

DSX

Product Description Manual

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This manual has been developed by NEC Unified Solutions, Inc. It is intended for the use of its customers and service personnel, and should be read in its entirety before attempting to install or program the system. Any comments or suggestions for improving this manual would be appreciated. Forward your remarks to:

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DSX

SOPHISTICATION SIMPLIFIED



INNOVATIVE

DSX from NEC takes the lead with state-of-the-art innovations sure to make your business communications more efficient, profitable, and enjoyable.

Innovation starts with the new sleek DSX telephones. All models feature the same thin, floating design, two position angle adjustment for effortless viewing, and built in wall mounting. The 22-Button Display offers a large 3-line-by-24 character display, four interactive soft keys, and a built in speakerphone. The 34-Button Display is enhanced with a backlit display and illuminated dial pad (for improved low light viewing), as well as additional feature keys. A 34-Button Display advanced model provides a built-in half-duplex speakerphone.

The 34-Button Super Display has all the features of the advanced 34-Button and additionally offers the user a 9-line-by-24-character display and 12 interactive soft keys. Rounding out the line, the DSX Cordless Telephone provides mobility and flexibility for those who spend much of the workday away from their desk. Complemented by 4 fully programmable Feature Keys, the DSX Cordless Telephone achieves a whole new level of convenience and mobility.

Innovations don't stop with the DSX telephones. Right out of the box the system has a two-port Automated Attendant with no optional equipment required. The capability for full-featured IntraMail Voice Mail with Automated Attendant is inherent in the system and only requires an IntraMail flash card to activate. Program on-site from the telephone or from a PC connected to the system's ethernet or USB port. PC remote programming is available through the ethernet port or built-in modem.

AFFORDABLE

NEC designed DSX from the ground up with affordability in mind. Economy per port is maximized by high-density circuitry. All DSX telephones have a speakerphone and display for increased functionality and total lower station cost. Native support for ISDN PRI and T1 provides maximum connectivity for low initial investment. Since DSX is simple to install and easy to use, the expenses of configuration, programming, and post-installation training are minimized.

The cost-effective IntraMail provides sophisticated Voice Mail and Automated Attendant features previously available only with expensive add-ons or costly external units. It is available in two configurations: 4 port/8 hour and 8 port/16 hour. The IntraMail Automated Attendant includes the call answering features you demand such as dial access to extensions, unique day, night, and holiday answering (Flexible Answering Schedules), the ability for two companies to share the same IntraMail (Multiple Company Greetings), and the capability to dial employees by entering their names instead of extension numbers (Directory Dialing).

IntraMail Voice Mail is much more than simple messaging. Advanced IntraMail features allow you to automatically place a return call to the message sender (Caller ID with Return Call), screen your incoming calls (Call Screening), forward a message to a co-worker (Message Forward), and send a call to a co-worker's mailbox (Transfer to a Mailbox).

DSX is sized right, starting with the economical 40-port DSX-40, growing into the 80-port DSX-80, and culminating in the 160-port DSX-160. To maintain the value of your investment, all the components of a DSX-80 can be used in DSX-160 just by adding a DSX-160 cabinet. Even when growing from the DSX-40, your investment in programming, telephones and other station equipment is retained.

RELIABLE

Over a decade of intense feature development ensures that the core DSX call processing features are mature, efficient, and reliable – yet intuitive and easy to use. Combined with end-to-end Quality Assurance and state-of-the-art circuit design (which achieves new standards for efficiency and economy), you are assured that DSX will be your reliable business partner for years to come.

Innovative leadership and longevity are a rare combination among technology companies. Founded in 1899, NEC has grown to a nearly \$50 billion enterprise that produces 15,000 products in 126 manufacturing plants worldwide. NEC pioneered the development of telephones and switching systems early in the 20th century, and has maintained a leadership position in communications and networking ever since.

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Components

DSX Telephones

22-Button Display Telephone with Speakerphone

At a Glance	P/Ns 1090020 (Black) and 1090025 (White)	
	Display: 3 line x 24 character	Speakerphone: Built-in, half-duplex
	Soft Keys: 4	Wall Mount: Built-in
	Feature Keys: 12	Angle Adjustment: 2 position built-in
	Fixed Function Keys: 12	Backlit: No
	Speed Dial Bin Keys: 10	Dual LEDs: Yes
	Headset jack: RJ-10 built-in	



The 22-Button Display Telephone features a large 3 line-by-24 character alphanumeric display with 4 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 12 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a headset jack and built-in speakerphone. Unique features include dual LEDs, a Ring/Message Lamp (to show ringing, Caller ID, and voice mail messages), built-in wall mounting, and an innovative two position angle adjustment.

34-Button Backlit Display Telephone with Speakerphone

At a Glance	P/Ns 1090021 (Black) and 1090026 (White)	
	Display: 3 line x 24 character	Speakerphone: Built-in, half-duplex
	Soft Keys: 4	Wall Mount: Built-in
	Feature Keys: 24	Angle Adjustment: 2 position built-in
	Fixed Function Keys: 12	Backlit: Yes
	Speed Dial Bin Keys: 10	Dual LEDs: Yes
	Headset jack: RJ-10 built-in	



The 34-Button Display Telephone features a large 3 line-by-24 character backlit alphanumeric display with 4 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 24 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a backlit keypad, a headset jack, and built-in speakerphone. Unique features include dual LEDs, a Ring/Message Lamp (to show ringing, Caller ID, and voice mail messages), built-in wall mounting, and an innovative two position angle adjustment.

34-Button Backlit Display Telephone with Full-Duplex Speakerphone

At a Glance	P/Ns 1090022 (Black) and 1090027 (White)	
	Display: 3 line x 24 character	Speakerphone: Built-in, full-duplex
	Soft Keys: 4	Wall Mount: Built-in
	Feature Keys: 24	Angle Adjustment: 2 position built-in
	Fixed Function Keys: 12	Backlit: Yes
	Speed Dial Bin Keys: 10	Dual LEDs: Yes
	Headset jack: RJ-10 built-in	



This feature-rich 34-Button Display Telephone features a large 3 line-by-24 character backlit alphanumeric display with 4 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 24 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a built-in full duplex speakerphone (with no external speaker or microphone required), a backlit keypad, and a headset jack. Unique features include dual LEDs, a Ring/Message Lamp (to show ringing, Caller ID, and voice mail messages), built-in wall mounting, and an innovative two position angle adjustment.

34-Button Backlit Super Display Telephone with Half-Duplex Speakerphone

At a Glance	P/Ns 1090030 (Black) and 1090031 (White)	
	Display: 9 line x 24 character	Speakerphone: Built-in, half-duplex
	Soft Keys: 12	Wall Mount: Built-in
	Feature Keys: 24	Angle Adjustment: 2 position built-in
	Fixed Function Keys: 12	Backlit: Yes
	Speed Dial Bin Keys: 10	Dual LEDs: Yes
	Headset jack: RJ-10 built-in	



The Super Display Telephone is the system's most sophisticated telephone instrument. It features a large 9 line-by-24 character backlit alphanumeric display with 12 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 24 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a built-in full duplex speakerphone (with no external speaker or microphone required), a backlit keypad, and a headset jack. Unique features include dual LEDs, a Ring/Message Lamp (to show ringing, Caller ID, and voice mail messages), built-in wall mounting, and an innovative two position angle adjustment.

60-Button DSS Console

At a Glance	P/Ns 1090024 (Black) and 1090029 (White)	
	Feature Keys: 60	Wall Mount: Built-in
	Fixed Function Keys: 3	Angle Adjustment: 2 position built-in
	Dual LEDs: No	



The 60-Button DSS Console provides a display keyset with a 60-button Busy Lamp Field (BLF) and one-button access to extensions, trunks, and selected system features. Enhanced by Answer, Release, and Transfer fixed function keys, the 60-Button DSS Console is a great time saver for users that do a lot of call processing (such as operators or dispatchers). By default, the DSS Console is set up with Hotline keys to extensions and 14 feature keys for quick access to Page, Park and the system Night Mode

Note: DSX80/160 supports DS1000/2000 telephones if the system has a DSTU Card (P/N 80021A) installed.

DTH-1-1 Single Line Telephone

At a Glance

P/N 780034 (Black)

Fixed Function Keys: 5	Message Waiting: Yes
Speed Dial Bin Keys: 4	Ring/Message Waiting Lamp: Yes
Selectable Ring Tones: Yes	Wall Mount: Built-in



Components

The DTH-1-1 is a cost-effective analog single line telephone that offers 5 fixed feature keys, 4 Speed Dial bin keys and Message Waiting. The built-in Message Waiting lamp will flash for incoming calls or when the user has a message. To simplify working in groups, The DTH-1-1 provides 3 selectable ring tones.

DTR-1-1 Single Line Telephone

At a Glance

P/Ns 780020 (Black) and 780021 (White)

Fixed Function Keys: 5	Message Waiting: Yes
Speed Dial Bin Keys: None	Ring/Message Waiting Lamp: No
Selectable Ring Tones: Yes	Wall Mount: Built-in
Handsfree Monitor: No	



The DTR-1-1 is a stylish yet rugged analog single line telephone with 5 fixed feature keys and Message Waiting. Similar to the DTH-1-1, the DTR-1-1 has a built in Message Waiting lamp that will flash for incoming calls or when the user has a message. The DTR-1-1 offers programmable ring pitch and volume. Built-in wall mounting and a bridged data jack for connecting a modem or answering machine are standard.

DTR-1HM-1 Single Line Telephone

At a Glance

P/Ns 780025 (Black) and 780026 (White)

Fixed Function Keys: 7	Message Waiting: Yes
Speed Dial Bin Keys: 8	Ring/Message Waiting Lamp: Yes
Selectable Ring Tones: Yes	Wall Mount: Built-in
Handsfree Monitor: Yes	



The DTR-1HM-1 provides all the features of the DTR-1-1 in addition to two additional fixed function keys (for Hold and Speaker/Monitor) and 8 Speed Dial bin keys. For convenient on-hook dialing and call monitor, the DTR-1HM-1 also offers Handsfree Monitor.

DSX Cordless Lite II

At a Glance

P/N 730087

Display: 2 line x 16 character	Transmission: 900 MHz Narrow Band FM
Status Icons: 4	Range: 350 feet (site dependent)
Feature Keys: 4	Max Units Per Site: 30 (12 in close proximity)
Fixed Function Keys: 8	Battery Life: Up to 7 hours talk time
Channels: 30	



The DSX Cordless Lite II Telephone (P/N 730087) is a 900 Mhz digital narrow band FM cordless telephone that provides mobility, flexibility and convenience for those who spend much of the workday away from their desk. Fully integrated with the DSX system, the DSX Cordless Lite II Telephone offers many standard features such as Call Forwarding, Call Coverage, Hotline, and Voice Mail. Complemented by 4 fully programmable function keys (with LEDs), the DSX Cordless Lite II Telephone achieves a whole new level of convenience and mobility. An easy-to-read 16-character by 2-line LCD display (with four status icons), volume controls, a rechargeable Nickel Metal Hydride Battery Pack, and a handy belt clip round out the elegant and affordable DSX Cordless Lite II Telephone.

The Cordless II Lite Telephone includes the following:

- Base Unit
- Base Unit AC Adaptor (P/N 630618)
- Base Wall Mount Bracket (P/N 730608)
- Base Line Cord
- Handset
- Handset Charger (P/N 730632)
- Handset Charger AC Adaptor (P/N 730619)
- Handset Charger Wall Mount Bracket (P/N 730633)
- Handset Battery (P/N 730631)
- Belt Clip (P/N 730634)

Corded Headsets for DSX Keysets and DTR/DTH SLTs

The following corded headsets are compatible with DSX keysets and the DTR/DTH single line telephones. Check with your supplier for their latest offerings.

NEC / Plantronics Headsets

NEC / Plantronics Amplified Headsets				
NEC P/N	Description	Style	Microphone Type	Plantronics Model Number
-	Polaris Starset	In-the-Ear	Voice Tube	P31
			Noise Canceling	P31N
750631	Polaris Mirage	On-the-Ear	Voice Tube	P41
-			Noise Canceling	P41N
750632	Polaris Supra Monaural	Over-the-Head	Voice Tube	P51
750636			Noise Canceling	P51N
-	Polaris Supra Binaural	Over-the-Head	Voice Tube	P61
750633			Noise Canceling	P61N
750630	Polaris TriStar	In-the-Ear	Voice Tube	P81
-			Noise Canceling	P81N
750634	Polaris Encore Monaural	Over-the-Head	Voice Tube	P91
-			Noise Canceling	P91N
-	Polaris Encore Binaural	Over-the-Head	Voice Tube	P101
760635			Noise Canceling	P101N
-	DuoSet Convertible	Over-the-Head, On-the-Ear	Voice Tube	P141
			Noise Canceling	P141N
-	DuoPro	On-the-Ear	Voice Tube	P151
			Noise Canceling	P151N
-	DuoPro	Over-the-Head	Voice Tube	P161
			Noise Canceling	P161N
-	DuoPro Convertible	Over-the-Head,	Voice Tube	P171
-	DuoPro Convertible	Over-the-Head,	Noise Canceling	P171N
-	DuoPro	Behind-the-Head	Voice Tube	P181
-	DuoPro	Behind-the-Head	Noise Canceling	P181N
750643	Polaris/SupraPlus Monaural	Over-the-Head	Voice Tube	P251
750644	Polaris/SupraPlus NC Monaural		Noise Canceling	P251N
-	Polaris/SupraPlus NC Binaural	Over-the-Head	Voice Tube	P261
750645	Polaris/SupraPlus NC Binaural		Noise Canceling	P261N
-	SupraPlus SL Monaural	Over-the-Head	Voice Tube	P351
			Noise Canceling	P351N
-	SupraPlus SL Binaural	Over-the-Head	Voice Tube	P361
			Noise Canceling	P361N



Headsets

NEC / Plantronics Non-Amplified Headsets ¹				
NEC P/N	Description	Style	Microphone Type	Plantronics Model Number
-	StarSet	In-the-Ear	Voice Tube	H31
			Noise Canceling	H31N
-	Mirage	On-the-Ear	Voice Tube	H41
			Noise Canceling	H41N
-	Supra Monaural	Over-the-Head	Voice Tube	H51
			Noise Canceling	H51N
-	Supra Binaural	Over-the-Head	Voice Tube	H61
			Noise Canceling	H61N
-	TriStar	In-the-Ear	Voice Tube	H81
			Noise Canceling	H81N
-	Encore Monaural	Over-the-Head	Voice Tube	H91
			Noise Canceling	H91N
-	Encore Binaural	Over-the-Head	Voice Tube	H101
			Noise Canceling	H101N
-	Freehand Monaural	In-the-Ear	Voice Tube	H131
			Noise Canceling	H131N
-	DuoSet Convertible	Over-the-Head, On-the-Ear	Voice Tube	H141
			Noise Canceling	H141N
-	DuoPro	On-the-Ear	Voice Tube	H151
				H151N
-	DuoPro	Over-the-Head	Voice Tube	H161
			Noise Canceling	H161N
-	DuoPro Convertible	Over-the-Head, On-the-Ear	Voice Tube	H171
			Noise Canceling	H171N
-	DuoPro	Behind-the-Head	Voice Tube	H181
			Noise Canceling	H181N
-	SupraPlus Monaural	Over-the-Head	Voice Tube	H251
			Noise Canceling	H251N
-	SupraPlus Binaural	Over-the-Head	Voice Tube	H261
			Noise Canceling	H261N
-	SupraPlus SL Monaural	Over-the-Head	Voice Tube	H351
			Noise Canceling	H351N
-	SuproPlus SL Binaural	Over-the-Head	Voice Tube	H361
			Noise Canceling	H361N
¹ Requires Vista M12 Amplifier and Handset/Headset Switch				

GN Netcom Headsets

GN Netcom Non-Amplified Headsets ¹			
Model Number	Description	Microphone Type	Style
GN 2110 STD01	2100 Sound Tube Monaural	Sound-Tube	Over-the-Head
GN 2120 NCD01	2100 Flex Monaural	Noise-Canceling	Over-the-Head
GN 2115 STD01	2100 SoundTube Binaural	Sound-Tube	Over-the-Head
GN 2125 NCD01	2100 Flex Binaural	Noise-Canceling	Over-the-Head
GN 2117 STD01	2100 SoundTube Monaural	Sound-Tube	On-the-Ear
GN 2127 NCD01	2100 Flex Monaural	Noise-Canceling	On-the-Ear
GN 2110 ST	2100 SoundTube Monaural	Sound-Tube	Over-the-Head
GN 2120 NC	2100 Flex Monaural	Noise-Canceling	Over-the-Head
GN 2115 ST	2100 SoundTube Binaural	Sound-Tube	Over-the-Head
GN 2125 NC	2100 Flex Binaural	Noise-Canceling	Over-the-Head
GN 2127 ST	2100 SoundTube Monaural	Sound-Tube	On-the-Ear
GN 2127 NC	2100 Flex Monaural	Noise-Canceling	On-the-Ear
405-SF	Surefit Monaural	Voice-Tube	3-Way Convertible: Over-the-Head, Ear-hook, Earloops
405-FLEX-SF	Surefit Monaural	Noise-Canceling	
405-UNC-SF	Surefit Monaural	Noise-canceling	
ADP-I	ADDvantage Plus Monaural	Noise-Canceling	Over-the-Head
ADP-II	ADDvantage Plus Binaural	Noise-Canceling	Over-the-Head
GN 2200	2200 Omega Monaural	Noise-Canceling	Over-the-Head
GN 2225	2200 Omega Binaural	Noise-Canceling	Over-the-Head
OG-I	Orator-G Monaural	Noise-Canceling	Over-the-Head
OG-II	Orator-G Binaural	Noise-Canceling	Over-the-Head
Contour LX-G	Contour LX-G Monaural	Noise-Canceling	On-the-Ear
Stratus Ultra-G	Stratus Ultra-G Monaural	Noise-Canceling	On-the-Ear
805-Flex	805-Flex Binaural	Noise-Canceling	Under-the-Chin or Behind-the-Neck
¹ Requires GN8000 MPA Amplifier and Headset Switch.			

Headsets for DSX Cordless Lite II Telephone

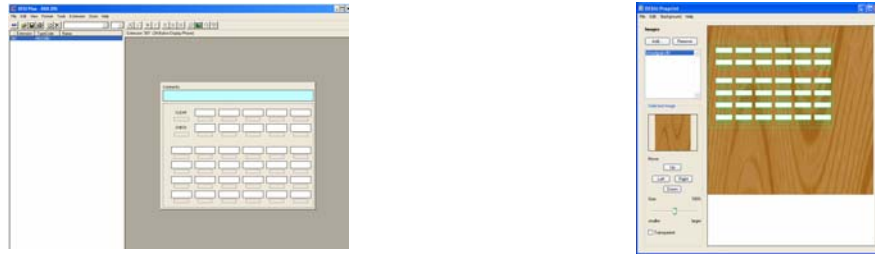
At a Glance	P/N 750637 (M175)	P/N 750642 (MX150)
		

- The following headsets are available for the DSX Cordless Lite II Telephone:
- M175 Headband Style (P/N 750637)
 - MX150 Earloop Style (P/N 750642)

DESI Labeling Software

At a Glance

DESI Labeling Software



Components

DESI Labeling Software is a Windows-compatible application for printing customized key data on specially designed DESI telephone labels. Use DESI Labeling Software to create quick, professional custom labels that can be printed on virtually any office ink jet or laser printer. DESI Labeling Software features:

- Automatic extension numbering
- Label templates that can be saved for later use
- Copy and paste functions
- Perforated and die cut labels for a perfect fit
- Choice of fonts and font colors
- Space for incorporating company logo
- User-printable background graphics (using DESI Preprint)

DESI labeling software is provided on the DSX System Document CD included with each telephone system.

DESI Telephone Labels

At a Glance

Labels for DSX Telephones



Labels for NEC Single Line Telephones



The following DESI labels are available for DSX telephones.

- For standard “replacement” applications:
 - 22-Button Display Standard
 - 34-Button Display Standard
 - 34-Button Super Display Standard
 - 60-Button DSS Console Standard

The following DESI labels are available for the NEC analog single line telephones.

- For DTR-1-1
 - Black (P/N 780400)
 - Metallic green (P/N 780401)
 - Metallic silver (P/N 780402)
 - Lime green (P/N 780403)
 - Preprint (blank) (P/N 780459)

DESI Telephone Label System

- For DTR-1HM-1
 - Black (P/N 780404)
 - Metallic green (P/N 780405)
 - Metallic silver (P/N 780406)
 - Lime green (P/N 780407)
 - Preprint (blank) (P/N 780460)
- For DTH-1-1
 - Metallic silver (P/N 780450)

DSX-80 4-Slot KSU

At a Glance

P/N 1090002

Slots: 4	Analog extensions (max.): 48
Ports: 80	Analog lines (max): 48
Digital extensions (max.): 32	Digital (T1) lines (max.): 64
<ul style="list-style-type: none">• Capacities determined by System Load Factor.• Always install a 16ESIU Card in the first universal slot.	



Components

The DSX-80 4-Slot KSU contains the CPU, 4 universal card slots and the system's power supply. It provides 80 ports. It is wall-mountable, has a flip off cover and removable side panel for easy access. The cabinet has a handy translucent panel in the cover that allows you to get essential system status and troubleshooting information at a glance, without removing the cover.

DSX-160 8-Slot KSU

At a Glance

P/N 1090003

Slots: 8	Analog extensions (max.): 112
Ports: 160	Analog lines (max): 64
Digital extensions (max.): 96	Digital (T1) lines (max.): 64
<ul style="list-style-type: none">• Capacities determined by System Load Factor.• Always install a 16ESIU Card in the first universal slot.• Install one power supply for every two 16ESIU Cards.	



The DSX-160 8-Slot KSU contains the CPU slot, 8 universal card slots and up to 3 system power supplies (depending on Load Factor requirements). It provides 160 ports. Just like the DSX-80 4-Slot KSU, the DSX-160 is wall-mountable, has a flip off cover and removable side panel for easy access. The DSX-160 also has a translucent panel in the cover for getting essential system status and troubleshooting at a glance.

DSX-80/160 Power Supply

At a Glance

P/N 1091008

DSX-80 Qty: 1	DSX-160 Qty: 3 (max.)
<ul style="list-style-type: none">• Quantity required in DSX-160 determined by System Load Factor.• In DSX-160, Install one power supply for every two 16ESIU Cards.	



The power supply provides the various DC voltages required to power the DSX-80/160 Cards. The DSX-80 4-Slot KSU requires a single power supply. The DSX-160 8-Slot KSU requires up to 3 power supplies, depending on system configuration.

DSX-80/160 CPU Card

At a Glance

P/N 1090010

Audio Inputs: 2

RS 232 connector: Yes (for SMDR)

Audio outputs: 1

Ethernet port: Yes

USB connector: Yes

CompactFlash interface: Yes



The CPU Card is the system's control center. It provides the system's Linux operating system, central processing, stored program, and memory for the customer's site-specific data. Every system requires a CPU Card. In addition, it also provides:

- CompactFlash card interface (for IntraMail, software loading, and database backup)
- Conference circuits, DTMF receivers and DTMF generators
- Real Time Clock
- NAND Flash for storing the system database
- Battery for short term (14 day) backup of the Real Time Clock and station parameters
- Two audio inputs for Background Music and Music on Hold (1/8" mono minijacks)
- One audio output for External Paging (1/8" mono minijack)
- Ethernet and USB ports for local and remote PC Programming
- RS-232 serial port for Station Message Detail Recording
- Built-in V.32BIS 14.4K BPS modem for remote maintenance

The CPU also has a reset switch that provides the following three functions:

1. System reset (when momentarily pressed).
2. System initialization (when held down as power is turned on).
3. Software update (when held down for six seconds while software update CompactFlash card is installed).

Tips to remember:

- When connecting to the CPU audio inputs or outputs, make sure the connected device is compatible with the CPU audio specifications. See *Specifications and Parts* (page 139) for more.

DSX-80/160 16 Port Digital Station (16ESIU) Card

At a Glance

P/N 1091004

Digital station ports: 16	Status LED: Yes
Mode switch: Yes	Activity LED: Yes
Max. installed in DSX-80: 2 (32 station ports)	Max. installed in DSX-160: 6 (96 station ports)



Components

Each 16ESIU Card connects 16 digital extensions (i.e., DSX keysets). The 16ESIU has a Mode Switch (for taking the card out of service). It also has a status LED that indicates proper card operation — as well as a port activity LED that flashes faster as traffic on the card increases. You can install up to two 16ESIU Cards in a DSX-80. You can install up to six 16ESIU Cards in a DSX-160. See *System Configuration* (page 19) for more.

Tips to remember:

- In DSX-160, you must install a separate power supply for every two 16ESIU Cards installed.
- In both DSX-80 and DSX-160, you must install a 16ESIU Card in slot 1.
- You can install additional 16ESIU Cards in any slot.

DSX-80/160 16 Port Analog Station (16SLIU) Card with HV Message Waiting

At a Glance

P/N 1091007

Analog station ports: 16	Activity LED: Yes
High Voltage Message Waiting: Yes	Mode switch: Yes
Max. installed in DSX-80: 3 (48 station ports)	Status LED: Yes
Max. installed in DSX-160: 5 (80 station ports)	



The 16SLIU Card connects 16 analog extensions which are typically used for single line telephones and fax machines. Just like the 16ESIU Card, the 16SLIU Card has a Mode Switch (for taking the card out of service), a status LED indicating proper card operation, and a port activity LED to indicate traffic on the card. See *System Configuration* (page 19) for more.

Tips to remember:

- The 16SLIU Card provides high voltage message waiting for single line sets with high voltage message waiting lamps.
- The 16SLIU Card also provides Caller ID to single line sets.
- You can install a 16SLIU Card in any slot except slot 1.

DSX-80/160 8 Port Analog Station (8SLIU) Card with HV Message Waiting

At a Glance	P/N 1091010	
	Analog station ports: 8	Activity LED: Yes
	High Voltage Message Waiting: Yes	Mode switch: Yes
	Max. installed in DSX-80: 3 (24 station ports)	Status LED: Yes
	Max. installed in DSX-160: 7 (56 station ports)	

The 8SLIU Card connects 8 analog extensions which are typically used for single line telephones and fax machines. The 8SLIU Card has a Mode Switch (for taking the card out of service), a status LED indicating proper card operation, and a port activity LED to indicate traffic on the card. See *System Configuration* (page 19) for more.

Tips to remember:

- The 8SLIU Card provides high voltage message waiting for single line sets with high voltage message waiting lamps.
- The 8SLIU Card also provides Caller ID to single line sets.
- You can install a 8SLIU Card in any slot except slot 1.

DSX-80/160 T1/E1/PRI Line Card

At a Glance	P/N 1091006	
	Line ports: 24	Activity LED: Yes
	Mode switch: Yes	Diagnostic LEDs: Yes
	Status LED: Yes	CSU required: Yes
	Max. installed in DSX-80: 3 (64 line ports in 3 T1/E1/PRI Cards, with 8 T1 circuits disabled in programming)	Max. installed in DSX-160: 3 (64 line ports in 3 T1/E1/PRI Cards, with 8 T1 circuits disabled in programming)



Components

The T1/E1/PRI Line Card provides T1 advanced digital calling and gives the DSX-80/160 a maximum of 24 trunks in a single card slot. The available T1 line types include:

- Loop Start (DTMF and Dial Pulse)
- Ground Start (DTMF and Dial Pulse)
- Direct Inward Dialing (DID) Wink Start (DTMF and Dial Pulse)
- Direct Inward Dialing (DID) Immediate Start (DTMF and Dial Pulse)
- E&M Tie Line Wink Start (DTMF and Dial Pulse)
- E&M Tie Line Immediate Start (DTMF and Dial Pulse)

Tips to remember:

- Normally you connect the T1/E1/PRI Card to a separately-purchased Channel Service Unit (CSU). Use a standard straight-through CAT 5 cable to connect the T1/E1/PRI Card to the CSU. The CSU in turn connects to the telco smart jack.
- The T1/E1/PRI Card also provides 32E1 support. E1 is not used in North America.
- PRI is currently not available.
- You can install a T1/E1/PRI Card in any slot except slot 1.

DSX-80/160 16 Port CO Line (16COIU) Card with Caller ID

At a Glance	P/N 1091005	
	Line ports: 16	Status LED: Yes
	Mode switch: Yes	Activity LED: Yes
	Power Failure ports: 2	Caller ID: Built in
	Max. installed in DSX-80: 3 (48 lines in 3 16COIU Cards)	Max. installed in DSX-160: 4 (64 line ports in 4 16COIU Cards)



The 16COIU Card supports 16 analog loop start CO lines. The card has a Mode Switch (for taking the card out of service), a status LED indicating proper card operation, and a port activity LED that indicates traffic on the card. Each 16COIU Card also provides two power failure cut-through circuits. When commercial AC power fails, the Card automatically cuts through two line circuits to two power failure single line telephones. See *System Configuration* (page 19) for more.

Tips to remember:

- The 16COIU provides built-in Caller ID.
- You can install a 16COIU Card in any slot except for slot 1.

DSX-80/160 8 Port CO Line (8COIU) Card with Caller ID

At a Glance	P/N 1091009	
	Line ports: 8	Status LED: Yes
	Mode switch: Yes	Activity LED: Yes
	Power Failure ports: 2	Caller ID: Built in
	Max. installed in DSX-80: 3 (24 line ports in 3 8COIU Cards)	Max. installed in DSX-160: 7 (56 line ports in 7 8COIU Cards)

The 8COIU Card supports 8 analog loop start CO lines. The card has a Mode Switch (for taking the card out of service), a status LED indicating proper card operation, and a port activity LED that indicates traffic on the card. Each 8COIU Card also provides two power failure cut-through circuits. When commercial AC power fails, the card automatically cuts through two line circuits to two power failure single line telephones. See *System Configuration* (page 19) for more.

Tips to remember:

- The 8COIU provides built-in Caller ID.
- You can install a 8COIU Card in any slot except for slot 1.

DSX IntraMail 8 x 16

At a Glance

P/N 1091013

Ports: 8	Storage Hours: 16
Routing Mailboxes: 16	Subscriber Mailboxes: 128
Ring Group Mailboxes: 8	UCD Group Mailboxes: 8
Total Mailboxes: 160	



Components

DSX IntraMail 4 x 8

At a Glance

P/N 1091011

Ports: 4	Storage Hours: 8
Routing Mailboxes: 16	Subscriber Mailboxes: 128
Ring Group Mailboxes: 8	UCD Group Mailboxes: 8
Total Mailboxes: 160	



IntraMail is a plug-in “in-skin” full-featured, DSP-based integrated Voice Mail with Automated Attendant for DSX. It is available in two models:

- P/N 1091013 with 8 Voice Mail ports, 16 hours of message storage, and up to 160 mailboxes.
- P/N 1091011 with 4 Voice Mail ports, 8 hours of message storage, and up to 160 mailboxes.

The IntraMail 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 Soft Keys guide the display telephone user through the extensive IntraMail feature set.

Tips to remember:

- After plugging in the IntraMail CompactFlash card, IntraMail automatically installs on power-up.

DSX Analog Door Box

At a Glance	P/N 922450	
	Requires 2PGDAD Module connected to DSX Digital Station (16ESIU) PCB.	DSX-80/160: No built-in Door Box ports.



The Analog 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 hand-set. 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 just answer the Door Box chimes instead.

Tips to remember:

- The Analog Door Box is a weather-tight unit and can be mounted outside.
- The maximum number of DSX Analog Door Boxes you can install is determined by the number of 2PGDAD Modules, which in turn is limited only by the availability of 16ESIU station ports.

DSX 2PGDAD Module

At a Glance	P/N 0891027	
	Provides connection and relays for two DSX Analog Door Boxes.	Connects to port on DSX Digital Station (16ESIU) PCB.



The DSX 2PGDAD Module provides connection and relays for two DSX Analog Door Boxes. This module connects to an available port on a DSX Digital Station (16ESIU) PCB.

Tips to remember:

- The maximum number of DSX Analog Door Boxes you can install is determined by the number of 2PGDAD Modules, which in turn is limited only by the availability of 16ESIU station ports.

DSX-80/160 System Load Factor

The combination of lines and extensions you can connect to your DSX system may be limited by the System Load Factor. Use the *DSX-80/160 System Load Factor Worksheet* on the next page to verify your system's configuration. When entering data on the worksheet, for each installed card make entries for each *Load Type*. There are two *Load Types* to consider: 5 VDC and 40 VDC.

To check your system configuration:

1. Indicate the quantity for each card installed in the **Qty** column.
 - The number of keysets, single line sets, and DSS Consoles does not affect the load factor.
2. For each item and for each Load Type, multiply the **Qty** times the **Load** and enter the value in the **Total** column.
 - For example, two 16ESIU Cards have a load of 16 for 5 VDC and 40 for 40 VDC.
3. Add up the entries in each **Total** column and enter the values in **Item 1: Load Type Totals**.
4. Review **Item 2: Power Supply Capacity** and determine the capacity of the power supplies installed in your system.
5. Compare the capacities in **Item 2** to your entries in **Item 1**. **Item 1** must always be equal to or less than the entry in **Item 2**.

Important
 Do not operate your system if the total for either Load Type exceeds the Power Supply Capacity of your installation.

System Configuration

DSX-80/160 System Load Factor Worksheet					
Description	Qty	Load Type			
		5 VDC		40 VDC	
		Load	Total	Load	Total
CPU Card	1	12	12	0	0
16ESIU Card		8		20	
8SLIU Card		5		8	
16SLIU Card		10		16	
8COIU Card		3		0	
16COIU Card		6		0	
T1/E1/PRI Card		8		0	
Item 1: Load Type Totals (Cannot exceed Item 2: Power Supply Capacity.)					
Item 2: Power Supply Capacity If you have <u>one</u> power supply installed, the capacity is: 5 VDC = 40 40 VDC = 48 If you have <u>two</u> power supplies installed, the capacity is: 5 VDC = 80 40 VDC = 80 If you have <u>three</u> power supplies installed, the capacity is: 5 VDC = 120 40 VDC = 120					
Notes: <ul style="list-style-type: none"> • DSX-80 can only have 1 power supply. • DSX-160 can have up to 3 power supplies. You <i>cannot</i> have more than two 16ESIU Cards per power supply, regardless of System Load Factor calculations. • Exceeding the allowed Load Type Total (Item 1) will cause the system's power supplies to automatically shut down and/or cause erratic system operation. • The total of all station, line, DSS Console, and voice mail ports cannot exceed 160. 					

Introduction

How To Use This Chapter

This chapter provides detailed information on the system's features. The features in this chapter are in alphabetical order, like a dictionary.

Account Codes

Use Account codes to categorize and/or restrict outside calls.

Account Codes are user-dialed codes that help categorize and/or restrict outside calls. Account Codes are from 2-10 digits long, using any combination of the digits 0-9. There are three types of Account Codes:

- Optional (Unforced Account Codes)
- Forced Account Codes
- Verified Account Codes

Optional (Unforced) Account Codes

Optional Account Codes allow a keyset extension user to enter an Account Code while placing an outside call or any time while on a call. This type of Account Code is optional: the system does not require the user to enter it. If the keyset user is already talking on an outside call, their conversation continues uninterrupted while they enter an Account Code.

Single line telephone users can only enter an Account Code while placing their outside call.

Forced Account Codes

Forced Account Codes require an extension user to enter an Account Code every time they place an outside call. If the user doesn't enter the code, the system prevents the call. The system can require Forced Account Codes for all outside calls, or just for toll calls (as determined by Toll Restriction programming). Note that Forced Account Codes do not pertain to incoming calls.

Verified Account Codes

With Verified Account Codes, the system compares the Account Code the user dials with a list of codes programmed into the Verified Account Code Table. If the Account Code is in the table, the call goes through (provided it is not prevented by an extension's Toll Restriction programming). If the code is not in the table, the system prevents the call. Verified Account Codes, if enabled, apply only to Forced Account Codes.

Using Account Codes and Speed Dial

To simplify Account Code operation, Personal and System Speed Dial bins can contain Account Codes. Keep the following in mind when using Speed Dial and Account Codes:

- The Account Code can be either the first or last entry in the bin, and must be preceded and followed by the # character. For example, the Account Code 1234 must be entered as #1234#.
- The Speed Dial bin can contain an Account Code followed by an outside number, or just the Account Code. The Account Code must be preceded and followed by a # entry. If the bin contains just the Account Code, the user must be sure to press the bin key before dialing the outside number.
- If the system has Verified Account Codes enabled, the Account Code entered in the Speed Dial bin must match an entry in the Verified Account Code Table.
- If the Speed Dial bin does not contain an Account Code, the user must enter the Account Code manually. If Forced Account Codes are enabled, the system requires the user to enter the Account Code before it outdials the stored Speed Dial number.
- An extension user can preselect a line for a Speed Dial call.

Using Account Codes with Last Number Redial and Save

Last Number Redial and Save do not store Account Codes. This means that the user must manually enter an Account Code to have it included with a call dialed using Last Number Redial and Save. If Forced Account Codes are enabled, the system requires the user to enter the Account Code before it outdials the stored number saved by Last Number Redial or Save.

An extension user can preselect a line for a Last Number Redial or Save call.

Account Codes and Emergency Calls

Account Codes are never enforced for emergency (911 and 1+911) calls.

Alphanumeric Display

The Alphanumeric Display messages help the display telephone user process calls, identify callers and customize features.

