NITSUKO AMERICA

This system uses fixed slot software. During installation, you can plug DSTU PCBs only into slots CN1 and CN2. You can plug an ASTU PCB only into slot CN2 (in place of the second DSTU PCB). Install ATRU PCBs only into slots CN3 and CN4. Refer to your Hardware Manual for additional information.

DS2000

Software Manual

Part No. 80000SWG02
Issue 1-0, October 1999
010000/101499

This manual has been developed by Nitsuko America. 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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Chapter 1
Features

Introduction

Before Reading This Section

This section provides detailed information on the system's features. If you don't know what the various features are, review the Table of Contents for this section and the manual's Index. After reviewing, turn back to this section for the specifics.

Using This Section

The features in this section are in alphabetical order, like a dictionary. This section subdivides each feature definition into headings as follows:

Description

Read *Description* to get an overview of the feature. Along with the feature's description are the *Conditions* and *Default Setting*. Conditions provides the feature's operational limits (if any). Default Setting outlines how the feature works with the default (factory installed) Programming List. When initially installed, the system uses the default setting. For specific default settings on each program, refer to the chart at the end of this manual.

In each feature description there are two icons which provide additional essential information about the feature:

This is *Feature Benefit* icon. Read this text to find out how the feature can help co-worker's become more productive and streamline company-wide communications.

This is the *Software History* icon. Since Nitsuko America is constantly enhancing your system, all options may not be available in all software levels. Read this text to find out the specifics.

Programming Guide

The *Programming Guide* is an easy-to-use chart that guides you step-by-step through programming the feature. If you're not sure how to set up a feature, start first with the Programming Guide.

Programming List

Programming List explains the system Programming List that lets you customize the feature. Some features require Programming List; others don't. If you decide to customize a feature, use Section 2 to enter the change into the system.

Other Related Features

Read this part to learn how the feature interacts with other features.

Feature Operation

This part provides you with instructions on how to use each feature. These instructions are also provided in the DS2000 Feature Handbook (P/N 80000MFH**). Also see the DS2000 Multibutton Telephone Quick Reference Guide (P/N 80000MBG**).

System Configuration

The total number of components you can install and connect to your system depends on power supply capacity and the System Load Factor. Use the table below and the following steps to calculate the System Load Factor.

Notes for 4-Slot Cabinets with Fixed Slot Software
• If your 4-slot cabinet uses fixed slot software, you can plug DSTU PCBs only into slots CN1 and CN2. • You can plug an ASTU PCB only into slot CN2 (in place of the second DSTU PCB). • Install ATRU PCBs only into slots CN3 and CN4.
• System Load Factor in fixed slot systems is only an issue if you have DSS Consoles and 2-OPX Modules installed. • The *Release Notes* that came with your system indicate if it uses fixed slot software. • Check your system's *Hardware Manual* for more installation details.
• Maximum configuration for 4-slot cabinets with fixed slot software is **16 trunks** and **32 extensions**.

Notes for 4-Slot and 8-Slot Cabinets with Universal Slot Software
• A 4-slot cabinet with universal slot software cannot connect more than **40 extensions**, regardless of System Load Factor. • A 4-slot cabinet with universal slot software cannot connect more than **24 trunks**, regardless of System Load Factor.
• An 8-slot cabinet with universal slot software cannot connect more than **96 extensions**, regardless of System Load Factor. • An 8-slot cabinet with universal slot software cannot connect more than **48 trunks**, regardless of System Load Factor.

To check your system configuration:

1. Indicate the quantity for each item installed in the **Qty** column.
2. For each item, multiply the **Qty** times the **Load Factor** and enter the value in the **Total Load** column.
3. Add all the values in the **Total Load** column and enter the value in row **1**.
4. Determine the System Load Factor capacity of the power supplies installed in your system and enter the total in row **2**.

   A 4-Slot Cabinet can have only 1 power supply. An 8-Slot Cabinet can have up to 3 power supplies. You cannot have more than two 16DSTU PCBs per power supply.
5. Compare the entry in row **2** to your entry in row **1**. ***Row 1 must always be equal to or less than the entry in row 2.***

Do not operate your system if the System Load Factor total (row 1) exceeds the allowable value (row 2).

System Load Factor Calculations			
Item	**Load Factor**	**Qty**	**Total Load**
16DSTU PCB	16		
4ASTU PCB	8		
8ASTU PCB	12		
110-Button DSS Console	2		
24-Button DSS Console	1		
2-OPX Module	3		
1. Total load for this configuration:			
2. If you have one power supply installed, enter 48. If you have two power supplies installed, enter 80. If you have three power supplies installed, enter 112. (2 16DSTU PCBs maximum per power supply)			

Typical 4-Slot Cabinet Universal Slot Software Configurations

The following configurations do not apply to fixed slot software. Refer to the Release Notes that came with your system to find out if you have fixed slot software.

- **16 x 32** (16 trunks and 32 digital extensions)
  Recommended for sites with no Voice Mail and high trunk usage.
- **24 x 16** (24 trunks and 16 digital extensions)
  Recommended for sites with no Voice Mail and very high trunk usage.
- **8 x 16 x 16** (8 trunks, 16 digital extensions and 16 analog extensions)
  Recommended for sites with Voice Mail, normal trunk usage and high analog extension usage.
- **16 x 8 x 8** (16 trunks, 8 digital extensions and 8 analog extensions)
  Recommended for sites with Voice Mail, high trunk usage and high analog extension usage.
- **8 x 32 x 8** (8 trunks, 32 digital extensions and eight analog extensions)
  Recommended for sites with Voice Mail, normal to low trunk usage and low analog extension usage.

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User-Programmable Features

Extension users may be able to customize certain features. These are the *User-Programmable Features* and include:

- Call Coverage Key Ringing
- Group Call Pickup Key Ringing
- Line Key Ringing
- Intercom Voice Announce Mode
- Speed Dial

Table 1: User-Programmable Features

For this feature	Dial this code	When you are
Call Coverage	**#** + **R C** (72) + Press Call Coverage key repeatedly to select ringing mode	Setting the ringing mode for your extension's Call Coverage keys
Group Call Pickup	**#** + **R G** (74) + Press Group Call Pickup key repeatedly to select ringing mode	Setting the ringing mode for your extension's Group Call Pickup keys
Line Keys	**#** + **R L** (75) + Press Line Key repeatedly to select ringing mode	Setting the ringing mode for your extension's line keys
Intercom	**#** + **I V** (48)	Enabling voice-announce for your incoming Intercom calls
	# + **I R** (47)	Enabling ringing for your incoming Intercom calls
Speed Dial	**ICM** + ## + 200-299	Programming System Speed Dial numbers
	ICM + ## + 701-720	Programming Personal Speed Dial numbers

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Initial Startup Programming

Initial Startup Programming (Page 1 of 2)

Step 1: Enter the programming mode.

- From any display telephone:
  Press ICM + #*#* + Password + HOLD.
- The default system passwords are:
  Installer (level 3) = 372000
  System Administrator 2 (level 2) = 9999
  System Administrator 3 (level 1) = 0000

Step 2: Assign the correct circuit type to your installed trunks.

- In *Program 1001 - Trunk Circuit Type* (page 416), enter the correct circuit type for each installed trunk:
  00 = Uninstalled
  51 = Loop start DTMF
  52 = Loop start DP

Step 3: Assign the correct circuit type to your installed extensions.

- In *Program 1801 - Extension Circuit Type* (page 449), enter the correct circuit type for each installed extension:
  00 = Uninstalled
  01 = 22-Button Standard
  02 = 22-Button Display
  06 = 34-Button Display
  09 = 34-Button Super Display
  15 = Analog station
  21 = 2OPX

Step 4: By default, each extension has full access to each trunk. Do you want to change this assignment?

If yes →

- For each extension in *Program 1803 - Extension Line Access Assignments* (page 461), assign the access options for each trunk. The options are:
  0 = No access
  1 = Incoming only
  2 = Outgoing only
  3 = Full access
- Use *Program 9801 - Copy Command* (page 472), to simplify your programming.

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Initial Startup Programming (Page 2 of 2)

If no

- In *Program 1803 - Extension Line Access Assignments* (page 461), make no changes from the default assignments.

Step 5: By default, each extension rings for every incoming trunk call. Do you want to change this assignment?

If yes

- For each extension in *Program 1805 - Ring Assignments* (page 466), assign ringing for each trunk. The options are:
  1 = Lamp only (day and night)
  2 = Ringing day and night
  3 = Night Ring only, lamp during the day
  4 = Delay ring day and night
- Use *Program 9801 - Copy Command* (page 472), to simplify your programming.
- The system attendant (extension 300) can put these trunks in the night mode by pressing their preassigned Night Key (key 11).

If no

- For each extension in *Program 1805 - Ring Assignments* (page 466), make no changes from the default assignments.

Step 6: Does your system have Voice Mail?

If yes

- Turn to *Voice Mail* on page 340 and review the required Voice Mail programming.

If no

- Go to the next step.

Step 7: Do you want to change the default system passwords?

If yes

- In *Program 9905 - Password* (page 478), change the passwords from their default settings.

If no

- In *Program 9905 - Password* (page 478), do not change the passwords from their default settings.

Step 8: Do you want to return the system to its factory installed (default) programming?

If yes

- In *Program 9999 - System Initialization* (page 482), reinstate the factory installed programming. ***This erases all your programming and returns the system to its initial default settings.***

If no

- In *Program 9999 - System Initialization* (page 482), ***do not*** reinstate the factory installed programming.

Table 2: Dial Codes (by Number)

For this feature	Dial this code	When you are	Also use Function Key
Call Forwarding	***30**	Canceling Call Forwarding at an extension	
	***32** + Extension or 0 (for operator)	Enabling Call Forwarding Busy/No Answer	
	***34** + Extension or 0 (for operator)	Enabling Call Forwarding All Calls	
	***36** + Extension or 0 (for operator)	Enabling Call Forwarding No Answer	
Selectable Display Messaging	***38** + Message (600-615)	Enabling a Selectable Display Message	

Table 3: System Number Plan/Capacities (Page 1 of 2)

	4-Slot System	8-Slot System
System Options		
• Classes of Service	1-15	
• Conference	32 simultaneous users in Conference (total of all Conferences system-wide) 8 simultaneous Conferences maximum 8 parties maximum in any one Conference	
• Extension Hunting (ACD/UCD) Master Numbers	8	
• Extension Hunting Groups	8 (1-8)	
• Group Call Pickup Groups	8 (1-8, 0 = unassigned)	
• Privacy Release Groups	16 (1-16, 0 = unassigned)	
• Speed Dial, Personal	20 bins at each extension (701-720) See **Speed Dial** (page 263) for additional information on Speed Dial capacities.	
• Speed Dial. System	10 (20-29), 100 (200-299), 1000 (2000-2999) See **Speed Dial** (page 263) for additional information on Speed Dial capacities.	
• Tenant Groups	1	
• Timeslots	Non-blocking	
• Toll Restriction Levels	7 (1-7, 0 = no restriction)	
Trunks		
• Direct Trunk Access Codes	401-416 (fixed slot) 401-424 (u-slot)	401-448
• Line Dial Up Codes	#901-#916 (fixed slot) #901-#924 (u-slot)	#901-#948
• Ring Groups	8 (1-8) 0 = No assignment Ring Group master numbers can be 100-299, 332-400, or 417-899. They cannot be in the extension (300-331) or trunk (401-416) number range. By default, the systems uses codes beginning with 0 for operator access and 9 for trunk/trunk group access.	
• Trunk Group Access Codes	90-98	
• Trunk Groups	9 (0-8)	

Table 3: System Number Plan/Capacities (Page 2 of 2)

	4-Slot System	8-Slot System
• Trunk Ports	16 (1-16) (fixed slot) 24 (1-24) (u-slot)	48 (1-48)
Extensions		
• Attendant (Operator) Access Number	0 (single operator) 01-04 (multiple operators)	
• Attendants	4	
• DSS Consoles	System software provides 4 unique DSS Console configurations. The System Load Factor limits the total number that you can install.	
• Telephone Extension Numbers	32 (300-331) (fixed slot) 40 (300-339) (u-slot)	96 (300-395)
• Telephone Port Numbers	32 (1-32) (fixed slot) 40 (1-40) (u-slot)	96 (1-96)
• Total Number of Station Devices	32 (fixed slot) (may be limited by load factor) 40 (u-slot) (may be limited by load factor)	96 (may be limited by load factor)
• Voice Mail and UCD Hunting Master Numbers	1 UCD Hunting group master numbers can be 100-299, 332-400, or 417-899. They cannot be in the extension (300-331) or trunk (401-416) number range. By default, the systems uses codes beginning with 0 for operator access and 9 for trunk/trunk group access.	
• Voice Mail Ports	Limited by available analog ports.	
Paging and Park		
• Page Relays	One set on CPRU that close when External Page is active	
• Page Zones	7 zones (1-7) and All Call (0) All Call and zone 1 broadcast on the CPRU External Page port	
• Park Orbits	10 (60-69) Orbits 68 and 69 have extended (5 min.) timers	
Passwords		
• System Administrator 1 (Level 1)	0000	
• System Administrator 2 (Level 2)	9999	
• Installer (Level 3)	372000	

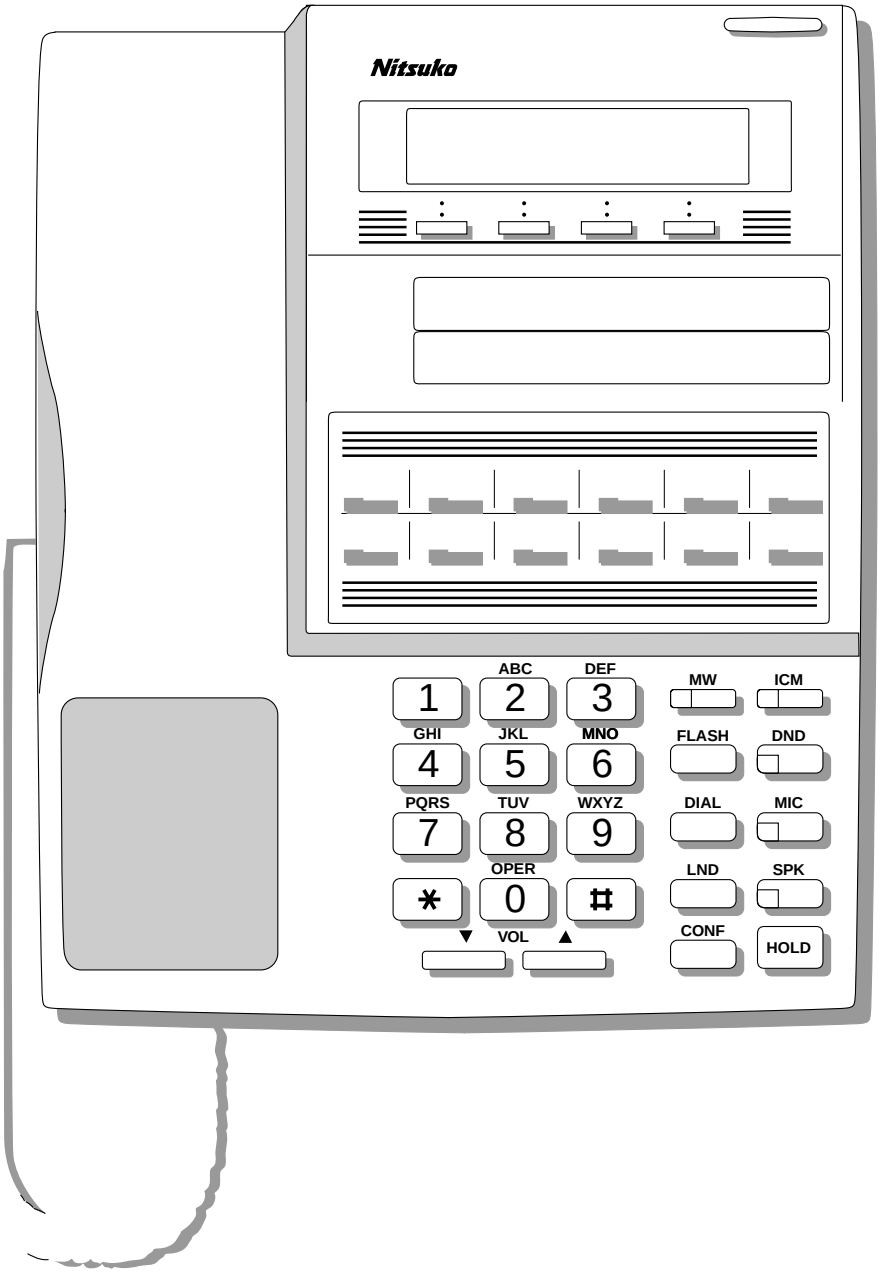


Figure 1: 22-Button Display Telephone

Figure 2: 22-Button Standard Telephone

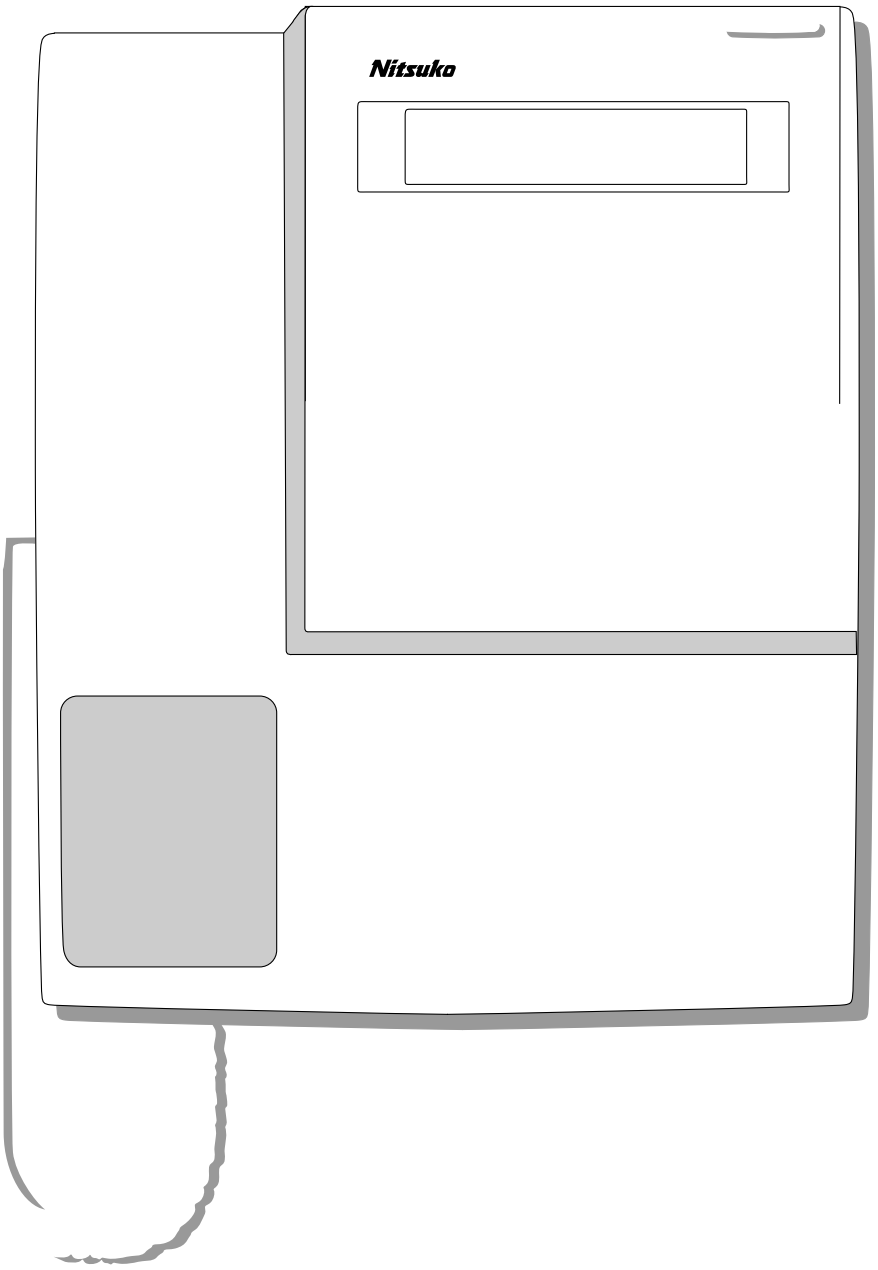


Figure 3: 34-Button Display Telephone

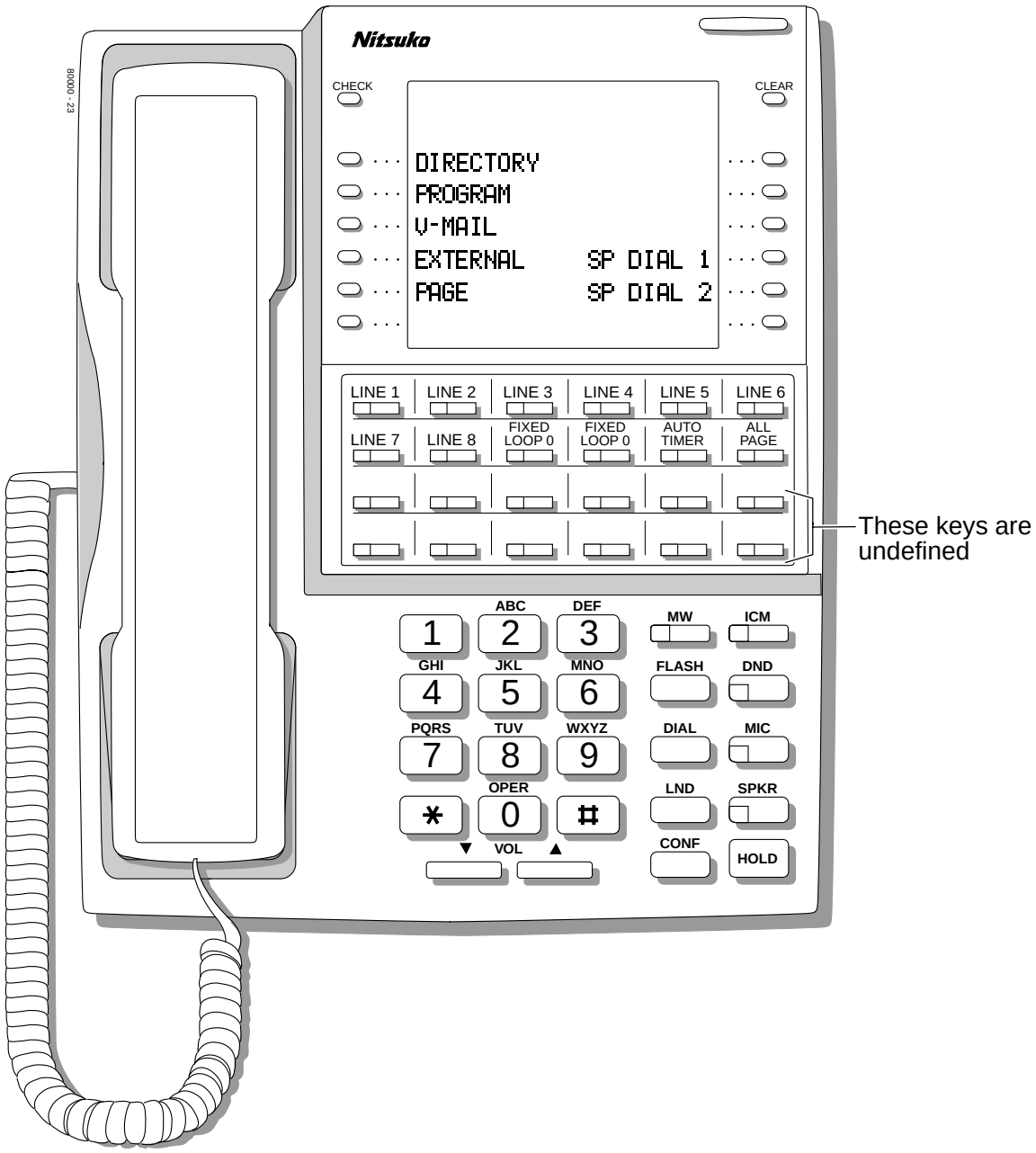


Figure 4: 34-Button Super Display Telephone

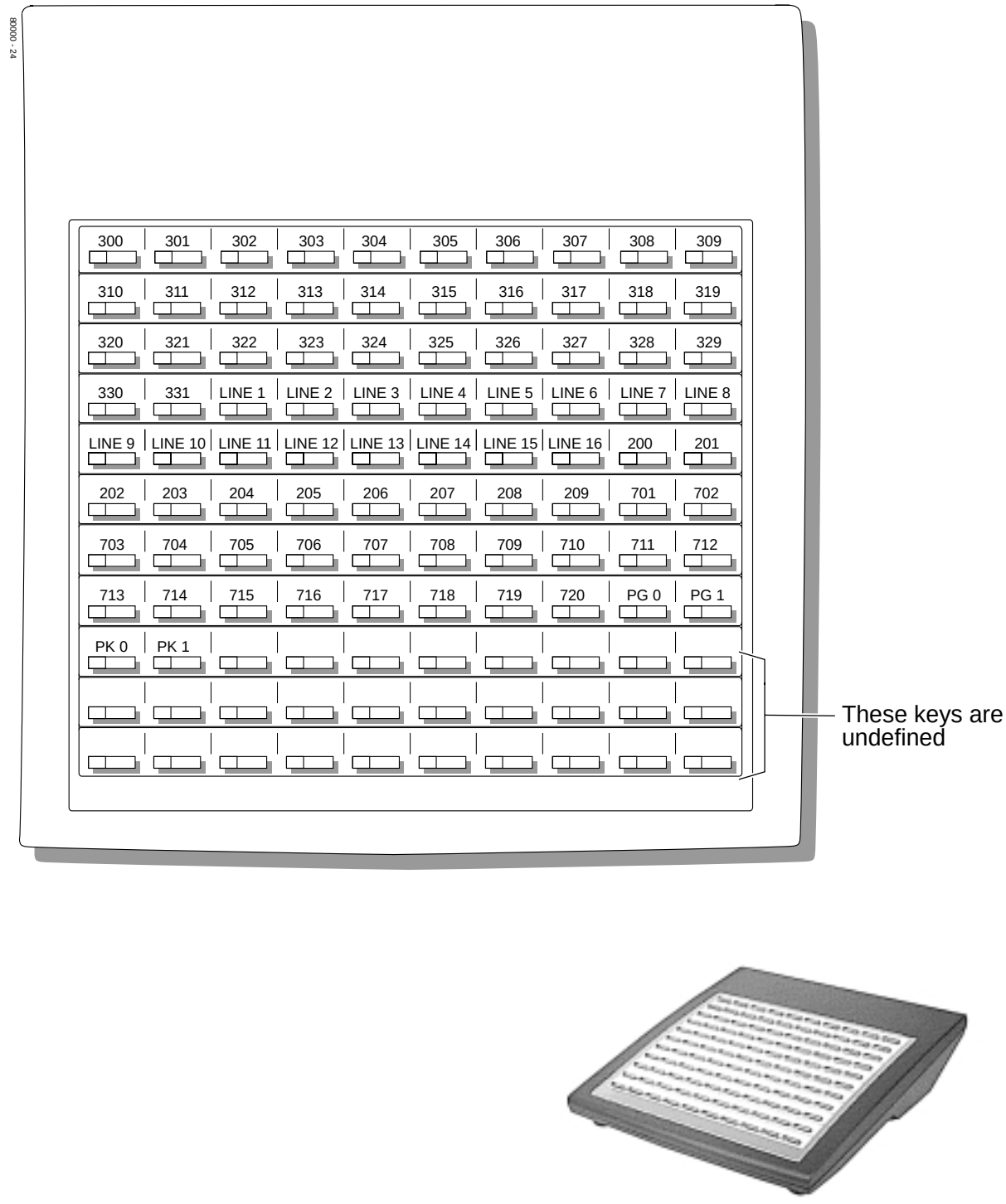


Figure 6: 110-Button DSS Console

Description

LCCPU 01.00.00	Available. See see *Off-Premise Extensions / On-Premise SLT Extensions* on page 207.

Description

LCCPU 01.00.00	Not available.

Description

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

LCCPU 01.00.00 | Available.

The 22- and 34-Button Display Telephones have a two-line, 20-character per line alphanumeric display. The first line displays the date and time (while idle) and feature status messages. The second line displays the Soft Key definitions.

The 34-Button Super Display Telephone has an eight-line, 20-character per line alphanumeric display. The first line displays the data and time (while idle) and feature status messages, just like the 22- and 34-Button Display Telephones. Lines 2-8 are the comprehensive Super Display Telephone soft key definitions.

- To learn more about the display telephones, see *22-Button Display Telephone* on page 11, see *34-Button Display Telephone* on page 13 and see *34-Button Super Display Telephone* on page 14.
- To learn more about the Soft Keys, see *Soft Keys* on page 261.

Conditions

None

Default Setting

Enabled for all display telephones.

Programming Guide

None

Programming List

None

Other Related Features

Soft Keys (page 261)
The interactive Soft keys provide users with intuitive access to the telephone's features.

Volume Controls (page 353)
While a feature is active, pressing VOL ▲ and VOL ▼ adjusts the volume of the active feature.

Feature Operation

Refer to the individual features for feature operation.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00	Not available.

Attendant Call Queuing

Description

LCCPU 01.00.00 | Available.

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 programmable 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.

Conditions

None

Default Setting

Enabled

Programming Guide

None

Programming List

None

Other Related Features

Attendant Position (page 24)
Assign system attendants.

Off-Hook Signaling (page 205)
The Operator Call Key activates off-hook signaling.

Ringing Line Preference (page 251)
Ringing Line Preference will not answer a call ringing the Operator Call Key.

Voice Mail (page 340)

- TRF transfers to the attendant from the Voice Mail Automated Attendant flash the Operator Call key and the Ring Indicator lamp. The call does not flash a line/loop key. (Note that Ringing Line Preference will not pick up a call ringing the attendant's Call Queue key.)
- UTRF transfers to the attendant from the Voice Mail Automated Attendant flash the trunk's line/loop key and the Ring Indicator lamp.

Feature Operation

To answer a call flashing the Operator Call Key:

1. Press the flashing Operator Call Key.
   This places your outside call on Hold and answers the waiting call.

Description

LCCPU 01.00.00 | Available.

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 **SPK** 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 (**ICM** key)
- Last Number Redial (**LND** key)
- Paging keys
- Park keys
- Personal Speed Dial bin keys
- Personal and System Speed Dial keys

The system always provides Automatic Handsfree for:

- Dial Number Preview
- Directory Dialing

Conditions

None

Default Setting

Enabled

Programming Guide

Step-by-step guide for setting up Automatic Handsfree

Step 1: IShould an extension be able to use Automatic Handsfree?

If yes

- In *Program 0201 - Automatic Handsfree* (page 367), enter Y to enable Automatic Handsfree system wide.
- In *Program 1802 - Automatic Handsfree* (page 456), enter Y to enable Automatic Handsfree for the extension.

If no

- In *Program 1802 - Automatic Handsfree* (page 456), enter N to enable Automatic Handsfree for the extension.

Step 2: Do you want to disable Automatic Handsfree for all extensions system-wide?

If yes

- In *Program 0201 - Automatic Handsfree* (page 367), enter Y to enable Automatic Handsfree for all extensions system-wide.

If no

- In *Program 0201 - Automatic Handsfree* (page 367), enter N to disable Automatic Handsfree for all extensions system-wide.

Programming List

Program 0201 - Automatic Handsfree (page 367)
Enter Y to enable Automatic Handsfree system-wide.
Program 1802 - Automatic Handsfree (page 456)
Enter Y to enable Automatic Handsfree.

Other Related Features

Central Office Calls, Placing (page 63)
With Automatic Handsfree, an extension user can press a line key to place a trunk call without first lifting the handset or pressing SPK. Users without Automatic Handsfree can preselect a line key before lifting the handset or pressing SPK.

Handsfree and Handsfree Answerback (page 150)
Process calls using the speaker and microphone in the telephone (instead of the handset).

Headset Compatibility (page 154)
While in the headset mode, Automatic Handsfree simplifies answering trunk calls.

Line Keys (page 176)
Automatic Handsfree allows the keyset user to answer a call ringing a line key without lifting the handset; they just press the line key instead.

Loop Keys (page 179)
Automatic Handsfree allows the keyset user to answer a call ringing a loop key without lifting the handset; they just press the loop key instead.

Feature Operation

If enabled, Automatic Handsfree operation is automatic when you press the key.

Description

LCCPU 01.00.00 | Available. See *Ringdown Extension* on page 249.

Description

	LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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 music source. You connect the Background Music music source to pins 3 and 6 in the CPU's 8-pin mod jack. Using the DS2000 installation cable, these pins punch down as 3 and 4. The music source you use for Background Music must be compatible with the following specifications:

Table 4: Music Source Specifications

Input Impedance	10K Ohms
Relative Input Level	+18 dBr (+/- dBr) at 1.0 kHz

Note:

In accordance with U.S. copyright law, a license may be required from the America Society of Composers, Authors and Publishers (ASCAP) or other similar organizations, if radio, television broadcasts or music other than material not in the public domain are transmitted through the Background Music feature of telecommunications systems. Nitsuko America hereby disclaims any liability arising out of the failure to obtain such a license.

Conditions

None

Default Setting

Enabled system-wide and at each extension.

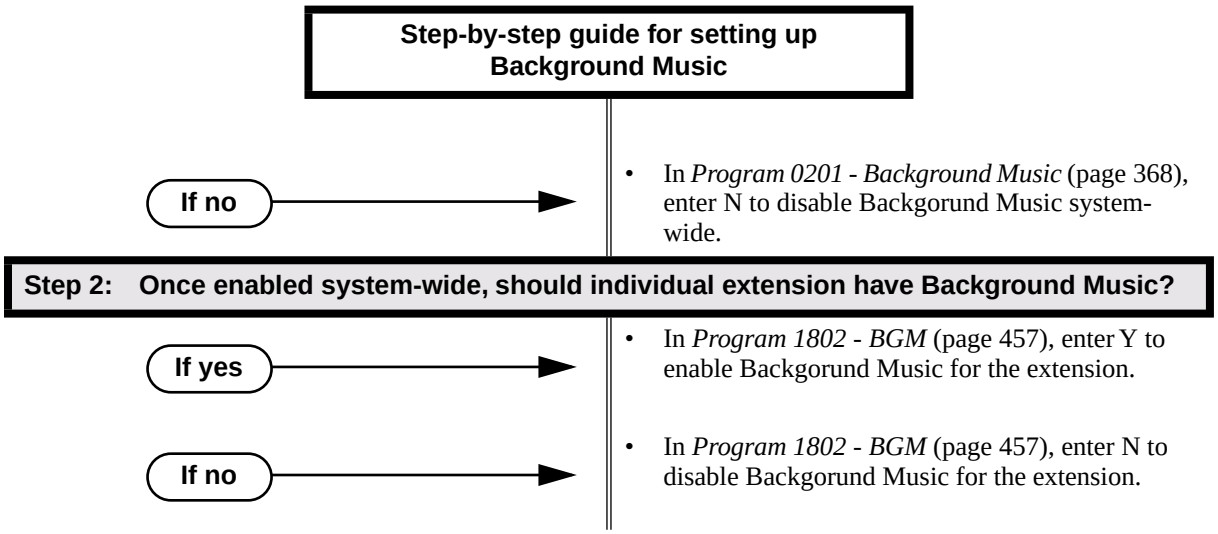
Programming Guide

Step-by-step guide for setting up Background Music

Step 1: Should Background Music be enabled system-wide?

If yes →

- In *Program 0201 - Background Music* (page 368), enter Y to enable Backgorund Music system-wide.
- Connect the music source to the CPRU music terminals.



Programming List

Program 0201 - Background Music (page 368)
Enter Y for this option to enable Background Music system-wide.
Program 1802 - BGM (page 457)
Enter Y to enable Background Music at the extension.

Other Related Features

Do Not Disturb (page 114)
DND does not affect the operation of Background Music.
Headset Compatibility (page 154)
Background Music plays in the headset when the extension is in the headset mode.
Music On Hold (page 195)
Background Music and Music on Hold share the same music source.
Off-Premise Extensions / On-Premise SLT Extensions (page 207)
Background Music is not available to On- and Off-Premise extensions.

Feature Operation

To turn Background Music on and off:

1. Do not lift handset or press **SPK**.
2. Press **HOLD**.

Description

LCCPU 01.00.00 | Available.

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 a trunk call.

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

Conditions

Barge-In uses a system Conference circuit. See *Conference* on page 79 for more.

Default Setting

Disabled

Programming Guide

Step-by-step guide for setting up Barge In

Step 1: Should an extension be able to Barge In on a co-worker's call?

If yes

- In *Program 0101 - Barge-In (Intrusion)* (page 362), enter Y to enable Barge In in the extension's Class of Service.
- In *Program 0101 - Privacy* (page 363), enter N to disable Privacy in the extension's Class of Service.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

If no

- In *Program 0101 - Barge-In (Intrusion)* (page 362), enter N to disable Barge In in the extension's Class of Service.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions

Barge In (Intrusion)

Programming List

Program 0101 - Barge-In (Intrusion) (page 362)
In an extension's Class of Service, enter Y to allow the extension to Barge In on another extension.
Program 0101 - Privacy (page 363)
In an extension's Class of Service, enter N to disable Privacy for the extension.
Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Other Related Features

Attendant Position (page 24)
Since the attendant is never busy, Intercom callers cannot Barge In on an attendant.
Conference (page 79)
An extension user can Barge In on a Conference.
Forced Trunk Disconnect (page 137)
As an alternative to Barging In, disconnect the trunk instead.
Privacy (page 226)
Privacy blocks Barge In attempts.

Feature Operation

To Barge-In on a call:

1. Call busy extension.
   OR
   Press line key for busy trunk.
   OR
   Press **ICM** and dial 401 for busy trunk (i.e., using Direct Trunk Access).
   OR
   Press **ICM** and dial #901 for busy trunk (i.e., using Line Dial-up).
   OR
   Press **ICM** and dial Trunk Group access code (e.g., 9).

Busy tone.

N/A

2. Dial 4.

Two beeps.

N/A

3. Join the conversation in progress.

Description

LCCPU 01.00.00 | Available.

The CPU PCB provides temporary backup of system memory and the time and date.

In the event of commercial AC power failure, the battery on the CPU PCB provides short-term backup of system memory and the system time and date (Real Time Clock). This battery will hold memory and time and date 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 the 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. When sizing a UPS unit, keep in mind that a fully-loaded 4-slot cabinet requires 165 VA. Refer to the *Hardware Manual* for additional details.

Conditions

None

Default Setting

None

Programming List

None

Other Related Features

When commercial AC power fails, the CPU battery does not back up the status of the following:

- Call Forwarding
- Call Waiting / Camp On
- Do Not Disturb
- Message Waiting
- Microphone Mute
- Trunk Queuing

System Programming Backup and Restore (page 287)
You can use PC Card P/N 85880 or P/N 80050-V**.** (with system software preloaded) to back up and restore your site data.

Time and Date (page 312)
The battery on the CPU PCB backs up the CPU Real Time Clock for 10-14 days.

Feature Operation

If properly installed, Battery Backup is automatic during AC power failures and brownouts.

Description

LCCPU 01.00.00 | Available.

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 Programmable keys on their telephone.

Call Coverage Key Busy Lamp Indications	
When the key is:	**The covered extension is:**
Off	Idle or not installed
On	Busy
Flashing slowly	Ringing
Flashing fast	In Do Not Disturb

Call Coverage Keys will intercept the following types of calls:

- Key Ring Calls
- Ringing Intercom calls

Conditions

None

Default Setting

No Call Coverage Keys assigned.

Programming Guide

Step-by-step guide for setting up Call Coverage Keys

Step 1: Should the Call Coverage key have Immediate Ring, No Ring or Delayed Ring?

Immediate Ring

- For keysets, in *Program 1701 - Call Coverage Immediate Ring* (page 437), enter code 06 + the covered extension, Ring Group master number or UCD Group master number to assign an Immediate Ring Call Coverage Key.
- For DSS Consoles, in *Program 1704 - Call Coverage Immediate Ring* (page 445), enter code 06 + the covered extension, Ring Group master number or UCD Group master number to assign an Immediate Ring Call Coverage Key.

No Ring

- For keysets, in *Program 1701 - Call Coverage No Ring* (page 437), enter code 07 + the covered extension, Ring Group master number or UCD Group master number to assign a No Ring (lamp only) Call Coverage Key.
- For DSS Consoles, in *Program 1704 - Call Coverage No Ring* (page 445), enter code 07 + the covered extension, Ring Group master number or UCD Group master number to assign a No Ring (lamp only) Call Coverage Key.

Delay Ring

- For keysets, in *Program 1701 - Call Coverage Delay Ring* (page 437), enter 08 + the covered extension, Ring Group master number or UCD Group master number to assign a Delay Ring Call Coverage Key.
- For DSS Consoles, in *Program 1704 - Call Coverage Delay Ring* (page 445), enter 08 + the covered extension, Ring Group master number or UCD Group master number to assign a Delay Ring Call Coverage Key.
- In *Program 0403 - Call Coverage Delay* (page 387), enter the interval after which a Delay Ring Call Coverage Key begins to ring.

Programming List

Program 0403 - Call Coverage Delay (page 387)

For extensions with Delayed Ringing Call Coverage keys, set how long a call flashes the key at an extension before it starts to ring.

Program 1701 - Programmable Function Key Assignments (page 436)
Assign a programmable key on an extension as a Call Coverage Key (code 06 = immediate ring key, code 07 = no ring key, code 08 = delay ring key). The option is 300-331 (covered extension number).

Program 1704 - DSS Console Key Assignment (page 444)
Assign a programmable key on an extension as a Call Coverage Key (code 06 = immediate ring key, code 07 = no ring key, code 08 = delay ring key). The option is 300-331 (covered extension number).

Other Related Features

Direct Station Selection (DSS) Console (page 98)
DSS Consoles can have Call Coverage keys.

Hotline (page 160)
Hotline keys provide many of the features available with Call Coverage keys.

Intercom (page 165)
A user can press a Call Coverage Key as an alternative to dialing Intercom numbers.

Key Ring (page 170)
Call Coverage will pick up Key Ring calls.

Transfer (page 324)
An extension user can Transfer a call to the covered extension by pressing the Call Co verage key.

Voice Over (page 350)
After calling a co-worker by pressing their Call Coverage key, and extension user can dial 9 to leave a Voice Over (if enabled in programming).

Feature Operation

To answer a call ringing or flashing a Call Coverage Key:

(Optional) Ringing.
Slowly flashing Call Coverage Key.

1. Press flashing Call Coverage Key.

To place a call from an idle Call Coverage Key to the covered extension:

1. Press Call Coverage Key.

Two beeps.
Call Coverage Key lights green.

2. Speak with co-worker at the covered extension.

Description

LCCPU 01.00.00 | Available.

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 ringing the extension forward when not answered.
- **Call Forwarding when Busy or Not Answered**
  Calls ringing 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.

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.

Conditions

A system reset or power failure cancels Call Forwarding.

Default Setting

Enabled

Programming Guide

Step-by-step guide for setting up Call Forwarding

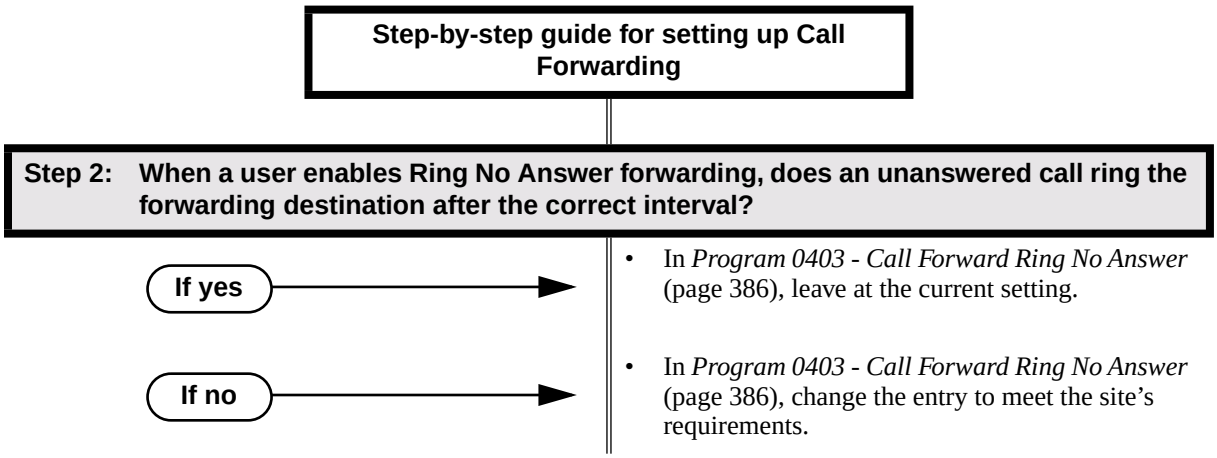
Step 1: Should an extension be able to forward their calls to a co-worker?

If yes

- In *Program 0101 - Internal Call Forwarding* (page 362), enter Y to enable Call Forwarding.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

If no

- In *Program 0101 - Internal Call Forwarding* (page 362), enter N to disable Call Forwarding.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.



Programming List

Program 0101 - Internal Call Forwarding (page 362)
In an extension's Class of Service, enter Y to enable internal Call Forwarding.

Program 0403 - Call Forward Ring No Answer (page 386)
For Call Forwarding Ring No Answer, set how long a forwarded call rings an unanswered extension before routing to the forwarding destination.

Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Other Related Features

Call Coverage Keys (page 40)
Call Forwarding will not reroute a call ringing a Call Coverage Key.

Direct Inward Line (page 88)
Call Forwarding will reroute Direct Inward Lines.

Do Not Disturb (page 114)
Call Forwarding considers an extension in DND as busy. In addition, an extension can have both DND and Call Forwarding enabled at the same time.

Extension Hunting (page 121)
If a member of a Circular or Terminal Hunting group forwards their calls, hunting will follow Call Forwarding. If a member of a UCD Hunting group forwards their calls, calls to the extension follow forwarding but calls to the UCD master number do not.

Extended Ringing (page 119)
With Extended Ringing enabled, RNA call forwarding rings an extension for the *Number of Extended Rings* before routing the forwarded destination.

Group Ring (page 144)
Call Forwarding will not reroute Group Ring calls.

Intercom (page 165)
Call Forwarding when Busy and Call Forwarding when Busy/Not Answered will not reroute voice-announced Intercom calls. It will reroute only ringing Intercom calls.

Key Ring (page 170)
Call Forwarding will not reroute Key Ring calls.

Line Keys (page 176)
Call Forwarding will not reroute calls ringing line keys.

Loop Keys (page 179)
Call Forwarding will not reroute a call ringing a loop key (unless the call is a DIL).

Feature Operation

To time your trunk call if you have an Automatic Call Timer key:

1. Place or answer trunk call.
2. The Call Timer starts automatically.

Conversation with caller.

Automatic Call Timer key on.
Timer in first line of display.

You can press the Automatic Call Timer key once to turn the timer off. Press the key a second time to restart the timer.

You can also press CHECK + the timer key to restart the timer.

To time your call if you have a Manual Call Timer key:

You can also use your Manual Call timer key as a stop watch while your phone is idle.

1. Place or answer Intercom or trunk call.
2. Press Manual Call Timer key.

Conversation with caller.

Manual Call Timer key on.
Timer in first line of display.

You can press the Manual Call Timer key once to turn the timer off. Press the key a second time to restart the timer.

You can also press CHECK + the timer key to restart the timer.

Description

LCCPU 01.00.00 | Available.

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, the system signals the busy extension with two beeps indicating the first waiting call. The beeps periodically repeat while the call waits. 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.

Conditions

- A system reset or power failure cancels all Camp-Ons system wide.
- While busy on a call, Camp-On tones occur only for the first incoming call and do not repeat.

Default Setting

Call Waiting tones enabled.

Programming Guide

Step-by-step guide for setting up Call Waiting / Camp-On

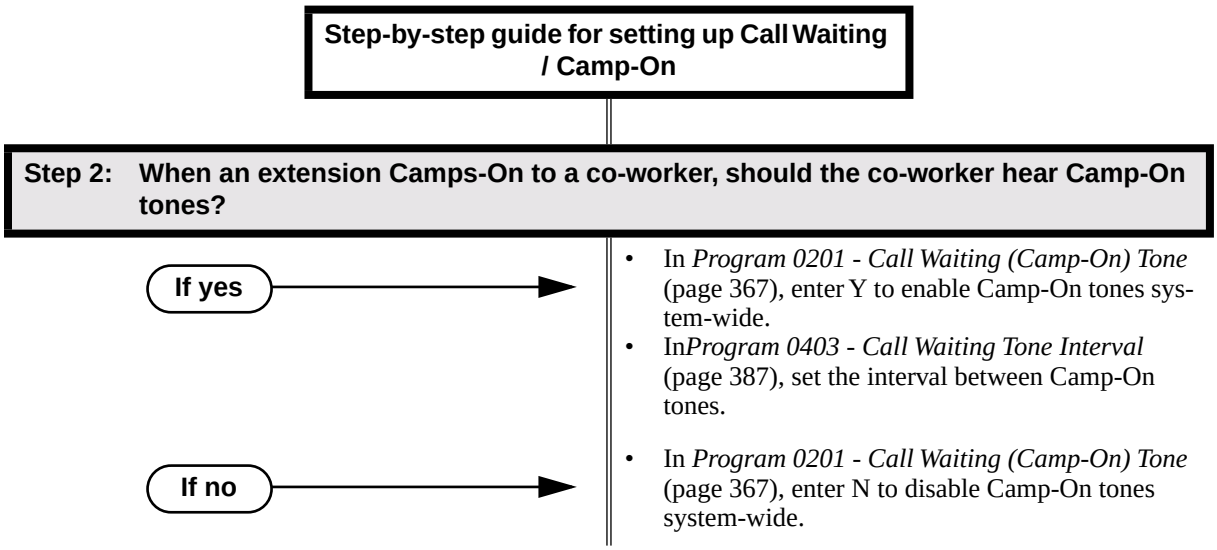
Step 1: Should extension be able to Camp On to a busy co-worker?

