm(15) detect level 2: -10dBm(0) to -25dBm(15) detect level 3: -15dBm(0) to -30dBm(15) detect level 4: -20dBm(0) to -35dBm(15) detect level 5: -25dBm(0) to -40dBm(15) detect level 6: -30dBm(0) to -45dBm(15) detect level 7: -35dBm(0) to -50dBm(15) detect level 8: -40dBm(0) to -55dBm(15) detect level 9: -45dBm(0) to -60dBm(15) detect level 10: -50dBm(0) to -65dBm(15) detect level 11: -55dBm(0) to -70dBm(15) detect level 12: -60dBm(0) to -75dBm(15) detect level 13: -65dBm(0) to -80dBm(15) detect level 14: -70dBm(0) to -85dBm(15) detect level 15: -75dBm(0) to -90dBm(15) default: Type 1~5 = 2 (-2dBm)			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-03-05	<b>DTMF Tone Receiver Setup – Forward Twist Level</b>	Define the various forward twist levels for the DTMF Tone Receiver.	0~9 (1dB~10dB) [default: Type 1~5 = 5 (6dBm)]			✓
80-03-06	<b>DTMF Tone Receiver Setup – Backward Twist Level</b>	Define the various backward twist levels for the DTMF Tone Receiver.	0~9 (1dB~10dB) [default: Type 1~5 = 0 (1dBm)]			✓
80-03-07	<b>DTMF Tone Receiver Setup – ON Detect Time</b>	Define the on detect time for the DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) [default: Type 1~5 = 1 (30ms)]			✓
80-03-08	<b>DTMF Tone Receiver Setup – OFF Detect Time</b>	Define the off detect time for the DTMF Tone Receiver.	1~255 (15+ 15ms~3825ms) [default: Type 1~5 = 1 (30ms)]			✓
80-04-01	<b>Call Progress Tone Detector Setup – Detection Level</b>	Define the detection levels for the Call Progress Tone Detector.	0 = 0dBm ~ -25dBm 1 = -5dBm ~ -30dBm 2 = -10dBm ~ -35dBm 3 = -15dBm ~ -40dBm 4 = -20dBm ~ -45dBm 5 = -25dBm ~ -50dBm 6 = -30dBm ~ -55dBm default: Type 1 (DT) – 0 (-25dBm) Type 2 (BT) – 0 (-25dBm) Type 3 (RBT) – 0 (-25dBm) Type 4, Type 5 – 0			✓
80-04-02	<b>Call Progress Tone Detector Setup – Min. Detection Level</b>	Define the minimum detection levels for the Call Progress Tone Detector.	0~15 detect level 0 : -15dBm (0) to -30dBm(15) detect level 1 : -30dBm (0) to -45dBm(15) detect level 2 : -40dBm (0) to -55dBm(15) default: Type 1 (DT) – 15 (-25dBm) Type 2 (BT) – 15 (-25dBm) Type 3 (RBT) – 15 (-25dBm) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-03	<b>Call Progress Tone Detector Setup – S/N Ratio</b>	Define the S/N ratio for the Call Progress Tone Detector.	0~4 (0dB ~ -20dB) default: Type 1 (DT) – 4 (-20dB) Type 2 (BT) – 4 (-20dB) Type 3 (RBT) – 4 (-20dB) Type 4, Type 5 – 0			✓
80-04-04	<b>Call Progress Tone Detector Setup – No Tone Time</b>	Define the no tone time for the Call Progress Tone Detector.	0~255 (30+30-7680 ms) The formula is 30+30N. When set to N=1, it means 30+30*1= 60 When set to N=255, it means 30+30*255=7680 (0 =not detect) default: Type 1 (DT) – 132 (3990ms) Type 2 (BT) – 132 (3990ms) Type 3 (RBT) – 132 (3990ms) Type 4, Type 5 – 0			✓
80-04-05	<b>Call Progress Tone Detector Setup – Pulse Count</b>	Define the pulse count for the Call Progress Tone Detector.	1~255 default: Type 1 (DT) – 1 Type 2 (BT) – 1 Type 3 (RBT) – 1 Type 4, Type 5 – 0			✓
80-04-06	<b>Call Progress Tone Detector Setup – ON Minimum Time</b>	Define the on minimum time for the Call Progress Tone Detector.	1~255 (30+30-7680ms) default: Type 1 (DT) – 9 (30 ms) Type 2 (BT) – 12 (300ms) Type 3 (RBT) – 25 (780ms) Type 4, Type 5 – 0			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
80-04-07	<b>Call Progress Tone Detector Setup – ON Maximum Time</b>	Define the on maximum time for the Call Progress Tone Detector.	0~255 (30+30-7680ms) default: Type 1 (DT) – 0 Type 2 (BT) – 20 (450ms) Type 3 (RBT) – 40 (1230ms) Type 4, Type 5 – 0			✓
80-04-08	<b>Call Progress Tone Detector Setup – OFF Minimum Time</b>	Define the off minimum time for the Call Progress Tone Detector.	1~255 (30+30-7680ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 12 (300ms) Type 3 (RBT) – 83 (2520ms) Type 4, Type 5 – 0			✓
80-04-09	<b>Call Progress Tone Detector Setup – OFF Maximum Time</b>	Define the off maximum time for the Call Progress Tone Detector.	0~255 (30+30-7680ms) default: Type 1 (DT) – 1 (60ms) Type 2 (BT) – 20 (450ms) Type 3 (RBT) – 115 (3480ms) Type 4, Type 5 – 0			✓

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## Operation

### Calling your Mailbox:


#### To call your mailbox:

##### Multiline Terminal

1. Press your **Voice Mail** key (Program 15-07 or SC 751: 77) or the **Message** key.

- OR -


Press **Speaker** and dial the Voice Mail Master Number. After Voice Mail Answers, dial your mailbox number.


 *Your mailbox number is normally the same as your extension number. You may optionally dial a co-worker's mailbox - or use this procedure to call your mailbox from a co-worker's telephone.*

- OR -

Press **Speaker** and dial **\*8**.


2. If requested by Voice Mail, enter your security code.

 *Ask your Voice Mail system administrator for your security code.*

 *Normally, your Message Waiting LED goes out (if applicable). If it continues to flash, you have unanswered Message Waiting requests or a new General Message. Refer to [Checking Messages: on page 2-1828](#).*

##### Single Line Telephone


1. Lift the handset and dial **\*8**.


 *If you are at a co-worker's telephone, you can dial the Voice Mail master number and your mailbox number instead. You can also use this procedure from your own telephone to call a co-worker's mailbox.*


2. If requested by Voice Mail, enter your security code.

### Checking Messages:

1. Press the **Message** key once.

 *The voice mail is called.*



 *When there are new messages, the Large LED on the telephone flashes red.*



 *With this option set, the MSG key can be used as a Voice Mail key for any function [calling voice mail or transfer call a to voice mail (Hold + MSG + Extension Number), etc.].*

## Recording your Call:



### To record your active call in your mailbox:

#### Multiline Terminal

1. Press **Voice Mail Record** key (Program 15-07 or SC 751: code 78).
    -  *You hear two beeps and your Record key flashes. The beeps periodically repeat to remind you that you are recording.*
    -  *To stop recording, press the Voice Mail Record key again. You can restart and stop recording as required.*
- OR -

1. Press **Hold**.
2. Dial **654**.
  -  *The system automatically reconnects you to your call.*
  -  *To stop recording, place the call on hold then pick the call back up. You can restart and stop recording as required.*

#### Single Line Telephone

1. Hookflash.
2. Dial **654**.
  -  *The system automatically reconnects you to your call.*
  -  *To stop recording, hookflash twice. You can restart and stop recording as required.*



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## *Voice Mail Message Indication on Line Keys*

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### **Description**

Voice Mail Message Indication on Line Keys indicates a new voice mail message on Line Keys or DSS/BLF keys.

### **Conditions**

- When a DSS key of an installed extension is pressed when flashing that extension is called.
- You have to use a VM Message key (code 77) to get the indication when there is a new message. It can be used also for installed extensions.
- VM Message key calls the VM and logs into the mail box.
- If a VM Message key for extension A is placed on extension A, the Large LED does not light on extension A for new message indication. Instead the VM Message key flashes green.
- VM message LED is a higher priority than any other status for the DSS/BLF key.
- The enabling or disabling of Voice Mail Indication on BLF enables the station with the message to show up on other telephones. It does not enable/disable stations from seeing the BLF indication.
- Virtual Extension Keys assigned as code \*03 do not support Voice Mail Message Indication on Line Keys.

### **Default Setting**

Not allowed

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### **System Availability**

#### **Terminals**

All Multiline Terminals

#### **Required Component(s)**

VM (Digital or Analog)

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## Related Features

### Class of Service

### Direct Station Selection (DSS) Console

### Programmable Function Keys

### UM8000 Mail

### VM8000 InMail

### Voice Mail Integration (Analog)

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-07-01	<b>Programmable Function Keys</b>	Assign DSS/BLF function keys on Multiline telephones (code 01 + extension number) or Message Key (Code 77 + mailbox number).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-13-41	<b>Class of Service Options (Supplementary Service) – Voice Mail Message Indication on DSS</b>	Turn Off or On the Voice Mail Message Indication for an extension on a DSS console.	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
30-01-01	<b>DSS Console Operating Mode</b>	Set the system DSS consoles mode.	0 = Business Mode 1 = Hotel Mode 2 = ACD Monitor Mode 3 = Business/ACD Mode (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-02-01	<b>DSS Console Extension Assignment – Extension Number</b>	Enter the extension number for the multiline terminal connected with the DSS console (up to eight digits).	Up to eight digits. (default not assigned)	✓		
30-03-01	<b>DSS Console Key Assignment</b>	Customize DSS console keys to function as DSS keys, Service Code keys, Programmable Function Keys, and One-Touch Calling keys. The key (when defined as a DSS/One-Touch key [code 01] can have any function with up to four digits (e.g., extension number or Service Code). The function information (such as extension number or Service Code) would then be entered as additional data.	Key Number 001~114 0~99 (General Functional Level) 97 = Door Box Access key (additional data: 1~8 Door Box No.) * 00 ~ * 99 (Appearance Functional Level)	✓		
30-05-02	<b>DSS Console Lamp Table – Busy Extension</b>	Define the LED patterns for busy extension functions on the DSS consoles.	0~7 [default = 7 (On)]			✓
30-05-03	<b>DSS Console Lamp Table – DND Extension</b>	Define the LED patterns for DND extension functions on the DSS consoles.	0~7 [default = 3 (RW)]			✓
30-05-04	<b>DSS Console Lamp Table – ACD Agent Busy</b>	Define the LED patterns for ACD agent busy functions on the DSS consoles.	0~7 [default = 7 (On)]			✓
30-05-05	<b>DSS Console Lamp Table – Out of Schedule (ACD DSS)</b>	Define the LED patterns for out of schedule (ACD/DSS) functions on the DSS consoles.	0~7 [default = 0 (Off)]			✓
30-05-06	<b>DSS Console Lamp Table – ACD Agent Log Out (ACD DSS)</b>	Define the LED patterns for ACD agent log out (ACD/DSS) functions on the DSS consoles.	0~7 [default = 5 (IL)]			✓
30-05-07	<b>DSS Console Lamp Table – ACD Agent Log In (ACD DSS)</b>	Define the LED patterns for ACD agent login (ACD/DSS) functions on the DSS consoles.	0~7 [default = 4 (IR)]			✓
30-05-08	<b>DSS Console Lamp Table – ACD Agent Emergency (ACD DSS)</b>	Define the LED patterns for ACD agent emergency (ACD/DSS) functions on the DSS consoles.	0~7 [default = 6 (IW)]			✓
30-05-09	<b>DSS Console Lamp Table – Hotel Status Code 1 (Hotel DSS)</b>	Define the LED patterns for hotel status code 1 (hotel DSS) functions on the DSS consoles.	0~7 [default = 7 (On)]			✓
30-05-10	<b>DSS Console Lamp Table – Hotel Status Code 2 (Hotel DSS)</b>	Define the LED patterns for hotel status code 2 (hotel DSS) functions on the DSS consoles.	0~7 [default = 1 (FL)]			✓
30-05-11	<b>DSS Console Lamp Table – Hotel Status Code 3 (Hotel DSS)</b>	Define the LED patterns for hotel status code 3 (hotel DSS) functions on the DSS consoles.	0~7 [default = 2 (WK)]			✓

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
30-05-12	DSS Console Lamp Table – Hotel Status Code 4 (Hotel DSS)	Define the LED patterns for hotel status code 4 (hotel DSS) functions on the DSS consoles.	0~7 [default = 3 (RW)]			✓
30-05-13	DSS Console Lamp Table – Hotel Status Code 5 (Hotel DSS)	Define the LED patterns for hotel status code 5 (hotel DSS) functions on the DSS consoles.	0~7 [default = 5 (IL)]			✓
30-05-14	DSS Console Lamp Table – Hotel Status Code 6 (Hotel DSS)	Define the LED patterns for hotel status code 6 (hotel DSS) functions on the DSS consoles.	0~7 [default = 3 (RW)]			✓
30-05-15	DSS Console Lamp Table – Hotel Status Code 7 (Hotel DSS)	Define the LED patterns for hotel status code 7 (hotel DSS) functions on the DSS consoles.	0~7 [default = 6 (IW)]			✓
30-05-16	DSS Console Lamp Table – Hotel Status Code 8 (Hotel DSS)	Define the LED patterns for hotel status code 8 (hotel DSS) functions on the DSS consoles.	0~7 [default = 4 (IR)]			✓
30-05-17	DSS Console Lamp Table – Hotel Status Code 9 (Hotel DSS)	Define the LED patterns for hotel status code 9 (hotel DSS) functions on the DSS consoles.	0~7 [default = 3 (RW)]			✓
30-05-18	DSS Console Lamp Table – Hotel Status Code 0 (Hotel DSS)	Define the LED patterns for hotel status code 0 (hotel DSS) functions on the DSS consoles.	0~7 [default = 0 (Off)]			✓
30-05-19	DSS Console Lamp Table – Hotel Status Code * (Hotel DSS)	Define the LED patterns for hotel status code * (hotel DSS) functions on the DSS consoles.	0~7 [default = 4 (IR)]			✓
30-05-20	DSS Console Lamp Table – Hotel Status Code # (Hotel DSS)	Define the LED patterns for hotel status code # (hotel DSS) functions on the DSS consoles.	0~7 [default = 5 (IL)]			✓
30-05-21	DSS Console Lamp Table – VM Message Indication	Define the LED patterns for VM message indication functions on the DSS consoles.	0~7 [default = 3 (RW)]			✓

## Operation

### To program a DSS/BLF key on a telephone:

1. Press **Speaker**.
2. Dial **751**.
3. Press the key you want to program.
4. Dial **01**.
5. Dial the number of the extension you want to appear on the key.

6. Press **Hold**.
7. Press **Speaker**.

**To program a VM Message key on a telephone:**

1. Press **Speaker**.
2. Dial **751**.
3. Press the key you want to program.
4. Dial **77**.
5. Dial the number of the extension you want to appear on the key.
6. Press **Speaker**.

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## Voice Over

### Description

Voice Over lets a user interrupt a busy station user that is on another call. With Voice Over, the busy extension user hears an alert tone followed by the voice of the interrupting party. The extension user receiving the Voice Over can respond to the interrupting party without being heard by the original caller. If desired, the user can easily switch between their original caller and the interrupting co-worker. The original caller and the interrupting party can never hear each other.

#### EXAMPLE:

Voice Over could help a lawyer waiting for an urgent call. While on a call with another client, the lawyer's paralegal could announce the urgent call as soon as it comes in. The lawyer could then give the paralegal instructions how to handle the situation – all without the original client hearing the conversation.

Both multiline terminal users and 500/2500 set users can initiate and receive a Voice Over.

To enable Voice Over, a multiline terminal can have a function key programmed for Voice Over. In addition to one-touch Voice Over operation, the key shows the Voice Over status as follows:

When the key is . . .	You are . . .
Off	Not using Voice Over
Flashing (Red)	Listening to the interrupting party
On (Green)	Responding to the interrupting party

### Conditions

- While active, Voice Over uses a Conference circuit on a CD-CP00-US. Refer to the Conference feature for Conference circuit programming.
- Voice Over can interrupt a trunk call only if the trunk is set up for at least six seconds.
- Do not use Voice Over to a user on speakerphone as the conversation may be heard by the outside party.
- When a multiline terminal user performs Voice Over, the speech path is 1-way from the originator to the destination.
- The Voice Over Access Code can be assigned on a Programmable Function Key.
- An override tone is sent to both calling and called parties. A single line telephone user can receive Voice Over. After a Tone Override is heard, Voice Over can be set.

- When a Programmable Function Key (programmed with the Voice Over Access Code) is pressed, the LED lights while responding to the page.
- When a multiline terminal has a Handsfree Unit programmed, the Voice Over call can be received and answered handsfree.
- When Data Line Security is assigned to a station, the Voice Over to the station is disabled.
- An extension user cannot Voice Over to another extension user in a Conference.
- If you place a call on hold and then Voice Over to a busy extension, the call on hold does not transfer to the busy party when you end the Voice Over.
- A station can receive only one Voice Over at a time.
- A multiline terminal user cannot answer a Voice Over with an internal call on hold.
- An attempt to Voice Over a station can be denied if the station is in DND (Do Not Disturb) Mode, Automatic Redial is activated, during Station Programming, during Incoming Ringing, during Internal/External Paging, during a Conference Call, during a conference call on hold, the terminal is on internal hold, or the terminal has a call on internal hold.
- When a single line telephone is on a call and Voice Over is presented, the single line telephone cannot talk back to the party that originated the Voice Over.
- Voice Over to a single line telephone is not recommended because cross talk is inherent in the side tone of analog telephones.
- Voice Over to a user on speakerphone is not recommended because the conversation may be heard by the outside party.
- Answering a Voice Over requires a uniquely programmed Voice Over key.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

All Multiline Terminals and Single Line Telephones

### **Required Component(s)**

None



## Related Features

Conference


Off-Hook Signaling

Programmable Function Keys

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-41	<b>Service Code Setup (for System Access) – Voice Over</b>	Set the service code used for the Voice Over feature.  <i>To use Service Code 690 for Voice Over, Program 11-16-08 (Single Digit Service Code Setup – Voice Over) must be undefined.</i>	MLT (default = 690)		✓	
11-16-08	<b>Single Digit Service Code Setup – Voice Over</b>	Set the Service code used for the Voice Over feature.	(default = 6)		✓	
15-07-01	<b>Programmable Function Keys</b>	Assign a function key for Voice Over (code 48).	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allow a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)	✓		
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	Program the time an extension must wait before using the Voice Over feature can be used on a call (this time expires before putting a call in a talk state). This time also affects Barge-In.	0~64800 (seconds) (default = 5)		✓	

## Operation

### To initiate a Voice Over to a busy extension:


1. Press Voice Over key (Program 15-07 or SC 751: 48)


- OR -

Dial **6**.

- OR -

Dial **690**.


 You hear an alert tone and the Voice Over key flashes. You can talk to the called party after the alert tone ends.


 To use Service Code 690 for Voice Over, Program 11-16-08 (Voice Over Service Code) must be undefined.

### To respond to a Voice Over alert tone to your extension:

You can respond only if you have a Voice Over key.

1. Press the Voice Over key.


 The Voice Over key lights steady (green), and you can talk to the interrupting party.

 You cannot respond by dialing the Voice Over Service Code (6).

### To return to your original call:

1. Press the Voice Over key.

2. Press the Voice Over key again.

 Your Voice Over key flashes red when you are talking to your original call.

 To switch between your original call and the interrupting party, just keep pressing the Voice Over key.

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## *Voice Response System (VRS)*

### Enhancements

With **Version 3000 or higher** system software, if an outside caller dials an invalid extension number when connected to the VRS Automated Attendant or calling in on a DISA trunk, the following new options are available to route these calls:

- Extension Number (e.g., operator)
- F-Route Dial (e.g., outside phone number)

With **Version 9000 or higher** software, a timer has been added to enable the direct dialling of numbers even if a single digit has already been assigned to a destination in the single-digit dial tables. This enhancement improves the options available to an outside caller by allowing the ability to use both single digit attendant features and extension calling with the same first digit number.

VRS Dialing Enhancement:

With **Version 9000** software, the system provides the ability to ignore DTMF signals during VRS message playback for DID/DISA calls. This improves the usability of VRS by ensuring the entire VRS message is played before the caller is transferred to the desired destination.

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### Description

The PZ-VM21 daughter board provides the option for the Voice Response System (VRS) which gives the system voice recording and playback ability. The VRS CompactFlash card provides up to 100 system messages (General Message, Automated Attendant greetings, ACD messages, and the 900 Preamble).

- General Message** – provides a recorded message to which any user can listen
- Automated Attendant (Operator Assistance)** – answers incoming calls, plays a greeting to the caller and then lets the caller directly dial a system extension
- ACD Messages** – provides announcement and overflow messages for ACD groups
- Transfer to the VRS** – allows any extension user to Transfer their outside call to the VRS
- Voice Prompting Messages** – plays call and feature status messages to users
- 900 Preamble** – alerts callers using 900 lines of the cost and features of the pay-per-call service
- Time, Date and Station Number Check** – lets a multiline terminal extension user quickly hear a recording for the time, date, or the extension number

## VRS Messages

The VRS allows you to record up to 100 VRS messages. You allocate these messages for Automated Attendant greetings, the General Message, ACD messages and the 900 Preamble message. The total storage time for all messages is approximately 45 minutes. The maximum duration for any message is two minutes – this is not programmable. VRS messages are stored on a Compact Flash drive, and do not require battery back up.

Any on-premise extension caller can listen, record and erase VRS Messages (unless restricted in programming). DISA and DID callers can listen and record VRS messages (unless restricted in programming).

## General Message

A General Message is a recorded message available to all callers. A General Message typically contains important company information that all employees should hear. To hear the General Message, an employee can go to any multiline terminal and press 4 (for General Message). You can restrict the ability to record the General Message in an extension Class of Service. This allows you to give recording ability to the System Administrator or Communications Manager, for example, but not any other employee. The Message Waiting LED at each telephone flashes when a new General Message is recorded. After the extension user listens to the message, the Message Waiting LED goes out.

## Park and Page

When an extension user is away from their telephone, Park and Page can let them know when they have a call waiting to be answered. The Personal Greeting and Park & Page options can have up to 200 total messages (note that the Park & Page feature uses two messages). To enable Park and Page, the user records a Personal Greeting along with an additional Paging announcement. Park and Page then answers an incoming call and plays the Personal Greeting to the caller. The caller then listens to Music on Hold (if available) while the system broadcasts the recorded Paging announcement. When the extension user hears the Page, they can go to any telephone and use Directed Call Pickup to intercept the call. Refer to [Call Forwarding on page 2-173](#), [Paging, External on page 2-1169](#), [Paging, Internal on page 2-1181](#), and [Park on page 2-1187](#).

## Automated Attendant (Operator Assistance)

Automated Attendant automatically answers outside calls, plays a recorded greeting and then lets the outside callers directly dial system extensions, Department Calling Groups and Voice Mail. Automated Attendant provides immediate answering and routing of outside calls without the need for an operator or dispatcher. Automated Attendant provides:

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## **Single Digit Dialing**

Single Digit Dialing allows Automated Attendant callers to dial extensions, Department Calling Groups, and Voice Mail by pressing a single digit. For example, your Automated Attendant can greet calls with, “Thank you for calling. To place an order, dial 1. To check on an existing order, dial 2. To speak with an operator, dial 0.” You can set up single digit dialing for each VRS Message programmed to answer outside calls via the Automated Attendant. This allows you to set up day/night/holiday greetings or unique greetings for each incoming trunk. (Keep in mind that, with a default system, if you assign destinations to digits 3, 4 and 5, outside callers cannot dial system extensions.)

Security of a communication system is the responsibility of the installer/maintainer and the network providers. However NEC will, of course, be pleased to offer advice on specific queries or issues brought to our attention.

With **Version 9000 or higher** software, the timer in Program 25-16-01, has been added, per single digit table, which enables the direct dialling of destinations even if a destination or another VRS message has been assigned to a digit. This timer, when set, defines a time that is required to expire after the first digit is dialled before the action assigned to the digit in the single digit table is used. If additional digits arrive before the timer expires, these and possible further digits are used as the direct dial destination.

 *The timer (Program 25-16-01) works only when destination is set in Program 25-06-02. If Program 25-06-01 is used (other than 0), single digit attendant works.*

 *If the timer (Program 25-16-01) is set 0, this feature is deactivated. If the timer value is longer than inter-digit timer (Program 21-01-03), the setting of Program 25-16-01 has no effect.*

## **Simultaneous Call Answering**

With VRS installed, the Automated Attendant can answer up to 16 calls simultaneously.

## **Flexible Routing**

The outside caller can directly dial any system extension, Department Calling Group or Voice Mail. If the caller dials a busy extension, Automated Attendant allows them to dial another extension or wait for the busy extension to become free.

## **Automatic Overflow**

Automatic Overflow can automatically redirect a call if it cannot go through. This can happen if all VRS ports are busy, if the called extension does not answer, or if the caller misdials or waits too long to dial. (This occurs if the caller is using a dial pulse telephone.) When the call overflows, it rings a designated Ring Group or the Voice Mail system.

## **Programmable Automated Attendant Greetings**

You can record a different greeting for each trunk answered by the Automated Attendant. The greetings can be different in the day, at night or on holidays or weekends. You can also have a special greeting if the caller misdials. You record the greetings just the way you want. For example, “Dial the 3-digit extension number you wish to reach, dial 500 for Sales or dial 600 for Customer Service.” When assigning and recording Automated Attendant greetings, you can choose among the 100 VRS messages.

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## VRS Waiting Message



Using VRS Waiting Message, the system can automatically answer an incoming trunk call first (either a normal trunk or one designated for a department group) to let the outside caller hear a recorded message when the call is not answered in a programmed time. With this feature, the call keeps ringing at the same destination until it is answered or until other programming, takes affect.

This feature can use up to two messages for an incoming call and the duration between the messages is programmable. These messages are repeated and, between these messages, either ring back tone or Music on Hold can be played.

This feature has two different modes:

- Permanent Mode**  
This mode sets the feature using system programming and is available for the following calls:
  - Normal Incoming Call**  
When the call is not answered or a user presses the VRS Waiting Message function key, this feature is initiated. The waiting message is played until other no-answer program (e.g. transfer to another incoming ring group or disconnect) takes affect.
  - Designated Call for the Department Group**  
When a department group receives a call from a DID, DIL, DISA or E&M trunk and all terminals in the group are busy, the call is put in a queue and VRS Waiting Message is also initiated. The waiting message is played until other no-answer program (e.g. transfer to another incoming ring group or disconnect) takes affect or a terminal becomes available to receive the department call.
- Manual Mode**  
This mode can be programmed by pressing the VRS Waiting Message function key from a multiline terminal to set this feature for each incoming ring group. This mode can be used for normal incoming calls only.

The following programs are used to define the VRS Waiting Message feature and the trunk overflow:

- 11-10-20: Service Code Setup (for System Administrator) – VRS - Record/Eraser Message
- 15-07: Programmable Function Keys  
Automatic Answer with Delay Message Setup (Function Number 52)
  -  *Function Key 52 can be used to enable the VRS Waiting Message feature when Program 22-01-10 is set to 1 (Changed by Manual Operation).*
- Automatic Answer with Delay Message Start (Function Number 53)
  -  *Function Key 53 can be used to play the VRS Waiting Message immediately when Function Key 53 + the ringing Trunk Appearance Key are pressed.*
- 20-07-13: Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)
- 20-15-11: Ring Cycle Setup – VRS Waiting Message Incoming Call
- 22-01-04: System Options for Incoming Calls – DIL No Answer Recall Time
- 22-01-08: System Options for Incoming Calls – DID Pilot Call No Answer Timer

- 22-01-10: System Options for Incoming Calls – VRS Waiting Message Operation
- 22-01-11: System Options for Incoming Calls – VRS Waiting Message Interval Time
- 22-08-01: DIL/IRG No Answer Destination
- 22-14-01~07: VRS Delayed Message for IRG
- 22-15-01~07: VRS Delayed Message for Department Group
- 25-07-02: System Timers for VRS/DISA – VRS/DISA No Answer Time
- 25-07-03: System Timers for VRS/DISA – Disconnect after VRS/DISA retransfer to IRG

### Transfer to the VRS

Any extension user can Transfer their outside call to the VRS. This lets their caller take advantage of the Automated Attendant's extensive routing abilities. To Transfer the call, the user places the call on Hold, dials the unique VRS service code (set up in system programming : default 782), and hangs up.