The 22- and 34-Button Display Telephones have a three-line, 24-character per line alphanumeric display. The first line displays the date and time (while idle) and feature status messages. The second line is used extensively by IntraMail. The third line displays the Soft Key definitions.

The 34-Button Super Display Telephone has a nine-line, 24-character per line alphanumeric display. The first line displays the date and time (while idle) and feature status messages, just like the 22- and 34-Button Display Telephones. The second line is used extensively by IntraMail. Lines 4-9 are the comprehensive Super Display Telephone soft key definitions.

- To learn more about the display telephones:
 - see *22-Button Display Telephone* on page 4
 - see *34-Button Display Telephone* on page 5
 - see *34-Button Super Display Telephone* on page 6
- To learn more about the Soft Keys, see *Interactive Soft Keys* (page 50).

Attendant Call Queuing

Attendant Call Queuing helps minimize call congestion in systems that use the attendant as the overflow destination for unanswered calls.

An unlimited number of callers can queue for the attendant. The callers hear ringback while they wait for the attendant to answer — not busy tone. If you have the attendant as the overflow destination for Direct Inward Lines, for example, unanswered DILs will “stack up” at the attendant until they are answered.

Operator Call Key

The last Feature Key on an attendant telephone is permanently assigned as an Operator Call key. When the operator has Intercom calls waiting to be answered, the calls queue under this key. The key winks (on) when calls are queued.

The Operator Call key is a permanent assignment for all extensions assigned as operators. You cannot change this assignment. Attendant Call Queuing is a permanent, non-programmable feature.

Attendant Position

The attendant is the system's call processing focal point.

The attendant is the focal point for call processing within the system. The system can have up to four attendants. In addition to the features of a standard keyset, the attendant also has the following unique capabilities (refer to the respective feature for details):

- ✦ *Attendant Call Queuing* (page 22)
Incoming Intercom calls from co-workers queue for the attendant. The callers never hear busy tone.
- ✦ *Barge In (Intrusion)* (page 25)
The attendant can break into another extension user's established call. This option is enabled in the attendant's Class of Service (COS 1).
- ✦ *Direct Line Access* (page 36)
Direct Line Access lets the attendant user dial a code to access an individual line. This option is enabled in the attendant's Class of Service (COS 1).
- ✦ *Forced Line Disconnect* (page 45)
In an emergency, the attendant can release (disconnect) another user's active outside call. This option is enabled in the attendant's Class of Service (COS 1).
- ✦ *Line Queuing / Line Callback* (page 53)
The attendant can Camp-On (queue) for a busy line. This option is enabled in the attendant's Class of Service (COS 1).
- ✦ *Night Service / Night Ring* (page 56)
An attendant with a *System Night* key can put the system in the night mode. This option is enabled in the attendant's Class of Service (COS 1).
- ✦ *Removing Lines and Extensions from Service* (page 65)
The attendant can remove problem lines from service — then return them to service once the problem is corrected. This option is enabled because the attendant has Direct Line Access enabled in their Class of Service (COS 1).

The attendant should use a 34-Button Display or 34-Button Super Display Telephone. In addition, most attendants should find a DSS Console helpful when processing calls.

Auto Redial

Instead of redialing, have Auto Redial periodically retry a busy outside number.

Auto Redial periodically redials a busy outside number. If a keyset user places an outside call and the call recipient is busy, the user can press a soft key to enable Auto Redial. The keyset user doesn't have to retry the number, hoping it will go through.

Auto Redial will periodically retry the number up to 15 times. Auto Redial cancels when the called party rings or answers, or when the extension:

- ✦ Places or answers another outside call.
- ✦ Receives an Intercom voice announcement or answers an Intercom call by lifting the handset or pressing **SPEAKER**.
- ✦ Presses **SPEAKER** to cancel Auto Redial.

-
- ✦ Presses any other fixed feature key except **MIC**.
 - ✦ Lifts and replaces the handset.
 - ✦ Presses the **CANCEL** soft key (Super Display only).

Automatic Handsfree

Automatic Handsfree is a convenience for workers who don't have a free hand to answer a call or use a feature.

Automatic Handsfree allows a keyset user to place or answer a call Handsfree by just pressing a key — without lifting the handset or pressing **SPEAKER** first. If enabled, the system provides Automatic Handsfree for:

- ✦ Call Coverage keys
- ✦ Central Office Calls (line and loop calls)
- ✦ Group Call Pickup keys
- ✦ Hotline Keys
- ✦ Intercom (**INTERCOM** key)
- ✦ Last Number Redial (**REDIAL** key)
- ✦ Paging keys
- ✦ Park keys
- ✦ Personal Speed Dial bin keys
- ✦ Personal and System Speed Dial Feature Keys

The system always provides Automatic Handsfree for:

- ✦ Dial Number Preview
- ✦ Directory Dialing

Automatic Slot Configuration

The system automatically installs PCBs when you power up the system.

Automatic Slot Configuration automatically sets up station and line PCBs when you initially power up the system. This simplifies installation because you don't have to use system programming to activate station and line PCBs after you plug them in.

Here's how Automatic Slot Configuration works:

1. With power off, install your station and line PCBs.
2. With the system powered down, install the station and line PCBs from left to right in the order you want your extension and line numbers set up.
 - Be sure to install a 16ESIU PCB in the first slot (CN1).
 - You don't have to group your station and line PCBs together, although it may be more convenient to do so.
3. Power up the system.
4. On power up, the system scans the PCBs from left to right and sets up the extension and line numbering as follows.
 - Extension numbers will begin with 300 in the first slot and increment from left to right.
 - Line numbers will begin with 101 (starting from the first installed line PCB) and will also increment from left to right.

System reset does not cause reconfiguration. Automatic Slot Configuration is temporarily disabled during a system reset.

Background Music

Broadcast music through the telephone speaker for a more pleasing work environment.

Background Music (BGM) sends music from a customer-provided music source to speakers in keysets. If an extension user activates it, BGM plays whenever the extension is idle. Incoming calls and Paging announcements temporarily override (turn off) Background Music. Background Music requires a customer-provided external music.

Barge In (Intrusion)

In an emergency, use Barge In to get through to a co-worker right away.

Barge In permits an extension user to break into another extension user's established call. This sets up a three-way conversation between the intruding extension and the two parties on the initial call. The user can Barge In on an Intercom call or outside call.

CAUTION

Unauthorized intrusion on calls using this feature may be interpreted as an invasion of privacy.

Battery Backup

The system provides permanent backup of system memory.

In the event of commercial AC power failure, the NAND Flash memory on the CPU PCB permanently maintains the site database. Additionally, an internal battery on the CPU provides short-term backup of the system date and time (Real Time Clock) and certain station parameters (such as the Caller ID log). The battery will hold the Real Time Clock and station parameters for up to 10-14 days. When commercial AC power is restored, the system restarts with all programming and the time and date intact.

Additional Battery Backup capability can be provided by a customer-supplied Uninterruptable Power Supply (UPS). The length of time the UPS will power the system when power fails depends on the capacity of the UPS unit. Consult with the UPS manufacturer for the specifics. Refer to the *Hardware Manual* for additional details.

Call Coverage Keys

Call Coverage keys allow an extension user to cover a co-worker's calls from their own telephone.

A keyset can have Call Coverage Keys for a co-worker's extensions, Ring Group master numbers and UCD Group master numbers. The Call Coverage Key lights when the co-worker's extension is busy, flashes slowly when the co-worker has an incoming call, and flashes fast when the co-worker is in Do Not Disturb. The Call Coverage Key can ring immediately when a call comes into the covered extension, ring after a delay or not ring at all. In addition, the keyset user can press the Call Coverage Key to intercept their co-worker's incoming call. They can also go off hook and press the Call Coverage key to call the covered extension. An extension can have as many Call Coverage Keys as they have available Feature Keys on their telephone.

Call Coverage Key Busy Lamp Indications	
When the key is:	The covered extension is:
Off	Idle or not installed

Call Coverage Key Busy Lamp Indications	
On	Busy
Slow Flash	Ringling
Medium Flash	Covered extension is in DND for outside calls (option 1).
Fast Flash	Covered extension is in DND for Intercom calls (option 2) or All Calls (option 3).

Call Coverage Keys *will* intercept the following types of calls:

- ✦ Key Ring Calls
- ✦ Ringling Intercom calls
- ✦ Calls to a UCD Group master number
- ✦ Calls ringling a Group Ring master number
- ✦ Transferred calls

Call Coverage Keys *will not* intercept a call ringling the attendant's Operator Call Key.

Call Forwarding

Call Forwarding ensures that the user's calls are covered when they are away from their work area.

Call Forwarding permits an extension user to redirect their call to another extension. The types of Call Forwarding are:

- ✦ **Call Forwarding when Not Answered**
Calls ringling the extension forward when not answered.
- ✦ **Call Forwarding when Busy or Not Answered**
Calls ringling the extension forward when not answered, and all calls forward while the extension is busy.
- ✦ **Call Forwarding Immediate**
All calls to the extension forward immediately.

You can set up Call Forwarding to reroute all calls or just outside calls. If an extension with forwarding set for outside calls only receives a screened Transfer, the initial voice-announcement broadcasts at the extension. When the caller hangs up to complete the transfer, the outside call forwards as programmed.

Call Forwarding Chaining

Extension user's can chain Call Forwards. For example, extension 301 can forward all calls immediately to 304, which in turn can forward all calls immediately to extension 302. Any co-worker calling 301 or 304 goes to 302 instead. If extension 302 is Call Forwarded to voice mail, callers to 301 or 304 go directly to 302's mailbox.

Call Forwarding Cancel

Call Forwarding cancel allows a keyset user to dial a code to simultaneously cancel all Call Forwarding system-wide. The extension must have access level 4 or 5.

Call Forwarding Key

A keyset user can have a key on their telephone or DSS Console assigned as a Call Forwarding key.

- ✦ *While the extension is idle*, pressing the key puts the extension in the Call Forwarding programming mode - the same as pressing **INTERCOM** and dialing ***3**.

- If the extension has Call Forwarding enabled, and the user presses the key and waits (for at least 6 seconds), Call Forwarding is automatically cancelled.
 - If the extension has Call Forwarding disabled, and the user presses the key and waits (for at least 6 seconds), the prior Call Forwarding mode is automatically enabled (if any).
- ✦ *While the extension is busy*, pressing the key switches Call Forwarding on and off.

Call Forwarding Key BLF	
This flash rate:	Means:
Off	Call Forwarding is disabled.
Fast flash	The extension is in the Call Forwarding programming mode.
Slow flash	Call Forwarding is enabled at the extension.

Call Forwarding Toggle in a Personal Speed Dial Bin

If an extension doesn't have an available Feature Key for a Call Forwarding key, the user can program a Personal Speed Dial bin for similar operation (without the BLF). To do this:

- ✦ While on hook, dial **#77**.
- ✦ Press the key for the Personal Speed Dial bin you want to program + **HOLD**.
- ✦ For **LINE/GRP/ICM**, press **INTERCOM** + **HOLD**.
- ✦ For **NUM**, dial ***3** + **HOLD**.
- ✦ For **NA**, enter a name of your choosing + **HOLD**.
- ✦ Press **SPEAKER** to exit.

While the extension is idle, pressing the bin key puts the extension in the Call Forwarding programming mode - the same as pressing **INTERCOM** and dialing ***3**.

- ✦ If the extension has Call Forwarding enabled, and the user presses the bin key and waits (for at least 6 seconds), Call Forwarding is automatically cancelled.
- ✦ If the extension has Call Forwarding disabled, and the user presses the bin key and waits (for at least 6 seconds), the prior Call Forwarding mode is automatically enabled (if any).

Call Forwarding Confirmation Tone

Keyset users will hear a single confirmation beep after enabling or cancelling Call Forwarding. Single line telephone users will hear Intercom dial tone after enabling or cancelling Call Forwarding.

Call Forwarding Off Premises

When a user is out of the office, they can send their calls to their home office or cell phone.

Off Premises Call Forwarding allows a keyset user to forward their calls to an off-site location (such as a cell phone or remote office) if allowed by their Class of Service. Keyset users can stay in touch by having Off Premises Call Forwarding automatically forward their calls while they are away from the office. To set up Off Premises Call Forwarding, the user selects the line or Line Group over which the call should route, as well as the number the system should dial. The number dialed can be from an extension's Personal Speed Dial bin containing an outside number, or the user can enter an outside number directly into their Personal Speed Dial bin 720. When a call rings the forwarded extension, the system selects the specified line or group and then outdials the stored number.

Off Premises Call Forwarding reroutes:

- ✦ Intercom calls
- ✦ Transferred calls
- ✦ Direct Inward Lines

-
- ✦ UTRF (unscreened transfer) calls routed from the voice mail Automated Attendant
 - ✦ Circular and Terminal Extension Hunting calls

Off Premises Call Forwarding does not reroute:

- ✦ Key Ring calls
- ✦ Calls to a UCD Group master number.
- ✦ Group Ring calls (i.e., calls to a Ring Group master number)
- ✦ UCD Group Calls (i.e., calls to a UCD Group master number)
- ✦ Ringing Call Coverage key calls

You can set up Off Premises Call Forwarding to reroute all calls or just outside calls. If an extension with forwarding set for outside calls only receives a screened Transfer, the initial voice-announcement broadcasts at the extension. When the caller hangs up to complete the transfer, the outside call forwards as programmed.

Call Timer

Call Timer helps users that must keep track of their time on the phone.

Call Timer lets a keyset user with a Call Timer key time their outside calls on the telephone display. There are two types of Call Timer keys:

- ✦ **Manual Call Timer**
Any time while placing a call or while on a call, a display keyset user can press their Manual Call Timer key to start the Call Timer. The Call Timer will continue until the user hangs up or presses their Manual Call Timer key again.
- ✦ **Automatic Call Timer**
In addition to the features of the Manual Call Timer key, the Automatic Call Timer key provides automatic timing for outside calls. When a display keyset with an Automatic Call Timer key places or answers an outside call, the Call Timer automatically starts when that outside call connects. The Automatic Call Timer does not automatically start for Intercom calls. The Automatic Call Timer can also work like a Manual Call Timer key. There is no need to have a Manual and Automatic Call Timer key on the same phone.

The Call Timer feature also provides:

- ✦ **Review of Previously Timed Call**
Any time after hanging up from a timed call, a display keyset user can press their Manual or Automatic Call Timer key to review the duration of that call.
- ✦ **Timer Reset for Current Call**
While the display keyset user is timing their call, they can press CLEAR at any time to reset the Call Timer to 00:00:00.
- ✦ **Automatic Timer Stop**
The system assigns the Call Timer to the active call. When the user terminates the active call, the Call Timer automatically shuts down.
- ✦ **Wrap-up Timer Display**
After hanging up a timed call, a display keyset will show the Call Timer data for 6 seconds before returning the display to idle. This gives the extension user adequate time to make a record of the timed call, if desired.

Call Waiting / Camp-On

Call Waiting helps busy extension users know when they have additional waiting calls. It also lets callers wait in line for a busy extension without being forgotten.

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 (by dialing 2), the system signals the busy extension with two beeps indicating the first waiting call. (The busy extension can be on a handset or Handsfree call.) The call goes through when the extension becomes free.

If an extension has more than one caller waiting, they queue on a first-in/first-out basis (FIFO). The extension will not hear Camp-On beeps for additional waiting calls.

Off-Hook Signaling also alerts the user when unanswered calls are waiting to get through. Turn to *Off-Hook Signaling* (page 57) for more.

The following chart shows when the two types of Off-Hook Signaling occur. Note that Camp-On tones occur for an extension when they are the exclusive recipient of the call (such as a DIL).

	Off-Hook Ringing	Camp-On Tones
Key Ring	Yes	No
Transferred Outside Call	Yes	Yes
Direct Inward Line	Yes	Yes
Transfer from voice mail (UTRF)	Yes	Yes
Call Coverage Key	Yes	No
Group Call Pickup Key	Yes	No

Callback

With Callback, a user does not have to repeatedly call a busy extension back, hoping to find it idle.

When an extension user calls a busy co-worker, they can leave a Callback request for a return call. The system services Callback requests as follows:

- ✦ Caller at extension A leaves a Callback at extension B.
 - Caller can place or answer additional calls in the mean time.
- ✦ When extension B becomes idle, the system rings extension A. This is the Callback ring.
- ✦ Once caller A answers the Callback ring, the system rings (formerly busy) extension B.
 - If caller A doesn't answer the Callback ring, the system cancels the Callback.
- ✦ As soon as caller B answers, the system sets up an Intercom call between A and B.

An extension user can leave a Callback at many extensions simultaneously. The system processes the Callbacks as the extensions become free. In addition, many extensions can leave a Callback at the same extension. The system processes these Callbacks on a first-in/first-out (FIFO) basis.

If an extension user leaves a Callback request and then fails to answer within four rings, the system cancels the Callback.

Caller ID

Caller ID automatically displays the phone number and optional name for incoming outside calls.

Caller ID allows a display keyset to show an incoming caller's telephone number (called Directory Number or DN) and optional name as the call is ringing. Caller ID supports the telco's 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.

Caller ID provides the following features:

Single and Multiple Message Format Compatibility

There are two types of Caller ID message formats currently available: Single Data Message Format (SDMF) and Multiple Data Message Format (MDMF). With Single Message Data Format, the telco sends only the caller's phone number (DN). The DN can be up to 10 digits long. In Multiple Data Message Format, the telco sends the DN and the caller's name. The DN for this format can be up to 15 digits long, and the name provided can consist of up to 15 ASCII characters.

If no DN is received, no number or error message displays.

Caller ID on the SMDR Report

Caller ID data prints on the SMDR report. SDMF records print a single line which shows just the incoming number. MDMF records print on two lines, with the first line showing the number and the second line showing the name. Unlike the telephone display, the SMDR report can show the entire 15 digits in the DN, if required.

Following is a sample SMDR report showing Caller ID data. The first two lines of the report show a complete MDMF record with both the caller's number and name. The last two lines of the report show two Caller ID error messages: Private Number and Out of Area. The "IN" in the type column indicates that the records shown are for incoming calls.

If no DN is received, no number or error message displays.

Station Message Detail Recording
05/10/2005 11:11A

Sta	Lin	Number Dialed	Account	Start	Duration	T
301	02	2139261000		11:11:39A	00:00:13	IN
301	02	ANDERSON ALLEN		11:11:39A	00:00:13	IN
301	02	Private Number		11:12:26A	00:00:12	IN
301	02	Out of Area Number		11:13:16A	00:00:12	IN

Caller ID Integration with Voice Mail

Caller ID fully integrates with IntraMail, UltraMail, and the NVM-Series voice mail systems. This enables voice mail features such as Make Call with Caller ID. Make Call allows the voice mail subscriber to return a call to someone who left them a message without knowing the calling party's phone number.

Second Call Caller ID (Extension Level Call Waiting Caller ID)

While a display keyset user is busy on a call, the system can show the Caller ID information for a waiting call. If the busy extension is programmed to receive Camp-On tones or Off-Hook Ringing from the waiting call, the system will send the Caller ID data to the busy telephone's display. If the busy extension does not receive Camp-On tones or Off-Hook Ringing, it will also not receive the waiting call's Caller ID. (Note that Caller ID data from a Camp-On is displayed only once, corresponding to the single Camp-On beep.) ***This is an internal system feature and does not use the telco's Call Waiting Caller ID.***

Third Party Caller ID Check

Third Party Caller ID Check allows an idle or busy keyset user to display the Caller ID data for another line. The line that the user checks can be ringing or busy.

Caller ID Display Separator

An extension's display can optionally show a calling party number separator. The separator is a dash after the area code and after the local exchange on a 7 or 10 digit number. If disabled, the calling party number displays without a separator.

Caller ID to Single Line Telephones

The system provides Caller ID data to single line ports. This allows single line Caller ID telephones to receive the Caller ID data also available at keysets.

On Intercom calls, the single line telephone display will show the extension number and name (if programmed) of the internal caller.

Caller ID Logging

An extension can store the caller's name and phone number for easy review and redialing.

When caller ID is enabled, Caller ID Logging stores a record of the caller's number and name (if provided by the telco) for each outside call that rings an extension. This allows an extension user to easily review and redial their calls. The system can log records directly to an extension or to one of 8 Caller ID Logging Groups. All the extensions in the same Logging Group share the same Caller ID records. Each extension or Logging Group can store up to 99 Caller ID records. The system stores up to 1000 Caller ID records, allocated among all extensions and Caller ID Logging Groups. All Caller ID records are retained when the system is powered down or reset. If a line rings more than one extension simultaneously, the system logs the call at all ringing extensions.

Central Office Calls, Answering

The system allows outside calls to ring and be answered at any combination of system extensions.

The system provides flexible routing of incoming CO calls to meet the exact site requirements.

Answering Priority

When multiple calls ring an extension simultaneously, the system services the ringing calls in the following order:

1. Ringing Intercom call
2. Line or loop key (from lowest to highest)

Central Office Calls, Placing

Customize the call placing options to meet the site requirements and each individual's needs.

The system provides flexibility in the way each extension user can place outgoing calls. A user can place a call by:

- ✦ **Pressing a Line Key**
Any keyset can have line keys for one-touch access to specific lines.
- ✦ **Pressing a Loop Key**
Loop Keys provide a user with one-touch access to the assigned Loop Group. Loop Groups can consist of one or more Line Groups.
- ✦ **Using Line Dial-Up**
With Line Dial-Up, a user can select a specific line by pressing **INTERCOM** and dialing the Line Dial-Up code (#9) followed by the line number (1-64).
- ✦ **Using Direct Line Access**
Direct Line Access allows a user to access a line by pressing **INTERCOM** and dialing the line's extension number (e.g., 101 for line 1, 102 for line 2. etc.).
- ✦ **Dialing a Line Group Access Code**
User's can also place outside calls by pressing **INTERCOM** and dialing a Line Group Access Code (90-98).
- ✦ **Line Group Routing**
If the system has Line Group Routing enabled, user's get the first available line when they press **INTERCOM** and dial 9.

Store and Forward

Store and Forward is an alternate method of placing outside calls in which the system stores (“collects”) the digits a user dials, waits for the user to finish dialing, and then redials the digits on the selected line. Store and forward provides Intercom dial tone to the caller as soon as they dial a line access code or press a loop key, similar to conventional ARS operation. When the user has completed dialing, the system will dial out the call over the connected line after 6 seconds or when the user dials #. Store and Forward can also be an advantage when connected to a T1 service that does not provide line dial tone.

Post dialing for Store and Forward calls is also available. After a user dials using Store and Forward, they can manually dial additional digits. The normal post dialing soft keys (such as **AUTO REDIAL [ALND]** for Auto Redial) are also enabled.

- ✦ Store and Forward does not apply to line keys, Direct Line Access, or line dial up (i.e., #9 plus the line number).
- ✦ You can use Account Codes with Store and Forward enabled (see *Operation* below).

Check Key

Quickly check keyset and DSS Console Feature Key assignments.

A keyset user can use the **CHECK** key to check keyset and DSS Console Feature Key assignments and Personal Speed Dial bin names.

Class of Service

Customize features and options for extensions and outside lines.

Class of Service (COS) sets various features and options for extensions and outside lines. The system allows any number of extensions and lines to share the same Class of Service. The Class of Service options are provided by the following programs:

- ✦ **140x-Station Options**
 - *1401-Features* (page 628)
 - *1402-Access* (page 633)
 - *1403-SLT's (Single Line Telephone Options)* (page 635)
 - *1404-Caller ID* (page 638)
 - *1405-Distinctive Ringing* (page 641)
 - *1406-Call Forwarding Options* (page 643)
 - *1407-Paging* (page 644)
- ✦ **141x-Line Options**
 - *1411-Access* (page 647)

Conference

A user can set up a multiple-party telephone meeting without leaving the office.

Conference lets an extension user add additional inside and outside callers to their conversation. The following table shows the system's Conference capacities:

Description	Capacity
Conference circuits	32
Maximum simultaneous users in Conference (total of all Conferences system-wide)	32

Description	Capacity
Maximum simultaneous conferences	8
Maximum parties in any one Conference (lines and/or extensions)	8

The system's 32 Conference circuits are dynamically allocated as users request them.

Cordless Telephone

Provides cordless mobility and a rich feature set for employees away from their desks.

The DSX Cordless Lite II Telephone (P/N 730087) is a 900 Mhz digital narrow band FM cordless telephone that provides mobility, flexibility and convenience for those who spend much of the workday away from their desk. Fully integrated with the DSX system, the DSX Cordless Lite II Telephone offers many standard features such as Call Forwarding, Call Coverage, Hot-line, and Voice Mail. Complemented by 4 fully programmable function keys (with LEDs), the DSX Cordless Lite II Telephone achieves a whole new level of convenience and mobility. An easy-to-read 16-character by 2-line LCD display (with four status icons), volume controls, a rechargeable Nickel Metal Hydride Battery Pack, and a handy belt clip round out the elegant and affordable DSX Cordless Lite II Telephone.



Delayed Ringing

Delayed Ringing helps co-workers cover each other's unanswered calls.

Delayed Ringing allows a line to start ringing a preset interval *after* the call starts flashing a line key. This is helpful for co-workers that cover each other's calls. For example, a secretary can have Delayed Ringing for the lines that ring the boss's telephone. If the boss doesn't answer after the Delayed Ringing interval, the call will start ringing the secretary's extension.

Dial Number Preview

Dial Number Preview helps the user avoid dialing errors.

Dial Number Preview lets a display keyset user dial and review a number before the system dials it out.

Dial Tone Detection

You can set up the system to detect CO dial tone.

The system can optionally detect precise CO dial tone for automatically dialed outside calls (such as Speed Dial and Auto Redial calls). With Dial Tone Detection enabled for a line, the system will monitor the line when initially seized for valid dial tone or stutter dial tone. If valid EIA/TIA dial tone is detected, the system outdials the call on the line. If dial tone is not detected within 2 seconds, the system will try the next available line in the same line to which the initial line belongs. If another line in the group is not available, the user hears busy tone. Dial Tone Detection *does not* apply to manually dialed outside calls.

If Dial Tone Detection is disabled, the system waits 500mS after line seizure and then outdials the number.

If enabled, Dial Tone Detection applies to the following types of outside calls:

- ✦ Auto Redial (initial line seizure)
- ✦ Caller ID (callbacks)
- ✦ Last Number Redial
- ✦ Call Forwarding Off Premise

-
- ✦ Save
 - ✦ Speed Dial

Direct Inward Dialing

Directly dial system extensions from outside the system.

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 (NXX) and additional digits to ring the telephone system extension. For example, DID number 926-5400 can directly ring extension 400. The caller does not have to rely on an attendant or receptionist to handle the call. Direct Inward Dialing is an efficient way to handle incoming calls, since callers can reach a large block of extensions over a relatively small number of DID lines. Direct Inward Dialing requires a T1 PCB and T1 DID service with a block (range) of DID numbers from the telco.

For outgoing calls, DID lines operate identically to loop start lines.

In addition to direct dialing of system extensions, DID provides:

- ✦ **DID Dialed Number Translation**

The system provides a 100-entry DID Translation Table. This table gives you more flexibility when buying DID service from the telco. If you can't buy the exact block of numbers you need (e.g., 300-399), use the translation table to convert the digits received. For example, a translation table could convert digits 500-599 to extension numbers 300-399.

By default, the system uses the last 2 digits of the received DID number to route to extensions 300-399.

- ✦ **Flexible DID Service Compatibility**

You can program the system to be compatible with DID service of varying lengths (up to 8 digits). DID service is typically 3 or 4 digits long. With 4 digit service, the telco sends 4 digits to the system for translation. With 3 digit service, the telco sends 3 digits to the system for translation. Be sure to set up your system for compatibility with the provided telco service. Additionally, the system is compatible with Dial Pulse (DP) and DTMF DID signaling. DID lines can be either wink start or immediate start.

By default, there are no DID lines programmed.

- ✦ **DID Station Intercept**

DID Station Intercept automatically reroutes DID calls under certain conditions. There are 3 types of DID Station Intercept:

- Busy/DND Intercept

If a caller dials an extension that is busy or in Do Not Disturb, the system routes the call to the extension's programmed DID Station Intercept destination.

- Ring No Answer Intercept

If a caller dials an extension that is unanswered, the system routes the call to the extension's programmed DID Station Intercept destination.

- Busy/DND and Ring No Answer Intercept

If a caller dials an extension that is busy, in Do Not Disturb, or is unanswered, the system routes the call to the extension's programmed DID Station Intercept destination.

By default, DID Station Intercept is disabled for all extensions.

- ✦ **Line Overflow**

If an incoming DID call is not answered at the destination extension or at the programmed intercept destination, it routes according to Line Overflow. This ensures that the call has an answering point in the system. Line Overflow typically routes to voice mail or to an extension. If the call is not answered at the overflow extension, it normally diverts to Key Ring. If Line Overflow is disabled, an unanswered DID call routes to Key Ring (and cannot overflow).

By default, Line Overflow is disabled. Unanswered calls route to Key Ring (and cannot overflow).

✦ Vacant Intercept

If a caller misdials or dials an extension that does not exist, or there is a DID Translation Table error, Vacant Intercept handles the call routing. Vacant Intercept is always enabled. Since Line Overflow is disabled by default, Vacant Intercept by default routes to Key Ring (and cannot overflow).

- If the telco doesn't send any digits into the system, or
If the digits sent by the telco don't correspond to a DID Translation Table entry, or
If the destination extension is out of service:
 The call follows the *3112-Termination* routing for the line. This includes the settings for Day Termination, Day Overflow, Night Termination, and Night Overflow. The call is handled the same as an analog line and follows the normal system timers.
- If the digits sent by the telco have a DID Translation Table entry with no corresponding destination programmed:
 No routing occurs and the caller hears busy tone.

✦ DID Camp-On

DID Camp-On sets what happens to DID calls to busy extensions when you have Busy/DND Intercept disabled. With DID Camp-On enabled, a call to a busy extension camps-on to the extension. Without DID Camp-On, the caller to the busy extension just hears busy tone (or follows the intercept programming if enabled).

By default, DID Camp-On is disabled.

✦ DID Routing to Voice Mail

If a DID call is unanswered and is eventually routed to voice mail, it will route to the mailbox of the initial DID destination. This is true regardless of whether the call routed to voice mail via DID Line Overflow, Call Forwarding, or Extension Hunting.

ANI/DNIS Support

The system is compatible with telco's T1 Automatic Number Identification (ANI) and Dialed Number Information Service (DNIS) services. ANI/DNIS services can be provided on T1 loop start, ground start, and DID lines (but not E&M). ANI/DNIS Compatibility provides:

✦ Selectable Receive Format

You can set up the system for compatibility with any combination of ANI, DNIS and Dialed Number (Address) data provided by the telco.

✦ Flexible Routing

The system can route the incoming call based on the received DNIS data and the entries stored in the DID Translation Table.

✦ Caller ID

The system can use the received ANI data to display the caller's number on the called extension's display. The ANI data can be up to 10 digits long. (Note that the T1 PCB can alternately receive normal FSK-based Caller ID if provided by the telco, but cannot route on that data.)

Direct Inward Line

A DIL lets an employee know which calls are just for them.

A Direct Inward Line (DIL) is a line that rings an extension directly. Since DILs only ring one extension, 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's phone number, the call rings the operator on the International Sales line key. The DIL does not ring other extensions.

Assigning a DIL to an extension automatically provides immediate ringing and incoming access for the line, with no additional programming required.

A DIL can ring:

- ✦ Extension numbers (including the attendant's extension)
- ✦ Ring Group master numbers
- ✦ UCD Group master numbers (including the voice mail master number)

Night Mode Control

The extension to which the line is terminated controls the night mode of the line. For example, if extension 301 has line 1 assigned as a DIL, the user can press **DND** to switch line 1 to its night routing destination. Switching line 1 to night mode at extension 301 has no affect on the night mode of the system. This flexibility could allow a service dispatcher with several DILs to independently send lines to their night destinations without affecting the night mode of the entire system.

Direct Line Access

Priority users can access lines directly. Direct Line Access also lets maintenance personnel access and test individual lines.

Direct Line Access lets an extension user access (seize) an individual line. After seizing the line, the user can dial any outside telephone number without restriction. An extension's Class of Service allows or denies Direct Line Access. Direct Line Access is normally only provided for attendants, priority users and maintenance personnel.

Direct Station Selection (DSS)

Quickly place and Transfer calls to co-workers, without having to look up or dial your co-worker's extension numbers.

Important

- | |
|--|
| <ul style="list-style-type: none">If you enable an extension's DSS Keys and leave the extension's default Prime Line programming intact, the line keys automatically change to DSS keys when the user lifts the handset. |
|--|

If an extension's Direct Station Selection (DSS) Keys are enabled, Feature Keys *automatically* become Direct Station Selection (DSS) keys when the user presses **INTERCOM**. Direct Station Selection provides an extension user with one-button Intercom access and Transfer to co-workers. Each DSS key also provides a Busy Lamp Field (BLF) for the assigned co-worker.

When the DSS/BLF key is:	The covered extension is:
Off	Idle
On	Busy or ringing
Flashing fast	In Do Not Disturb

Direct Station Selection (DSS) Console

DSS Consoles provide one-touch access to extensions, lines, and system features.

The DSS Console (P/N 1090024 for black and P/N 090029 for white) gives a keyset user one-button access to extensions, lines, and selected features. This saves time for users that do a lot of call processing such as operators or dispatchers).

The system allows you to install 4 DSS Consoles maximum per system. DSS Consoles use their own digital station port and do not require a separate power supply. In programming, you assign each installed console to an “owner” keyset. Each console can only have one owner.



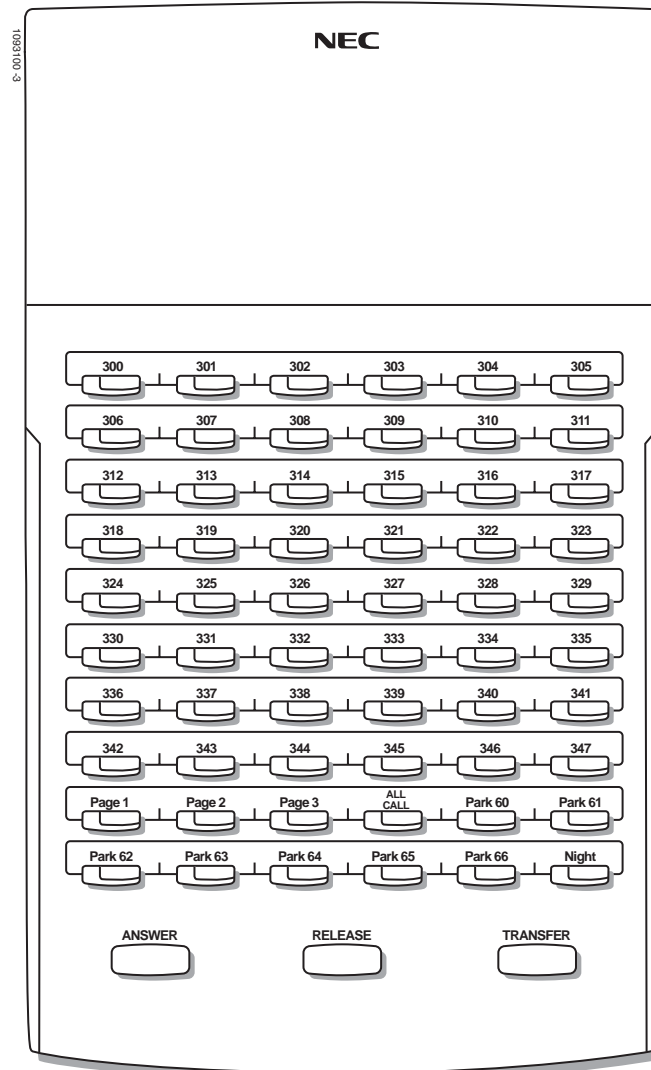
Features

You can assign the following types of Feature Keys to a DSS Console.:

• Account Code	• Intercom Directory Dialing	• Save Number Dialed
• Call Coverage (immediate, delayed or no ring)	• Line keys	• Speed Dial, Personal
• Call Forwarding	• Message Center	• Speed Dial, System
• Group Call Pickup (immediate, delayed or no ring)	• Night key	• Split
• Headset key	• Page Zones	• Voice Mail Conversation Record
• Hotline	• Park Orbit	

Default DSS Console Key Assignments

The following illustration shows the default DSS Console key assignments.



Directed Call Pickup

Directed Call Pickup allows co-workers to answer each other's calls.

Directed Call Pickup permits an extension user to intercept any type of call ringing another extension. With Directed Call Pickup, an extension user can pick up:

- ▶ Outside (Key Ring) calls ringing an extension
- ▶ Direct Inward Lines
- ▶ Transferred outside calls
- ▶ Ringing Intercom calls
- ▶ Recalls (e.g., Hold recall)
- ▶ Ring Group Calls (by dialing either the ringing extension's number or the Ring Group master number)
- ▶ Ringing Call Coverage key calls

- ✦ Ringing Group Call Pickup calls
- ✦ Calls ringing the operator's Operator Call key

Directory Dialing

Allows users to place Intercom or Speed Dial calls from a displayed list of names.

Directory Dialing allows a display keyset user to select a co-worker or outside call from a list of names, rather than dialing the phone number. There are three types of directory Dialing:

- ✦ System (Company-Wide) Speed Dial names.
- ✦ Intercom names (including extension, Ring Group and UCD Group names).
- ✦ Personal Speed Dial names.