If yes

- In *Program 0101 - Camp-On to Busy Extension* (page 362), enter Y in each Class of Service that should allow users to Camp-On to a busy extension.
- In *Program 0101 - Privacy* (page 363), be sure Privacy is disabled at the destination extension (N).

If no

- In *Program 0101 - Camp-On to Busy Extension* (page 362), enter N in each Class of Service that should prevent users from Camping-on to a busy extension. Entering N automatically converts an extension's Camp On to Callback.



Programming List

Program 0101 - Camp-On to Busy Extension (page 362)
In an extension's Class of Service, enter Y to allow the extension to Camp-On to a busy co-worker. Enter N to prevent the extension from Camping-On to a busy co-worker. Entering N also automatically converts an extension's Camp On to Callback.

Program 0101 - Privacy (page 363)
An extension with Privacy enabled (Y) will block Camp On / Call Waiting.

Program 0201 - Call Waiting (Camp-On) Tone (page 367)
Enter Y to enable Camp-On tones system-wide. Enter N to disable Camp-On Tones system-wide.

Program 0403 - Call Waiting Tone Interval (page 387)
Set the interval between Camp-On tones.

Other Related Features

Attendant Position (page 24)
An extension user cannot Camp-On to the attendant because the attendant's extension is never busy.

Callback (page 54)
If an extension user Camps-On and then hangs up, the system converts the Camp-On to a Callback.

Direct Inward Line (page 88),
DILs to a busy extension automatically send Camp-On tones.

Do Not Disturb (page 114)
An extension cannot Camp-On to a busy co-worker that is also in Do Not Disturb.

Key Ring (page 170)
A Key Ring call will not send Camp-On beeps to a busy extension that normally rings for that call.

Intercom (page 165)
A user can Camp-On after placing an Intercom call to a busy co-worker.

Privacy (page 226)
Privacy blocks Camp-On / Call Waiting.

Split (Alternate) (page 272)
Camp-On lets an extension user know that a call is waiting to be answered. The user can Split between the waiting call and their current call.

Transfer (page 324)
An extension user may be able to Transfer a call to a busy extension.

Trunk (Line) Queuing / Trunk Callback (page 332)
Trunk Queuing lets an extension user Camp-On to a busy trunk.

Volume Controls (page 353)
The extension user cannot adjust the volume of incoming Camp On tone.

Feature Operation

To Camp-On to a busy extension:

1. Call busy extension.
   - Busy tone.
   - **ICM** and **SPK** on.
2. Dial 2; do not hang up.
   - Busy tone stops.
   - **ICM** and **SPK** on.

   If you hang up, the system converts your Camp-On to a Callback.
3. When your co-worker hangs up their initial call:
   - Ringback. Camp-On rings your co-worker's phone also.
   - **ICM** and **SPK** on.
4. Speak to your co-worker when they answer their Camp-On ring.

Description

LCCPU 01.00.00 | Available.

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.

Conditions

A system reset or power failure cancels all Callbacks system-wide.

Default Setting

Callback enabled.

Programming Guide

Step-by-step guide for setting up Callback

Step 1: Should extension be able to leave a Callback for a busy co-worker?

If yes

- In *Program 0101 - Camp-On to Busy Extension* (page 362), enter Y in each Class of Service that should allow users to leave a Callback at a busy extension.

If no

- In *Program 0101 - Camp-On to Busy Extension* (page 362), enter N in each Class of Service that should prevent users from leaving a Callback at a busy extension.

Step-by-step guide for setting up Callback

Step 2: When an extension leaves a Callback for a co-worker, should the co-worker hear Camp-On tones?

If yes

- In *Program 0201 - Call Waiting (Camp-On) Tone* (page 367), enter Y to enable Camp-On tones system-wide.
- In*Program 0403 - Call Waiting Tone Interval* (page 387), set the interval between Camp-On tones.

If no

- In *Program 0201 - Call Waiting (Camp-On) Tone* (page 367), enter N to disable Camp-On tones system-wide.

Programming List

Program 0101 - Camp-On to Busy Extension (page 362)
In an extension's Class of Service, enter Y to allow the extension to leave a Callback for a busy co-worker. Enter N to prevent the extension from leaving a Callback for a busy co-worker.

Program 0201 - Call Waiting (Camp-On) Tone (page 367)
Enter Y to enable Camp-On tones system-wide. Enter N to disable Camp-On Tones system-wide.

Program 0403 - Call Waiting Tone Interval (page 387)
Set the interval between Camp-On tones.

Other Related Features

Attendant Position (page 24)
An extension user cannot leave a Callback for the attendant because the attendant's extension is never busy.

Call Waiting / Camp-On (page 51)
If an extension user starts to leave a Callback request but doesn't hang up, the system Camps-On instead.

Do Not Disturb (page 114)
An extension cannot leave a Callback for a busy co-worker that is also in Do Not Disturb.

Trunk (Line) Queuing / Trunk Callback (page 332)
An extension user can queue for a busy trunk and then hang up to turn the queue into a trunk Callback.

Feature Operation

To place a Callback:

1. Call busy extension.

Busy tone.
ICM and **SPK** on.

2. Dial 2 and hang up.

Busy tone stops.

ICM and **SPK** off.

Stay on the line without hanging up if you want to Camp-On instead.

3. When the busy co-worker becomes free:

Intercom ring.

ICM and **SPK** off.

4. Lift handset to answer.

Two beeps.

ICM on.

5. Speak to your co-worker when call goes through.

Description

LCCPU 01.00.00	Not Available.

Description

LCCPU 01.00.00 | Available.

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

The system provides flexible routing of incoming CO (trunk) 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. Line key (from lowest to highest)
2. Fixed Loop Key (from lowest to highest)
3. Switched Loop Key (from lowest to highest)
4. **ICM** Key

Overflow

Refer to *Overflow for Key Ring Calls* on page 170 for details on the overflow options.

Conditions

- The system provides analog trunk CO service via ATRU PCBs. ATRU PCBs can connect to either loop start or ground start trunks (depending on circuit type programming). Refer to the Hardware Manual for additional details on installing ATRU PCBs and connecting trunks.
- Per FCC regulations, do not set *1001- Trunk Transmit Gain* on page 417 higher than 0 dB.

Default Setting

Trunks 1-8 ring extensions on line keys 1-8.

Programming Guide

Step-by-step guide for setting up Central Office Calls, Answering (Page 1 of 3)

Step 1: Check to be sure each trunk's circuit type and loop length setting matches the connected trunk circuit.

- In *Program 1001 - Trunk Circuit Type* (page 416), enter the correct circuit type for each trunk (51 = loop start DTMF, 52 = loop start DP).
- In *Program 1001 - Loop Length* (page 420), use this option to compensate for a trunk's loop length. Use the short option (1) only when the system is very close to the central office or behind a PBX. Use the long option (2) for normal installations.

Step 2: Review *System Timers, Trunks* on page 300 **for compatibility with the connected telco or PBX/Centrex.**

Step 3: Set the trunk access options at each extension for each trunk.

No access →
- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 0 to prevent both incoming and outgoing access on the trunk.

Incoming →
- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 1 to allow incoming access only.

Outgoing →
- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 2 to allow outgoing access only.

Full →
- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 3 to allow full access (both incoming and outgoing).

Step 4: Set the ringing options at each extension for each trunk.

Lamp only →
- In *Program 1805 - Ring Assignment* (page 466), enter 1 for each trunk that should lamp only (day and night).

Ring →
- In *Program 1805 - Ring Assignment* (page 466), enter 2 for each trunk that should ring during the day and at night.

Night Ring →
- In *Program 1805 - Ring Assignment* (page 466), enter 3 for each trunk that should ring at night and lamp only during the day.

Step-by-step guide for setting up Central Office Calls, Answering (Page 2 of 3)

Delay Ring

- In *Program 1805 - Ring Assignment* (page 466), enter 4 for each trunk that should delay ring during the day and at night.
- In*Program 0401 - Trunk Delay Ring* (page 376), enter the interval after which a delay ring trunk will change from flashing to ringing.

Step 5: Should extension have line keys for answering trunk calls?

If yes

- In *Program 1701 - Line Key* (page 436), assign programmable keys as line keys (code 03). The options are 01-16 (trunks 1-16).

If no

- In *Program 1701 - Line Key* (page 436), make sure no keys are assigned as line keys (code 03).
- In *Program 1701 - Switched Loop Key* (page 436), or in *Program 1701 - Fixed Loop Key* (page 436), assign a loop key to any extension without line keys. This allows the extension to answer trunk calls.

Step 6: Should DSS Console have line keys for answering trunk calls?

If yes

- In *Program 1704 - Line Key* (page 444), assign programmable keys as line keys (code 03). The options are 01-16 (trunks 1-16).

If no

- In *Program 1704 - Line Key* (page 444), make sure no keys are assigned as line keys (code 03).

Step 7: While on a trunk call, is a user's conversation transmitted to the caller at a confortable level?

If yes

- In *Program 1001 - Trunk Transmit Gain* (page 417), leave this option at its current setting.

If no

- In *Program 1001 - Trunk Transmit Gain* (page 417), increase or decrease the trunk transmit gain for the optimum transmission level for the connected telco or PBX.

Step 8: While on a trunk call, is the conversation received by the user at a comfortable level?

If yes

- In *Program 1001 - Trunk Receive Gain* (page 419), leave this option at its current setting.

If no

- In *Program 1001 - Trunk Receive Gain* (page 419), increase or decrease the trunk receive gain for the optimum reception level for the connected telco or PBX.

Step 9: Does the system properly detect ringing trunks?

- In *Program 0402 - Minimum Ring Detection Timer*

Programming List

Program 0401 - Trunk Delay Ring (page 376)
Set how long the system flashes a line key before ringing an extension that has the Delayed Ringing option enabled.

Program 0402 - Minimum Ring Detection Timer (page 380)
Set the threshold for ring detection. If the ring signal is longer than this interval, the system interprets the signal as valid ringing. If the signal is equal to or shorter than this interval, the system ignores the ringing.

Program 0402 - Loop Current Detection Time (page 382)
Set the loop disconnect interval for trunk calls. If the system detects a loop current interruption longer than this interval it assumes the telco has disconnected the trunk. It then returns the trunk trunk to idle.

Program 0402 - Ringing Signal End Detect Timer (page 383)
If the ringing signal on a trunk call is interrupted for longer than this interval, the system assumes ringing has stopped and terminates the call. If this interval is set to short, valid ringing will be inadvertantly cut off. If too long, the system will leave the call set up even after ringing has stopped.

Program 1001 - Trunk Circuit Type (page 416)
Set the trunk's circuit type for compatibility with the connected telco or PBX. The options are 51 (loop start DTMF), 52 (loop start DP), 53 (ground start DTMF) or 54 (ground start DP).

Program 1001 - Trunk Transmit Gain (page 417)
Set the trunk's transmit gain to compensate for the transmit gain characteristics of the connected telco or PBX.

Program 1001 - Trunk Receive Gain (page 419)
Set the trunk's receive gain to compensate for the receive gain characteristics of the connected telco or PBX.

Program 1001 - Loop Length (page 420)
Use this option to compensate for a trunk's loop length. Use the short option (1) only when the system is very close to the central office or behind a PBX. Use the long option (2) for normal installations.

Step-by-step guide for setting up Central Office Calls, Placing (Page 3 of 4)

If no →
- In *Program 1704 - Line Key* (page 444), make sure no keys are assigned as line keys (code 03).

Step 9: Should extension user have single digit (dial 9) access to outside calls?

If yes →
- In *Program 0501 - Single Digit Access* (page 395), enter Y.
- In *Program 1802 - Station's Dial 9 Group* (page 456), assign the Trunk Group (0-8) the station will select after the user dials 9.
- In *Program 1002 - Trunk Groups* (page 424), assign trunks to Trunk Groups.

If no →
- In *Program 0501 - Single Digit Access* (page 395), enter N. Users dial 9 followed by the Trunk Group number (0-8).
- In *Program 1002 - Trunk Groups* (page 424), assign trunks to Trunk Groups (0-8).

Step 10: Should extension have Line Dial-up capability (i.e., the ability to dial #901-#916).

If yes →
- In *Program 1802 - Line Dial Up* (page 456), Enter Y.

If no →
- In *Program 1802 - Line Dial Up* (page 456), enter N.

Step 11: While on a trunk call, is a user's conversation transmitted to the caller at a confortable level?

If yes →
- In *Program 1001 - Trunk Transmit Gain* (page 417), leave this option at its current setting.

If no →
- In *Program 1001 - Trunk Transmit Gain* (page 417), increase or decrease the trunk transmit gain for the optimum transmission level for the connected telco or PBX.

Step 12: While on a trunk call, is the conversation received by the user at a confortable level?

If yes →
- In *Program 1001 - Trunk Receive Gain* (page 419), leave this option at its current setting.

If no →
- In *Program 1001 - Trunk Receive Gain* (page 419), increase or decrease the trunk receive gain for the optimum reception level for the connected telco or PBX.

Step-by-step guide for setting up Central Office Calls, Placing (Page 4 of 4)

Step 13: Do trunks inadvertantly disconnect while users are on a call?

If yes
- In *Program 0402 - Loop Current Detection Time* (page 382), set the loop disconnect interval for compatibility with the connected telco or PBX.

If no
- In *Program 0402 - Loop Current Detection Time* (page 382), leave this option at its current setting.

Step 14: Do users ever experience call colissions (i.e., connect to an incoming call while placing an outgoing call)?

If yes
- In *Program 0402 - Force Idle (Trunk Guard Time)* (page 379), lengthen the trunk guard time.

If no
- In *Program 0402 - Force Idle (Trunk Guard Time)* (page 379), leave the trunk guard time at its current setting.

Step 15: If the system encounters a defective trunk while placing a call, does it wait the proper interval before automatically cycling to the next trunk?

If yes
- In *Program 0402 - Line Response* (page 378), leave this interval at its current setting.

If no
- In *Program 0402 - Line Response* (page 378), set the *Line Response* interval to meet the site's requirements.

Step 16: Should 4 be the first digit in the Direct Trunk Access code?

If yes
- In *Program 0501 - Numbering Plan* (page 392), leave the parameters for digit 4 at their default settings.

If no
- In *Program 0501 - Numbering Plan* (page 392), set up another digit (in place of 4) that meets the site's requirements.

Programming List

Program 0402 - Line Response (page 378)
When the system fails to detect loop current on a trunk, it will wait this interval before marking the trunk as defective. Be sure the value you enter is compatible with the local telco.

Program 0402 - Force Idle (Trunk Guard Time) (page 379)
Set the guard time for trunks. When the system disconnects a trunk (e.g., after a user hang up), the system keeps the line idle until this timer expires. The Trunk Guard Time helps prevent call collisions.

Program 0402 - DP Make Timer (page 380)
Set the duration of the Dial Pulse Make signal (i.e., relay closed). This is the "on" time in a Dial Pulse digit. Set this timer for compatability with the connected telco or PBX/Centrex. Keep in mind that there are three components of a Dial Pulse digit: Make interval, Break interval and Interdigit interval.

Program 0402 - DP Break Timer (page 380)
Use this timer to set the duration of the Dial Pulse Break signal (i.e., relay open). This is the "off" time in a Dial Pulse digit. Set this timer for compatability with the connected telco or PBX/Centrex.

Program 0402 - DP Interdigit Timer (page 380)
Set the duration of the Dial Pulse Interdigit signal (i.e., relay open time ***b****etween* each digit). Set this timer for compatability with the connected telco or PBX/Centrex.

Program 0402 - Manual DTMF Tone On (page 381)
Set the duration of DTMF digits for trunk calls manually dialed by an extension user. This is required because the system buffers the digits the user dials. Set this timer for compatibility with the connected telco or PBX/Centrex.

Program 0402 - Manual DTMF Tone Off (page 381)
Set the duration of the interval between DTMF digits for trunk calls manually dialed by an extension user. This is required because the system buffers the digits the user dials. Set this timer for compatibility with the connected telco or PBX/Centrex.

Program 0402 - Loop Current Detection Time (page 382)
Set the loop disconnect interval for trunk calls. If the system detects a loop current interruption longer than this interval it assumes the telco has disconnected the trunk. It then returns the trunk trunk to idle.

Program 0402 - Codec Digitizing Method (page 382)
Be sure this option is always set to 0 (μ-law companding enabled). Do not set this option to 1 (A-law companding enabled).

Program 0501 - Numbering Plan (page 392)
Review this option when if you want to change the digits user's dial for Direct Trunk Access (normally 4 followed by the trunk number).

Program 0501 - Single Digit Access (page 395)
Use this option to enable or disable single digit access. If enabled (Y), users can dial 9 to select their assigned dial 9 Trunk Group. If disabled, users must dial 9 followed by the Trunk Group number (0-8 for Trunk Groups 0-8).

Program 0504 - Trunk Port Extension Numbers (page 396)
Assign extension numbers and names to trunk ports.

Program 1001 - Trunk Circuit Type (page 416)
Set the trunk's circuit type for compatiblity with the connected telco or PBX. The options are 51 (loop start DTMF), 52 (loop start DP), 53 (ground start DTMF) or 54 (ground start DP).

Program 1001 - Trunk Transmit Gain (page 417)
Set the trunk's transmit gain (0-60) to compensate for the transmit gain characteristics of the connected telco or PBX.

Program 1001 - Trunk Receive Gain (page 419)
Set the trunk's receive gain (0-60) to compensate for the receive gain characteristics of the connected telco or PBX.

Program 1001 - Loop Length (page 420)
Use this option to compensate for a trunk's loop length. Use the short option (1) only when the system is very close to the central office or behind a PBX. Use the long option (2) for normal installations.

Program 1002 - Trunk Groups (page 424)
Assign trunk Trunk Groups (0-8).

Program 1701 - Line Key (page 436)
Assign a programmable key on a extension as a line key (code 03). The options are 01-16 (trunks 1-16).

Program 1704 - Line Key (page 444)
Assign a programmable key on a DSS Console as a line key (code 03). The options are 01-16 (trunks 1-16).

Program 1802 - Line Dial Up (page 456)
Enter Y to allow an extension to access lines 1-16 by dialing trunk access codes #901-#916.
Program 1802 - Station's Dial 9 Group (page 456)
Assign the trunk group (0-8) a user accesses when they dial 9 for an outside line or press a switched loop key. This option does not apply to systems with ARS installed.
Program 1802 - Key Access to Outbound Lines (page 457)
Enter Y to enable an extension user to press a Programmable Function Key to access and outside line.
Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access).
Program 1804 - Trunk Group Access (page 464)
For each extension, enter Y to allow or N to prevent outgoing trunk group access. The system always allows incoming trunk group access.

Other Related Features

Automatic Handsfree (page 30)
With Automatic Handsfree, an extension user can press a line key to place a trunk call without first lifting the handset or pressing SPK. Users without Automatic Handsfree can preselect a line key before lifting the handset or pressing SPK.
Call Timer (page 48)
The Call Timer helps a user keep track of the time they spend on the phone.
Dial Number Preview (page 84)
Dial Number Preview allows an extension user to review a number before the system dials it out.
Direct Trunk Access (page 106)
Direct Trunk Access allows an extension user to seize an individual trunk and place a call without restriction.
Dial Tone Detection (page 86)
Refer to this feature for the specifics on how the system handles Dial Tone Detection.
Equal Access Compatibility (page 118)
The system is compatible with Equal Access numbers (e.g., 10-10-321).
Last Number Redial (page 174)
Easily redial the last number dialed.
Line Keys (page 176)
Line Keys give a user one-touch access to specific trunks.
Loop Keys (page 179)
An extension user may also be able to press a Loop Key to place an outside call.
Save Number Dialed (page 254)
Save a number you dialed, then easily redial it later on.
Speed Dial (page 263)
You can store outside numbers in Speed Dial bins for quick access to frequently called numbers.
System Timers, Trunks (page 300)
Always review the system's trunk timers for compatibility with the connected telco or PBX/Centrex.
Trunk Group Routing (page 329)
With Trunk Group Routing enabled, an extension user can dial 9 to place a trunk call.
Trunk (Line) Queuing / Trunk Callback (page 332)
An extension user can queue for a busy trunk, or queue and hang up to leave a callback for a busy trunk.

Feature Operation

To place a call over a specific trunk using a line key:

1. Lift handset.
2. Press line key.

Trunk dial tone.
Line key on.

You may also be able to press a Loop Key. See Loop Keys on page 179 for more.

3. Dial outside number.

To place a call over a specific trunk (using Line Dial-up or Direct Trunk Access):

1. Lift handset.
2. Press ICM.

Intercom dial tone.
ICM on.

If you hear busy tone, you may be able to dial 2 to queue for the busy trunk. See Trunk (Line) Queuing / Trunk Callback on page 332 for more.

3. **For Line dial-up:** Dial **#9** followed by the trunk number (e.g., #901 for trunk 1).

OR

For Direct Trunk Access: Dial 4 plus the trunk number (e.g., 401 for trunk 1).

Trunk dial tone, followed by digits outdialing on the trunk.
ICM on.

4. Dial outside number.

To place a call over a trunk group:

1. Lift handset.
2. Press ICM.

Intercom dial tone.
ICM on.

3. Dial trunk group code (90-98).

Trunk dial tone.
Line key on.

If you hear dial tone as soon as you dial 9, your system has Trunk Group Routing enabled. SeeTrunk Group Routing on page 329 *for more.*

4. Dial outside number.

Description

LCCPU 01.00.00 | Available.

Quickly check keyset and DSS Console Programmable Function Key assignments.

A display telephone user can use the CHECK key to check keyset and DSS Console Programmable Function Key assignments and Personal Speed Dial bin names.

Conditions

None

Default Setting

Enabled

Programming Guide

None

Programming List

None

Other Related Features

Programmable Function Keys (page 235)
Check Programmable Function Key assignments.

Speed Dial (page 263)
Check Personal Speed Dial bin assignments.

Feature Operation

To check a Programmable Function Key assignment:

1. Press CHECK
   N/A
   SPK flashes fast.
2. Press the Programmable Function Key
   The key assignment displays.
3. Press another key or SPK to exit the check mode.

To check a Personal Speed Dial bin name:

1. Press CHECK

	N/A
	SPK flashes fast.

2. Press the Personal Speed Dial Key.
   The programmed Personal Speed Dial name displays.
3. Press another key or SPK to exit the check mode.

Description

LCCPU 01.00.00 | Available.

Customize features and dialing options for extensions.

Class of Service (COS) sets various features and dialing options for extensions. The system allows any number of extensions to share the same Class of Service.

The table below shows each Service Option. Refer to the individual features referenced in the table for more.

Conditions

None

Default Setting

You should normally assign the attendant Class of Service 1.
All other extensions are normally Class of Service 2.

Table 5: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Off-Premise Call Forward	Use this option to enable or disable an extension's ability to use Off-Premise Call Forwarding. • See *Call Forwarding, Off-Premise* on page 46 for more.	**OFF PREM FWRD?** Y = Enable N = Disable	N
Barge-In (Intrusion)	Use this option to enable or disable an extension's ability to Barge In on a co-worker. • See *Barge In (Intrusion)* on page 37 for more.	**BREAK-IN?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Camp-On to Busy Extension	Use this option to enable or disable an extension's ability to Camp-On to a busy extension. • See *Call Waiting / Camp-On* on page 51 for more.	**CAMP-ON BUSY EXT?** Y = Enable N = Disable	Y
Internal Call Forwarding	Use this option to enable or disable an extension's ability to use Internal Call Forwarding. • See *Alternate Attendant* on page 21 for more. • See *Call Forwarding* on page 43 for more.	**CALL FORWARDING?** Y = Enable N = Disable	Y
System Speed Dial Access	Use this option to enable or disable an extension's ability to access System Speed Dial. • See *System Speed Dial* on page 263 for more.	**SYS SPDL ACCESS?** Y = Enable N = Disable	Y

Table 5: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Extended Ring	Use this option to enable or disable Extended Ringing at the extension. • See *Extended Ringing* on page 119 for more.	**EXTENDED RING?** Y = Enabled N = Disable	N
Privacy	Use this option to enable or disable Privacy at the extension. • See *Privacy* on page 226 for more.	**PRIVACY**? Y = Enable N = Disable	N
Trunk (Line) Queuing Priority	Use this option to enable or disable Trunk (Line) Queuing Priority at the extension. If more than one extension with Priority is queued on a busy trunk, the system services the Priority extensions on a first-queued, first-served basis. • See *Trunk Queuing Priority* on page 332 for more.	**LINE Q PRIORITY?** Y = Enable N = Disable	N
Forced Trunk Disconnect	Use this option to enable or disable an extension's ability to use Forced Trunk Disconnect. • See *Forced Trunk Disconnect* on page 137 for more.	**FORCE DISCONNECT?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Camp-On to Busy Line	Use this option to enable or disable an extension's ability to Camp-On to a busy trunk. • See *Trunk (Line) Queuing / Trunk Callback* on page 332 for more.	**CAMP ON TO LINES?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Initiate All Call Page	Use this option to enable or disable an extension's ability to make an All Call Paging announcement. • See *Paging* on page 214 for more.	**PAGE ALL CALL?** Y = Enable N = Disable	Y
Access Page Zone 1	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 1. • See *Paging* on page 214 for more.	**PAGE ZONE 1?** Y = Enable N = Disable	Y
Access Page Zone 2	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 2. • See *Paging* on page 214 for more.	**PAGE ZONE 2?** Y = Enable N = Disable	Y
Access Page Zone 3	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 3. • See *Paging* on page 214 for more.	**PAGE ZONE 3?** Y = Enable N = Disable	Y
Access Page Zone 4	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 4. • See *Paging* on page 214 for more.	**PAGE ZONE 4?** Y = Enable N = Disable	Y

Table 5: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Access Page Zone 5	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 5. • See *Paging* on page 214 for more.	**PAGE ZONE 5?** Y = Enable N = Disable	Y
Access Page Zone 6	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 6. • See *Paging* on page 214 for more.	**PAGE ZONE 6?** Y = Enable N = Disable	Y
Access Page Zone 7	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 7. • See *Paging* on page 214 for more.	**PAGE ZONE 7?** Y = Enable N = Disable	Y
Silent Monitor	Use this option to enable or disable an extension's ability to use Silent Monitor. • See *Monitor / Silent Monitor* on page 192 for more.	**SILENT MONITOR?** Y = Enable N = Disable	N
Flash for Single Line Sets	Use this option to enable or disable Flash for single line telephones. This option only applies to single line telephones. • See *Flash* on page 132 for more.	**FLASH FOR SLT?** Y = Enable N = Disable	N
ACD Supervisor	• This option is currently not implemented.	**ACD SUPERVISOR?** Y = Enable N = Disable	N
Single Ring for Single Line Sets	• Use this option to enable or disable single ring for single line telephones. This option only apples to single line telephones. See *Central Office Calls, Answering* on page 58 for more.	**SINGLE RING?** Y = Enable N = Disable	N
View System Alarms	Use this option to enable or disable an extension's ability to view the system alarms. • See *Attendant Position* on page 24 for more.	**VIEW SYS ALARMS?** Y = Enable N = Disable	N
Automatic Hold	Use this option to enable or diable Automatic Hold at an extension. • See *Hold* on page 156 for more.	**AUTO HOLD?** Y = Enable N = Disable	N
Activate Night Mode	Use this option to enable or disable an extension's ability to activate Night Service. • See *Night Service / Night Ring* on page 200 for more.	**ACTIVATE NITES?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N

Table 5: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Direct Trunk Access	Use this option to enable or disable an extension's ability to use Direct Trunk Access. Note that enabling Direct Trunk Access allows the user to bypass Toll Restriction. • See *Central Office Calls, Placing* on page 63 for more.	**DIRECT TRK ACCES?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Remote Call Forwarding / Alternate Attendant	• This option is currently not implemented.	**REMOTE FWRD?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Soft Keys	Use this option to enable or disable a display set's Interactive Soft Keys. • See See *Interactive Soft Keys* on page 163 for more.	**SOFTKEYS** Y = Enable N = Disable	Y
Conversation Record	Use this option to enable or disable an extension's ability to record conversations into their Voice Mail mailbox. If enabled, the user can press either their Conversation Record key or RECORD soft key to initiate recording. • See *Voice Mail* on page 340 for more.	**RECORD CONV** Y = Enable N = Disable	N

Programming Guide

Step-by-step guide for setting up Class of Service

Step 1: Make a unique Class of Service (1-15) for each set of feature/dialing options the site requires.

- In *Program 0101 - Class of Service Options* (page 362), set up the options for each Class of Service. The system has 15 Classes of Service (1-15).

Step 2: Assign Class of Service to extensions.

- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions. Many extensions can share the same Class of Service. Normally, only the attendant has Class of Service 1.

Programming List

Program 0101 - Class of Service Options (page 362)
Set Class of Service options for extensions, OPX trunk and tie lines.
Program 1001 - Trunk Class of Service Assignment (page 420)
Assign Class of Service (1-15) to OPX trunks and tie lines.
Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service (1-15) to extension's.

Other Related Features

Refer to the Class of Service chart above.

Attendant Position (page 24)
By default, the system assigns Class of Service 1 to the attendant. This provides the attendant with Alternate Attendant, Barge In, Call Forwarding Off Premise, Direct Trunk Access, Forced Trunk Disconnect, Night Service, and Trunk Queuing (Camp On) capability.

Feature Operation

None

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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
Maximum simultaneous conferences	8
Maximum parties in any one Conference (trunks and/or extensions)	8

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

Conditions

None

Default Setting

Conference enabled.

Programming Guide

None

Programming List

Program 1803 - Extension Line Access Assignments (page 461)
An extension can join a Conference with a trunk to which they normally cannot access.

Other Related Features

The following features also allow different types of multiple party calls:

Barge In (Intrusion) (page 37)
An extension user can Barge In on a Conference.
Group Listen (page 142)
Meet-Me Conference (page 184)

To correct the displayed digits before dialing them out:

1. Use VOL ▲ and VOL ▼ until the cursor replaces the digit you want to change.
   VOL ▲ moves the cursor to the left. VOL ▼ moves the cursor to the right.
2. Dial the digit that you want to replace the cursor.
3. Press VOL ▲ and VOL ▼ to place the cursor over any other digits you want to edit.
   OR
   Press VOL ▼ until the entire number displays to the left of the cursor.
   The system will only dial the digits to the left of the cursor.
4. Press a line key to have the system automatically dial the displayed number.

Dial Number Preview Editing Example		
To replace 2049265410 with 2039265400:		
Step 1:	Dial * followed by 2049265410. You see:	**2049265410-**
Step 1:	Press Vol ▲ until you see:	**20-9265410**
Step 2:	Dial 3. You see:	**203-265410**
Step 3:	Press VOL ▼ until you see:	**20392654-0**
Step 4:	Dial 0. You see:	**203926540-**
Step 5:	Press Vol ▲ until the entire number displays to the left of the cursor.	**2039265400-**
Step 6:	Press line key to dial number.	

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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

A Direct Inward Line (DIL) is a trunk 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 trunk, with no additional programming required.

The extension to which the trunk is terminated controls the night mode of the trunk. For example, if extension 301 has trunk 1 assigned as a DIL, the user can press **DND** to switch trunk 1 to its night routing destination. Switching trunk 1 to night mode at extension 304 has no affect on the night mode of the system. This flexibility could allow a service dispatcher with several DILs to independently send trunks to their night destinations without affecting the night mode of the entire system.

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)

Overflow for Direct Inward Lines

If unanswered, DILs calls can route to a programmed overflow destination. The overflow destination can be an extension, Ring Group, UCD Group or Voice Mail (i.e., DIL destination's mailbox). You can set up separate DIL overflow destinations for the day mode and at night. If unanswered at the overflow destination, the call diverts to Key Ring.

Conditions

None

Default Setting

No DILs assigned.

Programming Guide

Step-by-step guide for setting up Direct Inward Line (Page 1 of 3)

Step 1: Check to be sure each trunk's circuit type matches the connected trunk circuit.

- In *Program 1001 - Trunk Circuit Type* (page 416), enter the correct circuit type for each trunk (51 = loop start DTMF, 52 = loop start DP).

Step 2: Assign the DIL day mode destination.

- In *Program 1003 - Direct Termination (Day)* (page 426), assign the DIL day mode termination. The destination can be an extension, UCD Group master number, Ring Group master number or Voice Mail master number.

Step 3: Do you want an unanswered DIL to overflow during the day mode?

If yes →

- In *Program 1003 - Activate Overflow During the Day* (page 426), enter Y.

If no →

- In *Program 1003 - Activate Overflow During the Day* (page 426), enter N.

Step 4: Assign the DIL day overflow destination.

- In *Program 1003 - Day Overflow Destination* (page 426), assign the DIL day mode termination. The destination can be an extension, UCD Group master number, Ring Group master number, Voice Mail master number or Key Ring (by pressing CLEAR).

Step 5: Assign the DILnight mode destination.

- In *Program 1003 - Direct Termination (Night)* (page 426), assign the DIL night mode termination. The destination can be an extension, UCD Group master number, Ring Group master number or Voice Mail master number. (An extension puts their DIL in the night mode by pressing DND.)

Step-by-step guide for setting up Direct Inward Line (Page 2 of 3)

Step 6: Do you want an unanswered DIL to overflow during the night mode?

If yes

- In *Program 1003 - Activate Overflow at Night* (page 427), enter Y.

If no

- In *Program 1003 - Activate Overflow at Night* (page 427), enter N.

Step 7: Assign the DIL night overflow destination.

- In *Program 1003 - Night Overflow Destination* (page 427), assign the DIL night mode termination. The destination can be an extension, UCD Group master number, Ring Group master number, Voice Mail master number or Key Ring (by pressing CLEAR).

Step 8: Does extension have a line key for their DIL?

If yes

- In *Program 1701 - Line Key* (page 436), no programming changes are required.

If no

- In *Program 1701 - Line Key* (page 436), make sure the DIL has a line key assigned (code 03). DILs can optionally ring Loop Keys (codes 01 and 02).

Step 9: Do you want to put the DIL on a DSS Console key?

If yes

- In *Program 1704 - Line Key* (page 444), make sure the DIL has a DSS Console line key assigned (code 03).

If no

- In *Program 1704 - Line Key* (page 444), make sure the DIL does not have a DSS Console line key assigned (code 03).

Step 10: If DIL is unanswered, does call divert to its overflow destination (If programmed) or Key Ring (if no overflow exists) after the proper interval?

If yes

- In *Program 0401 - DIL No Answer* (page 376), leave the DIL No Answer time at its current setting.

If no

- In *Program 0401 - DIL No Answer* (page 376), change the DIL No Answer time to meet the site requirements.

Step-by-step guide for setting up Direct Inward Line (Page 3 of 3)

Step 11: If DIL is unanswered at the overflow destination, does call divert to Key Ring after the proper interval.

If yes

- In *Program 0401 - Transfer Recall* (page 375), leave the Transfer Recall time at its current setting.
- In *Program 1805 - Ring Assignments* (page 466), make sure you have extensions assigned to Key Ring.

If no

- In *Program 0401 - Transfer Recall* (page 375), change the Transfer Recall time to meet the site requirements.
- In *Program 1805 - Ring Assignments* (page 466), make sure you have extensions assigned to Key Ring.

Step 12: If DIL is terminated to Voice Mail, set up a Night key that controls the night mode status of the DIL.

- In *Program 1701 - Night Key* (page 438), set up a Night key for the Voice Mail master number (code 18 + Voice Mail master number)
  OR
- In *Program 1704 - Night Key* (page 446), set up a Night key for the Voice Mail master number (code 18 + Voice Mail master number).

Programming List

Program 0401 - DIL No Answer (page 376)
If DIL Overflow is set up, this interval determines how long a DIL rings its destination before ringing its programmed overflow destination. If DIL Overflow is not set up, this interval determines how long a DIL rings is destination before diverting to Key Ring.

Program 0401 - Transfer Recall (page 375)
This interval sets how long a call will ring the day or night overflow destination before diverting to key ring.

Program 1001 - Trunk Circuit Type (page 416)
Set the trunk's circuit type for compatiblity with the connected telco or PBX. The options are 51 (loop start DTMF), 52 (loop start DP), 53 (ground start DTMF) or 54 (ground start DP).

Program 1003 - Direct Termination (Day) (page 426)
Set the day termination (answering point) for the DIL. The DIL rings the answering point directly. The destination can be an extension, UCD Group master number, Ring Group master number or Voice Mail master number.

Program 1003 - Activate Overflow During the Day (page 426)
Enter Y to enable DIL overflow during the day mode. (Entering N for this option has the same affect as entering Y followed by Key Ring in the following option.)

Program 1003 - Day Overflow Destination (page 426)
Set the overflow destination for day mode calls. The overflow destination can be an extension, UCD Group master number, Ring Group master number, Voice Mail master number or Key Ring (by pressing CLEAR).

Program 1003 - Direct Termination (Night) (page 426)
Set the night termination (answering point) for the DIL. The DIL rings the answering point directly. The destination can be an extension, UCD Group master number, Ring Group master number or Voice Mail master number.
Program 1003 - Activate Overflow at Night (page 427)
Enable Y to enable DIL overflow during the night mode. (Entering N for this option has the same affect as entering Y followed by Key Ring in the following option.)
Program 1003 - Night Overflow Destination (page 427)
Set the overflow destination for night mode calls.The destination can be an extension, UCD Group master number, Ring Group master number or Voice Mail master number.
Program 1701 - Line Key (page 436)
Make sure the extension has a line key (code 03) for the DIL.
Program 1701 - Night Key (page 438)
If the DIL is terminated to a Voice Mail master number, a Night Key key (code 18 + the Voice Mail master number) controls the night mode of the DIL.
Program 1704 - Line Key (page 444)
The extension can optionally have a line key (code 03) for their DIL on a DSS Console.
Program 1704 - Night Key (page 446)
If the DIL is terminated to a Voice Mail master number, a Night Key key (code 18 + the Voice Mail master number) controls the night mode of the DIL.
Program 1805 - Ring Assignments (page 466)
Make sure you have extensions assigned to Key Ring.

Other Related Features

Call Forwarding (page 43)
Call Forwarding will reroute an extension's DILs.
Call Waiting / Camp-On (page 51)
A DIL to a busy extension will send Camp-On tones (if the extension is programmed to normally receive Camp-On tones).
Central Office Calls, Answering (page 58)
Central Office Calls, Placing (page 63)
Refer to these features to set additional parameters for trunks (such as transmit gain, receive gain and sidetone level). In addition, extension users can place calls on DILs, just like other trunks (depending on programming).
Delayed Ringing (page 82)
DILs automatically override Delayed Ringing.
Do Not Disturb (page 114)
Enabling Do Not Disturb at an extension puts that extension's DILs into Night Mode.
Extended Ringing (page 119)
With Extended Ringing enabled, DIL trunks ring for the *Number of Extended Rings* before routing to the overflow destination.
Extension Hunting (page 121)
DILs to a Circular or Terminal Hunting group member initiate hunting. In addition, DILs to a UCD master number ring the UCD group directly.
Group Ring (page 144)
A DIL can ring a Ring Group master number.
Key Ring (page 170)
An unanswered DIL diverts to all extensions with Key Ring for the trunk.
Line Keys (page 176)
Loop Keys (page 179)
When you assign a trunk as a DIL, it continues to flash its previously programmed line/loop key assignments. It will not, however, ring those phones.
Names for Extensions and Trunks (page 198)
Programming names for DILs makes it easier to identify incoming callers.
Night Service / Night Ring (page 200)

The extension to which the DIL is terminated controls the night mode of the DIL by pressing their DND key.

Off-Hook Signaling (page 205)

A DIL ringing a busy extension can automatically initiate Off-Hook Signaling.

Prime Line Preference (page 223)

If an extension's Prime Line is another extension's DIL, lifting the handset will answer the call even though it does not ring the phone.

Voice Mail (page 340)

- The Voice Mail Automated Attendant will answer a DIL terminated to the Voice Mail Master Number.
- If a DIL is terminated to the Voice Mail master number, a System Mode key (code 18 + the Voice Mail number) controls the night mode status of the DIL.

Feature Operation

To answer a call on your Direct Inward Line:

	Ringing.
	DIL's line key flashing (green).

1. Lift handset.

	Conversation with caller.
	DIL's line key on (green).

To place your DIL into Night Mode

1. Press **DND**.

	N/A
	DND flashes.

This also enables Do Not Disturb at the extension.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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

Programmable Function Keys *automatically* become Direct Station Selection (DSS) keys when the user press **ICM**. 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

Conditions

DSS keys do not pick up ringing calls.

Default Setting

Not assigned.

Programming Guide

Step-by-step guide for setting up Direct Station Selection (Page 1 of 2)

Step 1: Should extension have DSS capability on their programmable keys?

If yes

- In *Program 1802 - Busy Lamp Field* (page 456), enter Y.

If no

- In *Program 1802 - Busy Lamp Field* (page 456), enter N.

Step 2: Should extension have preprogrammed DSS keys?

If yes

- In *Program 1703 - DSS Key Assignment* (page 443), program the extension's DSS assignments.

Step-by-step guide for setting up Direct Station Selection (Page 2 of 2)

If no

- In *Program 1703 - DSS Key Assignment* (page 443), leave the extension's DSS keys unassigned.

Programming List

Program 1703 - DSS Key Assignment (page 443)
Program the extension's DSS assignments.
Program 1802 - Busy Lamp Field (page 456)
Enter Y to enable DSS capability for an extension's programmable keys.

Other Related Features

Intercom (page 165)
A user can press a DSS key as an alternative to dialing Intercom numbers.
Speed Dial (page 263)
The Personal Speed Dial Keys also provide one-button access to extensions.
Transfer (page 324)
You can press your DSS key to Transfer a call instead of dialing a co-worker's extension number.
Voice Over (page 350)
An extension can Voice Over after using Direct Station Selection to call a co-worker.

Feature Operation

To place a call to a co-worker using a DSS key:

1. Lift handset.
2. Press **ICM** .
   - Intercom dial tone.
   - DSS keys show status of covered co-workers (off = idle, on = busy or ringing, flashing fast = in Do Not Disturb).
3. Press DSS key for co-worker you want to call.
   - Two beeps or ringing.
   - N/A

To Transfer a call to a co-worker using a DSS key:

1. Place or answer trunk call.
   - Conversation with caller.
   - Line or Loop Key on (green).
2. Press **ICM** .
   - Intercom dial tone.
   - DSS keys show status of covered co-workers (off = idle, on = busy or ringing, flashing fast = in Do Not Disturb).

3. Press DSS key for co-worker.

	Two beeps or ringing.
	N/A

4. Hang up to have the Transfer go through unscreened.
   OR
   Wait for the called party to answer if you want them to screen the Transfer.

Description

LCCPU 01.00.00 | Available.

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

The DSS Console gives a 34-Button Display or 34-Button Super Display user a Busy Lamp Field (BLF) and one-button access to extensions, trunks, and selected system features. This saves time for users that do a lot of call processing (such as operators or dispatchers. There are two DSS Consoles types: the 24-Button (P/N 80556) and the 110 Button (P/N 80555).

Figure 7: 24-Button and 110-Button DSS Consoles

Every extension can have a DSS Console. However, the system provides four unique DSS configurations (called blocks). If the system has more than four DSS Consoles installed, they will have to share configurations. You cannot connect multiple DSS Consoles to the same keyset. DSS Consoles do not use a station port and do not require their own power supply.

You can assign DSS Console keys to the following functions:

- ACD Log On (future)
- Call Coverage (immediate, delayed or no ring)
- Data (future)
- Group Pickup (immediate, delayed or no ring)
- Hotline
- ICM Directory
- Message Center
- Multiple Directory Numbers (future)
- Night Key
- Page Zones
- Park Orbit
- Save
- Speed Dial, Personal
- Reverse Voice Over
- Split
- Speed Dial, System
- Trunks (line keys)
- Voice Mail Record

Conditions

- You cannot connect a DSS Console to a 22-button telephone.
- You must consider the System Load Factor when installing DSS Consoles. See *System Configuration* on page 3 for more.

Default Setting

DSS Console Default Assignments	
These keys:	**Have this function:**
24-Button DSS Console	
1-24	Hotlines to extensions 300-323
110-Button DSS Console	
1-32	Hotlines to extensions 300-331
33-48	Lines 1-16
49-59	System Speed Dial bins 200-209
59-78	Personal Speed Dial bins 700-719
79, 80	Page zones 0 (All Call) and 1.
81-82	System Park Orbits 0 and 1.
83-110	Unassigned

Programming Guide

Step-by-step guide for setting up DSS Consoles

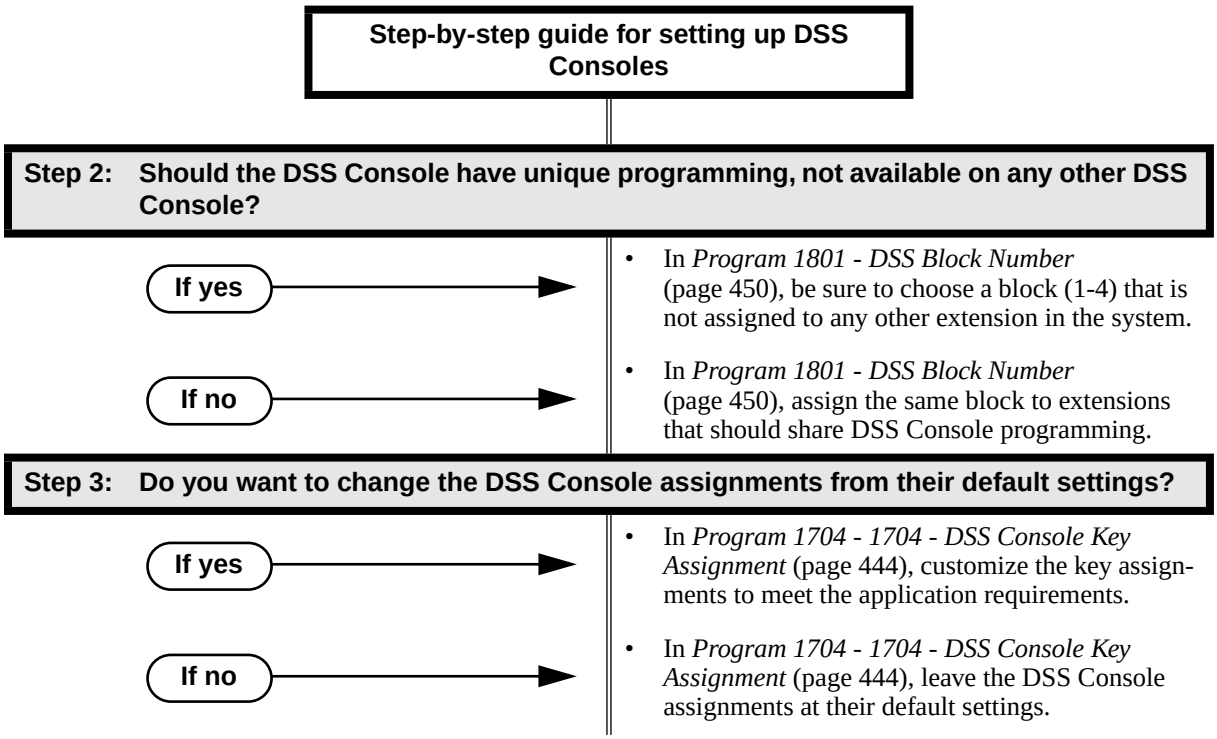
Step 1: Does the extension have a DSS Console connected?

If yes

- In *Program 1801 - DSS Type* (page 450), enter 1 if the extension has a 24-button console connected. Enter 2 if the extension has a 110-button console connected.

If no

- In *Program 1801 - DSS Type* (page 450), enter 0 if the extension does not have a DSS Console connected.



Programming List

Program 1704 - DSS Console Key Assignment (page 444)
Assign the keys for the system's DSS Consoles.
Program 1801 - DSS Type (page 450)
Specify the type of DSS Console plugged into the telephone (1 = 24-button, 2 - 110-button, 0 = unassigned).
Program 1801 - DSS Block Number (page 450)
Use this option to assign a DSS block to the console.

The following table shows the DSS Console key options (assigned in Program 1704):

Table 6: Program 1704 - DSS Console Key Assignment (Page 1 of 2)

Option	Description	Key Code
Undefined	Use this option to designate a key as undefined (no function).	**00**
Line Key	Use this option to assign a programmable key as a line key.	**03 + nn (trunk number)**
Park Orbit Key	Use this option to assign a programmable key as a Park Orbit key.	**04 + n (Park Orbit 0-9)**
Hotline Key	Use this option to assign a programmable key as a Hotline key.	**05 + nnn (extension number)**
Call Coverage Immediate Ring	Use this option to assign a programmable key as an immediately ringing Call Coverage Key.	**06 + nnn (extension number)**

Table 6: Program 1704 - DSS Console Key Assignment (Page 2 of 2)

Option	Description	Key Code
Call Coverage No Ring	Use this option to assign a programmable key as a lamp only (no ring) Call Coverage Key.	**07 + nnn (extension number)**
Call Coverage Delay Ring	Use this option to assign a programmable key as a lamp only (no ring) Call Coverage Key.	**08 + nnn (extension number)**
Group Pickup Immediate Ring	Use this option to assign a programmable key as an immediately ringing Group Call Pickup key.	**09 + nn (Pickup Group 01-16)**
Group Pickup No Ring	Use this option to assign a programmable key as a lamp only (no ring) Group Call Pickup key.	**10 + nn (Pickup Group 01-16)**
Group Pickup Delay Ring	Use this option to assign a programmable key as a delay ring Group Call Pickup key.	**11 + nn (Pickup Group 01-16)**
Page Zone Key	Use this option to assign a programmable key as a Page Zone key.	**13 + n (Page Zone 1-7, 0 for All Call)**
System Speed Dial Key	Use this option to assign a programmable key as a System Speed Dial key. You assign the key to specific System Speed Dial bin.	**14 + nnn (System Speed Dial bin, normally 200-299)**
Personal Speed Dial Key	Use this option to assign a programmable key as a Personal Speed Dial key. You assign the key to a specific Personal Speed Dial bin.	**15 + nnn (701-720)**
Voice Mail Record Key	Use this option to assign a programmable key as a Voice Mail Record key.	**17**
Night Key	Use this option to assign a programmable key as a Night key.	**18 + CLEAR**
Data Key	This option is currently not used.	**19 + nnn (extension number)**
Split Key	Use this option to assign a programmable key as a Split key.	**20**
ICM Directory Key	Use this option to assign a programmable key as an Intercom Directory Dialing key.	**21**
ACD Log On Key	This option is currently not used.	**22**
Reverse Voice Over Key	Use this option to assign a programmable key as a Reverse Voice Over key.	**23**
Message Center Key	Use this option to assign a programmable key as a Message Center key.	**24 + nnn (extension number)**
Save Key	Use this option to assign a programmable key as a Save Number Dialed key.	**25**

Other Related Features

Call Coverage Keys (page 40)
DSS Consoles can have Call Coverage keys.