### Voice Prompting Messages

The VRS feature provides the system with Voice Prompting Messages. These Voice Prompting Messages tell the extension user the status or progress of their call. For example, if a user calls extension 300 when it is busy, they hear, "*Station 300 is unavailable, please dial a new station or dial 750 to wait.*"

The following table shows the available Voice Prompting Messages.

**Table 2-146 Voice Prompting Messages**

Message No.	Message	This message will play when . . .
1-00	This is station	A user dials 6 for the extension number.
1-01	Station	A user dials 6 for the extension number.
1-02	Is busy, for callback dial	A user is calling a busy extension.
1-03	All lines are busy, for callback dial	A user dials 9 or 704 (+ trunk group) and all trunks are busy.
1-04	Please do not disturb	A user calls an extension that has enabled Do Not Disturb.
1-05	Please hold on, all lines are busy, your call will be answered when a line becomes free.	ACD message - refer to the UNIVERGE SV8100 Automatic Call Distribution Manual.
1-06	Please hold on, your call is being rerouted	Call Forwarding Off-Premise is rerouting your call.

Table 2-146 Voice Prompting Messages (Continued)

Message No.	Message	This message will play when . . .
1-07	The lowest cost line is busy, please wait for the next one.	ARS tries to reroute the user's call and the least costly route is busy.
1-08	The number you have dialed is not in service.	User dials a Service Code that Class of Service prevents.
1-09	You have a message.	An extension user has a Message Waiting to which they have not responded.
1-10	You have a message.	An extension user has a Message Waiting to which they have not responded.
1-11	Your calls have been forwarded.	An extension user has forwarded their calls.
1-12	Vacant number	An extension user has dialed an extension that does not exist.
1-13	Is unavailable	An outside caller dials an extension through the Automated Attendant and the extension is busy.
1-14	Please dial a new station	
1-15	Or dial	
1-16	To wait	
1-17	To leave your number	
1-18	Dial # to call you back at	
1-19	Enter your area code and telephone number	An outside caller dials an extension through the Automated Attendant and the extension is busy.
1-20	Please enter your password	
1-21	Please enter an account code	A user tries to place a trunk call and Forced Account Codes are enabled.
1-22	Please start recording	A user has dialed the code to record a VRS message.
1-23	Recording finished	A user is recording a VRS message and they have exceeded the maximum allowed recording length.
1-24	Audio file is full	There is no more space available in the VRS for storing messages.
1-25	To listen dial	A user is trying to record a VRS message and the recording already exists.
1-26	To erase dial	
1-27	To re-record dial	
1-28	To save dial	



Table 2-146 Voice Prompting Messages (Continued)

Message No.	Message	This message will play when . . .
1-29	To leave a message	
1-30	Just a moment	
1-31	Hello	
1-32	Thank you	
1-33	Good-bye	
2-00	Oh	A user dials 6 for the extension number or 8 for the time.
2-01	Dial	
2-02	Star	
2-03	Pound	
2-04	Zero	
2-05	One	A user dials 6 for the extension number, 8 for the time and date or as part of a spoken code (e.g., 714).
2-06	Two	
2-07	Three	
2-08	Four	
2-09	Five	
2-10	Six	
2-11	Seven	
2-12	Eight	
2-13	Nine	
2-14	Ten	
2-15	Eleven	
2-16	Twelve	

Table 2-146 Voice Prompting Messages (Continued)

Message No.	Message	This message will play when . . .
2-17	Thirteen	
2-18	Fourteen	
2-19	Fifteen	
2-20	Sixteen	
2-21	Seventeen	
2-22	Eighteen	
2-23	Nineteen	
2-24	Twenty	
2-25	Thirty	
2-26	Forty	
2-27	Fifty	
2-28	Sixty	
2-29	Seventy	
2-30	Eighty	
2-31	Ninety	
2-32	Hundred	
2-33	Thousand	
2-43	Message	
2-44	Messages	
2-64	January	
2-65	February	
2-66	March	
2-67	April	
2-68	May	
2-69	June	
2-70	July	
2-71	August	
2-72	September	

Table 2-146 Voice Prompting Messages (Continued)

Message No.	Message	This message will play when . . .
2-73	October	
2-74	November	
2-75	December	
2-76	Sunday	A user dials 8 for the date.
2-77	Monday	
2-78	Tuesday	
2-79	Wednesday	
2-80	Thursday	
2-81	Friday	
2-82	Saturday	
2-83	The date is	A user dials 8 for the date.
3-04	The time is	A user dials 8 for the time.
3-05	AM	
3-06	PM	

### 900 Preamble

If the system has trunks that are part of a 900 (caller paid) service, the VRS can automatically play a recorded message when a user answers the call. This recorded message should describe the 900 service features and cost. The 900 Preamble ensures that the caller is always aware that they have accessed a 900 pay-per-call service. A system user cannot converse with the caller until the preamble message ends. If the caller hangs up before the message completes, they are not charged for the call. If the caller waits for the message to end, they can talk to a system user and call charging begins. The system answers as many 900 calls as there are available VRS ports. If a 900 calls comes in when all VRS ports are busy, the call does not appear on an extension until a VRS port is available.

You can also use the 900 Preamble message to set up an *Auto-Answer with Greeting* application. When a receptionist answers a call, the VRS can play a preamble message such as, "Welcome to ABC Company. How can I help you?" When the caller replies, the receptionist answers, "One moment please," and quickly extends the call to the desired party. This ensures that all incoming calls are answered quickly, courteously and consistently.

## Time, Date and Station Number Check

If the system has a DSP daughter board installed for VRS, any multiline terminal user can find out the time, date or the extension number while their telephone is idle (on-hook). The time and date check saves the user time since they do not have to look for a clock or calendar. Hearing the extension number conveniently identifies non-display multiline terminals. To find out their extension number, the user can press 6 (for **Number**). To listen to the time and date, the user can press 8 (for **Time/Date**).

## Available with 64-Port Basic CD-CP00-US

The VRS feature is available with the 64-port Basic CD-CP00-US (no feature Upgrade PAL chip required).

The VRS feature requires a PZ-VM21 attached to the CD-CP00-US with the optional VRS flash card installed. Although the PZ-VM21 is recognized for this feature, it provides no additional tone resources (DTMF receivers, Caller ID receivers, or call progress tone detection).

## Conditions

- When the VM8000 InMail CF and PZ-VM21 are installed, the system provides two VRS ports (VRS license not required).
- VRS record time is fixed at two minutes and cannot be changed.
- The Automated Attendant (VRS) can answer up to 16 calls simultaneously.
- If Synchronous Ringing is enabled, the Preamble message cannot be used.
- The maximum number of VRS ports is 16 when the PZ-ME50-US is installed on the CP00. If the PZ-ME50-US is not installed, the maximum number of VRS ports is eight.
- When the DISA/VRS Ring Group Transfer (Programs 25-03 and 25-04) is set to 104 (Speed Dial Bin), Speed dial will be treated as an internal call no matter what Program 13-01-01 is set to. If an outside number is needed, the trunk access code must be put into the speed dial bin.
- The number of speech path channels on the CD-CP00-US (CPU) for the VM8000 (In Mail) and the VRS feature are shared and depends if the PZ-ME50 daughter board is installed.
  - ❑ Without a PZ-ME50 daughter board installed the systems supports a maximum of eight channels for VRS and/or In-Mail.
  - ❑ With a PZ-ME50 daughter board installed, the system supports a maximum of 16 channels for VRS and/or In-Mail. The maximum number of channels supported for In-Mail is eight.
- When Program 25-16-02, is set to 0 = Off (Do not detect DTMF), after playing a VRS greeting, the transfer destination set in Program 25-03-01 is followed.
- Program 25-03-01 is set on a per trunk port base, not Dial-in number base.
- A DISA Password can be detected regardless of Program 25-16-02 setting.

- The VRS dialing enhancement requires **Version 9000 or higher** system software.

### **Default Setting**

Disabled

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## **System Availability**

### **Terminals**

None

### **Required Component(s)**

- CP00 with PZ-VM21 Daughter Board
- VM8000 InMail CompactFlash
- CPU License for VRS

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## **Related Features**

**Transfer**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-20	<b>Service Code Setup (for System Administrator) – VRS - Record/ Erase Message</b>	Define the service code to record or erase a VRS message.	MLT, SLT (default = 616)		✓	
11-10-21	<b>Service Code Setup (for System Administrator) – VRS - General Message Playback</b>	Define the service code to playback the general message.	MLT, SLT (default = 611)		✓	
11-10-22	<b>Service Code Setup (for System Administrator) – VRS - Record or Erase General Message</b>	Define the service code to record or erase a general message on the VRS.	MLT, SLT (default = 612)		✓	
11-12-54	<b>Service Code Setup (for Service Access) – VRS Routing for ANI/ DNIS</b>	Define the service code to use when setting up ANI/DNIS Routing to the VRS Automated Attendant. Using the Transfer feature, this also allows a call to be transferred to the VRS (default: 782).	MLT, SLT (default = 782)		✓	
15-07-01	<b>Programmable Function Keys</b>	For the VRS Waiting Message feature, assign the VRS Incoming Call Queuing Setup key (code 52 + ring group #) to manually enable the feature.	Line Key 1~48 0~99 (Normal Function Code 751 by default) *00 ~ *99 (Appearance Function Code) (Service Code 752 by default)	✓		
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, listen to, or erase VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)	✓		
20-07-14	<b>Class of Service Options (Administrator Level) – VRS General Message Play</b>	Turn Off or On an extension user ability to dial 4 or Service Code 611 to listen to the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)	✓		
20-07-15	<b>Class of Service Options (Administrator Level) – VRS General Message Record/Delete</b>	Turn Off or On an extension user ability to dial Service Code 612 and record, listen to, or erase the General Message.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)	✓		
20-11-15	<b>Class of Service Options (Hold/Transfer Service) – VRS Personal Greeting (Message Greeting)</b>	Turn Off or On an extension user ability to dial Service Code 616 to record, listen to, or erase a Personal Greeting. This option also affects Park and Page.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-23	<b>Class of Service Options (Supplementary Service) – Display the Reason for Transfer</b>	Select whether or not an extension should display the reason a call is being transferred to their extension (Call Forward Busy, Call Forward No Answer, DND).	0 = Off 1 = On (default = 0 for COS 1~15)		✓	
20-15-11	<b>Ring Cycle Setup – VRS Waiting Message Incoming Call</b>	Set the ring cycle callers hear when the VRS Waiting Message feature is used.	Ring Cycle = 1~13 (default = 6)			✓
21-01-02	<b>System Options for Outgoing Calls – Intercom Interdigit Time</b>	When placing Intercom calls, users must dial each digit during this time.	0~64800 (seconds) (default = 10)		✓	
22-01-10	<b>System Options for Incoming Calls – VRS Waiting Message Operation</b>	Define whether the VRS Waiting Message is Automatically or Manually set.	0 = Enable Always 1 = Change by Manual Operation (default = 0)		✓	
22-01-11	<b>System Options for Incoming Calls – VRS Waiting Message Interval Time</b>	For VRS Waiting Message, determine the time between VRS messages.	0~64800 (seconds) (default = 20)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	For each Night Service mode, enter 1 if trunk should be automatically answered by VRS Automated Attendant.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
22-04-01	<b>Incoming Extension Ring Group Assignment</b>	Assign extensions (up to 32) to Ring Groups. Calls ring extensions according to Ring Group programming.	Maximum eight digits Default: Extensions 101~108 (first eight ports) ring for incoming Ring Group 1 calls. No other extensions ring for incoming Ring Group 1 calls.		✓	
22-14-01	<b>VRS Delayed Message for IRG – 1st Delayed Message Start Time</b>	For each Ring Group, set the time the system waits before playing the first message . This time is also used for VRS Waiting Message.	0~64800 (seconds) (default = 0)	✓		
22-14-02	<b>VRS Delayed Message for IRG – 1st Delayed Message Number</b>	For each Ring Group, select the message number to be played as the first message (0~101). This program is also used for VRS Waiting Message.	0~101 0 = No Message 101 = Fixed Message (default = 0)	✓		
22-14-03	<b>VRS Delayed Message for IRG – 1st Delayed Message Sending Count</b>	For each Ring Group, set the number of times the first message is played. This program is also used for VRS Waiting Message.	0~255 (times) (default = 0)	✓		
22-14-04	<b>VRS Delayed Message for IRG – 2nd Delayed Message Number</b>	For each Ring Group, select the message number to be played as the second message (0~101). This program is also used for VRS Waiting Message.	0~101 0 = No Message 101 = Fixed Message (default = 0)	✓		
22-14-05	<b>VRS Delayed Message for IRG – 2nd Delayed Message Sending Count</b>	For each Ring Group, set the number of times the second message is played. This program is also used for VRS Waiting Message.	0~255 (times) (default = 0)	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-14-06	VRS Delayed Message for IRG – Tone Kind at Message Interval	For each Ring Group, determine what the caller hears between messages. This program is also used for VRS Waiting Message.	0 = Ring Back Tone 1 = MOH Tone 2 = BGM Source (default = 0)	✓		
22-14-07	VRS Delayed Message for IRG – Disconnect Time After the end of VRS Delayed Message	For each Ring Group, set the time the system waits after playing the VRS message before disconnecting the call. To prevent the call from disconnecting, set this option to 0. This program is also used for VRS Waiting Message.	0 = No Disconnect 1~64800 (seconds) (default = 60)		✓	
22-15-01	VRS Delayed Message for Department Group – 1st Delayed Message Start Time	For each Department Group, set the time the system waits before playing the first message. This program is also used for VRS Waiting Message.	0~64800 (seconds) (default = 0)	✓		
22-15-02	VRS Delayed Message for Department Group – 1st Delayed Message Number	For each Department Group, select the message number to be played as the first message (0~101). This program is also used for VRS Waiting Message.	0~101 0 = No Message 101 = Fixed Message (default = 0)	✓		
22-15-03	VRS Delayed Message for Department Group – 1st Delayed Message Sending Count	For each Department Group, set the number of times the first message is played. This program is also used for VRS Waiting Message.	0~255 (times) (default = 0)	✓		
22-15-04	VRS Delayed Message for Department Group – 2nd Delayed Message Number	For each Department Group, select the message number to be played as the second message (0~101). This program is also used for VRS Waiting Message.	0~101 0 = No Message 101= Fixed Message (default = 0)	✓		
22-15-05	VRS Delayed Message for Department Group – 2nd Delayed Message Sending Count	For each Department Group, set the number of times the second message is played. This program is also used for VRS Waiting Message.	0~255 (times) (default = 0)	✓		
22-15-06	VRS Delayed Message for Department Group – Tone Kind at Message Interval	For each Department Group, determine what the caller hears between messages. This program is also used for VRS Waiting Message.	0 = Ring Back Tone 1 = MOH Tone 2 = BGM Source (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-15-07	<b>VRS Delayed Message for Department Group – Disconnect Time After the End of VRS Delayed Message</b>	For each Department Group, set the time the system waits after playing the VRS message before disconnecting the call. To prevent the call from disconnecting, set this option to 0. This program is also used for VRS Waiting Message.	0 = No Disconnect 1~64800 Seconds (default = 60)		✓	
24-02-03	<b>System Options for Transfer – Delayed Call Forwarding Time</b>	Set the time a telephone rings before the call reroutes to the programmed destination.	0~64800 (seconds) (default = 10)		✓	
25-01-02	<b>VRS/DISA Line Basic Data Setup – DISA User ID</b>	Select whether or not the DISA User ID is to be used.	0 = Off 1 = On (default = 1)		✓	
25-02-01	<b>DID/DISA VRS Message</b>	For each Night Service mode, enter 1 at the Talkie prompt if trunk should be automatically answered by VRS and the message number the caller should hear (1~101).	0 = No Message 1 = VRS (01~100 VRS Message Number) 2 = ACI (01~04 ACI Group Number) 3 = Department Groups (01~64 Extension Group Number) (default = 0)	✓		
25-03-01	<b>VRS/DISA Transfer Ring Group With Incorrect Dialing</b>	Set the destination that Automated Attendant (OPA) calls ring if the OPA caller dials an incorrect extension number. This also sets the options for DISA calls. The system allows Ring Groups or Disconnect.	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-04-01	<b>VRS/DISA Transfer Ring Group With No Answer/Busy</b>	Set the destination that Automated Attendant (OPA) calls ring if the OPA caller dials an extension that does not answer or is busy. This also sets the options for DISA calls. The system allows Ring Groups or Disconnect.	Ring Groups: 1~100 Trunk Ports: 001~200 Day/Night Mode: 1~8 0 (Disconnect) 1~100 (Incoming Ring Group) 102 (In-Skin/External Voice Mail or VM8000 InMail) 104 (Speed Dial table Program 25-15-01) Version 3000 software or higher is required. (default = 0)	✓		
25-05-01	<b>VRS/DISA Error Message Assignment</b>	For each trunk answered by VRS, enter the VRS message (1~100) the outside caller hears if they dial incorrectly after answer. If you enter 0, the call reroutes according to Program 25-03 and Program 25-04. Make one entry for each Night Service mode.	0~100 (0 = No Setting) (default = 0)		✓	
25-06-01	<b>VRS/DISA One-Digit Code Attendant Setup – Next Attendant Message Number</b>	Set up single digit dialing for Automated Attendant callers. For each VRS Message programmed to answer outside calls (see Program 25-02-01), specify the digit the Automated Attendant caller dials (1~9, 0, *, #). (Keep in mind that if you assign destinations to digits 3 and 4, outside callers cannot dial system extensions.)	0~100 (0 = No Setting) 101 = Voice MAIL Answers 104 = Refer to 25-04: VRS/DISA Transfer Ring Group with No Answer/ Busy 105 = Dial the other extension (default = 0)		✓	
25-06-02	<b>VRS/DISA One-Digit Code Attendant Setup – Destination Number</b>	Set up single digit dialing for Automated Attendant callers. For each VRS Message programmed to answer outside calls (see Program 25-02-01), specify the destination reached (eight digits maximum) when the caller dials the single digit code.	Up to eight digits (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-02	System Timers for VRS/DISA – VRS/DISA No Answer Time	If an Automated Attendant caller dials an extension that does not answer, the call waits this time before rerouting to the Ring Group specified in Program 25-03 and Program 25-04. This time also affects unanswered DISA calls.	0~64800 (seconds) (default = 0)		✓	
25-07-03	System Timers for VRS/DISA – Disconnect after VRS/DISA retransfer to IRG	Set the time for disconnecting a call after it is re-transferred to a ring group by VRS/DISA.	0~64800 (seconds) (default = 60)		✓	
25-08-01	DISA User ID Setup – Password	Set up password (six digits).	Dial (Six digits fixed) (0~9, *, #) (default not assigned)		✓	
25-13-01	System Option for DISA – VRS Message Access Password	Enter the password DISA callers must dial before the system allows them to record, listen to or erase VRS messages.	1~9, 0, *, # Six digits fixed (default not assigned)		✓	
25-15-01	DISA Transfer Target Setup – DISA Transfer Target Area at Wrong Dial	Used to assign a speed dial number when the wrong number is received.	Speed Dial bin number 0~1999 (default = 1999) Version 3000 software or higher is required	✓		
25-15-02	DISA Transfer Target Setup – DISA Transfer Target Area at No Answer or Busy	Used to assign a speed dial number when a dial tone times-out and the target extension does not answer or is busy.	Speed Dial bin number 0~1999. (default = 1999) Version 3000 software or higher is required.	✓		
25-16-01	DID/DISA Talkie Base Setup – Single Digit Timer	Assign a timer, per single digit table, required to expire before the allocated single digit entry is applied.  <b>Version 9000 or higher software is required.</b>	0~64800 (0 = No Setting) (default = 0)		✓	
25-16-02	DID/DISA Talkie Base Setup – DTMF Detect	<b>1 = On</b> setting detects DTMF signal during sending VRS message for DID/DISA call.  <b>0 = Off</b> setting does not detect DTMF signal during sending VRS message for DID/DISA call.	0 = Off 1 = On (default = 1)		✓	
31-02-01	Internal Paging Group Assignment – Internal Paging Group Number	Assign extensions to Internal Paging Groups (i.e., Page Zones).	0~64 (0 = No Setting) Default: 0 for IP Station 1 for TDM Station		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
31-02-02	<b>Internal Paging Group Assignment – Internal All Call Paging Receiving</b>	Allow/Prevent All Call Internal Paging for each extension. If allowed, extension can place and receive All Call Internal Paging announcements. If prevented, extensions can make only (not receive) All Call Internal Paging announcements. If combined, Paging zones should be restricted as well. Change the internal page zone group in Program 31-07-01 to 0.	0 = Off 1 = On (default = 0)		✓	
31-04-01	<b>External Paging Zone Group – Paging Group Number</b>	Assign each External Paging zone to an External Paging group.	0~8 (0 = No Setting) Default: Speaker 1 [PGD(2)-U10] = 1 (Group 1) Speaker 2 [PGD(2)-U10] = 2 (Group 2) Speaker 3 [PGD(2)-U10] = 3 (Group 3) Speaker 4 [PGD(2)-U10] = 4 (Group 4) Speaker 5 [PGD(2)-U10] = 5 (Group 5) Speaker 6 [PGD(2)-U10] = 6 (Group 6) Speaker 7 [PGD(2)-U10] = 7 (Group 7) Speaker 8 [PGD(2)-U10] = 8 (Group 8) Speaker 9 (CD-CP00-USII) = 1 (Group 1)		✓	
31-07-01	<b>Combined Paging Assignments</b>	Assign an External Paging Group (0~8) to an Internal Paging Zone for Combined Paging. When an extension user makes a Combined Page, they simultaneously broadcast into both the External and Internal Zone.	0~64 (0 = All internal paging) (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
40-07-01	<b>Voice Prompt Language Assignment for VRS</b>	Select the language to be used for the VRS. Although the system allows this option to be changed in programming, the language changes only if the PZ-VM21 has the firmware which provides the newly selected language.	1 = US English 2 = UK English 3 = AU English 4 = CA French 5 = Dutch 6 = Mex Spanish 7 = LA Spanish 8 = Italian 9 = German 10 = ES Spanish 11 = Norwegian 12 = ParisFrench 13 = BR Portuguese 14 = Japanese 15 = MandChinese 16 = Korean 17 = IB Portuguese 18 = Greek 19 = Danish 20 = Swedish 21 = Thai 22 = Taiwan 23 = Flemish 24 = Turkish 25 = Arabic 26 = Russian (default = 1)		✓	
40-10-01	<b>Voice Announcement Service Option – VRS Fixed Message</b>	Enable/Disable the system ability to play the fixed VRS messages (such as “You have a message.”).	0 = Not Used 1 = Used (default = 0)	✓		
40-10-02	<b>Voice Announcement Service Option – General Message Number</b>	Enter the number of the VRS message you want to use for the General Message (01~100). The message you select should not be used as a VRS message.	0~100 (0=No General Message Service) (default = 0)		✓	
40-10-03	<b>Voice Announcement Service Option – VRS No Answer Destination</b>	Assign the transferred Ring Group when the VRS is unanswered after Call Forwarding with Personal Greeting Message.	0~100 (Incoming Ring Group Number) (default = 0 (No Setting))		✓	
40-10-04	<b>Voice Announcement Service Option – VRS No Answer Time</b>	If an extension has Personal Greeting enabled and all VRS ports are busy, a DIL or DISA call to the extension waits this time for a VRS port to become free.	0~64800 (seconds) (default = 0)		✓	
40-10-05	<b>Voice Announcement Service Option – Park and Page Repeat Timer (VRS Msg Resend)</b>	If a Park and Page is not picked up during this time, the Paging announcement repeats.	0~64800 (seconds) (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
40-10-06	Voice Announcement Service Option – Set VRS Message for Private Call Refuse (VRS Msg Private Call)	Assign the VRS Message number used as Private Call Refuse. When Fixed message is set, VRS message guidance is: Service finished. Disconnect the line, please.	0~101 (0 = No message) (101 = Fixed message) (default = 0)		✓	
40-10-07	Voice Announcement Service Option – Set VRS Message for Caller ID Refuse (VRS Msg CID)	Assign the VRS Message number used as Caller ID Refuse. When Fixed Message is set, VRS message guidance is: Service finished. Disconnect the line, please.	0~101 (0 = No message) (101 = Fixed message) (default = 0)		✓	
40-11-01	Preamble Message Assignment	Assign the VRS Message number used as the Preamble Message for each trunk. When the extension user answers the incoming call, the assigned VRS message is sent to the outside caller.	0~100 (0 = No Service) (default = 0)			✓
47-03-02	SV8100 InMail Group Mailbox Options – Mailbox Number	The Group Mailbox Number is the same as the Department Group master (pilot) number. Select the Department Group master (pilot) number associated with the Master Mailbox you are programming.	Digits (eight maximum, using 0~9) No Setting (entered by pressing <b>Hold</b> ) (default = No Setting)		✓	

## Operation

### VRS Messages:

#### To record a VRS message:

1. Press **Speaker** or lift the handset.  
- OR -  
At a single line telephone, lift the handset.
2. Dial **616**.
3. Dial **7 (Record)**.
4. Dial the VRS message number you want to record (01~100).
5. When you hear, "Please start recording" followed by a beep, record your message.

6. Press **#** to end recording.

- OR -

Hang up to save the message.

**To listen to a previously recorded VRS message:**

1. Press **Speaker** or lift the handset.


- OR -

At a single line telephone, lift the handset.

2. Dial **616**.

3. Dial **5** (Listen).

4. Dial the VRS message number to which you want to listen (01~100).

 *You hear the previously recorded message. If you hear a beep instead, no previous message is recorded.*

5. Press **#** to hear the message again.

- OR -

To hear another message, dial 5 and then enter the message number (01~100).

- OR -

Hang up.

**To erase a previously recorded VRS message:**

1. Press **Speaker** or lift the handset.

- OR -

At a single line telephone, lift the handset.

2. Dial **616**.

3. Dial **3** (Erase).

4. Dial the number of the VRS message you want to erase (01~100).

5. Press **Hold** (multiline terminal only) to cancel the procedure without erasing (and return to step 3).

- OR -





Hang up to erase the message.



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**To record, listen to or erase a VRS message if you call in using DISA:**

1. Place call to the system.  
 *You hear dial tone.*
2. After the system answers, dial the DISA password (normally 000000).  
 *You hear dial tone.*
3. Dial **616** and the VRS password.
4. Dial the function you want.  
**7 = Record**  
**5 = Listen**  
**3 = Erase**
5. Dial the message number (01~100), record the message and press **#** to end recording.  
 *If you dialed 7 to record, you can dial **#** to listen to the message you just recorded.*  
 *If you dialed 5 to listen, you can dial 5 and the message number to hear it again or if you want to Record, listen to or erase another message, go back to step 4.*

**General Message:****To listen to the General Message:**Multiline Terminal Only

*Your Message Waiting LED flashes when there is a new General Message. A voice message periodically reminds you.*

1. Do not lift the handset or press **Speaker**.
2. Dial **4 (General)**.  
**- OR -**
1. Lift the handset and dial **611**.  
 *You hear the General Message.*  
 *Normally, your MW LED goes out. If it continues to flash, you have unanswered Message Waiting requests or new messages in your Voice Mail mailbox.*

**To record, listen to or erase the General Message:**


1. Press **Speaker** or lift the handset.  
**- OR -**  
At single line telephone, lift the handset.
2. Dial **612**.


3. Dial the function you want.

**7 = Record**


**5 = Listen**

**3 = Erase**

 *If you dialed 7 to record, press # to end the recording.*

 *If you dialed 5 to listen, you can dial 5 to listen to the message again.*

 *To Record the General Message again, go back to step 1.*

 *If you dialed 3 to erase the General Message, you must go to step 4 (hang up). To cancel without erasing on a multiline terminal, press HOLD instead and go back to step 1.*

4. Hang up when you are done.

### Time, Date and Station Number Check:

#### To check the extension number of any multiline terminal:


1. Do not lift the handset or press **Speaker**.
2. Dial **6** for extension number.

#### To check the system time and date from any multiline terminal extension:

1. Do not lift the handset or press **Speaker**.
2. Dial **8** for time and date.

### 900 Preamble:

#### To answer a 900 Preamble call:

1. Answer the ringing call.
  -  *The line key or Call Appearance (CAP) key turns solid red as the system plays the preamble to the caller.*
2. When you hear two beeps and the line key turns green, converse with the caller.