Distinctive Ringing

Allows users to customize their telephone's ringing so they'll know when calls are just for them.

Distinctive Ringing allows the installer or keyset extension user to customize keyset ringing. This permits the user to determine the type of call just by listening to their keyset ring. Distinctive Ringing provides:

- ✦ **Distinctive Ring Configuration at Each Keyset**
A keyset user can follow intuitive soft key menus to set up distinctive ringing for their phone. Their phone will even play back the new ring tones as the distinctive rings are being set up.
- ✦ **Line Override (Distinctive Ringing by Line and Ringing Mode)**
Each line can have its own distinctive ringing for each ring mode (day, night, or delay). This allows a keyset user, for example, to easily differentiate between new ringing calls and calls that are ringing their phone after a delay.
- ✦ **Extension Ring Override**
Each keyset extension can additionally override a line's distinctive ringing with the extension's own unique settings. Extension Ring Override helps identify ringing phones in large, open work areas.
- ✦ **Key Ring Override**
A keyset extension can set up unique ringing for each of its Call Coverage, Group Call Pickup, and line keys. If a user needs to know what type of call is ringing their phone, Key Ring Override will help.
- ✦ **Unique Ringing for UCD Groups and Ring Groups**
UCD Groups and Ring Groups can have their own distinctive rings. This allows a user to tell the difference between Intercom calls ringing their phone and UCD or Ring Group Calls.

The Distinctive Ringing Hierarchy

An extension's Distinctive Ringing uses the following hierarchy:

1. Key Ring Override
2. Extension Ring Override
3. Line Override
4. Default ringing assigned by the system

This means that Line Override will replace the default ringing assigned by the system. Extension Ring Override will in turn replace ringing set by Line Override. Finally, Key Ring Override will replace ringing set by Extension Override or ringing set by Line Override.

Understanding Ring Types

The Ring Types determine how different types of calls rings extensions. Each Ring Type sounds unique because it uses one of the 10 available ring tones. The first four Ring Types are assigned by default (see the table below). The last two (B and C) are unassigned by default but you can assign on your phone using *Extension Override* and *Key Ring Override*.

The Ring Types	
Ring Type	Call Type
Intercom	Intercom ringing This includes ringing Intercom calls, as well as calls ringing Extension Hunting groups, Call Coverage keys and the operator's Call key.
Ring Group	Ring Group ringing
Recall	Recall ringing This includes Hold, Park or Transfer recall ringing.
Ring "A"	Type A ringing This includes line key, loop key, Transfer, and DIL ringing. (You can reassign types A, B, and C ringing in <i>Extension Override</i> and <i>Key Ring Override</i> below.)
Ring "B"	Type B ringing Not used (unassigned) by default. (You can reassign types A, B, and C ringing in <i>Extension Override</i> and <i>Key Ring Override</i> below.)
Ring "C"	Type C ringing Not used (unassigned) by default. (You can reassign types A, B, and C ringing in <i>Extension Override</i> and <i>Key Ring Override</i> below.)

When Multiple Calls Ring an Extension

When multiple calls with different priorities are ringing an extension, the system prioritizes ringing according to the list below. All LEDs will flash as appropriate for the type of call, but the telephone will ring only for the highest priority call.

1. **INTERCOM** Key
2. Line Key (from lowest to highest)
3. Loop Key (from lowest to highest)

Do Not Disturb

DND permits an extension user to work by the phone undisturbed by incoming calls and announcements.

Do Not Disturb (DND) blocks incoming calls, Off-Hook Signaling and Paging announcements. An extension user can activate DND anytime while on a call or while their phone is idle. Once activated, incoming outside calls still flash the line keys. The user may use the phone in the normal manner for placing and processing calls.

Do Not Disturb provides the following 4 DND options:

- (1) Incoming outside calls blocked
- (2) Incoming Intercom calls blocked
- (3) All incoming calls blocked

(0) Cancel Do Not Disturb

Do Not Disturb Options	
This DND option:	Blocks these calls:
(1) Incoming Outside Calls Blocked	Ringing for outside calls, including: <ul style="list-style-type: none">• Key Ring calls• Off Hook Ringing• Call Coverage Keys• Group Call Pickup keys• Transferred outside calls• Hold, Park, and Transfer recalls• Circular or Terminal Extension Hunting calls• DILs to the extension (if the extension is not the night mode termination)• DILs to a Ring Group or UCD Group master number (if the extension is in the group)
(2) Incoming Intercom Calls Blocked	<ul style="list-style-type: none">• Incoming Intercom calls• Transferred Intercom calls• Paging announcements• Ringing from Intercom calls to the Ring Group master number (if the extension is in the group)• Extension hunting calls that normally ring the extension
(3) All Incoming Calls Blocked	<ul style="list-style-type: none">• All calls blocked by Option 1 <i>and</i> Option 2.
(0) Cancel Do Not Disturb	<ul style="list-style-type: none">• Option 0 cancels Do Not Disturb

Do Not Disturb BLF for Hotline and Call Coverage Keys

The following charts show the Do Not Disturb Busy Lamp Field flash rates for Hotline and Call Coverage keys.

Hotline Busy Lamp Indications	
When the key is:	The covered extension is:
Off	Idle or not installed
On	Busy or ringing Intercom call
Medium Flash	In DND for outside calls (option 1)
Fast Flash	In DND for Intercom calls (option 2) or All Calls (option 3)

Call Coverage Key Busy Lamp Indications	
When the key is:	The covered extension is:
Off	Idle or not installed
On	Busy
Slow flash	Ringing
Medium flash	In DND for outside calls (option 1)
Fast Flash	In DND for Intercom calls (option 2) or All Calls (option 3)

Note: When transferring an outside call to an extension in DND, the Transfer will be blocked if the extension has enabled DND for all calls (type 3) or DND for outside calls (type 1). The Transfer will be allowed if the extension has enabled DND for Intercom calls (type 2).

Do Not Disturb Override

Easily override a co-worker's Do Not Disturb.

Do Not Disturb Override lets an extension user override another extension's Do Not Disturb. This allows a priority employee (such as a supervisor or executive) to get through to a co-worker right away while the co-worker's phone is in Do Not Disturb. DND Override is available to all extensions that have DND Override set in their Class of Service. It is also available to any extension that has a Hotline key for a co-worker, even without the Class of Service option enabled.

Door Box

Use a Door Box to remotely monitor an entrance door.

The Door Box (P/N 922450) is a self-contained analog 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 or ringing to all extensions programmed to receive chimes. To answer the chime or ringing, 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 just answer the Door Box instead.



•DSX-80/160

In DSX-80/160, a Door Box connects to an available Door Box port on a 2PGDAD Module (P/N 0891027). Each module supports up to two Door Boxes, with the maximum number of Door Boxes installed limited only by the availability of station ports to connect additional 2PGDAD Modules.

•DSX-40

In DSX-40, the Door Box can connect to a 2PGDAD module or to one of the two "built-in" Door Box ports. As in DSX-80/160, the maximum number of Door Boxes installed is limited only by the availability of station ports to connect additional 2PGDAD Modules.

Refer to *Optional Equipment* in the *Hardware Manual* that came with your system for more on installing the Analog Door Box.

Door Box Relays

Any keyset extension that receives Door Box chimes or ringing can control a control relay, which in turn typically enables an electric strike on an entrance door next to the Door Box.

Door Box Alerts

The system uses Ring Groups to control Door Box alerts. When a visitor at the door presses the Door Box call button, the Door Box will alert (chime or ring) all the extensions in the Ring Group to which the Door Box belongs. For example, if Door Box 309 and extensions 301 and 302 are in Ring Group 1, pressing the call button alerts 301 and 302.

Extended Ringing

Lets calls ring longer than usual to assist co-workers that can't readily get to their phones.

Extended Ringing forces an unanswered call to ring a telephone an extended number of times before rerouting. This helps a users that cannot get to their phone quickly to pick up calls (such as a warehouse worker). Extended Ringing is available with the following features:

- **Direct Inward Line**
DILs ring for an extended period before routing to the overflow destination.
- **Transfer**
Transferred outside calls ring for an extended period before recalling the transferring extension.

Extension Hunting

Automatically route calls to co-workers that work closely together.

Extension Hunting routes calls to a predefined group of hunt group member extensions. A call rings in sequence through the hunt group until answered at a member extension. Extension Hunting is helpful, for example, for a group of co-workers that share responsibility for answering calls. Each call cycles through the group until an available member picks it up.

There are three types of Extension Hunting:

- Circular Hunting
- Terminal Hunting
- Uniform Call Distribution (UCD) Hunting

Circular Hunting

A Circular Hunting group consists of a group of extensions programmed into a Circular Hunting list. A call unanswered at a member extension rings the next extension in the programmed list. If unanswered, the call will continue to cycle through the hunt group. Depending on the hunt type (see below), Circular Hunting will occur for transferred outside calls, DILs to a hunt group member, and ringing Intercom calls. Hunting does not occur for Key Ring and Ring Group calls.

Terminal Hunting

A Terminal Hunting group consists of a group of extensions programmed into a Terminal Hunting list. A call unanswered at a member extension rings the next extension in the programmed list. The call will cycle through the group once, until it reaches the last extension in the list. Unlike Circular Hunting, the call will not cycle back to the top of the hunt list. Depending on the hunt type (see below), Terminal Hunting will occur for transferred outside calls, DILs to a hunt group member, and ringing Intercom calls. Hunting does not occur for Key Ring and Ring Group calls.

Uniform Call Distribution (UCD) Hunting

Like Circular and Terminal Hunting, a UCD Hunting also consists of a group of extensions programmed into a hunt list. The system routes calls into a UCD Group according to the frequency of use of the member extensions. The first extension rung is the member that has been idle the longest. The last extension rung is the member that has been idle the shortest.

Each member of the group is additionally associated with a UCD Master Extension Number. To activate UCD Hunting, an incoming call must route to the UCD Group master number. This is done by placing an Intercom call to the master number, transferring a call to the master number or setting up a DIL to the master number. When all members of the UCD Group are busy, the call can route to the programmed UCD Overflow destination.

Extension Locking

When they leave the office, a keyset user can secure their phone to prevent unauthorized use.

Extension Locking allows a keyset extension user to secure their phone when they leave the office. The user may want to do this if their phone has Toll Restriction and Class of Service options enabled that could be easily abused. ***While locked, the restrictions set up in Class of Service 15 and Toll Level 7 are in force at the extension.*** When the user returns, they just unlock their extension to return it to normal operation.

You'll need to program the restrictions in Class of Service 15 and Toll Level 7 separately.

Walking Class of Service and Extension Locking

Walking Class of Service overrides Extension Locking. For example:

- ✦ Extension 301 is permitted by their Class of Service and Toll Restriction to use Paging and place long distance calls.
- ✦ Extension 306 locks their extension. While locked, Class of Service 15 prevents Paging and Toll Level 7 prevents long distance calls. These features are no longer available at extension 306.
- ✦ The extension 301 user goes to extension 306 and implements Walking Class of Service.
- ✦ The extension 301 user can then use 306 to make long distance calls and Page (even though 306 was locked to prevent those features).

Feature Keys

Feature Keys simplify feature operation.

Each keyset has Feature Keys. These Feature Keys simplify placing calls, answering calls and using certain features. You can customize the function of any keyset's Feature Keys from the system program and the User Programmable Features.



The **22-Button Standard and Display Telephones** feature 12 Feature Keys.



The **34-Button Display Telephone** features 24 Feature Keys.



The **34-Button Super Display Telephone** also features 24 Feature Keys.

You can assign the following types of Feature Keys to an extension.

• Account Code	• Intercom Directory Dialing	• Park Orbit
• Call Coverage (immediate, delayed or no ring)	• Line keys	• Reverse Voice Over
• Call Forwarding	• Message Center	• Save Number Dialed
• Call Timer	• Loop Key, Fixed	• Speed Dial, Personal
• Group Call Pickup (immediate, delayed or no ring)	• Loop Key, Switched	• Speed Dial, System
• Headset key	• Night key	• Split
• Hotline	• Page Zones	• Voice Mail Conversation Record

Flash

Extension users can access certain CO and PBX features by interrupting line loop current.

Flash allows an extension user to access certain CO and PBX features by interrupting line 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.

Flexible Numbering Plan

Change the digits users dial for co-workers and other features.

The system's Flexible Numbering Plan allows you to change the digits users dial to reach the attendant, other co-worker's, outside lines, UCD Groups, and Ring Groups. The following chart shows the areas of the system number plan you can change.

For this feature:	You can change the digits a user dials to:	These digits are normally:
<i>Attendant Position</i> (page 23)	Reach the system operator(s)	0 or 01-04
<i>Central Office Calls, Placing</i> (page 31)	Access a Line Group	90-98
<i>Direct Line Access</i> (page 36)	Directly access a line	101-164
<i>Extension Hunting</i> (page 43)	Reach a UCD Group master number	700-707
<i>Group Ring</i> (page 46)	Reach a a Ring Group master number	600-607
<i>Intercom</i> (page 51)	Call a co-worker over the Intercom	300-427

Forced Line Disconnect

Disconnect a co-worker's outside call in an emergency.

Forced Line Disconnect allows an extension user to disconnect (release) another extension's active outside call. Forced Line Disconnect lets a user access a busy line in an emergency, when no other lines are available. Maintenance technicians can also use Forced Line Disconnect to release a line on which there is no

conversation. This can happen if a line does not properly disconnect when the outside party hangs up.

CAUTION

Forced Line Disconnect abruptly terminates the active call on the line. Only use this feature in an emergency and when no other lines are available.

Group Call Pickup

Easily answer a call ringing your Pickup Group, even if you don't know which extension is ringing.

Group Call Pickup allows an extension user to answer a call ringing an extension in their assigned Pickup Group. This permits co-workers in the same Pickup Group to easily answer each other's ringing calls. The user can intercept the ringing call by dialing a code or pressing a programmed Group Call Pickup key. The system has a maximum of eight Pickup Groups, with an unlimited number of extensions in each group. However, an extension can be a member of only one pickup group.

Group Call Pickup can answer the following types of calls:

- ✦ Ringing Intercom calls
- ✦ Transferred calls
- ✦ Direct Inward Lines
- ✦ Calls on lines assigned to the Pickup Group

To simplify picking up calls, an extension can have Feature Keys assigned as Group Call Pickup keys. There are three types of Group Call Pickup keys: immediate ring, no ring (lamp only), or delayed ring.

Group Listen

Use Group Listen to talk to an important client or customer and have your co-workers listen in on the meeting.

Group Listen permits a keyset user to talk on the handset and have their caller's voice broadcast over the telephone speaker. This lets the keyset user's co-workers listen to the conversation. Group Listen turns off the keyset's Handsfree microphone so the caller does not hear the co-worker's voices during a Group Listen. When a keyset user sets up Group Listen, they hear their caller's voice over the telephone speaker as well as their handset.

Group Ring

Use Group Ring to call a group of co-worker's simultaneously.

Group Ring allows you to arrange extensions into Ring Groups for answering calls. When a call comes into the Ring Group master number, all extensions in the group ring simultaneously. Any user in the Ring Group can answer the call just by lifting the handset. The ringing call can be:

- ✦ A Direct Inward Line to the Ring Group (i.e., terminated to the Ring Group master number).
- ✦ An outside call transferred to the Ring Group master number.
- ✦ An intercom call to the Ring Group master number.

The system provides up to 8 Ring Groups (1-8). The Ring Group master numbers are predefined as 600-607, but can be any valid extension number not already in use.

An unanswered DIL to the Ring Group master number can be picked up by the Ring Group Mailbox.

Handsfree and Handsfree Answerback

- Talk over the phone Handsfree, using the built-in speaker and microphone.
- With Handsfree Answerback, answer an Intercom call by just speaking toward your phone.

Handsfree

Handsfree allows a keyset user to process calls using the speaker and microphone in the telephone (instead of the handset). Handsfree is a convenience for workers who don't 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 phone.

Handsfree Answerback and Forced Intercom Ringing

Handsfree Answerback permits an extension user to respond to a voice-announced Intercom call by speaking toward the phone, without lifting the handset. Like Handsfree, this is a convenience for workers who don't have a free hand to pick up the handset. Incoming Intercom calls alert with two beeps if the extension has Handsfree Answerback — a single beep if it does not.

Forced Intercom Ringing causes an Intercom call to ring the destination extension. You can enable Forced Intercom Ringing system-wide (for all extensions), or a user can dial a code to have their Intercom call ring the destination.

Headset Compatibility

Have the privacy of a handset call without having to hold the handset.

A keyset user can utilize 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, the headset provides privacy not available from Handsfree.

Headset Compatibility also provides the following features. (Note that while an extension is in the Headset mode, the system ignores all hookswitch depressions.)

- ✦ **Background Music**
If programmed and connected, Background Music will broadcast over the telephone speaker while the extension is in the Headset mode.
- ✦ **Central Office Calls, Answering**
An extension user in the Headset mode can press **Volume Up** and **Volume Down** to control the volume of any call ringing their phone.
- ✦ **Handsfree and Handsfree Answerback**
An extension in the Headset mode can receive normal voice-announced Intercom calls, depending on system programming. The extension user can respond to the voice-announced call by speaking toward the phone (just like non-headset extensions). To answer the voice-announced call in the headset, the user just presses **SPEAKER** after hearing the voice-announcement.
- ✦ **Microphone Mute**
While on a headset call, the extension user can press **MUTE** to mute (i.e., turn off) the headset microphone. While responding to an Intercom call using Handsfree Answerback, pressing **MUTE** mutes the Handsfree microphone.
- ✦ **Off-Hook Signaling**
Outside Calls
Depending on system programming, an extension in the headset mode can receive either Camp-On beeps or Off-Hook Ringing for incoming outside calls (just like non-headset extensions).
Intercom Calls
Depending on system programming, an extension in the headset mode can receive either Camp-On beeps or Voice Over announcements from a co-worker (just like non-headset extensions).

Hotline Calls

Depending on system programming, an extension in the headset mode can receive either Camp-On beeps or Voice Over announcements from their Hotline partner.

Paging

Internal Paging announcements broadcast over the telephone speaker while the extension is in the Headset mode.

Transfer

Screened and unscreened transfers work just like non-headset extensions. For example, if a headset extension user presses **SPEAKER** to answer a screened transfer, the call will connect to their headset when the transferring party hangs up. Note that Handsfree Transfers always connect to the headset extension's headset, not speakerphone.

Volume Control

While on a headset call, the extension user can press **Volume Up** and **Volume Down** to adjust the receive volume in the headset.

Headset Key

A keyset user can have a Feature Key on their telephone or DSS Console assigned as a Headset key. The user presses the key to enable or disable the headset mode, as an alternative to using the **#HL** User Programmable Feature. The key lights while the extension is in the Headset mode, and is off while the Headset mode is disabled. If an extension user is on a call, pressing the Headset key automatically switches the active call to the headset. Pressing the Headset key again switches the call back to Handsfree.

Off-Hook Signaling and Headsets

Outside Calls (transfers and DILs)

If the extension is set up to receive Camp-On tones for waiting (transferred) outside calls, the user will hear the Camp-On tones in their headset. They will also hear Camp-On tones in their headset for a waiting Direct Inward Line (DIL). The extension will not, however, receive Camp-On tones for Key Ring calls ringing the phone while it is in the headset mode.

An extension in the headset mode will not hear Off-Hook Ringing.

Intercom Calls

If the extension is set up to receive Camp-On tones for waiting Intercom calls, the user will hear tones in their headset when a co-worker dials **2** to wait in line.

Hold

Have a call wait on Hold, then pick it up to continue the conversation.

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. Outside calls left on Hold too long recall the extension that placed them on Hold. If the recall is unanswered, the call diverts to Key Ring.

There are four types of Hold:

System (Regular) Hold

With System Hold, an outside call a user places on Hold flashes the line key (if programmed) at all other keysets. Any keyset 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 line appears busy to all other keysets that have a key for the line. Exclusive Hold is important if the user doesn't want a co-worker picking up their call on Hold.

Automatic Hold

Automatic Hold allows a user to be on an outside call, activate a feature, and automatically place the call on Hold without first pressing the **HOLD** key. The system places a call on Hold automatically when the user presses **CONF**, **INTERCOM**, or a Hotline key. Automatic Hold optionally allows a user, busy on an outside call, to press another line key or a Call Coverage Key to automatically put their initial call on Hold.

Intercom Hold

A user can place an Intercom call on Hold. The Intercom call on Hold does not indicate at any other extension. There is no Hold Recall for Intercom calls.

Distinctive Flash Rate on Recall

System Hold and Exclusive Hold recall feature a distinctive flash rate for line keys (see the chart below). This allows the keyset extension user to easily differentiate new calls that are ringing from held calls that are recalling.

Distinctive Flash Rate on Recall		
For this type of call:	You see this flash rate:	
	System Hold	Exclusive Hold
Call that you placed on Hold	Single Wink On (green)	Double Wink On (green)
Call that you initially placed on Hold <u>recalling</u> your phone	Double Wink On (green)	Double Wink On (green)
Call a co-worker placed on Hold at their extension	Single Wink On (red)	None (On red)
Call a co-worker initially placed on Hold <u>recalling</u> your phone	Double Wink On (red)	Double Wink On (red)

Hold Recall Display

The Hold recall display identifies:

- The type of call recalling the extension.
- The extension which initially placed the call on Hold.

The Hold recall displays occurs as the call is ringing the extension that initially placed it on Hold, and after the call diverts to Key Ring.

Hotline

Hotline provides partner extensions with one-button calling and Transfer.

Hotline gives a keyset user with a programmed Hotline key 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.

In addition, the Hotline key shows the status of the partner's extension:

Hotline Busy Lamp Indications	
When the key is:	The partner extension is:
Off	Idle or not installed
On	Busy or ringing ¹
Medium Flash	Partner extension is in DND for outside calls (option 1).
Fast Flash	Partner extension is in DND for Intercom calls (option 2) or All Calls (option 3).
¹ Ringing Intercom and Group Ring calls light the Hotline key. DILs, Key Ring calls and transferred calls do not.	

Hotline Automatic Transfer

With Hotline Automatic Transfer, the extension can Transfer their call to a co-worker just by pressing their Hotline key and hanging up. Without Hotline Automatic Transfer, the user must press **TRANSFER** *before* pressing the Hotline key. If the user frequently uses their Hotline key for one-button Transfer to co-workers, Hotline Automatic Transfer is recommended. If the user prefers to consult with their Hotline partner rather than Transfer, disabling Hotline Automatic Transfer would be helpful.

Pressing a Hotline key can Transfer a call to an uninstalled extension's mailbox (if the mailbox is enabled).

Interactive Soft Keys

Use advanced features just by pressing a soft key, without remembering feature codes.

Interactive Soft Keys provide intuitive feature access. It is no longer necessary to remember feature codes to access the telephone's advanced features because the function of the soft keys change as the user process calls. For example, while on an outside call a display keyset user can press the **PARK** soft key to Park their call in orbit.

Intercom

Use Intercom to call any co-worker.

Intercom gives extension users access to other extensions. This provides the system with complete internal calling capability.

Handsfree Answerback and Forced Intercom Ringing

Handsfree Answerback permits an extension user to respond to a voice-announced Intercom call by speaking toward the phone, without lifting the handset. Like Handsfree, this is a convenience for workers who don't have a free hand to pick up the handset. Incoming Intercom calls alert with two beeps if the extension has Handsfree Answerback — a single beep if it does not.

Forced Intercom Ringing causes an Intercom call to ring the destination extension. You can enable Forced Intercom Ringing system-wide (for all extensions), or a user can dial a code to have their Intercom call ring the destination.

For more on setting up Handsfree Answerback and Forced Intercom Ringing, see *Handsfree and Handsfree Answerback* (page 47) for more.

Key Ring

So they are not forgotten, unanswered calls automatically ring co-worker's extensions.

A Key Ring line rings an extension according to the settings in system programming. Multiple extensions can be enabled to ring immediately or after a programmed delay for each incoming line call. In addition, under certain conditions other types of outside calls divert to Key Ring if unanswered. The following conditions also initiate Key Ring:

- ✦ **Direct Inward Line**
An unanswered DIL diverts to Key Ring if unanswered at the extension to which it is terminated.
- ✦ **Hold**
Calls left on Hold too long recall the extensions that initially placed them on Hold. If still unanswered, they divert to Key Ring.
- ✦ **Park**
Calls parked in orbit recall the extension that initially parked them. If unanswered, the call diverts to Key Ring.
- ✦ **Transfer**
An unanswered Transfer recalls the extension that initially transferred it. If still unanswered, the line diverts to Key Ring.

Language Selection

Set up a telephone to show displays and soft keys in English or Spanish.

Language Selection provides telephone displays for soft keys and system programming in English and Spanish. You can select the language for each extension in system programming, or the extension user can choose their language via the soft keys. Language Selection allows the system to easily accommodate bilingual installations (English and Spanish). The telephone user can have their telephone display the language with which they are most comfortable.

Last Number Redial

Quickly redial the last number dialed.

Last Number Redial allows an extension user to quickly redial the last outside 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 20 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 line as for the initial call. However, if that line is busy and is part of a Line Group, Last Number Redial will automatically select the next line in the group. The user can also pre-select a specific line if desired.

Enhanced Last Number Redial

If enabled, Enhanced Last Number Redial allows the extension user to select from the last 5 outside numbers dialed. When the user places an outside call, the number dialed is stored in the Enhanced Last Number Redial buffer. This buffer saves the 5 most recent numbers (including Speed Dial calls), with the most recent call at the top of the buffer and the oldest number at the bottom of the buffer. Old calls get pushed off the bottom of the buffer to make room for new calls at the top. If a user dials a number that is already stored in the buffer, the system inserts the number at the top of the buffer and deletes the duplicate entry.

The numbers stored in the Enhanced Last Number Redial buffer are retained if the system resets or is powered down.

Line Group Routing

Dial a single code to place a call over the first available line in a Line Group.

With Line Group Routing enabled, an extension user can just press **INTERCOM** and dial **9** to place an outside call. Line Group Routing automatically selects the first available line in the extension's programmed "dial 9" Line Group. This simplifies placing calls in systems that have a lot of lines for outgoing calls. Rather than press one of many line keys, the user just dials **9** instead.

Line Groups

Dial codes to access Line Groups for outgoing calls.

Extension users can optionally dial Line Group access codes 90-98 to select an available line in the group for outgoing calls. This is helpful in applications that have different services arranged into Line Groups. For example, dialing 90 could access a group of DDD lines for local calls, and dialing 91 could access a group of WATS lines for long distance calls. Note that systems with *Line Group Routing* (page 52) enabled cannot also dial Line Group access codes 90-98.

When a user dials a Line Group access code (90-98), the system selects the lowest number in the group that is available. If that line is busy, it automatically selects the next highest line. If all lines in the group are busy, the user can optionally queue for a line to become free. See *Line Queuing / Line Callback* (page 53) for more.

Line Keys

Press a line key for one-touch access to an outside line.

A line key provides an extension user with one-button access to outside lines. The extension user just presses a line key to place or answer a call on the line. There is no need to dial codes to access or intercept outside calls. In addition, a line key provides a Busy Lamp Field (BLF) for the line to which it is assigned (see the table below).

Line Key BLF Indications	
When the key is:	The line is:
Off	Idle or not installed
On (red)	In use or on Exclusive Hold at a co-worker's extension
On (green)	In use at your extension
Wink On (red)	On System Hold at a co-worker's extension
Wink On (green)	On System Hold at your extension
Double Wink On (green)	On Exclusive Hold or recalling your extension
Slow Flash (red)	Ringing into the system
Slow Flash (green)	Ringing or recalling directly to your extension

Answering Priority

When multiple calls ring an extension simultaneously, the system services the ringing calls in the following order:

1. Ringing Intercom call
2. Line or loop key (from lowest to highest)
 - This option *does not* restrict loop keys.

Line Queuing / Line Callback

- When all lines are busy, **Line Queuing** lets a user wait in line for a line to become free.
 - **Line Callback** will automatically call the user back when a line is available.

Line Queuing

Line Queuing permits an extension user to queue (wait in line) on hook for a busy line or Line Group to become free. The system connects the queued extension as soon as the line is available. The user does not have to manually retry the line later.

Line Callback

After queuing for a line, the extension user just hangs up to convert the Line Queue into a Line Callback. When the line becomes free, the system automatically recalls the extension. As soon as the extension user answers the callback ring, the system connects the extension to the line.

An extension user can leave a Line Callback for many lines. The system processes the callbacks as the lines become free. In addition, many extensions can leave a Line Callback for the same line. The system processes the Callbacks on a first-in/first-out (FIFO) basis.

If an extension user leaves a Line Callback request and then fails to answer the callback ring, the system cancels the Callback.

Line Queuing Priority

Selected extensions can have Line Queuing Priority enabled in their Class of Service. If more than one extension queues or leaves a Callback for a busy line, the system services the extension with Line Queuing Priority first. If more than one extension with priority is queued for the same busy line, the system services the priority extensions on a first-in/first-out (FIFO) basis.

- This option *does not* restrict Line Callback.

Loop Keys

Loop keys simplify answering and placing calls.

Loop keys are Feature Keys that simplify the way extension users place and answer outside calls. There are two types of loop keys: Switched Loop keys and Fixed Loop keys.

Switched Loop Keys

For incoming calls, Switched Loop keys provide an appearance for any line *not* assigned to a line key for which the extension has access and ringing. Switched Loop keys insure that there is a visual appearance for lines that do not ring an extension's line keys.

For outgoing calls, Switched Loop keys provide convenient access to Line Groups. For example, instead of pressing **INTERCOM** and dialing 90 for Line Group 90, the user can just press the Switched Loop key and dial **0** instead.

Fixed Loop Keys

For outgoing calls, a Fixed Loop key is a loop key assigned to a specific Line Group. When the extension user presses the Fixed Loop key for an outgoing call, they get the first line in the group assigned to the key.

For incoming calls, the Fixed Loop key works just like a Switched Loop key. It provides an appearance for any line not assigned to a line key for which the extension has access and ringing.

Answering Priority

When multiple calls ring an extension simultaneously, the system services the ringing calls in the following order:

1. Ringing Intercom call
2. Line or loop key (from lowest to highest)

Meet-Me Conference

Set up a multiple-party telephone conversation with your co-workers.

With Meet-Me Conference, an extension user can set up a telephone meeting with their co-workers. 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. Users must join the meeting within the Meet-Me Conference interval.

The system has two Meet-Me Conference codes (#11 and #12). After a Meet-Me Conference is set up and the Meet-Me Conference interval expires, the code used becomes available for a new meeting. Since Meet-Me Conference is a type of Conference, the system's Conference capacity determines:

- The number of users that can join a Meet-Me Conference, and
- The number of simultaneous conferences.

The following table shows the Conference capacities:

Description	Capacity
Conference circuits	32
Maximum simultaneous users in Conference (total of all Conferences system-wide)	32
Maximum simultaneous conferences	8
Maximum parties in any one Conference (lines and/or extensions)	8

The system's 32 Conference circuits are dynamically allocated as users request them.

Message Waiting

For systems without voice mail, leave a Message Waiting request for a return call.

An extension user can leave a Message Waiting indication at a busy or unanswered extension requesting a return call. The indication is a flashing **V-MAIL** key and Ring/Message lamp at the called extension. Answering the Message Waiting automatically calls the extension which left the indication. Message Waiting ensures that a user will not have to recall an unanswered extension. It also ensures that a user will not miss calls when their extension is busy or unattended.

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. If an extension has multiple messages waiting, the user can scroll through their Messages Waiting and select a co-worker to call back.

Microphone Mute

Talk to a co-worker in your office without your caller hearing the conversation.

Microphone Mute lets a keyset user turn off their phone's handset or Handsfree microphone at any time. While the extension is on-hook, Microphone Mute mutes the Handsfree microphone. While off-hook, Microphone Mute mutes the handset microphone. Once activated, Microphone Mute prevents the caller from hearing conversations in the user's work area. The user can turn off the Handsfree or handset microphone while their telephone is idle, busy on a call, in DND or while an outside call is ringing. Answering a call automatically cancels Microphone Mute.

While an extension has their microphone muted, an incoming voice-announced Intercom call announces with a single beep (splash tone).

Handsfree Reply Soft Key

Display keyset users can press their **HF Reply (Hfrp)** soft key to turn off their telephone's Handsfree microphone for incoming Intercom calls.

Monitor / Silent Monitor

Monitor a co-worker's phone conversation without them knowing you are on the phone.

Monitor lets an extension user listen to the conversation at a busy extension. To implement Monitor, an extension user just calls a busy extension and dials the Monitor code. The busy extension and their caller have no indication of the intrusion. There are no tones heard and there is no visual indication that monitoring is occurring. For example, Monitor could help the supervisor of a service department. The department supervisor could listen to the questions that callers ask without disturbing the service call.

CAUTION

Monitor provides no warning tones prior to intrusion. Monitor may be interpreted as an invasion of privacy.

Music on Hold

Callers can listen to music while waiting for their call to go through.

Music on Hold (MOH) plays music to calls on Hold, parked calls, and transferred calls. The music lets the caller know that their call is waiting, not forgotten. Without Music on Hold, the system provides silence to these types of calls. Music on Hold is available from one of four sources: two internal beep tones and two audio input minijacks (which in turn connect to a customer-provided external music source).

With Music on Hold enabled, transferred callers can optionally listen to ringback or MOH while their call waits at the transfer destination.

Names for Extensions and Lines

Names help identify lines and extensions.

Extensions and lines can have names instead of just circuit numbers. These names show on a keyset's display when the user places or answers calls. Extension and line names make it easier to identify callers. The user does not have to refer to a directory when processing calls. Extension and line names can consist of upper and lower case letters, spaces and punctuation, and can be up to 18 characters long.

Night Service / Night Ring

Use Night Service to reroute calls after hours.

Night Service redirects outside calls to their night mode destination. Typically, the attendant or supervisor activates Night Service after normal working hours, when most employees are unavailable to answer calls. Lines can ring extensions directly at Night, providing specific answering points for Night Service calls. (For example, you can program lines to ring the security station at night.)

To have outside lines ring the External Paging system (which users can answer by dialing a code), see *Outside Call Ringing Over External Page* (page 58). To have the ringing call also activate the system relay, see *Page Relay Control* (page 58).

Night Service Keys

The night mode status of the system is controlled by the following 3 types of keys:

- **Night Key Assigned as a System Night Key**
This type of key controls the night mode status of all Key Ring lines as well as all lines that are Direct Inward Lines (DILs) to Ring Group master numbers. The entry is **18 + CLEAR**.

✦ **Night Key Assigned as a UCD Night Key**

This type of key controls the night mode status of all lines terminated to UCD Group master numbers. It has no affect on Key Ring lines or lines terminated to Ring Group master numbers. The entry is **18** + UCD Group master number.¹

✦ **An Extension's DND Key**

The **DND** key controls the night mode status of all lines that are DILs to the extension. In the day, the line rings the extension. When the user presses **DND**, the DILs ring their programmed night mode destinations.

Off-Hook Signaling

Off-Hook Signaling helps important callers get through.

When a user is busy on a call, Off-Hook Signaling indicates that another caller is trying to get through. Off-Hook Signaling helps important callers get through, without waiting in line for the called extension to become free. After the user hears the off-hook signal, they can use other system features (such as Hold or Park) to process their active call and then answer the waiting call.

Off-Hook Signaling for Outside Calls

While a keyset user is on a call, Off-Hook Signaling for outside calls can be:

- ✦ While on a handset call,
 - A flashing green Ring/Message lamp
 - A flashing red or green line/loop key
 - Muted off-hook ringing

(While Off-Hook Signaling ringing is occurring, use **Volume Up** and **Volume Down** to adjust the volume of ringing.)
- ✦ While on a handset or Handsfree call,
 - A flashing green line/loop key
 - Camp-On tones

The following chart shows when the two types of Off-Hook Signaling occur. Note that Camp-On tones occur for an extension when they are the exclusive recipient of the call (such as a DIL).

	Off-Hook Ringing	Camp-On Tones
Key Ring	Yes	No
Transferred Outside Call	Yes	Yes
Direct Inward Line	Yes	Yes
Transfer from Voice Mail (UTRF)	Yes	Yes
Call Coverage Key	Yes	No
Group Call Pickup Key	Yes	No

Off-Hook Signaling for Intercom Calls

While an extension user is on a handset or Handsfree call, they can receive Camp-On tones from a co-worker that called them and dialed **2** to Camp-On. Turn to *Call Waiting / Camp-On* (page 28) for more on how to set this up. Off-hook ringing for Intercom calls is not available.

1. Do not use this option if you want lines to overflow to voice mail. See *Key Ring* (page 51) instead.

Off-Hook Signaling for Hotline Calls

While an extension is busy on a handset call, the system provides unique handling of Off-Hook Signaling for calls from their Hotline partner. This unique handling occurs when the Hotline partner calls the extension by first pressing their Hotline key. The Off-Hook Signaling can be Camp-On tones or Voice Over. The default is Camp-On tones.

Paging

Use Paging to broadcast announcements or quickly locate co-workers.

Paging lets extension users broadcast announcements to other keyset users and to external Paging speakers. Paging allows a user to locate a co-worker or make an announcement without calling each extension individually. There are two types of Paging: Internal Paging and External Paging.