Directory Dialing (page 110)
Assign a Directory Dialing key on a DSS Console.

Group Call Pickup (page 139)
DSS Consoles can have Group Call Pickup keys.

Hotline (page 160)
DSS Consoles can have Hotline keys.

Night Service / Night Ring (page 200)
A DSS Console with a Night key can put the system in the night mode.

Paging (page 214)
DSS Consoles can have Page zone keys.

Park (page 218)
DSS Consoles can have Park keys.

Reverse Voice Over (page 245)
A DSS Console can have a Reverse Voice Over key.

Save Number Dialed (page 254)
A DSS Console can have a Save key.

Speed Dial (page 263)
The DSS Console Personal Speed Dial bins are the same as the extension to which the console is attached. This means that DSS Consoles that share the same block number still have unique Personal Speed Dial.

Voice Mail (page 340)
A DSS Console can have Voice Mail Record and Message Center keys.

Feature Operation

To use your DSS Console trunk (line) key:

1. Press the DSS Console trunk key.

DSS Console Trunk Key Busy Lamp Indications	
When the key is:	**The assigned trunk is:**
Off	Idle or not installed
On	Busy
Flashing fast	Ringing

To use your DSS Console Park key:

1. Press DSS Console Park key to Park or retrieve call.

DSS Console Park Key Busy Lamp Indications	
When the key is:	**The assigned orbit is:**
Off	Idle

DSS Console Park Key Busy Lamp Indications	
On	Holding a call that has been parked by a co-worker
Wink On	Holding a call that you parked

To use your DSS Console Hotline key:

1. Press key to call Hotline partner.

DSS Console Hotline Key Busy Lamp Indications	
When the key is:	**The Hotline partner is:**
Off	Idle
On	Busy or ringing
Fast Flash	In Do Not Disturb

To use your DSS Console Call Coverage key:

You can set up the Call Coverage key for immediate ring, delayed ring , or no ring.

1. Press key to call covered extension or pick up ringing call.

DSS Console Call Coverage Key Busy Lamp Indications	
When the key is:	**The covered extension is:**
Off	Idle
On	Busy
Fast Flash	In DND
Slow Flash	Ringing

To use your DSS Console Group Call Pickup key:

You can set up the Group Call Pickup key for immediate ring, delayed ring , or no ring.

1. Press key to answer call ringing Pickup Group.

DSS Console Group Call Pickup Key Busy Lamp Indications	
When the key is:	**The Pickup Group:**
Off	Does not have a call ringing
Slow Flash	Has a call ringing

To use your DSS Console Page Zone key:

1. Press key to Page into assigned zone.

DSS Console Group Call Pickup Key Busy Lamp Indications	
When the key is:	**The assigned zone is:**
On	Busy
Off	Idle

To use your DSS Console System Speed dial key:

1. Press key to dialed stored number.
   System Speed Dial keys provide no BLF.

To use your DSS Console Personal Speed dial key:

1. Press key to dialed stored number.
   Personal Speed Dial keys provide no BLF.

To use your DSS Console Conversation Record key:

You must have Voice Mail installed to use this key. A voice prompt and a periodic beep will remind you that your calls are being recorded.

1. Press key to record conversation in mailbox.

DSS Console Conversation Record Key Busy Lamp Indications	
When the key is:	**Recording is:**
On	Being set up
Off	Off
Fast Flash	On

To use your DSS Console Night key:

1. Press key to put the system in the night mode.

DSS Console Night Key Busy Lamp Indications	
When the key is:	**The system is:**
On	In the night mode
Off	In the day mode

To use your DSS Console ICM Directory key:

1. Press key to access Intercom Directory Dialing.

DSS Console ICM Directory Key Busy Lamp Indications	
When the key is:	**ICM Directory Dialing is:**
On	Active
Off	Inactive

To use your DSS Console Reverse Voice Over key:

1. While on a handset call, press key to place Private Intercom call to covered extension.

DSS Console Reverse Voice Over Key Busy Lamp Indications	
When the key is:	**Assigned extension is:**
On	Busy or ringing
Off	Idle
Fast Flash	In Do Not Disturb

To use your DSS Console Message Center key:

1. Press key to see how many messages are waiting in the Message Center.
   OR
   Press **SPK** + key to call Message Center mailbox.

DSS Console Message Center Key Busy Lamp Indications	
When the key is:	**There are:**
Off	No messages waiting in the Message Center mailbox
Fast Flash	Messages waiting in the Message Center mailbox

To use your DSS Console Save key:

1. While on a call, press key to Save the number you just dialed.
   OR
   While idle, press key to redial a previously saved number.
   Save keys provide no BLF.

Description

LCCPU 01.00.00 | Available.

Priority users can access trunks directly. Direct Trunk Access also lets maintenance personnel access and test individual trunks.

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

Conditions

None

Default Setting

Disabled

Programming Guide

Step-by-step guide for setting up Direct Trunk Access

Step 1: Should extension have Direct Trunk Access capability?

If yes

- In *Program 0101 - Direct Trunk Access* (page 364), enter Y.
- *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.
- In *Program 1803 - Extension Line Access Assignments* (page 461), no entries are required. Direct Trunk Access automatically provides access.

If no

- In *Program 0101 - Direct Trunk Access* (page 364), enter N.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

Step 2: Does the default Direct Trunk Access code (4) meet the site requirements?

If yes

- In *Program 0501 - Numbering Plan* (page 392), do not change the digit 4 from its default assignment.

If no

- In *Program 0501 - Numbering Plan* (page 392), reassign digits to meet the site requirements.

Programming List

Program 0501 - Numbering Plan (page 392)
Change the digit that user's dial for Direct Trunk Access if 4 does not meet the site requirements.

Program 0101 - Direct Trunk Access (page 364)
Enter Y to enable an extension to use Direct Trunk Access. Note that enabling Direct Trunk Access allows the user to bypass Toll Restriction.

Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Program 1803 - Extension Line Access Assignments (page 461)
Direct Trunk Access overrides an extension's access assignments. A extension can directly access a trunk for which they normally do not have access.

Other Related Features

Central Office Calls, Placing (page 63)
Refer to this feature for other methods of placing trunk calls.

Forced Trunk Disconnect (page 137)
An extension user with Direct Trunk Access can use Forced Trunk Disconnect.

Removing Trunks and Extensions From Service (page 242)
An extension user with Direct Trunk Access can remove trunks from service.

Toll Restriction (page 314)
Direct Trunk Access does not bypass Toll Restriction.

Step-by-step guide for setting up Directory Dialing (Page 2 of 2)

If no →

- In *Program 1701 - ICM Directory Key* (page 438), and in *Program 1704 - ICM Directory Key* (page 447), do not assign an Intercom Directory Dialing key (code 21).

Programming List

Program 0401 - Intercom Inter-digit (page 375)
If an extension user initiates Directory Dialing but doesn't make an entry within this interval, the system automatically cancels Directory Dialing.

Program 1701 - ICM Directory Key (page 438)
Assign an Intercom Directory Dialing key to a keyset (code 21).

Program 1704 - ICM Directory Key (page 447)
Assign an Intercom Directory Dialing key to a DSS Console (code 21).

Other Related Features

Direct Station Selection (DSS) Console (page 98)
Assign a Directory Dialing key on a DSS Console.

Extension Hunting (page 121)
Intercom Directory Dialing will show UCD Group names.

Group Ring (page 144)
Intercom Directory dialing will show Ring Group names.

Intercom (page 165)
Directory Dialing is a convenient alternative to manually dialing Intercom numbers.

Names for Extensions and Trunks (page 198)
Set up the names for extensions and trunks.

Speed Dial (page 263)
Set up Speed Dial names.

Feature Operation

To place a call using Directory Dialing:

1. Do not lift handset or press **SPK**.
1. Dial 3.
2. Dial the type of Directory Dialing from the table below:

Pressing this key:		Selects Directory Dialing for:
2	**C**	System (Company-Wide) Speed Dial names.
4	**I**	Intercom names.
7	**P**	Personal Speed Dial names.

	N/A
	SPK on.

To scroll alphabetically through the selected directory, press **VOL ▲** *or* **VOL ▼**. *To call the displayed name, just press* **DIAL**.

3. Dial the first letter of the desired name.

   For example, dial 4 if the first letter in the name begins with G, H or I. The display

	N/A
	For the example above (i.e., when you dial 4), the display shows: **1 = G, 2 = H, 3 = I**

4. Look at your phone's display and dial the digit for the letter/number you want to call.

   In the example above, if the name begins with G, dial 1. If the name begins with H, dial 2. If the name begins with I, dial 3.

   The first name/number that begins with your selection displays. If you see UNLISTED NAME, there is no name stored for your selection.

5. Press **VOL ▲** or **VOL ▼** to scroll through all the names/numbers that begin with the letter/number you selected.

   OR

   Skip to the next step if the displayed name/number is the one you want to call.

6. Press **DIAL** to have the system dial your call.

To exit Directory Dialing at any time.

1. Press **SPK**.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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 trunk calls still flash the line keys. The user may use the phone in the normal manner for placing and processing calls.

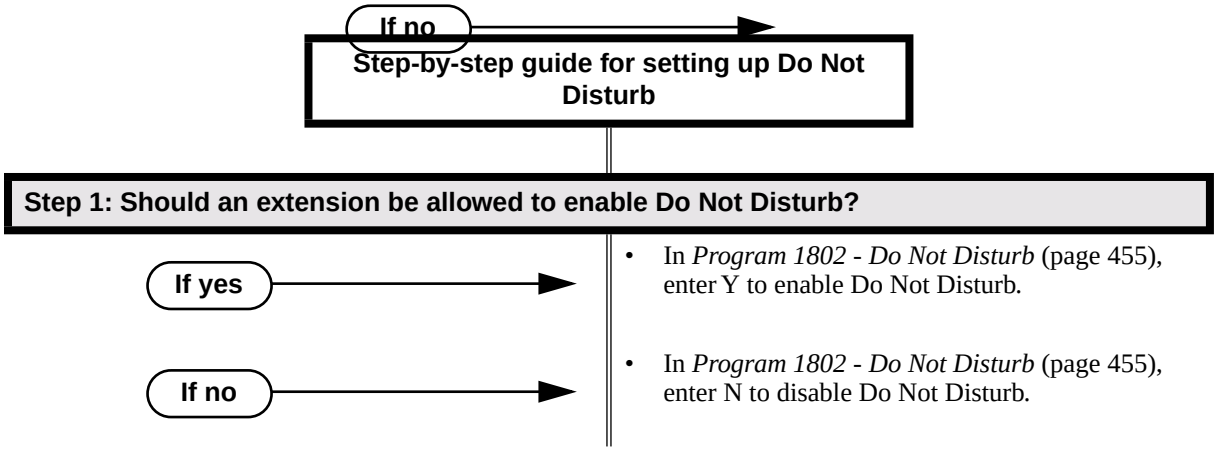
Conditions

A system reset or power failure cancels DND.

Default Setting

Do Not Disturb enabled.

Programming Guide



Programming List

Program 1802 - Do Not Disturb (page 455)
Enter Y to enable Do Not Disturb at the extension.

Other Related Features

Attendant Position (page 24)
The attendant can have Do Not Disturb. In addition, pressing DND at the attendant actives the night mode for any trunks directly terminated to the attendant.

Background Music (page 35)
DND does not affect the operation of Background Music.
Call Forwarding (page 43)
Call Forwarding considers an extension in DND as busy. In addition, an extension can have both DND and Call Forwarding enabled at the same time.
Call Forwarding Cancel (page 47)
Canceling Call Forwarding system-wide also cancels DND.
Call Waiting / Camp-On (page 51)
An extension cannot Camp-On to a busy co-worker that is in Do Not Disturb.
Callback (page 54)
An extension cannot leave a Callback for a busy co-worker that is in Do Not Disturb.
Night Service / Night Ring (page 200)
The attendant presses DND to put the system in the night mode.
Extension Hunting (page 121)
Placing an agent in DND temporarily removes it from the UCD group.
Hotline (page 160)
An extension user can press their Hotline key twice to override their Hotline partner's DND.
Message Waiting (page 187)
An extension user can leave a Message Waiting at an extension in Do Not Disturb.
Night Service / Night Ring (page 200)
A DIL destination activates the night mode for the DIL when they press DND.
Off-Premise Extensions / On-Premise SLT Extensions (page 207)
On- and Off-Premise extensions cannot use DND.
Paging (page 214)
DND blocks Paging announcements.
Reverse Voice Over (page 245)
DND does not block Reverse Voice Over.

Feature Operation

To activate DND at your extension:

You can activate DND anytime while idle or on a call.

1. Press **DND**.

	N/A
	DND flashes fast.

To cancel Do Not Disturb:

	N/A
	DND flashes fast.

1. Press **DND**.

	N/A
	DND goes out.

Description

LCCPU 01.00.00 | Not available.

Description

LCCPU 01.00.00	Not available.

Equal Access Compatibility

Description

LCCPU 01.00.00 | See *Toll Restriction* on page 314.

Description

LCCPU 01.00.00 | Available.

Lets calls ring longer that 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 users that cannot get to their phones quickly to pick up calls (such as a warehouse worker). Extended Ringing is available with the following features:

- **Call Forwarding**
  A call rings an extension with RNA call forwarding enabled for an extended period before routing the the forwarded destination.
- **Direct Inward Line**
  DILs ring for an extended period before routing the the overflow destination.
- **Transfer**
  Transferred trunks ring for an extended period before recalling the transferring extension.

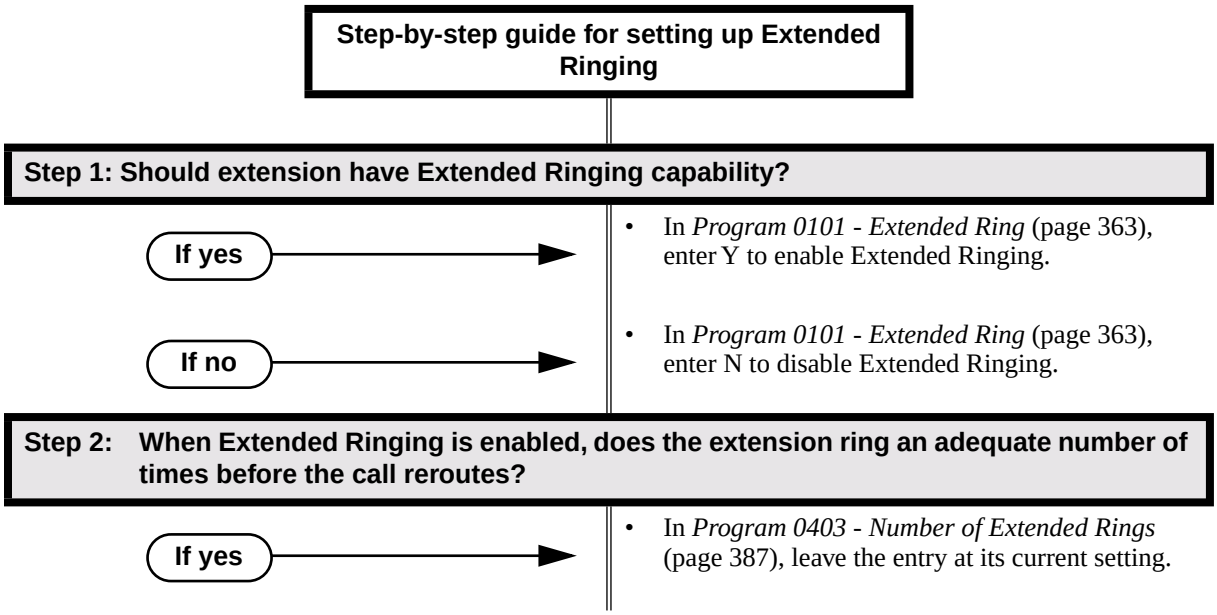
Conditions

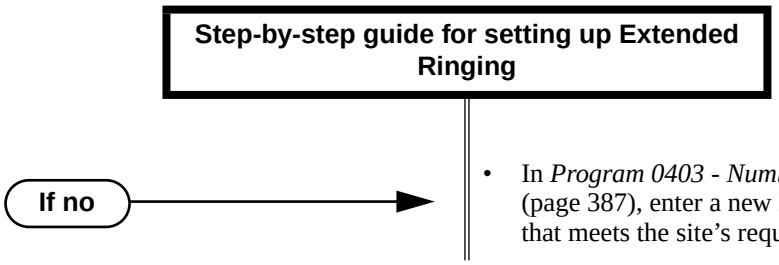
None

Default Setting

Disabled.

Programming Guide





Programming List

Program 0101 - Extended Ring (page 363)
In an extension's Class of Service, enter Y to enable Extended Ringing.
Program 0403 - Number of Extended Rings (page 387)
Set the duration of the Extended Ringing.

Other Related Features

Call Forwarding (page 43)
With Extended Ringing enabled, RNA call forwarding rings an extension for the *Number of Extended Rings* before routing to the forwarded destination.
Key Ring (page 170)
With Extended Ringing, a call rings longer at its destination before diverting to Key Ring.
Transfer (page 324)
With Extended Ringing enabled, transferred trunks ring the destination extension for the *Number of Extended Rings* before recalling the transferring extension.

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

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 trunk calls, DILs to a hunt group member, and ringing Intercom calls. Hunting does not occur for Key Ring and Ring Group calls.

There are four types of Circular Hunting:

- **Ring No Answer Trunk** (Option 1)
  Hunting will occur for unanswered trunk calls. Hunting will not occur for unanswered ringing Intercom calls or while the member extension is busy.
- **Busy/Ring No Answer Trunk** (Option 2)
  Hunting will occur for unanswered trunk calls and for trunk calls to the member extension while it is busy. Hunting will not occur for ringing Intercom calls.
- **Busy/Ring No Answer All Calls** (Option 3)
  Hunting will occur for unanswered trunk and ringing Intercom calls, and for trunk and ringing Intercom calls to the member extension while it is busy.
- **Busy Trunk** (Option 4)
  Hunting will occur for trunk calls to the member extension while it is busy. Hunting will not occur for unanswered trunk and ringing Intercom calls.

Circular Hunting Notes:

- If a call cycles through the entire Circular Hunting group and remains unanswered, it follows normal recall/routing programming. For example, a transferred call will recall the transferring extension and, if still unanswered, go to Key Ring.
- For type 3 hunting, an Intercom call will stop hunting when it voice-announces. Extension Hunting follows the Handsfree Answerback/Forced Intercom Ringing setup at each extension.
- Placing an extension in DND temporarily removes it from the Circular Hunting group.

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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 trunk calls, DILs to a hunt group member, and ringing Intercom calls. Hunting does not occur for Key Ring and Ring Group calls.

Just like Circular Hunting, there are four types of Terminal Hunting:

- **Ring No Answer Trunk** (Option 1)
  Hunting will occur for unanswered trunk calls. Hunting will not occur for unanswered ringing Intercom calls or while the member extension is busy.
- **Busy/Ring No Answer Trunk** (Option 2)
  Hunting will occur for unanswered trunk calls and for trunk calls to the member extension while it is busy. Hunting will not occur for ringing Intercom calls.
- **Busy/Ring No Answer All Calls** (Option 3)
  Hunting will occur for unanswered trunk and ringing Intercom calls, and for trunk and ringing Intercom calls to the member extension while it is busy.
- **Busy Trunk** (Option 4)
  Hunting will occur for trunk calls to the member extension while it is busy. Hunting will not occur for unanswered trunk and ringing Intercom calls.

Terminal Hunting Notes:

- If a call cycles through the entire Terminal Hunting group and remains unanswered, it follows normal recall/routing programming. For example, a transferred call will recall the transferring extension and, if still unanswered, go to Key Ring.
- Placing an extension in DND temporarily removes it from the Terminal Hunting group.
- For type 3 hunting, an Intercom call will stop hunting when it voice-announces. Extension Hunting follows the Handsfree Answerback/Forced Intercom Ringing setup at each extension.

Uniform Call Distribution (UCD) Hunting

Like Circular and Terminal Hunting, a UCD Hunting group 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 active UCD hunting, an incoming call must route to the UCD 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 Hunting group are busy, the call can route to the programmed UCD Overflow destination.

UCD Hunting Notes:

- Unanswered transferred calls and DILs continue to cycle through the UCD group as long as an agent is available.
- Placing an extension in Do Not Disturb temporarily removes it from the UCD group.
- Intercom calls to the UCD master number always ring the agent extensions.
- If a UCD Group is set to overflow to Voice Mail, overflow will divert to the Voice Mail Automated Attendant.

Conditions

None

Default Setting

Hunting not set up.

Programming Guide

Step-by-step guide for setting up Circular Hunting

Step 1: Assign the hunt type to each extension in the Circular Hunting group.

- In *Program 1807 - Hunt Type* (page 469), enter the hunt type for each extension in the hunt group:
  1 = Ring No Answer Trunk
  2 = Busy/Ring No Answer Trunk
  3 = Busy/Ring No Answer All Calls
  4 = Busy Trunk

Step 2: Set up the hunt destination routing.

- In *Program 1807 - Hunt Destination* (page 470), set up the circular hunt routing. Each extension should route to the next in the group. In addition, the last extension should route back to the first.

Step 3: Do calls ring each hunt group member for the correct interval (i.e., neither too long nor too short) before routing to the next extension in the group?

If yes →

- In *Program 0401 - Transfer Recall* (page 375), leave the entry at its current setting.

If no →

- In *Program 0401 - Transfer Recall* (page 375), change the Transfer Recall interval to meet the site requirements. (This setting also determines how long a trunk call waits at a busy member extension before routing.)

Step 4: Does a DIL to a hunt group member ring for the correct interval (i.e., neither too long nor too short) before routing to the next extension in the group?

If yes →

- In *Program 0401 - DIL No Answer* (page 376), leave the entry at its current setting.

If no →

- In *Program 0401 - DIL No Answer* (page 376), change the DIL No Answer interval to meet the site requirements.

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Extension Hunting

Step-by-step guide for setting up Terminal Hunting (Page 1 of 2)

Step 1: Assign the hunt type to each extension (except for the last) in the Terminal Hunting group.

- In *Program 1807 - Hunt Type* (page 469), enter the hunt type for each extension in the hunt group:
  1 = Ring No Answer Trunk
  2 = Busy/Ring No Answer Trunk
  3 = Busy/Ring No Answer All Calls
  4 = Busy Trunk

Step 2: Make sure the last extension in the Terminal Hunting group has hunting undefined.

- In *Program 1807 - Hunt Type* (page 469), press CLEAR for the last extension in the Terminal Hunting group.

Step 3: Set up the hunt destination routing (except for the last extension in the group).

- In *Program 1807 - Hunt Destination* (page 470), set up the terminal hunt routing. Each extension should route to the next in the group (except for the last — see below).

Step 4: Make sure the last extension in the Terminal Hunting group has no hunt destination.

- In *Program 1807 - Hunt Destination* (page 470), press CLEAR for the last extension in Terminal Hunting group.

Step 5: Do calls ring each hunt group member for the correct interval (i.e., neither too long nor too short) before routing to the next extension in the group?

If yes →

- In *Program 0401 - Transfer Recall* (page 375), leave the entry at its current setting.

If no →

- In *Program 0401 - Transfer Recall* (page 375), change the Transfer Recall interval to meet the site requirements. (This setting also determines how long a trunk call waits at a busy member extension before routing.)

Step-by-step guide for setting up Terminal Hunting (Page 2 of 2)

Step 6: Does a DIL to a hunt group member ring for the correct interval (i.e., neither too long nor too short) before routing to the next extension in the group?

If yes

- In *Program 0401 - DIL No Answer* (page 376), leave the entry at its current setting.

If no

- In *Program 0401 - DIL No Answer* (page 376), change the DIL No Answer interval to meet the site requirements.

Step-by-step guide for setting up UCD Hunting (Page 1 of 2)

Step 1: Set up the UCD Hunting group master number.

- In *Program 0510 - Hunt Group Master Number* (page 402), assign the UCD Hunting group master number.
- UCD Hunting group master numbers can be 100-299, 332-400, or 417-899. They cannot be in the extension (300-331) or trunk (401-416) number range. By default, the systems uses codes beginning with 0 for operator access and 9 for trunk/trunk group access.

Step 2: When all extensions in the UCD group are busy, should calls to the UCD group overflow to an alternate destination?

- In *Program 0510 - Overflow Destination* (page 402), enter the UCD overflow destination. The destination can be an extension, Ring Group master number or another UCD Hunting group master number.

Step 3: Assign hunt type 05 to each member of the UCD group.

- In *Program 1807 - Hunt Type* (page 469), make sure each extension in the UCD group has hunt type 05.

Step 4: Make sure each extension in the hunt group has the same master number assignment.

- In *Program 1807 - Hunt Master Number* (page 470), make sure each extension in the same UCD group has the same master number. Refer to **Program 0510 - Hunt Group Master Number** (page 402) when setting up master numbers.

Step 5: When all UCD group members are busy, do calls queue for the correct interval (i.e., neither too long nor too short) before routing to the overflow destination?

If yes →

- In *Program 0401 - ACD/UCD Overflow* (page 377), leave the entry at its current setting.

If no →

- In *Program 0401 - ACD/UCD Overflow* (page 377), change the ACD/UCD Overflow interval to meet the site requirements.

Description

LCCPU 01.00.00 | Available.

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 and trunks. 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:
Attendant Position	Reach the system operator(s)	0 or 01-04
Intercom	Call a co-worker over the Intercom	300-331
Direct Trunk Access	Directly access a trunk	401-416
Central Office Calls, Placing	Access a Trunk Group	90-98

Conditions

None

Default Setting

See the table above.

Programming Guide

Step-by-step guide for setting up Flexible Numbering Plan (Page 1 of 2)

Step 1: Do you want to change the digits users dial to reach the system operator(s)?

If yes

- In *Program 0501 - Numbering Plan* (page 392), change the options for digit 0 and the new operator access digit. Review your new choice to be sure it does not affect other system operations.

If no

- In *Program 0501 - Numbering Plan* (page 392), leave the options for digit 0 at their default setting.

Step-by-step guide for setting up Flexible Numbering Plan (Page 2 of 2)

Step 2: Do you want to change the digits users dial to reach coworkers over the Intercom?

If yes

- In *Program 0501 - Numbering Plan* (page 392), change the options for digit 3 and the new Intercom access digit. Review your new choice to be sure it does not affect other system operations.
- In *Program 0505 - Station Port Extension Numbers* (page 398), assign new extension numbers to station ports.

If no

- In *Program 0501 - Numbering Plan* (page 392), leave the options for digit 3 at their default setting.

Step 3: Do you want to change the digits users dial to directly access a trunk?

If yes

- In *Program 0501 - Numbering Plan* (page 392), change the options for digit 4 and the new trunk access digit. Review your new choice to be sure it does not affect other system operations.
- In *Program 0504 - Trunk Port Extension Numbers* (page 396), assign new extension numbers to trunk ports.

If no

- In *Program 0501 - Numbering Plan* (page 392), leave the options for digit 4 at their default setting.

Step 4: Do you want to change the digits users dial to access a Trunk Group?

If yes

- In *Program 0501 - Numbering Plan* (page 392), change the options for digit 9 and the new Trunk Group access digit. Review your new choice to be sure it does not affect other system operations.

If no

- In *Program 0501 - Numbering Plan* (page 392), leave the options for digit 9 at their default setting.

Programming List

Program 0501 - Numbering Plan (page 392)
Customize the system's number plan by changing the digits users dial to reach an operator, co-workers (i.e., Intercom), Direct Trunk Access and Trunk Group Access.

Program 0504 - Trunk Port Extension Numbers (page 396)
Enter the extension number associated with each trunk port.

Program 0505 - Station Port Extension Numbers (page 398)
Enter the extension number associated with each station port.

Other Related Features

Attendant Position (page 24)
Change the digits users dial to reach the system operators (normally 0 or 01-04).

Central Office Calls, Placing (page 63)
Change the digits users dial to access a Trunk Group for an outside call (normally 90-98).

Direct Trunk Access (page 106)
Change the digits users dial to directly access a trunk (normally 401-416).

Extension Hunting (page 121)
UCD Hunting group master numbers can be 100-299, 332-400, or 417-899. They cannot be in the extension (300-331) or trunk (401-416) number range. By default, the systems uses codes beginning with 0 for operator access and 9 for trunk/trunk group access.

Intercom (page 165)
Change the digits users dial to reach co-worker's over the Intercom (normally 300-331).

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

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

Forced Trunk Disconnect allows an extension user to disconnect (release) another extension's active trunk call. Forced Trunk Disconnect lets a user access a busy trunk in an emergency, when no other trunks are available. Maintenance technicians can also use Forced Trunk Disconnect to release a trunk on which there is no conversation. This can happen if a trunk does not properly disconnect when the outside party hangs up.

CAUTION

Forced Trunk Disconnect abruptly terminates the active call on the trunk. Always use this feature in an emergency and when no other trunks are available.

Conditions

None

Default Setting

Enabled for attendants (COS 1). Disabled for all other extensions (COS 2-15).

Programming Guide

Step-by-step guide for setting up Forced Trunk Disconnect

Step 1: Do you want to be able to disconnect another extension's active trunk call?

If yes

- In *Program 0101 - Forced Trunk Disconnect* (page 363), enter Y to enable Forced Trunk Disconnect for the extension.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extension.
- *Program 1803 - Extension Line Access Assignments* (page 461), make sure the extension has outgoing (option 2) or full (option 3) access to the trunks it should be able to disconnect.

If no

- In *Program 0101 - Forced Trunk Disconnect* (page 363), enter N to disable Forced Trunk Disconnect for the extension.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extension.

Forced Trunk Disconnect

Programming List

Program 0101 - Forced Trunk Disconnect (page 363)
In an extension's Class of Service, enter Y to enable the ability to use Forced Trunk Disconnect.

Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Program 1803 - Extension Line Access Assignments (page 461)
An extension can only use Forced Trunk Disconnect on a trunk to which it has outgoing (option 2) or full (option 3) access.

Other Related Features

Attendant Position (page 24)
System attendants normally have Forced Trunk Disconnect capability.

Barge In (Intrusion) (page 37)
As an alternative to disconnecting the trunk, Barge In instead.

Direct Trunk Access (page 106)
An extension user with Direct Trunk Access can dial a code for the busy trunk before using Forced Trunk Disconnect.

Tandem Trunking / Unsupervised Conference (page 307)
An extension user can end an Unsupervised Conference by using Forced Trunk Disconnect on one of the trunks in the tandem call.

Feature Operation

To disconnect a busy trunk:

1. Press line key for busy trunk.
   OR
   Press **ICM** and dial the trunk's Direct Trunk Access code (e.g., 401 for trunk 1).
   Busy tone.
   Line/loop key on (red).
   Refer to Direct Trunk Access for the specifics.
2. Dial # to disconnect the line.
   The line key goes out and you hear Intercom dial tone. To place a call on the trunk, press the line key and dial the number.

Description

LCCPU 01.00.00 | Available.

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 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
- Transfered calls
- Direct Inward Lines
- Calls on trunks assigned to the Pickup Group

To simplify picking up calls, an extension can have Programmable Function 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.

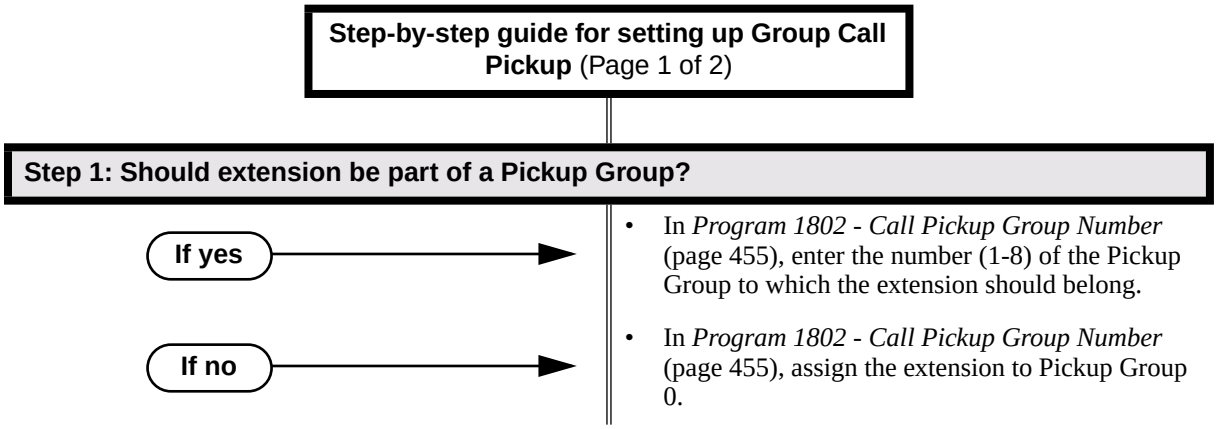
Conditions

None

Default Setting

No Pickup Groups assigned.

Programming Guide



Step-by-step guide for setting up Group Call Pickup (Page 2 of 2)

Step 2: Should an incoming call on a trunk ring all extensions in a Pickup Group?

If yes

- In *Program 1003 - Call Pickup Group* (page 426), assign the trunk to a Pickup Group (1-8).
- In *Program 1803 - Extension Line Access Assignments* (page 461), make sure extensions in the Pickup Group have incoming (option 1) or full (option 3) access to the trunk.
- In *Program 1805 - Ring Assignments* (page 466), make sure to enable ringing for all extensions in the Pickup Group that should ring for the trunk.

If no

- In *Program 1003 - Call Pickup Group* (page 426), assign the trunk to Pickup Group 0.

Step 3: Should extension have one-touch Group Call Pickup?

If yes

- In *Program 1701 - Group Pickup Immediate Ring* (page 437), use code 09 to assign a key as an immediate ring Group Call Pickup key.

OR

- In *Program 1701 - Group Pickup No Ring* (page 437), use code 10 to assign a key as a no ring (lamp only) Group Call Pickup key.

OR

- In *Program 1701 - Group Pickup Delay Ring* (page 437), use code 11 to assign a key as a delayed ring Group Call Pickup key.

If no

- In *Program 1701 - Programmable Function Key Assignments* (page 436), do not assign a key as a Group Pickup key (codes 09, 10 or 11).

Step 4: Should DSS Console have one-touch Group Call Pickup?

If yes

- In *Program 1704 - Group Pickup Immediate Ring* (page 445), use code 09 to assign a key as an immediate ring Group Call Pickup key.

OR

- In *Program 1704 - Group Pickup No Ring* (page 445), use code 10 to assign a key as a no ring (lamp only) Group Call Pickup key.

OR

- In *Program 1704 - Group Pickup Delay Ring* (page 446), use code 11 to assign a key as a delayed ring Group Call Pickup key.

If no

- In *Program 1704 - DSS Console Key Assignment* (page 444), do not assign a key as a Group Pickup key (codes 09, 10 or 11).

Programming List

Program 1003 - Call Pickup Group (page 426)
Have an incoming call on the trunk ring all the extensions in the assigned pickup group.

Program 1701 - Programmable Function Key Assignments (page 436)
Assign a programmable key on an extension as a Group Call Pickup key (09 = Immediate Ring, 10 = No Ring, 11 = Delayed Ring). The options are 1-8 (Pickup Groups 1-8) or 0 (unassigned).

Program 1704 - DSS Console Key Assignment (page 444)
Assign a programmable key on an extension as a Group Call Pickup key (09 = Immediate Ring, 10 = No Ring, 11 = Delayed Ring). The options are 1-8 (Pickup Groups 1-8) or 0 (unassigned).

Program 1802 - Call Pickup Group Number (page 455)
Assign the Call Pickup Group (1-8, 0 = undefined) for each extension.

Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access).

Program 1805 - Ring Assignments (page 466)
Assign ringing for each trunk at each extension (1 = Lamp only [day and night], 2 = Ringing day and night, 3 = Night Ring only, lamp during the day, 4 = Delay ring day and night).

Other Related Features

Direct Inward Line (page 88)
DILs to an extension activate Group Call Pickup if the extension ringing is a member of a Pickup Group.

Direct Station Selection (DSS) Console (page 98)
DSS Consoles can have Group Call Pickup keys.

Directed Call Pickup (page 108)
Directed Call Pickup is another way to pick up calls ringing an extension.

Intercom (page 165)
Ringing Intercom calls activate Group Call Pickup if the extension ringing is a member of a Pickup Group.

Transfer (page 324)
A trunk call transferred to an extension in a Pickup Group activates Group Call Pickup.

Feature Operation

To answer a call ringing a phone in your Pickup Group:

	Trunk ringing.
	(Optional) Group Pickup flashing (red).

1. Lift handset.
2. Press flashing Group Pickup .

	Conversation with caller.
	N/A.

OR

Dial *1.

	Conversation with caller.
	N/A.

Group Listen

Description

LCCPU 01.00.00 | Available.

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.

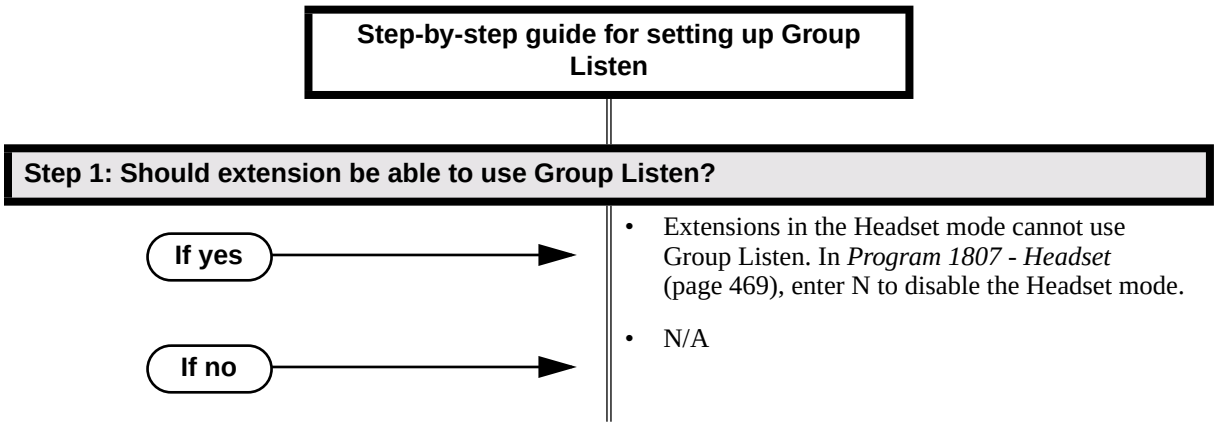
Conditions

None

Default Setting

Enabled

Programming List



Programming List

Program 1807 - Headset (page 469)

Extensions in the Headset mode cannot use Group Listen. If you need Group Listen, be sure to enter N to disable the Headset mode.

Other Related Features

Single Line Telephones (page 260)

Group Listen is not available to single line telephones.

Feature Operation

To initiate Group Listen:

1. Place or answer call using the handset.
2. Press **SPK** twice (but do not hang up).

Use handset to speak to caller. Caller's voice will broadcast over the telephone speaker.

SPK flashes slowly (red).

You can talk to the caller through your handset. You and your co-workers hear your caller's voice over your phone's speaker.

Your handsfree microphone and handset receiver are off.

To talk handsfree after initiating Group Listen:

1. Press **SPK** twice.

N/A.

SPK on.

2. Hang up.

Handsfree conversation with caller.

SPK on.

To cancel Group Listen and return to your handset:

1. Do not hang up.
2. Press flashing **SPK**.

Handset conversation with caller.

SPK off.

You can talk to your caller over your handset. Your co-workers can no longer hear your caller's voice.

Description

LCCPU 01.00.00 | Available.

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 trunk 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 number can be any valid extension number not already in use.

Overflow for Group Ring Calls

If unanswered, DILs to a Ring Group can route to a programmed overflow destination. The overflow destination can be an extension, another Ring Group, UCD Group or Voice Mail. You can set up separate DIL overflow destinations for the day mode and at night. If unanswered at the overflow destination, the call diverts to Key Ring. Note that a Ring Group DIL goes into the night mode when any extension with night mode capability presses their Night key. See *Night Service / Night Ring* on page 200 for more.

Conditions

None

Default Setting

No Ring Groups assigned.

Programming Guide

Step-by-step guide for setting up Group Ring
(Page 1 of 3)

Step 1: Should extensions be in a Ring Groups?

If yes

- In *Program 0511 - Ring Group Master Extension Numbers and Names* (page 404), assign names and extension numbers to Ring Groups (1-8).

  Ring Group master numbers can be 100-299, 332-400, or 417-899. They cannot be in the extension (300-331) or trunk (401-416) number range. By default, the systems uses codes beginning with 0 for operator access and 9 for trunk/trunk group access.

- *Program 1802 - Ring Group Number* (page 455), assign extensions to Ring Groups.

If no

- In *Program 0511 - Ring Group Master Extension Numbers and Names* (page 404), do not assign names and extension numbers to Ring Groups.
- *Program 1802 - Ring Group Number* (page 455), do not assign extensions to Ring Groups.

Step 2: Check to be sure each trunk's circuit type matches the connected trunk circuit.

- In *Program 1001 - Trunk Circuit Type* (page 416), enter the correct circuit type for each trunk (51 = loop start DTMF, 52 = loop start DP, 53 = ground start DTMF, 54 = ground start DP).

Step 3: Do you want to assign a DIL to the Ring Group in the day mode?.

If yes

- In *Program 1003 - Direct Termination (Day)* (page 426), assign the DIL to the Ring Group master number. (You can also assign a DIL to an extension, UCD Group master number, or Voice Mail master number.)

- In *Program 1003 - Direct Termination (Day)* (page 426), do not assign the DIL to a Ring Group master number.

Step 4: Do you want an unanswered Ring Group DIL to overflow during the day mode?

- In *Program 1003 - Activate Overflow During the Day* (page 426), enter Y.

Description

LCCPU 01.00.00 | Available.

- 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.

Conditions

None

Default Setting

Enabled

Programming Guide

Step-by-step guide for setting up Handsfree Answerback

Step 1: Should Intercom calls voice-announce system-wide?

If yes

- In *Program 0201 - Voice-Announced Intercom Calls* (page 367), enter Y to allow Intercom calls to voice-announce system-wide. Users can still dial 1 to have their calls ring.
- In *Program 1807 - Station Voice Announced Intercom Calls* (page 469), enter Y to enable voice-announced intercom calls for specific extensions. The User-Programmable Options # **IV** (#48) and # **IR** (#47) locally override this setting.

If no

- In *Program 0201 - Voice-Announced Intercom Calls* (page 367), enter N to have all Intercom calls ring system-wide. Users cannot dial 1 to have their calls voice-announce.

Step 2: Should user be able to respond to a voice-announced Intercom call without lifting the handset (i.e., by using Handsfree Answerback)?

If yes

- In *Program 0201 - Handsfree Reply on Intercom Calls* (page 367), enter Y to enable Handfree Answerback system-wide.
- In *Program 1802 - Handsfree Reply on Intercom Calls* (page 456), enter Y to enable Handsfree Answerback for specific extensions.

If no

- In *Program 0201 - Handsfree Reply on Intercom Calls* (page 367), enter N to disable Handsfree answerback system-wide. Users must lift the handset to respond to voice-announced Intercom calls.

Programming List

Program 0201 - Handsfree Reply on Intercom Calls (page 367)
Enter Y to allow extension user to respond to voice-announced Intercom calls by just speaking toward the phone (i.e., by using Handsfree Answerback). When you enter N, the extension user must lift the handset to speak.

Program 0201 - Voice-Announced Intercom Calls (page 367)
Enter Y to enable voice-announced Intercom calls system-wide. If disabled, all Intercom calls ring (i.e., Forced Intercom Ringing is enabled).

Program 1802 - Handsfree Reply on Intercom Calls (page 456)
Enter Y to enable Handsfree reply (Handsfree Answerback) on a per-extension basis. Intercom calls initially ring when this option is disabled. This option requires that you have previously enabled *0201 - Handsfree Reply on Intercom Calls.*

Program 1807 - Station Voice Announced Intercom Calls (page 469)
Enter Y to enable voice-announced Intercom calls on a per-extension basis. This option requires that you have previously enabled *0201 - Voice-Announced Intercom Calls*. The User-Programmable Options # **IV** (#48) and #**IR** #47) locally override this setting.

Other Related Features

Automatic Handsfree (page 30)
Automatic Handsfree allows a keyset user to place or answer a call Handsfree by just pressing a key — without pressing **SPK** first.

Headset Compatibility (page 154)
Handsfree is not available to extensions in the headset mode. Handsfree Answerback still available — depending on system programming.

Intercom (page 165)
Handsfree Answerback allows a user to answer an Intercom call by just speaking toward the phone.

Microphone Mute (page 190)
Use Microphone Mute to temporarily turn off the Handsfree microphone.

Off-Premise Extensions / On-Premise SLT Extensions (page 207)
On- and Off-Premise Extensions do not have Handsfree and Handsfree Answerback capability.

Feature Operation

Handsfree

To activate Handsfree instead of lifting the handset:

1. Press **SPK**.

	Handsfree conversation with caller.
	SPK on.

To talk on a Handsfree call:

1. Speak toward phone.
   To temporarily turn off the Handsfree microphone, see Microphone Mute on page 190.

To hang up a handsfree call:

1. Press **SPK**.

	Conversation stops.
	SPK off.

To change a handset call into a Handsfree call:

1. Press **SPK**.

	N/A.
	SPK on.

2. Hang up the handset.
   If you don't hang up, you'll activate Group Listen instead.

To change a Handsfree call into a handset call:

1. Lift handset.

	Conversation with caller in handset.
	SPK off.

Handsfree Answerback

Operation is automatic if enabled in system programming.

User Programmable Feature		
#IV	**#48**	Handsfree Answerback On (Forced Intercom Ringing Off)
#IR	**#47**	Forced Intercom Ringing On (Handsfree Answerback Off)

Description

LCCPU 01.00.00 | Available.

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.

An example of a compatible headset is UNEX Model Pro-MP10A.

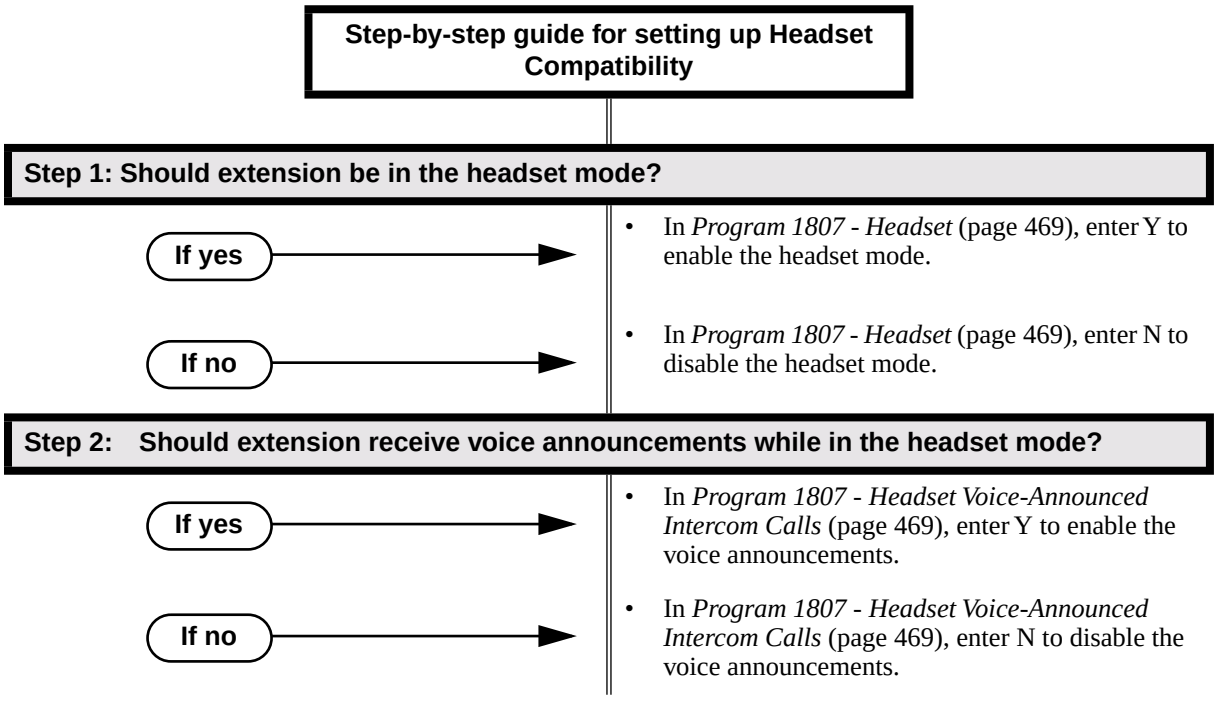
Conditions

None

Default Setting

Disabled

Programming Guide



Programming List

Program 1807 - Headset Voice-Announced Intercom Calls (page 469)

Enter Y to enable or N to disable incoming voice-announced Intercom calls while the extension is in the headset mode.

Program 1807 - Headset (page 469)
Enter Y to enable the Headset mode.

Other Related Features

Automatic Handsfree (page 30)
While in the headset mode, Automatic Handsfree simplifies answering trunk calls.

Background Music (page 35)
Background Music plays in the headset when the extension is in the headset mode.

Group Listen (page 142)
Group Listen is not available to extensions in the headset mode.

Handsfree and Handsfree Answerback (page 150)
Handsfree is not available to extensions in the headset mode. Handsfree Answerback is available — depending on system programming.

Off-Hook Signaling (page 205)
An extension in the headset mode can receive Camp On tones for trunk calls, but not off-hook ringing.

Off-Premise Extensions / On-Premise SLT Extensions (page 207)
On- and Off-Premise Extensions do not have headset capability.

Paging (page 214)
While in the headset mode, the extension user can hear Paging announcements in the headset.

Single Line Telephones (page 260)
Headset Compatibility is not available to single line telephones.