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# *Voice Response System (VRS) Embedded VRS*

## Enhancements

This feature added with **Version 4000 (4.01 or higher)**.

With **Version 8000 or higher** software, two ports of Embedded VRS are supported. The **Version 8000 Enhancement License (0037)** is required for this feature.

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## Description

Embedded VRS provides one channel of VRS without having the PZ-VM21 (VMDB) and CompactFlash installed on the CPU, therefore allowing the voice prompt to be saved on flash memory on the CPU (Embedded VRS). This feature is disabled when the InMail CompactFlash is installed.

The following applies to the Embedded VRS Feature:

- Number of VRS channels: 1 (2 are supported with **Version 8000 software and the Version 8000 Enhancement License (0037)**)
- Number of VRS Prompts: 4
- Maximum of eight minutes recording time, including stored VRS and outside caller messages.
- Maximum number of outside caller messages that can be stored: 10
- Available in US English, Mexican Spanish and Canadian French only.

When an outside caller leaves a message, the operators extension will show VOICE MESSAGE and the number of messages in the lower left of the LCD display. The message waiting LED does not light for these messages.

## Conditions

- Two embedded VRS channels are supported with SV8100 **Version 8000 or higher** software and the **Version 8000 Enhancement License (0037)**.
- A single embedded VRS channel is supported with **Version 7000 or lower** software, or if the **Version 8000 Enhancement License** is not applied.
- Up to four ACD Delay Announcements are supported.
- ACD queue depth announcements are not supported when using Embedded VRS for ACD delay Announcement. If enabled, the first ACD Delay Announcement repeats continuously.

- When all 10 messages have been recorded or if all eight minutes of the recording time has been used, auto attendant callers will be dropped without notification when trying to leave a message.
- The following full VRS features are not supported on Embedded VRS:
  - ❑ General Message
  - ❑ Transfer to the VRS
  - ❑ Voice Prompting Messages
  - ❑ Preamble
  - ❑ Time, Date and Station Number Check
  - ❑ ACD Queue Depth Announcements
  - ❑ VRS Music on Hold (MOH)
  - ❑ VRS Waiting Message
  - ❑ Park and Page
  - ❑ Personal Greeting
- Main software **Version 4000 (4.01 or higher)** and the **Version 4000 Main Version license** is required to support this feature.
- Outside caller messages are stored in VRS message locations 091-100.
- For greetings and other menu options VRS message locations 001-004 are available.
- When the InMail CF is installed on the system this feature is not available.
- The Voice Response System (VRS) Upload Download Audio feature is not available for Embedded VRS.
- One of the supported embedded VRS language prompt sets must be loaded onto the CCPU for this feature to work. The language prompt sets are available on the NTAC knowledgebase.
- When Embedded VRS is enabled, preview dial strings must start with \* (**Version 4000 ~ Version 6000**).
- The operator extension large LED (message waiting), does not light for messages left by outside callers on Embedded VRS.
- Callers are not provided a beep to record on SIP trunks that are looped back within the SV8100 and pointed to an Embedded VRS greeting that takes a message. For this application the prompt to record should be included in the greeting.

## Installing Language Prompt Sets

The procedure to load a language prompt set is similar to upgrading the system software. The same USB memory used for system software upgrades should be used. Before extracting the language prompt set to the USB memory delete all of the system software upgrade files.

To load an Embedded VRS language prompt set:

1. Download the appropriate language prompt set from the NTAC download site.
2. Delete all existing files on the USB memory.
3. Extract archive file to the USB memory.
4. Turn the system power **Off**.
5. After the system powers down, insert the USB memory containing the language prompt set into the USB port on the CD-CP00-US.
6. Push in and hold the **Load** button.
7. Turn the system power **On**.
8. Continue holding the **Load** button for approximately 10 seconds or until Status LED5 begins flashing red.
9. Release the **Load** button.
10. Wait until the Status LEDs on the CD-CP00-US have the following indications, approximately two minutes:
  - LED 2: Flashing Red
  - LED 3: Flashing Red
  - LED 4: Flashing Red
  - LED 5: Steady Red
11. Turn the system power **Off** and remove the USB memory.
12. Turn the system power back **On**.

### Embedded VRS Programming Example:

For this example Trunks 1-8 will be answered by Embedded VRS for Mode 1 (Day) and Mode 2 (Night). There will be Day and Night main greetings and Day and Night informational greetings used to provide office hours and directions to callers.

Dial options are set on a per message basis so be sure to select the appropriate message before setting any options. There will be dial options for each greeting for routing callers and for this example callers can only reach the Operator's extension (101) during the Day Mode. However, depending on the customer's needs all dial options can be set to route callers to specific extensions for each greeting.

The following Dial Options will be used:

- Message 1: Day Main Greeting and has the following dial options:
  - 3 = Routes callers to message 3 which is used for office hours and direction information in the Day Mode.
  - 4 = Allows callers to leave a message.
  - 0 = Routes callers to the Operator's extension 101. You can only enter valid extension numbers in this field and cannot use '0' as the routing destination.
- Message 2: Night Main Greeting, since this is used after hours there is no option to route callers to the Operator and has the following dial options:
  - 3 = Routes callers to message 4 which is used for office hours and direction information in the Night Mode.
  - 4 = Allows callers to leave a message.
- Message 3: Day Informational Greeting and has the following dial options:
  - 3 = Replays Message 3.
  - 4 = Allows callers to leave a message.
  - 0 = Routes callers to the Operator's extension 101. You can only enter valid extension numbers in this field and cannot use '0' as the routing destination.
  - # = Routes callers back to the Day Main Greeting (Message 1).
- Message 4: Night Informational Greeting, since this is used after hours there is no option to route callers to the Operator and has the following dial options:
  - 3 = Replays Message 4.
  - 4 = Allows callers to leave a message.
  - # = Routes callers back to the Night Main Greeting (Message 2).
- Programming:

This example assumes the default Class of Service (COS) settings have not been changed, extension 101 is still in COS 15 and used as the Operator's extension.

1. Set Program 22-02-01 to 1 (VRS) for Trunks 1-8 in Mode 1 and 2.

**System Data**  
22-02 : Incoming Call Trunk Setup

Trunk	Night Mode			
	Mode 1	Mode 2	Mode 3	Mode 4
1	VRS	VRS	Normal	Normal
2	VRS	VRS	Normal	Normal
3	VRS	VRS	Normal	Normal
4	VRS	VRS	Normal	Normal
5	VRS	VRS	Normal	Normal
6	VRS	VRS	Normal	Normal
7	VRS	VRS	Normal	Normal
8	VRS	VRS	Normal	Normal
9	DID	Normal	Normal	Normal
10	DID	Normal	Normal	Normal

Use Program 22-02: Incoming Call Trunk Setup to assign the incoming trunk type for each trunk. There is one item for each Night Service Mode.

**Figure 2-90 Program 22-02: Incoming Call Trunk Setup**

2. Set Program 40-10-01 (VRS Fixed Messaging) to 1 (Enable).

**System Data**  
40-10 : Voice Announcement Service Option

01 - VRS Fixed Messaging

**Figure 2-91 Program 40-10: Voice Announcement Service Option**

- For Trunks 1~8 set Program 25-02-01 Mode 1 to Message 1 (Day) and Mode 2 to Message 2 (Night). Make sure this is set for all trunks that were set to 'VRS' in Program 22-02-01.



Figure 2-92 Program 25-02: VRS/DISA Message

- Set the dial options for Message 1 (Day Main Greeting) as shown below.

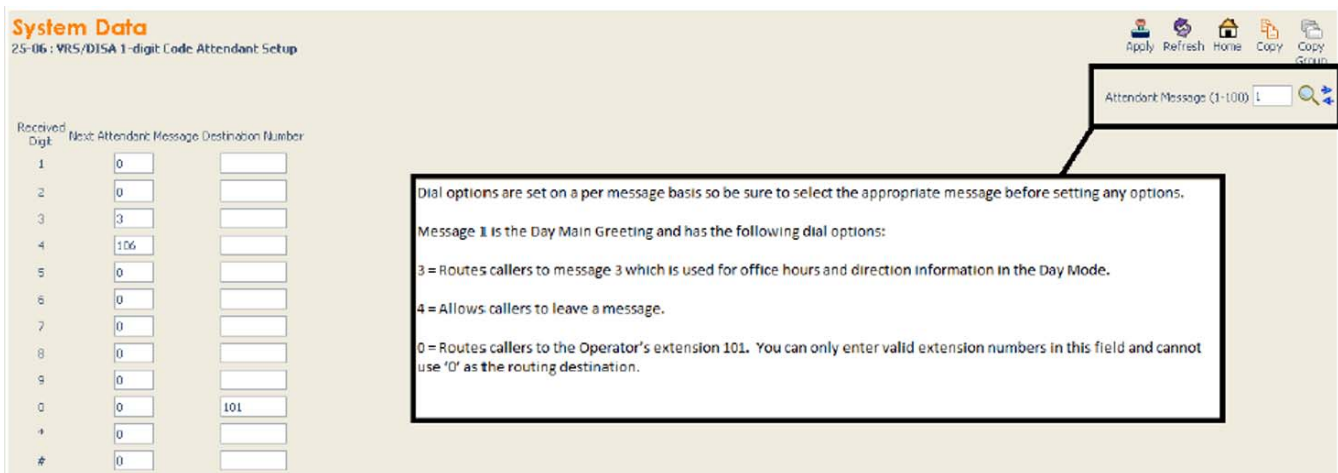


Figure 2-93 Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 1



5. Set the dial options for Message 2 (Night Main Greeting) as shown below.

**System Data**  
25-06 : VRS/DISA 1-digit Code Attendant Setup

Received Digit	Next Attendant Message	Destination Number
1	0	
2	0	
3	4	
4	106	
5	0	
6	0	
7	0	
8	0	
9	0	
0	0	
*	0	
#	0	

Attendant Message (1-100) 2

Dial options are set on a per message basis so be sure to select the appropriate message before setting any options.

Message 2 is the Night Main Greeting, since this is used after hours there is no option to route callers to the Operator and has the following dial options:

3 = Routes callers to message 4 which is used for office hours and direction information in the Night Mode.

4 = Allows callers to leave a message.

Figure 2-94 Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 2

6. Set the dial options for Message 3 (Day Informational Greeting) as shown below.

**System Data**  
25-06 : VRS/DISA 1-digit Code Attendant Setup

Received Digit	Next Attendant Message	Destination Number
1	0	
2	0	
3	3	
4	106	
5	0	
6	0	
7	0	
8	0	
9	0	
0	0	101
*	0	
#	1	

Attendant Message (1-100) 3

Dial options are set on a per message basis so be sure to select the appropriate message before setting any options.

Message 3 is the Day Informational Greeting and has the following dial options:

3 = Replays Message 3.

4 = Allows callers to leave a message.

0 = Routes callers to the Operator's extension 101. You can only enter valid extension numbers in this field and cannot use '0' as the routing destination.

# = Routes callers back to the Day Main Greeting (Message 1)

Figure 2-95 Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 3

- Set the dial options for Message 4 (Night Informational Greeting) as shown below.



**Figure 2-96 Program 25-06: VRS/DISA 1-digit Code Attendant Setup – Example 4**

- Record Greetings 1-4 making sure to record the dialing options as listed for each greeting. See Operation section below for message recording instructions.

### Default Setting

None

## System Availability

### Terminals

All Terminals

### Required Component(s)

CD-CP00-US

## Related Features

### Account Code – Forced/Verified/Unverified

## Automatic Call Distribution (ACD)

### Call Forwarding

### Voice Response System (VRS)

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-10-20	<b>Service Code Setup (for System Administrator) – VRS - Record/ Erase Message</b>	Define the service code to record or erase a VRS message.	MLT, SLT (default = 616)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-07-13	<b>Class of Service Options (Administrator Level) – VRS Record (VRS Msg Operation)</b>	Turn Off or On an extension user ability to record, listen to, or erase VRS messages.	0 = Off 1 = On (default = 0 for COS 1~14) (default = 1 for COS 15)		✓	
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Designate an extension operator. This setting determines which phone will show the message notification for outside caller messages.	Up to eight digits (default = ext. 101)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
22-02-01	<b>Incoming Call Trunk Setup</b>	For each Night Service mode and each trunk, enter 1 if trunk should be automatically answered by VRS Automated Attendant.	Trunks 1~200 0 = Normal 1 = VRS (second dial tone if no VRS installed) 2 = DISA 3 = DID 4 = DIL 5 = E&M Tie line 6 = Delayed VRS 7 = ANI/DNIS 8 = DID(DDI) Mode Switching (default = 0)		✓	
25-02-01	<b>DID/DISA VRS Message</b>	For each Night Service mode and each trunk, enter 1 at the Talkie prompt if trunk should be automatically answered by VRS and the message number the caller should hear (1~4).	0 = No Message 1 = VRS (01~004 VRS Message Number) 2 = ACI (01~04 ACI Group Number) 3 = Department Groups (01~64 Extension Group Number) (default = 0)		✓	
25-06-01	<b>VRS/DISA One-Digit Code Attendant Setup – Next Attendant Message Number</b>	Set up single digit dialing for Automated Attendant callers. For each VRS Message programmed to answer outside calls (see Program 25-02-01), specify the digit the Automated Attendant caller dials (1~9, 0, *, #).  If the dialed digit is an option to leave a message, this should be set to 106.  If the dialed digit is to play another VRS message, this should be set to the message number (001-004).	0~100 (0 = No Setting) 101 = Voice MAil Answers 104 = Refer to 25-04: VRS/DISA Transfer Ring Group with No Answer/ Busy 105 = Dial the other extension 106 = Take embedded VRS message (default = 0)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-06-02	<b>VRS/DISA One-Digit Code Attendant Setup – Destination Number</b>	Set up single digit dialing for Automated Attendant callers. For each VRS Message programmed to answer outside calls (see Program 25-02-01), specify the destination reached (eight digits maximum) when the caller dials the single digit code.  If the dialed digit is an option to be routed to a valid extension, this should be set to the extension number.	Up to eight digits (default not assigned)		✓	
40-07-01	<b>Voice Prompt Language Assignment for VRS</b>	Select the language prompt set that has been uploaded for Embedded VRS. Although the system allows this option to be changed in programming, the language changes only if the appropriate Embedded VRS language prompt set has been uploaded to the CCPU.	1 = US English 4 = CA French 6 = Mex Spanish (default = 1)		✓	
40-10-01	<b>Voice Announcement Service Option – VRS Fixed Message</b>	Enable (1)/Disable (0) the system ability to play the fixed VRS messages (such as You have a message).	0= Not Used 1= Used (default = 0)	✓		

## Operation

### VRS Messages:

#### To record a VRS message:

1. Press **Speaker** or lift the handset.  
  
-OR-  
At a Single Line Telephone, lift the handset.
2. Dial **616**.
3. Dial **7 (Record)**.
4. Dial the VRS message number you want to record (001~004).

5. When you hear, "Start recording at the tone and press the POUND key when you are done" followed by a beep, record your message.

6. Press # to end recording.

**-OR-**

Hang up to save the message.

#### **To listen to a previously recorded VRS message:**

1. Press **Speaker** or lift the handset.


**-OR-**

At a Single Line Telephone, lift the handset.

2. Dial **616**.

3. Dial **5 (Listen)**.

4. Dial the VRS message number to which you want to listen (001~004).

 *You hear the previously recorded message. If you hear a beep instead, no previous message is recorded.*

5. Press # to hear the message again.

**-OR-**

To hear another message, dial 5 and then enter the message number (001~004).

**-OR-**

Hang up.

#### **To erase a previously recorded VRS message:**

1. Press **Speaker** or lift the handset.

**-OR-**

At a Single Line Telephone, lift the handset.

2. Dial **616**.

3. Dial **3 (Erase)**.

4. Dial the number of the VRS message you want to erase (001~004).

5. Press **Hold** (multiline terminal only) to cancel the procedure without erasing (and return to step 3).

**-OR-**

Hang up to erase the message.

**To listen to a message left by an outside caller:**

1. Press **Speaker** or lift the handset.

**-OR-**

At a Single Line Telephone, lift the handset.

2. Dial **616**.
3. Dial **5 (Listen)**.
4. Dial the VRS message number to which you want to listen (091~100).

 *You hear the message left by the outside caller. If you hear a beep instead, no message is recorded.*

5. Press **#** to hear the message again.

**-OR-**

To hear another message, dial 5 and then enter the message number (091~100).

**-OR-**

To delete the message, dial 3, enter the message number (091~100), press **#** and hang up.

**-OR-**

Hang up.

**Reference**

**Table 2-147 Embedded VRS Prompts**

Prompt	How can I listen to this?
The number you have dialed is not in service.	Dial a service code for a feature that is not allowed by the station Class of Service.
Vacant number.	Dial an extension number which does not exist.
Your call cannot go through, please call the operator.	Dial an outgoing number which is not allowed by Toll Restriction.
Please do not disturb.	Dial an extension number which is in DND.
Please hold on, your call is being rerouted.	Dial an extension number which is set for Call Forward Off-Premise.
Please enter an account code.	Make an outgoing call from a telephone which requires an Account Code.
Recording finished.	Record a VRS message and press <b>#</b> when finished.
Your call has been forwarded.	Setup the Call Forwarding and receive a call to the telephone.
Start recording at the tone and press the POUND key when you are done.	Perform the VRS recording.

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# Voice Response System (VRS) Upload Download Audio

## Enhancements

This feature added with <b>Version 3000</b> .
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## Description

The Voice Response System (VRS) Upload Download Audio feature allows the upload of VRS greetings up to 1MB in size, recorded on a PC or professionally, to any valid VRS message in the system. It also allows users to listen to and delete VRS messages from callers. Access to the InMail/VRS compact flash drive is via the HTML User Pro (Web Pro).

Starting with **Version 4000** software, the User Admin (UA Mode) can change Routing Mailbox greetings for the following Routing mailbox types: Instruction (Call Routing), Announcement and Group.

## Audio Prompt Format

In order for uploaded greetings to properly play on the VRS InMail CF they must be in the proper format. Audio files not recorded in the proper format may not playback on the VRS/InMail CF. The proper format is:

Bit Rate	64kbps
Sampling Size	8 bits
Channel	1 (Mono)
Sampling Rate	8 KHz
Audio Format	CCiTT u-law

## User Pro Access

There are two different User Pro logins available to make changes to audio files on the InMail/VRS CF, but only one allows changes to be made to VRS messages. To login, open an Internet browser and enter the IP of the SV8100 LAN port in the address line. At default, the IP address is 192.168.0.10.

**User Admin Mode (UA Mode):** This mode allows the user admin to access any telephone and mailbox in the system. This mode must be used to change VRS and Routing Mailbox greetings. At default the login ID is USER1 and the password is 1111.

**User Mode (UB Mode):** This mode allows a user to access only their own telephone and mailbox when logged in. They will not be able to change any other telephone, mailbox, VRS or Routing Mailbox. At default the login ID is the “Extension Number” and the password is 1111.

The following details the page layout diagram of the two different User Pro login IDs:

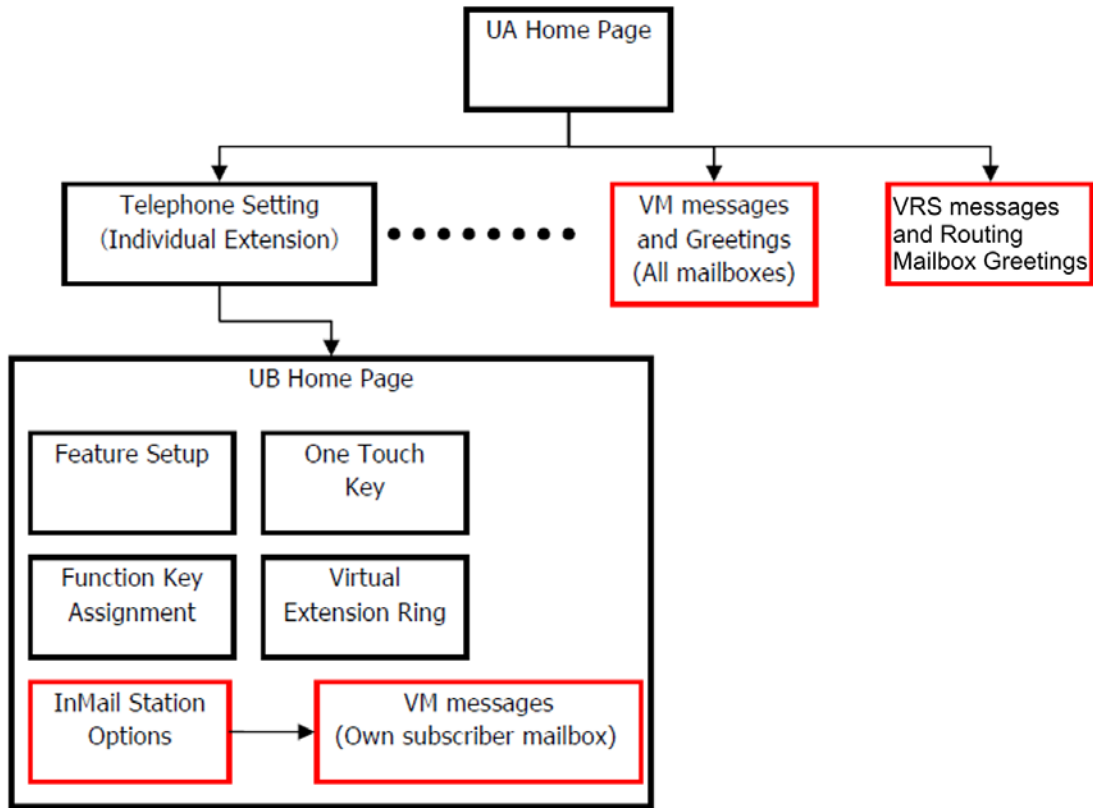


Figure 2-97 VRS User Pro Login Diagram

### Message Name Format


Downloaded messages are automatically assigned a name by the SV8100. This name includes the mailbox number the message was left in, type of message, the message number and the date and time to the second the message was left. [Table 2-148 Default Incoming Ringing Tone on page 2-2013](#) shows how to interpret the message name to determine this information.

Table 2-148 Default Incoming Ringing Tone

File Name Format	BTNNN_YYYYMMDD_HHMMSS.wav (maximum 32 characters)
B	Mailbox number (maximum eight digits) or VRS for the VRS message
T	Message Type + : Greeting or VRS message - : Recorded message
NNN	Message number (three digits)
YYYY	Year
MM	Month (1~12)
DD	Date (1~31)
HH	Hour (00~23)
MM	Minute (00~59)
SS	Second (00~59)

## Conditions

- With **Version 3000 or lower** software, uploading audio files to any type of Call Routing box and Group mailboxes are not supported. Auto attendant and group mailbox greetings cannot be uploaded or deleted in the End User WebPro interface.
- With **Version 4000 or higher** software, uploading audio files to any type of Call Routing box and Group mailboxes is supported. Auto attendant and group mailbox greetings can be uploaded or deleted using End User WebPro interface with the UA login.
- VRS and InMail messages are recorded in an ADPCM format which may not be easily opened on the support PC.
- It is not possible to upload/download/delete multiple files simultaneously.
- The mailbox will be inaccessible from the telephone under these conditions:
  - Mailbox XXX will not be accessible when opening the telephone setup screen of extension XXX by UA or UB mode in User Pro.
  - Mailbox XXX will not be accessible when selecting the extension XXX on the file upload/download screen of UA mode User Pro.
  - Mailbox XXX will be inaccessible when logging in the UB mode User Pro for extension XXX.
- While uploading an audio file via User Pro the greeting is not accessible by telephone.

- When downloading/deleting an audio file via User Pro, the file is not accessible by another User Pro session or from the telephone.
- This feature is only supported using a LAN connection.
- When uploading an audio file the extension will be checked whether it is WAV or not. However, the format of the uploaded file will not be checked. If the uploaded file is not in the proper format it may not playback properly.
- When a mailbox has a new message and the message is deleted using the User Pro interface, the MWI of the mailbox will NOT be cancelled.
- The largest allowed upload file size is approximately 1MB. Files larger than this cannot be uploaded.
- There is no size limitation when downloading audio files.
- User Pro does not check the uploaded file for correct naming format (i.e., BTNNN\_YYYYMMDD\_HHMMSS.wav). The file name will be automatically changed when the file is written in the CF.
- The actual file name of the messages is not displayed in User Pro. The message number, modified date and file size are displayed instead. If there is no message file, "-" will be displayed and the download/delete icon will not be displayed.
- The User Pro message page does not refresh automatically, to see new messages the page must be refreshed. For instance, if a new message is received via regular operation on the system while a user is viewing the upload/download screen, the new message is not shown until the page is reloaded by clicking the  icon.
- At default, Microsoft Windows will automatically open and play the downloaded WAV. To make **Open** or **Save** selectable, the following settings are required:
  - Windows XP
    1. Select **Control Panel** then **Folder Options**.
    2. Click on the **Files** tab.
    3. Select the **WAV** extension from the list, then click **Advanced**.
    4. Check **Confirm to open the file after download**, then click **OK**.
    5. Close the folder option by clicking **OK** again.
  - Windows Vista: It is not possible to change the save to folder option. The downloaded file is automatically opened for playback.

## Default Setting

None

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## System Availability

### Terminals

All Terminals

### Required Component(s)

- PZ-VM21
- VM8000 InMail CF
- CPU License

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## Related Features

### Voice Response System (VRS)


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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-02-01	Programming Password Setup – User Name	Set the system passwords.	Maximum 10 characters Refer to the SV8100 Programming Manual for default settings.		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
90-02-02	<b>Programming Password Setup – Password</b>	Configure the administrator accounts that are used when connecting to the KTS via PCPro/ WebPro. If using PCPro, these are the accounts that are used to <i>connect</i> . If using WebPro, these are the accounts that are used to login.  <i>If calls are answered by an Auto attendant first, instead of the DIL setup on Program 22-01 and Program 22-07, set the transfer destination in the Auto Attendant to the Modem Access Service Code.</i>	Up to eight digits. Refer to the SV8100 Programming Manual for default settings.		✓	
90-02-03	<b>Programming Password Setup – User Level</b>	Set the system password user levels.	0 = Prohibited User 1 = MF (Manufacturer Level) 2 = IN (Installer Level) 3 = SA (System Administrator Level 1) 4 = SB (System Administrator Level 2) 5 = UA (User Programming Level 1) Refer to the SV8100 Programming Manual for default settings.		✓	

## Troubleshooting

The table below shows possible Error messages and Causes:

**Table 2-149 Error Messages and Causes**

Error Message	Cause
VMDB is not attached	The PZ-VM21 is not attached.
Mailbox XXX does not exist. (XXX = mailbox number)	The mailbox does not exist
The mailbox is being used by another session	When the mailbox is being used by another session, either PC or telephone.
There is no available space in the CF.	When there is no available space in the CF.
The file is being used by another session. Please try again later.	When the file to be downloaded is being used by another session, either PC or telephone.

**Table 2-149 Error Messages and Causes (Continued)**

<b>Error Message</b>	<b>Cause</b>
The selected file has already been deleted.	When the file selected for download has already been deleted.
The file is being used by another session. Please try again later.	When the file selected for deletion is being used by another session.
The selected file has already been deleted.	When the file selected for deletion has already been deleted.
Cannot upload the file since the original file is being used by another session. Please try again later.	When the file to be replaced is being used when trying to upload the replacement.