Internal Paging

Internal Paging allows extension users to broadcast announcements into 7 internal Paging Zones and All Call (all zone). When a user makes a zone page, the announcement broadcasts to all extensions assigned to the specified zone. If the user makes an All Call announcement, the announcement simultaneously broadcasts to extensions in all zones. All Call Paging automatically overrides any zone pages already in progress. A system timer can optionally limit the duration of Paging announcements.

To simplify Paging access, a keyset can have Feature Keys assigned as Page keys.

Paging Key Busy Lamp Indications	
When the key is:	The zone is:
Off	Idle
On (red)	A co-worker is Paging into the assigned zone
On (green)	The extension user is Paging into the assigned zone.

External Paging

When a user pages into Internal All Call Page or Internal page Zone 1, the system simultaneously broadcasts the announcement into the External Paging Zone. Refer to the system's *Hardware Manual* for installation details.

Page Relay Control

Page Relay Control allows an announcement broadcast into a Paging zone to activate a system relay. This relay is typically used to activate a customer-provided Paging amplifier. You can assign these relays for Door Box strike control or Page Relay Control, but not both. ***If the system relay is programmed for Page Relay Control, and an extension or line is set up to ring over External Paging, the relay will activate when the extension or line rings.***

Outside Call Ringing Over External Page

Line ringing can optionally broadcast over External Paging speakers. For each line, the Paging speakers can broadcast ringing for all calls ringing the line, for calls ringing only at night, or for delay ring calls. While a line rings External Paging, any extension user can dial a code (**INTERCOM + *0**) to pick up the call. ***If the system relay is programmed for Page Relay Control, and the line is set up to ring over External Paging, the relay will activate when the line rings.***

If Door Box chimes, ringing, and Background Music are **all** programmed to output over External Paging, the system uses the following broadcast priority:

- ✦ Paging
- ✦ Door Box chimes
- ✦ Ringing
- ✦ Background Music

Note that External Paging can broadcast either extension ringing or line ringing, not both. In addition, External Paging requires additional customer-provided equipment. Refer to the Hardware Manual that came with your system for more.

Intercom Ring Over External Page

An extension's ringing can optionally broadcast over External Paging. If enabled, **any** type of call that rings the extension will broadcast over the Paging speakers. While an Intercom call rings External Paging, any extension user can dial a code (**INTERCOM + *0**) to pick up the call. ***If the system relay is programmed for Page Relay Control, and an extension is set up to ring over External Paging, the relay will activate when the extension rings.***

Door Chime Over External Page

Door Box chimes can optionally broadcast over External Paging. While Door Box chimes broadcast over External Paging, any extension user can dial a code (**INTERCOM + *0**) to answer the Door Box. After answering, a keyset user can press a soft key or **FLASH** to control the Door Box relay.

Background Music Over External Page

Background Music (BGM) can optionally play over the External Paging speakers while Paging is idle. BGM will automatically turn off while Paging, ringing or Door Box chimes broadcast from the external zone, and restart when the external zone again becomes idle.

Ring Over Page Volume Adjustment

You can adjust the volume of ringing over the External Paging system. There are three volume adjustments: low (5), medium (6), and high (4). This adjustment does not affect the volume of Background Music or Door Chimes.

Park

Park a call in orbit so a co-worker can pick it up. With Park, it is not necessary to locate a person to handle their calls.

Park places an outside call in a waiting state (called a Park Orbit) so that an extension user may pick it up. There are two types of Park: System and Personal. Use System Park when you want to have the call wait in one of 10 system orbits (60-69). Personal Park allows you to Park a call at an extension so a co-worker can pick it up. After parking a call, a user can Page the person receiving the call and hang up. The paged party dials a code or presses a programmed System Park key to pick up the call. Many calls can be parked at the same extension, and are retrieved in LIFO (last-in, first-out) order.

A call parked in System Park Orbit for too long will recall the extension that initially parked it. The recall for System Park Orbits 68 and 69 is permanently fixed at 5 minutes. If the recall remains unanswered, the call diverts to Key Ring.

A call parked in Personal Park Orbit for too long will initially recall to the extension at which it is parked. If unanswered there, it recalls to the extension that parked the call. If still unanswered, it diverts to Key Ring.

When an extension has System Park keys, the keys provide a Busy Lamp Field (BLF) for the orbit assigned to the key.

Park Key Busy Lamp Indications	
When the key is:	The Park orbit is:
Off	Idle
On (red)	A co-worker has parked a call in the orbit assigned to the key.
Single wink on (green)	The extension user has parked a call in the orbit assigned to the key.

Distinctive Flash Rate on Recall

Park recall features a distinctive flash rate for line keys (see the chart below). This allows the keyset extension user to easily differentiate new calls that are ringing from Parked calls that are recalling.

Distinctive Flash Rate on Park Recall	
For this type of call:	You see this flash rate:
Call that you Parked	Double Wink On (green)
Call that you initially Parked <u>recalling</u> your phone	Double Wink On (green)
Call Parked by a co-worker	On (red)
Call initially Parked by a co-worker that is <u>recalling</u> your phone	Double Wink On (red)

Personal Park Orbit Recall Display

The Personal Park Orbit recall display shows:

- ✦ *On all extensions that are ringing with the recall:*
 - The type of recall (i.e., Personal Park).
- ✦ *On the extension at which the call is parked (while it is ringing):*
 - The extension which initially parked the call.
- ✦ *On all other extensions as they are ringing with the recall:*
 - The extension at which the call was initially parked.

The Personal Park Orbit recall display occurs:

- ✦ At the extension which initially received the Personal Park.
- ✦ At the extension which initially parked the call.
- ✦ At all other extensions after the call diverts to Key Ring.

System Park Orbit Recall Display

The System Park Orbit recall display shows:

- ✦ The orbit from which the call is recalling (e.g., 60).
- ✦ The extension that initially parked the call (e.g., 301).

The System Park Orbit recall display occurs as the call is ringing the extension that initially parked it, and after the call diverts to Key Ring.

PBX / Centrex Compatibility

The DSX provides unique features when connected to a PBX or Centrex.

PBX/Centrex Access Codes

PBX Access Codes are the digits PBX extension users must dial to obtain outside lines. When the DSX is installed behind a PBX, users must dial these codes *before* the digits for their outside call. For example, if the PBX access code is 98, and the DSX user wants to reach 203-926-5400, they must dial 98-1-203-926-5400. Normally, DSX Toll Restriction and Forced Account Codes are applied to the digits dialed *after* the PBX Access Code. This is because any call dialed without the PBX access code is an *internal* PBX call, and usually won't require the restrictions imposed by Forced Account Codes and Toll Restriction.

PC Program (System Administrator)

Use your PC or laptop to program the system remotely or while on-site.

The PC Program is a Windows™-based application you can use for programming the telephone system and maintaining site databases, instead of using the conventional telephone programming. The PC Program provides:

- **On-Line Programming (Direct Connection)**
With the PC connected to the telephone system's serial USB, or Ethernet port, you can make immediate changes to the telephone system programming. While connected, the PC Program also allows you to save your new data to a file on the PC hard disk, or upload a "template" database from your PC to the system.
- **Remote Programming**
Using an IP or modem connection between your PC and the remote system, you can customize a customer's system without leaving your office. Specify what is required for IP and modem connections.

- **Off-Line Programming**
With Off-Line Programming, the PC Program allows you to set up a database on your PC off line, connect to the telephone system, and upload the entire custom configuration.
- **Database Save and Restore**
Use the PC Program to save a site's data to your PC hard disk. You can easily restore the saved data later on, if required.

Prime Line Preference

Get dial tone for a new outside or Intercom call just by lifting the handset.

Prime Line Preference allows an extension user to place or answer a call by just lifting the handset. The user does not have to press a line key, loop key, or the **INTERCOM** key first. This simplifies handling calls. In programming, you designate a line key, loop key, the **INTERCOM** key, a line, or a Line Group as the extension's Prime Line. With a line key, loop key, line, or Line Group, the associated line (or lines) becomes your Prime Line. With the **INTERCOM** key, you get Intercom dial tone when you lift the handset. Any number of extensions can have the same Prime Line assignment.

There are two types of Prime Line Preference: Idle Prime Line and Intercom Prime Line.

Idle Prime Line

Idle Prime Line lets a user place or answer a Prime Line call by just lifting the handset. An extension's Idle Prime Line can be any line or Line Group, regardless of whether the extension has a line or loop key for the line or group.

Idle Prime Line to any line or Line Group is also available at single line telephones.

Intercom Prime Line

With Intercom Prime Line, an idle extension user hears Intercom dial tone whenever they lift the handset or press **SPEAKER**. Intercom Prime Line may help the extension user that most often uses Intercom functions or calls co-workers. If an extension's Busy Lamp Field is disabled (which is the default), the Feature Keys do not go into the DSS mode when the user lifts the handset.

Prime Line vs. Ringing Line Preference

Ringing Line Preference has priority over Prime Line. For example, an extension with Ringing Line Preference will answer a ringing line, not get dial tone on their Prime Line. In addition, a Ringing Prime Line will have priority over any other ringing line. The seize priority is as follows:

- Ringing Prime Line
- Ringing non-Prime Line
- Prime Line

Privacy

Use Privacy to prevent interruptions at high priority extensions.

An extension with Privacy blocks incoming Barge In attempts and Call Waiting (Camp-On) signals. Privacy helps extension users that don't want their conversations interrupted.

Note that if an extension with Privacy *enabled* is on a call with an extension with Privacy *disabled*, they are still subject to Barge In attempts and Call Waiting signals to the non-private extension.

Privacy Release Groups

Quickly join in a co-worker's outside call.

You can program extensions into Privacy Release Groups to simplify sharing outside calls. Co-workers in the same Privacy Release Group can easily join another group member's outside call just by pressing the

busy line -key. The co-worker immediately joins in unannounced and uninvited. Privacy Release Groups are a quick alternative to Conference where control over the Conference is not required. In a Customer Service group, for example, a supervisor could just press a busy line key to monitor any agent's call.

If desired, an extension user can prevent other members of their Privacy Release Group from interrupting their active call. This ensures that group members will not interrupt confidential calls.

Any number of extensions can be in the same Privacy Release Group. However, an extension can only be in a single group. Members of the Group must have line keys and access to the lines they want to share.

Privacy Release Groups utilizes a Conference circuit. The following table shows the Conference capacities:

Description	Capacity
Conference circuits	32
Maximum simultaneous users in Conference (total of all Conferences system-wide)	32
Maximum simultaneous conferences	8
Maximum parties in any one Conference (lines and/or extensions)	8

The system's 32 Conference circuits are dynamically allocated as users request them.

Private Line

You can have a line reserved exclusively for your own use.

A Private Line is a line reserved for a keyset for placing and answering calls. A user with a Private Line knows when important calls are for them. Additionally, the user has their own line for placing calls that is not available to others in the system.

There are three types of Private Lines:

- ✦ **Incoming Only**
The keyset has a Private Line only for incoming calls. The user cannot place a call on the Private Line. A customer service representative may want an incoming only Private Line to be sure customers can always get through.
- ✦ **Outgoing Only**
The keyset has a Private Line only for outgoing calls. The Private Line does not ring for incoming calls. A service dispatcher may want an outgoing only Private Line so they can always get in touch with field technicians.
- ✦ **Both Ways**
The keyset has a Private Line for both incoming and outgoing calls. An executive may want a both ways Private Line that is available only to them for placing and answering calls.

You can optionally set up shared Private Lines between a group of co-workers that work closely together.

Programmable Idle Menu Soft Keys (Super Display)

Customize the Super Display Telephone idle menu soft keys to exactly meet the user's needs.

The Super Display Telephone idle menu soft keys are customizable in system programming and by the extension user. This allows the idle mode display to be tailored to meet the needs of each Super Display Telephone user. The first chart below shows the default idle menu soft key assignments. The second chart shows all the available idle mode soft keys, their definitions, and the related programming codes.

Super Display Telephone Default Idle Menu Soft Key Assignments			
Key	Display	Display	Key
1	Directory	(Blank)	7
2	Program	(Blank)	8
3	V-Mail --	(Blank)	9
4	Calls --	SP Dial 1	10
5	Page	SP Dial 2	11
6	(Blank)	(Blank)	12

Super Display Telephone Idle Menu Soft Key Options		
Entry	Display	Description
00	UNDEFINED	The key has no function and the idle menu display is blank.
01	Directory	Press to access additional soft keys for Intercom, System Speed Dial, and Personal Speed Dial Directory Dialing.
02	Extension	Press to directly access Intercom Directory Dialing.
03	Personal	Press to directly access Personal Speed Dial Directory Dialing.
04	Company	Press to directly access System Speed Dial Directory Dialing.
05	Program	Press to program the following: <ul style="list-style-type: none"> • Call Forwarding • Call Screening • Distinctive Ringing • Handsfree Reply • Intercom Voice Announce and Forced Intercom Ringing • Language Selection • Name Programming • Speed Dial • Volume for Ringing, Off-Hook Ringing, and Page
06	V-Mail	Press to call your voice mail mailbox. This soft key also shows the number of new messages in your mailbox.
07	Calls	Press to review your Caller ID log. This soft key also shows the number of new calls you have not yet reviewed.
08	Page	Press to initiate a Page announcement.
09	SP Dial 1	Press to access Personal Speed Dial bins 701-710. The display shows the Speed Dial numbers (or names - if programmed).
10	SP Dial 2	Press to access Personal Speed Dial bins 711-720. The display shows the Speed Dial number (or name - if programmed).
11-30	PERS SPDL BIN 1-20	Press to access the associated Personal Speed Dial bin (701-720). The display shows the Speed Dial number (or name - if programmed).

Pulse to Tone Conversion

Use special services (such as telephone banking) over dial pulse lines.

An extension can use Pulse to Tone Conversion while placing an outside call to change the dialing mode from dial pulse to DTMF. For a system in a dial pulse area, this permits users to access DTMF services (such as telephone banking) from their DP area. Pulse to tone conversion also helps dial pulse callers use another company's automated attendant dialing options. The user can, for example:

- ✦ Place a call to their bank over a DP line.
- ✦ After the banking service answers, wait 6 seconds. (The system automatically converts dialing to DTMF.)
- ✦ Dial additional banking options.

Regional Defaults

The system is compatible with both North American and Latin American applications.

Use the Regional Defaults capability to switch your system from the North American mode to the Latin American mode. Switching your system to the Latin American mode makes the following changes:

- ✦ The default language in programming, SMDR, and all telephone displays is Spanish.
- ✦ The Latin American Toll Restriction options are enabled. This is set up when you initialize each Toll Restriction Table.

Removing Lines and Extensions from Service

Temporarily remove problem extensions and lines from service until they can be repaired.

Supervisors and attendants can remove problem lines and extensions from service. This helps ensure maximum system performance. For example, the attendant can busy-out a noisy line or problem extension until service personnel can repair the problem. The line or extension then appears busy to all callers. Following repair, the attendant or supervisor can return the line to service.

Reverse Voice Over

Privately call a co-worker while you're busy on your handset.

While on a handset call, Reverse Voice Over lets a busy keyset user make a private Intercom call to an idle co-worker. The busy user just presses and holds down a programmed Reverse Voice Over key to make a private call to the assigned co-worker. The initial caller cannot hear the Reverse Voice Over conversation. The private Intercom call continues until the Reverse Voice Over caller releases the key again. The initial handset call can be an outside call or an Intercom call. An extension can have Reverse Voice Over keys for more than one co-worker.

Reverse Voice Over could help a salesperson, for example, when placing a call to an important client. The salesperson can talk with the client and give special instructions to an assistant — without interrupting the initial call.

When the keyset is idle, the Reverse Voice Over key functions the same as a Hotline key. The key also shows at a glance the status of the associated extension:

Reverse Voice Over Busy Lamp Indications	
When the key is:	The covered extension is:
Off	Idle or not installed
On	Busy or ringing
Medium Flash	Assigned extension is in DND for outside calls (option 1)
Fast Flash	Assigned extension is in DND for Intercom calls (option 2) or All Calls (option 3)

Reverse Voice Over uses a system Conference circuit while it is active. The following table shows the system's Conference capacities:

Description	Capacity
Conference circuits	32
Maximum simultaneous users in Conference (total of all Conferences system-wide)	32
Maximum simultaneous conferences	8
Maximum parties in any one Conference (lines and/or extensions)	8

The system's 32 Conference circuits are dynamically allocated as users request them.

Ringdown Extension

Call another extension, group or voice mail just by lifting the handset.

A Ringdown Extension automatically calls a co-worker, voice mail, a Ring Group, a UCD Group, or a Speed Dial number when the user lifts 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 phones, where the caller just lifts the handset to get the information desk.

Ringing Line Preference

Simply lift the handset to answer a ringing call.

Ringing Line Preference lets a keyset user answer a ringing call by just lifting the handset. For a user that primarily answers calls, Ringing Line Preference ensures that ringing calls have priority. The tables below

show the interaction between Ringing Line Preference and other features for both handset and headset calls.

Feature	Keyset		Attendant	
	RLP = Y	RLP = N	RLP = Y	RLP = N
	Does lifting the handset answer the ringing call?			
<i>Intercom</i> (page 51) Ringing Intercom calls	Yes	Yes	No ¹	No ¹
<i>Key Ring</i> (page 51) (Line/Loop Keys)	Yes	No	Yes	No
<i>Transfer</i> (page 77)	Yes	No	Yes	No
<i>Direct Inward Line</i> (page 35)	Yes	No	Yes	No
<i>Group Ring</i> (page 46)	Yes	Yes	N/A	N/A
<i>Extension Hunting</i> (page 43) (Call to UCD master)	Yes	Yes	No ¹	No
<i>Call Coverage Keys</i> (page 25)	No	No	No	No
<i>Group Call Pickup</i> (page 46)	No	No	No	No
¹ Ringing Line Preference will not answer a call ringing the Operator Call Key.				

Feature	Keyset		Attendant	
	RLP = Y	RLP = N	RLP = Y	RLP = N
	Does pressing SPEAKER while in the Headset mode answer the ringing call?			
<i>Intercom</i> (page 51) Ringing Intercom calls	Yes	Yes	No ¹	No ¹
<i>Key Ring</i> (page 51) (Line/Loop Keys)	Yes	No	Yes	No
<i>Transfer</i> (page 77)	Yes	No	Yes	No
<i>Direct Inward Line</i> (page 35)	Yes	No	Yes	No
<i>Group Ring</i> (page 46)	Yes	Yes	N/A	N/A
<i>Extension Hunting</i> (page 43) (Call to UCD master)	Yes	Yes	No ¹	No ¹
<i>Call Coverage Keys</i> (page 25)	No	No	No	No
<i>Group Call Pickup</i> (page 46)	No	No	No	No
¹ Ringing Line Preference will not answer a call ringing the Operator Call Key.				

When multiple calls ring an extension simultaneously, the system services the ringing calls in the following order:

1. **INTERCOM** Key
2. Line Key (from lowest to highest)
3. Loop Key (from lowest to highest)

In addition, if two extensions with Ringing Line Preference answer the same outside call simultaneously, the system connects the call to the lowest numbered extension.

Prime Line vs. Ringing Line Preference

Ringing Line Preference has priority over Prime Line. For example, an extension with Ringing Line Preference will answer a ringing line, not get dial tone on their Prime Line. In addition, a ringing Prime Line will have priority over any other ringing line. The seize priority is as follows:

- ✦ Ringing Prime Line
- ✦ Ringing non-Prime Line
- ✦ Prime Line

Save Number Dialed

Save the number you just dialed for quick redialing.

Save Number Dialed permits an extension user to save their last outside number 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.

Save Number Dialed saves in system memory a dialed number up to 20 digits. The system remembers the digits regardless of whether the call was answered, unanswered or busy. The system normally uses the same line as for the initial call. However, if that line is busy and is part of a Line Group, Save Number Dialed will

automatically select the next line in the group.

Save Number Dialed requires a uniquely programmed Feature Key on the extension or DSS Console.

Selectable Display Messaging

While you're away from the phone, callers can receive personalized text messages you set up.

An extension user can select a pre programmed Selectable Display Message for their extension. Keyset callers see the selected message when they call the user's extension. Selectable Display Messaging provides personalized text messaging. For example, an extension user could select the message "GONE FOR THE DAY." Any keyset user calling the extension would see the message. Other than displaying the message, the system puts the call through normally.

There are 16 Selectable Display Messages (01-16) set up in system programming. Messages 01-09 are preset by default, but can be changed to meet the site requirements. Messages 10-16 are initially undefined. Any message can be appended by the extension user. For example, a user could select message 09 (OUT UNTIL) and append the time they are expected back (e.g., 5:00). The total length of the message *plus* any user appended entries cannot exceed 18. Selectable Display Messages cannot begin with numbers.

Following are the 16 default Selectable Display Messages.

Option	Default
Message 01	CALL (plus 15 user entries)
Message 02	BACK BY (plus 12 user entries)
Message 03	MEETING IN ROOM (plus 4 user entries)
Message 04	OUT TO LUNCH (plus 7 user entries)
Message 05	GONE FOR THE DAY (plus 3 user entries)
Message 06	ON VACATION (plus 8 user entries)
Message 07	ON BUSINESS TRIP (plus 3 user entries)
Message 08	IN A MEETING (plus 7 user entries)
Message 09	OUT UNTIL (plus 10 user entries)
Message 10	Undefined (up to 20 characters)
Message 11	Undefined (up to 20 characters)
Message 12	Undefined (up to 20 characters)
Message 13	Undefined (up to 20 characters)
Message 14	Undefined (up to 20 characters)
Message 15	Undefined (up to 20 characters)
Message 16	Undefined (up to 20 characters)

Single Line Telephones

Connect analog devices such as single line telephones and fax machines to the system.

The system is compatible with 500 type (dial pulse) and 2500 type (DTMF) analog telephone devices. This includes on-premises single line telephones (SLTs), fax machines, and modems.

In DSX-40, SLTs connect to analog ports in the main equipment cabinet. In DSX-80/160, SLTs connect to SLIU PCBs. Each analog port provides power and ring voltage for the connected SLT. The analog ports use DTMF receivers. Each system provides 10 DTMF receivers that are shared by all connected analog ports.

Message Waiting

Both DSX-40 and DSX-80/160 support FSK Message Waiting lamps. DSX-80/160 also provides support for high voltage Message Waiting lamps – while DSX-40 does not.

Speed Dial

Instead of dialing a long telephone number to reach a client or customer, use Speed Dial instead. Also, store Intercom digits for quick access to commonly used features.

Speed Dial gives an extension user quick access to frequently called numbers. There are two types of Speed Dial: System and Personal. Speed Dial numbers can be up to 32 digits long, using 0-9, # and *. Every Speed Dial can have a programmed name up to 18 characters long. The name shows in the telephone display as the Speed Dial number dials out.

Speed Dial can store outside numbers and Intercom digits. The capability to store Intercom digits provides the user with “one-touch” access to features they use most often. For example, a user can have a Speed Dial bin that simplifies forwarding calls to voice mail or a co-worker.

System Speed Dial

System Speed Dial gives every extension access to the same set of stored numbers. The system provides 999 System Speed Dial numbers. Users can access these numbers by pressing a uniquely programmed System Speed Dial Feature Key or by dialing the Speed Dial bin number. Depending on the system option selected (see *Programming* below), users have dial access to either 9, 99 or 999 System Speed Dial bins.

Personal Speed Dial

Personal Speed Dial provides extensions with 20 numbers stored privately for their own use. The Personal Speed Dial keys on a DSS Console access the same bins as the extension to which it is attached.

Unique Speed Dial Entries

In addition to the digits 0-9, # and *, you can enter the following for additional dialing options:

For this option:	From system programming, press this key:	From user programming, press this key:
Flash	Feature Key 1	FLASH
Wait (not used)	Feature Key 2	DND
Pause	Feature Key 3	MUTE

Storing Line Routing in a Speed Dial Bin

When you program a Speed Dial bin, you can select either a line or a Line Group over which the call should route. For example, you can enter 1 for line 1 or 90 for Line Group 90.

- ✦ If you enter a Line Group number, the system will follow the Line Group programming and select an available line in the group for the call.

- ✦ If you enter a line number and the line is busy when the Speed Dial bin tries to dial out, the user hears busy tone. If their extension has Line Queuing, they can dial 2 to queue for a line to become free. If they hang up, the system converts the queue to a Line Callback.
- ✦ The capability to dial 90-98 to select a Line Group for a Speed Dial call is a permanent feature and not affected by programming.

Centrex Compatibility

Speed Dial offers unique compatibility with connected Centrex services. A Speed Dial number can accommodate **both** placing a new call **and** outdialing the stored Speed Dial number on an active Centrex line. This enables features such as Centrex Transfer and Conference. Speed Dial adheres to the following rules.

1. When a user active on an outside call presses **TRANSFER** and selects a Speed Dial number (using any method), the system examines the contents of the stored Speed Dial bin.
2. If the first entry in the bin is an **F** (Flash command), the system flashes the connected line and outdials the contents of the bin (ignoring the line selection associated with the bin).

Note that this unique Centrex integration also pertains to voice mail ports accessing stored Speed Dial numbers.

Chaining Bins for Dialing Long Numbers

A Speed Dial number can be up to 32 digits long. The system allows this by automatically using the next adjacent bin for entries longer than 16 digits. For example, assume you want to store a Personal Speed Dial number for a banking service (203-926 5400) followed by a pause and your 10 digit customer code (9876543210). If you store the entries in bin 701, the following occurs:

- ✦ The system stores the first 16 digits (203 926 5400 Pause 98765) in bin 701.
- ✦ The system stores the remaining digits (43210) in bin 702.

Chaining Notes:

- ✦ In the above example, bin 702 is inaccessible for viewing, programming, or dialing. It only becomes available if you reprogram bin 701 to be 16 digits or less.
- ✦ Since bin 720 is the last Personal Speed Dial bin, it can contain only 16 digits.

Split (Alternate)

Switch between active calls without Conferencing the calls together.

With Split, an extension user can split (alternate) between a current call and a new call. Split lets the extension user easily alternate between the calls without joining (Conferencing) the parties together.

Station Instruments

System keysets provide a host of sophisticated extension features.

The system offers 22-Button, 34-Button, 34-Button Advanced, and Super Display keyset telephones. All telephone models are available in two colors: black and white.

22-Button Display Telephone with Speakerphone



The 22-Button Display Telephone features a large 3 line-by-24 character alphanumeric display with 4 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 12 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a headset jack and built-in speakerphone. Unique features include dual LEDs, built-in wall mounting, and an innovative two position angle adjustment.

34-Button Backlit Display Telephone with Speakerphone



The 34-Button Display Telephone features a large 3 line-by-24 character backlit alphanumeric display with 4 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 24 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a backlit keypad, a headset jack, and built-in speakerphone. Unique features include dual LEDs, built-in wall mounting, and an innovative two position angle adjustment.

34-Button Backlit Display Telephone with Full-Duplex Speakerphone



This feature-rich 34-Button Display Telephone features a large 3 line-by-24 character backlit alphanumeric display with 4 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 24 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a built-in full duplex speakerphone (with no external speaker or microphone required), a backlit keypad, and a headset jack. Unique features include dual LEDs, built-in wall mounting, and an innovative two position angle adjustment.

34-Button Backlit Super Display Telephone with Half-Duplex Speakerphone



The Super Display Telephone is the system's most sophisticated telephone instrument. It features a large 9 line-by-24 character backlit alphanumeric display with 12 Interactive Soft Keys for intuitive feature access. It also provides 10 Personal Speed Dial bin keys, 24 programmable Feature Keys and 12 fixed function keys for streamlined operation. Additionally, this telephone offers a built-in half duplex speakerphone (with no external speaker or microphone required), a backlit keypad, and a headset jack. Unique features include dual LEDs, built-in wall mounting, and an innovative two position angle adjustment.

Ring/Message Lamp

Each keyset has a Ring/Message Lamp. Located on the upper right of the keyset faceplate, the Ring/Message Lamp indicates for the following features:

For this feature:	The lamp does this:
Caller ID Logging	Double-wink on (green) when there is a new Caller ID record that has not been reviewed
Central Office Calls, Answering	Slow flash (green) as call rings
Direct Inward Line	Slow flash (green) as call rings
Hold	Slow flash (green) during Hold recall
Intercom	Slow flash (green) as call rings
Message Waiting	Fast flash (red) when user has a Message Waiting indication left
Park	Slow flash (green) during Park recall
Transfer	Slow flash (green as call rings) and during Transfer recall
Voice Mail	Fast flash (red) when messages are waiting in mailbox

Station Message Detail Recording

SMDR provides a printed record of your calls.

Station Message Detail Recording (SMDR) provides a record of the system's outside 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 line. This makes charge-back and traffic management easier. SMDR includes both incoming and outgoing calls, and can be turned off system-wide or selectively for each line.

The SMDR call record outputs when the call completes. The system assigns the SMDR record to the last extension on the call. For example, if extension 306 answers the call, talks for 20 minutes, and then transfers the call to extension 302, extension 302 "owns" the entire call record as soon as they hang up.

SMDR requires a customer-provided data collection device connected to the system's RS-232 port. The default baud rate is 38,400. The data format is fixed at 8 data bits, no parity, with one stop bit (8N1). Connection requires:

System Identification

Store the site name and telephone number in the system data base.

The system administrator can enter the site name and telephone number into the system data base. This information is saved into system memory.

Conditions

- None

Default Setting

- No entries.

System Programming Password Protection

Control access to system programming.

The system controls access to the programmable options according to the programming password the administrator enters. There are three password levels:

Logging On with this Password:	Gives you access to these programs:
System Administrator 1 (level 1)	<i>1001-01: System Type (page 595)</i> <i>1001-02: Software Version (page 595)</i> <i>1001-03: DSP Version (page 596)</i> <i>1011-01: System Name (page 597)</i> <i>1011-02: Telephone Number (page 597)</i> <i>1021-01: System Time (page 599)</i> <i>1021-02: System Date (page 599)</i> <i>1022-01: Automatic Daylight Savings Time Setting (page 600)</i> <i>1031-01: New Password (page 602) (for level accessed)</i> <i>1701-01: Number of System Speed Dial Bins (page 714)</i> <i>1702-Assignment (System Speed Dial Assignment) (page 715)</i> <i>2121-Feature Keys (page 753)</i> <i>2122-Ring Override (Key Ring Override) (page 759)</i> <i>2123-BLF (DSS Keys) (page 760)</i> <i>2123-BLF (DSS Keys) (page 760)</i> <i>2124-Soft Keys (Idle Menu Soft Keys for Super Display) (page 761)</i> <i>2151-Assignment (Personal Speed Dial Bin Assignment) (page 775)</i> <i>2401-Config (DSS Console Configuration) (page 800)</i> <i>2402-Keys (DSS Console Keys) (page 801)</i> <i>25xx-Text Messages (Selectable Display Messaging) (page 806)</i>
System Administrator 2 (level 1)	
Installer (level 3)	All

T1 Lines

In DSX-80/160, provides for connection to advanced digital lines and simplifies installation.

T1 lines require a unique T1 PCB (P/N 80061) and give the system a maximum of 24 lines in a single PCB slot. The available T1 line types include:

- ✦ Loop Start (DTMF and Dial Pulse)
- ✦ Ground Start (DTMF and Dial Pulse)
- ✦ Direct Inward Dial (DID) Wink Start (DTMF and Dial Pulse)
- ✦ Direct Inward Dial (DID) Immediate Start (DTMF and Dial Pulse)
- ✦ E&M Tie Line Wink Start (DTMF and Dial Pulse)

- E&M Tie Line Immediate Start (DTMF and Dial Pulse)

T1 gives the system the advantages of advanced digital calling as well as conserving PCB slots. For example, you can set up a system with 12 loop start lines, six tie lines, and six DID lines and use only a single PCB slot. Additionally, the T1 PCB has its own on-board processor and DSP so it minimally impacts other system resources.

Note: Although the T1 PCB can connect directly to the telco's T1 smart jack, your telco may require that you purchase and install a separate Channel Service Unit (CSU). This unit installs between the smart jack and the T1 PCB.

ANI/DNIS Support

The system is compatible with telco's T1 Automatic Number Identification (ANI) and Dialed Number Information Service (DNIS) services. ANI/DNIS services can be provided on T1 loop start, ground start, and DID lines (but not E&M). ANI/DNIS Compatibility provides:

- **Selectable Receive Format**

You can set up the system for compatibility with any combination of ANI, DNIS and Dialed Number (Address) data provided by the telco.

- **Flexible Routing for DID Lines**

For DID lines, the system can route the incoming call based on the received DNIS data and the entries stored in the DID Translation Table. See *Direct Inward Line* (page 35) for more.

- **Caller ID**

The system can use the received ANI data to display the caller's number on the called extension's display. The ANI data can be up to 10 digits long.

FSK Caller ID

The T1 PCB can also receive FSK-based Caller ID (if provided by the telco), the same as the COIU (analog) line cards. To receive this type of Caller ID, you must enable DSP Caller ID for the T1 line circuits in programming. See the *Programming* below for more.

Tandem Calls / Unsupervised Conference

Join two callers in Conference, leave the call and let their conversation continue.

Tandem Calls allows an extension user to join two outside callers in a line-to-line conference. The extension user can then drop out of the call, leaving the lines 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.

Tandem Calls uses a Conference circuit. The following table shows the system's Conference capacities:

Description	Capacity
Conference circuits	32
Maximum simultaneous users in Conference (total of all Conferences system-wide)	32
Maximum simultaneous conferences	8
Maximum parties in any one Conference (lines and/or extensions)	8

The system's 32 Conference circuits are dynamically allocated as users request them.

Tie Lines

In DSX-80/160, link two systems together for inter-system Intercom calling and other features.

Tie lines directly link a local DSX-80/160 telephone system with one or more remote DSX-80/160 systems. The link is independent of the telco's switched network. When a local system user seizes a tie line, they hear Intercom dial tone from the remote system. The user can then use many of the features normally available to the remote system's single line telephones, including:

- ✦ Dialing Intercom extensions in the remote system.
- ✦ Using the remote system's lines for outgoing calls.
- ✦ Accessing System Speed Dial bins in the remote system.
- ✦ Using the remote system's Paging.

Tie Lines require a T1 PCB and Tie Line service from the telco.

Time and Date

The Time and Date shows on telephone displays and prints on system reports.

The system Time and Date appears on display telephones and Station Message Detail Recording reports. The system administrator can change the time and date from the system programming mode. In addition, extension users can change the time and date from the User Programmable Features. Although the data is entered in 24-hour format, it always displays in 12-hour format (e.g., 1300 = 1:00PM). The system can automatically adjust the time for Daylight Savings Time.

Toll Restriction

Use Toll Restriction to help you control the costs of outgoing long distance calls.

Toll Restriction limits the numbers an extension user may dial. By allowing extensions to place only certain types of calls, the system administrator can control long distance costs. The system applies Toll Restriction according to an extension's Toll Restriction Level. For each of the 7 Toll Restriction Levels, the administrator can enable or disable the following options.

- ✦ **Active Key Pad (Continuous Dialing)**
Active Key Pad continuously enables the telephone key pad. This is important if co-workers typically use dial-up services (such as automated banking) or frequently dial into voice mail systems. With Active Key Pad disabled, the system disables the telephone key pad 6 seconds after the user has dialed their last digit. Toll Restriction controls Active Key Pad for both incoming and outgoing calls.
- ✦ **N11 Dialing**
N11 Dialing enables or disables an extension's ability to use N11 services such as directory assistance (411) and repair (611). Consider enabling this option if the connected telco charges by the call (i.e., meters) these services. *Note that the system never restricts a user from dialing 911 or 1 + 911.*
- ✦ **0 + Dialing**
0 + Dialing enables or disables an extension's ability to manually dial 0 + (operator assisted) calls. These calls typically include collect calls and credit card calls. Be sure to disable this option if you don't want co-workers making these types of calls. The setting of 0 + Dialing does not affect the operation of international dialing (see the option immediately following).
- ✦ **International (011) Dialing**
Use the International Dialing option to restrict extension access to high-cost international (011) dialing. You can, for example, enable international dialing for high priority users and executives while disabling international dialing for all other co-workers.
- ✦ **Equal Access (1010 + XXX) Dialing**
Equal Access allows users to select long distance carriers other than your primary carrier. Your primary

carrier is the long distance provider you access when you seize a line and dial 1. To reach another provider, dial 1010 and that provider's three-digit code (e.g., 1010220). The system does not restrict the numbers dialed after the Equal Access code, but can prevent users from dialing specific Equal Access codes.

✦ **1 + Dialing**

This type of Toll Restriction can restrict:

- 1 + 3-digit (1 + NPA and 1 + NXX) dialing.
- 1 + 6-digit (1 + NPA + NXX) dialing.

✦ **Dialing without a Leading 1**

This type of Toll Restriction can restrict:

- 3-digit (NPA and NXX) dialing.
- 6-digit (NPA + NXX) dialing.

The Toll Restriction Tables

There are 5 separate tables for each Toll Restriction Level. Each table can hold up to 96 entries. The Toll Restriction Tables can individually restrict:

- ✦ Equal Access Dialing.
- ✦ Calls dialed *with* a leading 1 (1 + Dialing).
- ✦ Calls dialed *without* a leading 1.

Transfer

Send the outside call you are on to a co-worker.

Transfer permits an extension user to send (i.e., extend) an active call to any other extension in the system, a Ring Group, UCD Group or voice mail. 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. If a transferred outside call is still unanswered, the call diverts to Key Ring. This assures that users do not lose or inadvertently abandon their transfers. An extension user can Transfer both outside calls and Intercom calls.