Voice Over (page 350)
An extension user cannot Voice Over to a co-worker in the headset mode.

Feature Operation

To enable the headset mode:

1. Unplug the telephone handset but leave it in the handset cradle.
2. Plug in the headset.

When in the headset mode:

- Press a line key to place or answer a trunk call.
  OR
- Press **ICM** to get Intercom dial tone.
  OR
- If on a call, press **SPK** to hang up.

Description

LCCPU 01.00.00 | Available.

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. 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 trunk appears busy to all other keysets that have a key for the trunk. 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 a trunk 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 or ICM, a Call Coverage Key or a Hotline key.

Intercom Hold

A user can place an Intercom call on Hold. The Intercom call on Hold does not indicate at any other extension.

Conditions

None

Default Setting

System Hold, Exclusive Hold and Automatic Hold enabled.

Programming Guide

Step-by-step guide for setting up Hold

Step 1: Should extension be able to use Automatic Hold?

If yes

- In *Program 0101 - Automatic Hold* (page 364), enter Y to enable Automatic Hold.
- *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

If no

- In *Program 0101 - Automatic Hold* (page 364), enter N to disable Automatic Hold.
- *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

Step 2: Does an unanswered call on System Hold recall the extension that placed it on Hold after the correct interval?

If yes

- In *Program 0403 - Hold Recall* (page 386), leave the Hold Recall interval at its current setting.

If no

- In *Program 0403 - Hold Recall* (page 386), change the Hold Recall interval to meet the site requirements.

Step 3: Does an unanswered call on Exclusive Hold recall the extension that placed it on Hold after the correct interval?

If yes

- In *Program 0403 - Exclusive Hold* (page 386), leave the Exclusive Hold Recall interval at its current setting.

If no

- In *Program 0403 - Exclusive Hold* (page 386), change the Exclusive Hold Recall interval to meet the site requirements.

Step 4: Does an unanswered Hold recall revert to Key Ring after the proper interval?

If yes

- In *Program 0401 - Trunk Revert* (page 376), leave the Trunk Revert interval at its current setting.

If no

- In *Program 0401 - Trunk Revert* (page 376), change the Trunk Revert interval to meet the site requirements.

Programming List

Program 0101 - Automatic Hold (page 364)
Enter Y to enable Automatic Hold at an extension.
Program 0401 - Trunk Revert (page 376)
This timer sets how long Hold Recall rings the extension that placed the call on hold before Key Ring occurs. Key Ring rings all extensions programmed to ring for that line.
Program 0403 - Hold Recall (page 386)
Set how long a call stays on Hold before it recalls the extension that initially placed it on Hold.
Program 0403 - Exclusive Hold (page 386)
Set how long a call stays on Exclusive Hold before it recalls the extension that initially placed it on Exclusive Hold.
Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Other Related Features

Call Timer (page 48)
A user's Call Timer starts when they pick up a call from Hold. If they place the call on Hold and another user picks it up, the timer restarts for the new user.
Directed Call Pickup (page 108)
Directed Call Pickup can pick up Hold recalls.
Key Ring (page 170)
Unanswered Hold Recalls revert to Key Ring if not picked up.
Music On Hold (page 195)
If installed, Music on Hold plays to callers on Hold.
Off-Hook Signaling (page 205)
An extension user can place their current call on Hold and answer the waiting call.
Transfer (page 324)
If an extension receiving a screened Transfer answers the screen and immediately hangs up (before the transferring extension), the call goes on Exclusive Hold at the transferring extension.

Feature Operation

To place a trunk call on System Hold:

1. Press **HOLD**.

	N/A
	The line key winks (on) while on Hold, flashes slowly while recalling. The line key is green for your calls - red for your co-workers.

2. Hang up.

To pick up a trunk call on System Hold:

1. Press flashing line key.

	Conversation with caller.
	Line key on (green).

To place a trunk call on Exclusive Hold:

1. Press **HOLD** twice.

N/A

For you, the line key winks (on - green) while on Hold, flashes slowly while recalling. For your co-worker's the line key is on (red).

2. Hang up.

To pick up a trunk call on Exclusive Hold:

1. Press flashing line key.

Conversation with caller.

Line key on (green).

To place an Intercom call on Hold:

You can place both voice-announced and ringing Intercom calls on Hold.

1. Press **HOLD**.

N/A

ICM goes out.

2. Hang up.

To pick up a call on Intercom Hold:

1. Lift handset
2. Press **HOLD**.

Conversation with caller.

ICM on.

Description

LCCPU 01.00.00 | Available.

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

Hotline gives a keyset user one-button calling and Transfer to another extension (the Hotline partner). Hotline helps co-workers that work closely together. The Hotline partners can call or Transfer calls to each other just by pressing a single key.

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

Hotline Busy Lamp Indications	
When the key is:	**The covered extension is:**
Off	Idle or not installed
On	Busy or ringing
Flashing fast	In Do Not Disturb

Conditions

An extension's Hotline partner can be any other keyset (e.g., physical port). An extension cannot have a Hotline key for master numbers or virutal ports.

Default Setting

No Hotline keys programmed.

Programming Guide

Step-by-step guide for setting up Hotline
(Page 1 of 2)

Step 1: Should extension have a Hotline partner?

If yes

- In *Program 1701 - Hotline Key* (page 436), enter code 05 + the covered extension (300-331) to assign a Hotline key.

If no

- In *Program 1701 - Hotline Key* (page 436), do not enter code 05 to assign a key as a Hotline key.

Step-by-step guide for setting up Hotline
(Page 2 of 2)

Step 2: Should DSS Console also have a Hotline partners?

If yes →
- In *Program 1704 - Hotline Key* (page 445), enter code 05 + the covered extension (300-331) to assign a Hotline key.

If no →
- In *Program 1704 - Hotline Key* (page 445), do not enter code 05 to assign a key as a Hotline key.

Programming List

Program 1701 - Hotline Key (page 436)
Assign a programmable key on an extension as a Hotline key (code 05). The option is your Hotline partner's extension number.

Program 1704 - Hotline Key (page 445)
Assign a programmable key on a DSS Console as a Hotline key (code 04). The option is your Hotline partner's extension number.

Other Related Features

Call Coverage Keys (page 40)
Call Coverage Keys provide many of the features available to Hotline partners.

Direct Station Selection (DSS) Console (page 98)
DSS Consoles can also have Hotline keys.

Do Not Disturb (page 114)
An extension user can press their Hotline key twice to override their Hotline partner's DND

Intercom (page 165)
A user can press a Hotline Key as an alternative to dialing Intercom numbers.

Transfer (page 324)
An extension user can Transfer a call to their Hotline partner by pressing their Hotline key.

Voice Over (page 350)
An extension cannot Voice Over after calling a co-worker by pressing their Hotline key.

Feature Operation

To place a call to your Hotline partner:

1. Press Hotline key.

Two beeps.

Hotline key on (green) and **ICM** on (red).

To Transfer your trunk call to your Hotline partner:

Conversation with caller.

(Optional) Line/loop key on.

1. Press Hotline key.

Two beeps.

Hotline key on (green). Line/loop key flashes.

2. Announce call and hang up.

OR

Hang up to have the call wait at your Hotline partner unnannounced.

If the call is not picked up, it recalls to you after the Transfer Recall interval. See *Transfer* on page 324*for more.*

To answer a call from your Hotline partner:

Two beeps.

ICM on (red).

1. Speak toward phone.

Description

LCCPU 01.00.00 | Available.

Use advanced telephone 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 a trunk call a display keyset user can press the **PARK** soft key to Park their call in orbit.

For additional information on Interactive Soft Key operation, refer to the DS2000 Soft Key Glossary (P/N 80000GLO01). Check with your Sales Representative for the availability of this guide.

Conditions

When an extension's soft keys are enabled or disabled in programming, the user must take some action at the telephone (such as lifting and replacing the handset) before the change takes effect.

Default Setting

Soft keys enabled.

Programming Guide

Step-by-step guide for setting up Interactive Soft Keys

Step 1: Should extension have Interactive Soft Keys?

If yes

- In *Program 0101 - Soft Keys* (page 365), enter Y to enable soft keys.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.
- Take some action at the telephone (such as lifting and replacing the handset) so the change will take effect.

If no

- In *Program 0101 - Soft Keys* (page 365), enter N to enable soft keys.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.
- Take some action at the telephone (such as lifting and replacing the handset) so the change will take effect.

Programming List

Program 0101 - Soft Keys (page 365)
Enable (Y) or disable (Y) an extension's soft keys.
Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Other Related Features

None

Feature Operation

Once enabled, Interactive Soft Key operation is automatic. See the *Soft Key Glossary* (P/N 80000GLO**) for the specifics.

Description

LCCPU 01.00.00 | Available.

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 Anserback and Forced Intercom Ringing, see **Handsfree and Handsfree Answerback** (page 150) for more.

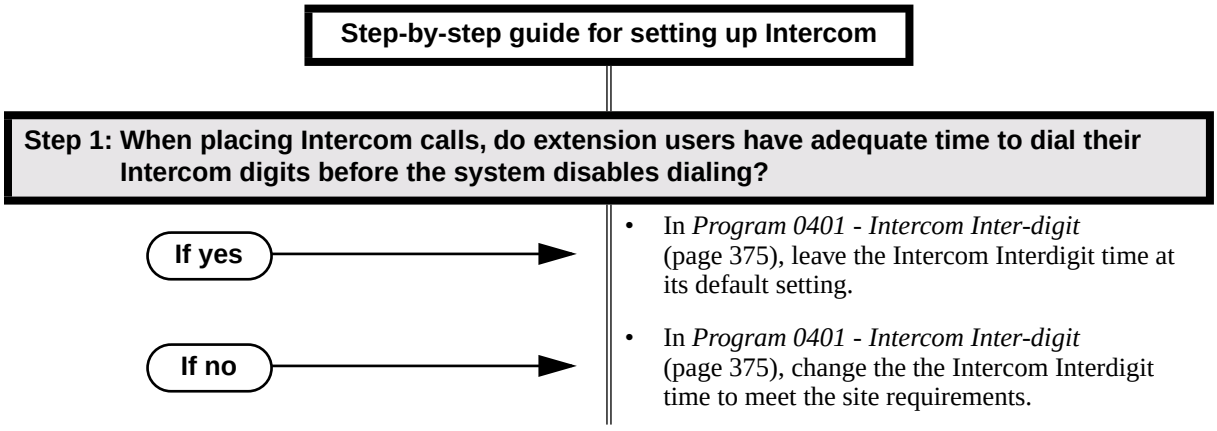
Conditions

None

Default Setting

Intercom calling always enabled.

Programming Guide



Step-by-step guide for setting up Intercom

Step 2: Should Intercom calls voice-announce system-wide?

If yes

- In *Program 0201 - Voice-Announced Intercom Calls* (page 367), enter Y to allow Intercom calls to voice-announce system-wide. Users can still dial 1 to have their calls ring.
- In *Program 1807 - Station Voice Announced Intercom Calls* (page 469), enter Y to enable voice-announced intercom calls for specific extensions. The User-Programmable Options #**IV** (#48) and #**IR** (#47) locally override this setting.

If no

- In *Program 0201 - Voice-Announced Intercom Calls* (page 367), enter N to have all Intercom calls ring system-wide. Users cannot dial 1 to have their calls voice-announce.

Step 3: Should user be able to respond to a voice-announced Intercom call without lifting the handset (i.e., by using Handsfree Answerback)?

If yes

- In *Program 0201 - Handsfree Reply on Intercom Calls* (page 367), enter Y to enable Handfree Answerback system-wide.
- In *Program 1802 - Handsfree Reply on Intercom Calls* (page 456), enter Y to enable Handsfree Answerback for specific extensions.

If no

- In *Program 0201 - Handsfree Reply on Intercom Calls* (page 367), enter N to disable Handsfree answerback system-wide. Users must lift the handset to respond to voice-announced Intercom calls.

Programming List

Program 0201 - Handsfree Reply on Intercom Calls (page 367)
Enter Y to allow extension user to respond to voice-announced Intercom calls by just speaking toward the phone (i.e., by using Handsfree Answerback). When you enter N, the extension user must lift the handset to speak.

Program 0201 - Voice-Announced Intercom Calls (page 367)
Enter Y to enable voice-announced Intercom calls system-wide. If disabled, all Intercom calls ring (i.e., Forced Intercom Ringing is enabled).

Program 1802 - Handsfree Reply on Intercom Calls (page 456)
Enter Y to enable Handsfree reply (Handsfree Answerback) on a per-extension basis. Intercom calls initially ring when this option is disabled. This option requires that you have previously enabled *0201 - Handsfree Reply on Intercom Calls.*

Program 0401 - Intercom Inter-digit (page 375)
When an extension user places a call, they must dial each succeeding digit within this interval.

Program 1807 - Station Voice Announced Intercom Calls (page 469)
Enter Y to enable voice-announced Intercom calls on a per-extension basis. This option requires that you have previously enabled *0201 - Voice-Announced Intercom Calls*. The User-Programmable Options #**IV** (#48) and #**IR** (#47) locally override this setting.

Other Related Features

Attendant Position (page 24)
Designate each extension's operator.

Call Coverage Keys (page 40)
A user can press a Call Coverage Key as an alternative to dialing Intercom numbers.

Call Waiting / Camp-On (page 51)
A user can Camp-On after placing an Intercom call to a busy co-worker.

Callback (page 54)
A user can leave a Callback request after placing an Intercom call to a busy co-worker.

Direct Station Selection (DSS) (page 95)
A user can press a DSS key as an alternative to dialing Intercom numbers.

Directory Dialing (page 110)
Directory Dialing is a convenient alternative to manually dialing Intercom numbers.

Extension Hunting (page 121)
Voice-announced Intercom calls do not initiate hunting.

Flexible Numbering Plan (page 134)
Change the digits users dial to place Intercom calls to co-workers.

Group Call Pickup (page 139)
Ringing Intercom calls activate Group Call Pickup if the extension ringing is a member of a Pickup Group.

Handsfree and Handsfree Answerback (page 150)
Handsfree Answerback allows a user to answer an Intercom call by just speaking toward the phone.

Headset Compatibility (page 154)
Extensions with headsets cannot receive voice-announced Intercom calls.

Hotline (page 160)
A user can press a Hotline Key as an alternative to dialing Intercom numbers.

Last Number Redial (page 174)
Last Number Redial cannot redial Intercom calls.

Message Waiting (page 187)
A user can leave a Message Waiting after placing an Intercom call to a busy co-worker.

Music On Hold (page 195)
Music on Hold plays to Intercom callers on Hold.

Names for Extensions and Trunks (page 198)
Extension names help identify Intercom callers to co-workers.
Off-Premise Extensions / On-Premise SLT Extensions (page 207)
All Intercom calls to On- and Off-Premise Extensions ring.
Ringdown Extension (page 249)
Ringdown Extension follows the voice-announce status of destination extension. For example, if an extension usually voice-announces Intercom calls, a ringdown to that extension will also voice-announce.
Ringing Line Preference (page 251)
Ringing Line Preference answers a ringing Intercom call before a ringing trunk call.
Single Line Telephones (page 260)
Single line telephones cannot receive voice-announced Intercom calls.
Transfer (page 324)
The system cannot Transfer Intercom calls.
Voice Over (page 350)
An extension user can Voice Over to a co-worker busy on an Intercom call.
Volume Controls (page 353)
The default Intercom (station-to-station) gain is 0 dB. While on an Intercom call, use VOL ▲ and VOL ▼ to change this setting.

Feature Operation

To place an Intercom call:

1. Lift handset and press **ICM**.

	Intercom dial tone.
	ICM on (red).

2. Dial extension number (300-316).

	Two beeps (if voice-announced) or ringing.
	N/A

To call the operator, dial the operator s extension number or dial 0 or 01-04 (depending on how your system is set up).
If your call voice-announces the destination, you can dial 1 to force the call to ring.

To answer an Intercom call (if you hear two beeps and your phone has Handsfree Answerback):

	Two beeps.
	ICM and **SPK** on (red).

1. Speak toward phone.
OR
Lift the handset for privacy.

To answer an Intercom call (if you hear one beep and your phone does not have Handsfree Answerback):

	One beep.
	ICM and **SPK** on (red).

1. Lift the handset.

To answer an Intercom call (if you hear ringing):

Intercom ringing.
ICM flashes.

1. Lift the handset.

Description

LCCPU 01.00.00 | Available.

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

A Key Ring trunk rings an extension according to the settings in **Program 1805 - Ring Assignments** (page 466). Multiple extensions can be enabled to ring immediately or after a programmed delay for each incoming trunk call. In addition, under certain conditions other types of trunk 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 (see *Direct Inward Line* on page 88 for more).
- **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 trunk diverts to Key Ring.

Overflow for Key Ring Calls

If unanswered, Key Ring calls can route to a programmed overflow destination. The overflow destination can be an extension, Ring Group, UCD Group or Voice Mail. You can set up separate Key ring overflow destinations for the day mode and at night. If unanswered at the overflow destination, the call again diverts to Key Ring. Note that a Key Ring trunk goes into the night mode when any extension with night mode capability presses their Night key. See *Night Service / Night Ring* on page 200 for more.

Conditions

None

Default Setting

Enabled for all extensions.

Programming Guide

Step-by-step guide for setting up Key Ring
(Page 1 of 2)

Step 1: Should extension have Key Ring for trunk?

If yes

- In *Program 1805 - Ring Assignments* (page 466),
  - Enter 2 for day & night Key Ring,
  - Enter 3 for night only Key Ring,
  - Enter 4 for delayed day & night Key Ring.
- To ensure that a trunk will always have a ring destination, consider making at least one extension in the system type 2 for all trunks.

If no

- In *Program 1805 - Ring Assignments* (page 466), enter 1 for lamp only (no Key Ring).

Step 2: Should trunk be a Key Ring trunk during the day?

If yes

- In *Program 1003 - Direct Termination (Day)* (page 426), press CLEAR to assign the trunk as a day mode Key Ring trunk.

If no

- Refer to *Direct Inward Line* on page 88 to make a different day mode assignment for the trunk.

Step 3: Should trunk overflow during the day mode?

If yes

- In *Program 1003 - Activate Overflow During the Day* (page 426), enter Y.
- In *Program 1003 - Day Overflow Destination* (page 426), assign the extension, Ring Group, UCD Group master number or Voice Mail master number you want to use for the trunk's day mode overflow destination.

If no

- In *Program 1003 - Activate Overflow During the Day* (page 426), enter N.

Step 4: Should trunk be a Key Ring trunk during the night?

If yes

- In *Program 1003 - Direct Termination (Night)* (page 426), press CLEAR to assign the trunk as a night mode Key Ring trunk.

If no

- Refer to *Direct Inward Line* on page 88 to make a different night mode assignment for the trunk.

Step-by-step guide for setting up Key Ring
(Page 2 of 2)

Step 5: Should trunk overflow during the night mode?

If yes

- In *Program 1003 - Activate Overflow at Night* (page 427), enter Y.
- In *Program 1003 - Night Overflow Destination* (page 427), assign the extension, Ring Group, UCD Group master number or Voice Mail master number you want to use for the trunk's night mode overflow destination.

If no

- In *Program 1003 - Activate Overflow at Night* (page 427), enter N.

Step 6: Do the trunks ring their initial mode destinations for the correct interval before diverting to the overflow destination?

If yes

- In *Program 0401 - Trunk Revert* (page 376), leave the Trunk Revert interval at is currently assigned value.

If no

- In *Program 0401 - Trunk Revert* (page 376), change the Trunk Revert interval to meet the site requirements.

Step 7: Do the trunks ring their overflow destinations for the correct interval before diverting to the Key Ring?

If yes

- In *Program 0401 - Transfer Recall* (page 375), leave the Transfer Recall interval at is currently assigned value.

If no

- In *Program 0401 - Transfer Recall* (page 375), change the Transfer Recall interval to meet the site requirements.

Programming List

Program 0401 - Transfer Recall (page 375)
This interval sets how long a call will ring the day or night overflow destination before diverting to key ring.

Program 0401 - Trunk Revert (page 376)
This interval sets how long a call will ring a call will ring its initial day or night mode destinatin before routing the the programmed overflow destination.

Program 1003 - Direct Termination (Day) (page 426)
Press CLEAR to assign the trunk to Key Ring in the day mode.

Program 1003 - Activate Overflow During the Day (page 426)
Enter Y if unanswered day mode calls on the trunk should route to the day overflow destination. Enter N if unanswered calls should stay at Key Ring.

Program 1003 - Day Overflow Destination (page 426)
Enter the extension, Ring Group, UCD Group master number or Voice Mail master number that you want to assign as the day overflow destination.

Program 1003 - Direct Termination (Night) (page 426)
Press CLEAR to assign the trunk to Key Ring in the night mode.
Program 1003 - Activate Overflow at Night (page 427)
Enter Y if unanswered night mode calls on trunk should route to the night overflow destination. Enter N if unanswered calls should stay at Key Ring.
Program 1003 - Night Overflow Destination (page 427)
Enter the extension, Ring Group, UCD Group master number or Voice Mail master number that you want to assign as the night overflow destination.
Program 1805 - Ring Assignments (page 466)
Assign ringing for each trunk at each extension (1 = Lamp only [day and night], 2 = Ringing day and night, 3 = Night Ring only, lamp during the day, 4 = Delay ring day and night). To ensure that a trunk will always have a ring destination, consider making at least one extension in the system type 2 for all trunks.

Other Related Features

Call Coverage Keys (page 40)
Call Coverage will pick up Key Ring calls.
Call Forwarding (page 43)
A Key Ring call will not follow an extension's Call Forwarding.
Call Waiting / Camp-On (page 51)
A Key Ring call will not send Camp-On beeps to a busy extension that normally rings for that call.
Direct Inward Line (page 88)
An unanswered DIL reverts to all extensions with Key Ring for the trunk.
Extended Ringing (page 119)
With Extended Ringing, a call rings longer at its destination before diverting to Key Ring.
Hold (page 156)
Unanswered Hold Recalls revert to Key Ring if not picked up.
Off-Hook Signaling (page 205)
Off-Hook Signaling can occur for Key Ring calls.
Park (page 218)
An unanswered Park recall diverts to Key Ring.
Transfer (page 324)
An unanswered call transferred to an extension diverts to Key Ring if unanswered at the transferring extension.

Feature Operation

Key Ring is automatic for those extensions programmed to receive it.

Last Number Redial

Description

LCCPU 01.00.00 | Available.

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 32 digits a user dials. The number can be any combination of digits 0-9, # and *. The system remembers the digits regardless how whether the call was answered, unanswered or busy. The system normally uses the same trunk as for the initial call. However, if that trunk is busy and is part of a trunk group, Last Number Redial will automatically select the next trunk in the group. The user can also preselect a specific trunk if desired.

Conditions

None

Default Setting

Enabled

Programming Guide

Step-by-step guide for setting up Last Number Redial

Step 1: Should extension be able to use Last Number Redial on the trunk?

If yes

- In *Program 1803 - Extension Line Access Assignments* (page 461),
  - Enter 2 for outgoing only access,
  - Enter 3 for full access.

If no

- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 0 for no access.

Programming List

Program 1803 - Extension Line Access Assignments (page 461)

An extension can only use trunks for Last Number Redial for which it has outgoing access. The access options are: 0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access.

Other Related Features

Central Office Calls, Placing (page 63)
Users can easily redial the last outside number dialed.

Intercom (page 165)
Last Number Redial cannot redial Intercom calls.

Save Number Dialed (page 254)
Save also simplifies dialing important numbers.

Trunk (Line) Queuing / Trunk Callback (page 332)
If all trunks are busy and Last Number Redial cannot go through, the user can dial 2 a queue for a trunk to become free. If the user hangs up, the system converts the queue to a Trunk Callback.

Feature Operation

To redial your last call:

1. Lift the handset.
2. (Optional) Press an idle line key to preselect a trunk.
   If you skip this step, the system automatically selects a trunk from the same group as your original call.
3. Press **LND**.

   Dial tone, then your call dialing out.

   Line key on (green).

   If you hear busy tone, you can dial 2 to queue for a trunk to become free. If you hang up, the system converts the queue to a Trunk Callback.

Description

LCCPU 01.00.00 | Available.

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

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

Line Key BLF Indications

When the key is:	The trunk 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
Winking on (red)	On System Hold at a co-worker's extension
Winking on (green)	On System Hold at your extension
Flashing slowly (red)	Ringing into the system
Flashing slowly (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. **ICM** Key
2. Line Key (from lowest to highest)
3. Loop Key (from lowest to highest)

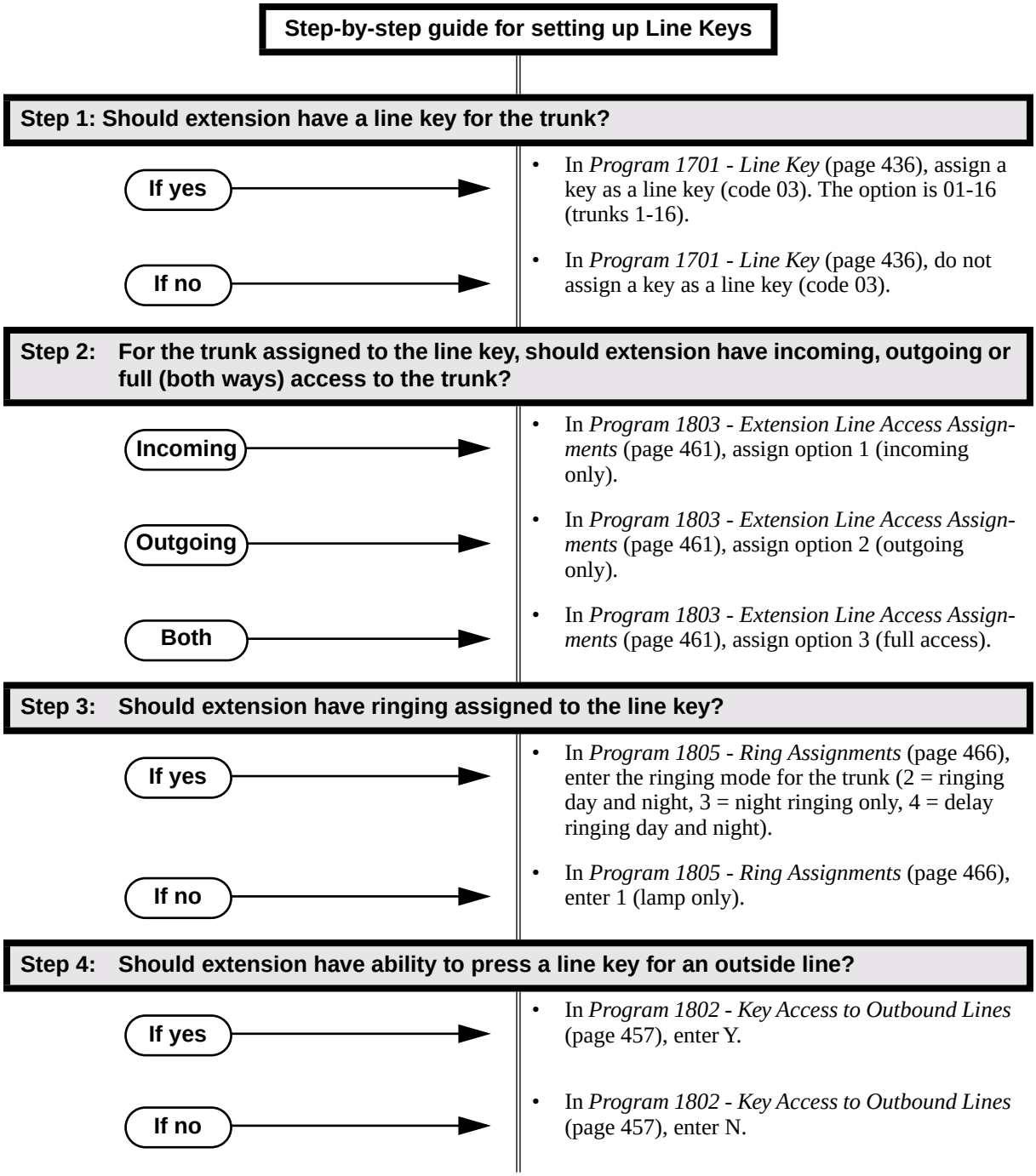
Conditions

None

Default Setting

Keys 1-8 are line keys for trunks 1-8.

Programming Guide



Programming List

Program 1701 - Line Key (page 436)
Assign a programmable key as a line key (code 03). The option is 01-16 (trunk 1-16).

Program 1802 - Key Access to Outbound Lines (page 457)
Enter Y to enable or N to disable key access to outbound lines.
Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access).
Program 1805 - Ring Assignments (page 466)
Assign ringing for each trunk at each extension (1 = Lamp only [day and night], 2 = Ringing day and night, 3 = Night Ring only, lamp during the day, 4 = Delay ring day and night).

Other Related Features

Automatic Handsfree (page 30)
Automatic Handsfree allows the keyset user to answer a call ringing a line key without lifting the handset; they just press the line key instead.
Central Office Calls, Placing (page 63)
Line Keys give a user one-touch access to specific trunks.
Direct Inward Line (page 88)
When you assign a trunk as a DIL, it continues to flash its previously programmed line/loop key assignments. It will ring line/loop keys only after diverting to Key Ring.
Loop Keys (page 179)
Loop keys also provide one-button access to trunks.
Ringing Line Preference (page 251)
Ringing Line Preference allows an extension user to answer a call ringing a line key just by lifting the handset.

Feature Operation

To place a call over a specific trunk using a line key:

1. Lift handset.
2. Press line key.

	Trunk dial tone.
	Line key on.

You may also be able to press a Loop Key. See Loop Keys on page 179 for more.

3. Dial outside number.

To answer an incoming trunk call:

	Trunk ring.
	Line key flashing red for calls that ring you and your co-workers.
	Line key flashing green for calls that ring you directly (such as DILs and transfers).

1. Lift handset.
If you have Ringing Line Preference, lifting the handset answers the call.
If you have Automatic Handsfree, you can press the line or loop key without first lifting the handset.
2. Press flashing line key.

	Conversation with caller.
	Line key on.

Description

LCCPU 01.00.00 | Available.

Loop keys simplify answering and placing calls.

Loop keys are programmable 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 trunk ***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 trunks that do not ring an extension's line keys.

For outgoing calls, Switched Loop Keys provide convenient access to the "dial 9" trunk groups. For example, instead of pressing ICM and dialing 90 for trunk group 0, 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 trunk group. When the extension user presses the Fixed Loop Key for an outgoing call, they get the first trunk 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 trunk 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. **ICM** Key
2. Line Key (from lowest to highest)
3. Loop Key (from lowest to highest)

Conditions

None

Default Setting

- No Switched Loop Keys assigned.
- On all keysets, keys 9 and 10 are assigned as Fixed Loop Keys (trunk group 0).

Programming Guide

Step-by-step guide for setting up Loop Keys

Step 1: Should extension have a Switched Loop Key?

If yes

- In *Program 1701 - Switched Loop Key* (page 436), assign a key as a Switched Loop Key (code 01).

If no

- In *Program 1701 - Switched Loop Key* (page 436), do not assign a key as a Switched Loop Key (code 01).

Step 2: Should extension be able to use Switched Loop Key for answering outside calls?

If yes

- In *Program 1803 - Extension Line Access Assignments* (page 461), assign incoming (1) or full (3) access to the trunks that should be able to ring the Switched Loop Key. ***Be sure all trunks assigned ringing in 1805 below also have incoming or full access.***
- In *Program 1805 - Ring Assignments* (page 466), assign day/night ringing (2), night only ringing (3), or delayed day/night ringing (4) to each trunk that should be able to ring the Switched Loop Key.

If no

- In *Program 1803 - Extension Line Access Assignments* (page 461), do not assign incoming (1) or full (3) access to the trunks that should be able to ring the Switched Loop Key.

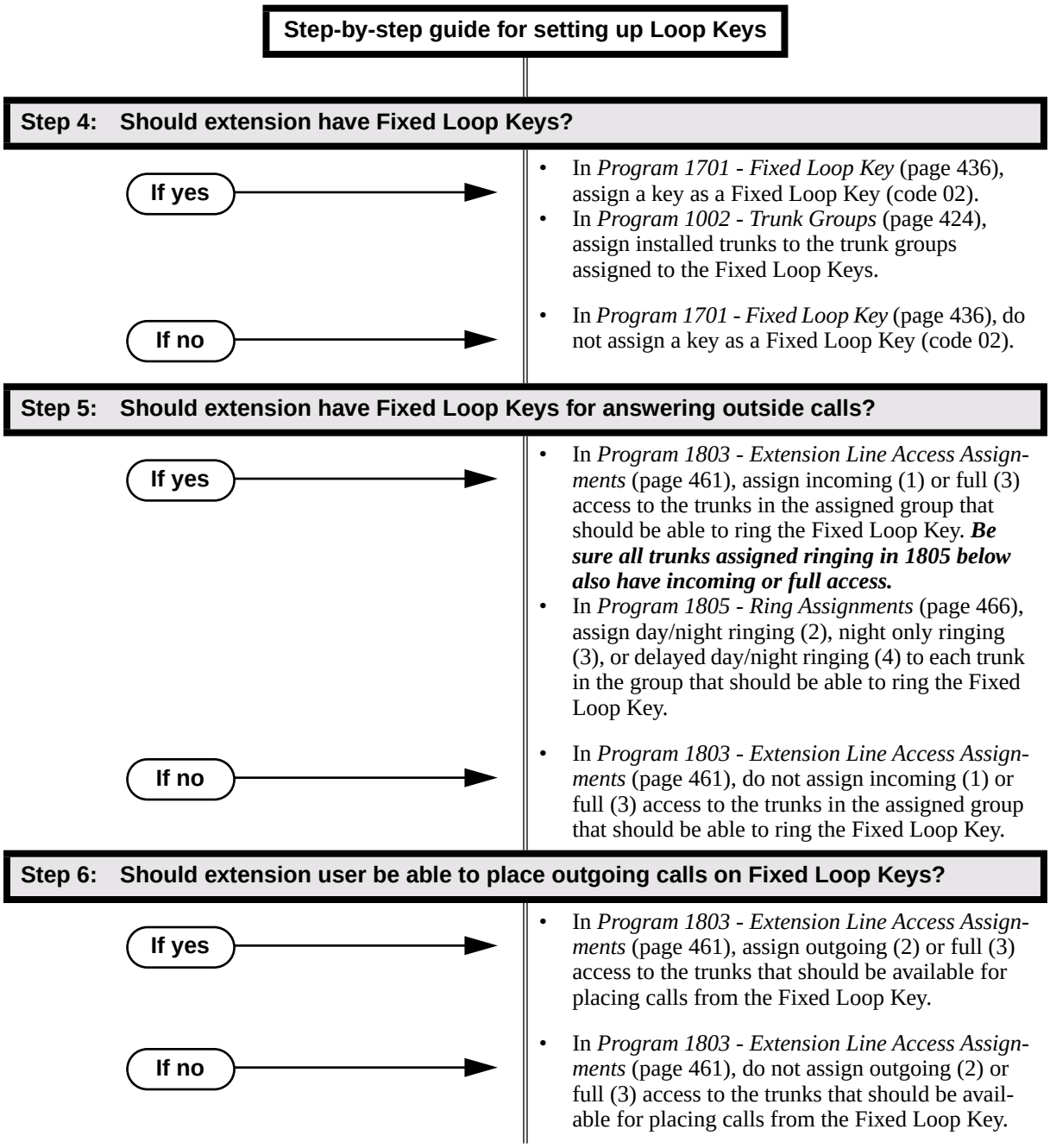
Step 3: Should extension user be able to place outgoing calls on Switched Loop Keys?

If yes

- In *Program 1002 - Trunk Groups* (page 424), assign installed trunks to trunk groups.
- In *Program 1803 - Extension Line Access Assignments* (page 461), assign outgoing (2) or full (3) access to the trunks that should be available for placing calls from the Switched Loop Key.

If no

- In *Program 1002 - Trunk Groups* (page 424), do not assign installed trunks to trunk groups.



Programming List

Program 1002 - Trunk Groups (page 424)
Assign trunks to trunk groups.

Program 1701 - Switched Loop Key (page 436)
Assign a programmable key on an extension as a Switched Loop Key (code 01).

Program 1701 - Fixed Loop Key (page 436)
Assign a programmable key on an extension as a Loop Key (code 02). You make a separate assignment for inbound and outbound. The options are 00-08 (Trunk Groups 0-8).

Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access).
Program 1805 - Ring Assignments (page 466)
Assign ringing for each trunk at each extension (1 = Lamp only [day and night], 2 = Ringing day and night, 3 = Night Ring only, lamp during the day, 4 = Delay ring day and night).

Other Related Features

Automatic Handsfree (page 30)
Automatic Handsfree allows the keyset user to answer a call ringing a line key without lifting the handset; they just press the line key instead.
Call Forwarding (page 43)
Call Forwarding will not reroute a call ringing a loop key (unless the call is a DIL or transferred call).
Central Office Calls, Answering (page 58)
An extension user can press a Loop Key to answer an outside call.
Central Office Calls, Placing (page 63)
An extension user can press a Loop Key to place an outside call.
Direct Inward Line (page 88)
When you assign a trunk as a DIL, it continues to flash its previously programmed line/loop key assignments. It will ring line/loop keys only after diverting to Key Ring.
Line Keys (page 176)
Loop keys also provide one-button access to trunks.
Ringing Line Preference (page 251)
Ringing Line Preference allows an extension user to answer a call ringing a loop key just by lifting the handset.
Trunk Groups (page 335)
Switched and Fixed Loop Keys use the system's Trunk Groups.

Feature Operation

To answer a call on a Loop Key:

Trunk ringing.
Loop Key flashing (red).

1. Lift handset.
2. Press Switched Loop Key.

Conversation with caller.
Loop Key on (green).

To place a call on a Loop Key:

1. Lift handset.
2. Press Loop Key.

Intercom dial tone.
Loop Key on (green).

3. Dial trunk group code (0-8).

Trunk dial tone.
Loop Key on (green).

4. Dial outside number.

Description

LCCPU 01.00.00 | Available.

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 Converence 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 (trunks and/or extensions)	8

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

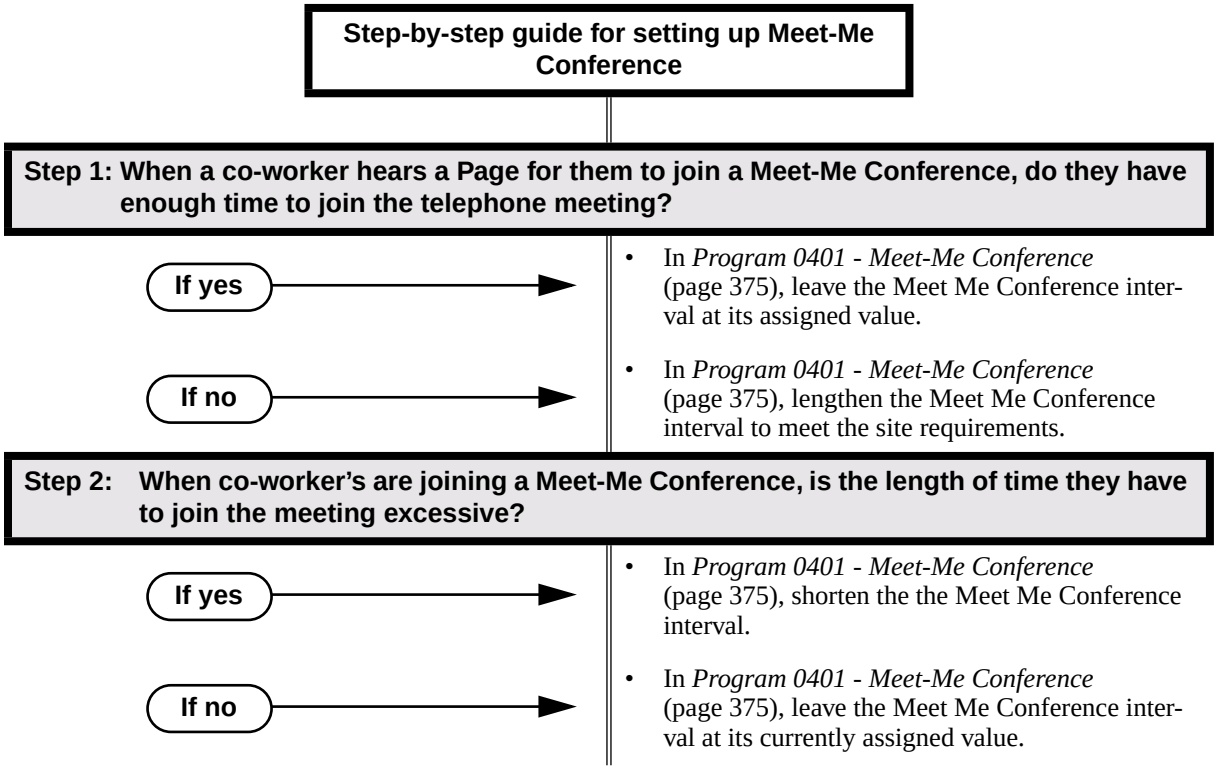
Conditions

None

Default Setting

Meet-Me Conference enabled.

Programming Guide



Programming List

Program 0401 - Meet-Me Conference (page 375)

When a user initiates a Meet-Me Conference, the system waits this interval for the Paged party to join the call.

Other Related Features

The following features also allow different types of multiple party calls:

Barge In (Intrusion) (page 37)
Conference (page 79)
Group Listen (page 142)
Privacy (page 226)
Tandem Trunking / Unsupervised Conference (page 307)

Feature Operation

To set up a Meet-Me Conference:

1. Page parties and announce the Meet-Me Conference code (#11 or #12).
   See Paging on page 214 *for more on how to page your co-workers.*

2. Do not hang up.
3. Press **ICM**.

Intercom dial tone.
ICM on (red).

4. Dial announced Meet-Me Conference code (#11 or #12).

Conversation with coworkers.
- When the first co-worker joins the Conference, **ICM** flashes fast (until the Meet-Me Conference interval expires).
- When the second and succeeding co-worker's join, **ICM** goes out.

Your co-worker's must join the telephone meeting within the Meet Me Conference time.

To join a Meet-Me Conference:

1. Listen for paged invitation to join the Conference.
2. Press **ICM**.

Intercom dial tone.
ICM on (red).

3. Dial announced Meet-Me Conference code (#11 or #12).

Conversation with coworkers.
- When the first co-worker joins the Conference, **ICM** flashes fast (until the Meet-Me Conference interval expires).
- When the second and succeeding co-worker's join, **ICM** goes out.

You can join the telephone meeting within the Meet Me Conference time.

Description

LCCPU 01.00.00 | Available.

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 MW key 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.

Additionally, Message Waiting lets extension users:

- Cancel all messages left at their extension.
- Cancel message they left at co-worker's extensions.
- Scroll through their Messages Waiting and select a co-worker to call back.

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.

Conditions

A power failure or system reset cancels all Messages Waiting system wide.

Default Setting

Enabled

Programming Guide

Step-by-step guide for setting up Message Waiting

Step 1: Should the system have Message Waiting capability (applicable only when Voice Mail is not installed)?

If yes

- In *Program 0201 - Voice Mail Installed* (page 368), enter N to disable Voice Mail.
- ***The system can have Message Waiting or Voice Mail, not both.***

If no

- In *Program 0201 - Voice Mail Installed* (page 368), enter Y to enable Voice Mail.

Programming List

Program 0201 - Voice Mail Installed (page 368)
Enter N to disable Voice Mail and enable Message Waiting.

Other Related Features

Call Forwarding (page 43)

- An extension user cannot leave a Message Waiting at an co-worker that has Call Forwarding Immediate (*34) enabled. Pressing MW automatically leaves a message at the forwarding destination instead.
- An extension user cannot leave a Message Waiting at a busy co-worker that has Call Forwarding Busy/No Answer (*32) enabled. Pressing MW will automatically leave a message at the forwarding destination instead.

Do Not Disturb (page 114)
An extension user can leave a Message Waiting at an extension in Do Not Disturb.

Intercom (page 165)
A user can leave a Message Waiting after placing an Intercom call to a busy co-worker.

Voice Mail (page 340)
A system can have either Voice Mail or Message Waiting activated — not both.

Voice Over (page 350)
An extension user cannot leave a Message Waiting after using Voice Over.

Feature Operation

To leave a Message Waiting:

1. Place Intercom call to co-worker.
   The extension you call can be unanswered, busy or in Do Not Disturb.
2. Press **MW**.

   Intercom dial tone.
   ICM on (red).
3. Hang up.
   ***MW** flashes fast at the extension you call.*

To answer a Message Waiting:

N/A
ICM on (red).

1. Lift handset.
2. Press **MW**.
   Two beeps or ringing, then conversation with co-worker.
   ICM on (red).
   If the extension you call is unanswered, busy or in DND, the system cancels Message Waiting.
   If the called extension doesn't answer, press your Message Waiting key to automatically leave them a message.
   Normally, your MW key goes out. If it continues to flash, you have additional Messages Waiting.

To review your Messages Waiting and then select a message for a return call:

	N/A
	MW flashing fast (red).

1. Do not lift the handset.
2. Press **MW**.

   The first message display. Press MW repeatedly to display additional Messages Waiting, if any.
3. When the extension you want to call displays, lift the handset.
4. Press **MW**.

	Two beeps or ringing.
	MW flashing fast (red).

   If the extension you call is unanswered, busy or in DND, the system cancels Message Waiting.

   If the called extension doesn't answer, press your Message Waiting key to automatically leave them a message.

Microphone Mute

Description

LCCPU 01.00.00 | Available.

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 Handsfree or handset microphone at any time. Once activated, Microphone Mute prevents the caller from hearing conversatoins 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 a call is ringing. The microphone stays off until the user turns it back on.

While an extension has their microphone muted, incoming Intercom calls announce with a single beep (rather than the normal two beeps). The calling party hears this single beep also when the called extension's mic is muted.

Conditions

A system reset or power failure cancels all Microphone Mutes system wide.

Default Setting

Enabled.

Programming List

None

Other Related Features

Handsfree and Handsfree Answerback (page 150)
Use Microphone Mute to temporarily turn off the Handsfree microphone.

Feature Operation

To activate Microphone Mute:

1. Press **MIC**.
   | The systems mutes your handsfree and handset microphone.
   | **MIC** on.
   You can do this any time while on the phone or while your phone is idle.
   While your microphone is muted, incoming Intercom calls announce with a single beep (rather than the normal two beeps). Your caller hears this single beep also while your mic is muted.

To deactivate Microphone Mute:

	N/A.
	MIC on.

1. Press **MIC**.

	N/A.
	MIC off.

Description

LCCPU 01.00.00 | Available.

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 uer just calls a busy extension and dials the Monitor code. The busy extension and their caller have no indication of the intusion. There are no tones heard and there is no visual indication that monitoring is occuring. For example, Monitor could help the superisor 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.

Conditions

Monitor uses a system Conference circuit. See *Conference* on page 79 for more.

Default Setting

Disabled

Programming Guide

Step-by-step guide for setting up Monitor

Step 1: Should an extension be able to Monitor a co-worker's call?

If yes

- In *Program 0101 - Silent Monitor* (page 364), enter Y to enable Monitor in the extension's Class of Service.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

If no

- In *Program 0101 - Silent Monitor* (page 364), enter N to disable Monitor in the extension's Class of Service.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions

Programming List

Program 0101 - Barge-In (Intrusion) (page 362)
In an extension's Class of Service, enter Y to allow the extension to Barge In on another extension.

Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Other Related Features

Attendant Position (page 24)
Since the attendant is never busy, Intercom callers cannot Monitor an attendant.

Conference (page 79)
An extension user cannot Monitor a Conference.

Privacy (page 226)
Privacy does not block Monitor.

Feature Operation

To Monitor a call:

1. Call busy extension.
   Busy tone.
    N/A
2. Dial 6.
   Two beeps.
    N/A
3. Listen to the conversation in progress.

Description

LCCPU 01.00.00

See *Call Coverage Keys* on page 40.

Description

LCCPU 01.00.00 | Available.

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 calls is waiting, not forgotten. Without Music on Hold, the system provides silence to these types of calls. Music on Hold is available from three sources: two internal beep tones and an external source connected to the CPU music input terminals. The external source typically connects to a customer-provided music source (such as a CD player or FM receiver).

The system provides a single external music input source. Background Music and Music on Hold share the same external source. For example, if Music on Hold uses a customer-provided program from CD, Background Music uses this source as well. The external music source connects via pins 3 and 6 in the CPU's 8-pin mod jack. Using the DS2000 installation cable, these pins punch down as 3 and 4. For more on connecting a customer-provided music source, refer to the system's Hardware Manual.

The external music source you use must be compatible with the following specifications:

Table 7: MOH Music Source Specifications

Input Impedance	10K Ohms
Relative Input Level	+18 dBr (+/- dBr) at 1.0 kHz

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

Note:

In accordance with U.S. copyright law, a license may be required from the America Society of Composers, Authors and Publishers (ASCAP) or other similar organizations, if radio, television broadcasts or music other than material not in the public domain are transmitted through the Music on Hold feature of telecommunications systems. Nitsuko America hereby disclaims any liability arising out of the failure to obtain such a license.