## Operation

### Changing VRS Messages using User Admin Mode (UA):

Audio files up to 1MB may be uploaded to the SV8100 for VRS messages. All 100 VRS messages can be uploaded or deleted. The messages can be used on all VRS features: General Message, Automated Attendant greetings, ACD messages and the 900 Preamble.

In order for uploaded messages to play they must be in the proper format. Audio files not recorded in the proper format may not playback. The proper format is:

Bit Rate	64kbps
Sampling Size	8 bits
Channel	1 (Mono)
Sampling Rate	8 KHz
Audio Format	CCiTT u-law

1. To login, open an Internet browser and enter the IP of the SV8100 LAN port in the address line. At default, the IP address is 192.168.0.10.
2. At the login screen enter username = USER1 and password = 1111.
3. You will then see the main menu, click on the VRS Audio Up/Download icon.
4. There can be up to 100 VRS messages and you may need to scroll through several pages or jump to get to the desired message number.
  -  *The message numbers correspond to the same message number when accessed via the telephone. Message 1 is 001, message 2 is 002 and message 3 is 003, etc.*
5. To delete a message, click on the red X to the right of the appropriate message.

6. To Upload a message:

- Under Message No, enter the message number to be replaced.
- Browse to find the location where the greeting file is stored.
- Click on the upload icon to the right of the selected file name.
- Depending on file size and LAN speed, it may take a minute to upload the greeting.
- The uploaded message will appear in the assigned location.



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# *Voice Response System (VRS) – Call Forwarding – Park and Page*

## Enhancements

This feature previously supported as Call Forwarding - Park and Page, has been renamed Voice Response System (VRS) – Call Forwarding – Park and Page with <b>Version 1100</b> .
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## Description

When an extension user is away from their phone, VRS Park and Page can let them know when they have a call waiting to be answered. The Personal Greeting and Park & Page options can have up to 200 messages total (note that the Park & Page feature uses two messages). To enable VRS Park and Page, the user records a Personal Greeting along with an additional Paging announcement. VRS Park and Page then answers an incoming call and plays the Personal Greeting to the caller. The caller then listens to Music on Hold (if available) while the system broadcasts the recorded Paging announcement. When the extension user hears the Page, they can go to any telephone and use Directed Call Pickup to intercept the call.

For example, John Smith could record a Personal Greeting that says:

“Hello, this is John Smith. I am away from my phone right now but please hold on while I am automatically paged.”

The recorded Paging announcement could say:

“John Smith, you have a call waiting on your line.”

The incoming caller hears the first message and listens to Music on Hold while the system broadcasts the second message. John Smith could then walk to any phone and pick up his call. If John doesn't pick up the call, the Page periodically repeats.

VRS Park and Page follows the rules for Personal Greeting for All Calls, immediately rerouted. This means that Park and Page activates for ringing Intercom calls, DID calls and DISA calls. It also activates for calls transferred from the Automated Attendant. Additionally, calls from the Automated Attendant follow Automatic Overflow routing if not picked up. Park and Page activates for transferred outside calls but does not play the Personal Greeting to the caller. If a call comes in when the specified Page zone is busy, the system broadcasts the announcement when the zone becomes free.

## Conditions

- VRS Park and Page announcements only repeat once.
- Voice Announcement (VAU) recording time is fixed at two minutes and cannot be changed.
- While VRS Park and Page is enabled, only one DID call at a time can be processed. Subsequent callers hear a busy tone.
- This feature is not supported for CO transferred calls.

## Default Setting

- VRS Park and Page is available at default for internal paging access code 701, zone 1.
- Use access code 713. See feature Operation. Set Program 40-10-01 for VRS guidance message.

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## System Availability

### Terminals

None

### Required Component(s)

- CD-CP00-US Blade with PZ-VM21 Daughter Board
- VM8000 InMail CompactFlash
- CPU License for VRS

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## Related Features

### Analog Communication Interface (ACI)

### Music on Hold

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-11-58	<b>Service Code Setup (for Setup/Entry Operation) – Call Forward with Personal Greeting</b>	Call forward with Personal greeting VRS. Service code setup.	MLT, SLT (default = 713)		✓	
11-12-19	<b>Service Code Setup (for Service Access) – Internal Group Paging</b>	Service code setup.	MLT, SLT (default = 701)		✓	
11-12-20	<b>Service Code Setup (for Service Access) – External Paging</b>	External paging access code. Service code setup.	MLT, SLT (default = 703)		✓	
11-12-24	<b>Service Code Setup (for Service Access) – Combined Paging</b>	Combined paging, internal/external access code. Service code setup.	MLT, SLT (default = *1)		✓	
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to extensions.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1	✓		
31-02-01	<b>Internal Paging Group Assignment – Internal Paging Group Number</b>	Assign extensions to Internal Paging Groups (i.e., Page Zones). The system allows up to 64 Internal Paging Groups. An extension can be in only one Internal Paging Group.	0~64 (0 = No Setting) Default: 0 for IP Station 1 for TDM Station	✓		
31-03-01	<b>Internal Paging Group Settings – Internal Paging Group Name</b>	Assign name to Internal Paging Groups (i.e., Page Zones). The system shows the name you program on the telephone displays.	Up to 12 Characters 01 = Group 1 02 = Group 2 : : 64 = Group 64	✓		



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
31-04-01	<b>External Paging Zone Group – Paging Group Number</b>	Assign each External Paging Speaker to an External Paging Zone.	Paging Group Number 0~8 (0 = No Setting) Speaker 1 [PGD(2)-U10 ADP] = 1 (Group 1) Speaker 2 [PGD(2)-U10 ADP] = 2 (Group 2) Speaker 3 [PGD(2)-U10 ADP] = 3 (Group 3) Speaker 4 [PGD(2)-U10 ADP] = 4 (Group 4) Speaker 5 [PGD(2)-U10 ADP] = 5 (Group 5) Speaker 6 [PGD(2)-U10 ADP] = 6 (Group 6) Speaker 7 [PGD(2)-U10 ADP] = 7 (Group 7) Speaker 8 [PGD(2)-U10 ADP] = 8 (Group 8) Speaker 9 (CD-CP00-US) = 1 (Group 1)	✓		
31-06-01	<b>External Speaker Control – Broadcast Splash Tone Before Paging (Paging Start Tone)</b>	Enable/Disable splash tone before Paging over an external zone. If enabled, the system broadcasts a splash tone before the External Paging announcement.	0 = No Tone (None) 1 = Splash Tone 2 = Chime Tone (default = 2)	✓		
31-06-02	<b>External Speaker Control – Broadcast Splash Tone After Paging (Paging End Time)</b>	Enable/Disable splash tone after Paging over an external zone. If enabled, the system broadcasts a splash tone at the end of an External Paging announcement.	0 = No Tone (None) 1 = Splash Tone 2 = Chime Tone (default = 2)	✓		
40-10-01	<b>Voice Announcement Service Option – VRS Fixed Message</b>	Enable/Disable the system ability to play the fixed VRS messages (such as, You have a message).	0= Not Used 1= Used (default = 0)	✓		
40-10-05	<b>Voice Announcement Service Option – Park and Page Repeat Timer (VRS Msg Resend)</b>	If a Park and Page is not picked up in this time, the Paging announcement repeats.	0~64800 (seconds) (default = 0)	✓		

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## Operation

### To have the system page you when you have a call:

1. Press **Speaker** (or lift the handset at the single line telephone) and dial **713**.
2. When you hear, "Please start recording," record your Personal Greeting.
  -  *If you already have Park and Page or Personal Greeting set up, you can dial:  
  
3 to erase (the optionally HOLD to cancel the erase)  
5 to listen (then # again to listen again)  
7 to record again*
3. Dial **#7**.
4. When you hear, "Please start recording," record your page and dial # when the announcement is complete.
  -  *A paging chime overrides the first four seconds of an announcement. Allow a delay in announcement recording for chime time.*
5. Dial the Page Zone that should broadcast your announcement.  
*For example, for Internal Zone 1 dial 701 + 1, or for Combined Paging Zone, 1 dial \*1 + 1.*
6. Dial the Park and Page type:  
**2** = All Calls  
**3** = Outside Calls Only
7. Press **Speaker** to hang up (or go on-hook at the single line telephone).

### To pick up your Park and Page:

1. Press **Speaker** (or lift the handset at the single line telephone).
2. Dial **\*\*** + your extension number.

### To cancel your Park and Page:

1. Press **Speaker** (or lift the handset at the single line telephone).
2. Dial **713 + 3**.
3. Press **Speaker** to hang up (or go on-hook at the single line telephone).

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# Volume Controls

## Enhancements

With <b>Version 7000 or higher</b> software, the handset/speaker volume for intercom calls or outside calls can be adjusted.
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## Description

Each multiline terminal user can control the volume of incoming ringing, splash tone, Paging, Background Music, Handsfree and your handset. Multiline terminals consolidate all adjustments into the volume buttons. Press the VOLUME ▲ or VOLUME ▼ to adjust the volume level for whichever feature is active (outside call, ICM, ICM ringing, paging, etc.). Press these keys when the telephone is idle to adjust the contrast level of the telephone display. The users should set the volumes for their most comfortable levels.

## Conditions

- The contrast is not adjustable when the telephone has background music enabled.
- Multiline terminal users can press the Speaker key and dial Code 729 to further increase station ring volume.
- Headset volume, off-hook ringing volume, station ringing volume, and speaker volume adjustments are determined by Program 15-02-27.
- The LCD of the Electra Elite IPK and SV8100 terminals provide a volume bar indication while adjusting the following volumes or controls:
  - Speaker Volume
  - Handset/Headset Volume
  - Background Music (BGM) Volume
  - Ring Volume/Off-Hook Ring Volume
  - LCD Contrast
- With **Version 7000 or higher** software, the handset/speaker volume for intercom calls or outside calls can be adjusted.

## **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

All Multiline Terminals

### **Required Component(s)**

None

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## **Related Features**

**Electra Elite IPK Terminals**

**SV8100/SV8300 Terminals**

**Off-Hook Signaling**



## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-02-27	<b>Multiline Telephone Basic Data Setup – Handset Volume</b>	Determine how an extension handset volume is set after it is adjusted during a call. When 1 is assigned, and a user sets the volume to maximum, it is reset to a level to meet FCC standards when the user hangs up.	0 = Back to Default (Back) 1 = Stay at previous level (Stay) (default = 1)		✓	


## Operation

### To adjust the volume of incoming ringing and splash tone:

1. If the telephone is idle, press **Speaker** and dial **729**. If the telephone is ringing, skip to Step 2.
2. Press VOLUME ▲ or VOLUME ▼.

### To adjust the volume of ringing incoming Paging announcements, Handsfree, the handset or Background Music:

1. Press VOLUME ▲ or VOLUME ▼.

 *The feature must be active to change the volume. Press the volume keys when the telephone is idle to adjust the display contrast.*

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# *Warning Tone for Long Conversation*

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## **Description**

The system can broadcast warning tones to a trunk caller, warning the caller that he has been on the call too long. If he chooses, the caller can disregard the tones and continue talking. The outside caller does not hear the warning tones. Warning tones do not occur for Intercom calls and most incoming trunk calls. DISA trunks can also have warning tones. Warning tones are not available to analog single line telephone (SLT) users.

There are two warning tones: Alarm Tone 1 and Alarm Tone 2. Alarm Tone 1 is the first set of tones that occur after the user initially places a trunk call. Alarm Tone 2 broadcasts periodically after Alarm Tone 1 as a continued reminder. Each alarm tone consists of three short beeps.

If programmed, DISA calls are disconnected unless the continue code is entered by the user. With the Long Conversation Cutoff feature, incoming or outgoing central office calls can also be disconnected.

## **Warning Tone for DISA Callers**

For DISA callers, with this feature enabled, the warning tone timer begins when an incoming DISA call places an outgoing call and either the inter-digit timer expires or the outgoing call is answered.

If an outside call is transferred to forwarded off-premise using an outside trunk, the warning tone timer begins immediately. This occurs only if either trunk involved in the call is programmed for this feature (Program 14-01-17). When transferring a trunk call off-premise, Program 14-01-13 must be enabled (set to 1).

## **Conditions**

- Warning Tone for Long Conversation does not occur for incoming trunk calls.
- Warning Tone for Long Conversation occurs for all outgoing trunk calls, regardless of how they are placed or other outgoing restrictions.
- Warning Tone for Long Conversation can be enabled for DISA calls.
- Warning Tone for Long Conversation does not occur for Intercom calls.
- Warning Tone for Long Conversation can be used with the Long Conversation Cutoff feature for outgoing calls.
- Warning Tone is presented on a single line telephone in the ear piece.



## Default Setting

Disabled

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## Related Features

Central Office Calls, Answering

Central Office Calls, Placing

Direct Inward System Access (DISA)

Intercom

Long Conversation Cutoff

Single Line Telephones, Analog 500/2500 Sets

Code Restriction

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## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
14-01-17	<b>Basic Trunk Data Setup – Trunk to Trunk Warning Tone for Long Conversation Alarm</b>	Determine whether DISA callers should hear the Warning Tone for Long Conversations.	0 = Disable 1 = Enable (default = 0)	✓		
14-01-25	<b>Basic Trunk Data Setup – Continued/Discontinued Trunk-to-Trunk Conversation</b>	When Program 24-02-10 is set to disconnect a trunk after the defined time, determine whether or not a user can use the continue/discontinued code.	0 = Disable 1 = Enable (default = 0)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day/Night Mode: 1~8 Class of Service for Extensions: 1~15 Defaults: Extension number 101 as Class 15. All other extension numbers are set as Class 1.	✓		
20-13-01	<b>Class of Service Options (Supplementary Service) – Long Conversation Alarm</b>	Turn Off or On the Warning Tone for Long Conversation (not for single line telephones).	0 = Off 1 = On (default = 0 for COS 1~15)	✓		
20-21-01	<b>System Options for Long Conversation – Long Conversation Alarm 1</b>	After a user places a trunk call, the system sends the first warning tone to their extension after this time.	0~64800 (seconds) (default = 170)		✓	
20-21-02	<b>System Options for Long Conversation – Long Conversation Alarm 2</b>	After hearing the first warning tone, the system sends additional warning tones after this time. The warning tones continue, spaced by this time, until the user hangs up.	0~64800 (seconds) (default = 180)		✓	
20-28-01	<b>Trunk to Trunk Conversation – Conversation Continue Code</b>	Enter a single digit Continue Code for the DISA call to use to immediately disconnect or continue their outside call.	0~9, #, * (default not assigned)	✓		
20-28-02	<b>Trunk to Trunk Conversation – Conversation Disconnect Code</b>	Enter a single digit Disconnect for the DISA call to use to immediately disconnect or continue their outside call.	0~9, #, * (default not assigned)	✓		
20-28-03	<b>Trunk to Trunk Conversation – Conversation Continue Time</b>	When Program 14-01-25 is enabled, determine the time a call is extended when the user dials the Continue code defined in Program 20-28-01.	0~64800 (seconds) (default = 0)	✓		
21-01-01	<b>System Options for Outgoing Calls – Seizure Trunk Line Mode</b>	Select the trunk based on the Trunk Route Priority (0) or based on the trunk that has not been used in the longest time (1).	0 = Priority Route 1 = Circular Route (default = 0)		✓	
21-01-03	<b>System Options for Outgoing Calls – Trunk Interdigit Time (External)</b>	The system waits for this time to expire before placing the call in a talk state (Call Timer starts after time expires. Voice Over and Barge-In are not allowed until after time expires).	0~64800 (seconds) (default = 5)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
25-07-07	<b>System Timers for VRS/DISA – Long Conversation Warning Tone Time</b>	Determine the time a DISA caller or any trunk-to-trunk (Such as Tandem Trunking) conversation can talk before the Long Conversation tone is heard.	0~64800 (seconds) (default = 3600)		✓	
25-07-08	<b>System Timers for VRS/DISA – Long Conversation Disconnect Time</b>	Determine the time the system waits before disconnecting a DISA caller or any trunk-to-trunk (Such as Tandem Trunking) conversation call after the Long Conversation tone is heard.	0~64800 (seconds) (default = 10)		✓	

## Operation

Warning Tone for Long Conversation is automatic if programmed.

### Warning Tone for Long Conversation for DISA Callers:

1. A DISA caller dials into the system and places a call.
2. After the Warning Tone is heard, **To continue the call** the DISA caller can press the programmed Continue Code.

- OR -

**To disconnect the call**, the DISA caller can press the programmed Disconnect Code.

## *Wireless DECT (SIP)*

### Enhancements

With **Version 4000 (4.01 or higher)** software, the SIP DECT handset can display the calling name on an inbound call. This priority is fixed in system programming. With **Version 4000**, Program 15-05-17 is no longer used.

With **Version 5000 (5.00 or higher)** software, Off-hook signaling and Caller ID display after a call transfer has been added.

With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

With **SV8100 Version 9000 (9.00 or higher)** software, the system has the ability to receive DTMF information in SIP INFO messages sent by Standard SIP Terminals. This allows the SIP Terminal to initiate features during a ringing state such as Camp-On and Message Waiting.

### Description

The Wireless DECT (SIP) (Digital Enhanced Cordless Telecommunication) system allows using DECT 6.0 DECT (SIP) handsets. These handsets provide the freedom and convenience of a wireless telephone but also allow access to features provided by the UNIVERGE SV8100 system.

The number of Wireless DECT (SIP) handsets supported by the UNIVERGE SV8100 is dependant on the number of SIP Client licenses.

[Table 2-150 Supported Wireless DECT \(SIP\) Features](#) lists the SV8100 features supported on the Wireless DECT (SIP).

**Table 2-150 Supported Wireless DECT (SIP) Features**

Feature Name	SIP DECT	Comments SIP DECT
Account Code – Forced/Verified/Unverified	Yes	
Account Code Entry	Yes	
Alarm	No	
Alarm Reports	No	
Alphanumeric Display	Yes	IP Dect Handsets have Alphanumeric Display and are backlit. However, the display is not updated with CPU messages

Table 2-150 Supported Wireless DECT (SIP) Features (Continued)

Feature Name	SIP DECT	Comments SIP DECT
Analog Communications Interface (ACI)	No	
Ancillary Device Connection	No	
Answer Hold	No	
Answer Key	No	
Attendant Call Queuing	No	
Automatic Call Distribution (ACD)	No	
Automatic Release	Yes	
Automatic Route Selection	Yes	
Background Music	No	
Barge-In	No	
Battery Backup – System Memory	N/A	
Battery Backup – System Power	N/A	
Call Appearance (CAP) Keys	No	
Call Arrival (CAR) Keys	No	
Call Duration Timer	Yes	SIP DECT handset timer not system timer.
Call Forwarding – Centrex	Yes	
Call Forwarding	Yes	Must be programmed in 24-09 or through feature code in handset.
Call Forwarding with Follow Me	No	
Call Forwarding, Off-Premise	Yes	
Call Forwarding/Do Not Disturb Override	Yes	
Call Monitoring	No	
Call Redirect	No	
Call Waiting/Camp-On	Yes	Can only set Camp-On to IP DECT handset from softkey menu of multiline terminal, not with access codes.
Callback	No	
Caller ID Call Return	N/A	
Caller ID	Yes	Only on ISDN or SIP Trunks. Analog Caller ID is not supported.
Central Office Calls, Answering	Yes	
Central Office Calls, Placing	Yes	
Class of Service	Yes	



Table 2-150 Supported Wireless DECT (SIP) Features (Continued)

Feature Name	SIP DECT	Comments SIP DECT
Clock/Calendar Display	No	
CO Message Waiting Indication	No	
Code Restriction	Yes	
Code Restriction Override	Yes	
Code Restriction, Dial Block	Yes	
Computer Telephony Integration (CTI) Applications	No	
Conference	No	
Conference, Voice Call/Privacy Release	No	
Cordless Telephone Connection	No	
Data Line Security	Yes	Barge-In is not supported.
Delayed Ringing	No	
Department Calling	No	
Department Step Calling	Yes	
Dial Pad Confirmation Tone	No	
Dial Tone Detection	No	
Dialing Number Preview	Yes	
Direct Inward Dialing (DID)	Yes	
Direct Inward Line (DIL)	Yes	
Direct Inward System Access (DISA)	Yes	
Direct Station Selection (DSS) Console	No	
Directed Call Pickup	Yes	
Directory Dialing	No	
Distinctive Ringing, Tones and Flash Patterns	No	
Do Not Disturb	No	
Do Not Disturb/Call Forward Override	Yes	
Door Box	Yes	Door Box will not ring IP DECT handset. IP DECT handset can call doorbox, but cannot activate the relay.
Drop Key	No	
<i>D<sup>term</sup></i> Cordless II Terminal	No	
<i>D<sup>term</sup></i> Cordless Lite II Terminal	No	

Table 2-150 Supported Wireless DECT (SIP) Features (Continued)

Feature Name	SIP DECT	Comments SIP DECT
<i>D<sup>term</sup></i> Handset Cordless	No	
<i>D<sup>term</sup></i> IP Gateway System	No	
E911 Compatibility	Yes	
Electra Elite IPK Terminals	No	
Electra Elite Terminal Migration	No	
Facsimile CO Branch Connection	No	
Flash	Yes	
Flexible System Numbering	Yes	SIP DECT numbering controlled through IP DECT Manager application.
Flexible Timeouts	Yes	
Forced Trunk Disconnect	No	
Group Call Pickup	Yes	
Group Listen	No	
Handset Mute	Yes	
Handsfree and Monitor	Yes	Handsfree is supported by handset.
Handsfree Answerback/Forced Intercom Ringing	No	
Headset Operation	Yes	
Hold	Yes	
Hotel/Motel	No	
Hotline	Yes	Handset can be a hotline destination, but cannot originate a hotline call.
Howler Tone Service	No	
Intercom	Yes	
Intercom Off-Hook Signaling	Yes	
IP Multiline Station (SIP)	No	
IP Trunk – (SIP) Session Initiation Protocol	Yes	
IP Trunk – H.323	No	
IPK II In-Mail	Yes	Same as SIP station.
ISDN Compatibility	Yes	
K-CCIS – IP	Yes	
K-CCIS – T1	Yes	

**Table 2-150 Supported Wireless DECT (SIP) Features (Continued)**

<b>Feature Name</b>	<b>SIP DECT</b>	<b>Comments SIP DECT</b>
Last Number Redial	No	Redial built in.
Line Preference	No	
Long Conversation Cutoff	Yes	
Meet Me Conference	No	
Meet Me Paging	Yes	
Meet Me Paging Transfer	Yes	
Memo Dial	No	Internal phone book. Capacity varies with handset model.
Message Waiting	Yes	Only VM Message Waiting can be received.
Message Waiting Answer	Yes	
Microphone Cutoff	Yes	Handset has mute function.
Multiple Trunk Types	Yes	
Music on Hold	Yes	
Name Storing	No	
Night Service	No	
Off-Hook Signaling	Yes	R5 Enhancement license required.
One-Touch Calling	No	
Operator	Yes	
Off-Hook Signaling Override	Yes	
(OPX) Off-Premise Extension	No	
Paging, External	Yes	IP DECT handset can only initiate a page, it cannot receive a page or display page information.
Paging, Internal	Yes	IP DECT handset can only initiate a page, it cannot receive a page or display page information.
Park	No	
PBX Compatibility	Yes	
PC Programming	Yes	IP stations can be programmed from PCPro for IP duplication.
Power Failure Transfer	No	
Prime Line Selection	Yes	
Private Line	Yes	
Programmable Function Keys	No	
Programming from a Multiline Terminal	N/A	

Table 2-150 Supported Wireless DECT (SIP) Features (Continued)

Feature Name	SIP DECT	Comments SIP DECT
Pulse to Tone Conversion	No	
Redial Function	No	Handset has redial list.
Quick Transfer to Voice Mail	Yes	MLTs can q/t to the SIP DECT VM, but SIP DECT handset cannot execute Q/T.
Remote (System) Upgrade	N/A	
Repeat Redial	No	
Resident System Program	N/A	
Reverse Voice Over	No	
Ring Groups	Yes	
Ringdown Extension, Internal/External	Yes	IP DECT handset can only be the ringdown destination. It cannot initiate ringdown.
Room Monitor	No	
Save Number Dialed	No	Handsets have own phone book and redial lists
Secondary Incoming Extension	No	
Secretary Call (Buzzer)	No	
Secretary Call Pickup	No	
Selectable Display Messaging	No	
Selectable Ring Tones	Yes	Ring tones are selectable at the handset level, specific to the type of call.
Serial Call	No	
Single Line Telephones, Analog 500/2500 Sets	No	
SLT Adapter	No	
SMB8000 Communications Analyst	Yes	
SMB8000 Conference Bridge	Yes	
SMB8000 Interactive Voice Response	No	
Softkeys	No	All keys are fixed in C124 handset.
Speed Dial – System/Group/Station	No	
Station Hunt	No	
Station Message Detail Recording	Yes	
Station Name Assignment – User Programmable	Yes	Handset name can be programmed in the handset (it does not show the name in Program 15-01-01), but will not display back to IPK II callers.
Station Relocation	No	

**Table 2-150 Supported Wireless DECT (SIP) Features (Continued)**

<b>Feature Name</b>	<b>SIP DECT</b>	<b>Comments SIP DECT</b>
Step Call	Yes	
SV8100 PoE Gigabit Switch	No	
SV8100 UC Desktop Suite Applications	No	
SV8100/SV8300 Terminals	No	
Synchronous Ringing	Yes	
T1 Trunking (with ANI/DNIS Compatibility)	Yes	
Tandem Ringing	No	
Tandem Trunking (Unsupervised Conference)	Yes	Only Tandem Trunking on hangup is supported with IP DECT.
TAPI Compatibility	No	
Tone Override	No	
Traffic Reports	No	
Transfer	Yes	
Trunk Group Routing	Yes	
Trunk Groups	Yes	
Trunk Queuing/Camp-On	No	
UM8000 Mail	No	
Uniform Call Distribution (UCD)	No	
Uniform Numbering Network	Yes	
Universal Slots	N/A	
User Programming Ability	Yes	Limited user customization available.
Virtual Extensions	No	
VM8000 InMail	Yes	
Voice Call & Signal Switching	Yes	Can only send voice/signal switch, not receive.
Voice Mail Integration (Analog)	Yes	
Voice Mail Message Indication on Line Keys	No	
Voice Over	No	
Voice Over Internet Protocol (VoIP)	Yes	By nature, this is a SIP device.
Voice Response System (VRS)	N/A	
Voice Response System (VRS) – Call Forwarding – Park and Page	Yes	

Table 2-150 Supported Wireless DECT (SIP) Features (Continued)

Feature Name	SIP DECT	Comments SIP DECT
Volume Controls	Yes	
Warning Tone for Long Conversation	Yes	
Wireless – DECT	No	

Components of the Wireless DECT (SIP) system include the following:

### NEC C124 SIP DECT Handset

The handset has the following features:

- Alphanumeric Display with Backlight
- LED Indication for Incoming Calls
- Telephone Book with 40 entries

While idle, dial the number to be stored, then press > and OK. Enter the name associated with the number using the dial pad, and press OK.

- Silent Mode (mute all sounds)
- Redial Function (last 10 numbers)

Press ▲ and continue to press ▼ to scroll through the numbers. Press Hook key to dial a number.

- Programming Pause

A long press on # adds a pause to pre-dial or phone book numbers.

- Adjustable Volume

Ring volume can be adjusted using ▲ and ▼ on the handset.

- Key Lock

Press OK and \* to lock the dial pad.

- Ten Different Ring Tones

Ring tones can be selected in the tone setup menu and press OK.

- Microphone Mute

Press ⊗ while the telephone is off-hook to mute the microphone.

- Caller ID Presentation

- Headset Connection

- 
- 
- R-Key for Transfer and Special Services

When off-hook, press R to Recall, transfer.

### **Display Enhancements with Version 4000 (4.01 or higher) Software**

With **Version 4000 (4.01 or higher)** software, the SIP DECT handset can now receive the calling party name on an incoming internal/external call. The priority for the display is as follows:

If calling from a standard SIP terminal

1. Program 15-05-04 nick name.
2. Program 15-01-01 extension name.
3. Calling name from originating standard SIP caller.
4. Extension number.