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.

Distinctive Flash Rate on Recall

Transfer recall features a distinctive flash rate for line keys (see the chart below). This allows the keyset extension user to easily differentiate new calls that are ringing from transferred calls that are recalling.

Distinctive Flash Rate on Transfer Recall	
For this type of call:	You see this flash rate:
Call that you transferred	Slow Flash (red)
Call that you initially transferred recalling your phone	Double Wink On (green)

Transfer Recall Display

The Transfer recall display occurs as the call is ringing the extension that initially transferred it as well as after the call diverts to Key Ring. It identifies:

- ✦ The type of call recalling the extension.

- ✦ The extension to which the call was initially transferred.

Handsfree Transfer

Handsfree Transfer allows an extension user to Transfer an outside call directly to a co-worker's speakerphone.

Hotline Automatic Transfer

With Hotline Automatic Transfer, the extension can Transfer their call to a co-worker just by pressing their Hotline key and hanging up. Without Hotline Automatic Transfer, the user must press **TRANSFER** *before* pressing the Hotline key. If the user frequently uses their Hotline key for one-button Transfer to co-workers, Hotline Automatic Transfer is recommended. If the user prefers to consult with their Hotline partner rather than Transfer, disabling Hotline Automatic Transfer would be helpful.

- Pressing **TRANSFER** + Call Coverage Key can Transfer a call to an uninstalled extension's mailbox (if the mailbox is enabled).
- Pressing a Hotline key can also Transfer a call to an uninstalled extension's mailbox (if the mailbox is enabled).

User Programmable Features

Extension users can set up their telephones to meet their own unique requirements.

User Programmable Features allow an extension user to dial mnemonics to customize the way certain features work on their telephone. With User Programmable Features, there is no need to rely on a System Administrator or Communications Manager to set up each phone. These User-Programmable Features include:

- ✦ Call Forwarding Clear All
- ✦ Direct Station Selection (DSS) Assignment
- ✦ Feature Key Assignment
- ✦ Feature Key Ringing for Call Coverage Keys, Group Call Pickup Keys, and Line Keys
- ✦ Headset Mode
- ✦ Hotline Key Assignment
- ✦ Off Hook Signaling Setup (including Camp-On, Off Hook Ringing for outside calls, and Voice Over for Intercom calls)
- ✦ Paging (Incoming)
- ✦ Prime Line Assignmen
- ✦ Programmable Idle Menu Soft Keys (Super Display)
- ✦ Ringing Line Preference
- ✦ Speed Dial Bin Setup (Personal and System)
- ✦ Time and Date
- ✦ Voice Announce (For incoming Intercom calls)

User Programmable Features				
To program a feature, press # and the feature's code. For example, to enable incoming Paging, press # and dial V P Y , then SPEAKER to hang up. By default, Call Forwarding Clear All, System Speed Dial, and Time and Date are only available to the attendant.				
Feature	Mnemonic	Numeric	Operation	Access Level
Call Forwarding Clear All	#CC	#22	#CC + Y to clear (cancel) forwarding or N to exit without clearing + SPEAKER to hang up.	4 and 5
Headset Mode	#HS	#47	#HS + Y to enable or N to disable + SPEAKER to exit.	3-5
Hotline	#HL	#45	#HL + Press flashing Hotline key + Enter extension for new Hotline partner + HOLD + Program another Hotline key or SPEAKER to exit.	3-5

User Programmable Features

To program a feature, press **#** and the feature's code. For example, to enable incoming Paging, press **#** and dial **V P Y**, then **SPEAKER** to hang up. By default, Call Forwarding Clear All, System Speed Dial, and Time and Date are only available to the attendant.

Feature	Mnemonic	Numeric	Operation	Access Level
Off Hook Signaling	#OHS	#647	#OHS + Select mode (1 = Outside line, 2 = Hotline partner, 3 = Intercom) + Select option (see below) + SPEAKER to exit. <i>For outside lines:</i> 1 = Camp-On tone, 2 = Off-hook Ringing, CLEAR = None <i>For Hotline partner:</i> 1 = Camp-On, 2 = Voice Over, CLEAR = None, <i>For Intercom:</i> 1 = Camp-On, 2 = Voice Over, CLEAR = None	3-5
Paging (Incoming)	#VP	#87	#VP + Y to enable or N to disable + SPEAKER to exit.	3-5
Prime Line Assignment	#PLA	#752	#PLA + Press one of your flashing programmable keys, INTERCOM , or CLEAR for none + SPEAKER to exit.	3-5
Feature Key Assignments	#KP	#57	#KP + Press key you want to program + HOLD + INTERCOM + Press Volume Up or Volume Down to select key option + HOLD + (Enter any additional data if required ¹ + HOLD) + Press Volume Up or Volume Down to select another key to program, or SPEAKER twice to exit.	3-5
			¹ To set up a System Night key, press CLEAR instead of entering additional data.	
Feature Key Ringing	#RAC	#722	<i>Call Coverage Keys:</i> #RAC + Call Coverage Key repeatedly to select ringing mode + SPEAKER to exit. Call Coverage Keys flash as follows: Lamp only = On red, Immediate ring = On green, Delay ring = Fast flash green.	2-5
	#RAL	#725	<i>Outside Line Keys:</i> #RAL + Line Key repeatedly to select ringing mode + SPEAKER to exit. Line keys flash as follows: Lamp only = On red, Immediate ring = On green, Delay ring = Fast flash green, Night ring = Slow flash green.	
	#RAP	#727	<i>Group Call Pickup Keys:</i> #RAP + Group Call Pickup Key repeatedly to select ringing mode + SPEAKER to exit. Group Call Pickup Keys flash as follows: Lamp only = On red, Immediate ring = On green, Delay ring = Fast flash green.	
Programmable Idle Menu Soft Keys (Super Display)	#SM	#76	Press the soft key you want to program (or press Volume Up or Volume Down to scroll through the keys) + HOLD + INTERCOM + Volume Up or Volume Down to select key option + HOLD + SPEAKER to exit.	1-5
Ringing Line Preference	#RLP	#757	#RLP + Y to enable or N to disable + SPEAKER to exit.	2-5

User Programmable Features

To program a feature, press **#** and the feature's code. For example, to enable incoming Paging, press **#** and dial **V P Y**, then **SPEAKER** to hang up. By default, Call Forwarding Clear All, System Speed Dial, and Time and Date are only available to the attendant.

Feature	Mnemonic	Numeric	Operation	Access Level
Speed Dial, Personal	#SP	#77	#SP + Press bin key (for bins 701-710) or dial the bin key (701-720) + HOLD + Dial outside line (e.g., 1), Line group (e.g., 90-98), or ICM for Intercom feature + HOLD + Number to store + HOLD twice + Name + HOLD + Press another bin key or SPEAKER to exit.	1-5
Speed Dial, System	#SP	#77	#SP + Dial System Speed Dial bin number (e.g., 201) + HOLD + Dial outside line (e.g., 1), Line group (e.g., 90-98), or INTERCOM for Intercom feature + HOLD + Number to store + HOLD twice + Name + HOLD + Dial another System Speed Dial bin or SPEAKER to exit.	4 and 5
System Program Access	##**		##** + Enter programming password	3-5
Time and Date	#TD	#83	#TD + Enter time in 24-hour clock using hours (2 digits), minutes (2 digits) and seconds (2 digits) + HOLD + Enter date using month (2 digits), day (2 digits) and year (4 digits) + HOLD + SPEAKER to exit.	4 and 5
Intercom Voice Announce (for incoming Intercom calls)	#VA	#82	#VA + V for voice announce or R for ring + SPEAKER to exit.	3-5

Voice Mail

Voice mail ends the frustration and cost of missed calls, inaccurate written messages and telephone tag, freeing up the company's receptionists and secretaries for more production work.

The system is fully compatible with IntraMail, UltraMail, and NVM-Series Voice Mail with Automated Attendant Systems. These systems provide telephone users with comprehensive voice mail and Automated Attendant features. Automated Attendant automatically answers the system's incoming calls. After listening to a customized message, an outside caller can dial a system extension or use voice mail. ***When installing voice mail, refer to the documentation provided with your voice mail system for the specifics.***

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's 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 when the extension is busy, or just for unanswered calls.

Leaving a Message

Voice mail lets a keyset extension user easily leave a message at an extension that is unanswered, busy, or in Do Not Disturb. The caller just presses **V-MAIL** to leave a message in the called extension's mailbox. There is no need to call back later.

Transferring to Voice Mail

By using Transfer to Voice Mail, an extension user can Transfer a call to the user's own or a co-worker's mailbox. After the Transfer goes through, the caller can leave a message in the mailbox. The caller will hear the entire mailbox greeting after the Transfer goes through.

Conversation Record

While on a call, an extension user can have voice mail record the conversation. The keyset user just presses their Record key. Once recorded, the voice mail 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 ability to use Conversation Record is controlled by an extension's Class of Service.

Caution

The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversations 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.

Conversation Record Key for a Co-worker's Mailbox

An extension user can have a Record key for a co-worker's mailbox. While on a call, the user can press the key to record their conversation directly into the co-worker's mailbox. The user can set up the Record key to record into any valid Subscriber Mailbox (including IntraMail Group Mailboxes and Master Mailboxes programmed as Subscriber Mailboxes). This could help a dispatcher, for example, that wants to record a conversation with a client right into the responsible technician's mailbox.

An extension can have multiple Record keys, each associated with a different mailbox. In addition, setting up a Record key for a co-worker's mailbox is also available on DSS Consoles.

Personal Answering Machine Emulation

Refer to *Call Screening* (page 102). You may find that Call Screening better meets your requirements.

A keyset user can have their idle extension emulate a personal answering machine. This lets voice 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 keyset user can then:

- ✦ Let the call go through to their mailbox.
- ✦ Intercept the call before it goes to their mailbox.

Personal Answering Machine Emulation will intercept the following types of calls:

- ✦ Intercom calls
- ✦ Direct Inward Lines to the extension
- ✦ Automated Attendant Unscreened Transfers
- ✦ Automated Attendant Screened Transfers

Personal Answering Machine Emulation will not intercept a call manually transferred to an extension.

Voice Mail Overflow

Voice mail can be the *overflow destination* for the following types of calls (refer to the individual features for the specifics):

- ✦ *Direct Inward Line* (page 35)
A line that directly rings an extension can overflow to voice mail.
- ✦ *Extension Hunting* (page 43)

A line that rings an Extension Hunting group can overflow to voice mail.

- ✦ *Group Ring* (page 46)
A line that rings a group of extensions can overflow to voice mail.
- ✦ *Key Ring* (page 51)
A line ringing an extension's line keys can overflow to voice mail.

Message Center Mailbox

A Message Center Mailbox is a mailbox shared by more than one extension. Any keyset that has a Message Center Key for the shared mailbox can:

- ✦ Listen to the messages stored in the mailbox.
- ✦ Transfer calls to the shared mailbox.
- ✦ Use many other voice mail features previously available only at an extension's individual mailbox.

A Message Center Mailbox helps co-workers that work together closely - such as members of the same Pickup Group. For example, the group supervisor can send important messages to the shared Message Center Mailbox, to which any group member can respond when time allows. Each group member's Message Center Key flashes (green) when messages are waiting.

Interactive Soft Key Shows New Messages

The Display and Super Display Telephone interactive soft keys show the number of new messages in the user's mailbox. For example, if a Display Telephone user has 2 new messages in their mailbox, their voice mail soft key shows: **VM02**. If a Super Display Telephone user has 2 new messages in their mailbox, their voice mail soft key shows **V-Mail 02**. The new message count resets to 00 as soon as the user calls their mailbox (regardless of whether the new messages were listened to). The message count returns when the system updates the Ring/Message lamp on the phone.

Voice Over

Get through to a co-worker busy on a handset call — without interrupting their call.

Voice Over lets a user get through to a keyset extension user busy on a handset call. With Voice Over, the busy keyset extension user hears an alert tone followed by the voice of the interrupting party. The keyset extension user can respond to the interrupting party without being heard by the original caller. If desired, the keyset extension 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's conversation.

Voice Over could help a lawyer, for example, 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 on how to handle the situation — all without the original client hearing the conversation.

Either a keyset or SLT can initiate a Voice Over, but only a keyset can receive a Voice Over.

Voice Over uses a system Conference circuit. The following table shows the system's Conference capacities:

Description	Capacity
Conference circuits	32
Maximum simultaneous users in Conference (total of all Conferences system-wide)	32
Maximum simultaneous conferences	8
Maximum parties in any one Conference (lines and/or extensions)	8

The system's 32 Conference circuits are dynamically allocated as users request them.

Volume and Contrast Controls

Easily adjust the volume of ringing, Paging, and other features.

A keyset user can press **Volume Up** and **Volume Down** to interactively adjust the volume of the following features while they are active:

- ✦ Intercom handset calls
- ✦ Intercom Handsfree calls
- ✦ Outside handset calls
- ✦ Outside Handsfree calls
- ✦ Paging receive volume
- ✦ Background Music
- ✦ Ringing
- ✦ Off-Hook Ringing

There are nine steps in the Volume Control adjustment range. This makes it easier for the keyset user to set up just the right volume levels. The settings a user makes are retained after a system reset or power-down.

Volume Control Presets

The volume control presets allow the keyset user to preset the default volume for Ringing, Off-Hook Ringing, and incoming Page announcements while their telephone is idle. Presets for the remaining volume controls are not required since the user can easily adjust those volumes while idle. For example, to adjust the volume of Background Music, just press **HOLD** to active BGM and then adjust the volume.

Display Brightness and Contrast Control

While a keyset is idle, pressing **Volume Up** or **Volume Down** adjusts the contrast of the display. There are eight user-selectable contrast control values. The value a user sets is "remembered" by the system and automatically restored in the event of a power down or system reset.

Display Brightness and Contrast Control Presets

The brightness and contrast control presets let the keyset user preset the default active brightness, idle brightness, and contrast for their keyset display. The brightness presets are not available to a 24-button keyset since it doesn't offer a backlit display.

Walking Class of Service

An extension user can temporarily use their Toll Restriction and Class of Service options at a co-worker's phone.

Walking Class of Service allows an extension user to temporarily implement their Toll Restriction and Class of Service settings at a co-worker's keyset. This is normally used to override dialing restrictions at a telephone. For example, an executive with an unrestricted phone can walk to any keyset in the building, implement Walking Class of Service, and dial without restriction. ***After the keyset goes idle, Walking Class of Service remains in effect for 10 seconds.*** This permits the user to make multiple calls before the keyset returns to its normal restrictions.

Walking Class of Service and Extension Locking

Walking Class of Service overrides Extension Locking. For example:

- ✦ Extension 301 is permitted by their Class of Service and Toll Restriction to use Paging and place long distance calls.
- ✦ Extension 306 locks their extension. While locked, Class of Service 15 prevents Paging and Toll Level 7 prevents long distance calls. These features are no longer available at extension 306.
- ✦ The extension 301 user goes to extension 306 and implements Walking Class of Service.
- ✦ The extension 301 user can then use 306 to make long distance calls and Page (even though 306 was locked to prevent those features).

IntraMail Features

Introduction

How To Use This Chapter

If you are not familiar with the IntraMail features, review the [IntraMail Feature Glossary](#) on page 86.

This chapter provides detailed information on the IntraMail features. Similar to the *Features* chapter, the IntraMail features in this chapter are in alphabetical order, like a dictionary. This chapter subdivides each feature definition into headings as follows:

- ✦ **Description**
Read *Description* to get an overview of the feature.
- ✦ **Operation**
Operation provides convenient operation charts for each IntraMail feature.

Start-Up (Default) Configuration

Without IntraMail Installed

The Built-In Automated Attendant is enabled. See page 100 for more.

With IntraMail Installed

IntraMail automatically assigns a mailbox to each extension in the number plan.

- ✦ By default in DSX-40, only the first 8 (300-307) Subscriber Mailboxes are active/enabled.
- ✦ By default in DSX-80/160, only the first 16 (300-315) subscriber mailboxes are active/enabled.
- ✦ The IntraMail Automated Attendant **does not** answer outside calls.

IntraMail Feature Glossary

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Administrator Security Code Control	<ul style="list-style-type: none"> See <i>Security Code</i> in this glossary. 	Voice Mail
Alternate Next Call Routing Mailbox	<ul style="list-style-type: none"> See <i>Next Call Routing Mailbox</i> in this Glossary. 	Voice Mail
Announcement Mailbox	Mailbox that allows a prerecorded greeting to play to callers. <ul style="list-style-type: none"> See <i>Announcement Mailbox</i> (page 96) for more. 	Automated Attendant
Announcement Message	The message that the System Administrator records for a specific Announcement Mailbox. <ul style="list-style-type: none"> See <i>Announcement Mailbox</i> (page 96) for more. 	Automated Attendant
Answer Schedule Override	Enables an alternate greeting and alternate dialing options for callers. <ul style="list-style-type: none"> See <i>Answer Schedule Override</i> (page 96) for more. 	Automated Attendant
Answer Table	Determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing. <ul style="list-style-type: none"> See <i>Answer Tables</i> (page 96) for more. 	Automated Attendant
Answering Machine Emulation	A keyset on the connected telephone system can work like a home answering machine. <ul style="list-style-type: none"> See <i>Announcement Mailbox</i> (page 96) for more. 	Voice Mail
Auto Attendant Do Not Disturb	Auto Attendant Do Not Disturb sends Automated Attendant calls directly to an extension user's mailbox. Their phone will not ring for calls from the Automated Attendant. <ul style="list-style-type: none"> See <i>Auto Attendant Do Not Disturb</i> (page 97) for more. Also see <i>Greeting</i> in this glossary. 	Automated Attendant
Auto Erase or Save	When a mailbox user completely listens to a new message and then exits their mailbox, IntraMail will either automatically save or erase the message. <ul style="list-style-type: none"> See <i>Auto Erase or Save</i> (page 98) for more. 	Voice Mail
Auto Time Stamp	After a user listens to a message, IntraMail can optionally announce the time and date the message was left. <ul style="list-style-type: none"> See <i>Auto Time Stamp</i> (page 98) for more. 	Voice Mail
Automated Attendant	The Automated Attendant can automatically answer the telephone system's incoming calls, play an Instruction Menu message, and provide dialing options to callers. <ul style="list-style-type: none"> See <i>Automated Attendant</i> (page 99) for more. 	Automated Attendant
Automated Attendant, Basic	Provides built-in call answering capability when IntraMail is not installed. <ul style="list-style-type: none"> See <i>Automated Attendant</i> (page 99) for more. 	Automated Attendant

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Automated Attendant Transfer	While on an outside call, an extension user can transfer their call to the Automated Attendant so the caller can use the Automated Attendant dialing options. <ul style="list-style-type: none"> See <i>Automated Attendant Transfer</i> (page 100) for more. 	Voice Mail
Automatic Call Routing to a Mailbox	<ul style="list-style-type: none"> See <i>Go to a Mailbox</i> in this glossary. 	Automated Attendant
Automatic Message Erase/Save	<ul style="list-style-type: none"> See <i>Auto Erase or Save</i> in this glossary. 	Voice Mail
Automatic Routing for Rotary Dial Callers	If an Automated Attendant caller doesn't dial any digits, IntraMail will automatically route them to a specified option (such as the operator or a mailbox). <ul style="list-style-type: none"> See <i>Automatic Routing for Rotary Dial Callers</i> (page 100) for more. 	Automated Attendant
Bilingual Voice Prompts	Provides IntraMail voice prompts in one of two active languages (primary and secondary) <ul style="list-style-type: none"> See <i>Call Forward to a Mailbox</i> (page 101) for more. 	Voice Mail
Call Forward to a Mailbox	An extension user can forward their calls to their mailbox. <ul style="list-style-type: none"> See <i>Call Forward to a Mailbox</i> (page 101) for more. 	Voice Mail
Call Routing Mailbox	The mailbox associated with an Answer Table that specifies which dialing options (Dial Action Table) and announcements are available to Automated Attendant callers. <ul style="list-style-type: none"> See <i>Call Routing Mailbox</i> (page 102) for more. 	Automated Attendant
Call Screening	Call Screening allows a display keyset extension user to listen to (screen) a voice mail message as it is being left in their mailbox. Unlike Personal Answering Machine emulation, Call Screening does not require the extension user to forward their calls immediately to voice mail. <ul style="list-style-type: none"> See <i>Call Screening</i> (page 102) for more. 	Voice Mail
Caller ID and Voice Mail	A telephone company service that provides a caller's number and optional name. The telephone system can pass this information to IntraMail to enable <i>Caller ID with Return Call</i> . <ul style="list-style-type: none"> See <i>Caller ID and Voice Mail</i> (page 103) for more. 	System
Caller ID with Return Call	<ul style="list-style-type: none"> See <i>Make Call</i> and <i>Time and Date Stamp</i> in this glossary. 	Voice Mail
Calling (Logging Onto) a Mailbox	<ul style="list-style-type: none"> See <i>Log Onto Voice Mail</i> in this glossary. 	Voice Mail
Calling the Automated Attendant	Automated Attendant callers can use various IntraMail features and then return to the Automated Attendant for additional dialing options. <ul style="list-style-type: none"> See <i>Calling the Automated Attendant</i> (page 103) for more. 	Automated Attendant
Centrex Transfer	The Automated Attendant to transfer a caller from a Centrex line to an outside number using the features of that Centrex line. <ul style="list-style-type: none"> See <i>Centrex Transfer</i> (page 103) for more. 	Automated Attendant

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Conversation Record	Allows an extension user to record their active call as a message in their mailbox. IntraMail will broadcast a beep and a voice prompt to the callers as Conversation Record begins. <ul style="list-style-type: none"> See <i>Conversation Record</i> (page 103) for more. 	Voice Mail
Day, Night, and Holiday Greetings	<ul style="list-style-type: none"> See <i>Flexible Answering Schedules</i> in this glossary. 	Automated Attendant
Deleting a Message	<ul style="list-style-type: none"> See <i>Message Delete</i> in this glossary. 	Voice Mail
Deleting Mailbox Security Code	<ul style="list-style-type: none"> See <i>Mailbox Security Code Delete</i> in this glossary. 	Maintenance
Dial Action Table	Defines the dialing options for a Call Routing Mailbox chosen by the active Answer Table, which in turn provides those dialing options to Automated Attendant callers. <ul style="list-style-type: none"> See <i>Dial Action Table</i> (page 104) for more. 	Automated Attendant
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. <ul style="list-style-type: none"> See <i>Directory Dialing</i> (page 105) for more. 	Automated Attendant
Erasing All Messages	Lets the System Administrator delete mailbox messages system-wide. <ul style="list-style-type: none"> See <i>Erasing All Messages</i> (page 105) for more. 	Maintenance
Exiting a Mailbox	An extension user can exit their mailbox by dialing a code or by hanging up. <ul style="list-style-type: none"> See <i>Exiting a Mailbox</i> (page 105) for more. 	Voice Mail
Extension Hunting to Voice Mail	Automatically sends calls to an extension's mailbox without the user having to set up Call Forwarding. <ul style="list-style-type: none"> See <i>Extension Hunting to Voice Mail</i> (page 106) for more. 	Voice Mail
External Transfer	An Automated Attendant caller can automatically route to an outside telephone number. <ul style="list-style-type: none"> See <i>External Transfer</i> (page 106) for more. 	Automated Attendant
Fax Detection	The Automated Attendant can detect incoming fax calls and transfer them to a fax machine. <ul style="list-style-type: none"> See <i>Fax Detection</i> (page 107) for more. 	System
Flexible Answering Schedules	The Automated Attendant can answer outside calls with different announcements and dialing options, depending on the time of day and day of week. <ul style="list-style-type: none"> See <i>Flexible Answering Schedules</i> (page 107) for more. 	Automated Attendant

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Flexible Call Routing	<p>The Automated Attendant can provide outside callers with a wide variety of dialing (routing) options. There are 3 components to Flexible Call Routing.</p> <ul style="list-style-type: none"> • <i>Answer Table</i> Determines how the Automated Attendant answers outside calls on each Voice Mail port, according to the time of the day and day of the week that the call is ringing. • <i>Call Routing Mailbox</i> The mailbox associated with an <i>Answer Table</i> that specifies which dialing options (<i>Dial Action Table</i>) and announcements are available to Automated Attendant callers. • <i>Dial Action Table</i> Defines the dialing options for the <i>Call Routing Mailbox</i> chosen by the active <i>Answer Table</i>, which in turn provides those dialing options to Automated Attendant callers. • See <i>Flexible Call Routing</i> (page 107) for more. 	Automated Attendant
Flexible Mailbox Numbering Plan	<p>If the telephone system extension numbers are customized, the IntraMail mailbox numbers can be customized to match.</p> <ul style="list-style-type: none"> • See <i>Flexible Mailbox Numbering Plan</i> (page 107) for more. 	System
Forced Unscreened Transfer	<p>A Subscriber Mailbox can optionally convert Automated Attendant Screened Transfers to Unscreened Transfers.</p> <ul style="list-style-type: none"> • See <i>Forced Unscreened Transfer</i> (page 108) for more. 	Automated Attendant
Forwarding Calls to a Mailbox	<ul style="list-style-type: none"> • See <i>Call Forward to a Mailbox</i> in this glossary. 	Voice Mail
Getting Recorded Help	<p>If an extension user dials an incorrect code or forgets what to dial while in their mailbox, they can request help from the IntraMail voice prompts.</p> <ul style="list-style-type: none"> • See <i>Getting Recorded Help</i> (page 108) for more. 	Voice Mail
Go to a Mailbox	<p>An Automated Attendant caller can dial a digit and route directly into a mailbox.</p> <ul style="list-style-type: none"> • See <i>Go to a Mailbox</i> (page 108) for more. 	Automated Attendant
Greeting	<p>A Subscriber Mailbox user can record up to three separate greetings and make any one of the three active. Caller's to the user's mailbox hear the active greeting.</p> <p>With Remote Greeting, an extension user can call into the Automated Attendant, access their mailbox, and remotely record their mailbox greeting.</p> <ul style="list-style-type: none"> • See <i>Greeting</i> (page 109) for more. • Also see <i>Auto Attendant Do Not Disturb</i> in this glossary. 	Voice Mail
Group Mailbox	<p>A Group Mailbox is a Subscriber Mailbox shared by a group of co-workers.</p> <ul style="list-style-type: none"> • See <i>Group Mailbox</i> (page 110) for more. 	Voice Mail
Guest Mailbox	<p>An outside party can have their own mailbox for receiving and sending messages.</p> <ul style="list-style-type: none"> • See <i>Guest Mailbox</i> (page 111) for more. 	Voice Mail

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Hang Up	An Automated Attendant option that immediately hangs up the outside call. <ul style="list-style-type: none"> See <i>Hang Up</i> (page 111) for more. 	Automated Attendant
Help	<ul style="list-style-type: none"> See <i>Getting Recorded Help</i> in this glossary. 	Voice Mail
Individual Line Greetings	<ul style="list-style-type: none"> See <i>Multiple Company Greetings</i> in this glossary. 	Automated Attendant
Instruction Menu	The Instruction Menu is the announcement that plays to Automated Attendant callers. Normally, the Instruction Menu provides callers with the Automated Attendant dialing options. <ul style="list-style-type: none"> See <i>Instruction Menu</i> (page 112). 	Automated Attendant
Leaving a Message	Leave a voice mail message in a co-worker's mailbox. <ul style="list-style-type: none"> See <i>Leaving a Message</i> (page 112). 	Voice Mail
Leaving a Message at a Busy/DND Extension	<ul style="list-style-type: none"> See <i>Leaving a Message</i> above in this glossary. 	Voice Mail
Leave a Quick Message	<ul style="list-style-type: none"> See <i>Quick Message</i> in this glossary. 	Automated Attendant
Listening Options	<ul style="list-style-type: none"> See <i>Listening to Messages</i> in this glossary. 	Voice Mail
Listening to Messages	While or after listening to a message, an extension user has many message handling options from which to choose. <ul style="list-style-type: none"> See <i>Listening to Messages</i> (page 113) for more. 	Voice Mail
Local Notification	<ul style="list-style-type: none"> See <i>Message Notification</i> in this glossary. 	Voice Mail
Log Onto Voice Mail	An extension user can press a key to log onto (access) their IntraMail mailbox. With Remote Logon, an employee calling through the Automated Attendant can dial a single digit followed by their own mailbox number to remotely log onto their mailbox. <ul style="list-style-type: none"> See <i>Log Onto Voice Mail</i> (page 115) for more. 	Voice Mail
Mailbox Greeting	<ul style="list-style-type: none"> See <i>Greeting</i> in this glossary. 	Voice Mail
Mailbox Logon	<ul style="list-style-type: none"> See <i>Log Onto Voice Mail</i> in this glossary. 	Voice Mail
Mailbox Name	A mailbox caller can hear the extension user's prerecorded name instead of their mailbox number. <ul style="list-style-type: none"> See <i>Mailbox Name</i> (page 116) for more. 	Voice Mail
Mailbox Options Menu	Sub-menu of a subscriber's Main Menu that provides access to the Auto Time Stamp, Mailbox Security Code Delete, and Message Notification features. <ul style="list-style-type: none"> See <i>Mailbox Options Menu</i> (page 116) for more. 	Voice Mail
Mailbox Security Code Delete	The System Administrator can delete the security code for any mailbox, effectively unlocking it. <ul style="list-style-type: none"> See <i>Mailbox Security Code Delete</i> (page 116) for more. Also see <i>Security Code</i> in this glossary. 	Maintenance

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Mailbox Transfer	<ul style="list-style-type: none"> See <i>Transfer to a Mailbox</i> in this glossary. 	Voice Mail
Main Menu	<p>The IntraMail options available to an extension user when they log onto their mailbox.</p> <ul style="list-style-type: none"> See <i>Main Menu</i> (page 116) for more. 	Voice Mail
Make Call	<p>A Subscriber Mailbox user can listen to a voice message and dial MC to return the call without knowing their caller's phone number.</p> <ul style="list-style-type: none"> See <i>Make Call</i> (page 117) for more. 	Voice Mail
Master Mailboxes	<ul style="list-style-type: none"> See <i>Group Mailbox</i> in this glossary. 	Voice Mail
Message Count Display	<p>The telephone display can show the number of new messages waiting in a user's mailbox.</p> <ul style="list-style-type: none"> See <i>Message Count Display</i> (page 117) for more. 	Voice Mail
Message Delete	<p>An extension user can delete any messages left in their mailbox.</p> <ul style="list-style-type: none"> See <i>Message Delete</i> (page 119) for more. 	Voice Mail
Message Forward	<p>A subscriber can forward a message in their mailbox to a co-worker. They can optionally record a comment before the forwarded message.</p> <ul style="list-style-type: none"> See <i>Message Forward</i> (page 119) for more. 	Voice Mail
Message Length	<p>The System Administrator can set the maximum length of a message that can be left in a user's voice mailbox.</p> <ul style="list-style-type: none"> See <i>Message Length</i> (page 119) for more. 	Voice Mail
Message Listen Mode	<p>When a user calls their mailbox, they can dial a code to listen to all their messages, their new messages, or their saved messages.</p> <ul style="list-style-type: none"> See <i>Message Listen Mode</i> (page 119) for more. 	Voice Mail
Message Notification	<p>Once activated by the mailbox user, dials a telephone number to let the recipient know there are new messages in the mailbox. Notification can call extensions, local numbers, long distance numbers and pagers.</p> <ul style="list-style-type: none"> See <i>Message Notification</i> (page 120) for more. 	Voice Mail
Message On Hold	<p>The System Administrator can record a message that will play to callers while they wait on Hold.</p> <ul style="list-style-type: none"> See <i>Message On Hold</i> (page 121) for more. 	Voice Mail
Message Playback Direction	<p>An extension user can listen to their messages in either LIFO (last-in-first-out) or FIFO (first-in-first-out) order.</p> <ul style="list-style-type: none"> See <i>Message Playback Direction</i> (page 121) for more. 	Voice Mail
Message Record	<ul style="list-style-type: none"> See <i>Record and Send a Message</i> in this glossary. 	Voice Mail
Message Reply	<p>An extension user can reply to a message in their mailbox by dialing a simple code, without knowing the caller's extension number.</p> <ul style="list-style-type: none"> See <i>Message Reply</i> (page 121) for more. 	Voice Mail

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Message Retention	IntraMail will save a mailbox's new or saved messages for the Message Retention interval, and then delete them. <ul style="list-style-type: none"> See <i>Message Retention</i> (page 121) for more. 	Voice Mail
Message Send	<ul style="list-style-type: none"> See <i>Record and Send a Message</i> in this glossary. 	Voice Mail
Message Storage Limit	Sets how many messages a mailbox can store. <ul style="list-style-type: none"> See <i>Message Storage Limit</i> (page 122) for more. 	Voice Mail
Message Waiting Lamp	An extension's Message Waiting lamp flashes on the telephone indicating that they have new messages waiting in their mailbox. <ul style="list-style-type: none"> See <i>Message Waiting Lamp</i> (page 122) for more. 	Voice Mail
Multiple Company Greetings	By assigning a unique Answer Table to each line, a single IntraMail system can provide individual greetings and dialing options for several companies. <ul style="list-style-type: none"> See <i>Multiple Company Greetings</i> (page 122) for more. 	Automated Attendant
Name	<ul style="list-style-type: none"> See <i>Mailbox Name</i> in this glossary. 	Voice Mail
Next Call Routing Mailbox	Provides callers with additional dialing options after they leave a message in an extension's mailbox (depending on the setting of the Next Call Routing Mailbox Dial Mode). <ul style="list-style-type: none"> See <i>Next Call Routing Mailbox</i> (page 123) for more. 	Voice Mail
One-Touch Forwarding	<ul style="list-style-type: none"> See <i>Call Forward to a Mailbox</i> and <i>Message Forward</i> in this glossary. 	Voice Mail
One-Touch Mailbox Access	<ul style="list-style-type: none"> See <i>Mailbox Logon</i> in this glossary. 	Voice Mail
One-Touch Mailbox Retrieval	<ul style="list-style-type: none"> See <i>Mailbox Logon</i> in this glossary. 	Voice Mail
Personal Answering Machine Emulation	<ul style="list-style-type: none"> See <i>Answering Machine Emulation</i> in this glossary. 	Voice Mail
Personalized Mailbox Greeting	<ul style="list-style-type: none"> See <i>Greeting</i> in this glossary. 	Voice Mail
Programmable Security Code	<ul style="list-style-type: none"> See <i>Security Code</i> and <i>Mailbox Security Code Delete</i> in this glossary. 	Voice Mail
Programming Voice Mail	You can program (customize) IntraMail using the embedded telephone programming or the separately available System Administrator PC program. Limited programming can also be done from a System Administrator's mailbox. <ul style="list-style-type: none"> See <i>Programming Voice Mail</i> (page 127) for more. Also see <i>System Administrator Mailbox</i> in this glossary. 	Maintenance
Quick Message	Automated Attendant callers can dial a digit followed by an extension number to leave a message directly in a user's mailbox. <ul style="list-style-type: none"> See <i>Quick Message</i> (page 127) for more. 	Automated Attendant
Record and Send a Message	A Subscriber Mailbox user can record and send a message to any other Subscriber Mailbox. <ul style="list-style-type: none"> See <i>Record and Send a Message</i> (page 128) for more. 	Voice Mail

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Recorded Help	<ul style="list-style-type: none"> Pre-recorded voice prompts guide the user through the IntraMail features. 	Voice Mail
Recording a Conversation	<ul style="list-style-type: none"> See <i>Conversation Record</i> in this glossary. 	Voice Mail
Recording a Message	<ul style="list-style-type: none"> See <i>Record and Send a Message</i> in this glossary. 	Voice Mail
Recording Conversation Beep	<ul style="list-style-type: none"> See <i>Conversation Record</i> in this glossary. 	Voice Mail
Recording Options	<ul style="list-style-type: none"> See <i>Record and Send a Message</i> in this glossary. 	Voice Mail
Remote Log On	<ul style="list-style-type: none"> See <i>Log Onto Voice Mail</i> in this glossary. 	Voice Mail
Remote Greetings	<ul style="list-style-type: none"> See <i>Greeting</i> in this glossary. 	Voice Mail
Remote Message Notification	<ul style="list-style-type: none"> See <i>Message Notification</i> in this glossary. 	Voice Mail
Remote Programming	IntraMail programming is available remotely via the System Administrator PC program. <ul style="list-style-type: none"> See <i>Remote Programming</i> (page 129) for more. 	Maintenance
Return Call (with Caller ID)	<ul style="list-style-type: none"> See <i>Make Call</i> in this glossary. 	Voice Mail
Rotary Dial Telephones	<ul style="list-style-type: none"> See <i>Automatic Routing for Rotary Dial Callers</i> in this glossary. 	Automated Attendant
Routing Mailbox	A category of mailboxes normally used to route Automated Attendant calls. <ul style="list-style-type: none"> See <i>Routing Mailbox</i> (page 129) for more. 	Automated Attendant
Screened Transfer	Similar to telephone system screened transfers in which the transferring party controls the transfer. <ul style="list-style-type: none"> After an Automated Attendant caller dials an extension, IntraMail calls (screens) the destination extension to see if the transfer can go through. If the destination is busy or in DND, the Automated Attendant doesn't extend the call and immediately provides the caller with additional options. If the destination is available, the Automated Attendant rings it. If the destination answers, the call goes through. If the destination doesn't answer within a pre-set interval, the Automated Attendant doesn't extend the call and provides the caller with additional options. See <i>Screened Transfer</i> (page 129) for more. Also see <i>Unscreened Transfer</i> in this glossary. 	Automated Attendant
Security Code	An extension user's mailbox can have a security code to protect the mailbox from unauthorized access. <ul style="list-style-type: none"> See <i>Security Code</i> (page 131) for more. Also see <i>Mailbox Security Code Delete</i> in this glossary. 	Voice Mail
Select Listen Mode	<ul style="list-style-type: none"> See <i>Message Listen Mode</i> in this glossary. 	Voice Mail

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Single Digit Dialing	An Automated Attendant caller can press a single key to route to an extension, route to another destination, or use an IntraMail feature. <ul style="list-style-type: none"> See <i>Single Digit Dialing</i> (page 132) for more. 	Automated Attendant
Subscriber Mailbox	The mailbox type normally used for telephone system extensions. <ul style="list-style-type: none"> See <i>Subscriber Mailbox</i> (page 132) for more. 	Voice Mail
System Administrator	The extension user that has IntraMail system administration capabilities. <ul style="list-style-type: none"> See <i>System Administrator</i> (page 132) for more. 	Maintenance
System Administrator Mailbox	A Subscriber Mailbox option that enables the system administration capabilities. <ul style="list-style-type: none"> See <i>System Administrator Mailbox</i> (page 133) for more. Also see <i>System Administrator</i> in this glossary. 	Voice Mail
System Reinitialization	Reinitializing IntraMail returns all programmed options to their default values. <ul style="list-style-type: none"> See <i>System Re-initialization</i> (page 133) for more. 	Maintenance
Time and Date with Voice Mail	Set the system Time and Date. <ul style="list-style-type: none"> See <i>Time and Date with Voice Mail</i> (page 133) for more. Also see <i>Auto Time Stamp</i> in this glossary. 	Voice Mail
Time and Date Stamp	With caller ID enabled, an extension can listen to a message and dial a code to hear the time the message was sent, as well as the caller's number. <ul style="list-style-type: none"> See <i>Time and Date Stamp</i> (page 134) for more. Also see <i>Caller ID with Return Call</i> and <i>Time and Date with Voice Mail</i> in this glossary. 	Voice Mail
Time and Date Stamp (with Caller ID Storage)	<ul style="list-style-type: none"> See <i>Time and Date Stamp</i> in this glossary. 	Voice Mail
Transfer by Extension	<ul style="list-style-type: none"> See <i>Screened Transfer</i> and <i>Unscreened Transfer</i> in this glossary. 	Automated Attendant
Transfer Calls to a FAX Machine	<ul style="list-style-type: none"> See <i>Fax Detection</i> in this glossary. 	Automated Attendant
Transfer to a Mailbox	An extension user can transfer their active call to a co-worker's mailbox. <ul style="list-style-type: none"> See <i>Transfer to a Mailbox</i> (page 134) for more. 	Voice Mail
Transfer to a UCD Group	The Automated Attendant can transfer outside callers to UCD Group master numbers. <ul style="list-style-type: none"> See <i>Transfer to a UCD Group</i> (page 134) for more. 	Automated Attendant
Transfer to an Extension	See <i>Screened Transfer</i> and <i>Unscreened Transfer</i> in this glossary.	Automated Attendant
Transfer to the Automated Attendant	<ul style="list-style-type: none"> See <i>Automated Attendant Transfer</i> in this glossary. 	Voice Mail

<u>Name</u>	<u>Description</u>	<u>Usage</u>
Undefined Routing	<p>A dialpad digit for which the Automated Attendant has no routing defined. When an Automated Attendant caller dials a digit for which there is no routing assigned, IntraMail plays a brief error message and then repeats the dialing options.</p> <ul style="list-style-type: none"> • See <i>Undefined Routing</i> (page 134) for more. 	Automated Attendant
Undefined Routing Intercept	<ul style="list-style-type: none"> • See <i>Undefined Routing</i> in this glossary. 	Automated Attendant
Unscreened Transfer	<p>Similar to telephone system unscreened transfers in which the transferring party immediately extends the call.</p> <ul style="list-style-type: none"> • After an Automated Attendant caller dials an extension, IntraMail immediately transfers the call to the destination and hangs up. Any recalls or additional routing are handled by the telephone system – just as with any other unscreened transfer. • See <i>Unscreened Transfer</i> (page 135) for more. • Also see <i>Screened Transfer</i> in this glossary. 	Automated Attendant
Voice Mail Overflow	<p>Ensures that IntraMail will pick up calls that don't go through.</p> <ul style="list-style-type: none"> • See <i>Voice Mail Overflow</i> (page 136) for more. 	System
Voice Prompting Messages	<p>IntraMail provides Voice Prompts that tell the extension user the status or progress of their call.</p> <ul style="list-style-type: none"> • See <i>Voice Prompting Messages</i> (page 137) for more. 	System
Volume Control with Voice Mail	<p>A mailbox user can turn the volume up or down while listening to their messages.</p> <ul style="list-style-type: none"> • See <i>Volume Control with Voice Mail</i> (page 137) for more. 	Voice Mail

Announcement Mailbox

Play a pre-recorded announcement to callers.