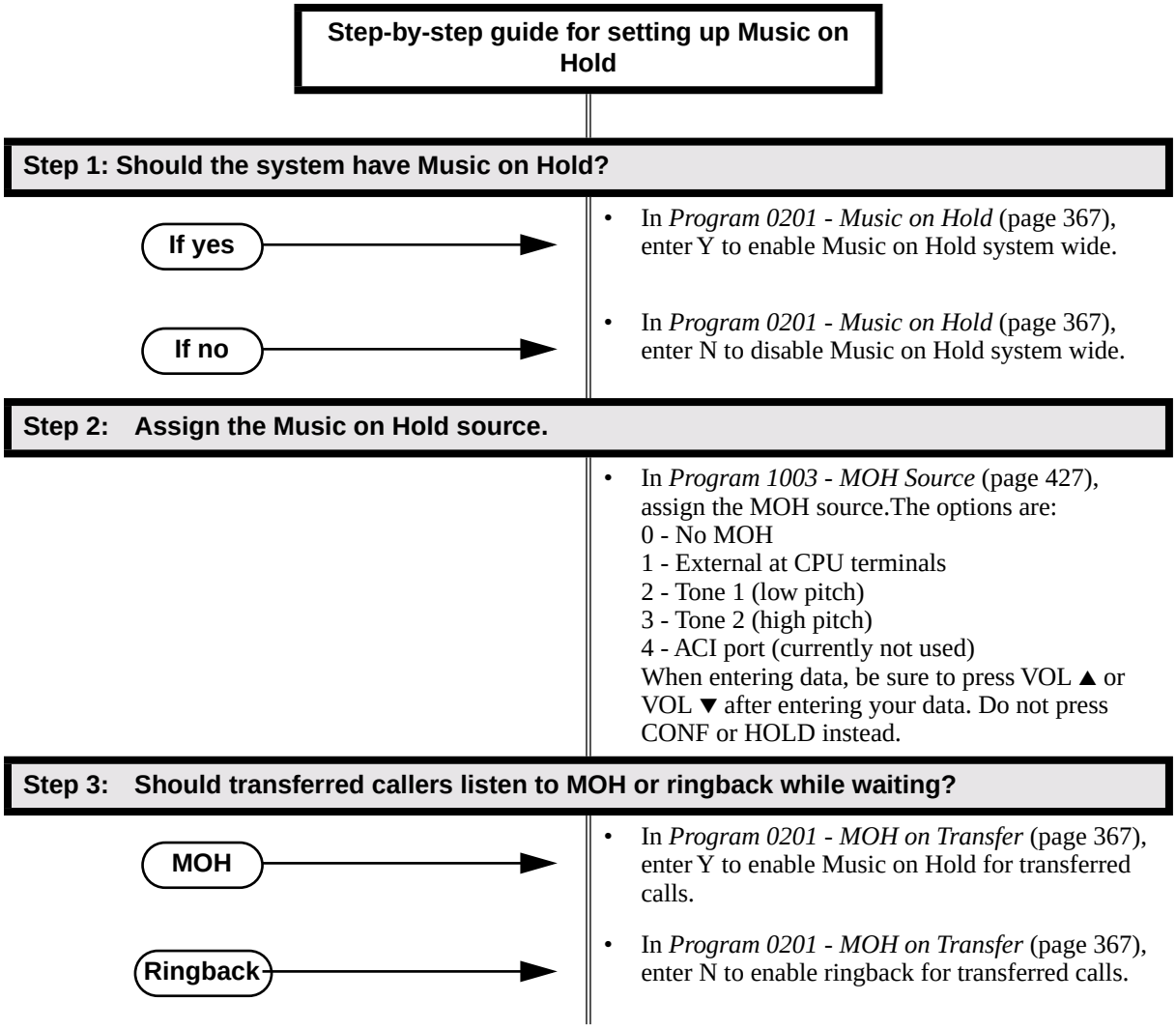
Conditions

None

Default Setting

External MOH enabled.

Programming Guide



Programming List

Program 0201 - Music on Hold (page 367)
Enter Y for this option to enable Music on Hold system-wide.
Program 0201 - MOH on Transfer (page 367)
Enter Y for this option to enable Music on Hold for transferred calls.

Program 1003 - MOH Source (page 427)
Assign the MOH source for the trunk. The options are:
0 - No MOH
1 - External at CPU terminals
2 - Tone 1 (low pitch)
3 - Tone 2 (high pitch)
4 - ACI port (currently not used).
When entering data, be sure to press VOL ▲ or VOL ▼ after entering your data. Do not press CONF or HOLD instead.

Other Related Features

Background Music (page 35)
Background Music and Music on Hold share the same external music source.
Hold (page 156)
If installed, Music on Hold plays to callers on Hold
Intercom (page 165)
Music on Hold plays to Intercom callers on Hold. Intercom callers always hear internal Tone 1.
Park (page 218)
If installed, Music on Hold plays to parked callers.
Transfer (page 324)
With Music on Hold enabled, transferred callers can optionally listen to ringback or MOH while their call waits at the transfer destination.

Feature Operation

Music on Hold is automatic once enabled.

Description

LCCPU 01.00.00 | Available.

Names help identify trunks and extension.

Extensions and trunks can have names instead of just circuit numbers. These names show on a key-set's display when the user places or answers calls. Extension and trunk names make it easier to identify callers. The user does not have to refer to a directory when processing calls. Extension and trunk names can consist of upper and lower case letters,spaces and punctuation. Trunk names can be up to 20 characters long. Extension names can be up to 15 characters long.

Extension names display when placing or answering Intercom calls. Trunk names display when using the following features:

- Central Office Calls, Answering
- Central Office Calls, Placing
- Direct Inward Line
- Direct Trunk Access
- Directed Call Pickup
- Last Number Redial
- Line Keys
- Loop Keys
- Night Service / Night Ring
- Park
- Speed Dial
- Transfer

Refer to *Programming Names and Text Messages* on page 361 when entering names.

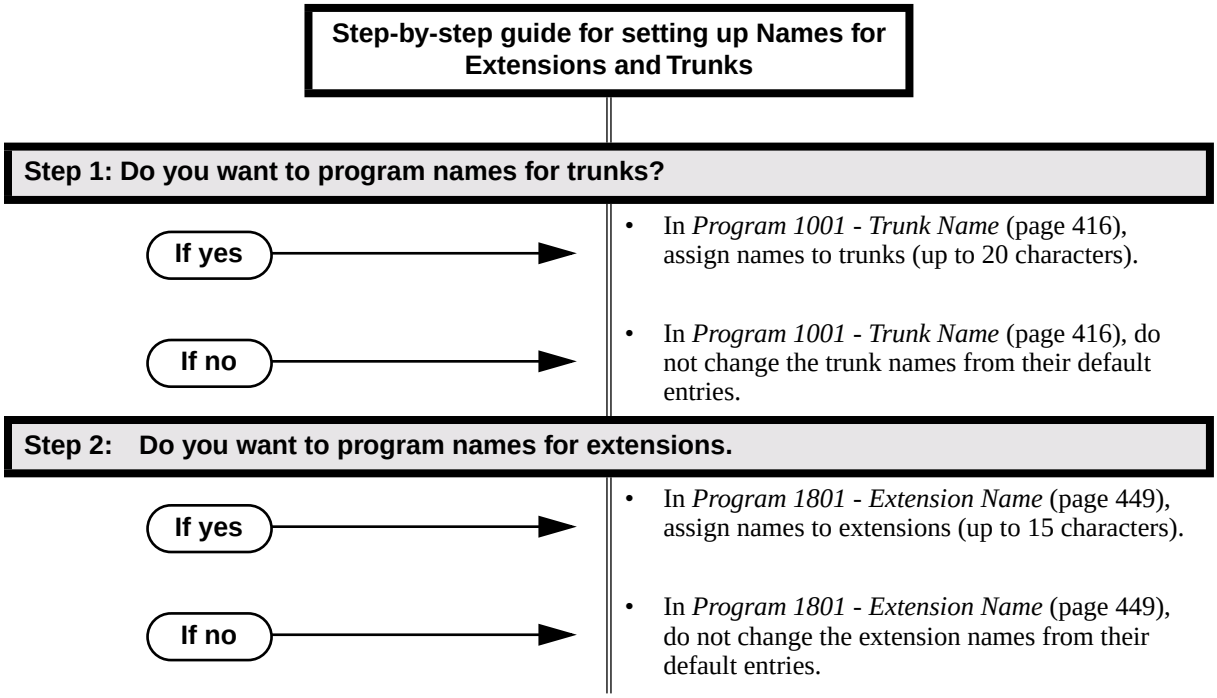
Conditions

None

Default Setting

- No extension names assigned (the extension's number displays instead).
- All trunk names are *TRUNK* followed by the trunk's number (e.g., *TRUNK 2* for trunk 2).

Programming Guide



Programming List

Program 1001 - Trunk Extension Number (page 416)
Enter the name for the trunk port. The trunk name can be up to 20 characters long.

Program 1801 - Extension Name (page 449)
Enter the name for the extension port. The extension name can be up to 15 characters long.

Other Related Features

See the list under *Description* above.

Feature Operation

Trunk and extension names automatically display once programmed.

Description

LCCPU 01.00.00 | Available.

Use Night Service to reroute calls after hours.

Night Service redirects trunk 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. There are two basic types of Night Service: Assigned Night Answer and Universal Night Answer. Universal Night Answer (UNA) allows a user to pick up a call ringing the system at night.

Assigned Night Answer rings extensions directly at Night, providing specific answering points for Night Service calls. (For example, you can program trunks to ring the security station at night.) With UNA, an employee can go to any telephone and dial a UNA code to answer the call. The extension does not need to have a line/loop key assigned for the ringing call.

Following are the four basic types of Night Service operation for a trunk. Note that only option 3 enables Universal Night Answer.

- **Option 1: Key Ring Day and Night**
  The trunk is a Key Ring trunk during the day and at night. The trunk rings according to the settings in **Program 1805 - Ring Assignments** (page 466). An extension's Night Key (if programmed) controls the day/night mode of the trunk. The trunk will not enable Universal Night Answer pickup. Turn to *Key Ring* on page 170 for more on setting up Key Ring trunks.

- **Option 2: Key Ring During the Day, DIL at Night**
  The trunk is a Key Ring trunk during the day and a DIL at night. During the day, the trunk rings according to the settings in **Program 1805 - Ring Assignments** (page 466). At night, the trunk rings the DIL destination (i.e., extension, Ring Group UCD Hunting group or Voice Mail). An extension's Night Key (if programmed) controls the day/night mode of the trunk. The trunk will not enable Universal Night Answer pickup. Turn to *Key Ring* on page 170 for more on setting up Key Ring trunks. Turn to *Direct Inward Line* on page 88 for more on setting up Direct Inward Lines.

- **Option 3: DIL During the Day, Key Ring at Night**
  The trunk is a DIL during the day and a Key Ring trunk at night. The trunk rings the DIL destination during the day and rings according to the settings in **Program 1805 - Ring Assignments** (page 466) at night. The DIL destination's DND key controls the night mode of the trunk. If the DIL destination is extension 300 (normally the attendant), pressing the DND key also enables Universal Night Answer pickup. Turn to *Direct Inward Line* on page 88 for more on setting up Direct Inward Lines. Turn to *Key Ring* on page 170 for more on setting up Key Ring trunks.

- **Option 4: DIL Day and Night**
  The trunk is a DIL during the day and at night. The DIL destination's DND key controls the night mode of the trunk. Pressing the DND key will not enable Universal Night Answer pickup. Turn to *Direct Inward Line* on page 88 for more on setting up Direct Inward Lines.

By default key 11 on attendant keyset is a Night key. This allows the attendant to activate the Night Mode system-wide.

Conditions

None

Default Setting

- Trunks 1-8 ring extensions on line keys 1-8 in the day and at night.
- Key 11 on the attendant's keyset is a the Night key.

Programming Guide

Step-by-step guide for setting up Night Service / Night Ring (Page 1 of 2)

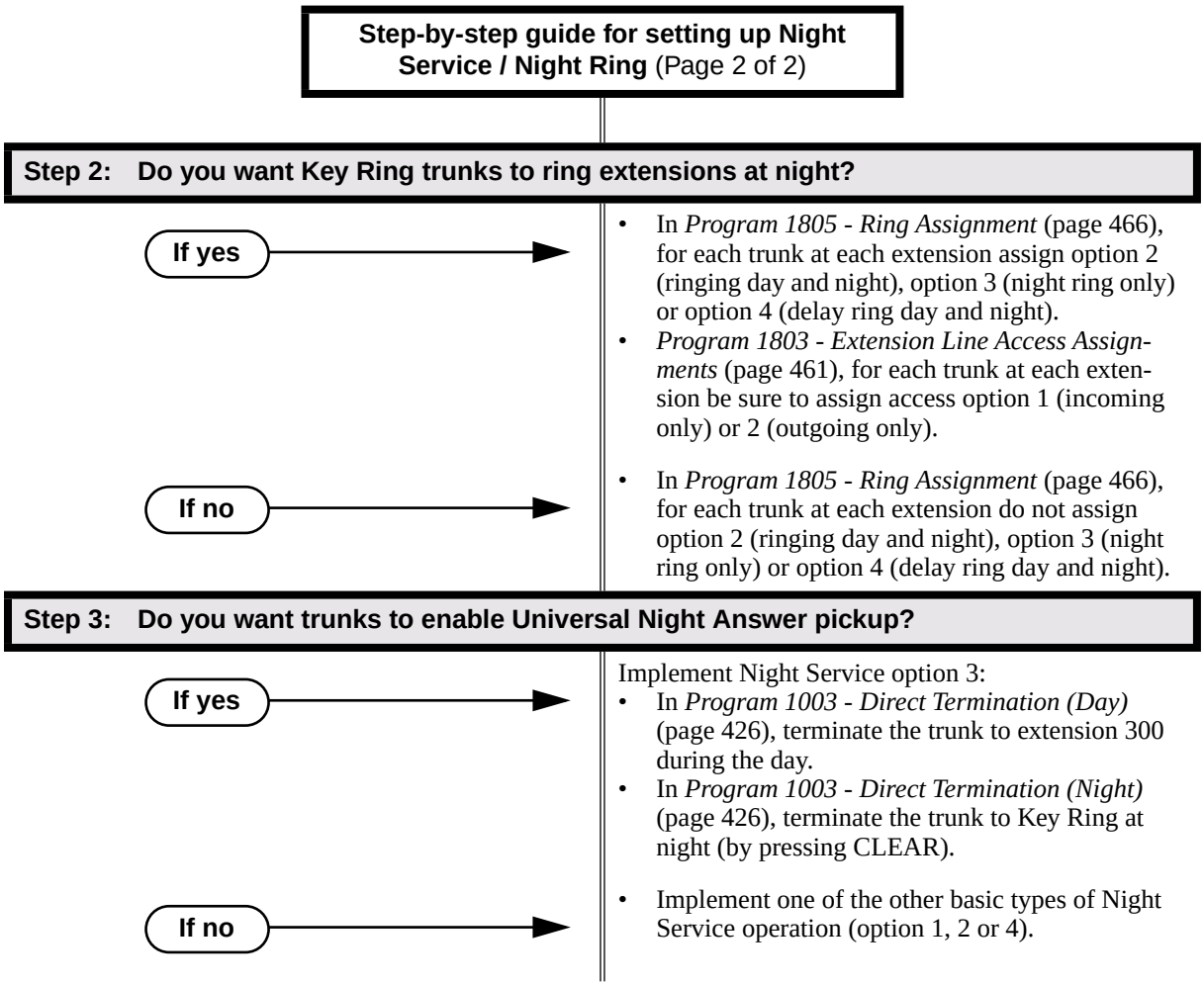
Step 1: Should extension be able to put Key Ring trunks into the night mode?

If yes

- In *Program 0101 - Activate Night Mode* (page 364), enter Y to allow extensions with the assigned Class of Service to put the system in the night mode. This capability is normally reserved for attendants.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.
- To put a Night key on a keyset:
  In *Program 1701 - Night Key* (page 438), assign a key as a Night key (code 18 + CLEAR).
- To put a Night key on a DSS Console:
  In *Program 1704 - Night Key* (page 446), assign a key as a Night key (code 18 + CLEAR).

If no

- In *Program 0101 - Activate Night Mode* (page 364), enter N to prevent extensions with the assigned Class of Service from putting the system in the night mode.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.
- In *Program 1701 - Night Key* (page 438), and *Program 1704 - Night Key* (page 446), do not assign Night keys (code 18).



Programming List

Program 0101 - Activate Night Mode (page 364)
Enter Y to allow an extension to activate the Night Mode for Key Ring trunks.

Program 1003 - Direct Termination (Day) (page 426)
To enable UNA pickup for a trunk (e.g., ** + 01 at night), terminate the trunk to extension 300 during the day. UNA pickup only applies to Option 3.

Program 1003 - Direct Termination (Night) (page 426)
To enable UNA pickup for the trunk (e.g., ** + 021 at night), terminate the trunk to Key Ring at night (by pressing CLEAR). UNA pickup only applies to Option 3.

Program 1701 - Night Key (page 438)
Assign a programmable key as a Night Key (code 18 + CLEAR). Pressing the Night Key puts trunks terminated to Key Ring during the day into the night mode.

Program 1704 - Night Key (page 446)
Assign a DSS Console key as a Night Key (code 18 + CLEAR). Pressing the Night Key puts trunks terminated to Key Ring during the day into the night mode.

Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access).

Program 1805 - Ring Assignments (page 466)
Assign ringing for each trunk at each extension (1 = Lamp only [day and night], 2 = Ringing day and night, 3 = Night Ring only, lamp during the day, 4 = Delay ring day and night).

Other Related Features

Direct Inward Line (page 88)

- The extension to which the DIL is terminated controls the night mode of the DIL.
- If a DIL is terminated to the Voice Mail master number, a System Mode key (code 18 + the Voice Mail number) controls the night mode status of the DIL.

Direct Station Selection (DSS) Console (page 98)
A DSS Console with a Night key can put the system in the night mode.

Do Not Disturb (page 114)
A DIL destination activates the night mode for the DIL when they press DND.

Group Ring (page 144)
The Night key sets the day/night status of a DIL terminated to a Ring Group.

Feature Operation

To activate Night Service (i.e., put Key Ring trunks into the night mode):

This capability is normally restricted to attendants and supervisors.

1. Do not lift the handset.
2. Press the Night key.

N/A.
Night key on. You display shows: *SYSTEM IN NIGHT MODE*

To deactivate Night Service (i.e., put Key Ring trunks into the day mode):

N/A.
Night key on.

This capability is normally restricted to attendants and supervisors.

1. Do not lift the handset.
2. Press the Night key.

N/A.
Night key goes out.

To answer a call that rings a line or loop key at night:

Trunk ring.
Line or loop key flashing red for key ring call.
Line key flashing green for DIL.

1. Lift handset.

If you have Ringing Line Preference, lifting the handset answers the call.
If you have Automatic Handsfree, you can press the line or loop key without first lifting the handset.

2. Press flashing line or loop key.

Conversation with caller.
Line or loop key on.

To answer a call ringing the system at night (UNA Pickup):

Trunk ring.
N/A

1. Press **ICM**.
2. Dial ** followed by the UNA code (01-04).
   Dial the lowest number first (e.g., 01). If you hear busy, try the next highest number (e.g., 02).

Description

LCCPU 01.00.00 | Available.

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 Trunk Calls

While a keyset user is on a handset call, Off-Hook Signaling is available for trunk calls. The Off-Hook Signal can be:

- A flashing green Ring/Message lamp, line/loop key, and muted off-hook ringing.
  OR
- A flashing green line/loop key and Camp-On tone.

Off-Hook Signaling for trunks occurs for DILs, transferred calls, Voice Mail Automated Attendant transfers and Key Ring calls.

While Off-Hook Signaling ringing is occuring, use VOL ▲ and VOL ▼ to adjust the volume of ringing.

Conditions

None

Default Setting

Disabled

Programming List

Program 1802 - Off-Hook Signaling for CO Calls (page 456)
Set the Off-Hook Signaling options for trunk calls. The options are 0 (no Off-Hook Signaling),1 (Camp-On tones) and 2 (off-hook ringing).

Other Related Features

Attendant Call Queuing (page 22)
The Operator Call Key activates off-hook signaling.
Conference (page 79)
An extension user can Conference their active call with the waiting call.
Direct Inward Line (page 88)
DILs can initiate Off-Hook Signaling beeps.
Headset Compatibility (page 154)
An extension in the headset mode can receive Camp On tones for trunk calls, but not off-hook ringing.

Hold (page 156)
An extension user can place their current call on Hold and answer the waiting call.

Key Ring (page 170)
Off-Hook Signaling can occur for Key Ring calls.

Park (page 218)
An extension user can Park their current call and answer the waiting call.

Split (Alternate) (page 272)
An extension user can alternate between their active call and their waiting call.

Transfer (page 324)
An extension user can Transfer their current call to a co-worker or Voice Mail and then answer the waiting call. In addition, transferred calls can initiate Off-Hook Signaling.

Voice Over (page 350)
Voice Over also lets a user get through to a keyset extension user busy on a handset call. The busy keyset extension user hears an alert tone followed by the voice of the interrupting party.

Feature Operation

Off-Hook Signaling is automatic for camped-on Intercom calls, Direct Inward Lines and transferred trunk calls.

Description

LCCPU 01.00.00 | Available.

Connect analog devices such as single line telephones, fax machines and voice mail systems to the system.

The system is compatible with 500 type (dial pulse) and 2500 type (DTMF) analog telephone devices. This includes telco OPX circuits, on-premise single line telephones (SLTs), fax machines, modems and voice mail ports. On- and Off-Premise SLTs connect to 2-OPX Modules. On-Premise SLTs connect to 2-OPX Modules or ASTU PCBs.

ASTU PCBs are available in two models, providing 4 and 8 ports, respectively. Each ASTU port provides power and ring voltage for the connected SLT. ASTU PCBs use system DTMF receivers, and do not provide the signaling required to light SLT Message Waiting lamps. The CPU provides 10 DTMF receivers that are shared by all devices connected to ASTU ports.

Each 2-OPX Module provides two OPX ports. In addition, the 2-OPX Module has its own DTMF receivers (one for each port), internal ring generator and power supply to provide the connected SLT with power and ring voltage. The 2-OPX Module does not provide the signaling required to light SLT Message Waiting lamps. The 2-OPX extension numbers are as follows:

- When connected to the first DSTU PCB in the system, the first 2-OPX extension number is the same as the port's extension number. The second 2-OPX extension number is the first port ***plus 201***. For example, the two extension numbers for the 2-OPX module plugged into extension 314 are 314 and 515.
- When connected to the second DSTU PCB in the system, the first 2-OPX extension number is the same as the port's extension number. The second 2-OPX extension number is the first port ***plus 217***. For example, the two extension numbers for the 2-OPX module plugged into extension 316 are 316 and 533.

Refer to the system *Hardware Manual* for additional details.

Ringing For Incoming Calls

On- and Off-Premise single line extensions do not ring according to the settings in **Program 1805 - Ring Assignments** (page 466). They can, however, directly ring for the following:

- **Direct Inward Line** (page 88)
- **Intercom** (page 165)
- **Group Ring** (page 144)
- **Ringdown Extension** (page 249)
- **Transfer** (page 324)

Conditions

- 2-OPX Module circuits meet the requirements of EIA Specification RS-464-A for OPS Class C (loop resistance to 3,300 ohms, loop current = 16 mA or greater). The 2-OPX Module provides far end loop disconnect supervision for the connected circuits.
- Dial Pulse (500 type) single line telephones cannot access any features that require the user to dial # or *.
- The system provides a pool of 10 DTMF recivers that are dynamically allocated as required.

Default Setting

The system's 2-OPX Modules do not auto-ID. See the Programming List below more.

Programming List

Program 0403 - Drop Pulse Send (page 387)
Use this timer to set the duration of the ASTU PCB drop pulse. This pulse is sent from the ASTU PCB to the connected analog device to initiate a disconnect.

Program 0403 - DTMF Detect (page 387)
Set the DTMF detection threshold for single line (analog device) ports. If the analog device sends a DTMF signal longer than this interval, the system recognizes it as a valid DTMF tone and decodes it. If the DTMF signal is equal to or less than this interval, the system ignores it

Program 1801 - Extension Circuit Type (page 449)
Assign circuit type 15 to each ASTU port. Assign circuit type 21 to the DSTU port to which the 2-OPX is connected.

Other Related Features

Background Music (page 35)
Background Music is not available to On- and Off-Premise extensions.

Do Not Disturb (page 114)
On- and Off-Premise extensions cannot use DND.

Handsfree and Handsfree Answerback (page 150)
On- and Off-Premise Extensions do not have Handsfree and Handsfree Answerback capability.

Headset Compatibility (page 154)
On- and Off-Premise Extensions do not have headset capability.

Intercom (page 165)
All Intercom calls to On- and Off-Premise Extensions ring.

Paging (page 214)
On- and Off-Premise Extensions can make Paging announcements, but cannot receive Paging announcements.

Prime Line Preference (page 223)
On- and off-premise extensions cannot use Prime Line Preference.

Save Number Dialed (page 254)
Save Number Dialed is not available to SLTs.

Single Line Telephones (page 260)
Single line telephones connect to either 2-OPX Modules or ASTU PCBs. On-premise single line telephones have the same capability as Off-Premise Extensions.

Feature Operation

Call Forwarding (page 43)

1. Lift handset + Dial ***3** + Dial Call Forwarding type:
   0 = Cancel your extension's Call Forwarding
   2 = Call Forwarding Busy/No Answer
   4 = Call Forwarding Immediate
   6 = Call Forwarding No Answer
2. Dial destination extension, **0** for your operator, or Voice Mail master number.
3. Hang up.

Call Waiting / Camp-On (page 51)

1. Call busy extension + Dial **2** + Do not hang up.
   If you hang up, the system converts your Camp-On to a Callback.
2. Speak to your co-worker when they answer their Camp-On ring.

Callback (page 54)

1. Call busy extension + Dial **2** and hang up.
   Stay on the line without hanging up if you want to Camp-On instead.
2. When Callback rings your phone, lift handset to answer.
3. Speak to your co-worker when call goes through.

Central Office Calls, Answering (page 58)

1. When your telephone rings, lift the handset.

Central Office Calls, Placing (page 63)

Line Dial-Up

1. Lift handset + Dial **#9** followed by the trunk number (e.g., #901 for trunk 1).

Direct Trunk Access

1. Dial **4** plus the trunk number (e.g., 401 for trunk 1) + Dial outside number.

Trunk Group Access

1. Lift handset + Dial trunk group code (9 or 90-98) + Dial outside number.

Conference (page 79)

1. Establish Intercom or trunk call
2. Hookflash and dial extension you want to add.
3. Hookflash and dial #10 to set up Conference.
   If you cannot add additional parties to your Conference, you have exceeded the system's Conference limit.
4. Repeat steps 2 and 3 to add aditional parties to your Conference.

Direct Trunk Access (page 106)

1. Dial **4** plus the trunk number (e.g., 401 for trunk 1) + Dial outside number.

Directed Call Pickup (page 108)

1. Lift handset + Dial *** *** + Dial number of extension whose call you want to intercept.
   To intercept a call ringing an attendant, dial the attendant's extension number (e.g., 300). Do not dial 0 or 01-04.

Forced Trunk Disconnect (page 137)

1. Lift handset + Dial the trunk's Direct Trunk Access code (e.g., 401 for trunk 1).
2. Dial **#** to disconnect the line.
   You hear Intercom dial tone. To place a call on the trunk, dial a trunk access code and then dial the number.

Group Call Pickup (page 139)

1. Lift handset + Dial *#.

Hold (page 156)

Place

1. Hookflash.
   This places a trunk call on Exclusive Hold.
2. (Optional) Hang up.

Retrieve

1. From Intercom dial tone, dial *7

Intercom (page 165)

Place

1. Lift handset + Dial extension number (300-316).
   To call the operator, dial the operator s extension number or dial 0 or 01-04 (depending on how your system is set up).
   If your call voice-announces the destination, you can dial 1 to force the call to ring.

Answer

1. Lift handset.

Last Number Redial (page 174)

1. Lift handset + Dial #5.
   The system automatically selects a trunk from the same group as your original call.
   If you hear busy tone, you can dial 2 to queue for a trunk to become free. If you hang up, the system converts the queue to a Trunk Callback.

Meet-Me Conference (page 184)

Setting Up

1. Page parties and announce the Meet-Me Conference code (#11 or #12).
   See Paging on page 214 *for more on how to page your co-workers.*
2. Hang up + Lift Handset + Dial announced Meet-Me Conference code (#11 or #12).
   Your co-worker's must join the telephone meeting within the Meet Me Conference time.

Joining

1. Listen for paged invitation to join the Conference + Dial announced Meet-Me Conference code (#11 or #12).
   You can join the telephone meeting within the Meet Me Conference time.

Message Waiting (page 187)

Leaving a Message Waiting

1. Place Intercom call to co-worker.
   The extension you call can be unanswered, busy or in Do Not Disturb.
2. Dial **8** + Hang up.
   ***MW** flashes fast at the extension you call.*

Answering a Message Waiting

The system currently provides no indication that an on- or off-premise extension has messages waiting.

1. Lift handset + Dial ***8**.

Night Service / Night Ring (page 200)

1. Dial ** + UNA code (01-04).

Dial the lowest code first (e.g., 01). If you hear busy, try the next highest code (e.g., 02).

Paging (page 214)

SLTs cannot receive Paging announcements.

1. Lift handset + Dial ***1** + Dial Paging zone (1-7 or 0 for all call).

Park (page 218)

Park a Call

1. Place or answer call + Hookflash + Dial ***** + Dial orbit (60-69 for system orbits, *300-*331 for Personal Park)

Retrieve a Parked Call

1. Lift handset + Dial ***** + Dial orbit (60-69 for system orbits, *300-*331 for Personal Park)

Pulse to Tone Conversion (page 240)

Must be switched manually from the telephone. The system does not provide Pulse to Tone Conversion for SLTs.

Removing Trunks and Extensions From Service (page 242)

1. Lift handset + Dial **#40** + Dial trunk (401-416) or extension (300-331) you want to remove or return to service + Dial **4** to return or **6** to remove. Hang up.

Speed Dial (page 263)

To dial a Speed Dial Number:

1. Lift handset and dial #.
2. Dial the Personal Speed Dial bin number (701-720).
   OR
   Dial the System Speed Dial bin number (normally 200-299).
   The stored number dials out.

Transfer (page 324)

To Transfer your call:

1. Place or answer call.
2. Hookflash + Dial extension to which you want to transfer the call.
   To Transfer the call to the Voice Mail Automated Attendant, dial the Voice Mail master number.
3. To Transfer the call unscreened, hang up.
   OR
   To screeen the Transfer, wait for the called party to answer before hanging up.

To return to the call if the calling party doesn't want the Transfer:

1. Hang up + Lift handset + Dial ** and co-worker's extension number.
   Do not hookflash or the call will go on Hold at the destination extension.

To receive a Transfer (if you get an intercom call announcing it):

1. Stay on the line.
   The Transfer goes through when the calling party hangs up.

Voice Mail (page 340)

1. Lift handset + Dial *8.

Description

LCCPU 01.00.00 | Available for Personal Speed Dial. Refer to *Speed Dial* on page 263.

Description

LCCPU 01.00.00 | Available.

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 Programmable Function 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. Access to the external zone is via pins 4 and 5 in the CPU's 8-pin mod jack. Using the DS2000 installation cable, these pins punch down as 1 and 2. Refer to the system *Hardware Manual* for additional installation details.

When connecting External Paging equipment, be sure to adhere to the following requirements:

Table 8: Audio/Paging Output

Output Impedance	600 Ohms @ 1 KHz
Output Level	0 dBr at 1.0 KHz

Note: External Paging does not activate the auxiliary relay contacts (CPU 8-pin mod jack pins 5 and 6).

Conditions

None

Default Setting

All Call and Zone Paging allowed.

Programming Guide

Step-by-step guide for setting up Paging

Step 1: Should extension be able to receive Paging announcements?

If yes

- In *Program 1807 - Paging Through Speaker* (page 469), enter Y to allow the extension to receive paging announcements.
- In *Program 1802 - Page Zone Member* (page 457), assign extension to the zone for which it should receive page announcements (1-7, 0 for All Call only).

If no

- In *Program 1807 - Paging Through Speaker* (page 469), enter N to prevent extension from receiving paging announcements.

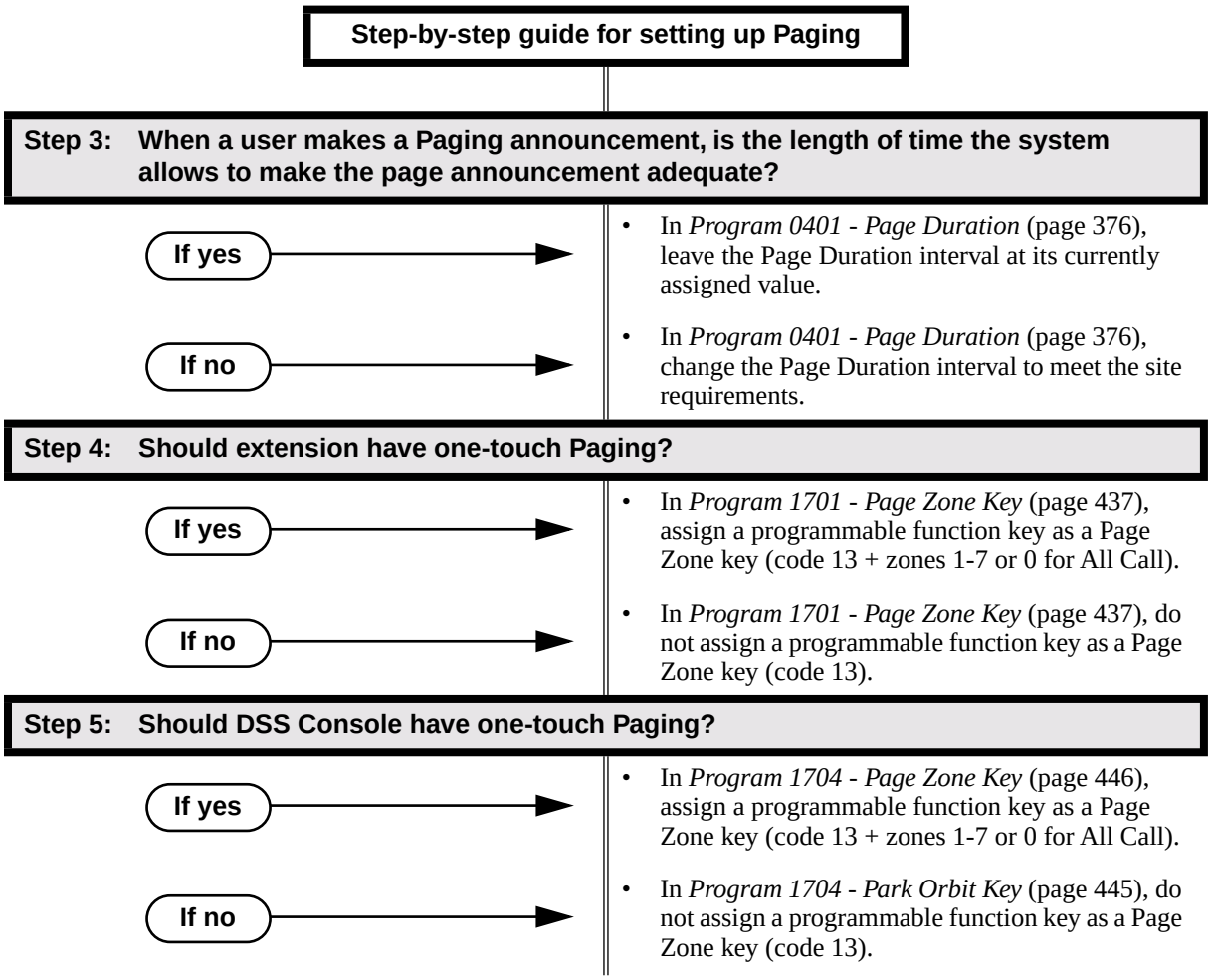
Step 2: Should extension be able to make (broadcast) Paging announcements?

If yes

- In *Program 0101 - Initiate All Call Page* (page 363), enter Y to allow extensions with the assigned Class of Service to make All Call Paging announcements.
- In *Program 0101 - Access Page Zone 1* (page 363), through *Program 0101 - Access Page Zone 7* (page 364), enter Y to allow extensions with the assigned Class of Service to make announcements into zones 1-7.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

If no

- In *Program 0101 - Initiate All Call Page* (page 363), enter N to prevent extensions with the assigned Class of Service from making All Call Paging announcements.
- In *Program 0101 - Access Page Zone 1* (page 363), through *Program 0101 - Access Page Zone 7* (page 364), enter N to prevent extensions with the assigned Class of Service from making announcements into zones 1-7.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.



Programming List

Program 0101 - Initiate All Call Page (page 363)
Enter Y to enable an extension's ability to make an All Call Paging announcement.
Program 0101 - Access Page Zone 1 (page 363)
Enter Y to enable an extension's ability to make a zone 1 Paging announcment.
Program 0101 - Access Page Zone 2 (page 363)
Enter Y to enable an extension's ability to make a zone 2 Paging announcment.
Program 0101 - Access Page Zone 3 (page 363)
Enter Y to enable an extension's ability to make a zone 3 Paging announcment.
Program 0101 - Access Page Zone 4 (page 363)
Enter Y to enable an extension's ability to make a zone 3 Paging announcment.
Program 0101 - Access Page Zone 5 (page 364)
Enter Y to enable an extension's ability to make a zone 3 Paging announcment.
Program 0101 - Access Page Zone 6 (page 364)
Enter Y to enable an extension's ability to make a zone 3 Paging announcment.
Program 0101 - Access Page Zone 7 (page 364)
Enter Y to enable an extension's ability to make a zone 3 Paging announcment.
Program 0401 - Page Duration (page 376)
Use this timer to set the maximum length of Page announcements.

Program 1701 - Page Zone Key (page 437)
Assign a programmable key on an extension as a Page Zone key (code 13). The options are 0-7 (Page Zones 1-7 or 0 for All Call Page).
Program 1704 - Page Zone Key (page 446)
Assign a programmable key on a DSS Console as a Page Zone key (code 13). The options are 0-7 (Page Zones 1-7 or 0 for All Call Page).
Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.
Program 1802 - Page Zone Member (page 457)
Assign the extension to a Page Zone (1-7).
Program 1807 - Paging Through Speaker (page 469)
Enter Y to enable Paging through the telephone speaker.

Other Related Features

Direct Station Selection (DSS) Console (page 98)
DSS Consoles can have Page zone keys.
Do Not Disturb (page 114)
DND blocks Paging announcements.
Headset Compatibility (page 154)
While in the headset mode, the extension user can hear Paging announcements in the headset.

Feature Operation

To make an Internal Paging announcement:

1. Lift handset.
2. Press **ICM**.

   Intercom dial tone.
   ICM on.
3. Dial *1 and page zone number (1-7 or 0 for All Call).

   Two beeps.
   N/A
4. Make announcement and hang up.
   The system may limit the length of your announcement.

OR

1. Lift handset.
2. Press Paging key.

   Two beeps.
   N/A
3. Make announcement and hang up.
   The system may limit the length of your annoucement.

Description

LCCPU 01.00.00 | Available.

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 a trunk 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 unanswerd, 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 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.

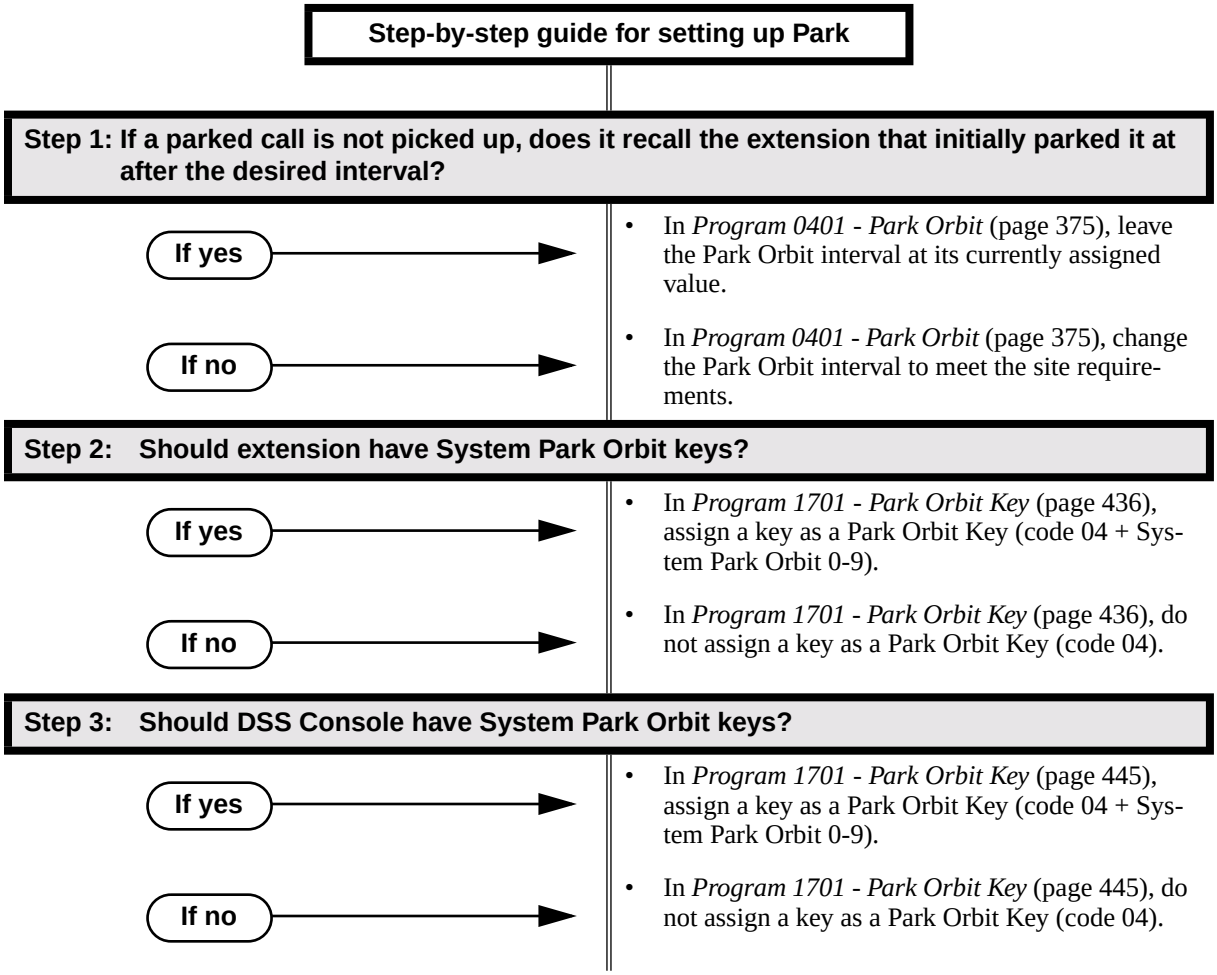
Conditions

None

Default Setting

- Park available.
- No System Park keys assigned.

Programming Guide



Programming List

Program 0401 - Park Orbit (page 375)
Set how long a call stays in System Park Orbits 60-67 only before recalling. Note that the recall for orbits 68 and 69 is fixed at 5 minutes.

Program 1701 - Park Orbit Key (page 436)
Assign a programmable key on an extension as a Park Orbit key (code 04). The options are 0-9 (System Park Orbits 0-9).

Program 1704 - Park Orbit Key (page 445)
Assign a programmable key on a DSS Console as a Park Orbit key (code 04). The options are 0-9 (System Park Orbits 0-9).

Other Related Features

Direct Station Selection (DSS) Console (page 98)
DSS Consoles can have Park keys.

Directed Call Pickup (page 108)
Directed Call Pickup also allows an extension user to pick up a call at a co-worker's extension.
Key Ring (page 170)
Unanswered Park recalls divert to key ring.
Music On Hold (page 195)
If installed, Music on Hold plays to parked callers.
Off-Hook Signaling (page 205)
An extension user can Park their current call and answer the waiting call.

Feature Operation

To Park a call in system orbit:

1. While on a trunk call, press **ICM**.

   Intercom dial tone.
   ICM on.
2. Dial ***** + System Park Orbit (60-69).
3. Hang up.
   N/A
   Line/loop key triple Wink On (green).

OR

1. While on a trunk call, press Park key.
2. Hang up.
   N/A
   Line/loop key triple wink on (green). Park key single wink on (green).

To retrieve a call from system Park orbit:

1. Lift handset.
2. Press **ICM**.
   Intercom dial tone.
   ICM on.
3. Dial ***** + System Park Orbit (60-69).
   Conversation with caller.
   Line/loop key on (green).

OR

1. Lift handset.
2. Press Park key.
   N/A
   Line/loop key on.

To Park a call at an extension (using Personal Park):

1. While on a trunk call, press **ICM**.
   Intercom dial tone.
   ICM on.
2. Dial *** *** + Number of extension at which you want to park the call (300-331).

3. Hang up.

N/A

For the extension that parked the call and for the extensin at which the call is parked: Line/loop key triple wink on (green).

To retrieve a call parked at an extension:

1. Lift handset.
2. Press **ICM**.

Intercom dial tone.

ICM on.

3. Dial *** *** + Number of extension at which the call is parked.

Conversation with caller.

Line/loop key on (green).

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Idle Prime Line for trunks available.

Place or answer an outside call on your Prime Line just by lifting the handset.

Prime Line Preference allows a keyset user to place or answer an outside call by just lifting the handset. The user does not have to press a line or loop key first. This simplifies handling calls for users that primarily place or answer trunk calls. In programming, you designate a line or loop key as a Prime Line Key. The trunk or trunk group assigned to that key becomes your Prime Line. Any number of extensions can have the same Prime Line assignment.

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

Ringing Prime Line

This option is currently not available.

Idle Prime Line

Idle Prime Line lets a user place or answer a Prime Line call by just lifting the handset. If the Prime Line Key is a line key, lifting the handset places or answers a call on the trunk assigned to the key. If the Prime Line key is a Loop Key, lifting the handset places or answers a call on a trunk assigned to the key.

Conditions

None

Default Setting

Prime Lines are not set up.

Programming Guide

Step-by-step guide for setting up Prime Line Preference (Page 1 of 2)

Step 1: Should an extension have Prime LIne Preference?

If yes

- In *Program 1807 - Prime Line Key* (page 470), enter the line/loop key that will be the extension's Prime Line.

If no

- In *Program 1807 - Prime Line Key* (page 470), enter 0 (no assignment).

Step-by-step guide for setting up Prime Line Preference (Page 2 of 2)

Step 2: Designate the function of the Prime Line Key.

- In *Program 1701 - Switched Loop Key* (page 436), assign the Prime Line Key as a Switched Loop Key (code 01).
  OR
- In *Program 1701 - Fixed Loop Key* (page 436), assign the Prime Line Key as a Fixed Loop Key (code 02 + Trunk Group 0-8).
  OR
- In *Program 1701 - Line Key* (page 436), assign the Prime Line Key as a Line Key (code 03 + Trunk number 1-16).

Programming List

Program 1701 - Programmable Function Key Assignments (page 436)
Program the key assigned as the extension's Prime Line as a Switched Loop Key (code 01), Fixed Loop Key (code 02 followed by Trunk Group 0-8), or a Line Key (code 03 followed by the trunk number 1-16).

Program 1807 - Prime Line Key (page 470)
Use this option to assign a trunk as the extension's Prime Line. You enter the Prime Line's key number (1-24).

Other Related Features

Direct Inward Line (page 88)
If an extension's Prime Line is another extension's DIL, lifting the handset will answer the call even though it does not ring the phone.

Off-Premise Extensions / On-Premise SLT Extensions (page 207)
On- and off-premise extensions cannot use Prime Line Preference.

Ringing Line Preference (page 251)
Prime Line Preference overrides Ringing Line Preference. For example, if you lift the handset while a call is ringing your phone, you seize your Prime Line instead of answering the ringing call.

Feature Operation

To answer a call on your Prime Line:

Trunk ring.

The key assigned as your Pime Line key flashes slowly.

To bypass your Prime Line, press another key (e.g., a line or loop key) before lifting the

handset.

1. Lift the handset.

Conversation with caller.

The key assigned as your Pime Line key is on (green).

To place a call on your Prime Line:

To bypass your Prime Line, press another key (e.g., a line or loop key) before lifting the handset.

1. Lift the handset.

Trunk dial tone.

The key assigned as your Pime Line key is on (green).

2. Dial call normally.

Description

LCCPU 01.00.00 | Available.

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.

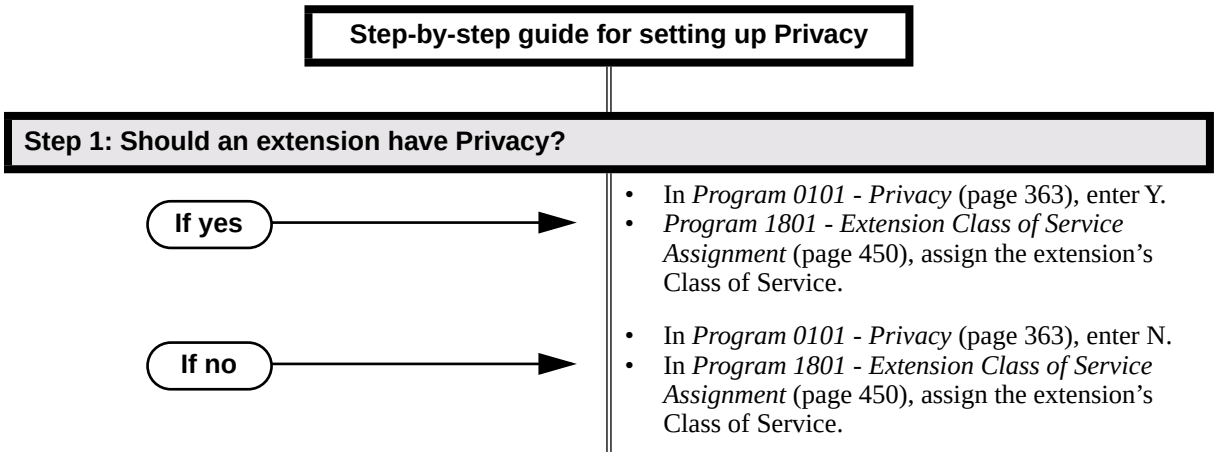
Conditions

None

Default Setting

Privacy disabled in an extension's Class of Service.

Programming Guide



Programming List

Program 0101 - Privacy (page 363)
In an extension's Class of Service, enter Y to enable Privacy.
Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Other Related Features

Attendant Position (page 24)
Since the attendant is never busy for Intercom calls, the attendant always has Privacy enabled.

Call Waiting / Camp-On (page 51)
Privacy blocks Camp-On beeps.
Barge In (Intrusion) (page 37)
Privacy blocks Barge In attempts.
Monitor / Silent Monitor (page 192)
Privacy does not block Monitor.
Privacy Release Groups (page 228)
There is no interaction between Privacy and Privacy Release Groups.

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

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

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

I 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 Privacy Release Group must have line keys and access to the trunks 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 (trunks and/or extensions)	8

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

Conditions

None

Default Setting

No Privacy Release groups assigned.

Programming Guide

Step-by-step guide for setting up Privacy Release Groups

Step 1: Should extension be in a Privacy Release Group?