If calling from an SLT, DT300 (including virtual extensions) or a DT700

1. Program 15-01-01 Extension name.
2. Extension number.

If calling from a trunk, (i.e. SIP trunk, ISDN, Analog C.O.)

1. Calling party name of incoming trunk. (Caller ID information).
2. Program13-04-02 abbreviated dial Name (with matching caller ID).
3. Calling party number.

For trunks, new Program 15-05-40 controls what is displayed and has the following options

1. Both Name and Number.
2. Name only.
3. Number only.
4. None.

If calling from Voice Mail

1. Program 45-01-02 Voice Mail master Name.
2. Program 45-01-09 Centralized Voice Mail Master name.
3. Program 15-01-01 Calling station information (Voicemail extension).

## Conditions

- Program 15-05-17 is no longer used.
- Program 32-04-01 Door Phone Name is not supported.
- Hold recall will not display calling name.
- Transfer recall will not display calling name.
- Alarm is not supported.
- Call forward from trunk is not supported.

## NEC G955 SIP DECT Handset

Features	Description
Call Handling Features	<ul style="list-style-type: none"> <li><input type="radio"/> Automatic Call answer</li> <li><input type="radio"/> Caller log</li> <li><input type="radio"/> CLI (name and number support): when available in a directory presented by name</li> <li><input type="radio"/> Last number redial</li> <li><input type="radio"/> Recall/hold (enquiry)</li> <li><input type="radio"/> Standby time: 120 hours</li> <li><input type="radio"/> Call reject option</li> <li><input type="radio"/> Caller filter</li> <li><input type="radio"/> Crystal clear speech and seamless handover</li> <li><input type="radio"/> On-hook number preparation</li> <li><input type="radio"/> Silent charging</li> <li><input type="radio"/> Talk time: 12 hours</li> </ul>
Directory	<ul style="list-style-type: none"> <li><input type="radio"/> Phone book multiple numbers per contact</li> <li><input type="radio"/> Personal phone book</li> </ul>
Display	<ul style="list-style-type: none"> <li><input type="radio"/> Color Graphic TFT display 160 X 128 pixels (262k)</li> <li><input type="radio"/> Illuminated display: Incoming calls and messages</li> </ul>
Headset	<ul style="list-style-type: none"> <li><input type="radio"/> Headset support</li> <li><input type="radio"/> Bluetooth headset support: via additional Bluetooth module</li> </ul>
Keys	<ul style="list-style-type: none"> <li><input type="radio"/> Function and keypad keys: 24 keys with 12 keypad keys (0~9, *, #), with text mode support</li> <li><input type="radio"/> Recall or enquiry key</li> <li><input type="radio"/> Menu navigation keys: programmable short keys, up, down, left, right</li> <li><input type="radio"/> Power On/Off key</li> <li><input type="radio"/> On and off-hook key: 2 separate keys</li> <li><input type="radio"/> Increase and decrease volume</li> <li><input type="radio"/> OK/confirm key</li> <li><input type="radio"/> Programmable softkeys (2 keys menu dependent function)</li> <li><input type="radio"/> Keypad lock</li> </ul>
Localization	<ul style="list-style-type: none"> <li><input type="radio"/> Multiple supported languages: 13</li> <li><input type="radio"/> Triple frequency band</li> </ul>
Menu	<ul style="list-style-type: none"> <li><input type="radio"/> Easy menu programming</li> </ul>
Mobility/Other	<ul style="list-style-type: none"> <li><input type="radio"/> Multiple subscriptions DECT systems: 8 DECT systems</li> </ul>
Sound/Audio	<ul style="list-style-type: none"> <li><input type="radio"/> Adjustable ringer volume</li> <li><input type="radio"/> Loudspeaker mode/hands free</li> <li><input type="radio"/> Adjustable earpiece/loudspeaker volume</li> <li><input type="radio"/> Microphone mute</li> <li><input type="radio"/> Silent ring support</li> </ul>
Security	<ul style="list-style-type: none"> <li><input type="radio"/> Automatic encryption for secure calls</li> </ul>
Service/Maintenance	<ul style="list-style-type: none"> <li><input type="radio"/> Software upgrading via air interface</li> <li><input type="radio"/> Easy subscription to another handset: by transferring memory card to another handset</li> <li><input type="radio"/> Backup of local data storage: via additional 64k memory card</li> </ul>
User Data	<ul style="list-style-type: none"> <li><input type="radio"/> Internal memory: for storage of local data</li> <li><input type="radio"/> Storage of local user data: personal phone book, caller log, caller filter and calendar entries</li> <li><input type="radio"/> Memory card: the storage capacity can be doubled by adding a memory card. The memory card also contains the subscription information</li> </ul>



Features	Description
User Interface	<ul style="list-style-type: none"> <li>○ Visible indicators: Icon driven menu</li> <li>○ Distinctive melodies for messages and priorities</li> <li>○ Status line indicators in the display</li> <li>○ Ringer tones/melodies: 20 distinctive melodies for external, internal calls</li> <li>○ Audible indicators are user selectable</li> </ul>

## Conditions

- 12 simultaneous calls can be made per DECT Access Point.
- When the Wireless DECT (SIP) telephone does not respond to an incoming call within 12 seconds because it is out of area, the originator hears a busy tone.
- The Out of Area Timer is fixed at eight seconds (Program 20-22-05).
- The maximum number of Wireless DECT (SIP) handsets is 255.
- The maximum number of DAPs is 256.
- Wireless DECT (SIP) is not supported with ACD.
- Off-Hook signaling is not supported for Wireless DECT (SIP) telephones, **Version 4000 (V4.01 or lower)**.
- Off hook signaling is supported with Wireless DECT (SIP) telephones, **Version 5000 (V5.00 or higher)**.
- When replacing the batteries in a C124, G355 or G955 handset, it is necessary to place the handset on the charger for 10 seconds in order to update the battery status indicator.
- NAT or NAPT is only supported on the DT700 series phones. NAT or NAPT is not supported on the ML440, MH240, the Wireless DECT (SIP), SP310 or third party SIP phones.

## Off-Hook Signaling

### Description

This feature enables the display of off-hook signaling on an IP DECT terminal while talking with the 1st call.



Figure 2-98 IP DECT – 2nd Indication

### Conditions

- Multiple call appearance and call waiting indication must be turned on for the SIP DECT system using the IP DECT configurator **V 5.0.1.4 or higher**.
- Program 20-13-54 must be turned on for the class of service the DECT telephone is in.
- If Program 20-13-06 is set on, IP DECT receives an off-hook signaling automatically. If Program 20-13-06 is set off, the 2nd caller hears a busy tone. If the override code is dialed (Program 11-12-03 SC 709) and overrides SC (Program 11-12-03), then the IP DECT receives off-hook signals manually.
- Off-hook signaling is supported from an extension, voicemail and trunk call.
- If a SIP DECT extension is talking to a voice mail port, the system does not send an off-hook signal. Once the SIP DECT disconnects from voice mail, SIP DECT can answer the 2nd call.
- If the 1st call is an extension and the 2nd call is a voice mail, IP DECT answers the 2nd call by pressing the \* button, but can not go back to the 1st call by pressing the \* button. To reconnect to the 1st call again, IP DECT has to disconnect the 2nd call and wait for recall of the 1st call.

- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

## Caller ID Display After a Call Transfer

### Description

Previously in case of screened transfer, if a call was from a trunk line or legacy terminal, etc, the transferrer's calling party number was displayed in IP DECT. In case of an unscreened transfer, the calling party number from where the call was transferred is displayed on the IP DECT.

This feature enables the IP DECT terminal to display the calling party number of the original caller (Transferee) when making a screened or unscreened transfer to an IP DECT terminal.

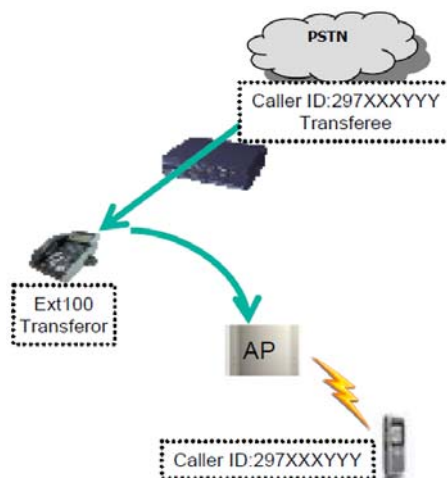


Figure 2-99 IP DECT – Caller ID Display

### Conditions

- Calling party name is not supported in this feature.
- In case of a screened transfer, when the transfer is made, IP DECT shows the calling party number of the original caller (Transferee) after answering the call.
- In case of an unscreened transfer, when the transfer is made, IP DECT shows the calling party number of the original caller (Transferee) before (and after) answering the call.

- With SV8100 **Version 5000 (5.00 or higher)** software and PZ-IPLB daughter board installed, half duplex connections are not supported. For troubleshooting purposes, a managed switch capable of port mirroring is required to capture packet data from the SV8100 IPLB Ethernet port.

## Out of Range Call Warning Notification

### Description

With **Version 8000** software, it is possible to determine when a SIP-Dect terminal is Out of Range or powered off. When an internal caller calls the Out of Range SIP terminal, either a lock out tone or call forwarding can be performed. When the Out of Range timer (Program 24-02-15) expires, CFW is performed when Program 24-09-01 is set to 2-5 and the dial is set to the suitable place of Program 24-09-02~24-09-05. If CFW is not set, the calling terminal hears a Lock-out tone and the following Out of Range notice is displayed on the originators LCD.

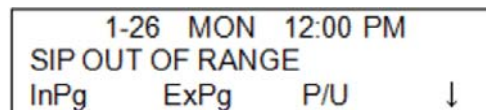


Figure 2-100 Out of Range Example

### Conditions

- When a call comes into an idle SIP terminal which has not been recognized as out of range, the system waits for the timer in Program 24-02-15 (default 4 sec) to expire to determine if the terminal is Out of Range state or not.
- Out of Range transfer works against the SIP terminal in an Out of Range state when Program 24-09-01 is set to a value between 2 and 5 (2: No Answer, 3: Immediate, 4: Busy/No Answer or 5: Busy). In case of a value of 0 or 1 (0: None or 1: Both), Out of Range transfer does not work.
- When the SIP terminal starts ringing and then moves to out of range, the terminal keeps ringing because the terminal is no longer under the control of the system. In this case the Out of Range transfer is not applied.
- Out of Range transfer is applied to individual calls only, group incoming calls or paging call to a SIP terminal are not applied.
- In case of Ring Transfer to the SIP terminal Out of Range transfer is not applied. It follows No Answer timer in Program 24-02-03.

- 
- 
- In case of internal call from other standard SIP terminal, lock-out tone is not applied. Caller hears a busy tone.


### **Default Setting**

Enabled

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## **System Availability**

### **Terminals**

- NEC C124 SIP DECT Handset
- NEC G955 SIP DECT Handset
- IP DECT
-  *Standard SIP terminals have not been evaluated with this feature.*

### **Required Component(s)**

- NEC DECT Access Point AP200S
- NEC SIP DECT Handset - NEC C124/G955
- Standard SIP Clients for each handset
- Version 5000 or higher software

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## **Related Features**

**Caller ID**

**Off-Hook Signaling**

**Transfer**

**Wireless DECT (SIP)**

## Guide to Feature Programming

The **Level 1**, **Level 2** and **Level 3** columns indicate the programs that are assigned when programming this feature in the order they are most commonly used. These levels are used with PCPro and WebPro wizards for feature programming.

- Level 1 – these are the most commonly assigned programs for this feature.
- Level 2 – these are the next most commonly assigned programs for this feature.
- Level 3 – these programs are not often assigned and require an expert level working knowledge of the system to be properly assigned.

### VoIP Settings:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-03	CD-CP00-US Network Setup – Default Gateway	Assign the default gateway IP address for the CD-CP00-US.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.254.255.254 192.0.0.1~ 223.255.255.254 (default = 0.0.0.0)	✓		
10-12-09	CD-CP00-US Network Setup – IP Address	Set IP address for IPLA/IPLB.	0.0.0.0~ 126.255.255.254 128.0.0.1~ 191.255.255.254 192.0.0.1~ 223.255.255.254 (default = 172.16.0.10)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-12-10	CD-CP00-US Network Setup – Subnet Mask	Define the Media Gateway Subnet Mask Address.	128.0.0.0 192.0.0.0 224.0.0.0 240.0.0.0 248.0.0.0 252.0.0.0 254.0.0.0 255.0.0.0 255.128.0.0 255.192.0.0 255.224.0.0 255.240.0.0 255.248.0.0 255.252.0.0 255.254.0.0 255.255.0.0 255.255.128.0 255.255.192.0 255.255.224.0 255.255.240.0 255.255.248.0 255.255.252.0 255.255.254.0 255.255.255.0 255.255.255.128 255.255.255.192 255.255.255.224 255.255.255.240 255.255.255.248 255.255.255.252 255.255.255.254 255.255.255.255 (default = 255.255.0.0)		✓	
10-19-01	VoIP DSP Resource Selection	Select type of VoIP ETU DSP Resource. This program setting has no affect on the terminal/trunk port assignment or usage.	0 = Common use for both IP extensions and trunks 1 = IP Extension 2 = SIP Trunk 3 = CCIS 4 = Use for NetLink 5 = Blocked Default: Resource 1 = 1 Resource 2~128 = 0	✓		
10-26-01	IP System Operation Setup – Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.	0 = Off 1 = On (default = 1)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
10-26-03	IP System Operation Setup – SIP Peer to Peer Mode	Enable/Disable the Peer to Peer feature for SIP IP stations.	0 = Off 1 = On (default = 1)		✓	
84-06-01	PVA Data Setting – RTP Port Number	Define the Media Gateway starting RTP Port Number.	0~65535 (default = 10020)		✓	
84-06-02	PVA Data Setting – RTCP Port Number	Define the Media Gateway Starting RTCP Port Number . The RTCP Port Number has to be the (RTP port number + 1).	RTP Port Number + 1 (default = 10021)		✓	
84-06-04	PVA Data Setting – Fract Lost Threshold	Define the fractional lost threshold. This data is sent to the CD-CP00-US if the value exceeds the defined value.	0~100% (default = 0)		✓	
84-06-05	PVA Data Setting – Packets Lost Threshold	Define the packets lost threshold. This data is sent to the CD-CP00-US when the value exceeds the defined value.	0~16777215 (default = 0)		✓	
84-06-07	PVA Data Setting – Jitter Threshold	Define the Jitter Threshold. This data is sent to the CD-CP00-US when the value exceeds the defined value.	0~4294967295 (seconds) (default = 0)		✓	
84-06-09	PVA Data Setting – Delay LSR Threshold	Define the Delay LSR threshold. This data is sent to the CD-CP00-US when the value exceeds the defined value.	0~4294967295 (seconds) (default = 0)		✓	


### VoIP ToS Setup:

The UNIVERGE SV8100 supports Quality of Service (QoS) Marking for the Session Initiation Protocol (SIP).

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-10-01	ToS Setup – ToS Mode	When Input Data is set to 1, Item No. 07 is invalid. When Data is set to 2, Items No. 02 ~ 06 are invalid.	0 = Disable (Invalid) 1 = IP Precedence 2 = Diffserv (default = 0)		✓	



**IP Extension Numbering:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-02-01	Extension Numbering	Define the IP Phone extension number.  This designated extension is used to register your IP Phone and is programmed IP Phone programming. Refer to the Installation Instructions for Installation Instructions for Elite ITH-4D/8D/16D-2/3 D <sup>term</sup> IPK Terminals and the IP-R (IPK) Adapters.	Up to eight digits 1 101 2 102 3 103 ~ ~ 99 199 100 3101 ~ ~ 512 3513	✓		

**SIP Extension Codec Information:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-01	SIP Extension CODEC Information Basic Setup – Number of G.711 Audio Frames	Define the G.711 audio Frame Size.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 2)		✓	
84-19-02	SIP Extension CODEC Information Basic Setup – G.711 Voice Activity Detection Mode	Enable/Disable Voice Activity Detection for G.711.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-03	SIP Extension CODEC Information Basic Setup – G.711 Type	Define the G.711 Type – $\mu$ -law is recommended when in USA.	0 = A-law 1 = $\mu$ -law (default = 1)		✓	
84-19-04	SIP Extension CODEC Information Basic Setup – G.711 Jitter Buffer (min)	Define G.711 Jitter Buffer minimum accepted value.	0~160ms (default = 20)		✓	
84-19-05	SIP Extension CODEC Information Basic Setup – G.711 Jitter Buffer (average)	Define G.711 Jitter Buffer average accepted value.	0~160ms (default = 40)		✓	
84-19-06	SIP Extension CODEC Information Basic Setup – G.711 Jitter Buffer (max)	define G.711 Jitter Buffer maximum accepted value.	0~160ms (default = 80)		✓	


Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-07	SIP Extension CODEC Information Basic Setup – Number of G.729 Audio Frames	Define the G.729 audio Frame Size.	1~6 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms 5 = 50ms 6 = 60ms (default = 2)		✓	
84-19-08	SIP Extension CODEC Information Basic Setup – G.729 Voice Activity Detection Mode	Enable/Disable Voice Activity Detection for G.729.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-09	SIP Extension CODEC Information Basic Setup – G.729 Jitter Buffer (min)	Define G.729 Jitter Buffer minimum accepted value.	0~270ms (default = 20)		✓	
84-19-10	SIP Extension CODEC Information Basic Setup – G.729 Jitter Buffer (average)	Define G.729 Jitter Buffer average accepted value.	0~270ms (default = 40)		✓	
84-19-11	SIP Extension CODEC Information Basic Setup – G.729 Jitter Buffer (max)	Define G.729 Jitter Buffer maximum accepted value .	0~270ms (default = 80)		✓	
84-19-17	SIP Extension CODEC Information Basic Setup – Jitter Buffer Mode	Define the Jitter Buffer mode.	1 = Static 2 = Adaptive during Silence 3 = Adaptive Immediately (default = 3)		✓	
84-19-18	SIP Extension CODEC Information Basic Setup – VAD Threshold	Define the VAD Threshold. Consult the UNIVERGE SV8100 Programming Manual for Threshold scale to set acceptable values.	0~30 dB (default = 20)		✓	
84-19-26	SIP Extension CODEC Information Basic Setup – TX Gain	Define TX Gain Values – Adjusting this value increases or decreases volume levels for the receiving party. Consult the UNIVERGE SV8100 Programming Manual for Transmit Gain scale to set acceptable value.	0~30 = (-19 dB ~ +10 dB, Auto) 0 = Auto Adjust 1 = -19 dB (-49 dBm) : 20 = 0 dB (-30 dBm) : 29 = +19 dB (-21 dBm) 30 = +10 dB (-20 dBm) (default =20)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-27	SIP Extension CODEC Information Basic Setup – RX Gain	Define RX Gain Values – Adjusting this value increases or decreases volume levels for the sending party. Consult the UNIVERGE SV8100 Programming Manual for Transmit Gain scale to set acceptable value.	0~40 = (-20dBm ~ +20dBm) 0 = -20 dBm 1 = -19 dBm : 20 = 0 dBm : 39 = +19 dBm 40 = +20 dBm (default = 20)		✓	
84-19-28	SIP Extension CODEC Information Basic Setup – Audio Capability Priority	Define Audio Capability Priority.	0 = G.711_PT 1 = G.723_PT 2 = G.729_PT 3 = G.722 4 = G.726 5 = Not Used (default = 0)		✓	
84-19-31	SIP Extension CODEC Information Basic Setup – DTMF Payload Number	Define the DTMF Payload Number.	96~127 (default = 96)		✓	
84-19-32	SIP Extension IP CODEC Information Basic Setup – DTMF Relay Mode	Select the DTMF Relay Mode.	0 = Disable 1 = RFC2833 (default = 0)		✓	
84-19-33	SIP Extension IP CODEC Information Basic Setup – Number of G.722 Audio Frames	Define the number of Audio Frames for G.722 CODEC.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 3)		✓	
84-19-34	SIP Extension IP CODEC Information Basic Setup – G.722 Voice Activity Detection Mode	Enable/Disable the G.722 Voice Activity Detection Mode.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-35	SIP Extension IP CODEC Information Basic Setup – G.722 Jitter Buffer (min)	Define the minimum setting for the G.722 Jitter Buffer.	0~160ms (default = 30)		✓	
84-19-36	SIP Extension IP CODEC Information Basic Setup – G.722 Jitter Buffer (Average)	Define the average setting for the G.722 Jitter Buffer.	0~160ms (default = 60)		✓	
84-19-37	SIP Extension IP CODEC Information Basic Setup – G.722 Jitter Buffer (Max)	Define the maximum setting for the G.722 Jitter Buffer.	0~160ms (default = 120)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-19-38	SIP Extension IP CODEC Information Basic Setup – Number of G.726 Audio Frames	Define the number of G.726 Audio Frames.	1~4 1 = 10ms 2 = 20ms 3 = 30ms 4 = 40ms (default = 3)		✓	
84-19-39	SIP Extension IP CODEC Information Basic Setup – G.726 Voice Activity Detection Mode	Enable/Disable the G.726 Voice Activity Detection Mode.	0 = Disable 1 = Enable (default = 0)		✓	
84-19-40	SIP Extension IP CODEC Information Basic Setup – G.726 Jitter Buffer (min)	Define the minimum setting for the G.726 Jitter Buffer.	0~160ms (default = 30)		✓	
84-19-41	SIP Extension IP CODEC Information Basic Setup – G.726 Jitter Buffer (Average)	Define the average setting for the G.726 Jitter Buffer.	0~160ms (default = 60)		✓	
84-19-42	SIP Extension IP CODEC Information Basic Setup – G.726 Jitter Buffer (Max)	Define the maximum setting for the G.726 Jitter Buffer	0~160ms (default = 120)		✓	

### SIP Extension Basic Information Setup:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-20-01	SIP Extension Basic Information Setup – Registrar/Proxy Port	Define SIP station Proxy Port.	1~65535 (default = 5070)		✓	
84-20-02	SIP Extension Basic Information Setup – Session Timer Value	Define the periodic refresh time that allows both user agents and proxies to determine if the SIP session is still active.	0~65535 (seconds) (default = 180)		✓	
84-20-03	SIP Extension Basic Information Setup – Minimum Session Timer Value	define the minimum allowed value for the SIP session timer.	0~65535 (seconds) (default = 180)		✓	
84-20-04	SIP Extension Basic Information Setup – Called Party Info	define the SIP Extension presented Caller ID information.	0 = Request URI 1 = To Header (default = 0)		✓	
84-20-05	SIP Extension Basic Information Setup – Expire Value of Invite	Define the time out response value for SIP invite.	0~256 (seconds) (default = 180)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
84-26-01	IPL Basic Setup – IP Address	Assign the IP address for each DSP on the IPLA.	xxx.xxx.xxx.xxx Defaults: Slot 1 = 172.16.0.20 : Slot 4 = 172.16.0.44 VoIP GW Number 1~8 172.16.0.20 ~ 172.16.16.0.27	✓		
84-26-02	IPL Basic Setup – RTP Port Number	Assign the RTP port number to be used for each DSP on the IPLA.  Only even numbered ports are supported.	0~65534 Defaults: VoIP GW1 = 10020 VoIP GW2 = 10052 VoIP GW3 = 10084 VoIP GW4 = 10116 VoIP GW5 = 10148 VoIP GW6 = 10180 VoIP GW7 = 10212 VoIP GW8 = 10244		✓	
84-26-03	IPL Basic Setup – RTCP Port Number (RTP Port Number + 1)	Assign the RTCP port number to be used for each DSP on the IPLA.	0~65534 Defaults: VoIP GW1 = 10021 VoIP GW2 = 10053 VoIP GW3 = 10085 VoIP GW4 = 10117 VoIP GW5 = 10149 VoIP GW6 = 10181 VoIP GW7 = 10213 VoIP GW8 = 10245		✓	

### IP Phone Configuration:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-01-01	Basic Extension Data Setup – Extension Name	Define the extension/virtual extension name.	Up to 12 characters Default: STA 101 = Ext 101 STA 102 = Ext 102, etc.	✓		
15-05-02	IP Telephone Terminal Basic Data Setup – IP Phone Fixed Port Assignment	MAC Address of registered MLT SIP phone is stored and/or can input the MAC address of an MLT SIP phone so when it comes online it is provided with the extension which the MAC address matches.	MAC address 00-00-00-00-00-00 to FF-FF-FF-FF-FF-FF (default = 00-00-00-00-00-00)	✓		

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
15-05-07	<b>IP Telephone Terminal Basic Data Setup – Using IP Address</b>	Review the registered IP Phones IP Address [Informational Only].	0.0.0.0~255.255.255.255 (default = 0.0.0.0)	✓		
15-05-15	<b>IP Telephone Terminal Basic Data Setup – CODEC Type</b>	Assign the registered IP Phone Codec type of the MLT SIP – Reference Program 84-11 Dterm IP Codec Basic Information.	1-Type 1 2-Type 2 3-Type 3 4-Type 4 5-Type 5 (default = 1)	✓		
15-05-16	<b>Authentication Password</b>	Assign the authentication password for SIP single line telephones.	Up to 24 characters (default = None)	✓		
15-05-18	<b>IP Telephone Terminal Basic Data Setup – IP Duplication Allowed Group</b>	If an adapter has one IP address coming in but multiple extensions going out of it, assign all the extensions to a group so the CPU knows that the one IP address is assigned to multiple extensions.	0 = Not Used 1 = Group 1 2 = Group 2 3 = Group 3 4 = Group 4 5 = Group 5 6 = Group 6 7 = Group 7 8 = Group 8 9 = Group 9 10 = Group 10 (default = 0)	✓		
15-05-40	<b>IP Telephone Terminal Basic Data Setup – Calling Name Display Info via Trunk for Standard SIP</b>	Sets the incoming calling name display type on a standard SIP terminal. Trunk name is the first priority and abbreviated (SPD) name is second priority.	0 = Both name and number 1 = Name only 2 = Number only 3 = None (default = 0)		✓	
15-05-49	<b>IP Telephone Terminal Basic Data Setup – Receiving SIP INFO</b>	Select whether or not system can receive DTMF from standard SIP phone via SIP INFO message.	0 = Disable 1 = Allowed any time 2 = Allowed while RTP is not available (default = 1)		✓	

**Off-Hook Signalling:**

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
11-12-03	<b>Service Code Setup (for Service Access) – Override (Off-Hook Signaling)</b>	Customize the override (off-hook signaling) used for service access.	MLT, SLT (default = 709)	✓		
20-09-01	<b>Class of Service Options (Incoming Call Service) – Second Call for DID/DISA/DIL/ E&amp;M Override</b>	Turn Off or On the extension ability to receive a second call from a DID, DISA, DIL, or tie line caller. <i>With this option set to 1, the destination extension must be busy for a second DNIS caller to ring through. If the destination extension does not have a trunk or CAP key available for the second call and a previous call is ringing the extension but has not yet been answered, the second caller hears busy regardless of this program setting.</i>	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-09-07	<b>Class of Service Options (Incoming Call Service) – Call Queuing</b>	Turn Off or On an extension user ability to have calls queued if a call rings the extension when it is busy.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-05	<b>Class of Service Options (Supplementary Service) – Intercom Off-Hook Signaling</b>	Turn Off or On an extension ability to receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
20-13-06	<b>Class of Service Options (Supplementary Service) – Automatic Off-Hook Signaling (Automatic Override)</b>	Allows a busy extension to Manually (0) or Automatically (1) receive off-hook signals.	0 = Off 1 = On (default = 1 for COS 01~15)		✓	
20-13-54	<b>Class of Service Options (Supplementary Service) – Call Waiting for Standard SIP Terminal</b>	Set up Call waiting (Off-hook Signaling) for Standard SIP terminal. When setting this Program to enable, Program 20-13-05, 20-13-06 and Program 20-09-01, 20-09-07 also need to be set to Enable.	0 = Disable 1 = Enable (default = 0)		✓	
20-17-01	<b>Operator Extension – Operator's Extension Number</b>	Define the extension numbers which are to be used by operators.	Up to eight digits (default = ext. 101)		✓	

### Caller ID Display After a Call Transfer:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
20-06-01	<b>Class of Service for Extensions</b>	Assign a Class of Service (1~15) to an extension.	Day Night/Mode: 1~8 Class of Service of Extensions (1~15) Default: Extension port 101 = Class 15 All other extension port = Class 1		✓	
20-11-06	<b>Class of Service Options (Hold/Transfer Service) – Unscreened Transfer (Ring Inward Transfer)</b>	Turn Off or On an extension user ability to use Unscreened Transfer.	0 = Off 1 = On (default = 1 for COS 1~15)		✓	
24-02-15	<b>System Options for Transfer – SIP Out of Range Timer</b>	When not receiving any response within this timer setting, system determines SIP terminal is out of range. When set to 0, timer is invalid.	0 ~ 30 (sec) (default = 4)	✓		
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type</b>	Type of Call Forwarding	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)	✓		
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign CO Call Forwarding Destination for ring, all call and no answer.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	
24-09-03	<b>Call Forward Split Settings – Interim Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign Intercom Call Forwarding Destination for ring, all call and no answer.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	



Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-09-04	<b>Call Forward Split Settings – CO Call Forwarding Busy Destination</b>	Assign CO Call Forwarding for busy destinations.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	
24-09-05	<b>Call Forward Split Settings – Intercom Call Forwarding Busy Destination</b>	Assign Intercom Call Forwarding for busy destinations.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	
80-01-16	<b>Service Tone Setup – Lockout Tone</b>	Lock Out Tone Repeat Count.	Value 2 - 255			✓


### Out of Range Call Warning Notification:

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-02-15	<b>System Options for Transfer – SIP Out of Range Timer</b>	When not receiving any response within this timer setting, system determines SIP terminal is out of range. When set to 0, timer is invalid.	0 ~ 30 (sec) (default = 4)	✓		
24-09-01	<b>Call Forward Split Settings – Call Forwarding Type</b>	Type of Call Forwarding	0 = Call Forwarding Off 1 = Call Forwarding with both ring 2 = Call Forwarding when no answer 3 = Call Forwarding all calls 4 = Call Forwarding busy or no answer 5 = Call Forwarding when busy (default = 0)	✓		
24-09-02	<b>Call Forward Split Settings – CO Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign CO Call Forwarding Destination for ring, all call and no answer.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	

Program Number	Program Name	Description/Comments	Assigned Data	Level		
				1	2	3
24-09-03	<b>Call Forward Split Settings – Interim Call Forwarding Destination for Both Ring, All Call, No Answer</b>	Assign Intercom Call Forwarding Destination for ring, all call and no answer.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	
24-09-04	<b>Call Forward Split Settings – CO Call Forwarding Busy Destination</b>	Assign CO Call Forwarding for busy destinations.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	
24-09-05	<b>Call Forward Split Settings – Intercom Call Forwarding Busy Destination</b>	Assign Intercom Call Forwarding for busy destinations.	0~9, #, *, P, R, @ (Up to 24 digits) P = Pause R = Hookflash @ = Wildcard (default not assigned)		✓	
80-01-16	<b>Service Tone Setup – Lockout Tone</b>	Lock Out Tone Repeat Count.	Value 2 - 255			✓

## Operation


### Placing an outside call with pre-dial:


1. Dial **9**.
2. Press and hold the # key to insert a pause (–), if necessary.
3. Dial the outside number.
4. Press the  key (On-Hook/Off-Hook).