An Announcement Mailbox plays a pre-recorded announcement to Automated Attendant callers without providing dialing options. The Announcement Mailbox is typically set up to provide information to callers (such as company directions) and then route back to the Automated Attendant. For example:

- ✦ The Automated Attendant instructs the caller to dial a digit (e.g., 1) for company directions.
 - Record this in the Instruction Menu message for the active Call Routing Mailbox. See *Instruction Menu* (page 112) for more.
 - Set the dialing options in the Dial Action Table associated with the active Call Routing Mailbox. See *Dial Action Table* (page 104) for more.
- ✦ The caller dials the digit and listens to the prerecorded Announcement Mailbox message for directions.
- ✦ After playing the directions, the caller routes back to the Automated Attendant for additional dialing options.

Announcement Message

This is the message that the System Administrator records for an Announcement Mailbox.

The Announcement Message is the voice message that the System Administrator records for a specific Announcement Mailbox.

Answer Schedule Override

Enables an alternate greeting and alternate dialing options for callers.

Answer Schedule Override provides alternate answering for Automated Attendant calls. When enabled, Answer Schedule Override sends calls to the specified Override Mailbox. The Override Mailbox can be an Announcement, Call Routing, or Subscriber mailbox. You can use Answer Schedule Override to provide holiday and bad weather closing announcements, for example. Enable override when you want callers to hear the special announcements; disable override to have the Automated Attendant answer normally. You can enable Answer Schedule Override from system programming or from the System Administrator Mailbox.

- ✦ If the Override Mailbox is an Announcement Mailbox, the outside caller will hear the recorded announcement. Depending on how the Announcement Mailbox is programmed, IntraMail will then hang up, reroute the call, or provide additional dialing options.
- ✦ If the Override Mailbox is a Call Routing Mailbox, the outside caller will hear the instruction menu and can dial any options allowed by the associated Dial Action Table.
- ✦ If the Override Mailbox is a Subscriber Mailbox, the outside caller hears the mailbox greeting (if recorded) and can leave a message.

Answer Tables

Determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing.

The Answer Table determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing. IntraMail provides 8 Answer Tables. The Answer Table is an integral part of the Automated Attendant. The Automated Attendant can automatically answer the telephone system's incoming calls, play an Instruction Menu message, and provide dialing options to callers. There are 3 major Automated Attendant components:

- ✦ *Answer Tables*
The Answer Table (8 maximum) determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing. The Answer Table divides the time of day and day of the week into individual schedules, which in turn assign a Call Rout-

ing Mailbox to each call. When a specific schedule is *not* in effect, the Answer Table uses its Default Mailbox to determine routing.

- By default, all lines use Answer Table 1. Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM.

✦ **Call Routing Mailbox** (page 102)

A Call Routing Mailbox (16 maximum) is a mailbox associated with an individual Answer Table schedule or the Default Mailbox. It specifies which dialing options (Dial Action Table) are available to callers. It also provides the Instruction Menu to callers which typically greets the callers and describes the dialing options.

- ✓ By default, Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM. This schedule and the Default Mailbox both use Call Routing Mailbox 1.

✦ **Dial Action Table** (page 104)

Once the Automated Attendant answers, the Dial Action Table (16 maximum) provides the dialing options to callers. Each digit a caller can dial is assigned a specific action (function) in the Dial Action Table. The dial action used depends on the setting in the active Call Routing Mailbox, which in turn depends on the Answer Table setup.

- ✓ By default, Call Routing Mailbox 1 uses Dial Action Table 1.

The Default Mailbox and Routing Hierarchy

The Default Mailbox provides routing for an Answer Table during periods when a schedule is not in effect. By default, for example, Answer Table 1 Schedule 1 is active Monday through Friday from 8:30 AM to 5:00 PM. The Default Mailbox for Answer Table 1 is active during all other times (i.e., evenings and weekends). Since Schedule 1 and the Default Mailbox both use Call Routing Mailbox 1, initially the routing is the same 24 hours a day, 7 days a week. See *Customizing an Answer Table* below for more.

When setting up your Answer Tables, keep in mind that a *more specific* type of routing has priority over a *less specific* type of routing. When selecting which routing to follow when there is more than one choice for a specific time, IntraMail will choose in the following order:

- Date Schedule
- Day of Week Schedule
- Range of Days Schedule
- Default Mailbox

For example, a Date Schedule set up for Christmas day will have priority over any other schedules in effect on December 25.

Answering Machine Emulation

A keyset on the connected telephone system can work like a home answering machine.

A user's keyset can work like a home answering machine. This lets IntraMail 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 two alert tones followed by the caller's incoming message.

The keyset user can then:

- ✦ Let the call go through to their mailbox, or
- ✦ Intercept the call.

Auto Attendant Do Not Disturb

Auto Attendant Do Not Disturb sends Automated Attendant calls directly to an extension user's mailbox. Their phone will not ring for calls from the Automated Attendant.

When a subscriber enables Auto Attendant Do Not Disturb, Automated Attendant calls to their extension go directly to their mailbox. Their phone will not ring for calls from the Automated Attendant. You can optionally enable Auto Attendant Do Not Disturb from system programming. A subscriber typically turns on Auto Attendant Do Not Disturb when they need to work at their desk undisturbed by outside calls from the Automated Attendant.

Keep in mind that Auto Attendant Do Not Disturb will *not* block Intercom calls from co-workers or any other type of outside call not routed through the Automated Attendant. For example, with Automated Attendant Do Not Disturb enabled, Direct Inwards Lines and transferred outside calls to an extension work normally.

Auto Erase or Save

When a mailbox user completely listens to a new message and then exits their mailbox, IntraMail will either save or erase the message.

When a mailbox user completely listens to a new message and then exits their mailbox, IntraMail will either automatically save or erase the message. The setting of this option depends on how the subscriber would prefer their mailbox to operate. When set to *erase*, the subscriber can review their messages and retain only those they specifically save using the **SA** option. This is a good choice for a subscriber that receives frequent unessential messages. When set to *save*, the subscriber has the assurance of knowing that every message they listened to was saved in their mailbox. This is a good choice for those that must carefully review and consider each new message.

Handling Partially Reviewed Messages

When listening to multiple new messages when Auto Erase or Save is set to *Save*:

- ✦ Any message to which you *partially listen* is automatically saved.
- ✦ Any message to which you *hang up during* or *do not listen* is retained as a new message.

For example, if you have three new messages, listen to part of message 1, dial **L** to hear part of message 2 and then hang up, IntraMail automatically:

- ✦ Saves message 1.
- ✦ Retains messages 2 and 3 as new messages.
- ✦ Restarts the flashing ring/message lamp.
- ✦ Resets the telephone display to **V-MAIL 02 (VM02)**.

When listening to multiple new messages when Auto Erase or Save is set to *Erase*:

- ✦ Any message to which you *partially listen* is automatically erased.
- ✦ Any message to which you *hang up during* or *do not listen* is retained as a new message.

For example, if you have three new messages, listen to part of message 1, dial **L** to hear part of message 2 and then hang up, IntraMail automatically:

- ✦ Erases message 1.
- ✦ Retains messages 2 and 3 as new messages.
- ✦ Restarts the flashing ring/message lamp.
- ✦ Resets the telephone display to **V-MAIL 02 (VM02)**.

Auto Time Stamp

Automatically hear the time and date a message was left.

After a Subscriber Mailbox user listens to a message, IntraMail can optionally announce the time and date the message was left. The Subscriber can enable Auto Time Stamp from their mailbox, or you can optionally enable it from system programming. Auto Time Stamp helps if the subscriber needs to know the time and date of each message they receive without taking any extra steps. With Auto Time Stamp turned on, IntraMail automatically announces the date, time, and (optionally) the caller's number at the end of each message. With Auto Time Stamp turned off, the subscriber must dial **TI** while listening to a message to get the same information.

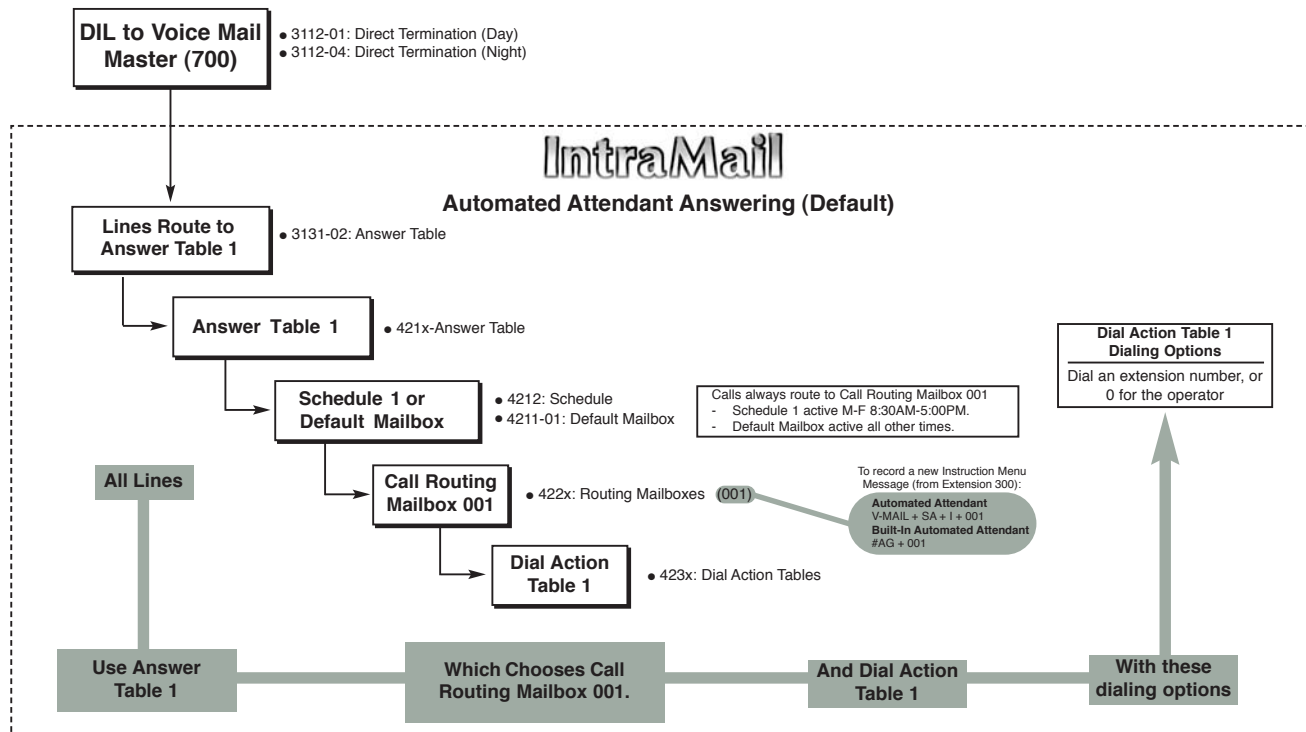
Automated Attendant

Automatically answers the telephone system's incoming calls, plays an Instruction Menu message, and provides dialing options to callers.

For a built-in call answering capability when IntraMail is not installed, see Automated Attendant, Built-In (page 100).

The Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing. The Automated Attendant can automatically answer the telephone system's incoming calls, play an Instruction Menu message, and provide dialing options to callers. There are 3 major components:

- **Answer Tables (page 96)**
The Answer Table (8 maximum) determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing. The Answer Table divides the time of day and day of the week into individual schedules, which in turn assign a Call Routing Mailbox to each call. When a specific schedule is *not* in effect, the Answer Table uses its Default Mailbox to determine routing.
 - By default, all lines use Answer Table 1. Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM.
- **Call Routing Mailbox (page 102)**
A Call Routing Mailbox (16 maximum) is a mailbox associated with an individual Answer Table schedule or the Default Mailbox. It specifies which dialing options (Dial Action Table) are available to callers. It also provides the Instruction Menu to callers which typically greets the callers and describes the dialing options.
 - By default, Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM. This schedule and the Default Mailbox both use Call Routing Mailbox 1.
- **Dial Action Table (page 104)**
Once the Automated Attendant answers, the Dial Action Table (16 maximum) provides the dialing options to callers. Each digit a caller can dial is assigned a specific action (function) in the Dial Action Table. The dial action used depends on the setting in the active Call Routing Mailbox, which in turn depends on the Answer Table setup.
 - By default, Call Routing Mailbox 1 uses Dial Action Table 1.



Automated Attendant, Built-In

Provides built-in call answering capability when IntraMail is not installed.

For the full-featured IntraMail Automated Attendant that automatically answers incoming calls, plays an Instruction Menu message, and provides dialing options to callers, see Automated Attendant (page 99).

The Built-In Automated Attendant gives the system call answering and routing capabilities when IntraMail is not installed. The Built-In Automated Attendant can use any of the first eight Call Routing Mailboxes (001-008) for call handling, and each of these eight Routing Mailboxes can have a 30 second Instruction Menu message (Attendant Greeting). The Routing Mailboxes *must* be Call Routing Mailboxes, and all other Routing Mailbox types are ignored. Additionally, the Built-In Automated Attendant provides two voice mail ports, allowing it to process two calls simultaneously.

The Built-In Automated Attendant does not provide voice mail.

Just like the full featured IntraMail Automated Attendant, the Built-In Automated Attendant can answer outside calls on each line according to the time of the day and day of the week that the call is ringing. After answering, the Built-In Automated Attendant plays an Instruction Menu message (greeting) to the caller and provides them with dialing options. There are 3 major Automated Attendant components:

Automated Attendant Transfer

While on an outside call, an extension user can transfer their call to the Automated Attendant for additional dialing options.

An extension user can transfer their outside call to the Automated Attendant so the outside caller can use the Automated Attendant dialing options. This helps an outside caller, for example, that wants to return to the Automated Attendant so they can dial another co-worker or use a different Automated Attendant option.

Automatic Routing for Rotary Dial Callers

Automatically route Automated Attendant callers that don't dial any digits to a specified option.

If an Automated Attendant caller doesn't dial any digits, IntraMail will automatically route them to a specified option (such as the operator or a mailbox). This lets rotary telephone users stay on the line to leave a message or have their call processed. Without Automatic Routing for Rotary Dial Callers, rotary callers would not be able to use the Automated Attendant.

Automatic Routing for Rotary Dial Callers

Provides IntraMail voice prompts in one of two active languages.

Bilingual Voice Prompts provides IntraMail voice prompts in one of two active languages (primary and secondary). These language choices are available to Routing Mailboxes, outside lines, Station Mailboxes, and Group Mailboxes as follows:

- ✦ *Routing Mailbox*
The language an Automated Attendant caller hears is set by the answering Routing Mailbox.
- ✦ *Outside Line*
For outside lines not answered by the Automated Attendant, the language the caller hears if routed to voice mail is set by the line. An outgoing outside call also hears the line's language setting if it is then transferred to a co-worker's mailbox.
- ✦ *Station Mailbox*
When you log onto your own mailbox and use its features, you always hear your mailbox language. If you call a co-worker and leave a message, you will hear the system's Primary Language.

• *Group Mailbox and UCD Group Mailbox*

Similar to a Station Mailbox, when you log into a Group or UCD Group Mailbox and use its features, you always hear the language programmed for that mailbox. If a co-worker leaves a message in the Group Mailbox, they hear the system's Primary Language.

There are up to six languages stored in the IntraMail CompactFlash card. By default, English mnemonic and English numeric are active and the other four languages (if any) are inactive. You activate an inactive language through system programming.

Automated Attendant callers can optionally dial a digit to select the language of their choice.

Call Forward to a Mailbox

An extension user can forward their calls to their mailbox.

A subscriber can easily forward calls to their Subscriber Mailbox. Instead of dialing an extension as the forwarding destination, the user just presses their **V-MAIL** key instead. With Call Forward to a Mailbox, the subscriber is assured that their calls don't get forgotten when they are busy or unavailable. Unlike with Extension Hunting to Voice Mail, forwarding lets the subscriber choose when and how they want their unanswered calls to go to voice mail (rather than have the telephone system reroute their calls automatically).

Call Forwarding a Subscriber's Direct Inward Line to their Mailbox

The following table describes how IntraMail handles a subscriber's Direct Inward Line when it is Call Forwarded to their mailbox. The routing occurs when the caller dials a digit while listening to the recorded or default mailbox greeting.

Dialing Options while Listening to a Subscriber Mailbox Greeting			
Next Call Routing Mailbox	Dialing Option	Digit Dialed	Action
Undefined	No	0	Caller hears, " <i>That is an invalid entry,</i> " and the greeting repeats, and the caller is prompted to leave a message.
		1-9	
		#	IntraMail hangs up.
		*	Caller skips greeting and can immediately start recording.
1-16 (valid Call Routing Mailbox)	No	0	Caller follows 0 action in Next Call Routing Mailbox.
		1-9	Caller hears, " <i>That is an invalid entry,</i> " the greeting repeats, and the caller is prompted to leave a message.
		#	Caller routes to the Next Call Routing Mailbox and hears its Instruction Menu.
		*	Caller skips greeting and can immediately start recording.
1-16 (valid Call Routing Mailbox)	Yes	0	Caller follows key's action in Next Call Routing Mailbox.
		1-9	
		#	Caller routes to the Next Call Routing Mailbox and hears its Instruction Menu.
		*	Caller skips greeting and can immediately start recording.

Call Routing Mailbox

The mailbox associated with an Answer Table that specifies the dialing options and announcements for Automated Attendant callers.

The Call Routing Mailbox, associated with an Answer Table, specifies which dialing options (Dial Action Table) and announcements are available to Automated Attendant callers. By default, IntraMail provides 8 Call Routing Mailboxes (1-8). However, you can assign any of the 16 Routing Mailboxes as a Call Routing Mailbox. The Call Routing Mailbox is an integral part of the Automated Attendant. The Automated Attendant can automatically answer the telephone system's incoming calls, play an Instruction Menu message, and provide dialing options to callers. There are 3 major Automated Attendant components:

- ✦ *Answer Tables* (page 96)
The Answer Table (8 maximum) determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing. The Answer Table divides the time of day and day of the week into individual schedules, which in turn assign a Call Routing Mailbox to each call. When a specific schedule is *not* in effect, the Answer Table uses its Default Mailbox to determine routing.
 - By default, all lines use Answer Table 1. Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM.
- ✦ *Call Routing Mailbox*
A Call Routing Mailbox (16 maximum) is a mailbox associated with an individual Answer Table schedule or the Default Mailbox. It specifies which dialing options (Dial Action Table) are available to callers. It also provides the Instruction Menu to callers which typically greets the callers and describes the dialing options.
 - By default, Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM. This schedule and the Default Mailbox both use Call Routing Mailbox 1.
- ✦ *Dial Action Table* (page 104)
Once the Automated Attendant answers, the Dial Action Table (16 maximum) provides the dialing options to callers. Each digit a caller can dial is assigned a specific action (function) in the Dial Action Table. The dial action used depends on the setting in the active Call Routing Mailbox, which in turn depends on the Answer Table setup.
 - By default, Call Routing Mailbox 1 uses Dial Action Table 1.

Call Screening

Users can screen (listen to) voice mail messages as they are being left in their mailbox.

Call Screening allows a display keyset extension user to listen to (screen) a voice mail message as it is being left in their mailbox. Call Screening emulates a standard home answering machine — in addition to providing more control when handling incoming messages. Similar to Personal Answering Machine Emulation, the extension user can listen as the message is being left, intercept the call, or end the screen and have the message recorded privately. Unlike Personal Answering Machine emulation, Call Screening does not require the extension user to forward their calls immediately to voice mail. The telephone display automatically shows the Call Screening soft key options as soon as the recording begins.

When enabled, Call Screening will broadcast the caller's message as soon as the mailbox Greeting completes. Additionally, if the extension user intercepts (answers) the screened call, the first portion of the message is automatically erased from the extension's mailbox.

Any caller that can leave a message can have their call screened by the extension user.

Call Screening and Group Mailboxes

If extensions share a Group Mailbox, any number of extensions in the group can screen an incoming message. The group extensions can monitor the incoming message simultaneously. If any group member answers the call (i.e., intercepts the incoming message), the remaining group members are immediately disconnected.

Automatic Call Screening

With Automatic Call Screening enabled, an extension will immediately screen (broadcast) an incoming message as soon as the caller starts to leave it in the extension's mailbox. The extension user hears two beeps followed by the caller's voice.

Caller ID and Voice Mail

A telephone company service that provides a caller's number and optional name.

Caller ID is a telephone company service that provides an extension with a caller's number and optional name. With Caller ID, the keyset user knows who's calling before they pick up the call. Caller ID Logging stores a record of the call on the user's telephone which they can review and use to easily return the call. When used with IntraMail, Caller ID enables the Make Call feature for outside calls. After listening to a voice message, the subscriber can dial **MC** to return the call without knowing the callers phone number.

Calling the Automated Attendant

Outside callers can return to the Automated Attendant for additional dialing options.

Automated Attendant callers can use various IntraMail features and then return to the Automated Attendant for additional dialing options. This lets the caller dial other extensions, leave messages for co-workers, or use other Automated Attendant features. The features below describe several ways to return to the Automated Attendant.

- ▶ *Automated Attendant Transfer* (page 100)
An extension user can transfer their outside call to the Automated Attendant so the outside caller can use the Automated Attendant dialing options.
- ▶ *Next Call Routing Mailbox* (page 123)
The Next Call Routing Mailbox provides callers with additional dialing options after they leave a message in a mailbox (depending on the setting of the Dialing Option).

Centrex Transfer

The Automated Attendant can transfer a caller from a Centrex line to an outside number using the features of that Centrex line.

Centrex Transfer is a Dial Action Table option that can transfer an Automated Attendant call from a Centrex line to an outside number using the features of that Centrex line. With Centrex Transfer, the Automated Attendant answers an outside call and then transfers the caller back to the telco using the same line on which the call initially rang. To set this up, assign a Dial Action Table action as a UTRF to a System Speed Dial bin (e.g., #201P). The bin should contain the complete dial string (preceded by a Flash command) required to initiate the Centrex Transfer. When the Automated Attendant answers, the caller dials the digit and IntraMail automatically routes them to the outside number.

Centrex Transfer is only available if the telephone system connects to Centrex lines that provide the features required to complete the transfer. Similar to External Transfer, Centrex Transfer allows your callers to easily reach branch offices and important off-site associates. Unlike External Transfer, Centrex Transfer *requires* unique telco features.

Conversation Record

Allows an extension user to record their active call as a message in their mailbox.

Conversation Record allows a subscriber to record their active call as a new message in their mailbox, which they can review later on. Conversation Record can be helpful when an extension user is on a call that

involves a lot of detail (such as a technical discussion or extensive directions). Rather than taking notes as the call progresses, the user can record the conversation and carefully review it later on. IntraMail broadcasts a beep and a voice prompt to the callers as Conversation Record begins. After calling their mailbox, the subscriber can save, edit, or delete the recorded conversation.

Caution

The use of monitoring, recording, or listening devices to eavesdrop, monitor, retrieve, or record telephone conversations 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.

Conversation Record Key for a Co-worker's Mailbox

Your extension or DSS Console can have Conversation Record keys for co-worker's mailboxes. While on a call, you can press the key to record your conversation directly into a co-worker's mailbox. You can set up the key to record into any valid Subscriber Mailbox (including Group Mailboxes programmed as Subscriber Mailboxes). This could help a dispatcher, for example, that wants to record a conversation with a client right into the responsible technician's mailbox.

Your extension can have multiple Conversation Record keys, each associated with a different mailbox.

Dial Action Table

Defines the dialing options for Automated Attendant callers.

The Dial Action Table defines the dialing options for the Call Routing Mailbox chosen by the active Answer Table, which in turn provides those dialing options to Automated Attendant callers. IntraMail provides 16 Dial Action Tables. The Dial Action Table is an integral part of the Automated Attendant. The Automated Attendant can automatically answer the telephone system's incoming calls, play an Instruction Menu message, and provide dialing options to callers. There are 3 major Automated Attendant components:

- *Answer Tables* (page 96)
The Answer Table (8 maximum) determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing. The Answer Table divides the time of day and day of the week into individual schedules, which in turn assign a Call Routing Mailbox to each call. When a specific schedule is *not* in effect, the Answer Table uses its Default Mailbox to determine routing.
 - By default, all lines use Answer Table 1. Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM.
- *Call Routing Mailbox* (page 102)
A Call Routing Mailbox (16 maximum) is a mailbox associated with an individual Answer Table schedule or the Default Mailbox. It specifies which dialing options (Dial Action Table) are available to callers. It also provides the Instruction Menu to callers which typically greets the callers and describes the dialing options.
 - By default, Answer Table 1 has a single schedule that runs Monday through Friday from 8:30AM to 5:00PM. This schedule and the Default Mailbox both use Call Routing Mailbox 1.
- *Dial Action Table*
Once the Automated Attendant answers, the Dial Action Table (16 maximum) provides the dialing options to callers. Each digit a caller can dial is assigned a specific action (function) in the Dial Action Table. The dial action used depends on the setting in the active Call Routing Mailbox, which in turn depends on the Answer Table setup.
 - By default, Call Routing Mailbox 1 uses Dial Action Table 1.

Directory Dialing

An Automated Attendant caller to reach an extension by dialing the first few letters in the extension user's name.

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's how Directory Dialing works:

1. When the Automated Attendant answers, it sends the call to a Directory Dialing Mailbox. (Optionally, the caller may be asked to dial a digit to access Directory Dialing.)
2. The Directory Dialing Mailbox plays the Directory Dialing Message (recorded by the System Administrator) 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. IntraMail 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 IntraMail 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 18 characters, A-Z, using upper and lower case letters). Each extension should also have a name recorded in their Subscriber Mailbox. In addition, each extension used by Directory Dialing must be installed and must have their Subscriber Mailbox active (Personal or Group).

Directory Dialing Mailbox

The mailbox type required for Directory Dialing.

A Directory Dialing Mailbox is the Routing Mailbox type required to implement Directory Dialing. See *Directory Dialing* (page 105) for more on how to set up a Directory Dialing Mailbox.

Erasing All Messages

Lets the System Administrator delete mailbox messages system-wide.

The System Administrator can delete all messages in a Subscriber Mailbox. Erasing All Messages is an administrator's maintenance tool. The administrator may need to use this tool if an employee has left the company or has an excessive number of messages stored in their mailbox. By deleting the unwanted messages, the administrator can prevent the IntraMail recording capacity from being reached (which would disable many of the IntraMail messaging features).

Exiting a Mailbox

Exit your mailbox by dialing a code or by hanging up.

A Subscriber Mailbox user can exit their mailbox by dialing a code or by hanging up. After exiting, the subscriber can use their extension for normal call processing.

Extension Hunting to Voice Mail

Automatically sends unanswered calls to an extension's mailbox.

Extension Hunting to Voice Mail automatically sends calls to an extension's mailbox without the user having to set up Call Forwarding. For example, Extension Hunting to Voice Mail can send unanswered transferred calls to an extension's mailbox rather than recalling the transferring party. In addition, Extension Hunting to Voice Mail can send an unanswered Direct Inward Line to the extension's mailbox instead of diverting to Key Ring. Hunting can also reroute calls from the Automated Attendant as well as ringing Intercom calls (depending on the hunt type). Unlike Call Forwarding, Extension Hunting to Voice Mail requires no action by the extension user to redirect calls; the system reroutes them automatically.

There are 4 types of Extension Hunting to Voice Mail:

- ✦ *Ring No Answer Line (Type 1)*
Type 1 hunting reroutes outside calls to the extension's mailbox after a preset interval. Type 1 hunting reroutes outside calls when the extension is idle, busy, or in Do Not Disturb but does not reroute ringing or voice-announced Intercom calls. See the Routing Charts below for more.
- ✦ *Ring No Answer / Busy Line (Type 2)*
Type 2 hunting also reroutes outside calls to the extension user's mailbox. When the extension is idle, Type 2 hunting reroutes calls after an interval. Type 2 hunting reroutes outside calls immediately while the extension is busy or in Do Not Disturb. Like Type 1 hunting, Type 2 hunting does not reroute ringing or voice-announced Intercom calls. See the Routing Charts below for more.
- ✦ *Ring No Answer / Busy All (Type 3)*
Type 3 hunting reroutes outside calls **and** ringing Intercom calls. If the extension is idle, calls reroute to the user's mailbox after an interval. Type 3 hunting reroutes calls immediately when the extension is busy or in Do Not Disturb. It does not reroute voice-announced Intercom calls. See the Routing Charts below for more.
- ✦ *Busy Line (Type 4)*
Type 4 hunting is similar to Type 2 hunting except that transferred outside calls to an idle extension do not reroute. Transferred outside calls, Direct Inward Lines, and calls from the Automated Attendant go immediately to the mailbox when the extension is busy or in Do Not Disturb. This type of hunting never reroutes ringing or voice-announced Intercom calls. See the Routing Charts below for more.

Notes:

- ✦ Extension Hunting to Voice Mail does not reroute voice-announced Intercom calls.
- ✦ Extension Hunting to Voice Mail does not reroute Key Ring calls. See *Key Ring* (page 51) for more.

External Transfer

An Automated Attendant caller can automatically route to an outside telephone number.

External Transfer allows an Automated Attendant caller to automatically route to an outside telephone number. This requires a Dial Action Table action assigned as a UTRF to a System Speed Dial bin (e.g., #201 + Pause for system bin 201). When the Automated Attendant answers, the caller dials the digit and IntraMail automatically routes them to the outside number contained in the bin. Similar to Centrex Transfer, External Transfer allows your callers to easily reach branch offices and important off-site associates. Unlike Centrex Transfer, External Transfer **does not** require unique telco features.

Fax Detection

Automatically transfer incoming fax calls to a fax machine.

The Automated Attendant can detect incoming fax calls and transfer them to a fax machine. With Fax Detection enabled, after the Automated Attendant answers a call it listens for incoming fax CNG tone. If it detects the tone, it does an unscreened transfer of the call to the specified company fax machine. The incoming fax then prints out on the company fax machine. If you disable Fax Detection, the Automated Attendant will not detect and route incoming fax calls.

Flexible Answering Schedules

The Automated Attendant can answer outside calls with different announcements and dialing options, depending on the time of day and day of week.

The Automated Attendant can answer outside calls with different announcements and dialing options, depending on the time of day and day of week. For example, a company can set up separate schedules for weekdays, evenings, weekends, and specific holidays. Each schedule can play a different announcement to callers, as well as provide them with unique dialing options. Once set up in programming, the schedule operation is automatic.

The Flexible Answering Schedules are determined by the set up of the IntraMail Answer Tables. See *Answer Tables* (page 96) for more.

Flexible Call Routing

Provides outside callers with a wide variety of dialing (routing) options.

The Automated Attendant can provide outside callers with a wide variety of dialing (routing) options. You can customize the announcements and routing options to exactly meet the site requirements. Use Flexible Call Routing to eliminate or minimize the need for an operator or receptionist to handle outside calls.

There are 3 components to Flexible Call Routing.

- ▶ *Answer Tables* (page 96)
Determines how the Automated Attendant answers outside calls on each line, according to the time of the day and day of the week that the call is ringing.
- ▶ *Call Routing Mailbox* (page 102)
The mailbox associated with an *Answer Table* that specifies which dialing options (*Dial Action Table*) and announcement are available to Automated Attendant callers.
- ▶ *Dial Action Table* (page 104)
Defines the dialing options for the *Call Routing Mailbox* chosen by the active *Answer Table*, which in turn provides those dialing options to Automated Attendant callers.

Flexible Mailbox Numbering Plan

If telephone extension numbers are customized, set up IntraMail mailbox numbers to match.

If the telephone system extension numbers are changed or swapped, IntraMail will automatically change the Subscriber Mailbox numbers to match. There is no extensive reprogramming required. After the swap, all of the subscriber's messages and options are available at their new extension number. Flexible Mailbox Numbering Plan lets you customize a site's extension numbers and be assured that IntraMail will automatically adapt to the new configuration.

Two-digit mailboxes are not supported in IntraMail.

Forced Unscreened Transfer

Automatically converts Automated Attendant Screened Transfers to Unscreened Transfers.