If yes

- In *Program 1802 - Privacy Release Group* (page 455), assign the extension to a Privacy Release Group (1-16). Users in the Privacy Release Group must have line keys for the trunks they want to share.
- In *Program 1701 - Line Key* (page 436), assign the extension's line keys. Users in the Privacy Release Group must have line keys for the trunks they want to share.
- In *Program 1704 - Line Key* (page 444), optionally assign line keys to the extension's DSS Console. Users in the Privacy Release Group must have line keys for the trunks they want to share.
- In *Program 1803 - Extension Line Access Assignments* (page 461), assign access to the trunks the Privacy Release Group members want to share. The options are 0 (no access), 1 (incoming only), 2 (outgoing only) and 3 (full access).

If no

- In *Program 1802 - Privacy Release Group* (page 455), assign the extension to Privacy Release Group 0.

Programming List

Program 1701 - Line Key (page 436)
Assign a programmable key as a line key. Users in the Privacy Release Group must have line keys for the trunks they want to share.

Program 1704 - Line Key (page 444)
Optionally assign a programmable key on a DSS Console as a line key. Users in the Privacy Release Group must have line keys for the trunks they want to share.

Program 1802 - Privacy Release Group (page 455)
Assign an extension to a Privacy Release Group (1-16, 0 = Unassigned).

Program 1803 - Extension Line Access Assignments (page 461)
Users in the Privacy Release Group must have access for the trunks they want to share.The options are 0 (no access), 1 (incoming only), 2 (outgoing only) and 3 (full access).

Other Related Features

The following features also allow different types of multiple party calls:

Barge In (Intrusion) (page 37)
Conference (page 79)
Group Listen (page 142)
Meet-Me Conference (page 184)
Tandem Trunking / Unsupervised Conference (page 307)

Privacy (page 226)
There is no interaction between Privacy and Privacy Release Groups.

Feature Operation

To join a trunk call with a member of your Privacy Release Group:

	N/A.
	Line key on(red).
	The line key is on (orange) at the extension that initially placed or answered the call.

1. Press line key.
   You can optionally press a line key on your DSS Console.

	Conversation with caller.
	Line key on (green) for every Privacy Release Group member that joins the call.

To prevent a member of your Privacy Release Group from joining your call:

1. Place or answer trunk call on line key.

	Conversation with caller.
	Line key on (orange).

2. Press line key.

	Conversation with caller continues.
	Line key on (green).

   A Privacy Release Group member cannot join your call.
3. Repeat step 2 to allow or prevent users to join your call.

Description

LCCPU 01.00.00 | Available.

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

A Private Line is a trunk 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 trunk 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 ougoing 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.

Conditions

None

Default Setting

No Private Lines programmed.

Programming Guide

Step-by-step guide for setting up Private Lines (Page 1 of 2)

Step 1: Should extension have a Private Line

If yes

- In *Program 1001 - Trunk Circuit Type* (page 416), assign the correct circuit type to the Private Line.

If no

- Stop.

Step-by-step guide for setting up Private Lines (Page 2 of 2)

Step 2: Should Private Line be exclusively for only one extension?

If yes

- In *Program 1701 - Line Key* (page 436), make sure that only the extension with the Private Line has a line key for the trunk (code 03 followed by the trunk number[1-16]).
  OR
  In *Program 1704 - Line Key* (page 444), optionally assign the Private Line to a key on the DSS Console (code 01 followed by the trunk number [1-16]).
- In *Program 1803 - Extension Line Access Assignments* (page 461), make sure that the extension with the Private Line is the only phone that has access to the trunk. See step 3 below for the specifics.

If no

- In *Program 1701 - Line Key* (page 436), assign line keys (code 03 followed by the trunk number [1-16]) for all extensions that will share the Private Line.
  OR
  In *Program 1704 - Line Key* (page 444), optionally assign the Private Line to a key on the DSS Console (code 01 followed by the trunk number [1-16]).

Step 3: Should Private Line be incoming, outgoing or both ways?

Incoming

- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 1 for incoming only access.
- In *Program 1805 - Ring Assignments* (page 466), make sure only the extension with the Private Line rings for the trunk.

Outgoing

- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 2 for outgoing only access.
- In *Program 1805 - Ring Assignments* (page 466), make sure no extensions ring for the trunk.

Both

- In *Program 1803 - Extension Line Access Assignments* (page 461), enter 3 for full access.
- In *Program 1805 - Ring Assignments* (page 466), make sure only the extension with the Private Line rings for the trunk.

Programming List

Program 1001 - Trunk Circuit Type (page 416)
Assign the correct circuit type to the Private Line.
Program 1701 - Line Key (page 436)
Assign the Private Line to a line key (code 03 followed by the trunk number [1-16]).
Program 1704 - Line Key (page 444)
Optionally assign the Private Line to a key on the DSS Console (code 01 followed by the trunk number [1-16]).
Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access).
Program 1805 - Ring Assignments (page 466)
Assign ringing for each trunk at each extension (1 = Lamp only [day and night], 2 = Ringing day and night, 3 = Night Ring only, lamp during the day, 4 = Delay ring day and night). Check to be sure this program applies to this feature.

Other Related Features

The following features work normally for Private Lines.

Automatic Handsfree (page 30)
Delayed Ringing (page 82)
Group Ring (page 144)
Hold (page 156)
Last Number Redial (page 174)
Night Service / Night Ring (page 200)
Park (page 218)
Prime Line Preference (page 223)
Save Number Dialed (page 254)
Speed Dial (page 263)
Toll Restriction (page 314)
Transfer (page 324)

The following features do not apply to Private Lines

Call Forwarding (page 43)
If you want to be able to forward a private trunk, consider setting up a Direct Inward Line.

Feature Operation

To answer an incoming call on your Private Line:

	Trunk ring.
	Privalte Line flashing red.

1. Lift handset..

	Conversation with caller.
	Private Line key on (green).

To place a call over your Private Line:

1. Lift handset.

2. Press line key.

	Trunk dial tone.
	Private Line key on (green).

3. Dial outside number.

Description

LCCPU 01.00.00 | Available.

Programmable Function Keys simplify feature operation.

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

The **22-Button Standard and Display Telephones** features 12 Programmable Function Keys.

The **34-Button Display Telephone** features 24 Programmable Function Keys.

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

Programmable Function Keys

The following chart lists the available Programmable Function Key assignments.

- ACD Log On (Future)
- Call Coverage
- Call Timer
- Data Key (Future)
- Group Pickup
- Hotline
- Intercom Directory Dialing
- Line Key
- Loop Key, Fixed
- Loop Key, Switched
- Message Center
- Multiple Directory Numbers (Future)
- Night Key
- Page Zones
- Park Orbit
- Reverse Voice Over
- Speed Dial, Personal
- Speed Dial, System
- Split Key
- Voice Mail Record Key

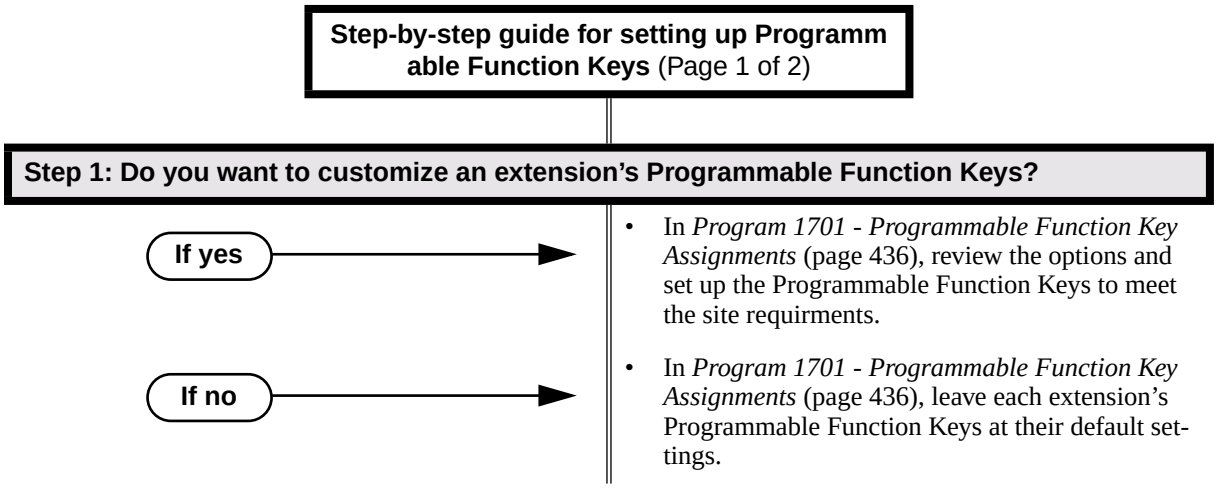
Conditions

If you unplug a 34-button telephone and replace it with a 22-button telephone, Programmable Function Keys 13-24 are inaccessible. However, the system still retains the programming for those keys.

Default Setting

- Keys 1-8 are line keys for trunks 1-8.
- Keys 9 and 10 are fixed loop keys.
- Key 11 is an auto timer key.
- Key 12 is an All Call Page key.

Programming Guide



Step-by-step guide for setting up Programmable Function Keys (Page 2 of 2)

Step 2: Are any of an extension's Programmable Function Keys set up as line keys?

If yes

- In *Program 1802 - Key Access to Outbound Lines* (page 457), enter Y to enable line key access to trunks.
- Also, review*Central Office Calls, Answering* on page 58 and *Central Office Calls, Placing* on page 63 for more on setting up trunk calling.

If no

- To provide an answering point for incoming calls, you should have at least one Loop Key reserved for incoming calls. Refer to *Loop Keys* on page 179 for more.

Programming List

Program 1701 - Programmable Function Key Assignments (page 436)

Assign programmable key functions per the following chart.

Option	Description	Key Code
Undefined	Use this option to designate a key as undefined (no function).	**00**
Switched Loop Key	Use this option to assign a programmable key as a switched loop key.	**01**
Fixed Loop Key	Use this option to assign a programmable key as a Fixed Loop Key.	**02 + nn (trunk group)**
Line Key	Use this option to assign a programmable key as a line key.	**03 + nn (trunk number)**
Park Orbit Key	Use this option to assign a programmable key as a Park Orbit key.	**04 + n (Park Orbit 0-9)**
Hotline Key	Use this option to assign a programmable key as a Hotline key.	**05 + nnn (extension number)**
Call Coverage Immediate Ring	Use this option to assign a programmable key as an immediately ringing Call Coverage Key.	**06 + nnn (extension number)**
Call Coverage No Ring	Use this option to assign a programmable key as a lamp only (no ring) Call Coverage Key.	**07 + nnn (extension number)**
Call Coverage Delay Ring	Use this option to assign a programmable key as a delayed ring Call Coverage Key.	**08 + nnn (extension number)**
Group Pickup Immediate Ring	Use this option to assign a programmable key as an immediate ring Group Call Pickup key.	**09 + nn (Pickup Group 01-08)**

Option	Description	Key Code
Group Pickup No Ring	Use this option to assign a programmable key as a lamp only (no ring) Group Call Pickup key.	**10 + nn (Pickup Group 01-08)**
Group Pickup Delay Ring	Use this option to assign a programmable key as a delay ring Group Call Pickup key.	**11 + nn (Pickup Group 01-08)**
Page Zone Key	Use this option to assign a programmable key as a Page Zone key.	**13 + n (Page Zone 1-7, 0 for All Call)**
System Speed Dial Key	Use this option to assign a programmable key as a One-Touch System Speed Dial key. You assign the key to specific System Speed Dial bin.	**14 + nnn (System Speed Dial bin, normally 200-299)**
Personal Speed Dial Key	Use this option to assign a programmable key as a Personal Speed Dial key. You assign the key to a specific Personal Speed Dial bin.	**15 + nnn (701-720)**
Call Timer Key	Use this option to assign a programmable key as a Call Timer key. There are two types of timer key: manual and automatic.	**16 + n (1 = Manual Call Timer, 2 = Automatic Call Timer)**
Voice Mail Record Key	Use this option to assign a programmable key as a Voice Mail Record key.	**17**
Night Key	Use this option to assign a programmable key as a Night Key.	**18 + CLEAR**
Data Key	This option is currently not used.	**19 + nnn (extension number)**
Split Key	Use this option to assign a programmable key as a Split key.	**20**
ICM Directory Key	Use this option to assign a programmable key as an Intercom Directory Dialing key.	**21**
ACD Log On Key	• This option is currently not used.	**22**
Reverse Voice Over Key	Use this option to assign a programmable key as a Reverse Voice Over key.	**23**
Message Center Key	Use this option to assign a programmable key as a Message Center key.	**24 + nnn (extension number)** Note that the extension number does not have to be an installed extension.
Save Key	Use this option to assign a programmable key as a Save Number Dialed key.	**25**

Program 1802 - Key Access to Outbound Lines (page 457)

Enter Y to enable an extension user to press a Programmable Function Key to access and outside line.

Other Related Features

Check Key (page 71)
Check Programmable Function Key assignments.

Direct Station Selection (DSS) (page 95)
If enabled in programming, Programmable Function Keys become DSS keys when the user presses **ICM**.

Feature Operation

Refer to the individual features in the chart above.

Pulse to Tone Conversion

Description

LCCPU 01.00.00 | Available.

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

An extension can use Pulse to Tone Conversion while placing a trunk 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 trunk.
- After the banking service answers, wait 6 seconds. (The system automatically converts dialing to DTMF.)
- Dial additional banking options.

Refer to *Central Office Calls, Answering* on page 58 and *Central Office Calls, Placing* on page 63 for the specifics on setting up your trunk calling.

Conditions

None

Default Setting

Pulse to Tone Conversion always enabled for dial pulse trunks.

Programming Guide

None

Programming List

Program 1001 - Trunk Circuit Type (page 416)
Be sure to program your DP trunk with circuit type 52.

Other Related Features

Pulse to Tone Conversion (page 240)
The system does not provide Pulse to Tone Conversion for SLTs. The conversion must be switched manually from the telephone.

Speed Dial (page 263)
If a Speed Dial number using a dial pulse trunk contains a pause, the digits following the pause automatically dial out as DTMF.

Feature Operation

To convert your phone's dialing to DTMF after placing your call on a DP trunk:

1. Dial initial digits for call.

	Digits dial out as dial pulse.
	N/A

2. Wait 6 seconds.
3. Dial additional digits.

	Additional digits dial out as DTMF.
	N/A

Description

LCCPU 01.00.00 | Available.

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

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

The extension or trunk removed from service shows as busy on the appropriate key (e.g., line key or Hotline key). The port activity LED on the ATRU PCB indicates that the trunk is busy.

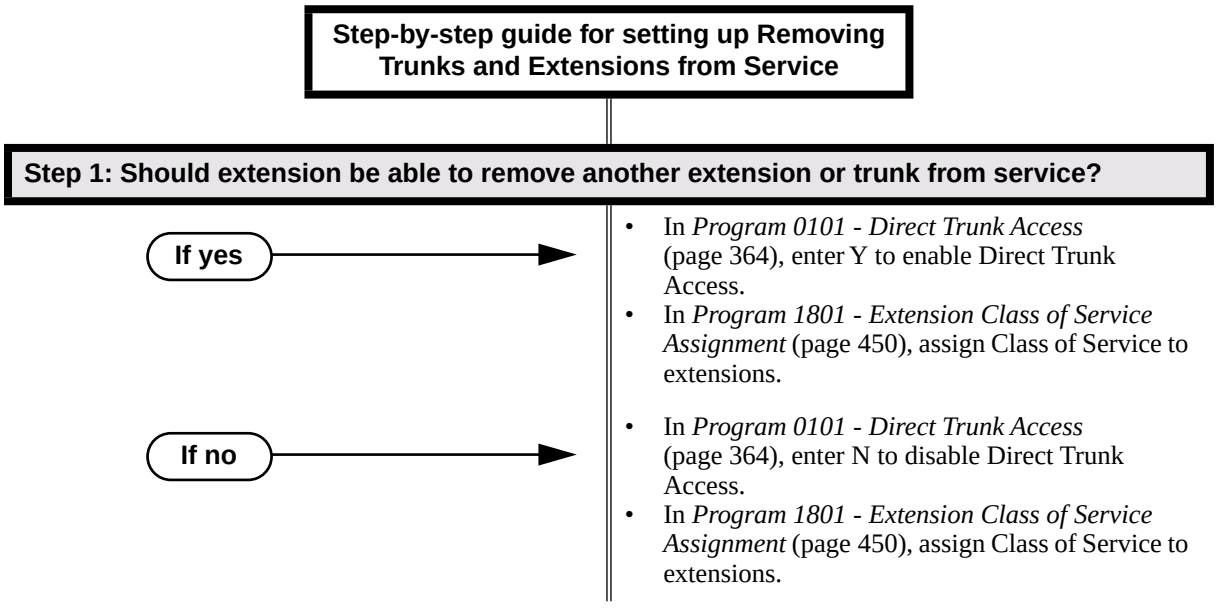
Conditions

None

Default Setting

Disabled

Programming Guide



Programming List

Program 0101 - Direct Trunk Access (page 364)
Enter Y to enable an extension to use Direct Trunk Access. Note that enabling Direct Trunk Access allows the user to bypass Toll Restriction.

Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Other Related Features

Attendant Position (page 24)
Normally, system attendants should have the ability to remove trunks and extensions from service.

Call Forwarding (page 43)
If Call Forwarding is enabled at an extension when it is removed from service, it is reinstated when the extension is returned to service.

Direct Trunk Access (page 106)
An extension user with Direct Trunk Access can remove trunks from service.

Selectable Display Messaging (page 256)
Removing and returning an extension to service does not cancel an extension's Selectable Display Messaging.

Feature Operation

To remove or return an extension or trunk to service:

1. Press **ICM** and dial #40.
2. Dial the number of the extension you want to remove or return to service (300-331).
   OR
   Dial the number of the trunk you want to remove or return to service (401-416)
3. Dial 4 to return.
   OR
   Dial 6 to remove.

   Dial tone.

   The display on a telephone removed from service shows: *Out of Service*
   The line key for a trunk removed from service is on (red).
4. Press **SPK** to hang up.

Repeat Redial

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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 a trunk 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. (You cannot, however, use it to Transfer calls.) 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
Flashing fast	In Do Not Disturb

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 (trunks and/or extensions)	8

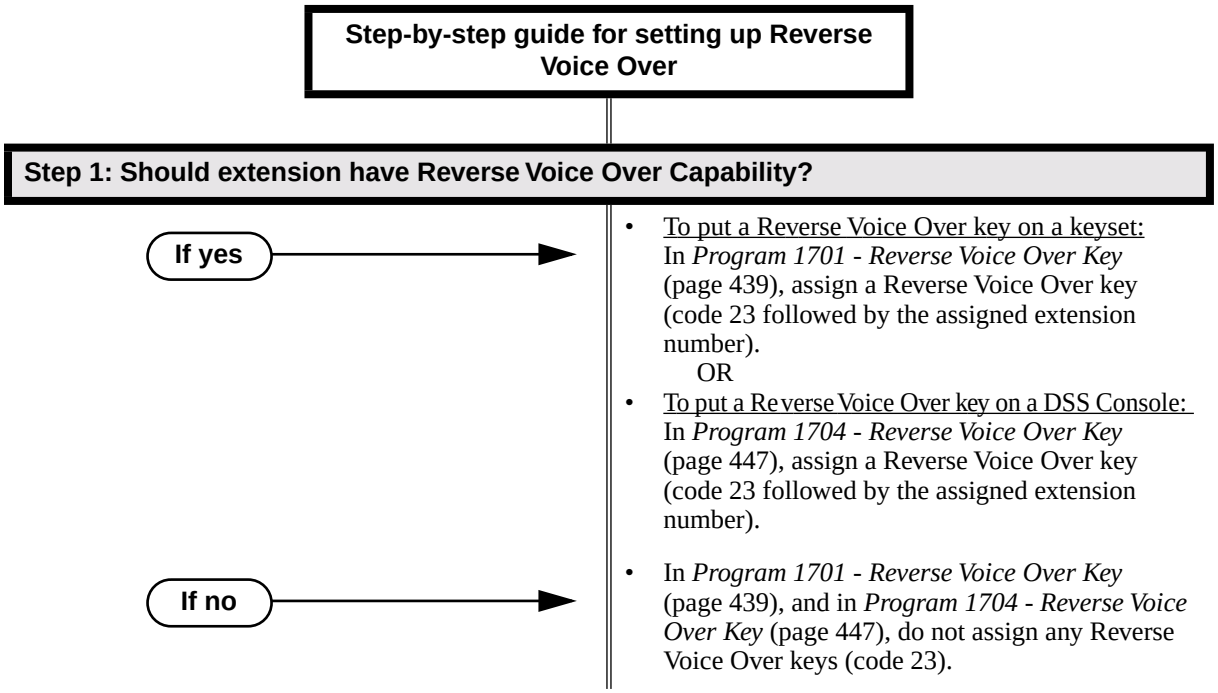
The system's 32 Conference circuits are dynamically allocated as users request them.

Conditions

Default Setting

No Reverse Voice Over keys assigned

Programming Guide



Programming List

Program 1701 - Reverse Voice Over Key (page 439)
Assign a keyset programmable key as a Reverse Voice Over key (code 23 followed by the assigned extension number).

Program 1704 - Reverse Voice Over Key (page 447)
Assign a DSS Console programmable key as a Reverse Voice Over key (code 23 followed by the assigned extension number).

Other Related Features

Conference (page 79)
An extension user cannot add an incoming Reverse Voice Over call to a Conference.

Direct Station Selection (DSS) Console (page 98)
A DSS Console can have a Reverse Voice Over key.

Do Not Disturb (page 114)
DND does not block Reverse Voice Over.

Hold (page 156)
An extension cannot put an incoming Reverse Voice Over call on Hold.

Transfer (page 324)
While idle, an extension user cannot use their Reverse Voice Over key to Transfer calls.

Feature Operation

To place a Reverse Voice Over call:

1. While on a handset call, press and hold your Reverse Voice Over key.

Two beeps, then conversation with called co-worker.

Reverse Voice Over key on (red).

To return to your initial caller:

1. Release your Reverse Voice Over key.

Conversation with initial caller in handset.

Reverse Voice Over key off.

To place a call to your assigned Reverse Voice Over destination:

1. While your telephone is idle, press your Reverse Voice Over key.

Two beeps, then conversation with called co-worker.

Reverse Voice Over key on (green).

You can optionally lift the handset for Privacy.

Description

Refer to *Group Ring* on page 144 for more information.

Description

LCCPU 01.00.00 | Available.

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 or a UCD Hunting group 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 extension are frequently used for lobby phones, where the caller just lifts the handset to get the information desk.

Conditions

None

Default Setting

Ring Down disabled.

Programming List

Program 1802 - Ring Down Destination (page 457)
Assign the extension's Ringdown destination. The destination can be an extension, the Voice Mail master number, a Ring Group number, or a UCD master number. The Ringdown destination cannot be a trunk (e.g., 401).

Other Related Features

Intercom (page 165)
Ringdown Extension follows the voice-announce status of destination extension. For example, if an extension usually voice-announces Intercom calls, a ringdown to that extension will also voice-announce.

Ringing Line Preference (page 251)
Ringing Line Preference has precedence over Ringdown Extension. If Ringing Line Preference is ringing the phone, lifting the handset answers the call. Lifting the handset does not call the Ringdown destination.

Voice Mail (page 340)
If the Ringdown destination is the Voice Mail master number, the Ringdown Extension user hears the Voice Mail main greeting ("*Please enter your mailbox number*") after the call connects.

Feature Operation

To use Ringdown Extension:

1. Lift handset or press **SPK**.
   | Two beeps or ringing.
   | ICM on.
   If you hear ringing, wait for the called pary to answer. If you hear two beeps, you may

begin speaking.

To bypass Ringdown (if your keyset is set up as a Ringdown Extension):

1. Before lifting the handset or pressing **SPK**, press one of the following:
   - **ICM**
   - Line key
   - Programmable Function Key

Description

LCCPU 01.00.00 | Available.

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.

Table 9: Ringing Line Preference for Handset Call

Feature	Keyset		Attendant	
	RLP = Y	RLP = N	RLP = Y	RLP = N
	Does lifting the handset answer the ringing call?			
Intercom (page 165) Ringing Intercom calls	Yes	Yes	Yes[1]	Yes[1]
Key Ring (page 170) (Line/Loop Keys)	Yes	No	Yes	No
Transfer (page 324)	Yes	No	Yes	No
Direct Inward Line (page 88)	Yes	No	Yes	No
Group Ring (page 144)	Yes	Yes	N/A	N/A
Extension Hunting (page 121) (Call to UCD master)	Yes	Yes	No	No
Call Coverage Keys (page 40)	No	No	No	No
Group Call Pickup (page 139)	No	No	No	No

[1]Ringing Line Preference will not answer a call ringing the Operator Call Key.

Table 10: Ringing Line Preference for Headset Calls

Feature	Keyset		Attendant	
	RLP = Y	RLP = N	RLP = Y	RLP = N
	Does pressing **SPK** while in the Headset mode answer the ringing call?			
Intercom (page 165) Ringing Intercom calls	Yes	Yes	Yes	Yes

Table 10: Ringing Line Preference for Headset Calls

Feature	Keyset		Attendant	
	RLP = Y	RLP = N	RLP = Y	RLP = N
	Does pressing **SPK** while in the Headset mode answer the ringing call?			
Key Ring (page 170) (Line/Loop Keys)	Yes	No	Yes	No
Transfer (page 324)	Yes	No	Yes	No
Direct Inward Line (page 88)	Yes	No	Yes	No
Group Ring (page 144)	Yes	Yes	N/A	N/A
Extension Hunting (page 121) (Call to UCD master)	Yes	Yes	No	No
Call Coverage Keys (page 40)	No	No	No	No
Group Call Pickup (page 139)	No	No	No	No

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

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

Conditions

None

Default Setting

Enabled

Programming List

Program 1807 - Ringing Line Preference (page 469)
Enter Y to enable Ringing Line Preference.

Other Related Features

Attendant Call Queuing (page 22)
Ringing Line Preference will not answer a call ringing the Operator Call Key.

Intercom (page 165)
Ringing Line Preference answers a ringing Intercom call before a ringing trunk call.

Prime Line Preference (page 223)
Prime Line Preference overrides Ringing Line Preference. For example, if you lift the handset while a call is ringing your phone, you seize your Prime Line instead of answering the ringing call.

Ringdown Extension (page 249)
Ringing Line Preference has precedence over Ringdown Extension. If Ringing Line Preference is ringing the phone, lifting the handset answers the call. Lifting the handset does not call the Ringdown destination.

Feature Operation

To use Ringing Line Preference:

1. Lift handset or press **SPK**.
   You automatically answer the call.

To bypass Ringing Line Preference:

1. Before lifting the handset or pressing **SPK**, press one of the following:
   - **ICM**
   - Line key
   - Programmable Function Key

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Save Number Dialed

Description

LCCPU 01.00.00 | Available.

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 32 digits. The system remembers the digits regardless of whether the call was answered, unanswered or busy. The system normally uses the same trunk as for the initial call. However, if that trunk is busy and is part of a trunk group, Save Number Dialed will automatically select the next trunk in the group. The user can also preselect a specific trunk if desired.

Save Number Dialed requires a uniquely programmed Programmable Function Key or DSS Console Key.

Conditions

None

Default Setting

No Save keys programmed.

Programming Guide

Step-by-step guide for setting up Save Number Dialed (Page 1 of 2)

Step 1: Should extension have a Save key?

If yes

- In *Program 1701 - Save Key* (page 439), enter code 25.

If no

- In *Program 1701 - Save Key* (page 439), do not enter code 25 to assign a key as a Save key.

Step 2: Should DSS Console have a Save key?

If yes

- In *Program 1704 - Save Key* (page 447), enter code 25.

Step-by-step guide for setting up Save Number Dialed (Page 2 of 2)

If no →

- In *Program 1704 - Save Key* (page 447), do not enter code 25 to assign a key as a Save key.

Programming List

Program 1701 - Save Key (page 439)
Assign a Save key to a keyset Programmable Function Key (code 25).
Program 1704 - Save Key (page 447)
Assign a Save key to a DSS Console (code 25).

Other Related Features

Central Office Calls, Placing (page 63)
Save an outside number, then easily redial it later on.
Direct Station Selection (DSS) Console (page 98)
A DSS Console can have a Save key.
Last Number Redial (page 174)
Last Number Redial also simplifies dialing important numbers.
Off-Premise Extensions / On-Premise SLT Extensions (page 207)
Save Number Dialed is not available to on- and off-premise SLTs.
Single Line Telephones (page 260)
Save Number Dialed is not available to SLTs.
Trunk (Line) Queuing / Trunk Callback (page 332)
If an extension user presses their Save key and hears busy, they can dial 2 to wait in line for the trunk to become available. The system will automatically redial the call. However, if the user hangs up to convert the queue to a Trunk Callback, the system will not redial the saved call once the trunk connects.

Feature Operation

To save the outside number you just dialed (up to 32 digits):

1. Press Save Number Dialed Key.
   The system stores the number you just dialed.

To redial a saved number:

1. (Optional) Press a line key to preselect a trunk for the call.
2. Press Save Number Dialed key.
   Stored number dialing out.
   Line/loop key triple Wink On (green).
   The stored number dials out.
   If you hear busy, you may be able to dial 2 and wait in line for the trunk to become free.

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Selectable Display Messaging

Description

LCCPU 01.00.00 | Available.

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

An extension user can select a preprogrammed Selectable Display Message for their extension. Display 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 display keyset user calling the extension would see the message. Other than displaying the message, the system puts the call though normally.

The 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 20. 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 RM (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 THE 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)

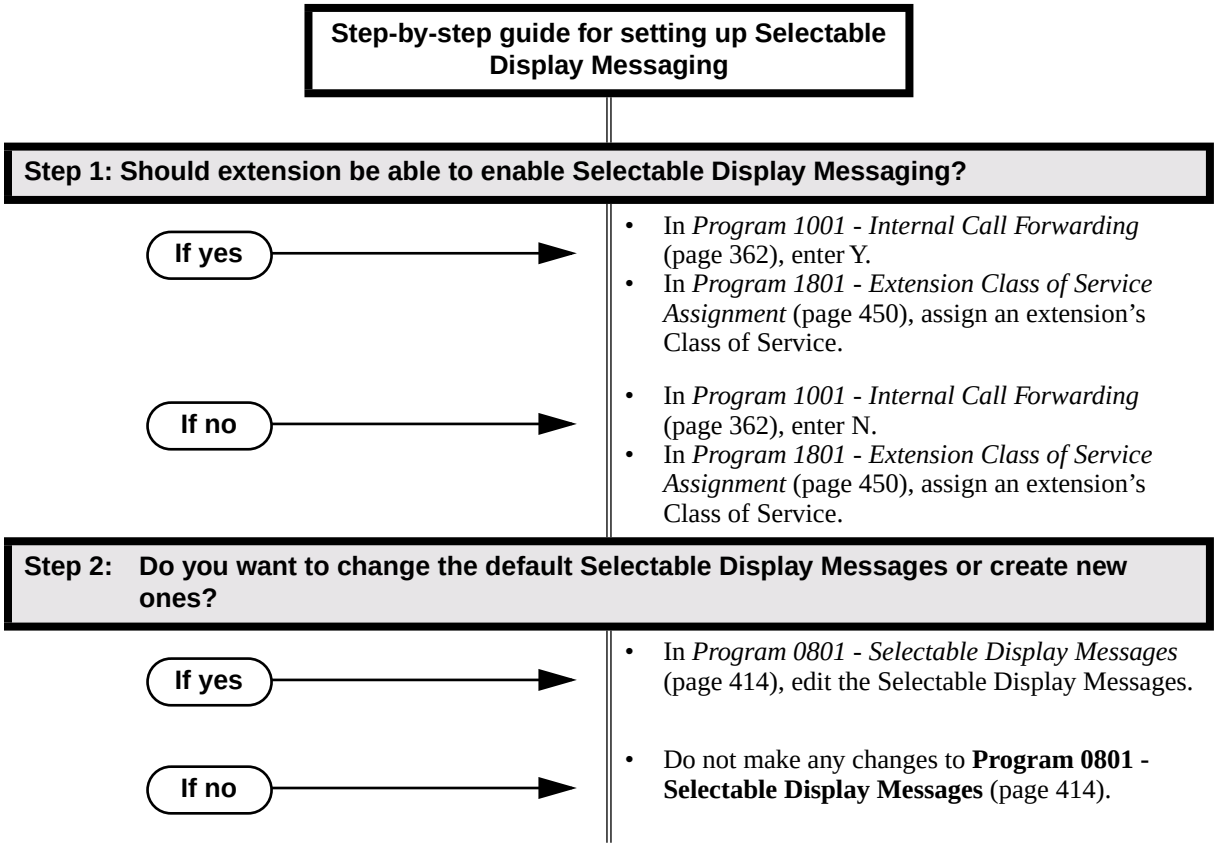
Conditions

None

Default Setting

See the table above.

Programming Guide



Programming List

Program 1001 - Internal Call Forwarding (page 362)
Enter Y to enable Call Forwarding.

Program 0801 - Selectable Display Messages (page 414)
Program the system's 16 Selectable Display Messages (up to 20 characters long).

Program 1801 - Extension Class of Service Assignment (page 450)
Assign an extension's Class of Service.

Other Related Features

Call Forwarding (page 43)
Call Forwarding Cancel (page 47)
Call Forwarding, Off-Premise (page 46)
Enabling or canceling Call Forwarding cancels an extension's Selectable Display Messaging.
Removing Trunks and Extensions From Service (page 242)
Removing and returning an extension to service does not cancel an extension's Selectable Display Messaging.
Single Line Telephones (page 260)
SLTs cannot use Selectable Display Messaging.
Speed Dial (page 263)
Personal Speed Dial keys can store the codes that enable Selectable Display Messaging.

Feature Operation

To select a Selectable Display Message:

1. Press **ICM**.

   Dial tone.
   ICM and **SPK** on.
2. Dial *38 + Message number (01-16).

   Dial tone stops.
   ICM on, **SPK** flashes.
   You can press VOL ▲ or VOL ▼ to scroll through the messages instead of dialing the message number.
3. Press HOLD.
4. Enter any additional digits.
   The total number of digits/characters in the message cannot exceed 20. Use any valid characters, digits or symbols (just as if you were entering names). Refer to the table below when entering digits.
5. Press HOLD.
6. Press SPK to hang up.
   DND is on while the Selectable Display Message is active.

To cancel a Selectable Display Message:

1. Press **ICM**.

   Dial tone.
   ICM and **SPK** on.
2. Dial *30.

   Dial tone.
   ICM and **SPK** on.
3. Press SPK to hang up.

   Dial tone stops.
   ICM, SPK and **DND** go out.

Use the following table when entering or appending messages:

Keys for Entering Names					
Press this key:	**Then one of these keys to enter the character in the white cell:**				
	1	**2**	**3**	**4**	**#**
1	**&**				**1**
2	**A**	**B**	**C**		**2**
3	**D**	**E**	**F**		**3**
4	**G**	**H**	**I**		**4**
5	**J**	**K**	**L**		**5**
6	**M**	**N**	**O**		**6**
7	**P**	**Q**	**R**	**S**	**7**
8	**T**	**U**	**V**		**8**
9	**W**	**X**	**Y**	**Z**	**9**
0	**SPACE**	**:**			**0**
*****					*****
#					#
To enter characters in lower case (e.g., **e** instead of **E**), press **MW** before pressing the key in the first shaded column. Use **LND** to backspace over (erase) any characters you want to correct.					

Description

LCCPU 01.00.00	Available. Refer to *Off-Premise Extensions / On-Premise SLT Extensions* on page 207 for more.

Description

LCCPU 01.00.00

See *Interactive Soft Keys* on page 163.

Silent Monitor

Description

LCCPU 01.00.00

See *Monitor / Silent Monitor* on page 192.

Description

LCCPU 01.00.00 | Available.

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 30 digits long, using 0-9, # and *. Every Speed Dial can have a programmed name up to 16 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 up to 1000 System Speed Dial numbers. Depending on the system option selected (see *Programming Guide* below), the system provides either 10, 100 or 1000 System Speed Dial numbers.

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.

Allocating Speed Dial Blocks

The system allows up to 1240 unique Speed Dial numbers (bins). Bins are grouped into 62 distinct blocks, with 20 numbers in each block. Review the table below and keep the following bullets in mind when setting up Speed Dial:

System Speed Dial			Personal Speed Dial		
Total Bins	**Total Blocks**	**Block Numbers**	**Total Bins**	**Total Blocks**	**Block Numbers**
10 (20-29)	1	1 (10 bins are not used)	1220	61	2-61
100 (200-299)	5	1-5	1140	57	6-62
1000 (2000-2999)	50	1-50	240	12	51-62

- The system automatically assigns System Speed Dial blocks. By default, Personal Speed Dial Blocks are assigned as follows.

Extension	Personal Speed Dial Block Assignment
300	6
301	7
through	
331	36

- You can change the Personal Speed Dial block assignment for an extension in system programming. ***Always be careful, however, to not assign a Personal Speed Dial block that is already in use for System Speed Dial.*** If you do, that extension's personal entries will overwrite the system entries, and vice-versa.
- Extensions with the same Personal Speed Dial block share the same Personal Speed Dial numbers.
- The Personal Speed Dial keys on a DSS Console access the same bins as the extension to which it is attached. DSS Consoles do not have unique Personal Speed Dial numbers.

Unique Speed Dial Entries

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

For this option	Or use this telephone Programming List option:
Pause	MIC
Flash	FLASH

Storing Trunk Routing in a Speed Dial Bin

When you program a Speed Dial bin, you can select either a trunk or a Trunk Group over which the call should route. For example, you can enter 1 for trunk 1 or 90 for Trunk Group 0.

- If you enter a Trunk Group number, the system will select the lowest numbered trunk in the group for the call. If that trunk is busy, the system will select the next highest trunk.
- If you enter a trunk number, the system initially selects that specific trunk for the call. If the trunk is busy, the system automatically tries the next trunk in that trunk's group (if any). If there is no other installed trunk in that group, the user hears busy tone and the call doesn't go through.

Conditions

None

Default Setting

- 100 System Speed Dial bins (200-299).
- System Speed Dial uses Speed Dial blocks 1-5.
- All extensions can program and use System Speed Dial.
- Extension Speed Dial uses blocks 6-62. (Extension 300 uses block 6, extension 301 uses block 7 etc.)
- All bins are empty and no names are programmed.

Programming Guide

Step-by-step guide for setting up Speed Dial

Step 1: Should extension be able to use System Speed DIal?

If yes

- In *Program 0101 - System Speed Dial Access* (page 362), enter Y if extension should have access to System Speed Dial.
- In *Program 1803 - Extension Line Access Assignments* (page 461), make sure extensions have access to the trunks you want to use for System Speed Dial.
- In *Program 1002 - Trunk Groups* (page 424), optionally set up Trunk Groups. See *Storing Trunk Routing in a Speed Dial Bin* on page 264 for more on why you may want to do this.

If no

- In *Program 0101 - System Speed Dial Access* (page 362), enter N is extension should not have access to System Speed Dial.

Step 2: Should the system have 10 (2-digit), 100 (3-digit) or 1000 (4-digit) System Speed Dial numbers?

10

- In *Program 0301 - Number of Digits in a System Speed Dial Code* (page 370), enter 2. System bins will normally be 20-29.

100

- In *Program 0301 - Number of Digits in a System Speed Dial Code* (page 370), enter 3. System bins will normally be 200-299.

1000

- In *Program 0301 - Number of Digits in a System Speed Dial Code* (page 370), enter 4. System bins will normally 2000-2999.

Step 3: Do you want to enter System Speed Dial numbers from within system programming?

If yes

- In *Program 1101 - System Speed Dial Numbers* (page 431), enter System Speed Dial numbers. Users with the proper access can also enter System Speed Dial numbers.

If no

- In *Program 1101 - System Speed Dial Numbers* (page 431), do not enter System Speed Dial numbers. Users with the proper access can still enter System Speed Dial numbers.

Step-by-step guide for setting up Speed Dial

Step 4: Should extension or DSS Console have Programmable Function Key access to System Speed Dial numbers.

If yes

- In *Program 1701 - System Speed Dial Key* (page 438), assign a keyset programmable key as a System Speed Dial Key (code 14 + System Speed Dial bin number).
- In *Program 1704 - System Speed Dial Key* (page 446), assign a DSS Console key as a System Speed Dial Key (code 14 + System Speed Dial bin number).

If no

- Do not assign keyset or DSS Console keys for System Speed Dial access.

Step 5: Should extension be able to use Personal Speed Dial?

If yes

- In *Program 1802 - Speed Dial Block* (page 457), assign Personal Speed Dial Blocks to extensions. Refer to *Allocating Speed Dial Blocks* on page 263 for help with assigning blocks.
- In *Program 1803 - Extension Line Access Assignments* (page 461), make sure extensions have access to the trunks you want to use for Personal Speed Dial.
- In *Program 1002 - Trunk Groups* (page 424), optionally set up Trunk Groups. See *Storing Trunk Routing in a Speed Dial Bin* on page 264 for more on why you may want to do this.

If no

- In *Program 1802 - Speed Dial Block* (page 457), assign the extension to Personal Speed Dial block 0.

Step 6: Do you want to enter Personal Speed Dial numbers from within system programming?

If yes

- In *Program 1702 - Personal Speed Dial* (page 441), enter Personal Speed Dial numbers. Users can also enter Personal Speed Dial numbers from their own phone.

If no

- In *Program 1702 - Personal Speed Dial* (page 441), do not enter Personal Speed Dial numbers. Users can still enter Personal Speed Dial numbers from their own phone.

Step-by-step guide for setting up Speed Dial

Step 7: Should extension or DSS Console have Programmable Function Key access to Personal Speed Dial numbers.

If yes

- In *Program 1701 - Personal Speed Dial Key* (page 438), assign a keyset programmable key as a Personal Speed Dial Key (code 15 + System Speed Dial bin number).
- In *Program 1704 - Personal Speed Dial Key* (page 446), assign a DSS Console key as a Personal Speed Dial Key (code 10 + System Speed Dial bin number).

If no

- Do not assign keyset or DSS Console keys for System Speed Dial access.

Step 8: Should the system be able to dial out any # characters stored in a Speed Dial bin?

You may not want to enable the dialing of stored # characters if your system is installed behind a PBX.

If yes

- In *Program 0201 - Enable Dial-out of # in a Speed Dial Number* (page 368), enter Y.

If no

- In *Program 0201 - Enable Dial-out of # in a Speed Dial Number* (page 368), enter N.

Step 9: When the system encounters a pause stored in a Speed Dial bin, does it wait the proper interval before outdialing the remainder of the number?

If yes

- In *Program 0401 - Dialing Pause* (page 376), do not change the entry from its assigned value.

If no

- In *Program 0401 - Dialing Pause* (page 376), change the pause duration for compatibility with the connected telco or PBX/Centrex.

Step 10: When the system encounters a Flash stored in a Speed Dial bin, does it open the loop on the trunk for the proper interval before outdialing the remainder of the number?

If yes

- In *Program 0402 - PBX Pause* (page 379), do not change the entry from its assigned value.

If no

- In *Program 0402 - PBX Pause* (page 379), change the Flash duration for compatibility with the connected telco or PBX/Centrex.

Step-by-step guide for setting up Speed Dial

Step 11: Does the system properly detect dial tone for Speed Dial calls?

If yes

- In *Program 0402 - Dial Tone Detect* (page 378), do not change the entry from its assigned value.

If no

- In *Program 0402 - Dial Tone Detect* (page 378), change the Dial Tone Detect duration for compatibility with the connected telco or PBX/Centrex.

Step 12: When the system outdials DTMF Speed Dial calls, are the DTMF digits properly interpreted by the connected telco or PBX/Centrex.

If yes

- In *Program 0402 - Speed Dial DTMF Tone On* (page 381), do not change the entry from its assigned value.
- In *Program 0402 - Speed Dial DTMF Tone Off* (page 382), do not change the entry from its assigned value.

If no

- In *Program 0402 - Speed Dial DTMF Tone On* (page 381), change the DTMF on interval the system uses for Speed Dial calls to match the connected telco or PBX/Centrex.
- In *Program 0402 - Speed Dial DTMF Tone Off* (page 382), change the DTMF on interval the system uses for Speed Dial calls to match the connected telco or PBX/Centrex.

Programming List

Program 0101 - System Speed Dial Access (page 362)
In an extension's Class of Service, enter Y to allow the extension to access System Speed Dial numbers.

Program 0201 - Enable Dial-out of # in a Speed Dial Number (page 368)
Enter Y for this option if you want the system to outdial any # characters stored in the Speed Dial number. Enter N to have the system suppress outdialing the #. (You may want to enter N if the system is installed behind a PBX.)

Program 0301 - Number of Digits in a System Speed Dial Code (page 370)
Assign the number of digits the system uses to designate System Speed Dial bins (2, 3 or 4). With 2-digit bins, the system has 10 bins numbered 20-29. With 3-digit bins, the system has 100 bins numbered 200-299. With 4-digit bins, the system as 1000 bins numbered 2000-2999.

When Number of Digits in a System Speed Dial Code is:	System Speed Dial bin numbers are:	And the total number of System Speed Dial bins is:
2	20-29	10
3	200-299	100
4	2000-2999	1000

Program 0401 - Dialing Pause (page 376)
For Speed Dial, the system waits this interval when it encounters a pause in a Speed Dial bin.
Program 0402 - Dial Tone Detect (page 378)
When the system seizes a line to place a Speed Dial call, it waits this interval for dial tone before outdialing the call.
Program 0402 - PBX/Centrex Flash (page 379)
When the system encounters a flash in a Speed Dial bin, it opens the loop on the trunk for this interval for outdialing the remainder of the call.
Program 0402 - Speed Dial DTMF Tone On (page 381)
Set the duration of DTMF digits for Speed Dial trunk calls automatically dialed by the system. Set this timer for compatibility with the connected telco or PBX/Centrex.
Program 0402 - Speed Dial DTMF Tone Off (page 382)
Sets the duration the the quiet time between DTMF digits for Speed Dial trunk calls automatically dialed by the system. Set this timer for compatibility with the connected telco or PBX/Centrex.
Program 1002 - 1002 - Trunk Groups (page 424)
Set up Trunk Groups if you want Speed Dial to use or overflow to Trunk Groups.
Program 1101 - System Speed Dial Numbers (page 431)
Enter System Speed Dial bin names and numbers.
Program 1701 - System Speed Dial Key (page 438)
Assign a programmable key on an extension as a System Speed Dial key (code 14). You assign the key to specific System Speed Dial bin (normally 200-299).
Program 1701 - Personal Speed Dial Key (page 438)
Assign a programmable key on an extension as a Personal Speed Dial key (code 15). You assign the key to a specific Personal Speed Dial bin (e.g., 701-720).
Program 1702 - Personal Speed Dial (page 441)
Enter Personal Speed Dial bin names and numbers. An extension user can also enter their Personal Speed Dial numbers from their own telephone.
Program 1704 - System Speed Dial Key (page 446)
Assign a programmable key on an extension as a System Speed Dial key (code 14). You assign the key to specific System Speed Dial bin (normally 200-299).
Program 1704 - Personal Speed Dial Key (page 446)
Assign a programmable key on an extension as a Personal Speed Dial key (code 15). You assign the key to a specific Personal Speed Dial bin (e.g., 701-720).
Program 1802 - Speed Dial Block (page 457)
Assign a Speed Dial block (1-62) to an extension.
Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access).

Other Related Features

Central Office Calls, Placing (page 63)
You can store outside numbers in Speed Dial bins for quick access to frequently called numbers.
Check Key (page 71)
Check Personal Speed Dial bin assignments.
Direct Station Selection (DSS) Console (page 98)
The DSS Console Personal Speed Dial bins are the same as the extension to which the console is attached. This means that DSS Consoles that share the same block number still have unique Personal Speed Dial.
Voice Over (page 350)
An extension user can Voice Over after calling a co-worker by using Personal Speed Dial.

Feature Operation

Personal Speed Dial

To Program a Personal Speed Dial Number:

1. Press **ICM** and dial ##.
   Intercom dial tone comes on - then goes off.
   SPK flashes slowly.
2. Dial the Personal Speed Dial bin number (701-720).
   OR
   Press Personal Speed Dial Key (for bins 1-10).
   OR
   Press **DIAL** and the Personal Speed Dial Key for bins 11-20.
3. Press **HOLD**.
4. Enter the trunk number you want the system to use when dialing your stored number (1-16)>
   OR
   Enter the Trunk Group number you want the system to use when dialing your stored number (e.g., 90 for Trunk Group 0).
   OR
   Skip this step if you want to enter Intercom codes.
5. Press **HOLD**.
6. Enter the number you want to store (up to 30 digits long).
   *If storing Intercom codes, you can enter any valid dial sequence consisting of the digits 0-9, # and *.*
   To insert a pause, press MIC. To insert a Flash, press FLASH.
7. IPress **HOLD**.
8. Enter a name for the Speed Dial number
   For help on programming names, see Keys for Entering Names on page 361.
9. Press **HOLD**.
10. Repeat from step 2 to program another bin number.
    OR
    Press **SPK** to exit.

To dial a Personal Speed Dial Number:

1. Press **ICM** and dial #.
   Intercom dial tone comes on - then goes off.
   SPK and **ICM** on.
2. Dial the Personal Speed Dial bin number (701-720).
   The stored number dials out.

For one-button access to your Personal Speed Dial numbers:

1. Press Personal Speed Dial Key for bins 1-10.
   OR
   Press **DIAL** then Personal Speed Dial key for bins 11-20.
   OR
   Press Programmable Function key for Personal Speed Dial bin.
   The stored number dials out.

System Speed Dial

To Program a System Speed Dial Number:

1. Press **ICM** and dial ##.

   Intercom dial tone comes on - then goes off.
   SPK flashes slowly.
2. Dial the System Speed Dial bin number (normally 200-299).
3. Press **HOLD**.
4. Enter the trunk number you want the system to use when dialing your stored number (1-16)>
   OR
   Enter the Trunk Group number you want the system to use when dialing your stored number (e.g., 90 for Trunk Group 0).
5. Press **HOLD**.
6. Enter the number you want to store (up to 30 digits long).
   *You can enter any combination of the digits 0-9, # and *. To store a pause with your Speed Dial number, press MIC.*
7. Press **HOLD**.
8. Enter a name for the Speed Dial number
   For help on programming names, see Keys for Entering Names on page 361.
9. Press **HOLD**.
10. Repeat from step 2 to program another bin number.
    OR
    Press **CONF** to exit.