For more information on the Wireless DECT (SIP) feature, refer to the NEC SIP DECT Solutions Manuals.

### Off-hook Signaling:

#### To answer off-hook signaling (2nd call) and answer hold recall of 1st call:


 Program 20-13-54 is set to Enable.


 Program 20-13-06 is set to Automatically

1. From ext 100 call IP DECT 200 (1st call).

- 
- 
2. Answer on IP DECT 200 and talk with ext 100.
  3. From ext 101 Call IP DECT (2nd call).
  4. IP DECT receives off-hook signal.
  5. Press the \* button on the IP DECT. Hold the 1st call and answer the 2nd call.
  6. Talk with ext 101.
  7. Use on-hook on the IP DECT to disconnect ext 101.
  8. Hold Recall occurs and seizes the 1st call (On hold) on the IP DECT.
  9. Talk with ext 100.


**To toggle between the 1st call and off-hook signaling (2nd call):**


 *Program 20-13-54 is set to Enable.*

 *Program 20-13-06 is set to Automatically.*

1. From ext 100 call IP DECT 200 (1st call).
2. Answer on IP DECT 200 and talk with ext 100.
3. From ext 101 Call IP DECT (2nd call).
4. IP DECT receives off-hook signal.
5. Press the \* button on the IP DECT. Hold the 1st call and answer the 2nd call.
6. Talk with ext 101.
7. Press the \* button on the IP DECT. Hold the 2nd call and retrieve the 1st call (On hold).
8. Talk with ext 100.

**To answer off-hook signaling (2nd call) and 2nd caller disconnect the call:**

 *Program 20-13-54 is set to Enable.*

 *Program 20-13-06 is set to Automatically.*

1. From ext 100 call IP DECT 200 (1st call).
2. Answer on IP DECT 200 and talk with ext 100.
3. From ext 101 Call IP DECT (2nd call).
4. IP DECT receives off-hook signal.
5. Press the \* button on the IP DECT. Hold the 1st call and answer the 2nd call.
6. Talk with ext 101.

7. Use on-hook on ext 101. A busy tone is heard on the IP DECT.
8. Press the \* button on the IP DECT and retrieve the 1st call (On hold).
9. Talk with ext 100.

### Caller ID Display After a Call Transfer:

#### To make screened transfer to IP DECT of trunk call:

Transferee : Caller ID:297XXXXYY

Transferrer : Multi line, Ext 100

Transfer target : IP DECT, Ext 200

1. Place a call to ext 100 from outside party 297XXXXYY.
2. Answer incoming call at ext 100 and press the **Transfer** button.
3. Dial 200 to call an IP DECT.
4. Announce the call and press the **Transfer** button or hang up ext 100.
5. Calling party number "297XXXXYY" is displayed on the IP DECT.

#### To make unscreened transfer to IP DECT of trunk call:

Transferee : Caller ID:297XXXXYY

Transferrer : Multi line, Ext 100

Transfer target : IP DECT, Ext 200

1. Place a call to ext 100 from outside party 297XXXXYY.
2. Answer incoming call at ext 100 and press the **Transfer** button.
3. Dial 200 to call an IP DECT.
4. Press the **Transfer** button or hang up ext 100.
5. The IP DECT rings and calling party number "297XXXXYY" is displayed on the IP DECT.



## SECTION 1 ABOUT THIS CHAPTER

The charts in this chapter provide a list of the Service Codes, Function Key Codes, and System Number Plan/Capacities. The service codes and function codes are listed by number and by feature in separate charts for ease of use.

## SECTION 2 SIMPLIFYING MULTILINE TERMINAL OPERATIONS WITH ONE-TOUCH KEY OPERATION

A multiline terminal user can access many features through Service Codes (e.g., Service Code #9 to access a specific trunk). To streamline the operation of their telephone, a multiline terminal user can store these codes under One-Touch Keys. This provides one-button operation for almost any feature. To find out more, turn to the One-Touch Calling feature.

When reading an instruction using programmable keys, you will see a notation similar to (**PRG 15-07 or SC 7nn**). This means that the key requires function code nnn, and you can program this code through Program 15-07 or by dialing Service Code 751 or 752. Refer to the Programmable Function Keys feature for more information.

## SECTION 3 USING HANDSFREE

The manual assumes each extension has Automatic Handsfree. This lets a user just press a line key or Speaker Key to answer or place a call. For extensions without Automatic Handsfree, the user must:

- Lift the handset or press **Speaker** for intercom dial tone.
- Lift the handset or press **Speaker**, then press a line key for trunk dial tone.

**Table 3-1 Post Dialing Service Codes – Single Digit Post Dialing Codes**

Code	For this feature. . .	When you are. . .
1	Handsfree Answerback / Forced intercom Ringing	Changing the signaling mode of your outgoing Intercom call
2	Department Step Calling	Cycling to the next member of a Department Calling Group
3~5	Not used	
6	Voice Over	Sending a Voice Over to a busy extension after hearing Busy/Ring tone
7	Barge-In	Barge into another station's active call
8	Voice Mail	Leaving a message in a co-worker's mailbox after calling their busy or unanswered extension
0	Message Waiting	Leaving a Message Waiting at a co-worker's busy or unanswered extension
#	Call Waiting / Camp-On / Callback / Trunk Queuing	Call Waiting / Camp-On / Callback / Trunk Queuing
*	Off-Hook Signaling	Sending off-hook signal tones to a busy extension

**Table 3-2 Service Codes by Number**

Dial this Service Code. . . <sup>1</sup>	When you . . .	For this feature. . .	Also see Function Key. . .
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
* + Enter Account Code + *	Enter an Account Code.	Account Codes	-
**	Pick up a call ringing or waiting at another extension.	Directed Call Pickup Voice Response System (VRS)	-
**#	Pick up a call ringing an extension in your pickup group (except Ring Group calls).	Group Call Pickup	24
*0	Answer a Message Waiting request.	Message Waiting	38
*06	Set the Automatic Transfer for each trunk line.	Transfer	-
*07	Cancel the Automatic Transfer for each trunk line.	Transfer	-
*08	Set the Destination for Automatic Trunk Transfer.	Transfer	-
*1 + Paging Group Number	Make a Combined Page.	Paging	-
+ 0	Cancel Call Forwarding.	Call Forwarding	16
*2 + 1 + Type (2~4)	Activate Personal Answering Machine Emulation.	Voice Mail (Personal Answering Machine Emulation)	16
*2 + 2 + Destination + Type (2~4)	Activate Call Forwarding when Busy/Not Answered.	Call Forwarding	16
*2 + 3 + Destination + Type (2~4)	Activate Call Forward Follow Me at the destination extension.	Call Forwarding with Follow Me	16
*2 + 4 + Destination + Type (2~4)	Activate Call Forwarding Immediate.	Call Forwarding	16
*2 + 6 + Destination + Type (2~4)	Activate Call Forwarding when Unanswered (delayed).	Call Forwarding	16
*2 + 7 + Destination + Type (2~4)	Activate Call Forwarding (Both Ringing).	Call Forwarding	16

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
<b>*3</b> (After + 001~200 + busy)	Disconnect a call in progress on a trunk.	Forced Trunk Disconnect	-
<b>*4 + 3</b> + Message (01~20), or + 3 + Hang up to cancel	Activate or cancel Selectable Display Messaging.	Selectable Display Messaging	17
<b>*4 + 6</b> + Trunk access code + Outside number, or + 6 + Hold + Hang up to cancel	Forward your calls to an off-premise telephone number.	Call Forwarding Off-Premise	17
+ 7 + Record message + # + Condition (2, 4, 6 or 7) + Destination + Type (2 or 3) or + 7 + 3 to cancel	Record, listen to or erase a Personal Greeting or Park and Page.	Voice Response System (VRS) (Personal Greeting)	17
<b>*5</b>	Log out of or in to an ACD group.	Automatic Call Distribution (ACD)	<b>*10</b>
<b>*6</b> + Orbit (01~64)	Pick up a call parked in a system Park orbit (01~64).	Park	<b>*04</b> + orbit
<b>*8</b>	Call your mailbox.	Voice Mail	67
<b># * # *</b>	Enter system programming mode.	System Programming Password Protection	-
<b># * # 9</b>	Back up system data.	Maintenance	-
Hookflash + <b>##</b> + Enter Account Code + Hookflash	Enter an Account Code at a single line telephone.	Account Codes	-
<b>#0</b>	Use Universal Answer Code to pick up a call ringing over the paging system.	Central Office Calls, Answering	-
Hookflash + <b>#1</b> + extension + hookflash twice	Activate Conference from a Single Line (500/2500) Telephone.	Conference	-
<b>#2</b> + bin	Dial a Common Speed Dialing number.	Speed Dialing	27
<b>#3</b>	Flash a trunk from an single line telephone.	Flash	-
<b>#4</b> + bin	Dial a group Speed Dialing number.	Speed Dialing	28



**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
#5	Use Last Number Redial.	Last Number Redial	-
#6 + orbit (01~64)	Park a call in a system Park orbit (1~8, 01~32 or 01~64).	Park	*04 + orbit (1~64)
#7	Use Personal Speed dialing.	Speed Dialing	-
#8	Set up an Unsupervised Conference.	Tandem Trunking (Unsupervised Conference)	-
#9 + 001 -200	Place a call over a specific trunk.	Central Office Calls, Placing	*01 + trunk (001~200)
0 (Off-Hook)	Leave a Message Waiting at a co-worker's busy or unanswered extension.	Message Waiting	35
1 (Off-Hook)	Change the signaling mode of your outgoing Intercom call.	Handsfree Answerback/Forced Intercom Ringing	-
4 (On-Hook)	Listen to the General Message.	Voice Response System (VRS)	-
6 (On-Hook)	Check an extension number.	Voice Response System (VRS)	-
8 (On-Hook)	Listen for the time.	Voice Response System (VRS)	-
9	Place a call using ARS or Trunk Group Routing.	Automatic Route Selection Trunk Group Routing	*02
600 + code + 0	Use Dial Block.	Toll Restriction, Dial Block	-
601 + code + 0	Aa a supervisor use Dial Block.	Toll Restriction, Dial Block	-
602 + Group number (1~8 or 01~64)	Set Automatic Transfer Setup for each extension group.	Transfer	-
603 + Group number (1~8 or 01~64)	Cancel Automatic Transfer Setup.	Transfer	-

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
604 + Group number (1~8 or 01~64) + mode + extension	Set the destination for Automatic Transfer Setup for each extension group.	Transfer	-
605 + Group number (1~8 or 01~64)	Set Delayed Transfer for each extension group.	Transfer	-
606 + Group number (1~8 or 01~64)	Cancel Delayed Transfer.	Transfer	-
607 + Group number (1~8 or 01~64)	Set up DND for each extension group.	Transfer	-
608 + Group number (1~8 or 01~64)	Cancel DND for each extension group.	Transfer	-
611	Use an SLT to listen the General Message.	Voice Response System (VRS)	-
612 + 3 to erase, 5 to listen or 7 to record	Record, listen to or erase the General Message.	Voice Response System (VRS)	-
616 + 3 to erase, 5 to listen or 7 to record	Record, listen to or erase a VRS Message.	Voice Response System (VRS)	-
618	Use Night Mode Switch for other group.	Night Answer	
620	Use Common Cancel Service Code.	TBD	-
621	Print the SMDR Extension Accumulated printout.	Station Message Detail Recording (SMDR)	-
622	Print the SMDR Group Accumulated printout.	Station Message Detail Recording (SMDR)	-
623	Print the SMDR Account Code Accumulated printout.	Station Message Detail Recording (SMDR)	-
782	Transfer a call to the VRS This can also be used for routing ANI/DNIS to the VRS.	Transfer	-

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
627	Enable DND at a room telephone.	Hotel/Motel (Do Not Disturb)	-
628	Cancel DND at a room telephone.	Hotel/Motel (Do Not Disturb)	-
629	Enable DND for another room telephone.	Hotel/Motel (Do Not Disturb)	-
630	Cancel DND at another room telephone.	Hotel/Motel (Wake Up Call)	-
631	Set up a Wake Up call for your own room telephone.	Hotel/Motel (Wake Up Call)	-
632	Cancel a Wake Up Call for your room telephone.	Hotel/Motel (Wake Up Call)	-
633	Set a Wake Up Call for another guest room telephone.	Hotel/Motel (Wake Up Call)	-
634	Cancel a Wake Up Call for another guest room telephone.	Hotel/Motel (Wake Up Call)	-
635	Enable Room to Room Call Restriction for a guest room telephone.	Hotel/Motel (Room to Room Call Restriction)	-
636	Disable Room to Room Call Restriction for a guest room telephone.	Hotel/Motel (Room to Room Call Restriction)	-
637	Change a room telephone Toll Restriction (When Checked In) level.	Hotel/Motel (Toll Restriction When Checked In)	-
638	Set a room as checked in.	Hotel/Motel (Room Status)	-
639	Set a room as checked out.	Hotel/Motel (Room Status)	-
641	Set a room status from another telephone.	Hotel/Motel (Room Status)	-
642	Request a Room Status Printout.	Hotel/Motel (Room Status Printouts)	-

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
645 + trunk # + 1 (block) 645 + trunk # + 0 (enable)	Block/busy out outbound usage on a trunk with Trunk Port Disable.	Central Office Calls, Placing	-
650 + 0 (install) or 1 (remove)	Log in (0) or log out (1) for your Department Calling Group.	Department Calling	
654	Enable Conversation Record at an SLT.	Voice Mail	-
655	Log out of or in to an ACD Group from a single line telephone.	Automatic Call Distribution (ACD)	-
656	Activate Work Time from an SLT.	Automatic Call Distribution (ACD)	*17
657	Cancel Work Time from an SLT.	Automatic Call Distribution (ACD)	*17
658	Activate Rest Mode from an SLT.	Automatic Call Distribution (ACD)	*13
659	Cancel Rest Mode from an SLT.	Automatic Call Distribution (ACD)	*13
Hookflash + 160	ACD Record for an SLT.	Automatic Call Distribution (ACD)	-
663 + 6-digit code + line + telephone number	Override Toll Restriction.	Toll Restriction	-
667	Log an agent into their ACD Group.	Automatic Call Distribution (ACD)	-
668	Log an agent out of their ACD Group.	Automatic Call Distribution (ACD)	-
669	Are a supervisor assigning an agent into another ACD Group or changing an agent's status.	Automatic Call Distribution (ACD)	-
670 + ACD Group	Change your ACD Group assignment.	Automatic Call Distribution (ACD)	-
672 + Line number (001~200)	Answer a call on a specific trunk.	Central Office Calls, Answering Hold	-

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
675	Monitor a room telephone.	Hotel/Motel (Room Monitor)	-
677	Change the COS of another extension. Must be allowed in Program 20-13-28.	Class of Service	-
678 + 0~9	Change the language of a display telephone.	Alphanumeric Display / Maintenance	-
679 + 1 (set) or 0 (cancel)	Change the ability for a second call with DID/DISA/DIL.	Central Office Calls, Answering	-
689	Transfer a Wireless DECT (SIP) call when out of range.	Wireless DECT (SIP)	-
700 + extension # + enter name + Hold	Program extension names.	Name Storing	55
701 + zone (1~9 or 01~64) 801 + zone (0 or 00)	Make an Internal Zone Page. Make an All Call Internal Page.	Paging, Internal	21 + zone 22
702 + Door Box (1~4 or 1~8)	Place a call to a Door Box.	Door Box	-
703 + zone (1~4 or 1~8) 803 + zone (0)	Make an External Zone page. Make an External All Call page.	External Paging	19 + zone 20
704 + trunk group (1~8 or 1~9 or 001~200)	Place an outside call over a trunk group.	Central Office Calls, Placing	*02 + group
707	Override Do Not Disturb or Call Forwarding.	Call Forwarding Do Not Disturb	37
708	Step through a Department Group.	Department Step Calling	36
709	Send a Call Waiting tone to a busy extension.	Call Waiting	33
710	Break into another extension call.	Barge-In	-
711 + 1 (ICM) or 2 (TRK) + tone (1~8)	Listen to the incoming ring choices.	Selectable Ring Tones	-
712	Change the signal type for calling an extension.	Intercom	-

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
715	Save a number (from SLT) or dial a saved number	Save Number Dialed	30
718 + 1 718 + 2 718 + 3 718 + 4 718 + 5 718 + 6 718 + 7 718 + 8	Activate Day 1 Mode. Activate Night 1 Mode. Activate Midnight 1 Mode. Activate Rest 1 Mode. Activate Day 2 Mode. Activate Night 2 Mode. Activate Midnight 2 Mode. Activate Rest 2 Mode.	Night Service	09 + 1 09 + 2 09 + 3 09 + 4 09 + 5 09 + 6 09 + 7 09 + 8
720 + 1 (ICM) or 2 (TRK) + tone (1~8)	Change your extension incoming ring tones.	Selectable Ring Tones	-
721	Enable Handsfree Answerback for incoming Intercom calls.	Handsfree Answerback/Forced Intercom Ringing	-
722	Call off-premise with a Door Box.	Call Forwarding, Off-Premise Door Box	54
723	Enable Forced Ringing for incoming Intercom calls.	Handsfree Answerback/Forced Intercom ringing	-
724	Enable/disable Dial Pad Confirmation Tone.	Dialing Pad Confirmation tone	-
725	Turn Background Music on and off.	Background Music	04
727 + 1 or 2 + time, or 727 + 1 or 2 + 9999 to cancel	Check, set or cancel an alarm.	Alarm	-
728 + hour + minutes	Set the system Time.	Time and Date Clock/Calendar Display	-
729	Check or change ring volume.	Volume Control	-
730	Use Remote maintenance.	-	-
732	Place a call on Group Hold.	Hold	-
740	Delete System alarm message.	-	-

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
747 + 0 (Cancel) 1 (Trk calls) 2 (Paging, ICM, Call Forward and transfers) 3 (All calls) 4 (Call Forwards)	Activate Do Not Disturb.	Do Not Disturb	-
749	Place a call on Exclusive Hold at an SLT.	Hold	-
750	Camp On to an extension when calling into the system through the VRS.	Voice Response System (VRS)	35
751 + key + code	Change the function of a programmable key using 751 service code.	Programmable Function Keys	-
752 + key + code	Change the function of a programmable key using 752 service code.	One-Touch Serial Operation	-
753 + bin + number + Hold + Name + Hold to store	Store Common Abbreviated Dialing numbers.	Abbreviated Dialing	-
754 + bin + number + Hold + Name + Hold to store	Store Group Abbreviated Dialing numbers.	Abbreviated Dialing	-
755 + One Touch key + code	Program a One-Touch Key or Personal Speed Dial.	One-Touch Dialing	-
756	Answer a call ringing a telephone in your pickup group (except Ring Group calls).	Group Call Pickup	-
757	Park a call or pick up a parked call at an extension.	Park	-
759	Retrieve a call from Exclusive Hold at an SLT.	Hold	-
760	Use DID ACD Access Code.	Automatic Call Distribution (ACD)	-
762	Pick up a call from Group Hold.	Hold	-

**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
763	Join a Meet Me Conference or Meet Me Page on an Internal Paging Zone (if your extension is in the group called).	Meet Me Conference Meet Me Paging	23 or 32
764 + zone paged (0~9 or 00~64)	Join a Meet Me Conference or Meet Me Page if your extension is not in the group paged.	Meet Me Paging	23 or 32
765 + zone (0~8)	Join a Meet Me Conference or Meet Me Page on an External Paging Zone.	Meet Me Conference Meet Me Paging	23 or 32
768 + pickup group (1~8 or 1~9 or 01~64)	Answer a call ringing a telephone in another pickup group (except Ring Group calls).	Group Call Pickup	26 + group
769	Answer a call ringing a telephone in another pickup group if you do not know the group number (except Ring Group Calls).	Group Call Pickup	25
770	Cancel a Callback request.	Callback	-
771 + ext	Cancel Messages Waiting you left at a specific extension.	Message Waiting	-
773	Cancel all Messages Waiting you have left at other extensions.	Message Waiting	-
775 + pswd (0000) + place outside call	Temporarily override an extension Toll Restriction.	Toll Restriction Override	-
776	Clear number saved by Last Number Redial.	Last Number Redial	-
780 + Relay (0~8)	Use the General Purpose Relay.	Paging, External Night Service	51
781 + 00 (no tone), 01 (general) or 02 (holiday)	Change the Music on Hold Tone.	Music on Hold	-



**Table 3-2 Service Codes by Number (Continued)**

<b>Dial this Service Code. . .<sup>1</sup></b>	<b>When you . . .</b>	<b>For this feature. . .</b>	<b>Also see Function Key. . .</b>
<sup>1</sup> Except where indicated, dial Service Code from Intercom dial tone (e.g., press idle Speaker first).			
782	Route ANI/DNIS to the VRS. It can also be used to transfer to VRS.	Transfer Voice Response Service (VRS)	-
783	Enable the data communication auto-answer mode.	Data Communications	-
784	Access the VRS.	Voice Response Service (VRS)	-
785	Clear the number saved by Save Number Redial.	Save Number Redial	-
790	Use Voice Over after calling a busy extension.	Voice Over	48
794	Split between two calls on an SLT.	Call Waiting	-
799	Test Callback operation for an SLT.	Callback	-

**Table 3-3 Service Codes by Feature**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Speed Dialing	753 + bin + number + Hold + Name + Hold to store	Store System Speed Dialing numbers.	-
	754 + bin + number + Hold + Name + Hold to store	Store Group Speed Dialing numbers.	-
	#2 + bin	Dial a System Speed Dialing number.	27
	#4 + bin	Dial a Group Speed Dialing number.	28
	#7 + bin	Use Personal Speed Dialing.	-
Account Codes	* + Enter Account code + *	Enter an Account Code.	-
	Hookflash + ## + Enter account code + Hookflash	Enter an Account Code at an SLT.	-
Alarm	727 + 1 or 2 + time, or 727 + 1 or 2 + 9999 to cancel	Check, set or cancel an alarm.	-
Alphanumeric Display	678 + 0~9	Select the language used on display multiline terminals.	-
Wireless DECT (SIP)	689	Transfer a Wireless DECT (SIP) call when out of range.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Automatic Call Distribution (ACD)	*5	Log out of or in to an ACD Group.	*10
	655	Log out of or in to an ACD Group from an SLT.	
	656	Activate Work Time from an SLT.	*17
	657	Cancel Work Time from an SLT.	*17
	658	Activate Rest Mode from an SLT.	*13
	659	Cancel Rest Mode from an SLT.	*13
	Hookflash + 660	Use ACD Recording with an SLT.	-
	667	Allow an ACD Agent to log into a group.	-
	668	Allow an ACD Agent to log out of a group.	-
	669	Allow a supervisor to change agent's status.	-
	670 + ACD Group	Change your ACD Group assignment.	-
Automatic Route Selection or Trunk Group Routing	9	Place a call using Trunk Group. Route an Automatic Route Selection.	*02
Background Music	725	Turn Background Music on or off.	04