A Subscriber Mailbox can optionally convert Automated Attendant Screened Transfers to Unscreened Transfers. Enable this option for a mailbox if the subscriber prefers to receive all calls sent by the Automated Attendant as Unscreened Transfers. With Unscreened Transfers,

- Calls from the Automated Attendant ring like other transferred calls and display the incoming Caller ID data (if provided by telco and enabled in programming) as the call is ringing.
- As with Screened Transfers, unanswered calls route to the subscriber's greeting (recorded or default) so the caller can leave a message. However, with Unscreened Transfer the caller cannot dial 2 to reach the Next Call Routing Mailbox options (if programmed).

Getting Recorded Help

Request help from the IntraMail voice prompts.

If a Subscriber Mailbox user dials an incorrect code or forgets what to dial while in their mailbox, they can request help from the IntraMail voice prompts. Recorded Help provides the user with a built-in, interactive user's guide. To get recorded help, the user dials 0.

Go to a Mailbox

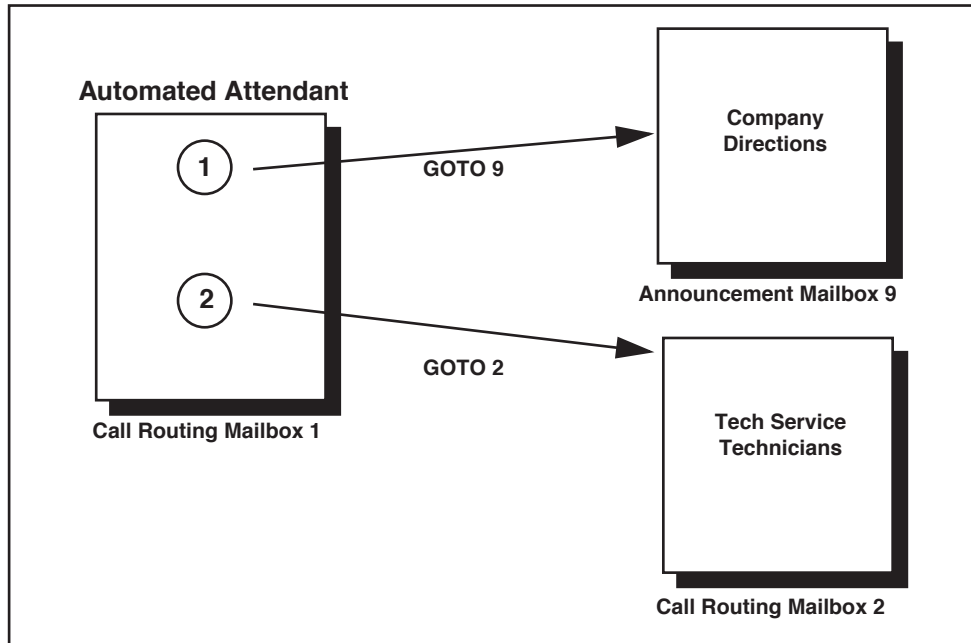
An Automated Attendant caller can dial a digit and route directly into a mailbox.

An Automated Attendant caller can dial a digit to route to a Call Routing or Announcement Mailbox. This is called the Go To (GOTO) action. The GOTO action can route directly to a specific Call Routing or Announcement Mailbox, or allow the Automated Attendant caller to go to a mailbox of their own choosing. Use the GOTO action to set up a "tree" of Automated Attendant options.

The block diagram below shows how the Automated Attendant can provide the caller with a "tree" of dialing options. Dialing 1 (GOTO 9) routes to Announcement Mailbox 9, which plays the company directions. Dialing 2 (GOTO 1) routes to Call Routing Mailbox 2, which is set up to give the caller single-digit dialing to Tech Service technicians.

- The Announcement Message for Announcement Mailbox 9 tells the caller how to locate the company.

- The Instruction Menu for Call Routing Mailbox 1 instructs the caller which digits to dial for each technician. The Dial Action Table for Call Routing Mailbox 2 contains the STRF or UTRF actions to each technician's extension.



The GOTO action can also log into a Subscriber Mailbox, although the LOGON action is normally reserved for this function.

Greeting

A user can record a Greeting for their mailbox callers to hear.

A Subscriber Mailbox user can record a personalized greeting for their mailbox. Caller's to the user's mailbox hear the prerecorded personalized greeting rather than a default message. The greeting can announce the subscriber's name, provide a personal message (such as *"Hello - I am on vacation this week"*), or instruct the caller how to leave a message or use other mailbox options. A greeting that provides mailbox instructions is very helpful if the mailbox has a Next Call Routing Mailbox set up that provides additional dialing options. Without the greeting, the caller would not know which digits to dial.

If a greeting has not been recorded, a caller leaving a message in the subscriber mailbox will hear, *"At the tone, you can leave your message for (extension number or name)."*

While listening to a mailbox greeting, a caller can dial * to immediately leave a message.

Multiple Greetings

A subscriber can record up to three personalized greetings for their mailbox and make any one of the three active. Callers to the user's mailbox hear the active greeting rather than a default message. When a caller leaves a message in the subscriber's mailbox, they hear the active greeting. This allows the subscriber, for example, to record separate greetings for work hours, after work, and during vacation. Instead of rerecording their greeting when they leave the office, they can just activate the "after work" greeting instead.

Remote Greetings

A Subscriber Mailbox user can call into the Automated Attendant, access their mailbox, and remotely record their mailbox greeting. Following are two of the ways a user can do this:

- After the Automated Attendant answers, dial a digit (typically #) followed by their mailbox number. This method allows outside callers to log into their Subscriber Mailboxes from outside the company. Once they log into their mailbox, the user can dial **G** to record a greeting.

-
- ✦ If an extension has a Direct Inward Line that is forwarded to voice mail, the caller can dial # and log into their mailbox (instead of leaving a message). Once they log into their mailbox, the user can dial **G** to record a greeting. This option must be set up in the Next Call Routing Mailbox.

Group Mailbox

Subscribers in the same group can share a mailbox.

Ring Group Mailbox

Group (Shared) Mailbox

A Group Mailbox is a Ring Group Mailbox shared by a group of co-workers. It is normally a Subscriber Mailbox. If a caller leaves a message at any extension within the group that shares the mailbox, the system stores the message in the shared Group Mailbox. The Ring/Message lamp at all keyset extensions in the group flashes to indicate that there is a new voice mail message waiting. Any extension user in the group can log onto their mailbox to hear and process the shared message. The message count on all keyset displays increments and decrements as group messages are received, listened to, or deleted.

Any extension sharing a Group Mailbox can record and activate the Greeting and set Automated Attendant Do Not Disturb. The system automatically uses the most recent Greeting, regardless of which member of the group recorded it.

Group Mailboxes are helpful in both residential installations and larger business workgroups, since extensions share a common voice mailbox. Messages in the Group Mailbox can be listened to, forwarded, deleted, and otherwise processed by any member of the group.

Group Mailbox uses Ring Group programming. You can separately set up Ring Group members to have the same Ring Group Mailbox. Since the system provides 8 Ring Groups, there are a total of 8 Ring Group Mailboxes available.

The Ring Group Mailbox can optionally be a Routing Mailbox (see *Understanding Mailbox Types* below).

Mailbox for a Ring Group

A Ring Group Mailbox can also be the mailbox for a “stand-alone” Ring Group in which the members do not share the mailbox, but have personal mailboxes instead. The following types of *unanswered* calls route to this type of Ring Group Mailbox:

- ✦ Outside calls transferred to the Ring Group master number.
- ✦ Automated Attendant transfers (UTRF or STRF) to the Ring Group master number.
- ✦ Direct Inward Lines to the Ring Group master number (see page 136).

UCD Group Mailbox

If a UCD Group is set to overflow to voice mail, an unanswered call into the group is picked up by the UCD Group Mailbox. The UCD Group Mailbox can be a Subscriber Mailbox (to allow the caller to leave a message) or a Routing Mailbox (to provide additional dialing options or an announcement). See *Understanding Mailbox Types* below.

Understanding Group Mailbox Types

If the Group Mailbox is a Subscriber Mailbox (1):

- ✦ The Group Mailbox has all the features of any other personal Subscriber Mailbox.

If the Group Mailbox redirects to a Call Routing Mailbox (2):

- ✦ A co-worker attempting to leave a message at an extension assigned to the Group Mailbox hears: “*Your call cannot go through. Goodbye.*” IntraMail then hangs up.
- ✦ An outside caller attempting to leave a message at an extension assigned to the Group Mailbox hears the prerecorded Instruction Menu message and can dial options allowed by the associated Dial Action Table.

- ✦ If the Group Mailbox user presses **V-MAIL**, they are asked to enter their mailbox number. After entering the number, they hear, *“That mailbox does not exist.”*
- ✦ An Automated Attendant caller attempting to leave a Quick Message or do a Remote Logon at an extension assigned to the Group mailbox hears, *“That mailbox does not exist.”* They then return to the Automated Attendant.

If the Group Mailbox redirects to an Announcement Mailbox (2):

- ✦ A co-worker attempting to leave a message at an extension assigned to the Group Mailbox hears: *“Your call cannot go through. Goodbye.”* IntraMail then hangs up.
- ✦ An outside caller attempting to leave a message at an extension assigned to the Group Mailbox hears the prerecorded announcement and can use all other Announcement Mailbox features.
- ✦ If the Group Mailbox user presses **V-MAIL**, they are asked to enter their mailbox number. After entering the number, they hear: *“That mailbox does not exist.”*
- ✦ An Automated Attendant caller attempting to leave a Quick Message or do a Remote Logon at an extension assigned to the Group mailbox hears, *“That mailbox does not exist.”* They then return to the Automated Attendant.

If the Group Mailbox redirects to a Directory Dialing Mailbox (2):

- ✦ A co-worker attempting to leave a message at an extension assigned to the Group Mailbox hears: *“Your call cannot go through. Goodbye.”* IntraMail then hangs up.
- ✦ An outside caller attempting to leave a message at an extension assigned to the Group Mailbox hears the Directory Dialing message and can use any of the options programmed for the Directory Dialing Mailbox.
- ✦ If the Group Mailbox user presses **V-MAIL**, they are asked to enter their mailbox number. After entering the number, they hear: *“That mailbox does not exist.”*
- ✦ An Automated Attendant caller attempting to leave a Quick Message or do a Remote Logon at an extension assigned to the Group mailbox hears, *“That mailbox does not exist.”* They then return to the Automated Attendant.
 - Skip this step for a “stand-alone” Ring Group.

Guest Mailbox

An outside party can have their own mailbox for receiving and sending messages.

An outside party can have their own Guest Mailbox mailbox for receiving and sending messages. A Guest Mailbox is a Subscriber Mailbox that **does not** have an extension associated with it. A Guest Mailbox has many of the IntraMail features of a Subscriber Mailbox. A company visitor with a Guest Mailbox could, for example:

- ✦ Go to any extension, press **INTERCOM** + 700, then dial their mailbox number.
- ✦ Review their messages, leave messages for associates, or record a new greeting for their mailbox.
- ✦ Use many other features available to a Subscriber Mailbox.

Voice mail routes calls to the Guest Mailbox in the following three ways:

- ✦ A Screened Transfer (STRF) or Unscreened Transfer (UTRF) from the Automated Attendant goes directly to the Guest Mailbox, even though there is no extension installed.
- ✦ An Intercom call to the uninstalled extension goes directly to the Guest Mailbox.
- ✦ A transferred call to the uninstalled extension also goes directly to the Guest Mailbox.

Hang Up

An Automated Attendant option that immediately hangs up the outside call.

Hang Up is an Automated Attendant option that immediately hangs up the outside call. When setting up a Dial Action Table, you may want to use Hang Up for unused actions (rather than the caller hearing the standard error message). You might also want to use the Hang Up action as the Timeout destination for callers that wait too long to dial after the Automated Attendant answers.

Instruction Menu

Play an announcement to outside callers announcing the Automated Attendant dialing options.

The Instruction Menu is the announcement that plays to Automated Attendant callers. Normally, the Instruction Menu greets callers and provides them with the Automated Attendant dialing options. The Instruction Menu is associated with the active Call Routing Mailbox. Normally, you should have the System Administrator customize (rerecord) the Instruction Menu to match the dialing options enabled in the site's Dial Action Table. If a custom Instruction Menu is not recorded, the Automated Attendant callers hear:

“Thank you for calling. If you are calling from a touch tone phone, please dial the extension number you wish to reach, or dial 0 for assistance. If you are calling from a rotary dial phone, please stay on the line for assistance.”

Leaving a Message

Leave a voice message in a mailbox from inside or outside the company.

An extension user or outside caller can leave a voice message in a co-worker's mailbox if that extension is busy, unanswered, or in Do Not Disturb. Leaving a voice message is a handy and efficient way to communicate with co-workers that avoids post-it notes, message pads, and unnecessary email.

Additional Options While Leaving a Message

The following chart shows the additional dialing options a caller may have while *listening to the mailbox greeting* prior to leaving a message. What happens depends on the setting of the Next Call Routing and Dialing Option options.

Dialing Options While Leaving a Message				
Next Call Routing Mailbox	Dialing Option	Digit Dialed	Action	
			Outside Call	Intercom Call
Undefined	No	0	Caller hears, “ <i>That is an invalid entry</i> ,” and the greeting repeats.	
		1-9		
		#	IntraMail hangs up.	
		*	Caller skips greeting and can immediately start recording.	
1-16 (valid Call Routing Mailbox)	No	0	Caller follows 0 action in Next Call Routing Mailbox.	Caller hears, “ <i>That is an invalid entry</i> ,” and the greeting repeats.
		1-9	Caller hears, “ <i>That is an invalid entry</i> ,” and the greeting repeats.	
		#	Caller routes to the Next Call Routing Mailbox and hears its Instruction Menu.	IntraMail hangs up.
		*	Caller skips greeting and can immediately start recording.	

Dialing Options While Leaving a Message				
Next Call Routing Mailbox	Dialing Option	Digit Dialed	Action	
			Outside Call	Intercom Call
1-16 (valid Call Routing Mailbox)	Yes	0	Caller follows key's action in Next Call Routing Mailbox.	Caller hears, <i>"That is an invalid entry,"</i> and the greeting repeats.
		1-9		
		#	Caller routes to the Next Call Routing Mailbox and hears its Instruction Menu.	IntraMail hangs up.
		*	Caller skips greeting and can immediately start recording.	

Listening to Messages

While or after listening to a message, an extension user has many message handling options from which to choose.

While or after listening to a message, a Subscriber Mailbox user has many message handling options from which to choose. The listening options let you quickly and efficiently manage your voice mail messages, respond to the message sender, or forward the message to a co-worker for additional handling. The following table shows these options.

Message Listen Options [Super Display Soft Key] - [Keyset Soft Key]	
Option	Description
RE (73) [Reply] - [N/A]	<ul style="list-style-type: none"> Record a reply.
MF (63) [Forward] - [N/A]	<ul style="list-style-type: none"> Forward the message to another mailbox.
MC (62) [Callback] - [N/A]	<ul style="list-style-type: none"> Make a call to the message sender.
TI (84)	<ul style="list-style-type: none"> Hear the time and date the message was sent.
SA (72)	Save the message in your mailbox.
E (3) [Erase] - [Erase]	<ul style="list-style-type: none"> Erase the message.
L (5) [Next Message] - [Next]	Listen to the next message.
B (2)	Back up a few seconds.
BB (22) [Repeat] - [Rpt]	Back up to the beginning of the message.
G (4)	Go ahead a few seconds.
*	Pause/resume listening.
1N (16) [Message List + New Messages] - [N/A]	<ul style="list-style-type: none"> Select New Message List
1S (17) [Message List + Saved Messages] - [N/A]	<ul style="list-style-type: none"> Select Saved Message List
1A (12) [Message List + All Messages] - [N/A]	<ul style="list-style-type: none"> Select All Message List
# [Exit] - [Exit]	Exit the listen mode.

Message Listen Options [Super Display Soft Key] - [Keyset Soft Key]	
Option	Description
X (9)	Exit your mailbox.
Dial 0 while listening to hear the list of options.	

Handling Partially Reviewed Messages

When listening to multiple new messages when Auto Erase or Save is set to **Save**:

- ✦ Any message to which you *partially listen* is automatically saved.
- ✦ Any message to which you *hang up during* or *do not listen* is retained as a new message.

For example, if you have three new messages, listen to part of message 1, dial **L** to hear part of message 2 and then hang up, IntraMail automatically:

- ✦ Saves message 1.
- ✦ Retains messages 2 and 3 as new messages.
- ✦ Restarts the flashing ring/message lamp.
- ✦ Resets the telephone display to **V-MAIL 02 (VM02)**.

When listening to multiple new messages when Auto Erase or Save is set to **Erase**:

- ✦ Any message to which you *partially listen* is automatically erased.
- ✦ Any message to which you *hang up during* or *do not listen* is retained as a new message.

For example, if you have three new messages, listen to part of message 1, dial **L** to hear part of message 2 and then hang up, IntraMail automatically:

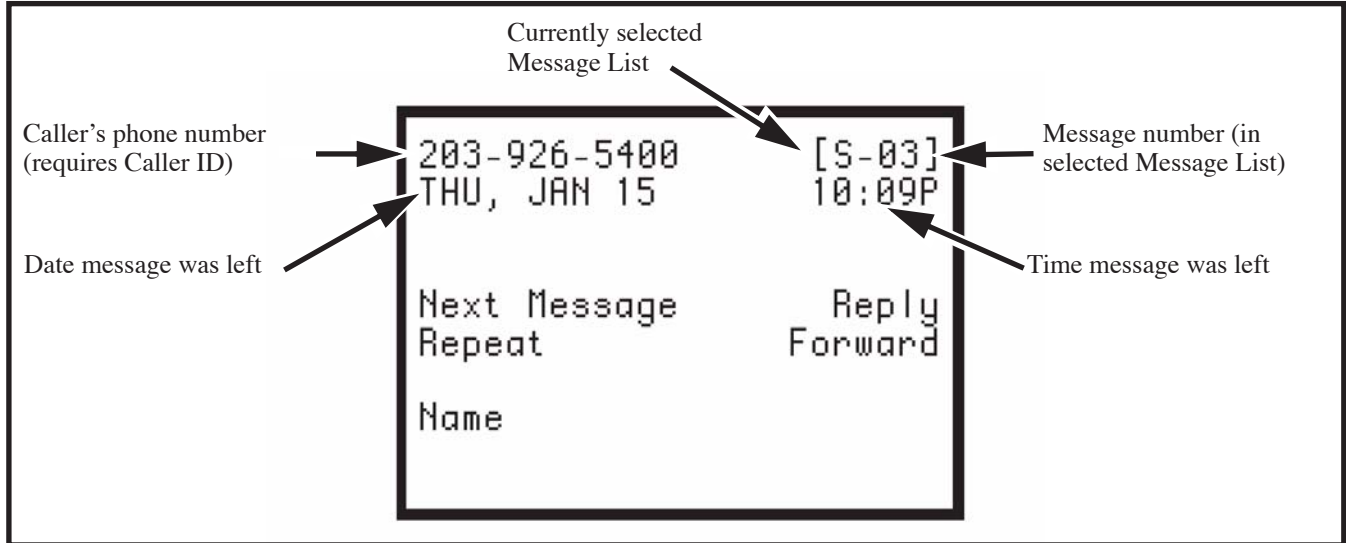
- ✦ Erases message 1.
- ✦ Retains messages 2 and 3 as new messages.
- ✦ Restarts the flashing ring/message lamp.
- ✦ Resets the telephone display to **V-MAIL 02 (VM02)**.

Telephone Display while Listening to a Message

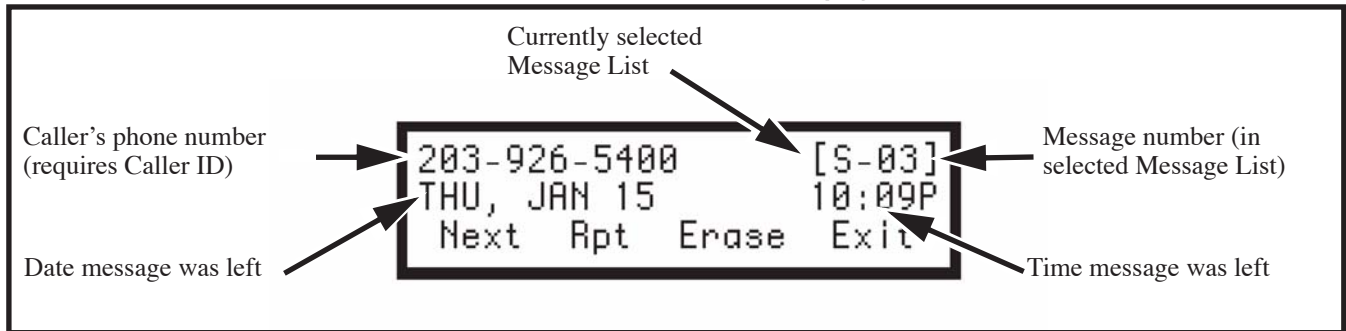
While listening to a message, your telephone display shows you important information about the message. This includes:

- The caller's telephone number (if available).
- The selected Message List.
- The message number in the selected list.
- The date and time the message was left.

Super Display



22-Button and 34-Button Display



Log Onto Voice Mail

An extension user can press a key to log onto (access) their IntraMail mailbox.

A subscriber can log onto their mailbox using a method that best suits their needs and location. While at their own phone, the subscriber just presses a single key to log onto their mailbox. To use their mailbox while at a co-worker's phone, the subscriber dials the IntraMail master number, followed by their mailbox number (which is normally the same as their extension number). If they are away from the office, the subscriber can still use their mailbox by calling in through the Automated Attendant.

Local (On-site) Logon

An extension user can log onto their mailbox in the following ways:

- Press their **V-MAIL** key to log onto their Subscriber Mailbox.
- Dial the IntraMail master number (e.g., 700), followed by their mailbox number. This method is typically used by Guest Mailbox users, as well as subscribers attempting to log into their Subscriber Mailbox from a co-worker's phone.

Remote Log On

A Subscriber Mailbox user can call into the Automated Attendant and log onto their mailbox. Following are two of the ways a user can do this:

- After the Automated Attendant answers, dial a digit (typically #) followed by their mailbox number. This method allows outside callers to log into their mailboxes from outside the company. Once they log into their mailbox, they can use the allowed features in the mailbox main menu. *To avoid unauthorized*

access to their mailbox, the user should enable their own unique Security Code.

- ▶ If an extension has a Direct Inward Line that voice mail picks up, the caller can dial # during their greeting to log into their mailbox (instead of leaving a message). This method allows subscribers to dial their own number and then use the features of their mailbox. This capability must be set up in the user's Next Call Routing Mailbox.

Mailbox Name

A mailbox caller can hear the extension user's prerecorded name instead of their mailbox number.

A caller leaving a message in a Subscriber Mailbox can hear the mailbox's prerecorded name instead of the mailbox number. The prerecorded Mailbox Name gives the subscriber's mailbox that personal touch. Prior to leaving a message, caller's will hear the name instead of the default "*extension xxx*" prompt. The recorded name can be up to 10 seconds long.

Mailbox Options Menu

A Subscriber Mailbox sub-menu that provides access to the Auto Time Stamp, Mailbox Security Code Delete, and Message Notification features.

The Mailbox Options Menu is a sub-menu of a subscriber's Main Menu that provides access to the Auto Time Stamp, Mailbox Security Code Delete, and Message Notification features. The chart below summarizes these options. Auto Time Stamp helps if the subscriber needs to know the time and date of each message they receive without taking any extra steps. If mailbox security is not an issue, the subscriber can delete their security code to simplify logging onto their mailbox.

Mailbox Options Menu [Super Display Soft Key] - [Keyset Soft Key]	
Option	Description
S (7) [Security Code] - [Sec]	<ul style="list-style-type: none">• Erase the mailbox's Security Code.
N (6) [Notification] - [Notif]	<ul style="list-style-type: none">• Set up Message Notification.
AT (28) [Time Stamp] - [Time]	<ul style="list-style-type: none">• Enable or disable Auto Time Stamp.
To hear the list of Mailbox Options, dial 0.	

Mailbox Security Code Delete

Allows the System Administrator to delete the security code for any mailbox.

The System Administrator can delete the security code for any Subscriber Mailbox. This effectively unlocks the mailbox. If mailbox security is not necessary, deleting a mailbox's security code speeds up mailbox logon. Without a security code, the subscriber just presses their **V-MAIL** key to immediately log onto their mailbox.

Main Menu

Provides options to an extension user when they log onto their mailbox.

After a Subscriber Mailbox user logs into their mailbox, IntraMail provides them with the Main Menu of options. The Main Menu provides quick access to the most commonly used mailbox features in a central location. It includes listening and recording options, as well as additional selections for recording mailbox

names and greetings. The chart below summarizes these options.

Mailbox Main Menu [Super Display Soft Key] - [Keyset Soft Key]	
Option	Description
L (5) [Listen] - [Lstn]	<ul style="list-style-type: none"> Listen to messages.
RS (77) [Record] - [Rec]	<ul style="list-style-type: none"> Record and send a message.
G (4) [Greeting] - [Greet]	<ul style="list-style-type: none"> Record a mailbox greeting.
RN (76) [Name] - [N/A]	<ul style="list-style-type: none"> Record a mailbox name.
[Message List] - [N/A]	<ul style="list-style-type: none"> Select the active Message List.
1N (16) [Message List + New Messages] - [N/A]	<ul style="list-style-type: none"> Select the New Message List.
1S (17) Message List + Saved Messages] - [N/A]	<ul style="list-style-type: none"> Select the Saved Message List.
1A (12) [Message List + All Messages] - [N/A]	<ul style="list-style-type: none"> Select the All Message List.
OP (67) [MBOX Options] - [N/A]	<ul style="list-style-type: none"> Use the Mailbox Options
SA (72) [System Admin] - [N/A]	<ul style="list-style-type: none"> Access the System Administrator options.
TI (84)	<ul style="list-style-type: none"> Check the current time and date.
X (9) [Exit] - [Exit]	<ul style="list-style-type: none"> Exit your mailbox.
To hear the complete Main Menu of options, dial 0 while in the Main Menu.	

Make Call

A Subscriber Mailbox user can dial MC to return a call without knowing their caller's number.

Make Call lets a Subscriber Mailbox user listen to a voice message and dial **MC** to return the call without knowing their caller's phone number. Make Call automates returning messages since you don't have to dial the message sender's telephone number. Make Call is always available for messages received from co-workers. Make call is available for messages received from outside callers if the system has Caller ID enabled (and provided by the connected telco).

While listening to a message at a Super Display Telephone, first 2 lines of the display show the callers number (or extension) in addition to the date and time the message was left. At a 22-Button or 34-Button Telephone, the first line of the display shows the date and time the message was left.

Message Count Display

The telephone display can show the number of new messages waiting in a user's mailbox.

The telephone display provides interactive status updates for the subscriber's mailbox. The subscriber doesn't have to call their mailbox and wait for the voice prompts to find out the number of new and saved messages in their mailbox. Then can just look at the display instead. *While idle*, the telephone display shows the number of new messages waiting in a subscriber's mailbox. The message count automatically updates as the subscriber receives new messages and processes older messages. *While logged into the mailbox*, the tele-

phone display shows the number of both new and saved messages.

22-Button and 34-Button Display

While Idle

1-17 SAT 5:30PM

Dir Prog UM01 CL02

One new message waiting in the Subscriber Mailbox

While Logged-in

VOICE MAIL MBOX:300

Messages New: 1 Saved: 1

Lstn Rec Greet Exit

One new message waiting in the Subscriber Mailbox

One saved message waiting in the Subscriber Mailbox

Super Display

While Idle

1-17 SAT 5:30PM

Directory

Program

U Mail 01

Calls 02

Page

SP Dial 1

SR Dial 2

One new message waiting in the Subscriber Mailbox

While Logged-in

VOICE MAIL MBOX 303

Messages New: 1 Saved: 1

Listen MBOX Options

Record

Greeting

Name

One new message waiting in the Subscriber Mailbox

One saved message waiting in the Subscriber Mailbox

Message Delete

An extension user can delete any messages left in their mailbox.

A Subscriber Mailbox user can delete any messages left in their mailbox. Message Delete lets the subscriber do their own mailbox maintenance. They can delete messages they no longer need and save messages that contain essential information. With Message Delete, the subscriber doesn't have to rely on the System Administrator to perform these routine mailbox maintenance functions.

Message Forward

A subscriber can forward a message in their mailbox to a co-worker.

A Subscriber Mailbox user can forward a message in their mailbox to a co-worker. Forwarding is helpful when a subscriber receives a message with which a co-worker can assist them. Rather than sending a new message, the subscriber can just forward the message with which they need help. They can also optionally record a comment before the forwarded message. Typically, the comment would describe the reason for the message forwarding.

IntraMail saves the message in the subscriber's mailbox after they forward it. The Message Forward destination receives the forwarded message as a new message.

Message Length

Through system programming, set the maximum length of a message that can be left in a user's voice mailbox.

You can set the maximum length of a message that can be left in a Subscriber Mailbox. When a caller tries to leave a message that exceeds the limit, they hear, "*You have reached the recording limit.*" IntraMail sends the portion of the message that fits within the allowed Message Length and hangs up. The Message Length option helps you maximize the storage space reserved for messages. If you find that callers are leaving unusually long messages, shorten the Message Length. IntraMail will cut off the message once the caller reaches the Message Length limit. On the other hand, if you hear that IntraMail is cutting off caller's messages prematurely, increase the Message Length to give callers more time.

Message Listen Mode

When a user calls their mailbox, they can dial a code to listen to all their messages, their new messages, or their saved messages.

After logging onto their mailbox, the subscriber can select the category of messages to which they want to listen. Then can listen to just new messages, just saved messages, or all messages. Message Listen Mode lets the subscriber customize their mailbox to initially play just the list of messages to which they want to listen. For example, if a subscriber has many saved messages and just a few new messages, then can log onto their mailbox and dial **1N** to select the new message list. When they press **L**, they will then cycle through just their new message.

Initially, a Subscriber Mailbox uses the All Message List. If they select a different message list, IntraMail reinstates the all Message List the next time they log onto their mailbox.

Message Notification

Dials a telephone number to let the recipient know there are new messages in their mailbox.

Once activated by the Subscriber Mailbox user, Message Notification dials a telephone number to let the user know when there are new messages in their mailbox. When Message Notification is on, a subscriber who is out of the office does not have to keep calling their mailbox remotely to find out if they have new messages. IntraMail will let them know automatically. Notification can call extensions, local numbers, long distance numbers and digital pagers. When a Subscriber Mailbox user sets up Message Notification, they choose from the following options:

- ✦ If Message Notification is enabled or disabled.
(Message Notification can only occur if it is enabled.)
- ✦ The time of day Message Notification should begin and end.
(Callouts will only occur between the begin and end times.)
- ✦ The type of device to which Message Notification will be calling.
(Message Notification can call a normal telephone number or a digital pager.)
- ✦ The telephone or pager service phone number.

To protect your mailbox from unauthorized access, be sure to record a security code for your mailbox before enabling Message Notification.

How Message Notification Works to Normal Telephone Numbers

1. The subscriber activates Message Notification for their mailbox (see *Operation* below).
2. When the subscriber receives a new message, IntraMail dials the destination that should receive the Message Notification.
 - IntraMail waits up to 30 seconds for ringback, reorder, busy or voice activity from the called number. If nothing is detected, the callout is considered unanswered.
3. If the recipient answers, IntraMail 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 will retry the callout number. After completing the programmed number of callout attempts, Message Notification will stop.
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.

How Message Notification Works to Digital Pager Numbers

1. The subscriber activates Message Notification for their mailbox (see *Operation* below).
2. When the subscriber receives a new message, IntraMail immediately dials the pager service.
 - IntraMail waits up to 30 seconds 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, IntraMail sends a dial string 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 recipient logs onto the mailbox. Notification will not reoccur until the subscriber receives new messages.

-
- If the pager service doesn't answer, IntraMail will retry the callout number. Message Notification may eventually cancel if the callout remains unacknowledged.

Message On Hold

A prerecorded message can play to callers while they wait on Hold

Message On Hold allows the System Administrator to record a message that will play to callers while they wait on Hold. For example, you can record a message summarizing available services or hours of operation. This message will play to callers as soon as you put them on Hold, and continually repeat as long as they remain on Hold. Message On Hold recording is only available from the System Administrator's Mailbox. IntraMail provides a single Message On Hold. Any number of callers can simultaneously listen to the Message On Hold recording.

Message Playback Direction

An extension user can listen to their messages in either LIFO (last-in-first-out) or FIFO (first-in-first-out) order.

When you dial **L** (5) after logging into your mailbox, IntraMail will play messages in either LIFO (last-in-first-out) or FIFO (first-in-first-out) order. If you prefer to hear new messages first, enable LIFO (last-in-first-out) listening order. The newest (last-in) messages are at the top of the message list and the oldest messages are at the bottom of the list. If you want to be reminded of oldest messages first, enable FIFO (first-in-first-out) listening order. The oldest (first-in) messages are at the top of the message list and the newest messages are at the bottom. Check with your system administrator to have this set up.

Message Reply

An extension user can reply to a message in their mailbox by dialing a simple code, without knowing the caller's extension number.

A Subscriber Mailbox user can reply to a message from a co-worker by dialing **RE**, without knowing the caller's extension or mailbox number. Message Reply saves the subscriber valuable time since they don't need to know the sender's extension number or send a separate message to respond. The subscriber can just listen to the co-worker's message, dial a code, and record their answer. The message sender receives the reply as a new message.

Message Retention

Automatically deletes a mailbox's messages after a preset time.

IntraMail will save a Subscriber Mailbox's new or saved messages for the Message Retention interval and then delete them. You'll find Message Retention to be an invaluable tool for managing IntraMail's voice message storage space. If subscribers are letting old, unwanted messages build up in their mailboxes, shorten the Message Retention time. Be sure to let the subscribers know how long IntraMail will retain their messages. By default, IntraMail retains all messages indefinitely.

IntraMail performs its Message Retention deletions at midnight of the day the message was marked for deletion. For example, if the mailbox has 1 day Message Retention, any messages left on Wednesday are deleted at midnight on Thursday.

Message Retention Guard Time

IntraMail has a Message Retention Guard Time that automatically starts when you change the date and time in the telephone system. Message deletion can occur only after the Message Retention Guard Time expires. This prevents Message Retention from inadvertently deleting messages when you change the telephone system time and date. The guard time is fixed at 4 days.

Message Storage Limit

Sets how many messages a mailbox can store.

Message Storage Limit sets how many messages can be left in a Subscriber Mailbox. Message Storage Limit is another invaluable tool for managing IntraMail's voice message storage space. To conserve storage space and make it available for new messages, decrease the Message Storage Limit. If storage space is not an issue, increase the Message Storage Limit so subscribers can store additional messages. Be sure to let the subscribers know how many messages their mailboxes can hold.

Message Waiting Lamp

The Ring/Message Lamp flashes when the user has new messages waiting in their mailbox.

An extension's Ring/Message Lamp flashes on the telephone to indicate that the user has new messages waiting in their mailbox. Once IntraMail is properly installed and programmed, telephone Ring/Message Lamp operation is automatic. The Ring/Message Lamp will flash fast (red) when there are new messages in the extension user's mailbox, providing a visual reminder of new messages. The subscriber does not have to call their mailbox and listen to the voice prompts to find out when they have new messages.

Multiple Company Greetings

By assigning a unique Answer Table to each line, a single IntraMail system can provide individual greetings and dialing options for several companies.

The Automated Attendant can answer each individual line with a unique greeting and unique set of dialing options. Since there are a total of 8 Answer Tables, this allows up to 8 companies or departments to share a single IntraMail. Callers to each company hear that company's greeting (Instruction Menu) and can dial options that may be only available to that specific company. You set this up as follows:

- ✦ Assign a unique Answer Table (1-8) to each line that you want to have an individual greeting.
- ✦ For each Answer Table, assign the Call Routing Mailbox that will handle the call.
- ✦ For each of the assigned Call Routing Mailboxes, set up the dialing options (Dial Action Table) and record an Instruction Menu.

If multiple companies or departments share an IntraMail, messaging and calling between the workers of each company or department are not restricted.

Next Call Routing Mailbox

Provides callers with additional dialing options after they leave a message in an extension's mailbox (depending on the setting of the Next Call Routing Mailbox Dial Mode).

The Next Call Routing Mailbox provides callers with additional dialing options while listening to a Subscriber Mailbox recorded or default greeting. It also provides additional dialing options to callers routed to an Announcement Mailbox. Next Call Routing Mailbox lets the caller choose how IntraMail should handle their call. For example, if an Automated Attendant caller dials a subscriber's extension and hears the greeting, Next Call Routing Mailbox (if programmed) allows them to dial other options instead of hanging up.

Subscriber Mailbox Options

The following chart shows the additional dialing options a caller may have 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 Dialing Option options. For an explanation of the options a caller can dial *while recording*, see *Record and Send a Message* (page 128).