To dial a System Speed Dial Number:

1. Press **ICM** and dial #.

   Intercom dial tone comes on - then goes off.
   SPK and **ICM** on.
2. Dial the System Speed Dial bin number (normally 200-299).
   OR
   Press Programmable Function Key for System Speed Dial bin.
   The stored number dials out.

Split (Alternate)

Description

LCCPU 01.00.00 | Available.

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.

Conditions

None

Default Setting

Split disabled (no Split keys programmed).

Programming Guide

Step-by-step guide for setting up Split

Step 1: Should keyset be able to Split between calls?

If yes

- In *Program 1701 - Split Key* (page 438), assign a Programmable Function Key as a Split key (code 20).
  OR
- In *Program 1704 - Split Key* (page 446), assign a DSS Console key as a Split key (code 20).

If no

- In *Program 1701 - Split Key* (page 438), ***do not*** assign a Programmable Function Key as a Split key (code 20).
  OR
- In *Program 1704 - Split Key* (page 446), ***do not*** assign a DSS Console key as a Split key (code 20).

Programming List

Program 1701 - Split Key (page 438)
Assign a Programmable Function Key as a Split key (code 20).
Program 1704 - Split Key (page 446)
Assign a DSS Console key as a Split key (code 20).

Other Related Features

Call Waiting / Camp-On (page 51)
Camp-On lets an extension user know that a call is waiting to be answered. The user can Split between the waiting call and their current call.

Direct Station Selection (DSS) Console (page 98)
A DSS Console can have a Split key.

Off-Hook Signaling (page 205)
An extension user can alternate between their active call and their waiting call.

Feature Operation

To Split between your current Intercom call and a new Intercom call:

Your extension must have a Split Programmable Function Key.

1. Press **HOLD** to place your current Intercom call on Hold, then hang up.
2. Place or answer Intercom call.
   - Intercom Callback ring from waiting Intercom call.
   - **ICM** slow flash.
3. Press the Split key to switch between your two Intercom calls.

To Split between your current trunk call and an Intercom call:

Your extension must have a Split Programmable Function Key.

1. Press **ICM** to place trunk call on Hold, then hang up.
   - Intercom Callback ring from waiting Intercom call.
   - Line key flutter on (green). **ICM** slow flash.
2. Place or answer waiting Intercom call.
3. Press the Split key to switch between the Intercom can and the trunk call.
   Repeat this step to alternate between the callers.

To Split between your current Intercom call and a trunk call:

Your extension must have a Split Programmable Function Key.

1. Press HOLD to place your current Intercom call on Hold.
2. Answer trunk call.
   - Conversation with trunk caller.
   - **ICM** slow flash.
3. Press the Split key to switch between your two calls.

To Split between your current trunk call and a waiting trunk call:

Your extension must have a Split Programmable Function Key.

1. Press ICM to place your current trunk call on Hold, then hang up.
2. Place or answer new trunk call.
   - Conversation with trunk caller.
   - Line key on (green) for active call, flutter on (green) for call on Hold..
3. Press the Split key to switch between your two calls.

Description

LCCPU 01.00.00 | Available.

System keysets provide a host of sophisticated extension features.

The system offers 22-Button Display, 22-Button Standard, 34-Button Display, and 34-Button Super Display keyset telephones.

22-Button Display Telephone

The 22-Button Display Telephone features a 2-by-20 alphanumeric display with 4 Interactive Soft Keys for intuitive feature access, 10 Personal Speed Dial bin keys, 12 Programmable Function Keys and 14 fixed feature keys. It also provides a built-in speakerphone, Dual LEDs and a built-in desk stand.

22-Button Standard Telephone

The 22-Button Telephone also has 10 Personal Speed Dial bin keys, 12 Programmable Function Keys and 14 fixed feature keys. It also provides a built-in speakerphone, Dual LEDs and a built-in desk stand. It does not, however, have a 2-line display and Interactive Soft Keys.

34-Button Display Telephone

The 34-Button Display Telephone features a 2-line, 20 character display with 4 Interactive Soft Keys for intuitive feature access, 10 Personal Speed Dial bin keys, 24 Programmable Function keys and 14 fixed feature keys. It also offers a built-in speakerphone, Dual LEDs, and a built-in desk stand. The 34-Button Display Telephone is compatible with the optional REJ Recording Jack.

34-Button Super Display

The 34-Button Super Display Telephone is the system's premier telephone instrument. It features an 8-line, 20-character display with 12 interactive keys that provide intuitive call processing. The Super Display also offers 24 user-customizable programmable function keys for one-button access to a host of sophisticated features. The 14 fixed feature keys provide quick access to the vast array of standard features. The Super Display is compatible with the optional REJ Recording Jack.

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:
Central Office Calls, Answering	Flashes slow (green) as call rings
Direct Inward Line	Flashes slow (green) as call rings
Hold	Flashes slow (green) during Hold recall
Intercom	Flashes slow (green) as call rings
Message Waiting	Flashes fast (red) when user has a Message Waiting indication left
Park	Flashes slow (green) during Park recall
Transfer	Flashes slow (green as call rings) and during Transfer recall
Voice Mail	Flashes fast (red) when messages are waiting in mailbox

Conditions

None

Default Setting

All extensions set up as 22-Button Display keysets (circuit type 02)

Programming List

Program 1801 - Extension Circuit Type (page 449)

Assign the correct circuit type for each extension:

- 01 = 22-Button Standard
- 02 = 22-Button Display
- 06 = 34-Button Display
- 09 = 34-Button Super Display

Other Related Features

None

Feature Operation

Refer to the individual features in this manual.

Description

LCCPU 01.00.00 | Available.

SMDR provides a printed record of your calls.

Station Message Detail Recording (SMDR) provides a record of the system's trunk calls. Typically, the record outputs to a customer-provided printer, terminal or SMDR data collection device. SMDR allows you to monitor the usage at each extension and trunk. This makes charge-back and traffic management easier. SMDR includes both incoming and outgoing calls, and can be turned off system-wide or selectively for each trunk.

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.

When connecting SMDR, use cable P/Ns 80893 and 85980 to connect the 8-pin DIN connector on the CPU to the 9-pin COM port on the customer-provided laptop or data collection device. By default, the data rate is 9600 baud, 8 data bits, 1 stop bit and no parity (typically referred to as 9600 8N1).

The system buffers 50 SMDR call records. When the SMDR buffer fills, new call records will overwrite previously buffered call records.

Sample SMDR Report

Following is a sample SMDR report:

```
Station Message Detail Recording
05/07/1999 09:10P

---+---+-------------------------------+----------+---------+--------+-
Sta|Lin|         Number Dialed          |  Account |  Start  |Duration|T
---+---+-------------------------------+----------+---------+--------+-
306| 01|                    12039265400|          |09:10:18P|00:00:05|O
306| 01|                    19055072888|          |09:10:48P|00:01:13|O
301| 02|                              -|          |09:12:13P|00:01:12|I
304| 01|                              -|          |09:12:07P|00:01:20|I
306| 01|                    18003651928|          |09:15:38P|00:00:14|O
```

SMDR Report Definitions

SMDR Report Definitions	
Sta	The extension that placed or answered the call
Lin	The trunk used for the call
Number Dialed	For outgoing calls, the number dialed on the trunk (up to 20 digits)
Account	Account code
Start	The time the call was initially answered
Duration	The total duration of the call
T	O = Outgoing trunk call I = Incoming trunk call

SMDR Report Format

SMDR Report Format (Page 1 of 3)		
Line	**Character**	**Field**
Report Start Header		
1	1-32	STATION MESSAGE DETAIL RECORDING
	33,34	Carriage return, line feed
2	1-10	Date (mm/dd/yyyy)
	11	Space
	12-16	Time (hh:mm:ss)
	17	A (for am) or P (for pm)
	18,19	Carriage return, line feed
3	1,2	Carriage return, line feed

SMDR Report Format (Page 2 of 3)		
Line	**Character**	**Field**
Call Record Header		
1	1-3	- characters
	4	+ character
	5-7	- characters
	8	+ character
	9-40	- characters
	41	+ character
	42-51	- characters
	52	+ character
	53-61	- characters
	62	+ character
	63-70	- characters
	71	+ character
	72	- character
2	1-3	Sta
	4	| character
	5-7	Lin
	8	| character
	9-40	(9 spaces) Number Dialed (10 spaces)
	41	| character
	42-51	(2 spaces) Account (1 space)
	52	| character
	53-61	(2 spaces) Start (2 spaces)
	62	| character
	63-70	Duration
	71	| character
	72	T

SMDR Report Format (Page 3 of 3)		
Line	**Character**	**Field**
3	1-3	- characters
	4	+ character
	5-7	- characters
	8	+ character
	9-40	- characters
	41	+ character
	42-51	- characters
	52	+ character
	53-61	- characters
	62	+ character
	63-70	- characters
	71	+ character
	72	- character
Call Record		
1	1-3	Extension number
	4	| character
	5-7	Trunk number (2 digits, right justified, preceded by one space)
	8	| character
	9-40	Number dialed (up to 20 characters, right justified, preceded by spaces)
	41	| character
	42-51	Account Code (right justified, preceded by spaces)
	52	| character
	53-61	Start time of call (hh:mm:ssA or P)
	62	| character
	63-70	Duration of call (hh:mm:ss)
	71	| character
	72	Type of call

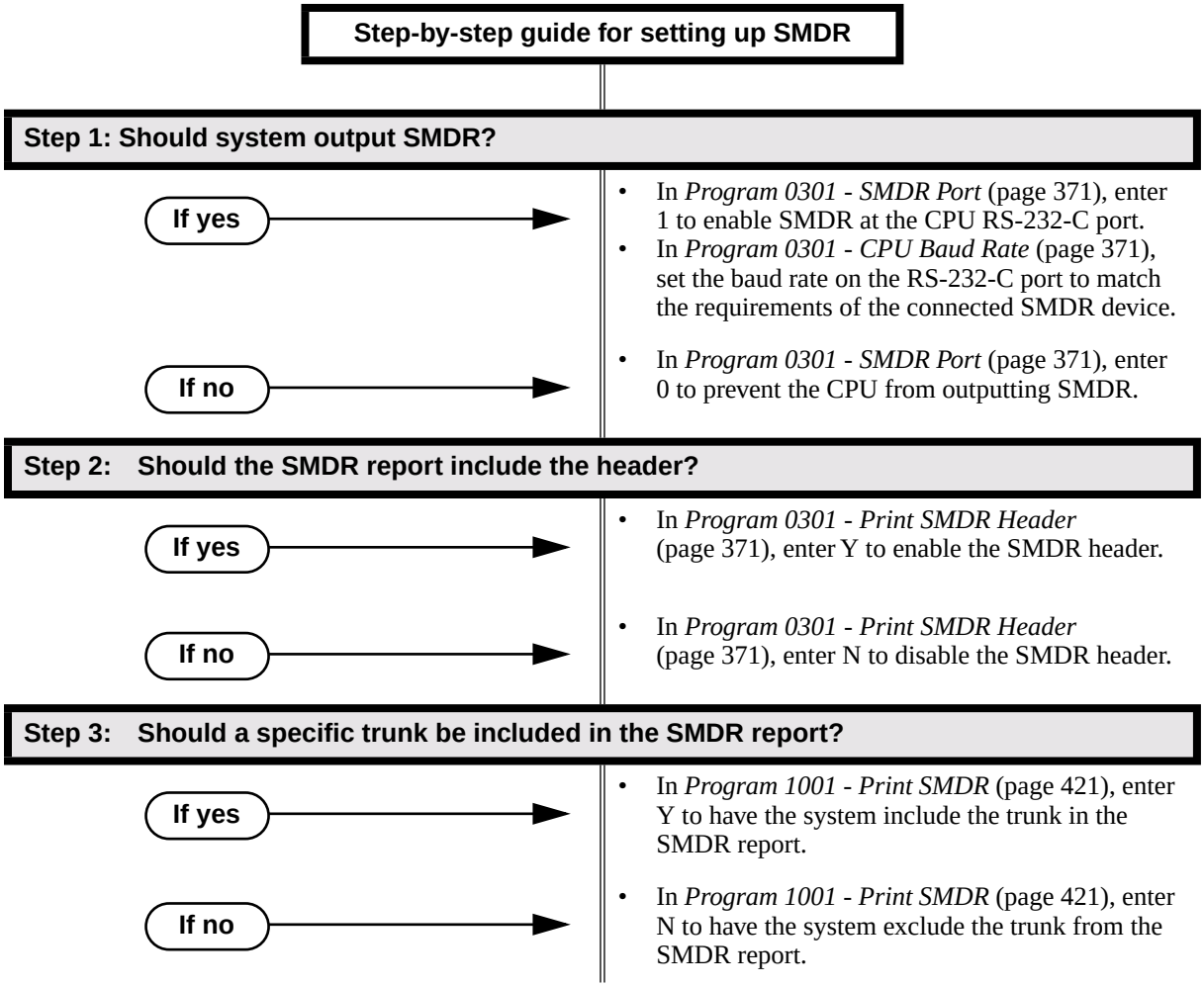
Conditions

None

Default Setting

SMDR output disabled.

Programming Guide



Programming List

Program 0301 - CPU Baud Rate (page 371)
Assign the baud rate for the RS-232-C port on the CPU. The options are 2 (1200), 3 (2400), 4 (4800), 5 (9600) and 6 (19200). You can also use Ctrl + Break from a laptop connected to the CPU RS-232-C port to step through the available baud rates.

Program 0301 - SMDR Port (page 371)
Enter 1 to enable SMDR output from the CPU RS-232-C port, or enter 0 to disable SMDR at the CPU RS-232-C port.

Program 0301 - Print SMDR Header (page 371)
Enter Y to have the beginning of the SMDR report include the column header data. Enter N to have the SMDR report only include the call data (without the header).

Program 1001 - Print SMDR (page 421)
Enter Y to have the SMDR report include calls on the trunk. Enter N to have the SMDR report exclude calls on the trunk.

Other Related Features

Call Timer (page 48)
The Call Timer also helps users keep track of their time on the phone.

Time and Date (page 312)
Time and date appear on the SMDR report.

Transfer (page 324)
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.

Year 2000 Compliance (page 355)
The SMDR report displays four digits for the year (i.e., 2000, 2001).

Feature Operation

SMDR is automatic once enabled.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Not available.

Description

LCCPU 01.00.00 | Available.

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

The system adminstrator can enter the site name and telephone number into the system data base. This information is saved into system memory and will appear on system diagnostic reports, once available.

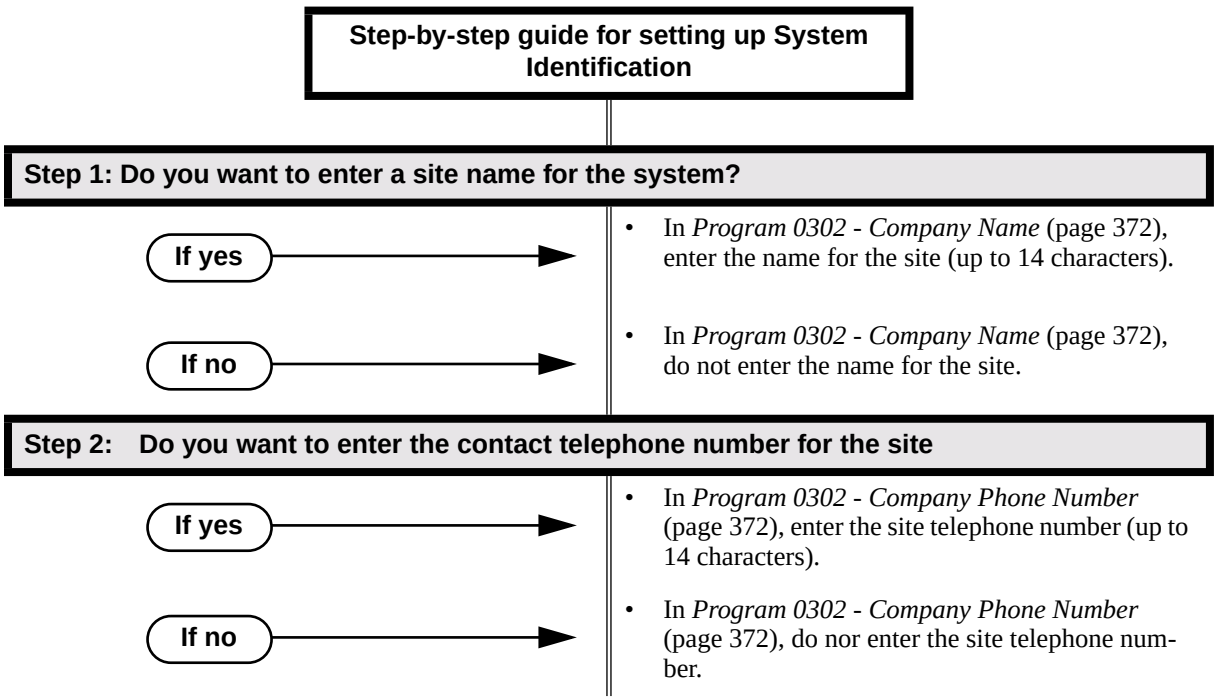
Conditions

None

Default Setting

No entries.

Programming Guide



Programming List

Program 0302 - Company Name (page 372)

14 Enter the name of the company (up to 14 characters) at which the system is installed. The name appears on top of various system reports.

Program 0302 - Company Phone Number (page 372)
Enter the number that the system should call to report a fault. This ***is not*** the number of the company where the system is installed. It is the number of the remote service center.

Other Related Features

Automatic Fault Reporting (page 29)
System Diagnostics (page 284)
The company name and phone number will display on system diagnostic reports.

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

Backup and restore site data to a PC card.

You can use PC Card P/N 85880 or P/N 80050-V**.** (with system software preloaded) to back up and restore your site data. Each PC card can store up to 12 complete data bases. In addition, you can assign a name (up to 10 characters long) to each stored data base.

The PC Card provides a permanent, non-volatile backup of all the site's programming. If you have backed up your site data to a PC Card, for example, you can easily restore all site programming after an extended power failure.

Backup and Restore also allows an installer to back up systems of varying software levels onto the same PC card. For example, they can store a system at software level 00.01.14 in one address, 00.01.16C in another address, and 00.01.16F in a third address. If the system is inadvertantly mis-programmed on site, the installer can quickly have the system up and running once restored from the PC card data.

Conditions

If you use PC Card P/N 80050-V**.** (with system software preloaded) to load a new version of system software, your system will restart with the factory loaded (default) program entries. Any existing site-specific programming is automatically erased.

Default Setting

No data bases stored.

Programming Guide

Step-by-step guide for setting up System Programming Backup and Restore (Page 1 of 2)

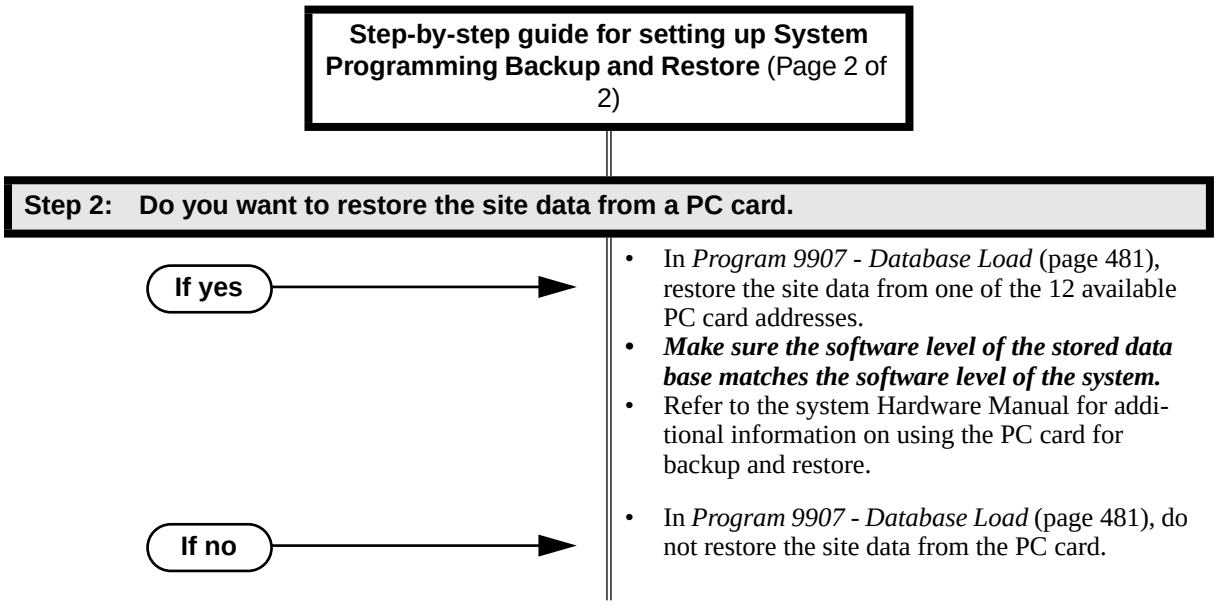
Step 1: Do you want to back up the site data to a PC Card?

If yes

- In *Program 9906 - Database Save* (page 479), back up the site data to one of the 12 available PC card addresses.
- Refer to the system Hardware Manual for additional information on using the PC card for backup and restore.

If no

- In *Program 9906 - Database Save* (page 479), do not back up the site data to the PC card.



Programming List

Program 9906 - Database Save (page 479)
Save (back up) site data to a PC card.
Program 9907 - Database Load (page 481)
Restore (load) site data from a PC card.

Other Related Features

Automatic Fault Reporting (page 29)
System Diagnostics (page 284)
If the system diagnostics report a critical fault that requires a CPU change or system initialization, the installer can quickly restore site programming from the PC card.
Battery Backup (page 39)
In the event of commercial AC power failure, the battery on the CPU PCB provides short-term backup of system memory and the system time and date (Real Time Clock).

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

The following system programs are available:

Program 0100 - Class of Service (page 362)
Program 0101 - Class of Service Options (page 362)

Program 0200 - Tenant Options (page 367)
Program 0201 - Tenant Option Programming (page 367)

Program 0300 - System Options (page 370)
Program 0301 - System Options (Part 1) (page 370)
Program 0302 - System Identification (page 372)

Program 0400 - Timers (page 375)
Program 0401 - System Timers (page 375)
Program 0402 - Trunk Timers (page 378)
Program 0403 - Station Timers (page 386)
Program 0404 - Analog Station Timers (page 389)

Program 0500 - System Numbering (page 392)
Program 0501 - Numbering Plan (page 392)
Program 0504 - Trunk Port Extension Numbers (page 396)
Program 0505 - Station Port Extension Numbers (page 398)
Program 0510 - ACD/UCD Master Extension Numbers and Names (page 402)
Program 0511 - Ring Group Master Extension Numbers and Names (page 404)

Program 0600 - Toll Restriction (page 406)
Program 0601 - Toll Restriction Options (page 406)

Program 0800 - Display Messages (page 414)
Program 0801 - Selectable Display Messages (page 414)

Program 1000 - Trunk Programming (page 416)
Program 1001 - Trunk Port Description (page 416)
Program 1002 - Trunk Groups (page 424)
Program 1003 - Trunk Options (page 426)

Program 1100 - Speed Dial (page 431)
Program 1101 - System Speed Dial Numbers (page 431)
Program 1102 - Speed Dial Block Assignment (page 433)

Program 1700 - Key Programming (page 436)
Program 1701 - Programmable Function Key Assignments (page 436)
Program 1702 - Personal Speed Dial (page 441)
Program 1703 - DSS Key Assignment (page 443)
Program 1704 - DSS Console Key Assignment (page 444)

Program 1800 - Extension Options (page 449)
- **Program 1801 - Extension Port Description** (page 449)
- **Program 1802 - Extension Options (Part 1)** (page 455)
- **Program 1803 - Extension Line Access Assignments** (page 461)
- **Program 1804 - Extension Trunk Group Access** (page 464)
- **Program 1805 - Ring Assignments** (page 466)
- **Program 1807 - Extension Options (Part 2)** (page 469)

Program 9800 - System Utilities, Part 1 (page 472)
- **Program 9801 - Copy Command** (page 472)

Program 9900 - System Utilities, Part 2 (page 474)
- **Program 9901 - Reset Station Port** (page 474)
- **Program 9905 - Password** (page 478)
- **Program 9906 - Database Save** (page 479)
- **Program 9907 - Database Load** (page 481)
- **Program 9999 - System Initialization** (page 482)

Description

LCCPU 01.00.00 | Available.

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) Password = 0000	**Program 0302 - System Identification** (page 372) **Program 1101 - System Speed Dial Numbers** (page 431)
System Administrator 2 (level 1) Password = 9999	**Program 0302 - System Identification** (page 372) **Program 0801 - Selectable Display Messages** (page 414) **Program 1101 - System Speed Dial Numbers** (page 431) **Program 1701 - Programmable Function Key Assignments** (page 436) **Program 1702 - Personal Speed Dial** (page 441) **Program 1703 - DSS Key Assignment** (page 443)
Installer (level 3) Password - 372000	All

Conditions

None

Default Setting

See the table above.

Programming List

Program 9905 - Password (page 478)
Review the complete list of programmable options.

Other Related Features

System Programming Backup and Restore (page 287)
Backup your system programming to a PC card provides for a permanent, non-volatile backup of all the site's programming.

System Programming List (page 289)
Review the complete list of programmable options.

Feature Operation

None

Description

LCCPU 01.00.00 | Information to be provided.

Use the system-side timers to tailor the system to the site's requirements.

The system-wide timers allow the adminstrator system performance to meet the specific application requirements. Review the table below for a description of each timer.

Following is a summary of the **Program 0401 - System Timers** (page 375) options.

Table 11: Program 0401 - System Timers (Page 1 of 2)

Option	Description	Default
Park Orbit	Use this timer to set how long a call stays in System Park Orbit before it recalls the extension that parked it. This timer if for orbits 60-67 only. The recall for orbits 68 and 69 is fixed at 5 minutes.	60 sec.
Modem Reserve	Use this timer to set how long the system reserves a modem, once requested by an extension user, from the modem pool before returning in to the pool.	30 sec.
Transfer Recall	Use this timer to set how long a transferred call rings the destination extension before recalling the extension from which it was initially transferred. This option pertains to all idle extensions, as well as busy multibutton extensions. *Note that this timer does not control how long a transferred call rings a busy operator.*	30 sec.
Intercom Inter-digit	When an extension user places a call, they must dial each succeeding digit within this interval.	6 sec.
Meet-Me Conference	When a user initiates a Meet-Me Conference, the system waits this interval for the Paged party to join the call.	30 sec.
Dialing Pause	For Automatic Route Selection, the system waits this interval when it encounters a pause in an ARS Dial Treatment. For Speed Dial, the system waits this interval when it encounters a pause in a Speed Dial bin.	1 sec.
Page Duration	Use this timer to set the maximum length of Page announcements.	30 sec.
Door Unlock	When a single line (2500 type) user hookflashes while talking to a Door Box, the Door Box strike opens for this interval.	30 sec.

Table 11: Program 0401 - System Timers (Page 2 of 2)

Option	Description	Default
DIL No Answer	This timer sets how long a DIL rings an idle extension before Key Ring occurs. Key Ring rings all extensions programmed to ring for that line.	15 sec.
Trunk Revert	This timer sets how long Hold Recall rings the extension that placed the call on hold before Key Ring occurs. Key Ring rings all extensions programmed to ring for that line. This timer also sets how long a Transfer Recall rings the extension that initially transferred the call before Key Ring occurs.	15 sec.
Trunk Delay Ring	Use this timer to set how long the system waits before ringing an extension that has the Delayed Ringing option enabled.	10 sec.
Trunk Overflow	Information to be provided.	20 sec.
Centrex Type Feature Key Delay	This timer sets how long the system waits when it finds a Centrex delay (i.e., D) programmed in a Centrex Feature Key.	50 sec.
ACD/UCD Overflow	This timer sets when UCD overflow occurs. When all UCD agents are busy, a queued call rings for this interval and then overflows to the UCD Overflow destination.	60 sec
Number of Password Attempts	Use this option to set how many times the system allows a user to enter the incorrect programming password before locking them out.	3
Program Lockout Time	Once the system locks out a user, it will wait this interval before allowing the user to reenter the programming mode.	10 sec.
Force Program Exit	If a telephone in the programming mode is inactive longer than this interval, the system automatically cancels the programming mode and makes the telephone idle.	10 sec.

Conditions

None

Default Setting

See the table above.

Programming List

Program 0401 - System Timers (page 375)

The system-wide timers allow the adminstrator system performance to meet the specific application requirements.

Other Related Features

Refer to the following for related feature information:

Program 0401 - System Timers (page 375)

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

Adjustable station timers allow the system to more precisely meet the site requirements.

The system provides many station timers that the administrator can customize. Review the tables below for a description of each station timer.

Following is a summary of the **Program 0403 - Station Timers** (page 386).

Table 12: Program 0403 - Station Timers (Page 1 of 2)

Option	Description	Default
Hold Recall	Use this timer to set how long a call stays on Hold before it recalls the extension that initially placed it on Hold.	60 sec.
Exclusive Hold	Use this timer to set how long a call stays on Exclusive Hold before it recalls the extension that initially placed it on Exclusive Hold.	90 sec.
Camp-On	Use this timer to set how long a transferred call camps-on to a busy single line phone before recalling the extension that initially transferred the call.	60 sec.
Call Forward Ring No Answer	When Call Forwarding Ring No Answer is enabled, this timer sets how long a forwarded call rings an unanswered extension before routing to the forwarding destination. Also use this timer to set how long a transferred call rings a busy operator extension before recalling the extension from which it was initially transferred. *Note that this timer does not control how long a transferred call rings any other busy extension.*	10 sec.
Call Waiting Tone Interval	Use this timer to set the interval between Call Waiting tones. Also use this timer to set the interval between Off Hook Signaling alert tones.	10 sec.
Call Coverage Delay	For extensions with Delayed Ringing Call Coverage keys, this timer sets how long a call flashes the key at an extension before it starts to ring.	10 sec.
Hook flash Transfer	This timer is currently not implemented.	2 sec.
Hook Flash Disconnect	This timer is currently not implemented.	12 sec.

Table 12: Program 0403 - Station Timers (Page 2 of 2)

Option	Description	Default
Number of Extended Rings	If an extension's Class of Service enables Extended Ringing, use the timer to set the duration of the Extended Ringing.	20 sec.
Drop Pulse Send	Use this timer to set the duration of the ASTU PCB drop pulse. This pulse is sent from the ASTU PCB to the connected analog device to initiate a disconnect.	300 mS
DTMF Detect	Use this timer to set the DTMF detection threshold for single line (analog device) ports. If the analog device sends a DTMF signal longer than this interval, the system recognizes it as a valid DTMF tone and decodes it. If the DTMF signal is equal to or less than this interval, the system ignores it.	70 mS
Ring No Answer Hunt	Use this timer to set the Extension Hunting Ring No Answer Time. A call will ring a hunt group member extension for this interval before automatically cycling to the next extension in the group.	10 sec.

Following is a summary of the **Program 0404 - Analog Station Timers** (page 389).

Table 13: Program 0404 - Analog Station Timers (Page 1 of 2)

Option	Description	Default
Country Data	Use this option to define the country of use and the codec digitizing method for ASTU PCBs. This timer consists of two bits (xy), with bit x defining the country and bit y defining the digitization method. For example, the default entry 00 is for North America (x=0) and u-law digitization method (y=0). ***Do not change this entry from its default value (00).***	00 (xy)
Rotary Dial Type	Use this option to define the rotary dial pulsing method for the system's ASTU PCBs. ***Do not change this entry from its default value (01).***	Standard (0)
Loop Current	Use this option to set the maximum allowed loop current for the system's ASTU PCBs. Normally choose 25mA for short loops and 35mA for long loops. In general, a long loop is 3000 feet or longer and a short loop is less than 3000 feet.	25mA (0)
Ringing Frequency	Use this option to define the AC ringing frequency for the system's ASTU PCBs. ***Do not change this entry from its default value (20 Hz).***	20 Hz (1)
Minimum Break Time	This timer defines the minimum amount of time the loop must be opened to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	2 (10 mS)
Maximum Break Time	This timer defines the maximum amount of time the loop must be opened to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	20 (100 mS)
Minimum Make Time	This timer defines the minimum amount of time the loop must be closed to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	2 (10 mS)
Maximum Make Time	This timer defines the maximum amount of time the loop must be closed to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	20 (100 mS)

Table 13: Program 0404 - Analog Station Timers (Page 2 of 2)

Option	Description	Default
Minimum Hookflash Time	For ASTU PCBs, this timer defines the minimum amount of time the loop must be opened before the system starts to detect a transfer or hang up sequence. Open loop intervals shorter than the setting are ignored by the ASTU PCB.	21 (105 MS)
Maximum Hookflash Time	For ASTU PCBs, this timer defines the maximum amount of time the loop can be opened in order for the system to detect a Transfer sequence. Open loop intervals longer than the setting are interpreted as hang up.	200 (1000 mS / 1 second)
Minimum Ground Flash Time	For ground start applications with ASTU PCBs, this timer sets the amount of time a ground must be applied before the system detects a transfer sequence. The ASTU uses this timer when analog telephones use ground Transfer instead of open loop Transfer. ***This timer is not used in North America. Do not change this timer from its default value.***	21 (105 mS)
Minimum Off-Hook Time	For ASTU PCBs, this timer defines how long a connected analog device must remain off-hook before the system recognizes the off-hook status.	21 (105 mS)
Off-Hook Guard Time	The ASTU PCB waits this interval after an analog device hangs up before accepting any additional input from the device. This timer helps prevent erroneous detection due to hardware stabilization.	60 (300 mS)
Dial Pulse Guard Timer	The ASTU PCB waits this interval between dial pulse digits before attempting to detect any additional DP digits. This timer helps prevent erroneous DP dialing due to hardware stabilization.	70 (350 mS)
Loop Disconnect Time	When the far end disconnects, the ASTU PCB opens the loop to the connected analog device for this interval.	40 (200 mS)
Ring/MW Wait Period Time	This timer determines the ringing sequence for the devices connected ASTU PCBs. Because of power consumption, it is not possible to ring all analog devices on an ASTU simultaneously. Instead, the card is divided into 4 groups with two ports in each group. Ringing cycles between the 4 groups, ringing each group for this interval.	15 (750 mS)

Conditions

None

Default Setting

Refer to the charts above.

Programming List

Program 0403 - Station Timers (page 386)
Customize general station timers.
Program 0404 - Analog Station Timers (page 389)
Customize analog station timers.

Other Related Features

Refer to the following for related feature information:

Program 0403 - Station Timers (page 386)
Program 0404 - Analog Station Timers (page 389)

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

Customize critical trunk timers for compatibility with the connected telco or PBX/Centrex.

The system provides many trunk timers that the administrator can customize. Review the table below for a description of each trunk timer.

Following is a summary of the **Program 0402 - Trunk Timers** (page 378). Refer also to:

- *Rules for Detecting Normal CO (Single) Ring* on page 304.
- *Rules for Detecting Special (Double) Ring* on page 304.
- *Rules for Detecting Loop Current* on page 305.

Table 14: Program 0402 - Trunk Timers (Page 1 of 5)

Option	Description	Default
Camp-On	Information to be provided.	60 sec.
Line Response	When the system fails to detect loop current on a trunk, it will wait this interval before marking the trunk as defective. Be sure the value you enter is compatible with the local telco. If you set this value too short, the system may mark properly functioning trunks as defective. If too long, defective trunks may be left in service.	100 (10 seconds)
Dial Tone Detect	When the system seizes a line to place a Speed Dial call, it waits this interval for dial tone before outdialing the call. The system requires that the first dial tone be at least.5 seconds long and the second dial tone to be at least 2.5 seconds long. Be sure the value you enter is compatible with the local telco. If you set this value too short, the system may not seize properly functioning trunks. If too long, there will be too long a delay before the system skips over a defective trunk.	10 (1 second)
PBX/Centrex Flash	Use this timer to set the Flash interval. When a user flashes a trunk, the system opens the trunk circuit for this interval. For accurate flash function, be sure to set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco may not always register the flash. If too long, inadvertent disconnects may occur.	800 mS
Flash Disconnect	TBD	2496mS

Table 14: Program 0402 - Trunk Timers (Page 2 of 5)

Option	Description	Default
Force Idle (Trunk Guard Time)	Use this timer to set the guard time for trunks. When the system disconnects a trunk (e.g., after a user hang up), the system keeps the line idle until this timer expires. The Trunk Guard Time helps prevent call collisions. If you set this interval too short, call collisions may occur. If too long, there will be unnecessary delays before you can use the trunk for a new call.	25 (2.5 sec)
PBX Pause	Use this timer to set the delay that occurs after the system dials a PBX access code. After the system dials the code, it waits this interval before outdialing the rest of the number. If you set this interval too short, the PBX may not have enough time to set up the call and return dial tone. If too long, the PBX may disconnect the call.	0
Minimum Ring Detection Timer	Use this timer to set the threshold for ring detection. If the ring signal is longer than this interval, the system interprets the signal as valid ringing. If the signal is equal to or shorter than this interval, the system ignores the ringing. Be sure the value you enter is compatible with the local telco. If you set this value too short, the system may detect line spikes and anomalies as ringing. If too long, the system may not properly interpret a valid ringing signal.	104 mS
DP Make Timer	Use this timer to set the duration of the Dial Pulse Make signal (i.e., relay closed). This is the “on” time in a Dial Pulse digit. Set this timer for compatibility with the connected telco or PBX/Centrex. Keep in mind that there are three components of a Dial Pulse digit: Make interval, Break interval and Interdigit interval. An improper setting may cause misdialing.	40 mS
DP Break Timer	Use this timer to set the duration of the Dial Pulse Break signal (i.e., relay open). This is the “off” time in a Dial Pulse digit. Set this timer for compatability with the connected telco or PBX/Centrex. Keep in mind that there are three components of a Dial Pulse digit: Make interval, Break interval and Interdigit interval. An improper setting may cause misdialing.	60 mS
DP Interdigit Timer	Use this timer to set the duration of the Dial Pulse Interdigit signal (i.e., relay open time ***b****etween* each digit). Set this timer for compatability with the connected telco or PBX/Centrex. Keep in mind that there are three components of a Dial Pulse digit: Make interval, Break interval and Interdigit interval. An improper setting may cause misdialing.	800 mS

Table 14: Program 0402 - Trunk Timers (Page 3 of 5)

Option	Description	Default
Manual DTMF Tone On	This timer sets the duration of DTMF digits for trunk calls manually dialed by an extension user. This is required because the system buffers the digits the user dials. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to properly detect the DTMF digit. If too long, outbound dialing is unnecessarily slowed down.	250 mS
Manual DTMF Tone Off	This timer sets the duration of the interval between DTMF digits for trunk calls manually dialed by an extension user. This is required because the system buffers the digits the user dials. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to set up to receive the next DTMF digit. If too long, outbound dialing is unnecessarily slowed down.	100 mS
Speed Dial DTMF Tone On	This timer sets the duration of DTMF digits for Speed Dial trunk calls automatically dialed by the system. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to properly detect the DTMF digit. If too long, outbound dialing is unnecessarily slowed down.	100 mS
Speed Dial DTMF Tone Off	This timer sets the duration the quiet time between DTMF digits for Speed Dial trunk calls automatically dialed by the system. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to set up to receive the next DTMF digit. If too long, outbound dialing is unnecessarily slowed down.	100 mS
Loop Current Detection Time	For loop start trunks, loop current must be present for this interval before the system seizes the trunk. Set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the system may inadvertently seize unstable trunks. If too long, the system may not properly seize a valid trunk.	800 mS
Codec Digitizing Method	Use this option to set the system's codec companding method type for the trunk. ***Be sure this option is always set to 0 (μ-law companding enabled).*** Do not set this option to 1 (A-law companding enabled).	0 (μ-law)

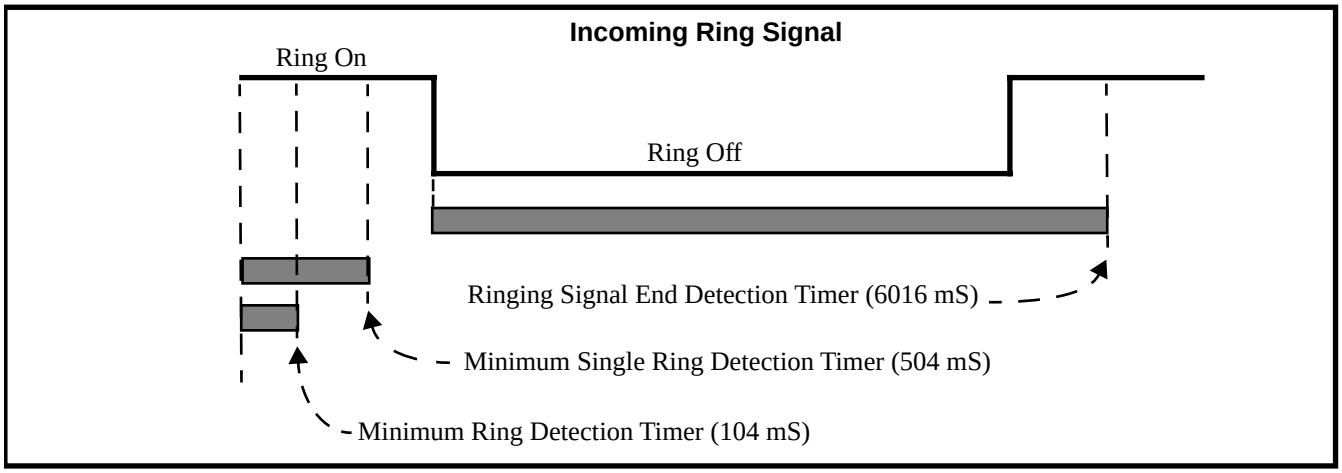
Table 14: Program 0402 - Trunk Timers (Page 4 of 5)

Option	Description	Default
Setting for International Rotary Disk	Set this option for compatibility with the type of rotary dial (500 type) telephone used. ***Be sure to always set this option to 0.***	0 (US standard)
Far End Disconnect	Use this timer to set the loop disconnect interval for trunk calls. If the system detects a loop current interruption longer than this interval it assumes the telco has disconnected the trunk. It then returns the trunk trunk to idle. Set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the system may inadvertently disconnect valid trunks. If too long, the system may leave trunks connected that it should tear down.	300 mS
Minimum Single Ring Detection Timer	The system uses this timer to detect valid ringing signal from the connected telco or PBX. Valid single ring must be longer than this interval.	504 mS
Minimum Double Ring Detection Off Timer	The system uses this timer to detect valid double ring from the connected PBX. Valid double ring must be longer than this interval.	104 mS
Maximum Double Ring Detection Off Timer	The system uses this timer to detect valid double ring from the connected PBX. Valid double ring must be less than this interval.	304 mS
Ringing Signal End Detect Timer	If the ringing signal on a trunk call is interrupted for longer than this interval, the system assumes ringing has stopped and terminates the call. Set this option for compatibility with the connected telco or PBX Centrix. If this interval is set to short, valid ringing will be inadvertently cut off. If too long, the system will leave the call set up even after ringing has stopped.	6016 mS
Caller ID Detection Timer	***Caller ID is currently not available. Do not change this timer from its default setting.*** The Caller ID Timer is the amount of time a system DSP is turned on, "listening" for Caller ID digits on a trunk. The listen mode starts 100 mS after the first ring burst and continues until the AC Impedance Timer times out. Only change this timer is you are having errors in the displayed Caller ID digits.	3268 mS

Table 14: Program 0402 - Trunk Timers (Page 5 of 5)

Option	Description	Default
Ground Start Timer	Before the system can start a ground start trunk, the telco's tip ground must be present for longer than this interval. Set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the system may inadvertently start a trunk it should not set up. If too long, the system may not start trunks that are functioning normally.	800 mS
Pause Timer	This timer sets the system pause interval. For example, if a user programs a pause into a Speed Dial bin, the system will wait this interval and then proceed with dialing the remaining digits in the bin.	3008 mS
DP Mute Timer	Information to be provided.	8 mS
P.F. Recovery Detect Timer	When the ATRU PCB recovers from a power failure, it checks the power failure trunk (trunk 1) for loop current for the P.F. Recovery Detect interval. If loop current is detected, it assumes the Power Failure Telephone is still connected and does not tear down the call. If loop current is not detected, the ATRU PCB switches the trunk out of the power failure mode.	3008 mS

Rules for Detecting Normal CO (Single) Ring

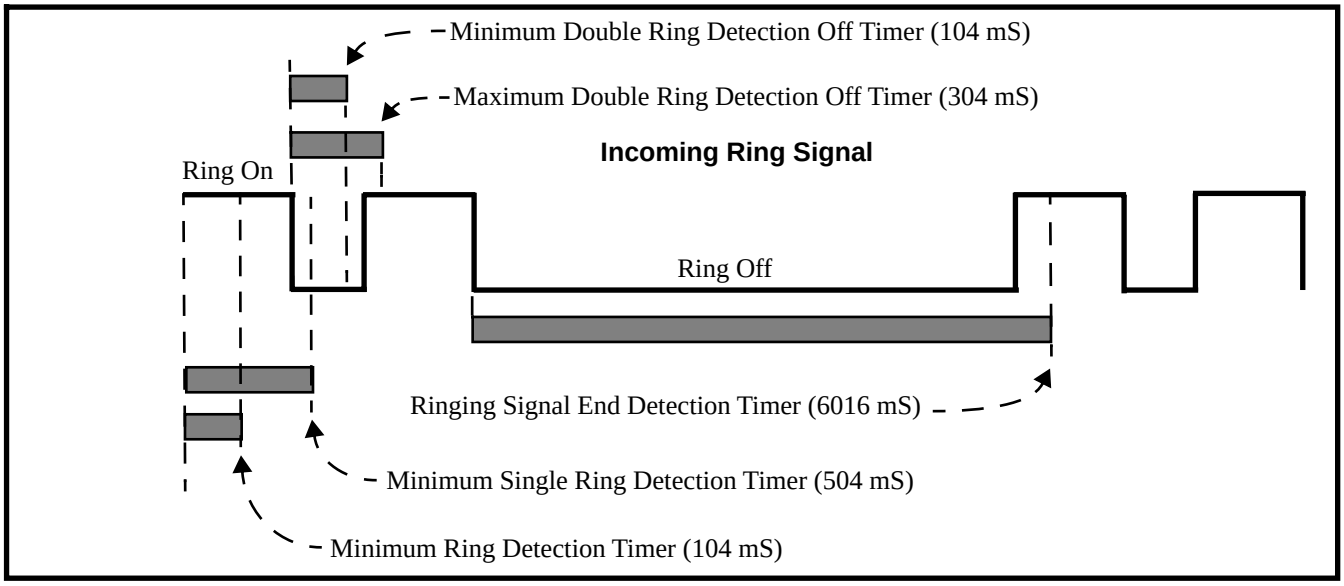


1. The ring signal must be longer than the *Minimum Ring Detection Timer* (normally 104 mS).
2. The ring signal must also be longer than the *Minimum Single Ring Detection Timer* (normally 504 mS).
3. The interval between ring bursts must not be longer than the *Ringing Signal End Detection Timer* (normally 6016 mS).

Rules for Detecting Special (Double) Ring

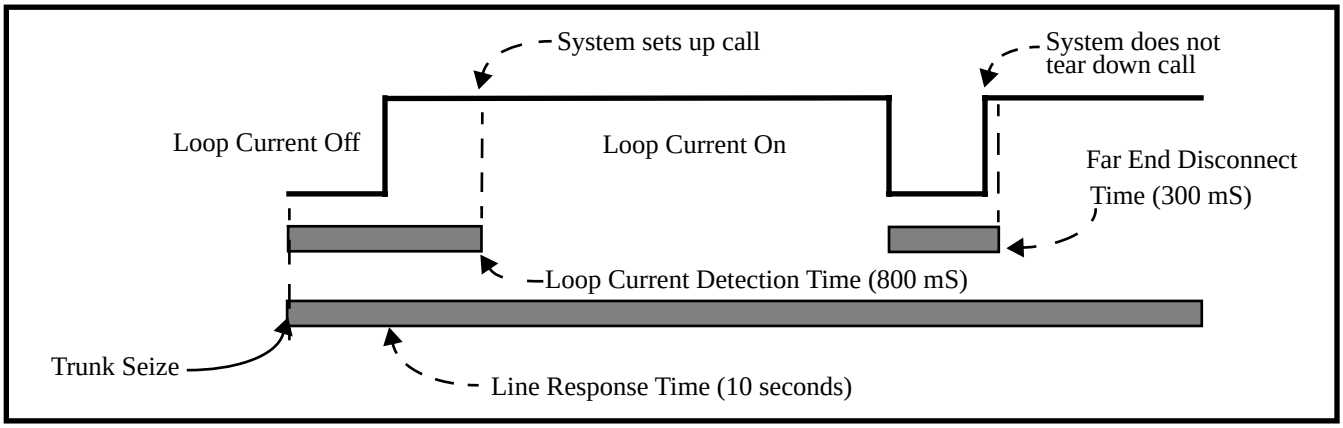
(This option is normally not required and is intended for only for certain Centrex/PBX applications

with unique incoming ring.)



1. The ring signal must be longer than the *Minimum Ring Detection Timer* (normally 104 mS).
2. The ring signal must be shorter than the *Minimum Single Ring Detection Timer* (normally 504 mS).
3. The off interval between the two double rings must be greater than the *Minimum Double Ring Detection Off Timer* (normally 104 mS) but less than the *Maximum Double Ring Detection Off Timer (normally 304 mS)*.
4. The interval between the second burst of a ring cycle and the first burst of the next cycle must not be longer than the *Ringing Signal End Detection Timer* (normally 6016 mS).

Rules for Detecting Loop Current



1. When the system seizes a trunk, it will wait the *Line Response Time* (normally 10 seconds) for loop current. (If it doesn't detect loop current, it marks the trunk as defective. If it does detect loop current, it will proceed to step 2 below.) Note that *Line Response Time* is a system timer. (not a trunk timer).
2. Once loop current is detected, it must be present for the *Loop Current Detection Time* (normally 800 mS).
3. If loop current is interrupted for longer than the *Far End Disconnect Time* (normally 300 mS), the system disconnects the call.