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Call Forwarding	745	Set/Cancel Call Forwarding (Both Ringing).	-
	742	Set/Cancel Call Forwarding when Busy.	-
	744	Set/Cancel Call Forwarding when Busy/No Answer.	-
	743	Set/Cancel Call Forwarding No Answer.	-
	746	Set/Cancel Call Forwarding Follow Me.	-
	741	Set/Cancel Call Forwarding Immediate.	-
Call Forwarding, Off-Premise Door Box	722	Call off-premise with a Door Box.	54
Call Forwarding/Do Not Disturb Override	707	Override an extension Call Forward or DND setting.	37
Call Waiting / Camp-On	794	Split (switch) between calls on an SLT.	-
	770	Cancel a Callback request.	-
	799	Test Callback operation for an SLT.	-
Callback / Camp-On / Trunk Queuing	#	Camp On or leave a Callback for a busy extension or trunk.	35
	770	Cancel a Callback request.	-
	799	Test Callback operation for an SLT.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Central Office Calls, Answering / Hold	#0	Use Universal Answer to pick up a call ringing over the paging system.	-
	672 + Line number (001~200)	Answer a call on a specific trunk.	-
	679 + 1 (set) or 0 (cancel)	Change the ability for a second call with DID/DISA/DIL.	-
Central Office Calls, Placing	#9 + 001~200	Place a call over a specific trunk.	*01 + trunk (100-200)
	645 + trunk # + 1 (block) 145 + trunk # + 0 (enable)	Block/busy out outbound usage on a trunk with Trunk Port Disable.	-
	704 + trunk group (1~9 or 001~200)	Place an outside call over a trunk group.	*02 + group
Class of Service	677	Change the COS of another extension. Must be allowed in Program 20-13-28.	-
Conference	Hookflash + #1 + extension + hookflash twice	Activate Conference from a Single Line (500/2500) Telephone.	1016
Data Communications	783	Enable the data connection auto-answer mode.	-
	784	Disconnect an active data call.	-
Department Calling	650 + 0 (install) or 1 (remove)	Log in (0) or log out (1) for your Department Calling Group.	46
Department Step Calling	#	Step Call through a Department Group.	36
Dial Pad Confirmation Tone	724	Enable/disable Dial Pad Confirmation Tone.	-
Directed Call Pickup	** + ext.	Pick up a call ringing or waiting at an extension.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Do Not Disturb	747 + 0 (Cancel) 1 (Trk calls) 2 (Paging, ICM, Call Forwards, and Transfers) 3 (All calls) 4 (Call Forwards)	Activate Do Not Disturb.	-
Door Box	702 + Door Box (1~4 or 1~8)	Place a call to a door Box.	-
	722	Forward a Door Box off-premise.	-
E911	786	Turn off the E911 alarm.	-
Flash	#3	Flash a trunk from an SLT.	-
Forced Trunk Disconnect	* 3 (after #9 + 1~8 or 001~200 + busy)	Disconnect a call in progress on a trunk.	-
Group Call Pickup	*#	Pick up a call ringing an extension in your own pickup group (except Ring Group calls).	24
	768 + pickup group (1~8 or 1~9 or 01~64)	Answer a call ringing a telephone in another pickup group.	26 + group
	769	Answer a call ringing a telephone in another pickup group if you do not know the group number (except Ring Group calls).	25
Handsfree Answerback/Forced Intercom Ringing	1 (Off-Hook)	Change the signaling mode of your outgoing Intercom call.	-
	721	Enable Handsfree Answerback for incoming Intercom calls.	-
	723	Enable Forced Ringing for incoming Intercom calls.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Hold	732	Placing a call on Group Hold.	-
	749	Place a call on Exclusive Hold at an SLT.	-
	759	Retrieve a call from Exclusive Hold at a 2-Button telephone.	-
	762	Pick up a call from Group Hold.	-
Hotel/Motel (Do Not Disturb)	627	Enable DND at a room telephone.	-
Hotel/Motel (Do Not Disturb)	628	Cancel DND at a room telephone.	-
Hotel/Motel (Do Not Disturb)	629	Enable DND for another room telephone.	-
Hotel/Motel (Do Not disturb)	630	Cancel DND at another room telephone.	-
Hotel/Motel	675	Monitor a room telephone.	-
Hotel/Motel (Wake Up Call)	631	Set a Wake Up Call for your room telephone.	-
Hotel/Motel (Wake Up Call)	632	Cancel a Wake Up Call for your room telephone.	-
Hotel/Motel (Wake Up Call)	633	Set a Wake Up Call for another guest room telephone.	-
Hotel/Motel (Wake Up Call)	634	Cancel a wake Up Call for another guest room telephone.	-
Hotel/Motel (Room to Room Call Restriction)	635	Enable Room to Room Call Restriction for a guest room telephone.	-
Hotel/Motel (Room to Room Call Restriction)	636	Disable Room to Room Call Restriction for a guest room	-
Hotel/Motel (Toll restriction [When Checked In])	637	Change a room telephone Toll Restriction (When Checked In) level.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Hotel/Motel (Room Status)	638	Set a room as checked in.	-
Hotel/Motel (Room Status)	639	Set room as checked out.	-
Hotel/Motel (Room Status)	641	Set a room as available (clean) from another telephone.	-
Hotel/Motel (Room Status Printouts)	642	Request a Room Status Printout.	-
Last Number Redial	#5	Use Last Number Redial.	-
	776	Clear number saved by Last Number Redial.	-
Maintenance	# * # 9	Back up system data.	-
	678 + 0~9	Display the language the telephone is using.	-
Meet Me Conference Meet Me Paging	763	Join a Meet Me Conference or Meet Me Page on an Internal Paging Zone (if your extension is in the group called).	23 (Meet Me Paging) or 32 (Meet Me Conference)
	764 + zone paged (0~9 or 00~64)	Join a Meet Me Conference or Meet Me Page if your extension is not in the group paged.	-
	765 + zone (0~8)	Join a Meet Me conference or Meet Me Page on an External Paging Zone.	-
Message Waiting	0 (Off-Hook)	Leave a Message Waiting at a co-worker's busy or unanswered extension.	38
	*0	Answer a Message Waiting request.	38
	771 + ext	Cancel Messages Waiting you have left at a specific extension.	-
	773	Cancel all Messages Waiting you have left at other extensions.	-



**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Music on Hold	781 + 00 (no tone), 01 (general) or 02 (holiday)	Change the Music on Hold Tone.	-
Name Storing	700 + enter name + Hold	Program extension names.	55
Night Service	618	Use Night Mode Switching for other group.	-
	718 + 1 718 + 2 718 + 3 718 + 4 718 + 5 718 + 6 718 + 7 718 + 8	Activate Day 1 Mode. Activate Night 1 Mode. Activate Midnight 1 Mode. Activate Rest 1 Mode. Activate Day 2 Mode. Activate Night 2 Mode. Activate Midnight 2 Mode. Activate Rest 2 Mode.	09 + 1 09 + 2 09 + 3 09 + 4 09 + 5 09 + 6 09 + 7 09 + 8
Off-Hook Signaling	* (Off-Hook) or 709	Send off-hook signal tones to a busy extension.	33
One-Touch Dialing	755 + One-Touch key + code	Program a One-Touch Key or Personal Speed Dial.	-
Paging, Combined	*1 + Zone (1~8) *1 + Zone (0)	Make a combined zone page. Make a combined All Call page.	19 + zone 20
Paging, External	703 + zone (1~8) 703 + zone (0)	Make an external zone page. Make an external All Call page.	19 + zone 20
Paging, External Night Service	780 + relay number (0~8)	Activate the general purpose relay.	51
Paging, Internal	701 + zone (1~8, 1~9 or 01~64)	Make an Internal Zone Page.	21 + zone or 22
	701 + zone (0 or 00)	Make an internal All Call Page.	
Park	#6 + orbit (01~64)	Park a call in a system Park orbit (01~64).	*04 + orbit
	*6 + orbit (01~64)	Pick up a call parked in a system Park orbit (01~64).	*04 + orbit
	757	Park a call or pick up a parked call at an extension.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Programmable Function Keys	751 + key + code	Change the function of a programmable key using 751 service code.	-
	752 + key + code	Change the function of a programmable key using 752 service codes.	-
Save Number Dialed	715	Save a number (from SLT) or dial a saved number.	30
	785	Clear the number saved by Save Number Redial number.	-
Selectable Display Messaging	*4 + 3 + message (01~20), or *4 + 3 + Hang up to cancel	Activate or Cancel Selectable Display Messaging.	17
Selectable Ring Tones	711 + 1 (ICM) or 2 (Trk) + tone (1~8)	Listen to the incoming ring choices.	-
	720 + 1 (ICM) + 2 (Trk) + tone (1~8)	Change your extension incoming ring tones.	-
System Programming Password Protection	# * * *	Enter system programming mode.	-
Station Message Detail Recording	621	Print the SMDR Extension Accumulated printout.	-
	622	Print the SMDR Group Accumulated printout.	-
	623	Print the SMDR Account Code Accumulated printout.	-
Tandem Trunking (Unsupervised Conference)	#8	Set up an Unsupervised Conference.	-
Time and Date Clock/Calendar Display	728 + hour + minutes	Set the system Time.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Toll Restriction, Dial Block	600 + code + 0	Use Dial Block.	-
	601 + code + 0	As a supervisor use Dial Block.	-
Toll Restriction Override	775 + pswd (0000) + place outside call	Temporarily override an extension Toll Restriction.	-
	663 + digit code + line + telephone number	Override Toll Restriction.	-
Transfer	*06	Set the Automatic Transfer for each trunk line.	-
	*07	Cancel the Automatic Transfer for each trunk line.	-
	*08	Set the Destination for Automatic Trunk Transfer.	-
	602 + Group number (1~8 or 01~64)	Set Automatic Transfer Setup for each extension group.	-
	603+ Group number (1~8 or 01~64)	Cancel Automatic Transfer Setup	-
	604 + Group number (1~8 or 01~64) + mode + extension	Set the destination for Automatic Transfer Setup for each extension group.	-
	605 + Group number (1~8 or 01~64)	Set Delayed Transfer for each extension group.	-
Transfer (continued)	606 + Group number (1~8 or 01~64)	Cancel Delayed Transfer.	-
	607 + Group number (1~8 or 01~64)	Set up DND for each extension group.	-
	608 + Group number (1~8 or 01~64)	Cancel DND for each extension group.	-
	624 + Extension number	Transfer a call into an existing call.	-
	782	Transfer a call to the VRS. This can be used also to route ANI/DNIS to the VRS.	-

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Trunk Group Routing or Automatic Route Selection	9	Place a call using Trunk Group Routing or Automatic Route Selection.	*02
Trunk Queuing	*8	Call your mailbox.	67
	654	Enable Conversation Record at an SLT.	-
	# (Off-Hook)	Camp on to or leave a Callback at a busy trunk.	35
Voice Mail	8 (Off-Hook)	Leave a message in a co-worker's mailbox after callback their busy or unanswered extension.	-
	*8	Call your mailbox.	67
	654	Enable Conversation Record at an SLT.	-
Voice Over	6 (Off-Hook)	Send a Voice Over to a busy extension after hearing Busy/Ring tone.	48

**Table 3-3 Service Codes by Feature (Continued)**

<b>For this feature...</b>	<b>Dial this Service Code...<sup>1</sup></b>	<b>When you ...</b>	<b>Also see Function Key...</b>
<sup>1</sup> Except where indicated, dial Service Code from intercom dial tone (e.g., press idle Speaker first).			
Voice Response System (VRS)	** + ringing ext.	Pick up a call ringing another extension for Directed Call Pickup or VRS Park and Page.	-
	616 + 7 + Record message + # + Condition (2, 4,6 or 7) + Destination + Type (2 or 3) or 616 + 7 + 3 to cancel	Record, listen to or erase a Personal Greeting or Park and Page.	17
	4 (On-Hook)	Listen to the General Message.	-
	6 (On-Hook)	Check an extension number.	-
	8 (On-Hook)	Listen for the time.	-
	611	Use SLT to listen to the General Message.	-
	612 + 3 to erase, 5 to listen or 7 to record	Record, listen to or erase the General Message.	-
	616 + 3 to erase, 5 to listen or 7 to record	Record, listen to or erase a VRS Message.	-
	750	Camp On to an extension when calling into the system through the VRS.	-
	782	Transfer a call to the VRS. This can be used also to route ANI/DNIS to the VRS.	-
784	Access the VRS.	-	
Volume Control	729	Check or change ring volume.	-
Common Canceling Service Code	620	Use Common Canceling Service Code.	-

**Table 3-4 Function Key Codes by Feature**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Speed Dialing	<b>Code: 27</b> <b>Operation:</b> Press key + bin + Line or Speaker key	Dial a stored System Speed Dialing number.	None	#2 + bin
	<b>Code: 28</b> <b>Operation:</b> Press key + bin + Line or Speaker key	Dial a stored Group Speed Dialing number.	None	# 4 + bin
Account Codes	<b>Code: 50</b> <b>Operation:</b> Press key + Dial Account Code	Enter Account Codes.	None	*

**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Automatic Call Distribution (ACD)	<b>Code: *10</b> <b>Operation:</b> Press key to log in Press key + 1 to log out or 0 to cancel	Basic Operation Log in or out of an ACD Group.	On red when logged in Off when logged out	-
	<b>Code: *12</b> <b>Operation:</b> Press key	Emergency Call Place or receive an Emergency Call.	On while calling your supervisor or after being answered by your supervisor Flashing fast at the supervisor while ringing	-
	<b>Code: *13</b> <b>Operation:</b> Press key	Rest Mode Enable/disable Rest Mode.	On red when Rest Mode enabled Off when Rest Mode disabled	-
	<b>Code: *14</b> <b>Operation:</b> Press key + Press 1 (Yes) or 2 (No)	Out of Service Take an ACD Group out of Service (for Group Supervisors only), or Take all ACD Groups out of service (for System Supervisors only).	On red when the group is out of service.	-
	<b>Code: *15</b> <b>Operation:</b> Call busy ACD agent + Press key	Terminal Monitor Monitor an ACD Agent's conversation.	On red while monitoring Off when not monitoring	-

**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Automatic Call Distribution (ACD) (cont.)	<b>Code: *16</b> <b>Operation:</b> Press key to put agent on hold. Press key again + 1 to hang up agent or 0 to bring agent back into call.	Switch (split) between an ACD Agent and their outside caller after answering an emergency call.	On red while the agent is on hold	-
	<b>Code: *17</b> <b>Operation:</b> Press key	Working Time Enable/disable Work Time.	On when Work Time enabled, Flashing while on a call if Auto Work Time enabled Off when Work Time disabled	-
	<b>Code: *18 + ACD Group</b> <b>Operation:</b> Press key	ACD Overflow Control Overflow ACD calls to another group.	On when enabled, Slow flash when disabled	-
	<b>Code: *19</b> <b>Operation:</b> Press key while on-hook + Vol Up or Vol Down to scroll	Queue Status Check When in an ACD group, check the status of the queue groups.	None	-
Background Music	<b>Code: 04</b> <b>Operation:</b> Press key	Turn Background Music on or off.	None	725
Barge-In	<b>Code: 34</b> <b>Operation:</b> Call ext + Press key	Barge-In on a co-worker's conversation.	None	710
Call Arrival (CAR) Key	<b>Code: *03 + ext.</b> <b>Operation:</b> Press key	Place or answer a call to your co-worker's extension.	Slow Flash red when ringing, On red when busy	-
Call Forwarding, Both Ring	<b>Code: 14</b> <b>Operation:</b> Press key + Dest. Extension	Call Forward Both Ring to extension.	Slowly flashes red	745
Call Forwarding, Busy	<b>Code: 11</b> <b>Operation:</b> Press key + Dest. Extension	Call Forward Busy to extension or Voice Mail.	Slowly flashes red	742
Call Forwarding, Busy/No Answer	<b>Code: 13</b> <b>Operation:</b> Press key + Dest. Extension	Call Forward Busy/No Answer to extension or Voice Mail.	Slowly flashes red	744



**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Call Forwarding, External by Door Box	<b>Code:</b> 54 <b>Operation:</b> Press key + Dest. Number	Externally Call Forward Door Box calls.	Slowly flashes red	722
Call Forwarding, Follow Me	<b>Code:</b> 15 <b>Operation:</b> Press key + Dest. Extension	Call Forward Follow Me to extension or Voice Mail.	Slowly flashes red	746
Call Forwarding, Immediate	<b>Code:</b> 10 <b>Operation:</b> Press key + Dest. Extension	Call Forward Immediate to extension or Voice Mail.	Slowly flashes red	741
Call Forwarding, No Answer	<b>Code:</b> 12 <b>Operation:</b> Press key + Dest. Extension	Call Forward No Answer to extension or Voice Mail.	Slowly flashes red	743
Call Forwarding / Do Not Disturb Override	<b>Code:</b> 37 <b>Operation:</b> Call extension + Press key	Override an extension Call Forwarding or Do Not Disturb.	None	-
Callback / Camp-On/ Trunk Queuing	<b>Code:</b> 35 <b>Operation:</b> Call busy extension or access busy trunk + Press key	Leave a Call back request at a busy extension, Camp On to a busy extension, or Queue for a busy trunk.	On red when activated	#
Call Redirect	<b>Code:</b> 49 + extension or voice mail <b>Operation:</b> Press key	Redirect a ringing call to the predefined destination.	On red when activated	-
Central Office Calls	<b>Code:</b> *01 + Trunk number (001~200) <b>Operation:</b> Press key	Press a line key to place or answer a trunk call (where trunks are 001~200).	On green when seized, on red when in use (by other party), Slow Flash green when ringing, Hold flash when on Hold	#9
Conference	<b>Code:</b> 07 <b>Operation:</b> Set up call + Press key + set up call to add + Press key twice	Set up a Conference or a Meet Me Conference.	On red during setup	#1
Department Calling	<b>Code:</b> 46 <b>Operation:</b> Press Key	Log in or log out of your Department Calling Group.	On when removed, Off when installed	650

**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Department Step Calling	<b>Code:</b> 36 <b>Operation:</b> Dial busy ext + Press key	Step Call through a Department Group for an idle member.	None	2
Direct Station Selection / One-Touch Calling	<b>Code:</b> 01 <b>Operation:</b> Press key + dest. ext. or outside tel. # + Hold	Call an extension or outside number using a DSS key.	Off = extension idle On = extension busy Flashing = DND	-
Do Not Disturb	<b>Code:</b> 03 <b>Operation:</b> Press key + code (0~4)	Set your telephone in DND.	DND key on red	747
Do Not Disturb/ Call Forward Override	<b>Code:</b> 37 <b>Operation:</b> Press key	Call an extension which is in DND or Call Forwarded.	None	-
General Purpose Relay	<b>Code:</b> 51 + relay number <b>Operation:</b> Press key	Activate the general purpose relay.	On when active	780
Group Call Pickup	<b>Code:</b> 24 <b>Operation:</b> Speaker key + Press key	Answer a call ringing another telephone in your Pickup Group.	None	**#
	<b>Code:</b> 25 <b>Operation:</b> Speaker key + Press key	Answer a call ringing a telephone in another Pickup Group – if you do not know the group number.	None	769
	<b>Code:</b> 26 + Pickup Group (1~8 or 1~9 or 01~64) <b>Operation:</b> Speaker key + Press key + Pkup Group	Answer a call ringing a telephone in a specific Pickup Group.	None	768
Handset Cutoff	<b>Code:</b> 40 <b>Operation:</b> Press key	Cut off the handset transmission while on a call.	On when feature active (no transmission on handset)	-
Hotline	<b>Code:</b> 01 + dest. ext <b>Operation:</b> Press key	Place a call to your Hotline partner.	Full BLF (red) for covered ext.	-

**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Headset Operation	<b>Code:</b> 05 <b>Operation:</b> Press key	Enable or disable Headset Operation.	On red when activated	688
Hold	<b>Code:</b> 44 <b>Operation:</b> Place or answer call + Press key	Put a call on System Hold (if your telephone Hold key is reassigned).	None	-
	<b>Code:</b> 45 <b>Operation:</b> Place or answer call + Press key	Put a call on Exclusive Hold.	None	-
Meet Me Conference (Also see Conference)	<b>Code:</b> 32 <b>Operation:</b> Press key	Join a Meet Me Conference.	None	763 or 764
Memo Dial	<b>Code:</b> 31 <b>Operation:</b> <u>Store:</u> While on call, press key + number to store <u>Use:</u> Press Key + Call or line <u>Erase:</u> Speaker key + Press key	Store, use or check a Memo dial number.	None	-
Message Waiting	<b>Code:</b> 38 <b>Operation:</b> Leave message: Call ext + Press key OR Answer message: Press key	Answer/Leave a Message Waiting.	None	*0
Microphone Cutoff	<b>Code:</b> 02 <b>Operation:</b> Set up call + Press key	Use Microphone Cutoff.	On red when activated	-
Call Arrival (CAR) Keys	<b>Code:</b> *03 + ext. or dept group <b>Operation:</b> Press key	Place or answer a call to your virtual (phantom) extension.	Slow Flash red when ringing, On red when busy	-
Name Storing	<b>Code:</b> 55 <b>Operation:</b> Press key + ext ## + name + Hold	Enter a name for the extension to be displayed on telephones.	None	700

**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Networking	<b>Code:</b> *06 + network (01~50) <b>Operation:</b> Press key	Access a networked trunk.	None	-
Night Service	<b>Code:</b> 09 + mode (1~4 or 1~8) <b>Operation:</b> Press key	Activate the Day/Night Mode.	On red when activated	718 + + 0
Off-Hook Signaling	<b>Code:</b> 33 <b>Operation:</b> Call ext. and receive busy + Press key	Signal a busy extension.	None	7
Paging, External	<b>Code:</b> 19 + zone (1~8) <b>Operation:</b> Press Key	Make an external zone page.	On red when activated	703 + zone
	<b>Code:</b> 20 <b>Operation:</b> Press key	Make an external All Call page.	On red when activated	703 + 0
Paging, Internal	<b>Code:</b> 21 + zone (1~8, 1~9 or 01~64) <b>Operation:</b> Press key	Broadcast to an Internal Paging Zone.	On red when activated	701 + zone
	<b>Code:</b> 2 <b>Operation:</b> Press key	Broadcast to all Internal Paging zones.	On red when activated	701 + 0 or 00
Park	<b>Code:</b> *04 + orbit (1~9 or 01~64) <b>Operation:</b> Place or answer call + Press key	Place a call into or retrieve a call from a Park Orbit.	Fast flash when orbit is busy (green at originator, red at others)	#6 (Park) *6 (pickup)
Repeat Redial	<b>Code:</b> 29 <b>Operation:</b> Place call and press key	Activate Repeat Redial while on a call.	Fast Flash while system waits to redial	-
Reverse Voice Over	<b>Code:</b> 47 + dest. ext. <b>Operation:</b> Press and hold key	Initiate Reverse Voice Over.	Full BLF red	-
Room Monitor	<b>Code:</b> 39 <b>Operation:</b> Press key at destination & source + ext	Activate Room Monitor.	Dest. Fast Flash red, Source Hold Flash red	-

**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Save Number Dialed	<b>Code:</b> 30 <b>Operation:</b> <u>Save:</u> Place call + Press key <u>Redial:</u> Line or Speaker key + Press key	Save, redial or check saved number.	None	-
Secretary Call (Buzzer)	<b>Code:</b> 41 + sec. ext <b>Operation:</b> Press key	Call your secretary (using the buzzer).	On red at source Fast Flash red at destination	-
Secretary Call Pickup	<b>Code:</b> 42 + boss ext <b>Operation:</b> Press key	As a secretary pick up a call ringing your boss's extension.	On red when activated	-
Selectable Display Messaging	<b>Code:</b> 18 <b>Operation:</b> Press key + additional data if needed	Set up Call Forwarding Off-Premise, Selectable Display Messaging, VRS Park and Page and VRS Personal Greeting.	Flashes red when activated	-
Serial Call	<b>Code:</b> 43 <b>Operation:</b> Trk call + Hold + ext + Press key	Place a Serial Call to a co-worker.	None	-
Step Call	<b>Code:</b> 36 <b>Operation:</b> Press key	Step through a department group.	None	#
Transfer	<b>Code:</b> 06 <b>Operation:</b> Establish call + Hold + Ext + Press key	Transfer a call.	None	-
Trunk Group Routing	<b>Code:</b> *05 <b>Operation:</b> Press key	Access a trunk using Trunk Group Routing.	On red when active	9
Trunk Groups	<b>Code:</b> *02 + TRK group (1~9 or 001~200) <b>Operation:</b> Press key	Use a trunk group key to access a Trunk Group.	On red when active	704
Trunk Queuing	<b>Code:</b> 35 <b>Operation:</b> Hear busy tone for Trk + Press key	Camp On or Queue for a trunk.	On red while camped on	-

**Table 3-4 Function Key Codes by Feature (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
For this feature...	Use this key...	When you ...	Key Lamp Status	Also See Srvc Code
Voice Response System (VRS) (Park and Page) (Personal Greeting)	<b>Code:</b> 17 <b>Operation:</b> Press key + device type code + requested data (depends on device selected).	Set up Call Forwarding Off-Premise, Selectable Display Messaging, VRS Park and Page or VRS Personal Greeting.	Flashes red	*4
Voice Mail	<b>Code:</b> 83 + code (0~4) <b>Operation:</b> Press key	Use Voice Mail Service.	Flashes slowly when monitoring	-
	<b>Code:</b> 77 + extension or Message Center number <b>Operation:</b> Press key	Call Voice Mail or leave a message.	Flashes green on your key for your messages or flashes red for the Message Center	*8 or 8
	<b>Code:</b> 78 + 0 <b>Operation:</b> Set up call + Press key	Use Voice Mail Record.	Slow Flash red when active	-
Voice Over	<b>Code:</b> 48 <b>Operation:</b> Hear Off-Hook Signaling tone + Press key	Initiate or respond to Voice Over.	On red when responding Hold Flash red when listening	6

**Table 3-5 Function Key Codes by Number**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code:</b> 01 + dest. ext. or outside tel # + Hold <b>Operation:</b> Press key	Direct Station Selection, Hotline, One-Touch Calling	Call an extension or outside number using a DSS key.	Off = extension idle On = extension busy Flashing = DND	747
<b>Code:</b> 02 <b>Operation:</b> Set up call + Press key	Microphone Cutoff	Use Microphone Cutoff.	On red when activated	-
<b>Code:</b> 03 <b>Operation:</b> Press key	Do Not Disturb	Activate DND.	On red when activated	-
<b>Code:</b> 04 <b>Operation:</b> Press key	Background Music	Turn BGM on or off.	On red when activated	725
<b>Code:</b> 05 <b>Operation:</b> Press key	Headset Operation	Enable or disable Headset Operation.	On red when activated	734
<b>Code:</b> 06 <b>Operation:</b> Establish call + Hold + Ext + Press key	Transfer	Transfer a call.	None	-
<b>Code:</b> 07 <b>Operation:</b> Set up call + Press key + set up call to add + Press key twice	Conference	Set up a conference or a Meet Me Conference.	On red during setup	#1
<b>Code:</b> 08 <b>Operation:</b> Press key	Incoming Caller ID List	List incoming caller ID to extension.	Flashing when new log created On in call log	-
<b>Code:</b> 09 + mode (1~4 or 1~8) <b>Operation:</b> Press key	Night Service	Activate the Day/Night Mode.	On red when activated	718 + mode (1~4 or 1~8)
<b>Code:</b> 10 <b>Operation:</b> Press key + Dest. Ext.	Call Forwarding, Immediate	Call Forward to extension or Voice Mail.	Slowly flashes red	741

**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code:</b> 11 <b>Operation:</b> Press key + Dest. Ext.	Call Forwarding, Busy	Call Forward to extension or Voice Mail.	Slowly flashes red	742
<b>Code:</b> 12 <b>Operation:</b> Press key + Dest. Ext.	Call Forwarding, No Answer	Call Forward to extension or Voice Mail.	Slowly flashes red	743
<b>Code:</b> 13 <b>Operation:</b> Press key + Dest. Ext.	Call Forwarding, Busy/No Answer	Call Forward to extension or Voice Mail.	Slowly flashes red	744
<b>Code:</b> 14 <b>Operation:</b> Press key + Dest. Ext.	Call Forwarding, Both Ring	Call Forward to extension.	Slowly flashes red	745
<b>Code:</b> 15 <b>Operation:</b> Press key + Dest. Ext.	Call Forwarding, Follow Me	Call Forward to extension or Voice Mail.	Slowly flashes red	746
<b>Code:</b> 19 + zone (1~8) <b>Operation:</b> Press key	Paging, External	Broadcast to an External Paging Zone.	On red when activated	703 + zone
<b>Code:</b> 20 <b>Operation:</b> Press key	Paging, External	Broadcast to all External Paging Zones.	On red when activated	703 + 0
<b>Code:</b> 21 + zone (1~8, 1~9 or 01~32) <b>Operation:</b> Press Key	Paging, Internal	Broadcast to an Internal Paging Zone.	On red when activated	701 + zone
<b>Code:</b> 22 <b>Operation:</b> Press key	Paging, Internal	Broadcast to all Internal Paging Zone.	On red when activated	701 + 0 or 00
<b>Code:</b> 23 <b>Operation:</b> Press key	Meet Me Paging	Join a Meet Me Page.	None	763, 764, or 765
<b>Code:</b> 24 <b>Operation:</b> Speaker key + Press Key	Group Call Pickup	Answer a call ringing another telephone in your Pickup Group.	None	<b>*#</b>