Dialing Options While Listening to a Subscriber Mailbox Greeting				
Next Call Routing Mailbox	Dialing Option	Digit Dialed	Action	
			Outside Call	Intercom Call
Undefined	No	0	Caller hears, " <i>That is an invalid entry</i> ," and the greeting repeats.	
		1-9		
		#	IntraMail hangs up.	
		*	Caller skips greeting and can immediately start recording.	
1-16 (valid Call Routing Mailbox)	No	0	Caller follows 0 action in Next Call Routing Mailbox.	Caller hears, " <i>That is an invalid entry</i> ," and the greeting repeats.
		1-9	Caller hears, " <i>That is an invalid entry</i> ," and the greeting repeats.	
		#	Caller routes to the Next Call Routing Mailbox and hears its Instruction Menu.	IntraMail hangs up.
		*	Caller skips greeting and can immediately start recording.	
1-16 (valid Call Routing Mailbox)	Yes	0	Caller follows key's action in Next Call Routing Mailbox.	Caller hears, " <i>That is an invalid entry</i> ," and the greeting repeats.
		1-9		
		#	Caller routes to the Next Call Routing Mailbox and hears its Instruction Menu.	IntraMail hangs up.
		*	Caller skips greeting and can immediately start recording.	

Logging Onto a Subscriber Mailbox while Listening to the Greeting

A subscriber who wishes to log onto their mailbox while listening to their greeting must have the option set in their Next Call Routing Mailbox. To allow this capability, for example:

- Program the Next Call Routing Mailbox # digit as LOGON to IXXX.
- While listening to their greeting, the subscriber can dial:
 - # (to route to their Next Call Routing Mailbox), then
 - # and their mailbox number to log onto their mailbox.

By default, this option is provided in Call Routing Mailbox 1. Additionally, the subscriber should enable a Security Code for their mailbox to prevent unauthorized logons.

Announcement Mailbox Options

The following charts show how an Announcement Mailbox handles Automated Attendant calls.

- The first chart explains what happens when the outside call is directly answered by the Announcement Mailbox. This happens when the Answer Table uses an Announcement Mailbox for routing instead of a Call Routing Mailbox.
- The second chart explains what happens when the outside call is answered by a Call Routing Mailbox and then routed to the Announcement Mailbox. This can happen, for example, when a caller dials a digit to hear an announcement of company directions.
- See *Answer Tables* (page 96) for more on setting up Answer Tables.

Direct Announcement Mailbox Routing (If the outside caller routes directly to the Announcement Mailbox)			
Next Call Routing Mailbox	Repeat Count	Hang Up After	Action
Undefined	0 (No repeats)	Yes or No	<ul style="list-style-type: none"> • <u>If the caller doesn't dial</u>, after the announcement IntraMail hangs up. • <u>If the caller dials a digit</u> during the announcement, IntraMail says "That is an invalid entry" and hangs up.
1-16 (valid Call Routing Mailbox)	0 (No repeats)	No	<ul style="list-style-type: none"> • <u>If the caller doesn't dial</u>, after the announcement they route to the Next Call Routing Mailbox. • <u>If the caller dials a digit</u> during the announcement, they route to the Next Call Routing Mailbox.
		Yes	<ul style="list-style-type: none"> • <u>If the caller doesn't dial</u>, after the announcement IntraMail hangs up. • <u>If the caller dials a digit</u> during the announcement, they route to the Next Call Routing Mailbox.
Undefined	x (x number of repeats)	Yes or No	<ul style="list-style-type: none"> • <u>If caller doesn't dial</u>, they hear the announcement repeat x number of times and then IntraMail hangs up. • <u>If the caller dials a digit</u> during the announcement, IntraMail says "That is an invalid entry" and aborts the announcement. The announcement repeats (if allowed by the Repeat Count) and then IntraMail hangs up.
1-16 (valid Call Routing Mailbox)	x (x number of repeats)	No	<ul style="list-style-type: none"> • <u>If caller doesn't dial</u>, they hear the announcement repeat x number of times and then route to the Next Call Routing Mailbox. • <u>If the caller dials a digit</u> during the announcement, they route to the Next Call Routing Mailbox.
		Yes	<ul style="list-style-type: none"> • <u>If caller doesn't dial</u>, they hear the announcement repeat x number of times and then IntraMail hangs up. • <u>If the caller dials a digit</u> during the announcement, they route to the Next Call Routing Mailbox.

Routed Announcement Mailbox Routing (Page 1 of 2) (If the outside caller routes to the Announcement Mailbox from a Call Routing Mailbox)			
Next Call Routing Mailbox	Repeat Count	Hang Up After	Action
Undefined	0 (No repeats)	No	<ul style="list-style-type: none"> • <u>If the caller doesn't dial</u>, after the announcement the caller goes back to the initial Call Routing Mailbox. • <u>If the caller dials a digit</u> during the announcement, IntraMail says "<i>That is an invalid entry</i>" and routes the caller goes back to the initial Call Routing Mailbox.
		Yes	<ul style="list-style-type: none"> • <u>If the caller doesn't dial</u>, after the announcement IntraMail hangs up. • <u>If the caller dials a digit</u> during the announcement, IntraMail says "<i>That is an invalid entry</i>" and hangs up.
1-16 (valid Call Routing Mailbox)	0 (No repeats)	No	<ul style="list-style-type: none"> • <u>If the caller doesn't dial</u>, after the announcement they route to the Next Call Routing Mailbox. • <u>If the caller dials a digit</u> during the announcement, they route to the Next Call Routing Mailbox.
		Yes	<ul style="list-style-type: none"> • <u>If the caller doesn't dial</u>, after the announcement IntraMail hangs up. • <u>If the caller dials a digit</u> during the announcement, they route to the Next Call Routing Mailbox.
Undefined	x (x number of repeats)	No	<ul style="list-style-type: none"> • <u>If caller doesn't dial</u>, they hear the announcement repeat x number of times and then go back to the initial Call Routing Mailbox. • <u>If the caller dials a digit</u> during the announcement, IntraMail says "<i>That is an invalid entry</i>" and aborts the announcement. The announcement repeats (if allowed by the Repeat Count) and then IntraMail routes back to the initial Call Routing Mailbox.
		Yes	<ul style="list-style-type: none"> • <u>If caller doesn't dial</u>, they hear the announcement x number of times and then IntraMail hangs up. • <u>If the caller dials a digit</u> during the announcement, IntraMail says "<i>That is an invalid entry</i>" and aborts the announcement. The announcement repeats (if allowed by the Repeat Count) and then IntraMail hangs up.

Routed Announcement Mailbox Routing (Page 2 of 2) (If the outside caller routes to the Announcement Mailbox from a Call Routing Mailbox)			
Next Call Routing Mailbox	Repeat Count	Hang Up After	Action
1-16 (valid Call Routing Mailbox)	x (x number of repeats)	No	<ul style="list-style-type: none"> If caller doesn't dial, they hear the announcement repeat x number of times and then route to the Next Call Routing Mailbox. If the caller dials a digit during the announcement, they route to the Next Call Routing Mailbox.
		Yes	<ul style="list-style-type: none"> If caller doesn't dial, they hear the announcement repeat x number of times and then IntraMail hangs up. If the caller dials a digit during the announcement, they route to the Next Call Routing Mailbox.

Programming Voice Mail

Customize IntraMail using the embedded telephone programming or the separately available System Administrator PC program.

You program (customize) IntraMail by using the DSX telephone programming or the Windows™-based DSX System Administrator PC Program running on a PC or laptop. You can also do limited programming from the System Administrator's mailbox. By using the many programmable options available with IntraMail, you should be able to set up the system to accurately meet the customer's requirements.

- ✦ To customize IntraMail using the telephone programming, use this manual.
- ✦ To customize IntraMail using the PC program, see the *DSX PC Program User Guide*.

Quick Message

Automated Attendant callers can dial a digit followed by an extension number to leave a message directly in a user's mailbox.

Quick Message is a Dial Action Table action that allows Automated Attendant callers to dial a digit (normally *) followed by a mailbox number to leave a message in a Subscriber Mailbox. Since Quick Message is enabled by default, it is an efficient way for experienced Automated Attendant callers to leave messages. There is no need to dial an extension first. To make this option more readily available to all Automated Attendant callers, consider having the active Instruction Menu describe how to use the Quick Message option.

There are two Quick Message Dial Action Table actions:

- ✦ **Quick Message with Greeting (REC1)**
The caller hears the mailbox greeting followed by a beep and can leave message. If the greeting is not recorded, the caller hears, *"At the tone, you can leave your message for extension xxx (or name if recorded). Start recording at the tone. When you are done, press the # key or hang up."*
- ✦ **Quick Message without Greeting (REC2)**
The caller bypasses the mailbox greeting (hearing *"Recording"* and a beep instead) and can leave a message. This is typically used with a Next Call Routing Mailbox when the caller is asked to dial a digit (e.g., 1) to leave a message. Otherwise, the mailbox greeting (if recorded) would be heard again.

Record and Send a Message

A Subscriber Mailbox user can record and send a message to any other Subscriber Mailbox.

A Subscriber Mailbox user can record and send a message to any other Subscriber Mailbox. Record and Send a Message is the heart of IntraMail's voice messaging system. It allows co-workers to efficiently stay in touch and exchange essential information without relying on message slips, memos, or email.

Recording Options

While recording a message, a Subscriber Mailbox user has several recording options from which to choose. The following table shows these options.

Message Recording Options	
Option	Description
Options available while recording:	
*	Pause/resume recording.
E (3)	Erase the recording.
#	End recording.
Dial 0 while recording to hear the list of options.	

Remote Programming

IntraMail programming is available remotely via the System Administrator PC program.

You can remotely program IntraMail by using the Windows™-based DSX System Administrator PC Program running on a PC or laptop. After the initial installation, Remote Programming allows you to customize IntraMail to meet the customer's requirements without being on-site. See the *DSX PC Program User Guide* for more.

Routing Mailbox

A category of mailboxes used to route Automated Attendant calls

Routing Mailboxes are a category of mailboxes normally used to route Automated Attendant calls. A Routing Mailbox can be an Announcement Mailbox, a Call Routing Mailbox, or a Directory Dialing Mailbox. See the following for more on each of Routing Mailbox types:

- ✦ *Announcement Mailbox* (page 96)
- ✦ *Call Routing Mailbox* (page 102)
- ✦ *Directory Dialing Mailbox* (page 105)

Screened Transfer

Similar to telephone system screened transfers in which the transferring party controls the transfer.

Screened Transfer is an Automated Attendant option that allows callers to directly dial system extensions. Screened Transfer (and its related feature Unscreened Transfer) allows the IntraMail Automated Attendant to transfer outside calls to system extensions without the need for a live receptionist or operator. It is similar to telephone system screened transfers in which the transferring party controls the transfer. After an Automated

Attendant caller dials an extension, IntraMail calls (screens) the destination extension to see if the transfer can go through.

- If the destination is busy or in DND, the Automated Attendant doesn't extend the call and immediately provides the caller with additional options.
- If the destination is available, the Automated Attendant rings it. If the destination answers, the call goes through. If the destination doesn't answer within a preset interval, the Automated Attendant doesn't extend the call and provides the caller with additional options.

Screened vs. Unscreened Transfer

Both Screened and Unscreened Transfer allow Automated Attendant callers to directly dial system extensions. The following summarizes the differences between these two types of Automated Attendant transfer.

- With Unscreened Transfer, calls from the Automated Attendant ring like other transferred calls and display the incoming Caller ID data (if provided by telco and enabled in programming). Screened Transfers ring like Intercom calls and do not display Caller ID until the call is answered.
- Both Screened and Unscreened Transfers route unanswered calls to the subscriber's greeting (recorded or default) so the caller can leave a message. However, only Screened Transfer allows the caller to dial 2 to reach the Next Call Routing Mailbox options (if programmed).

Screened Transfer and Inactive Mailboxes

Screened Transfer to an extension can only occur if the destination extension has an active mailbox. If the extension's mailbox is inactive, the Automated Attendant caller hears, *"That is an invalid entry,"* and then returns to the Automated Attendant.

The table on the next page shows in detail how Screened Transfer operates.

Screened Transfer (STRF) Operation

- *Call* = Call answered by the Automated Attendant.
- *Extension* = Extension dialed by Automated Attendant caller.

If Auto Attendant Do Not Disturb is **off** (see page 97 for more on this feature):

	Extension Idle	Extension Busy	Extension in DND
With Active Greeting Recorded	<ol style="list-style-type: none"> 1. Places a screened (Intercom) call to extension. - <i>If answered</i>, transfers call. 2. <i>If unanswered</i>¹: - <i>With no Next Call Routing Mailbox</i>, caller hears greeting and can leave a message. - <i>With a Next Call Routing Mailbox</i>, caller can dial 1 to leave a message or 2² for other options. 	<ol style="list-style-type: none"> 1. <u>When busy</u>: - <i>With no Next Call Routing Mailbox</i>, caller hears greeting and can leave a message. - <i>With a Next Call Routing Mailbox</i>, caller can dial 1 to leave a message or 2² for other options. 	<ol style="list-style-type: none"> 1. <u>When in DND</u>: - <i>With no Next Call Routing Mailbox</i>, caller hears greeting and can leave a message. - <i>With a Next Call Routing Mailbox</i>, caller can dial 1 to leave a message or 2² for other options.
With Active Greeting Not Recorded	<ol style="list-style-type: none"> 1. Places a screened (Intercom) call to extension. - <i>If answered</i>, transfers call. 2. <i>If unanswered</i>¹: - <i>With no Next Call Routing Mailbox</i>, IntraMail prompts caller to leave a message. - <i>With a Next Call Routing Mailbox</i>, caller can dial 1 to leave a message or 2² for other options. 	<ol style="list-style-type: none"> 1. <u>When busy</u>: - <i>With no Next Call Routing Mailbox</i>, IntraMail prompts caller to leave a message. - <i>With a Next Call Routing Mailbox</i>, caller can dial 1 to leave a message or 2² for other options. 	<ol style="list-style-type: none"> 1. <u>When in DND</u>: - <i>With no Next Call Routing Mailbox</i>, caller hears greeting and can leave a message. - <i>With a Next Call Routing Mailbox</i>, caller can dial 1 to leave a message or 2² for other options.

If Auto Attendant Do Not Disturb is **on** (see page 97 for more on this feature):

	Extension Idle	Extension Busy	Extension in DND
With Active Greeting Recorded or Not Recorded	<ol style="list-style-type: none"> 1. Sends call immediately to mailbox: - Plays greeting (if recorded), or - Prompts caller to start recording. 		

¹ After the *Screened Transfer Timeout* interval.

² Dialing 2 routes the call to the Next Call Routing Mailbox for additional dialing options. See *Next Call Routing Mailbox* (page 123) for more.

Security Code

A mailbox can have a security code to guard against unauthorized access.

A mailbox can have a security code to protect it from unauthorized access. A Security Code must be 4 digits long, using 0-9. If a subscriber wants to keep their mailbox private, they can enter a Security Code. No one else can use the subscriber's mailbox unless they know the code.

Single Digit Dialing

Allows an Automated Attendant caller to press a single key for an extension, another destination, or use an IntraMail feature.

An Automated Attendant caller can press a single key to route to an extension, route to another destination, or use an IntraMail feature. Single Digit Dialing simplifies the Automated Attendant since the caller just dials a single digit to reach an extension or use an option. If you set up Single Digit Dialing, be sure to customize the active Instruction Menu so it describes which digits the caller should dial to use the available options.

Subscriber Mailbox

The mailbox type normally used for telephone system extensions.

A Subscriber Mailbox is the type of mailbox assigned to a telephone system extension. The telephone assigned to the Subscriber Mailbox is called the subscriber's extension. When an extension user accesses their voice mail, they are using their Subscriber Mailbox. It provides the IntraMail voice messaging services. For a brief overview of the features available at a Subscriber Mailbox, review the *Other Related Features* below. Then, go to the individual feature to find out how it operates and any programming required to make it work.

IntraMail automatically assigns a mailbox to each extension in the number plan. In DSX-80/160, the first 16 (300-315) Subscriber Mailboxes are active. In DSX-40, the first eight (300-307) Subscriber Mailboxes are active.

System Administrator

The extension user that has IntraMail system administration capabilities.

The System Administrator is a Subscriber Mailbox that has unique system administration features such as recording Instruction Menus and deleting messages in a co-worker's mailbox. The System Administrator features are an essential part of IntraMail setup since they allow the recording of the system-wide messages and provide Subscriber Mailbox maintenance. After logging onto their Subscriber Mailbox, the System Administrator can use all of the features in the **SA** menu. The *System Administrator Options* table below shows these options.

System Administrator Options [Super Display Soft Key] - [Keyset Soft Key]		
Option	Description	For more, see:
SA (72) [System Admin] - [N/A]	Access the System Administrator options.	
I (4) [Instruction] - [Instr]	Record an Instruction Menu.	<i>.Instruction Menu</i> (page 112)
A (2) [Announcement] - [Annc]	Record an Announcement Message.	<i>Announcement Message</i> (page 96)
S (7) [Subscriber] - [Subs]	Access the Subscriber Maintenance options (see the following features).	
EA (32) [Erase All Messages] - [Msgs]	Erase all messages in a mailbox.	<i>.Erasing All Messages</i> (page 105)
EG (34) [Erase Greeting] - [Greet]	Erase a mailbox greeting. <ul style="list-style-type: none">With Multiple Greetings, this option simultaneously erases all recorded greetings in a Subscriber Mailbox. Additionally, the active greeting is reset to 1.	<i>.Greeting</i> (page 109)

System Administrator Options [Super Display Soft Key] - [Keyset Soft Key]		
Option	Description	For more, see:
EN (36) [Erase Name] - [Name]	Erase a mailbox name.	<i>.Mailbox Name</i> (page 116)
S (7) [Erase Security Code] - [N/A]	Delete a mailbox Security Code.	<i>.Mailbox Security Code Delete</i> (page 116)
N (6) [Record Mailbox Name] - [N/A]	Record Mailbox Name.	<i>.Mailbox Name</i> (page 116)
O (6) [Answer Schedule] - [N/A]	Override the active Answer Schedule.	<i>Answer Schedule Override</i> (page 96)
1 [N/A] - [N/A]	Message on Hold	<i>Message On Hold</i> (page 121)
V (8) [N/A] - [N/A]	Hear the version number of the IntraMail stored voice prompts.	

System Administrator Mailbox

A Subscriber Mailbox option that enables the system administration capabilities.

A System Administrator Mailbox is a Subscriber Mailbox in which you have enabled the System Administrator option. This provides the subscriber with system administration capabilities. IntraMail can have multiple System Administrator Mailboxes. Turn to *System Administrator* for more.

System Re-initialization

Reinitializing IntraMail returns all programmed options to their default values.

Initializing the telephone system automatically initializes all IntraMail programming. You may want to do this if the site requirements significantly change and it is easier to start over from default than remove all your custom programming. Reinitializing returns all programmed options to their default values.

Reinitializing the telephone system returns all programmed options to their factory set (default) values. Any site specific programming you have done will be erased following reinitialization.

To initialize (erase) Subscriber Mailbox Security Codes and all recordings, use a System Administrator Mailbox.

Time and Date with Voice Mail

Set the system time and date.

Since IntraMail is completely integrated with the telephone system software, the IntraMail time and date is the same as the phone system time and date. Since time and date is used on telephone displays and with the *Auto Time Stamp* and *Time and Date Stamp* features, be sure to set it accurately. To change the time and date, use either the system programmable options or the User Programmable features. See *Programming* below. The Time and Date is retained if the telephone system power should fail or the system resets.

In addition, a Subscriber Mailbox user can hear the time and date when they call their mailbox.

Time and Date Stamp

A mailbox user can listen to a message and dial a code to hear the time the message was sent, as well as the caller's number.

While listening to a message, a Subscriber Mailbox user can dial **TI** to hear the Time and Date the message was left. This is a handy option while reviewing messages. The subscriber can just dial a code to find out when the message arrived.

Time and Date Stamp with Caller ID

With caller ID installed, a mailbox user can dial **TI** while listening to a message from an outside caller to hear the time the message was sent, *as well* as the caller's number. This capability is always available for messages left by an Intercom caller.

Transfer to a Mailbox

An extension user can transfer their active call to a co-worker's mailbox.

An extension user can transfer their active call to a co-worker's mailbox. This lets the caller leave a personal message for the co-worker. Transfer to a Mailbox is one of the big conveniences of IntraMail since the caller can state their business and not have to call back later. It saves the caller time and cuts down on unnecessary telephone system call processing. Transfer to a Mailbox is frequently used by attendants and receptionists as well as other co-workers.

Transfer Message Handling

When the transferring extension leaves a message before hanging up (which could occur if the destination's calls are forwarded to voice mail), the system will record two separate messages. One message will be from the transferring extension; the other from the transferred caller. Each message has the correct Caller ID assigned.

Additionally, if a caller is transferred to an extension and Voice Mail picks up, the caller will hear the entire greeting for the called extension's mailbox. The greeting will restart as soon as the system connects the caller to the Transfer destination's mailbox.

Transfer to a UCD Group

The Automated Attendant can transfer outside callers to UCD Group master numbers.

The Automated Attendant can transfer outside callers to a UCD Group master number. If a customer has a UCD Group set up for a department (such as Sales or Tech Service), the Automated Attendant can send calls directly to that department without any operator intervention. It is not necessary to have a company employee handle the calls. The calls will ring a member of the group or queue (wait in line) if all co-worker's in the group are busy.

To set up Transfer to a UCD Group, assign a STRF or UTRF action in the active Dial Action Table to route to the UCD Group master number. Refer to *Screened Transfer* (page 129) and *Unscreened Transfer* (page 135) for more on how these Automated Attendant options handle calls.

Undefined Routing

A key pad digit for which the Automated Attendant has no routing defined.

An Automated Attendant Undefined Routing is a Dial Action Table key assignment for which there is no routing defined. When an Automated Attendant caller dials a digit and there is no routing assigned, IntraMail plays, *"That is an invalid entry."* IntraMail then repeats the dialing options (Instruction Menu) to the caller. If a Dial Action Table key assignment has no function, you should normally leave it undefined.

Unscreened Transfer

Similar to telephone system unscreened transfers in which the transferring party immediately extends the call.

Unscreened Transfer is an Automated Attendant option that allows callers to directly dial system extensions. Unscreened Transfer (and its related feature Screened Transfer) allows the IntraMail Automated Attendant to transfer outside calls to system extensions without the need for a live receptionist or operator. It is similar to telephone system unscreened transfers in which the transferring party immediately extends the call. After an Automated Attendant caller dials an extension, IntraMail transfers the call to the destination and hangs up. Any recalls or additional routing are handled by the telephone system – just as with any other unscreened transfer.

Screened vs. Unscreened Transfer

Both Screened and Unscreened Transfer allow Automated Attendant callers to directly dial system extensions. The following summarizes the differences between these two types of Automated Attendant transfer.

- ✦ With Unscreened Transfer, calls from the Automated Attendant ring like other transferred calls and display the incoming Caller ID data (if provided by telco and enabled in programming). Screened Transfers ring like Intercom calls and do not display Caller ID until the call is answered.
- ✦ Both Screened and Unscreened Transfers route unanswered calls to the subscriber's greeting (recorded or default) so the caller can leave a message. However, only Screened Transfer allows the caller to dial 2 to reach the Next Call Routing Mailbox options (if programmed).

Unscreened Transfer and Inactive Mailboxes

An Unscreened Transfer will go through to the destination extension even if the destination doesn't have an active mailbox. If the Unscreened Transfer is unanswered at the destination, the call returns to the Automated Attendant.

The following table shows in detail how Unscreened Transfer operates.

Unscreened Transfer (UTRF) Operation			
<ul style="list-style-type: none"> • <i>Call</i> = Call answered by the Automated Attendant. • <i>Extension</i> = Extension dialed by Automated Attendant caller. 			
If Auto Attendant Do Not Disturb is off (see page 97 for more on this feature):			
	Extension Idle	Extension Busy	Extension in DND
With Active Greeting Recorded	1. Transfers call to extension. - <i>If answered</i> , connects call (just like a phone system transfer). - <i>If unanswered</i> ¹ in a default phone system, plays greeting (so caller can start recording). ²	1. Transfers call to extension. 2. <i>If unanswered</i> ¹ in a default phone system, plays greeting (so caller can start recording). ²	1. Transfers call to extension. 2. <i>If unanswered</i> ¹ in a default phone system, plays greeting (so caller can start recording). ²
With Active Greeting Not Recorded	1. Transfers call to extension. - <i>If answered</i> , connects call (just like a phone system transfer). - <i>If unanswered</i> ¹ in a default phone system, plays name (if recorded) or extension number. IntraMail then prompts caller to leave a message. ²	1. Transfers call to extension. 2. <i>If unanswered</i> ¹ in a default phone system, plays name (if recorded) or extension number. IntraMail then prompts caller to leave a message. ²	1. Transfers call to extension. 2. <i>If unanswered</i> ¹ in a default phone system, plays name (if recorded) or extension number. IntraMail then prompts caller to leave a message. ²

If Auto Attendant Do Not Disturb is on (see page 97 for more on this feature):			
	Extension Idle	Extension Busy	Extension in DND
With Active Greeting Recorded or Not Recorded	1. Sends call immediately to mailbox: -Plays greeting (if recorded), or -Prompts caller to start recording.		
¹ After the <i>1603-01: Transfer Recall Timer</i> interval. ² Custom phone system programming may redirect the unanswered call (for example, to a hunt group or another extension).			

Voice Mail Overflow

Insures that IntraMail will pick up calls that don't go through.

The telephone system can automatically reroute unanswered outside calls to the IntraMail Automated Attendant. Voice Mail Overflow ensures that IntraMail will pick up calls that don't go through. This allows callers to leave a message rather than having to call back later. Voice Mail can be the overflow destination for the following types of unanswered calls:

- ✦ **Key Ring Overflow**
A line ringing an extension's line keys can overflow to the IntraMail Automated Attendant.
- ✦ **UCD Group Overflow**
A line that rings UCD Hunting group can overflow to the group's mailbox. See *Group Mailbox* (page 110) for more.
- ✦ **Ring Group Overflow**
A line transferred by an extension or the Automated Attendant (UTRF or STRF) to a Ring Group can overflow to the group's mailbox. See *Group Mailbox* (page 110) for more.
- ✦ **Direct Inward Line (DIL) Overflow**
A line that directly rings an extension or can overflow to that extension's mailbox if not answered.
- ✦ **Ring Group Direct Inward Line (DIL) Overflow**
A Direct Inward Line (DIL) to the Ring Group master number can overflow to the group's mailbox. See *Group Mailbox* (page 110) for more.

Voice Prompting Messages

IntraMail provides Voice Prompts that tell the extension user the status or progress of their call.

IntraMail provides the telephone system with Voice Prompting Messages which tell the extension user the status or progress of their call. For example, if an extension user calls a co-worker while their extension is in DND, they hear, “*Please do not disturb.*” Voice Prompting Messages guide the user while using certain features. The following table lists the available Voice Prompting Messages.

Voice Prompting Messages		
Voice Prompt		Description
<i>The number you have dialed is not in service.</i>		The extension you called is part of the extension data base but is not installed.
<i>Vacant number.</i>		The extension you called is not part of the extension data base.
<i>This is extension ____.</i>		You press N (6) to hear your extension number.
<i>The time is _____. The date is _____.</i>		You press T (8) on your idle keyset to hear the Time and Date.
<i>All lines are busy. For callback, press 2 or the callback key.</i>		You dial a Line Group access code (9 or 90-98) and no lines are available in that group.
<i>Extension ____ is busy. For callback, press 2 or the callback key.</i>		You place an Intercom call to a busy extension
<i>Your call cannot go through. Please call the operator.</i>		You place a call that is blocked by your extension’s Toll Restriction
<i>Please do not disturb.</i>		You call an extension in Do Not Disturb.
<i>Please hold on. Your call is being rerouted.</i>		Call Forwarding Off Premise is rerouting your call to the programmed destination.

Volume Control with Voice Mail

A mailbox user can turn the volume up or down while listening to their messages.

Since IntraMail is completely integrated with the telephone system software, Volume Control is available at a subscriber’s keyset any time while listening to a message, greeting, or prerecorded voice prompt. Volume Controls let the user interactively adjust the loudness of the IntraMail messages and prompts to a comfortable level.

Specifications and Parts

Specifications

System Capacities (Page 1 of 2)	
Cabinets:	1
Talk Timeslots (Intercom/line):	Non-blocking
Ports	160
Lines:	64
Digital Telephones:	DSX-80: 32 DSX-160: 96
Analog Telephones:	DSX-80: 48 DSX-160: 80
DSS Consoles:	4 max. per system Plugs into a digital station port
Power Failure Telephones:	2 per COIU Card
Internal Paging Zones:	8 (7 and All Call)
External Page Audio Output:	1 (on CPU)
Music Inputs:	2 (on CPU)
Conference Circuits:	32 Conference circuits dynamically allocated, with 8 parties max per Conference. Conference circuits provided on CPU.

Specifications

System Capacities (Page 2 of 2)	
16ESIU Digital Station Card 16SLIU Analog Station Card 8SLIU Analog Station Card 16COIU Analog CO Line Card 8COIU Analog CO Line Card T1/E1/PRI Card	Refer to <i>System Configuration</i> (page 19) for capacities.
CPU Card:	1

Environmental Requirements
Meeting established environmental standards maximizes the life of the system. Refer to the <i>Standard Practices Manual</i> for further information. Be sure that the site is not: <ol style="list-style-type: none">1. In direct sunlight or in hot, cold or humid places.2. In dusty areas or in areas where sulfuric gases are produced.3. In places where shocks or vibrations are frequent or strong.4. In places where water or other fluids come in contact with the main equipment.5. In areas near high-frequency machines or electric welders.6. Near computers, telexes, microwaves, air conditioners, etc.7. Near radio antennas (including shortwave).

Power Requirements
A dedicated 110 VAC 60 Hz circuit located within 7 feet of the cabinet is required.

Environmental Specifications
Cabinet and Key Telephones Temperature: 0-40°C (32-104°F) Humidity: 10-95% (non-condensing)

Electrical Specifications	
The following specifications apply to each power supply installed.	
Power Supply:	120 VAC \pm 10% @ 50-60 Hz
Output Power:	91 Watts @ 100% full load
Input Current:	1.5A @ 110V
VA:	165 VA
Kwh:	.165 KwH
BTU:	563 BU
Grounding Requirements:	12 AWG copper wire

Telephone and Line Voltages	
Keyset Voltages	
DC voltage measured at the MDF (between tip and ring)	Minimum: 36 VDC Maximum: 44 VDC
Minimum operating DC voltage measured at station jack (between tip and ring)	24 VDC
8/16SLIU Card Single Line Telephone Voltages	
DC voltage measured at the MDF (between tip and ring)	On-Hook Idle State Minimum: 44 VDC On-Hook Idle State Maximum: 56 VDC Off-Hook Active State: 7.5 VDC typical, depending on the telephone type and loop length.
Ringing voltage	50-65 VAC, sinusoidal (sine wave)
High Voltage Message Waiting	95 VDC
REN (Ringer Equivalence) Per Port	2
Simultaneous Ringing	Ringling cycles through the ports, ringing four ports at a time.
Line Voltages	
Ringing voltage	42-103 VAC @ 20 Hz
Battery (from telco)	44-56 VDC
External Paging	
Output Impedance:	600 Ohm
Output Level:	0 dBr @ 1.0 KHz

Specifications

Mechanical Specifications				
Equipment	Width	Depth	Height	Weight
4 Slot KSU:	10 3/4"	5 7/8"	13 11/16"	4 lbs 5 oz
8 Slot KSU	19 1/2"	5 7/8"	13 11/16"	6 lbs 12 oz
Display Keypad:	7 5/8"	9 1/2"	4 3/4"	2 lb. 5.7 oz.
Super Display Keypad:	7 5/8"	9 1/2"	4 3/4"	2 lb. 5.7 oz.
60-Button DSS Console	5 5/8"	9 1/2"	4 3/4"	1 lb. 3.4 oz.

BGM/MOH Music Source Inputs	
Music inputs are located on the CPU Card.	
Input Impedance:	10K Ohms
Input Level:	+18 dBr (± 2 dBr) @ 1.0 Khz

USB and Ethernet Specifications	
USB and ethernet connectors are located on the CPU Card.	
USB:	USB 2.0 full speed (12 Mbits/sec)
Ethernet	Auto Sensing

2PGDAD Module Specifications	
Relay Contacts	
Configuration:	Normally open
Maximum Contact Ratings:	500 mA @ 24 VDC 250 mA @ 120 VAC

FCC Registration Information				
Model:	DX7NA-80M and DSX7NA-160M			
Manufacturer:	NEC Infrontia			
FCC Part 15 Registration:	Class A			
FCC Registration Number:	US:NIFKF00BDSX US:NIFMF00BDSX US:NIFPF00BDSX			
Industry Canada Certificate (DOC) Number:	IC: 140k-DSX			
Reg. Status	FIC	Mfrs. Port ID	REN	Network Jacks
Original	02LS2	1091005 1091009	REN 0.6B	RJ11C RJ21X
T1/E1/PRI Card FCC Registration Information				
FIC	Description			
04DU9-BN	1.544 Mbps Superframe format (SF) without line power			
04DU9-ISN	1.544 Mbps ANSI ESF and B8ZS without line power			

Cabling Requirements			
<ol style="list-style-type: none"> Do not run station cable parallel with the AC source, telex or computer, etc. If the cables are near cable runs to those devices, use shielded cable with grounded shields or install the cable in conduit. When cables must be run on the floor, use cable protectors. Cable runs for key telephones and single line telephones Modules must be a dedicated, isolated cable pair. 			
Device	Cable Type	Cable Run (ft)	Notes
Key Telephone	2-wire 26 AWG	1300	
	2-wire 24 AWG	2000	
Single Line Telephone	2-wire 26 AWG	11,500	at constant 20 mA
		3150	at constant 35 mA
	2-wire 24 AWG	18,000	at constant 20 mA
		5050	at constant 35 mA
2PGDAD Module	2-wire 22 AWG	29,000	at constant 20 mA
		8000	at constant 35 mA
	2-wire 26 AWG	650	
	2-wire 24 AWG	980	
DSX Analog Door Box to 2PGDAD Module	2-wire 22 AWG	1640	
	2-wire 26 AWG	650	
	2-wire 24 AWG	980	
	2-wire 22 AWG	1640	

Station Equipment	
Description	Part Number
22-Button Display Telephone with Speakerphone	1090020 (Black) 1090025 (White)
34-Button Backlit Display Telephone with Speakerphone	1090021 (Black) 1090026 (White)
34-Button Backlit Display Telephone with Full-Duplex Speakerphone	1090022 (Black) 1090027 (White)
34-Button Backlit Super Display Telephone with Half-Duplex Speakerphone	1090030 (Black) 1090031 (White)
60-Button DSS Console	1090024 (Black) 1090029 (White)
DTH-1-1 Single Line Telephone	780034
DTR-1-1 Single Line Telephone	780020 (Black) 780021 (White)
DTR-1HM-1 Single Line Telephone	780025 (Black) 780026 (White)
Analog Door Box	922450
2PGDAD Module	0891027

DSX Cordless Lite II Telephone	
Description	Part Number
Cordless Lite II Telephone	730087
Cordless Lite II Base Unit AC Adaptor	730618
Cordless Lite II Base Unit Wall Mount Bracket	730608
Cordless Lite II Handset Charger	730632
Cordless Lite II Handset Charger AC Adaptor	730619
Cordless Lite II Wall Mount Bracket for Handset Charger	730633
Cordless Lite II Handset Battery	730631
Cordless Lite II Belt Clip	730634
Cordless Lite II M175 Headset	750637
Cordless Lite II MX150 Headset	750642

DESI Labels	
Description	Part Number
DSX Telephone Labels	
DSX 22-Button Display Telephone (White)	1093086
DSX 22-Button Display Telephone (Black)	1093085
DSX 34-Button Display Telephone (White)	1093084
DSX 34-Button Display Telephone (Black)	1093083
DSX 34-Button Super Display Telephone (White)	1093082
DSX 34-Button Super Display Telephone (Black)	1093081
DSX 60-Button DSS (White)	1093080
DSX 60-Button DSS (Black)	1093079
DTR-1-1 Telephone Labels	
Black	780400
Metallic Green	780401
Metallic Silver	780402
Lime Green	780403
Preprint (blank)	780459
DTR-1HM-1 Telephone Labels	
Black	780404
Metallic Green	780405
Metallic Silver	780406
Lime Green	780407
Preprint (blank)	780460
DTH-1-1 Telephone Labels	
Metallic Silver	780450

DSX Telephone Headsets	
Description	Part Number
See <i>Headsets</i> (page 5).	

Parts List

Common Equipment	
Description	Part Number
DSX-80 4-Slot KSU	1090002
DSX-160 8-Slot KSU	1090003
DSX Power Supply	1091008
Installation Cable	808920
DSX Serial Adaptor (requires customer-provided 6-conductor line cord)	1091014

Cards	
Description	Part Number
CPU Card	1090010
16 Port Digital Station Card (16ESIU)	1091004
16 Port Analog Station Card with HV Message Waiting (16SLIU)	1091007
8 Port Analog Station Card with HV Message Waiting (8SLIU)	1091010
T1/E1/PRI Line Card	1091006
16 Port CO Line Card (16COIU)	1091005
8 Port CO Line Card (16COIU)	1091009

IntraMail	
Description	Part Number
IntraMail 8 Port x 16 Hour	1091013
IntraMail 4 Port x 8 Hour	1091011

Replacement Parts	
Description	Part Number
Handset and Cord Assembly	1091016
22 Button Clear Plastic Cover	1091018
34 Button Clear Plastic Cover	1091019
34 Button Super Display Clear Plastic Cover	1091020
60 Button DSS Clear Plastic Cover	1091021
RFI Bead Kit	88901
Replacement Battery for CPU Card	EX0254-0040



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