**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code:</b> 25 <b>Operation:</b> Speaker key + Press key	Group Call Pickup	Answer a call ringing a telephone in another Pickup Group – if you do not know the group number.	None	769
<b>Code:</b> 26 + Pickup Group (1~8 or 1~9 or 01~64) <b>Operation:</b> Speaker key + Press key + Pickup Group	Group Call Pickup	Answer a call ringing a telephone in a specific Pickup Group.	None	768
<b>Code:</b> 27 <b>Operation:</b> Press key + bin + Line or Speaker key	Speed Dialing	Dial a stored System Speed Dialing number.	None	#2 + bin
<b>Code:</b> 28 <b>Operation:</b> Press key + bin + Line or Speaker key		Dial a stored Group Speed Dialing number.	None	#4 + bin
<b>Code:</b> 29 <b>Operation:</b> Place call + Press key	Repeat Redial	Activate repeat redial while on a call.	Fast Flash while system waits to redial	-
<b>Code:</b> 30 <b>Operation:</b> <u>Save:</u> Place call + Press key <u>Redial:</u> Line or Speaker key + Press key	Save Number Dialed	Save, redial or check a saved number.	None	715
<b>Code:</b> 31 <b>Operation:</b> <u>Store:</u> While on call, Press key + number to store <u>Use:</u> Press key + Speaker key or line <u>Erase:</u> Speaker key + Press key	Memo Dial	Store, use or check a Memo Dial number.	None	-

**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code: 33</b> <b>Operation:</b> Call ext. and receive busy + Press key	Off-Hook Signaling	Signal a busy extension.	None	709
<b>Code: 34</b> <b>Operation:</b> Call ext + Press key	Barge-In	Barge-In on a co-worker's conversation.	None	710
<b>Code: 35</b> <b>Operation:</b> Call busy extension or access busy trunk + Press key	Callback / Camp-On / Trunk Queuing	Leave a Callback request at a busy extension, Camping On to a busy extension, or Queue for a busy trunk.	On red when activated	750
<b>Code: 36</b> <b>Operation:</b> Dial busy ext + Press key	Department Step Calling	Step Call through a Department Group for an idle member.	None	708
<b>Code: 37</b> <b>Operation:</b> Call extension + Press key	Call Forwarding / Do Not Disturb Override	Override an extension Call Forwarding or Do Not Disturb.	On red when activated	707
<b>Code: 38</b> <b>Operation:</b> Leave message: Call ext + Press key OR Answer message: Press key	Message Waiting	Answer/Leave a Message Waiting.	None	*0 or 0
<b>Code: 39</b> <b>Operation:</b> Press key at destination and source + ext	Room Monitor	Activate Room Monitor.	Fast Flash red at destination, Hold Flash red at source	-
<b>Code: 40</b> <b>Operation:</b> Press key	Handset Cutoff	Cut off the handset transmission while on a call.	On when feature active (no transmission on handset)	-

**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code:</b> 41 + sec. ext. <b>Operation:</b> Press key	Secretary Call	Call your secretary (using the buzzer).	On red at source Fast Flash red at destination	-
<b>Code:</b> 42 + boss ext. <b>Operation:</b> Press key		As a secretary pick up a call ringing your boss's extension.	On red when activated	-
<b>Code:</b> 43 <b>Operation:</b> TRK call + Hold + ext + Press key	Serial Call	Place a Serial Call to a co-worker.	None	-
<b>Code:</b> 44 <b>Operation:</b> Place or answer call + Press key	Hold	Put a call on System Hold (if hold key is reassigned).	None	-
<b>Code:</b> 45 <b>Operation:</b> Place or answer call + Press key		Put a call on Exclusive Hold.	None	-
<b>Code:</b> 46 <b>Operation:</b> Press key	Department Calling	Log in or log out of your Department Calling Group.	On when removed, Off when installed	650
<b>Code:</b> 47 + dest. ext. <b>Operation:</b> Press and hold key	Reverse Voice Over	Initiate Reverse Voice Over.	Full BLF red	-
<b>Code:</b> 48 <b>Operation:</b> Hear Off-Hook Signaling tones + Press key	Voice Over	Initiate or respond to Voice Over.	On red when responding Hold Flash red when listening	690
<b>Code:</b> 49 + ext or voice mail number <b>Operation:</b> Press key	Call Redirect	Redirect an incoming call to an extension or voice mail.	On red when activated Flashes when in DND/Call Forward	-
<b>Code:</b> 50 <b>Operation:</b> Press key	Account Codes	Enter Account Codes.	None	* or ##

**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code:</b> 51 + relay number <b>Operation:</b> Press key	General Purpose Relay	Activate the general purpose relay.	On when active	780
<b>Code:</b> 55 <b>Operation:</b> Do not Lift the handset + Press key + Enter extension number + Enter name + Press Hold	Name Storing	Change the name displayed on your display telephone.	None	700
<b>Code:</b> 83 + 0~4 <b>Operation:</b> Press key	Voice Mail	Use Voice Mail Service.	Flashes slowly when monitoring	-
<b>Code:</b> 77 + extension or Message Center number <b>Operation:</b> Press key		Call Voice Mail or leave a message.	Flashes green on your key for your messages or flashes red for the Message Center	*8 or 8
<b>Code:</b> 78 + Conversation Record <b>Operation:</b> Press key		Use Conversation Record.	Flashes red when recording	-
<b>Code:</b> *01 + Trunk number (001~200) <b>Operation:</b> Press key	Central Office Calls	Press a line key to place or answer a trunk call (where trunks are 001~200).	On green when seized, on red when in use (by other party), Slow Flash green when ringing, Hold flash when on Hold	#9
<b>Code:</b> *02 + TRK group (1~9 or 001~200) <b>Operation:</b> Press key	Trunk Groups	Use a trunk group key to access a Trunk Group.	On red when active	704

**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code:</b> *03 + ext. or department group <b>Operation:</b> Press key	Call Arrival (CAR) Keys	Call Arrival (CAR) Key: Place or answer a call from your virtual (phantom) extension or Call Arrival (CAR) Key: Place or answer a call to your co-worker's extension.	Slow Flash red when ringing, On red when busy	-
<b>Code:</b> *04 + orbit (01~64) <b>Operation:</b> Place or answer call + Press key	Park	Place a call into or retrieve a call from a Park Orbit.	Fast Flash when orbit is busy (green at originator, red at others)	#6 (Park) *6 (pickup)
<b>Code:</b> *06 + Network number (1~50) <b>Operation:</b> Press key	Networking	Access a networked trunk.	None	-

**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code: *10</b> <b>Operation:</b> Press key to log in Press key + 1 to log out or 0 to cancel	Automatic Call Distribution (ACD)	<b>Basic Operation</b> Log in or out of an ACD Group.	On red when logged in Off when logged out	<b>*5</b>
<b>Code: *12</b> <b>Operation:</b> Press key		<b>Emergency Call</b> Place or receive an Emergency Call.	On while calling your supervisor or after being answered by your supervisor Flashing fast at the supervisor while ringing	-
<b>Code: *13</b> <b>Operation:</b> Press key		<b>Rest Mode</b> Enable/disable Rest Mode.	On red when Rest Mode enabled Off when Rest Mode disabled	-
<b>Code: *14</b> <b>Operation:</b> Press key + Press 1 (Yes) or 2 (No)		<b>Out of Service</b> Take an ACD Group out of service (for Group Supervisors only), or Take all ACD Groups out of service (for System Supervisors only).	On red when a group is out of service	-
<b>Code: *15</b> <b>Operation:</b> Call busy ACD agent + Press key		<b>Terminal Monitor</b> Monitor an ACD Agent's conversation.	On red while monitoring, Off when not monitoring	-
<b>Code: *16</b> <b>Operation:</b> Press key to put agent on hold. Press key again + 1 to hang up agent or 0 to bring agent back into call.		<b>Supervisor Split</b> Switch (split) between an ACD Agent and their outside caller after answering an emergency call.	On while agent is on hold	-

**Table 3-5 Function Key Codes by Number (Continued)**

To program a key, press Speaker, dial 751 (for 2-digit codes) or 752 (for 3-digit codes), press the key and enter the code (e.g., 48 for Voice Over).				
Use this key...	For this feature...	When you ...	Key Lamp Status	Also see Srvc Code
<b>Code: *17</b> <b>Operation:</b> Press Key	Automatic Call Distribution (ACD) <i>(continued)</i>	<b>Work Time</b> Enable/disable Work Time.	On when Work Time enabled, Flashing (while on a call) if Auto Work time enabled Off when Work Time disabled	-
<b>Code: *18 + ACD Group Number</b> <b>Operation:</b> Press key		Enable ACD overflow.	On red when activated Slowly flashes red when disabled	-
<b>Code: *19</b> <b>Operation:</b> Press key while on-hook + Vol Up or Vol Down to scroll		Queue Status Check View the ACD Queue Status of each ACD group.	None	-

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# *Feature Availability by Software Revision*



## **SECTION 1      FEATURE AVAILABILITY CHART**

This chapter provides an alphabetical listing of the features that are available with each software revision.

Note: the following table provides a breakout of the availability of each feature by revision, see [Table 4-1 Feature Availability by Software Revision](#).

**S = Supported Feature**

**N/A = Feature not supported for this software release**

**E = Supported and Enhanced**

Table 4-1 Feature Availability by Software Revision

UNIVERGE SV8100 Feature Name	Ver. 1000	Ver. 1100	Ver. 2000	Ver. 2500	Ver. 3000	Ver. 4000	Ver. 5000	Ver. 6000	Ver. 7000	Ver. 8000	Ver. 9000
Account Code – Forced/Verified/Unverified	S	S	S	S	S	S	S	S	S	S	S
Account Code Entry	S	S	S	S	S	S	S	S	S	S	S
Alarm	S	S	S	S	S	S	S	S	S	S	S
Alarm Reports	S	S	S	S	E	S	E	S	E	S	S
Alphanumeric Display	S	S	S	S	S	S	S	S	S	S	S
Analog Communications Interface (ACI)	S	S	S	S	S	S	S	S	S	S	S
Ancillary Device Connection	S	S	S	S	S	S	S	S	S	S	S
Answer Hold	S	S	S	S	S	S	S	S	S	S	S
Answer Key	S	S	S	S	S	S	S	S	S	S	S
Attendant Call Queuing	S	S	S	S	S	S	S	S	S	S	S
Automatic Call Distribution (ACD)	S	S	S	S	S	S	E	E	S	E	S
Automatic Release	S	S	S	S	S	S	S	S	S	S	S
Automatic Route Selection	S	S	S	S	S	S	S	S	E	S	S
Background Music	S	S	S	S	S	S	S	S	S	S	S
Barge-In	S	S	S	S	S	S	S	S	S	S	S
Battery Backup – System Memory	S	S	S	S	S	S	S	S	S	S	S
Battery Backup – System Power	S	S	S	S	S	S	S	S	S	S	S
Call Appearance (CAP) Keys	S	S	S	S	S	S	S	S	S	S	S
Call Arrival (CAR) Keys	S	S	S	S	E	S	S	S	S	S	S
Call Duration Timer	S	S	S	S	S	S	S	S	S	S	S
Call Forwarding – Centrex	S	S	S	S	S	S	S	S	S	S	S
Call Forwarding	S	S	S	S	E	S	S	S	S	S	S
Call Forwarding with Follow Me	S	S	S	S	S	S	S	S	S	S	S
Call Forwarding, Off-Premise	S	S	S	S	S	S	S	S	S	S	S
Call Forwarding/Do Not Disturb Override	S	S	S	S	S	S	S	S	S	S	S
Call Monitoring	S	S	S	S	S	S	S	S	S	S	E

Table 4-1 Feature Availability by Software Revision (Continued)

UNIVERGE SV8100 Feature Name	Ver. 1000	Ver. 1100	Ver. 2000	Ver. 2500	Ver. 3000	Ver. 4000	Ver. 5000	Ver. 6000	Ver. 7000	Ver. 8000	Ver. 9000
Call Redirect	S	S	S	S	S	S	S	S	S	S	S
Call Waiting/Camp-On	S	S	S	S	S	S	S	S	S	S	S
Callback	S	S	S	S	S	S	S	S	S	S	S
Caller ID Call Return	S	S	S	S	S	S	S	S	S	S	S
Caller ID	S	S	S	S	E	E	E	S	S	S	S
Caller ID – Flexible Ringing	N/A	N/A	N/A	N/A	S	S	S	S	S	S	S
Central Office Calls, Answering	S	S	S	S	E	S	S	S	E	S	S
Central Office Calls, Placing	S	S	S	S	S	S	S	S	E	S	S
Class of Service	S	S	S	S	S	S	S	S	S	S	S
Clock/Calendar Display	S	S	S	S	S	S	S	S	S	S	S
CO Message Waiting Indication	S	S	S	S	S	S	S	S	S	S	S
Code Restriction	S	S	S	S	S	S	S	S	S	S	S
Code Restriction Override	S	S	S	S	S	S	S	S	S	S	S
Code Restriction, Dial Block	S	S	S	S	S	S	S	S	S	S	S
Conference	S	S	S	S	S	S	S	S	S	S	S
Conference, Voice Call/Privacy Release	S	S	S	S	S	S	S	S	S	S	S
Continued Dialing	S	S	S	S	S	S	S	S	S	S	S
Cordless DECT Terminals	S	S	S	S	S	S	E	S	S	S	S
Cordless Telephone Connection	S	S	S	S	S	S	S	S	S	S	S
Data Line Security	S	S	S	S	S	S	S	S	S	S	S
Delayed Ringing	S	S	S	S	S	S	S	S	S	S	S
Department Calling	S	S	S	S	S	S	S	S	S	S	S
Department Step Calling	S	S	S	S	S	S	S	S	S	S	S
Dial Pad Confirmation Tone	S	S	S	S	S	S	S	S	S	S	S
Dial Tone Detection	S	S	S	S	S	S	S	S	S	S	S
Dialing Number Preview	S	S	S	S	S	S	S	S	S	S	S
Digital Trunk Clocking	S	S	S	S	S	S	S	S	S	S	S
Direct Inward Dialing (DID)	S	S	S	S	S	S	S	S	E	S	S
Direct Inward Line (DIL)	S	S	S	S	S	S	S	S	S	S	S

Table 4-1 Feature Availability by Software Revision (Continued)

UNIVERGE SV8100 Feature Name	Ver. 1000	Ver. 1100	Ver. 2000	Ver. 2500	Ver. 3000	Ver. 4000	Ver. 5000	Ver. 6000	Ver. 7000	Ver. 8000	Ver. 9000
Direct Inward System Access (DISA)	S	S	S	S	E	S	S	S	S	S	S
Direct Station Selection (DSS) Console	S	S	S	S	S	S	S	S	S	S	S
Directed Call Pickup	S	S	S	S	S	S	S	S	S	S	S
Directory Dialing	S	S	S	S	E	S	S	S	S	S	S
Distinctive Ringing, Tones and Flash Patterns	S	S	S	S	E	S	S	S	S	S	S
Do Not Disturb	S	S	S	S	S	S	S	S	S	E	S
Door Box	S	S	S	S	S	S	S	S	S	S	S
Drop Key	S	S	S	S	S	S	S	S	S	S	S
<i>D<sup>term</sup></i> Cordless II Terminal	S	S	S	S	S	S	S	S	S	S	S
<i>D<sup>term</sup></i> Cordless Lite II Terminal	S	S	S	S	S	S	S	S	S	S	S
DTPlusWare	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	S
Ecology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S
E911 Compatibility	S	S	S	S	S	E	S	S	S	S	S
Electra Elite IPK Terminals	S	S	S	S	S	S	S	S	S	S	S
Facsimile CO Branch Connection	S	S	S	S	S	S	S	S	S	S	S
Flash	S	S	S	S	S	S	E	S	S	S	S
Flexible System Numbering	S	S	S	S	S	S	S	S	S	S	S
Flexible Timeouts	S	S	S	S	S	S	S	S	S	S	S
Forced Trunk Disconnect	S	S	S	S	S	S	S	S	S	S	S
General Purpose Relay	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S
Group Call Pickup	S	S	S	S	S	S	S	S	S	S	S
Group Listen	S	S	S	S	S	S	S	S	S	S	S
Handset Mute	S	S	S	S	S	S	S	S	S	S	S
Handsfree and Monitor	S	S	S	S	S	S	S	S	S	S	S
Handsfree Answerback/Forced Intercom Ringing	S	S	S	S	S	S	S	S	S	S	S
Headset Operation	S	S	S	S	S	S	S	S	S	S	S
Hold	S	S	S	S	S	S	S	S	S	S	S

Table 4-1 Feature Availability by Software Revision (Continued)

UNIVERGE SV8100 Feature Name	Ver. 1000	Ver. 1100	Ver. 2000	Ver. 2500	Ver. 3000	Ver. 4000	Ver. 5000	Ver. 6000	Ver. 7000	Ver. 8000	Ver. 9000
Hot Key-Pad	S	S	S	S	S	S	S	S	S	S	S
Hotel/Motel	S	S	S	S	S	S	S	S	E	S	S
Hotline	S	S	S	S	S	S	S	S	S	S	S
Howler Tone Service	S	S	S	S	S	S	S	S	S	S	S
Intercom	S	S	S	S	S	S	S	S	E	S	S
IP Multiline Station (SIP)	S	S	S	S	E	S	E	E	S	S	E
IP Multiline Station (SIP) – ML440 Cordless	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	S
IP Single Line Telephone (SIP)	S	S	S	S	S	E	S	E	S	S	E
IP Trunk – (SIP) Session Initiation Protocol	S	S	S	S	S	E	S	S	E	S	E
IP Trunk – H3.23	S	S	S	S	S	S	S	S	S	S	S
IPK/IPK II Migration	N/A	N/A	N/A	S	S	S	S	S	S	S	S
IP/Digital Call Logging	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S
ISDN Compatibility	S	S	S	S	E	E	S	S	S	S	S
IVR – Appointment Reminder Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S
IVR – Broadcast Server	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S
K-CCIS – IP	S	S	S	S	S	S	E	S	S	S	S
K-CCIS – IP with PVA	N/A	N/A	N/A	N/A	S	S	E	S	S	S	S
K-CCIS – T1	S	S	S	S	S	S	E	S	S	S	S
Last Number Redial	S	S	S	S	E	S	S	S	S	S	S
Licensing	S	S	S	S	E	E	E	S	E	S	E
Line Preference	S	S	S	S	S	S	S	S	S	S	S
Long Conversation Cutoff	S	S	S	S	S	S	S	S	S	S	S
Loop Keys	N/A	N/A	N/A	N/A	N/A	S	S	S	S	S	S
Maintenance	S	S	S	S	S	S	S	S	E	S	S
Meet Me Conference	S	S	S	S	S	S	S	S	S	S	S
Meet Me Paging	S	S	S	S	S	S	S	S	S	S	S
Meet Me Paging Transfer	S	S	S	S	S	S	S	S	S	S	S
Memo Dial	S	S	S	S	S	S	S	S	S	S	S

Table 4-1 Feature Availability by Software Revision (Continued)

UNIVERGE SV8100 Feature Name	Ver. 1000	Ver. 1100	Ver. 2000	Ver. 2500	Ver. 3000	Ver. 4000	Ver. 5000	Ver. 6000	Ver. 7000	Ver. 8000	Ver. 9000
Message Waiting	S	S	S	S	S	S	S	S	S	S	S
MH240 Wireless IP Telephone	N/A	N/A	N/A	S	E	S	E	S	S	S	S
Microphone Cutoff	S	S	S	S	S	S	S	S	S	S	S
Mobile Extension	S	S	S	S	E	S	E	S	S	S	E
Multiple Trunk Types	S	S	S	S	S	S	S	S	S	S	S
Music on Hold	S	S	S	S	S	S	S	S	S	S	S
Name Storing	S	S	S	S	S	S	S	S	S	S	S
NEC Meeting Center (NMC)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S
Night Service	S	S	S	S	S	S	S	S	S	S	S
Off-Hook Signaling	S	S	S	S	S	S	S	S	S	S	S
One-Touch Calling	S	S	S	S	S	S	S	S	S	S	S
Operator	S	S	S	S	S	S	S	S	S	S	S
(OPX) Off-Premise Extension	S	S	S	S	S	S	S	S	S	S	S
Paging, External	S	S	S	S	S	S	S	S	S	S	S
Paging, External (VRS)	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	S	S
Paging, Internal	S	S	S	S	S	S	S	S	S	S	S
Park	S	S	S	S	E	S	E	S	S	S	S
PBX Compatibility	S	S	S	S	S	S	S	S	S	S	S
PC Programming	S	S	S	S	S	E	S	E	S	E	E
Power Failure Transfer	S	S	S	S	S	S	S	S	S	S	S
Prime Line Selection	S	S	S	S	S	S	S	S	S	S	S
Private Line	S	S	S	S	S	S	S	S	S	S	S
Programmable Function Keys	S	S	S	S	S	S	S	S	S	S	S
Programming from a Multiline Terminal	S	S	S	S	S	S	S	S	S	S	S
Pulse to Tone Conversion	S	S	S	S	S	S	S	S	S	S	S
Redial Function	S	S	S	S	S	S	E	S	S	S	S
Remote (System) Upgrade	S	S	S	S	S	S	S	E	S	S	E
Repeat Redial	S	S	S	S	S	S	S	S	S	S	S
Resident System Program	S	S	S	S	S	S	S	S	S	S	S

Table 4-1 Feature Availability by Software Revision (Continued)

UNIVERGE SV8100 Feature Name	Ver. 1000	Ver. 1100	Ver. 2000	Ver. 2500	Ver. 3000	Ver. 4000	Ver. 5000	Ver. 6000	Ver. 7000	Ver. 8000	Ver. 9000
Reverse Voice Over	S	S	S	S	S	S	S	S	S	S	S
Ring Groups	S	S	S	S	S	S	S	S	S	S	S
Ringdown Extension, Internal/ External	S	S	S	S	S	S	S	S	S	S	S
Room Monitor	S	S	S	S	S	S	S	S	S	S	S
Save Number Dialed	S	S	S	S	S	S	S	S	S	S	S
Secondary Incoming Extension	S	S	S	S	E	S	S	S	S	S	S
Secretary Call (Buzzer)	S	S	S	S	S	S	S	S	S	S	S
Secretary Call Pickup	S	S	S	S	S	S	S	S	S	S	S
Security	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S
Selectable Display Messaging	S	S	S	S	S	S	S	S	S	S	S
Selectable Ring Tones	S	S	S	S	S	S	S	S	S	S	S
Serial Call	S	S	S	S	S	S	S	S	S	S	S
Single Line Telephones, Analog 500/ 2500 Sets	S	S	S	S	S	S	S	S	S	S	S
SLT Adapter	S	S	S	S	S	S	S	S	S	S	S
SMB8000 Communications Analyst	S	S	S	S	S	S	E	S	S	S	S
SMB8000 Conference Bridge	N/A	S	S	S	S	S	S	S	S	S	S
SMB8000 Conference Bridge – Outlook Integration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	S	S
Softkeys	S	S	S	S	S	S	S	S	S	S	S
Speed Dial – System/Group/Station	S	S	S	S	E	S	S	S	S	S	S
Speed Dial – Telephone Book	N/A	N/A	N/A	N/A	S	S	S	S	S	S	S
Station Hunt	S	S	S	S	S	S	S	S	S	S	S
Station Message Detail Recording	S	S	S	S	E	S	S	S	E	E	E
Station Name Assignment – User Programmable	S	S	S	S	S	S	S	S	S	S	S
Station Relocation	S	S	S	S	S	S	S	S	S	S	S
SV8100 Internal Router	S	S	S	S	S	S	S	S	S	S	S
SV8100 NetLink	N/A	S	S	S	S	E	E	S	S	S	E
SV8100 PoE Gigabit Switch	S	S	S	S	S	S	S	S	S	S	S

Table 4-1 Feature Availability by Software Revision (Continued)

UNIVERGE SV8100 Feature Name	Ver. 1000	Ver. 1100	Ver. 2000	Ver. 2500	Ver. 3000	Ver. 4000	Ver. 5000	Ver. 6000	Ver. 7000	Ver. 8000	Ver. 9000
SV8100 UC Desktop Suite Applications	S	S	E	S	E	E	E	S	S	E	E
SV8100/SV8300 Terminals	S	S	S	S	E	S	S	S	S	S	S
Synchronous Ringing	S	S	S	S	S	S	S	S	S	S	S
T1 Trunking (with ANI/DNIS Compatibility)	S	S	S	S	S	S	S	S	S	S	S
Tandem Ringing	S	S	S	S	S	S	S	S	S	S	S
Tandem Trunking (Unsupervised Conference)	S	S	S	S	S	S	S	S	S	S	S
TAPI Compatibility	S	S	S	S	S	E	S	S	S	S	S
Tone Override	S	S	S	S	S	S	S	S	S	S	S
Traffic Reports	S	S	S	S	S	S	S	S	S	S	S
Transfer	S	S	S	S	S	S	S	S	S	S	S
Trunk Group Routing	S	S	S	S	S	S	S	S	S	S	S
Trunk Groups	S	S	S	S	S	S	S	S	S	S	S
Trunk Queuing/Camp-On	S	S	S	S	S	S	S	S	S	S	S
UCB (Unified Communications for Business)	N/A	S	S	S	S	S	E	S	S	S	S
UM8000 Mail	S	S	S	E	E	S	S	S	S	S	S
uMobility	N/A	N/A	N/A	N/A	S	S	S	S	S	S	S
Unicast/Multicast Paging Mode	N/A	N/A	N/A	N/A	S	S	S	S	S	S	S
Uniform Call Distribution (UCD)	S	S	S	S	S	S	S	S	S	S	S
Uniform Numbering Network	S	S	S	S	S	S	S	S	S	S	S
Universal Slots	S	S	S	S	S	S	S	S	S	S	S
User Programming Ability	S	S	S	S	S	S	S	S	S	S	S
Virtual Extensions	S	S	S	S	E	S	S	S	E	S	S
VM8000 InMail	S	S	S	S	S	E	E	E	S	E	S
VM8000 InMail Park and Page	N/A	S	S	S	S	S	S	S	S	S	S
VM8000 InMail Upload Download Audio	N/A	N/A	N/A	N/A	S	E	S	S	S	S	S
VM8000 InMail – Automatic Access to VM by Caller ID	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	S	S



**Table 4-1 Feature Availability by Software Revision (Continued)**

<b>UNIVERGE SV8100 Feature Name</b>	<b>Ver. 1000</b>	<b>Ver. 1100</b>	<b>Ver. 2000</b>	<b>Ver. 2500</b>	<b>Ver. 3000</b>	<b>Ver. 4000</b>	<b>Ver. 5000</b>	<b>Ver. 6000</b>	<b>Ver. 7000</b>	<b>Ver. 8000</b>	<b>Ver. 9000</b>
VM8000 InMail – Cascade Message Notification	N/A	N/A	N/A	N/A	N/A	S	S	E	S	E	S
VM8000 InMail – Email Notification	N/A	N/A	N/A	N/A	S	S	S	E	S	S	S
VM8000 InMail – Find-Me Follow-Me	N/A	N/A	N/A	N/A	N/A	S	S	E	S	S	S
VM8000 InMail – Language Setting	N/A	N/A	N/A	N/A	N/A	S	S	S	S	S	S
Voice Call Recording	N/A	N/A	N/A	N/A	S	S	S	E	S	S	S
Voice Mail Integration (Analog)	S	S	S	S	S	S	S	S	S	S	S
Voice Mail Message Indication on Line Keys	S	S	S	S	S	S	S	S	S	S	S
Voice Over	S	S	S	S	S	S	S	S	S	S	S
Voice Response System (VRS)	S	S	S	S	E	S	S	S	S	S	E
Voice Response System (VRS) Embedded VRS	N/A	N/A	N/A	N/A	N/A	N/A	S	S	S	S	S
Voice Response System (VRS) Upload Download Audio	N/A	N/A	N/A	N/A	S	S	S	S	S	S	S
Voice Response System (VRS) – Call Forwarding – Park and Page	N/A	S	S	S	S	S	S	S	S	S	S
Volume Controls	S	S	S	S	S	S	S	S	E	S	S
Warning Tone for Long Conversation	S	S	S	S	S	S	S	S	S	S	S
Wireless DECT (SIP)	S	S	S	S	S	E	E	S	S	S	E

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# ***UNIVERGE<sup>®</sup> SV8100***

## **FEATURES AND SPECIFICATIONS MANUAL**

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