Conditions

None

Default Setting

Refer to the chart above.

Programming List

Refer to the chart above.

Other Related Features

Refer to the following for related feature information:

Program 0402 - Trunk Timers (page 378)

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

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

Tandem Trunking allows an extension user to join two outside callers in a trunk-to-trunk conference. The extension user can then drop out of the call, leaving the trunks in an Unsupervised Conference. The extension user that established the Conference is not part of the conversation. The Conference continues until either outside party hangs up.

Tandem Trunking 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 (trunks and/or extensions)	8

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

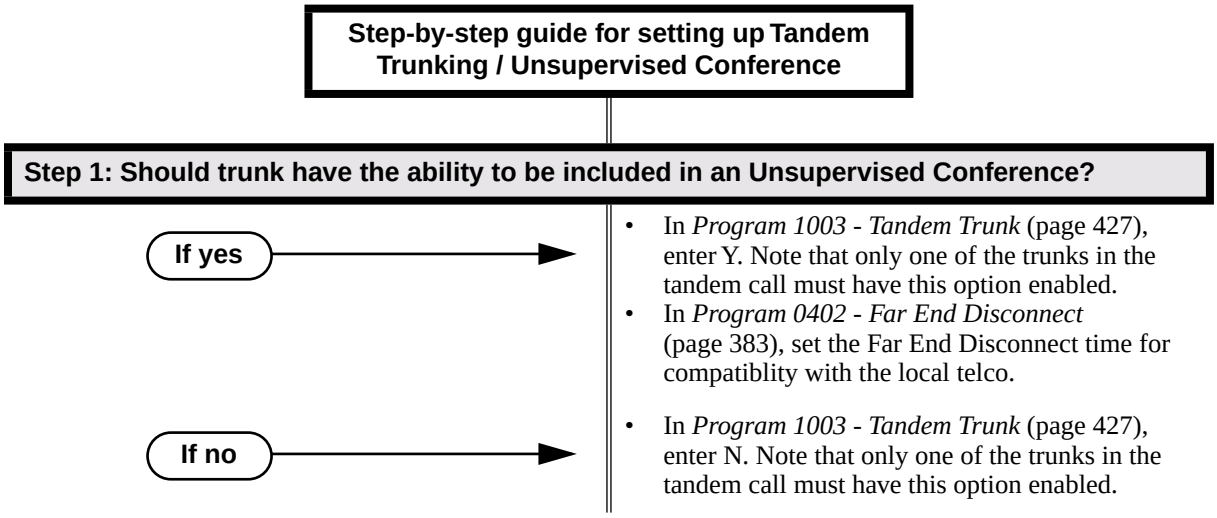
Conditions

None

Default Setting

Tandem Trunking disabled.

Programming Guide



Programming List

Program 0402 - Far End Disconnect (page 383)
Set the Far End Disconnect time for compatibility with the local telco.

Program 1003 - Tandem Trunk (page 427)
Enabled (Y) or disable (N) the trunk's ability to be included in an Unsupervised Conference. Only one of the trunks in the tandem call must have this option enabled.

Other Related Features

The following features also allow different types of multiple party calls:

Barge In (Intrusion) (page 37)
An extension user can Barge In on a tandem call.

Conference (page 79)

Group Listen (page 142)

Meet-Me Conference (page 184)

Privacy Release Groups (page 228)

Forced Trunk Disconnect (page 137)
An extension user can end an Unsupervised Conference by using Forced Trunk Disconnect on one of the trunks in the tandem call.

Feature Operation

To set up a tandem call (Unsupervised Conference):

1. Establish trunk call.

	Conversation with caller.
	Line Key or Loop Key on.

2. Press **CONF**.

Intercom dial tone.

ICM on and Line/Loop Key flashing.

Your caller hears Music On Hold (if installed) while they wait for you to set up the Conference.

3. Place or answer trunk call

OR

Retrieve trunk call from Park Orbit.

4. Press CONF to set up the Conference.

Conversation with your conferenced callers.

Line/Loop Keys on (green).

If you cannot add additional parties to your Conference, you have exceeded the system's Conference limit.

5. Hang up.

N/A

Line/Loop Keys on (red)

If the outside parties disconnect, the trunks you selected do not have Tandem Trunking capability.

To disconnect a tandem call (using Forced Trunk Disconnect):

1. Press line key for busy trunk.

OR

Press **ICM** and dial the trunk's Direct Trunk Access code (e.g., 401 for trunk 1).

Busy tone.

Line/loop key on (red).

Refer to Direct Trunk Access for the specifics.

2. Dial # to disconnect the line.

The tandem call disconnects.

To Barge In on a tandem call:

1. Press line key for busy trunk.

OR

Press **ICM** and dial the trunk's Direct Trunk Access code (e.g., 401 for trunk 1).

Busy tone.

Line/loop key on (red).

Refer to Direct Trunk Access for the specifics.

2. Dial 4.

You hear two beeps and you join the tandem call.

Line/loop keys on (green).

You can optionally place the Conference on hold. Your callers hear Music on Hold (if installed) while waiting on Hold. Press **CONF** *to reinstate the Conference.*

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

The time and date shows on telephone displays and prints on system reports.

The system Time and Date appears on:

- Display Telephones
- Station Message Detail Recording reports

The system administrator can change the time and date from the system programming mode. Although the data is entered in 24-hour format, it always displays in 12-hour format (e.g., 1300 = 1:00PM).

Conditions

The system retains the time and date after a system reset or short term power failure.

Default Setting

- 01:00:00 (1:00AM)
- 01/01/1998 (Thursday, January 1, 1998)

Programming Guide

Step-by-step guide for setting up Time and Date

Step 1: Do you want to change the system time?

If yes

- In *Program 0302 - Time* (page 372), enter the new system time (HH:MM:SS in 24 hour format).

If no

- In *Program 0302 - Time* (page 372), do not change the system time.

Step 2: Do you want to change the system date?

If yes

- In *Program 0302 - Date* (page 373), enter the new system date (MM:DD:YYYY). For example, enter 01012000 for January 1, 2000.

If no

- In *Program 0302 - Date* (page 373), do not change the system date.

Programming List

Program 0302 - Time (page 372)
Enter the system time.
Program 0302 - Date (page 373)
Enter the system date.

Other Related Features

Automatic Route Selection (page 34)
ARS uses the date and time when routing calls.
Battery Backup (page 39)
The battery on the CPU PCB backs up the CPU Real Time Clock for 10-14 days.
Station Message Detail Recording (page 277)
Time and date appear on the SMDR report.
Year 2000 Compliance (page 355)
The system is fully Y2K (year 2000) compliant. The year always displays as four digits and the system correctly recognizes leap years.

Feature Operation

None

Description

LCCPU 01.00.00 | Available.

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 Dial Pad (Continuous Dialing)**
  Active Dial Pad continuously enables the telephone dial pad. This is important if co-workers typically use dial-up services (suck as automated banking) or frequently dial into Voice Mail systems. With Active Dial Pad disabled, the system disables the telephone dial pad 6 seconds after the user has dialed their last digit. Toll Restriction controls Active Dial 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.*** (Toll Restriction uses the NPA Dialing table to control 1 + N11 dialing.)

- **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 (10XXX) 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 trunk and dial 1. To reach another provider, dial 10 and that provider's three-digit code (e.g., 10321). The system does not restrict the numbers dialed after the Equal Access code, but can prevent users from dialing specific 10XXX codes. Enter the codes you want to deny or allow in the 10XXX Toll Restriction Table.

- **NXX Dialing**
  NXX Dialing provides restriction for calls not exceeding 7 digits that begin with the digits 2-9. These are typically local exchanges. Enter the codes you want to deny or allow in the NXX Dialing Toll Restriction Table. You might want to prevent local calling to all exchanges that are not in the immediate vicinity of your company.

- **NPA Dialing**
  NPA Dialing performs 3-digit analysis on numbers dialed that exceed 7 digits and are not 0+,

011, or 10XXX calls. Enter the codes you want to deny or allow in the NPA Dialing Toll Restriction Table. To control long distance costs, for example, you might want to limit NPA calls to in-state or neighboring state area codes. Note that if a number is allowed or denied by NPA Dialing, it can be further allowed or denied by 6-Digit Analysis below.

- **6-Digit Analysis (NPA + NXX translation)**
  The 6-Digit Analysis option evaluates both the NPA and NXX component of the number dialed. Enter the 6-digit codes you want to deny or allow in the 6-Digit Analysis Toll Restriction Table. This option allows for more flexible Toll Restriction assignments. For example, you can allow calls only to the area code and exchange for your out-of-state branch and restrict all other exchanges within that area code.

Refer to the *Toll Restriction Rules* table for additional routing information.

Conditions

None

Default Setting

- Toll Restriction disabled (Toll Level 0 assigned to all extensions).

For Toll Levels 1-7 (once assigned):

- Active Dial enabled (Yes).
- N11 Dialing enabled (Yes).
- 0+ Dialing enabled (Yes).
- International Dialing enabled (Yes).
- Equal Access (10+XXX) Dialing disabled (allow table with no entries).
- NXX Dialing disabled (allow table with no entries).
- NPA Dialing disabled (allow table with no entries).
- 6-Digit Analysis disabled (allow table with no entries)

Programming List

Program 0601 - Program Toll Restriction (page 406)
Use this option to program Toll Restriction. (You must always use the following option to initialze Toll Restriction before using it for the first time.)

Program 0601 - Initialize Toll Restriction (page 406)
Use this option to initialize Toll Restriction. You must always initialize Toll Restriction before using if for the first time. If you have already programmed Toll Restriction, initializing will erase all your entries and reinstate the default Toll Restriction values.

Program 0601 - Toll Restriction Level (page 406)
Use this option to select the Toll Restriction level you want to program. The entries that follow pertain to the Toll Restriction Level you select in this option.

Toll Level Rules

1. Toll Level follows the day/night mode of the trunk used for the call. If a trunk is terminated to Key Ring in **Program 1003 - Direct Termination (Day)** (page 426), an extension's Night key controls the day/night mode of the trunk. (A uniquely programmed Night key controls the day/night mode of trunks terminated to UCD Hunting or Ring Groups.) If a trunk is terminated to an extension in **Program 1003 - Direct Termination (Day)** (page 426), the extension's DND key controls the day/night mode of the trunk.
2. If a trunk has **1001: Override Extension Toll Level** enabled (Y), the system uses the

Toll Level assigned to the trunk in **1001: Trunk Toll Level**. The entries are 1-7, 0 = no Toll Restriction applied.

3. If a trunk has **Program 1001 - Override Extension Toll Restriction** (page 421) disabled (N), and the trunk is in the day mode, the system uses the Toll Level assigned in **Program 1801 - Extension Toll Level Day** (page 450). The entries are 1-7, 0 = no Toll Restriction applied.
4. If a trunk has **Program 1001 - Override Extension Toll Restriction** (page 421) disabled (N), and the trunk is in the night mode, the system uses the Toll Level assigned in **Program 1801 - Extension Toll Level Night** (page 450). The entries are 1-7, 0 = no Toll Restriction applied.
5. When an extension user with Toll Restriction enabled flashes a trunk, the system enforces toll Restrictin on any digits the user dials from the new dial tone. For example, if an extension user cannot dial 203 926 5400 before they flash, they cannot dial 203 926 5400 after they flash.

Program 0601 - Active Dial Pad (page 406)

Enable (Y) or disable (N) Active Dial Pad (continued dialing). With Active Dial Pad enabled, the telephone outputs a digit over the trunk each time the user presses a dial pad key. With Active Dial Pad disabled, the the system turns off the extension's dial pad six seconds after the user dials their last digit. Toll Restriction controls Active Dial Pad for both incoming and outgoing calls.

Program 0601 - N11 Dialing (page 406)

Enable (Y) or disable (N) N11 Dialing. If disabled, the system terminates the call on the third digit of an N11 call. The system never restricts 911 calls. To control 0NN and 1 + 0NN calls, refer to the 0 + Dialing and International Dialing options below. Toll Restriction controls 1 + N11 calls through the NPA Dialing table.

Program 0601 - 0 + Dialing (page 407)

Enable (Y) or disable (N) 0 + dialing. If enabled, the telephone can dial operator assisted calls and credit card calls. If disabled, the system terminates the call as soon as the user dials 0.

Program 0601 - International Dialing (page 407)

Enable (Y) or disable (N) International Dialing. If enabled, the extension can directly dial 011 international calls. If disabled, the system terminates the call as soon as the user dials 01.

Program 0601 - Equal Access Dialing (page 407)

This option allows/prevents an extension user from directly dialing Equal Access (10XXX) calls. The system compares the 10XXX code the user dials to the 10XXX table that you program. You can set up the table as an allow or deny table. If set up as an allow table, the system will allow only those codes you enter into the table, and deny all others. If set up as a deny table, the system will deny only those codes you enter into the table, and allow all others.

Program 0601 - NXX Dialing (page 407)

This option allows/prevents an extension user from directly dialing NXX (local exchange) calls. The system compares the NXX code the user dials to the NXX table that you program. You can set up the table as an allow or deny table. If set up as an allow table, the system will allow only those codes you enter into the table, and deny all others. If set up as a deny table, the system will deny only those codes you enter into the table, and allow all others.

Program 0601 - NPA Dialing (page 408)

This option allows/prevents an extension user from directly dialing NPA (area code) calls. The system compares the NPA code the user dials to the NPA table that you program. You can set up the table as an allow or deny table. If set up as an allow table, the system will allow only those codes you enter into the table, and deny all others. If set up as a deny table, the system will deny only those codes you enter into the table, and allow all others. (Note that if you want to do 6-Digit Analysis on an NPA, be sure the NPA Dialing Table doesn't restrict the code.)

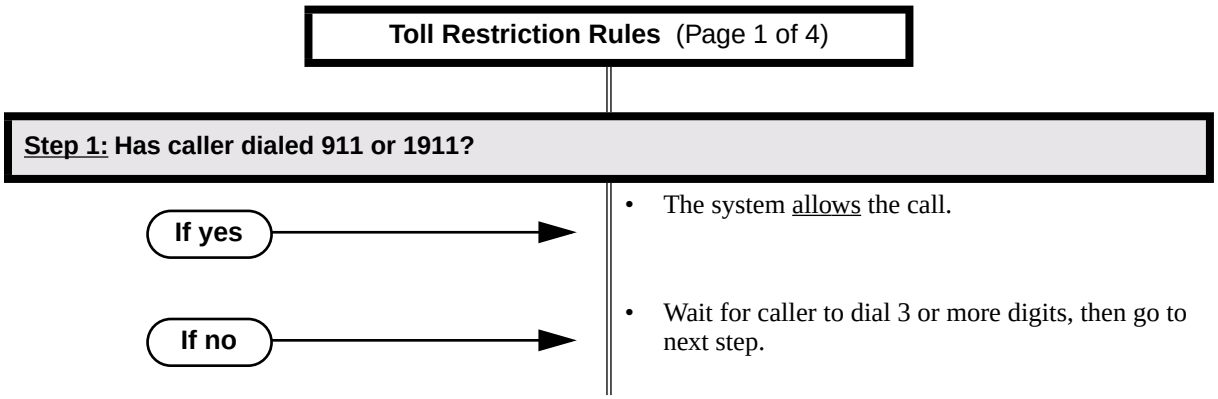
Program 0601 - 6-Digit Analysis (page 408)

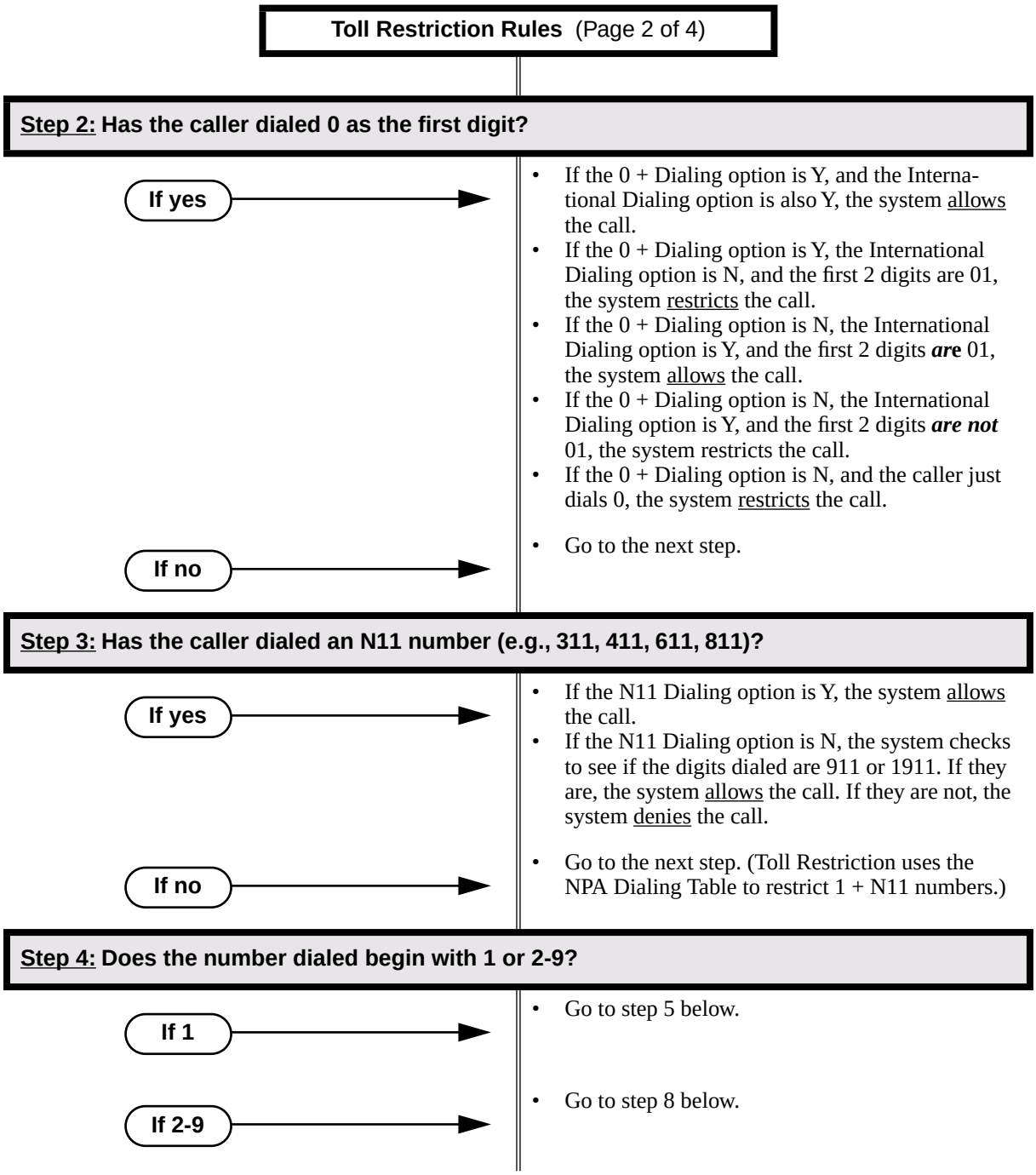
This option enables/disables 6-Digit Analysis. With 6-Digit Analysis, the system restricts a call according to the NPA and NXX the user dials. If 6-Digit Analysis is allowed, the system compares the NPA and NXX code the user dials to the 6-Digit Table that you program. You can set up the table as an allow or deny table. If set up as an allow table, the system will allow only those codes you enter into the table, and deny all others. If set up as a deny table, the system will deny only those codes you enter into the table, and allow all others. (Note that if you want to do 6-Digit Analysis on an NPA, be sure the NPA Dialing Table doesn't restrict the code.)

Additional Toll Restriction Programming Notes

- Valid Toll Restriction table entries are the digits 0-9. Use * as a wild card to represent ***any*** digit 0-9. For example 20* = 200 through 209.
- The system provides a total of 600 Toll Restriction Elements. Each element corresponds to a 3-digit Toll Restriction Table entry. For example, the 10XXX Table, NXX Dialing Table, and the NPA Dialing Table use one element for each entry. The 6-Digit Analysis Table uses two elements for each entry.
- To set up a global deny table (i.e., denies all entries), you have two choices:
  - Set up an allow table and leave it empty.
  - Set up a deny table and enter *** (3-digit entry) or ****** (6-Digit Analysis entry).
- To set up a global allow table (i.e., allows all entries), you have two choices:
  - Set up a deny table and leave it empty.
  - Set up an allow table and enter *** (3-digit entry) or ****** (6-Digit Analysis entry).

Toll Restriction Rules




Toll Restriction Rules (Page 2 of 4)
Step 2: Has the caller dialed 0 as the first digit?
If yes
• If the 0 + Dialing option is Y, and the International Dialing option is also Y, the system allows the call.
• If the 0 + Dialing option is Y, the International Dialing option is N, and the first 2 digits are 01, the system restricts the call.
• If the 0 + Dialing option is N, the International Dialing option is Y, and the first 2 digits are 01, the system allows the call.
• If the 0 + Dialing option is N, the International Dialing option is Y, and the first 2 digits are not 01, the system restricts the call.
• If the 0 + Dialing option is N, and the caller just dials 0, the system restricts the call.
If no
• Go to the next step.
Step 3: Has the caller dialed an N11 number (e.g., 311, 411, 611, 811)?
If yes
• If the N11 Dialing option is Y, the system allows the call.
• If the N11 Dialing option is N, the system checks to see if the digits dialed are 911 or 1911. If they are, the system allows the call. If they are not, the system denies the call.
If no
• Go to the next step. (Toll Restriction uses the NPA Dialing Table to restrict 1 + N11 numbers.)
Step 4: Does the number dialed begin with 1 or 2-9?
If 1
• Go to step 5 below.
If 2-9
• Go to step 8 below.

Toll Restriction Rules (Page 3 of 4)

Step 5: Has caller dialed a 10XXX Equal Access number (e.g., 10320)

If yes

The system currently supports 5-digit (10XXX) Equal Access. It does not support 7-digit (10XXXXX) Equal Access.

If the Equal Access Table is an allow table:
- The system denies the call if the number dialed is not in the table.
- The system allows the call if the number dialed is in the table.

If the Equal Access Table is a deny table:
- The system denies the call if the number dialed is in the table.
- The system allows the call if the number dialed is not in the table.

If no

- Go to the next step.

Step 6: If the number dialed is not an Equal Access Code, the system looks at the NPA Dialing Table.

The system currently looks at the first four digits dialed and compares them to the NPA Dialing table.

If the NPA Dialing Table is an allow table:
- If the number dialed is not in the table, the system checks the 6-Digit Analysis Table in step 7 below. If the number is not allowed in the 6-digit table, the system denies the call.
- If the number dialed is in the table, the system goes to the step 7 below to further analyze the dialed number. If the number is not denied by the 6-digit table, the system allows the call.

If the NPA Dialing Table is a deny table:
- If the number dialed is in the table, the system checks the 6-Digit Analysis Table in step 7 below. If the number is not allowed in the 6-digit table, the system denies the call.
- If the dialed number is not in the table, the system goes to the step 7 below to further analyze the dialed number. If the number is not denied by the 6-digit table, the system allows the call.

Toll Restriction Rules (Page 4 of 4)

Step 7: Before denying or allowing the call based on the NPA Dialing Table, the system looks at the 6-Digit Analysis Table (i.e., uses NPA + NNX analysis).

If the number dialed is accepted by the NPA Dialing Table above, the system waits for 7 digits and then compares them to the 6-Digit Analysis Table entries.

If the 6-Digit Analysis Table is an allow table:
- The system denies the call if the number dialed is not in the table.
- The system allows the call if the number dialed is in the table.

If the 6-Digit Analysis Table is a deny table:
- The system denies the call if the number dialed is in the table.
- The system allows the call if the number dialed is not in the table.

Step 8: If the first digit dialed is 2-9, the system waits for timeout or for more than 7 digits.

If the dialing times out before more than 7 digits are dialed, the system looks at the NXX Dialing Table.

If the NXX Dialing Table is an allow table:
- The system denies the call if the NXX portion of the number dialed is not in the table.
- The system allows the call if the NXX portion of the number dialed is in the table.

If the NXX Dialing Table is a deny table:
- The system denies the call if the NXX portion of the number dialed is in the table.

The system allows the call if the NNX portion of the number dialed is not in the table.

If more than 7 digits are dialed, the system goes back to step 6 and reanalyzes the NPA Dialing Table and the 6-Digit Analysis Table.

Other Related Features

Direct Trunk Access (page 106)
Direct Trunk Access does not bypass Toll Restriction.

Flash (page 132)
When an extension user with Toll Restriction enabled flashes a trunk, the system enforces toll Restrictin on any digits the user dials from the new dial tone. For example, if an extension user cannot dial 203 926 5400 before they flash, they cannot dial 203 926 5400 after they flash.

Forced Trunk Disconnect (page 137)
Forced Trunk Disconnect does not bypass Toll Restriction.
Last Number Redial (page 174)
Last Number Redial will not store a number denied by Toll Restriction.
Private Line (page 231)
Toll Restriction restricts Private Lines just like any other trunk.
Save Number Dialed (page 254)
Save Number Dialed will not store a number denied by Toll Restriction.
Speed Dial (page 263)
The system enforces Toll Restriction on Speed Dial numbers as they are dialed, not as they are stored.

Feature Operation

Toll Restriction operation is automatic.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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

Transfer permits an extension user to send (i.e., extend) an active trunk call to any other extension in the system, an Ring Group, UCD Hunting 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 still unanswered, the call diverts to Key Ring. This assures that users do not lose or inadvertently abandon their transfers.

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.

The system cannot Transfer Intercom calls.

Conditions

None

Default Setting

Enabled

Programming Guide

Step-by-step guide for setting up Transfer
(Page 1 of 2)

Step 1: Does an unanswered Transfer ring the destination extension long enough before recalling the extension that initially transferred it?

If yes

- For non-operator extensions:
  In *Program 0401 - Transfer Recall* (page 375), leave the Transfer Recall interval at it's currently assigned value.
- For operators:
  In *Program 0403 - Call Forward Ring No Answer* (page 386), leave the Call Forward Ring No Answer interval at it's currently assigned value.

If no

- For non-operator extensions:
  In *Program 0401 - Transfer Recall* (page 375), change the Transfer Recall interval to meet the site requirements.
- For operators:
  In *Program 0403 - Call Forward Ring No Answer* (page 386), change the Call Forward Ring No Answer interval to meet the site requirements.

Step 2: If a transferred call is not picked up, recalls the transferring extension, and is still not picked up, does it divert to Key Ring after the proper interval?

If yes

- In *Program 0401 - Trunk Revert* (page 376), leave the Trunk Revert interval at it's currently assigned value.

If no

- In *Program 0401 - Trunk Revert* (page 376), change the Trunk Recall interval to meet the site requirements.

Step 3: If a user transfers a call into a busy UCD Hunting group, does it divert to the overflow destination (if programmed) after the proper interval?

If yes

- In *Program 0401 - ACD/UCD Overflow* (page 377), leave the ACD/UCD Overflow interval at it's currently assigned value.

If no

- In *Program 0401 - ACD/UCD Overflow* (page 377), change the ACD/UCD Overflow interval to meet the site requirements.

Step-by-step guide for setting up Transfer
(Page 2 of 2)

Step 4: While a transferred caller is waiting to be picked up, should they hear Music on Hold instead of ringback?

If yes

- In *Program 0201 - Music on Hold* (page 367), enter Y for this option to enable Music on Hold system-wide.
- *Program 0201 - MOH on Transfer* (page 367), enter Y for this option to enable Music on Hold for transferred callers.

If no

- In *Program 0201 - MOH on Transfer* (page 367), enter N for this option to disable Music on Hold for transferred callers.

Programming List

Program 0201 - Music on Hold (page 367)
Enter Y for this option to enable Music on Hold system-wide (if you also enabled *MOH on Transfer* below).

Program 0201 - MOH on Transfer (page 367)
Enter Y for this option to enable Music on Hold for transferred callers.

Program 0401 - Transfer Recall (page 375)
Set how long a transferred call rings the destination extension before recalling the extension from which it was initially transferred. This option pertains to all idle extensions, as well as busy multibutton extensions. *Note that this timer does not control how long a transferred call rings a busy operator.*

Program 0401 - Trunk Revert (page 376)
Sets how long a Transfer Recall rings the extension that initially transferred the call before Key Ring occurs. Key Ring rings all extensions programmed to ring for that line.

Program 0401 - ACD/UCD Overflow (page 377)
Set how long a transferred call (or DIL) camps on to a busy UCD Hunt Group before ringing the overflow destination.

Program 0403 - Call Forward Ring No Answer (page 386)
Set how long a transferred call rings a busy operator extension before recalling the extension from which it was initially transferred. *Note that this timer does not control how long a transferred call rings any busy non-operator extension.*

Other Related Features

Call Forwarding (page 43)
Call Forwarding will reroute transferred calls.

Call Coverage Keys (page 40)
An extension user can Transfer a call to the covered extension by pressing the Call Coverage key.

Call Waiting / Camp-On (page 51)
Transfer can automatically Camp-On to a busy extension.

Direct Station Selection (DSS) (page 95)
You can press your DSS key to Transfer a call instead of dialing a co-worker's extension number.

Extended Ringing (page 119)
With Extended Ringing enabled, transferred trunks ring the destination extension for the *Number of Extended Rings* before recalling the transferring extension.

Extension Hunting (page 121)
Trunk calls transferred to a Terminal or Circular Hunting group member activate hunting. In addition, trunk calls transferred to a UCD group master number activate hunting.

Group Call Pickup (page 139)
A trunk call transferred to an extension in a Pickup Group activates Group Call Pickup.

Group Ring (page 144)
An extension user can Transfer a call to a Ring Group master number. If unanswered, the call will continue to ring the group until a member picks it up.

Hold (page 156)
If an extension receiving a screened Transfer answers the screen and immediately hangs up (before the transferring extension), the call goes on Exclusive Hold at the transferring extension.

Hotline (page 160)
An extension user can Transfer a call to their Hotline partner by pressing their Hotline key.

Intercom (page 165)
The system cannot Transfer Intercom calls.

Key Ring (page 170)
An unanswered call transferred to an extension diverts to Key Ring if unanswered at the transferring extension.

Music On Hold (page 195)
With Music on Hold enabled, transferred callers can optionally listen to ringback or MOH while their call waits at the transfer destination.

Off-Hook Signaling (page 205)
An extension user can Transfer their current call to a co-worker or Voice Mail and then answer the waiting call. In addition, transferred calls can initiate Off-Hook Signaling.

Reverse Voice Over (page 245)
While idle, an extension user cannot use their Reverse Voice Over key to Transfer calls.

Station Message Detail Recording (page 277)
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.

Voice Over (page 350)
An extension user can Voice Over after making a Screened Transfer and hearing busy/ring tone.

Feature Operation

To Transfer your call:

You cannot Transfer Intercom calls.

1. Do not hang up.
2. Press **ICM**.

Intercom dial tone.

ICM anbd **SPK** on

You can press your Call Coverage or Hotline key instead of **ICM**.

3. Dial your co-worker's extension.
   OR
   Press a DSS key.
   OR
   Dial a Ring Group or UCD Hunting group master number.
4. Announce call to make a Screened Transfer.
   OR

Press the flashing line key to return to the call if your co-worker doesn't want it (i.e., rejects your screen).

OR

Hang up to send the call through Unscreened.

The call will recall to you if unanswered at the destination extension. If you don't answer the recall, it diverts to Key Ring.

To Transfer your call to a co-worker's mailbox:

1. Do not hang up.
2. Press **ICM**.

   Intercom dial tone.

   ICM anbd **SPK** on

   You can press your Call Coverage or Hotline key instead of **ICM**.
3. Press **MW**.
4. Dial your co-worker's extension.
5. Hang up.

Description

LCCPU 01.00.00 | Available.

Dial a single code to place a call over the first available trunk in a trunk group.

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

Conditions

Systems using Trunk Groups or Trunk Group Access should use the hybrid FCC registration number (i.e., the number that ends in MF-E). Look at the label on the bottom of your equipment cabinet for more information.

Default Setting

Disabled

Programming Guide

Step-by-step guide for setting up Trunk Group Routing (Page 1 of 2)

Step 1: Should dial 9 capability be available system-wide?

If yes

- In *Program 0501 - Single Digit Access* (page 395), enter Y.

If no

- In *Program 0501 - Single Digit Access* (page 395), enter N.

Step 2: Should extension have dial 9 capability?

If yes

- In *Program 1802 - Station's Dial 9 Group* (page 456), assign a trunk group that has valid, installed trunks to which the extension has access. Also review the steps below.
- In *Program 1002 - Trunk Groups* (page 424), assign installed trunks to the extension's dial 9 trunk group assigned above.

If no

- In *Program 1802 - Station's Dial 9 Group* (page 456), assign a trunk group that does not have valid, installed trunks to which the extension has access.

Step-by-step guide for setting up Trunk Group Routing (Page 2 of 2)

Step 3: Check the trunk and trunk group access options for the extension.

- In *Program 1803 - Extension Line Access Assignments* (page 461), be sure the extension has either outgoing access (2) or full access (3) for some of the trunks in their dial 9 group.
- In *Program 1804 - Extension Trunk Group Access* (page 464), be sure to enable (Y) access to the extension's dial 9 group.

Programming List

Program 0501 - Single Digit Access (page 395)
Enter Y to enable user's to dial 9 for their specified trunk group. Enter N to require users to dial 9 followed by the Trunk Group number (0-8).

Program 1002 - Trunk Groups (page 424)
Program installed trunks into the trunk group you want to designate as an extension's dial 9 group in *Program 1802 - Station's Dial 9 Group* on page 456 below.

Program 1802 - Station's Dial 9 Group (page 456)
Assign the extension's dial 9 trunk group.

Program 1803 - Extension Line Access Assignments (page 461)
To make outgoing call, make sure the extension has either outgoing access (2) or full access (3) for the trunk.

Program 1804 - Extension Trunk Group Access (page 464)
Make sure the extension has access to the trunk group specified in *Program 1802 - Station's Dial 9 Group* on page 456.

Other Related Features

Central Office Calls, Placing (page 63)
Review this feature for other ways to place trunk calls.

Trunk (Line) Queuing / Trunk Callback (page 332)
An extension user camp-on or leave a Callback if all trunks in the dial 9 group are busy.

Trunk Groups (page 335)
With Trunk Group Routing disabled, extension users can optionally dial 90-98 to place calls on trunk groups 0-8.

Feature Operation

To place a call over a trunk group:

1. Lift handset.
2. Press ICM.

Intercom dial tone.

ICM on.

3. Dial 9.

Trunk dial tone.

Line key on.

If you don't hear dial tone as soon as you dial 9, your system does not have Trunk Group Routing enabled. See *Central Office Calls, Placing* on page 63 *for more.*

If you hear busy tone after dialing 9, all the trunks in your dial 9 group are busy. You can dial 2 to wait in line for a trunk to become free, or dial 2 to have an available trunk call you back. See Trunk (Line) Queuing / Trunk Callback on page 332 *for more.*

4. Dial outside number.

Description

LCCPU 01.00.00 | Available.

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

Trunk Queuing

Trunk Queueing permits an extension user to queue (wait in line) on hook for a busy trunk or trunk group to become free. The system recalls the queued extension as soon as the trunk is available. The user does not have to manually retry the trunk later.

Trunk Callback

After queuing for a trunk, the extension user just hangs up to convert the Trunk Queue into a Trunk Callback. When the trunk 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 trunk.

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

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

Trunk Queuing Priority

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

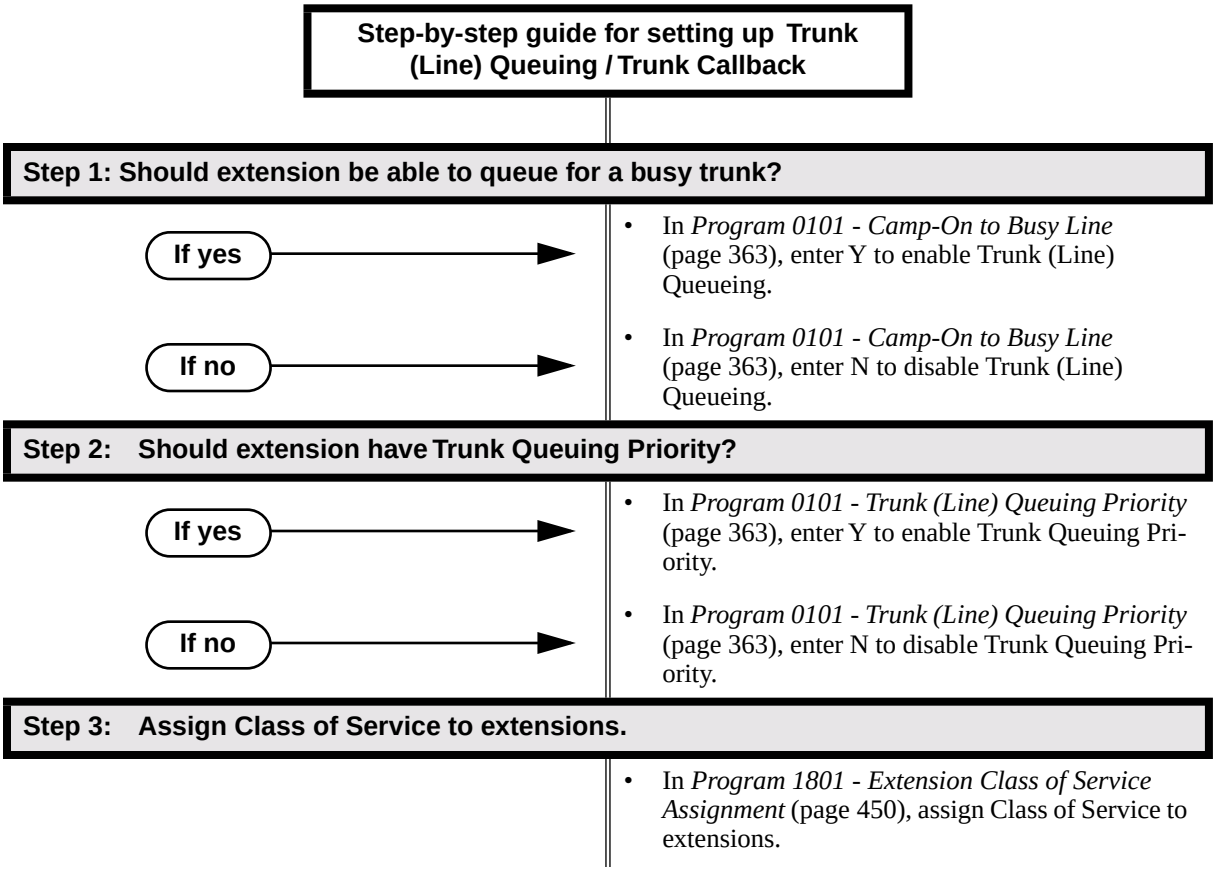
Conditions

A system reset or power failure cancels all Trunk Callbacks system-wide.

Default Setting

- Trunk (Line) Queuing / Trunk Callback enabled for attendants (COS 1), but disabled for all other extensions (COS 2-15).
- Trunk Queuing Priority disabled for all extensions (COS 1-15).

Programming Guide



Programming List

Program 0101 - Trunk (Line) Queuing Priority (page 363)
In an extension's Class of Service, enter Y to enable Trunk (Line) Queuing Priority.
Program 0101 - Camp-On to Busy Line (page 363)
In an extension's Class of Service, enter Y to allow camping on to a busy trunk.**Program 1801 - Extension Class of Service Assignment** (page 450)
Assign Class of Service to extensions.

Other Related Features

Callback (page 54)
An extension user can Camp-On to a busy co-worker then hang up to turn the Camp-On into a Callback.
Call Waiting / Camp-On (page 51)
Camp-On lets an extension user Camp-On to a busy extension.
Central Office Calls, Placing (page 63)
An extension user can queue for a busy trunk, or queue and hang up to leave a callback for a busy trunk.

Last Number Redial (page 174)
If all trunks are busy and Last Number Redial cannot go through, the user can dial 2 a queue for a trunk to become free. If the user hangs up, the system converts the queue to a Trunk Callback.

Save Number Dialed (page 254)
If an extension user presses their Save key and hears busy, they can dial 2 to wait in line for the trunk to become available. The system will automatically redial the call. However, if the user hangs up to convert the queue to a Trunk Callback, the system will not redial the saved call once the trunk connects.

Feature Operation

To queue for a busy trunk:

1. Press line key for busy trunk.
   OR
   Press **ICM** and dial the trunk's Direct Trunk Access code (e.g., 401 for trunk 1).
   - Busy tone.
   - Line/loop key on (red).
2. Dial 2; do not hang up.
   - Busy tone stops.
   - **ICM** and **SPK** on.

   If you hang up, the system converts your queue to a Trunk Callback.
3. When the trunk becomes free, you are automatically connected.
   - If you initially queued for the trunk, you hear trunk dial tone so you can place your call again.
   - If you left a Trunk Callback, your hear Trunk Callback ring. If you answer within four rings, you will hear dial tone from the trunk. You can then place your call again.
   - **ICM** and **SPK** on.
4. Place your outside call.

Description

LCCPU 01.00.00 | Information to be provided.

Dial codes to access trunk groups for outgoing calls.

Extension users can optionally dial trunk group access codes 90-98 to select trunk groups 0-8 for outgoing calls. This is helpful in applications that have different services arranged into trunk groups. For example, dialing 90 could access a group of DDD trunks for local calls, and dialing 91 could access a group of WATS trunks for long distance calls. (Note that systems with **Trunk Group Routing** (page 329) enabled cannot also dial trunk group access codes 90-98.)

When a user dials a trunk group access code (90-98), the system selects the lowest number in the group that is available. If that trunk is busy, it automatically selects the next highest trunk. If all trunks in the group are busy, the user can optionally queue for a trunk to become free. See **Trunk (Line) Queuing / Trunk Callback** (page 332) for more.

Systems using Trunk Groups or Trunk Group Access should use the hybrid FCC registration number (i.e., the number that ends in MF-E). Look at the label on the bottom of your equipment cabinet for more information.

Conditions

Systems using Trunk Groups or Trunk Group Access should use the hybrid FCC registration number (i.e., the number that ends in MF-E). Look at the label on the bottom of your equipment cabinet for more information.

Default Setting

Dialing 90-98 for trunk groups 0-8 is disabled because single digit access (dial 9) is enabled.

Programming Guide

Step-by-step guide for setting up Trunk Groups (Page 1 of 2)

Step 1: Should extension be able to dial codes 90-98 to place calls on trunk group.

If yes

- In *Program 0501 - Single Digit Access* (page 395), enter N to disable single digit access (dial 9).
- In *Program 1002 - 1002 - Trunk Groups* (page 424), assign trunks to trunk groups.

If no

- In *Program 0501 - Single Digit Access* (page 395), enter Y to enable single digit access (dial 9).

Step-by-step guide for setting up Trunk Groups (Page 2 of 2)

Step 2: Should extension be able to access all installed trunks in all trunk groups for placing calls (via codes 90-98)?

If yes

- In *Program 1803 - Extension Line Access Assignments* (page 461), assign either outgoing (2) or full (3) access to each trunk the extension ***should*** be able to use for outgoing calls.
- In *Program 1804 - Extension Trunk Group Access* (page 464), be sure the extension has access (Y) to each trunk group it ***should*** be able to use for outging calls.

If no

- In *Program 1803 - Extension Line Access Assignments* (page 461), assign either no (0) or incoming (1) access to each trunks the extension ***should not*** be able to use for outgoing calls.
- In *Program 1804 - Extension Trunk Group Access* (page 464), be sure the extension has no access (N) to each trunk group it ***should not*** be able to use for outging calls.

Programming List

Program 0501 - Single Digit Access (page 395)
Enter N to disable single digit access. With single digit access disabled, an extension user can dial 90-98 to access trunk groups 0-8.

Program 1002 - Trunk Groups (page 424)
Assign trunks to Trunk Groups (0-8).

Program 1803 - Extension Line Access Assignments (page 461)
For each extension, assign the access options for each trunk (0 = No access, 1 = Incoming only. 2 = Outgoing only, 3 = Full access). This feature may not require access - check into this when the feature is working.

Program 1804 - Trunk Group Access (page 464)
For each extension, enter Y to allow or N to prevent outgoing trunk group access. The system always allows incoming trunk group access.

Other Related Features

Loop Keys (page 179)
Switched and Fixed Loop Keys use the system's Trunk Groups.

Trunk Group Routing (page 329)
With Trunk Group Routing enabled, extension users can press ICM and dial 9 to place outgoing calls.

Feature Operation

To place a call over a trunk group:

1. Lift handset.
2. Press ICM.

Intercom dial tone.

ICM on.

3. Dial trunk group code (90-98).

Trunk dial tone.

Line key on.

If you hear dial tone as soon as you dial 9, your system has Trunk Group Routing enabled. SeeTrunk Group Routing on page 329 *for more.*

4. Dial outside number.

Description

LCCPU 01.00.00 | Available. See *System Timers, Trunks* on page 300 for more.

Description

LCCPU 01.00.00 | Not available.

Description

LCCPU 01.00.00 | Available. Check with your Sales Representative for the availability of Park and Page.

Voice Mail ends the frustration of 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 Nitsuko's 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. 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 in Do Not Disturb. The caller just presses their Voice Mail key 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 coworker's mailbox. After the Transfer goes through, the caller can leave a message in the mailbox.

Conversation Record

While on a call, an extension user can have Voice Mail record the conversation. The keyset user just presses their Voice Mail Record Key. Once recorded, the Voice Mail stores the conversatoin as a new message in the user's mailbox. After calling their mailbox, a user can save, edit or delete the recorded conversation.

Personal Answering Machine Emulation

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 two alert tones followed by 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.

Voice Mail Overflow

If Voice Mail automatically answers trunks, Voice Mail Overflow can reroute those trunks to an extension, Ring Group or UCD Hunting group when all Voice Mail ports are busy. During periods of high traffic, this prevents the outside calls from ringing Voice Mail for an inordinate amount of time. Without overflow, the outside calls ring Voice Mail until a port becomes available or the outside caller hangs up.

In addition, 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 88)
  A trunk that directly rings an extension can overflow to Voice Mail.
- **Extension Hunting** (page 121)
  A trunk that rings an Extension Hunting group can overflow to Voice Mail.
- **Group Ring** (page 144)
  A trunk that rings a group of extensions can overflow to Voice Mail.
- **Key Ring** (page 170)
  A trunk ringing 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 when messages are waiting.

Note on Current NVM-Series Voice Mail Configuration

Set up the NVM-Series Voice Mail as follows:

1. Select **IN - Install System**
2. Reinstall the Voice Mail for DS01/VS (24 x 72) and customize the trunk numbers to begin with 401.

If setting up Voice Mail Park and Page, in Voice Mail programming make the following change:

1. Select **CU - Customize Database**.
2. Select **MO - Mailbox Options**
3. Enter the the extension's mailbox number (e.g., 300 for extension 300).
4. For the mailbox selected (e.g., 300), change the Park/Pageing string to: FW**nnn/*10M (where nnn is the extension's number).
   *For extension 300, for example, the string would be FW**300/*10M.*

Refer to your NVM-Series Documentation for additional details.

Conditions

If an extension has a flashing MW lamp and the system resets or power fails, the MW key continues to flash after the system restarts.

Default Setting

Voice Mail not installed.

Programming Guide

Step-by-step guide for setting up Voice Mail
(Page 1 of 4)

Step 1: Make sure you have analog ports reserved for Voice Mail.

- If you are using a 2-OPX Module, be sure to enter type 21 in **Program 1801 - Extension Circuit Type** (page 449). The 2-OPX Module must be P/N 92177A.
- If you are using ports on an ASTU PCB, be sure to enter type 15 in **Program 1801 - Extension Circuit Type** (page 449).
- Following the instructions in your Voice Mail documentation, connect the analog ports to Voice Mail system.

Step 2: Assign a UCD Hunt Group for Voice Mail.

- *Program 0510 - Group Number* (page 402), select an available UCD Hunt Group for Voice Mail.
- In *Program 0510 - Hunt Group Master Number* (page 402), assign a master number to the hunt group you designate for Voice Mail.

Step 3: Enable Voice Mail programming.

- In *Program 0201 - Voice Mail Installed* (page 368), enter Y. (Entering N enables Message Waiting.)
- In *Program 0201 - Voice Mail Master Extension Number* (page 368), enter the Voice Mail master extension number (e.g., 700).

Step 4: Set up the Voice Mail ports.

- In *Program 1802 - Voice Mail Port* (page 457), enter Y for each analog extension connected to Voice Mail.
- In *Program 1807 - Hunt Type* (page 469), enter hunt type 05 (for UCD hunting) for each analog extension connected to Voice Mail.
- In *Program 1807 - Hunt Master Number* (page 470), enter the Voice Mail UCD Group master number (assigned in step 2 above) for each analog extension connected to Voice Mail.

Step-by-step guide for setting up Voice Mail
(Page 2 of 4)

Step 5: Do you want the Voice Mail Automated Attendant to answer trunk calls?

If yes

- In *Program 1003 - Direct Termination (Day)* (page 426), enter the Voice Mail master extension number (e.g., 700). The Automated Attendant will now also answer calls at night.

If no

- In *Program 1003 - Direct Termination (Day)* (page 426), make sure the trunk is not terminated to the Voice Mail master extension number.

Step 6: Do you want the Voice Mail Automated Attendant to answer trunk calls only at night?

If yes

- In *Program 1003 - Direct Termination (Day)* (page 426), make sure the trunk is not terminated to the Voice Mail master extension.
- In *Program 1003 - Direct Termination (Night)* (page 426), enter the Voice Mail master extension number (e.g., 700). The Automated Attendant will now also answer calls when the system is in the night mode.

If no

- In *Program 1003 - Direct Termination (Day)* (page 426), make sure the trunk is not terminated to the Voice Mail master extension number.
- *Program 1003 - Direct Termination (Night)* (page 426), make sure the trunk is not terminated to the Voice Mail master extension.

Step 7: When all Voice Mail ports are busy, do you want Automated Attendant calls to ring a designated overflow destination?

If yes

- In *Program 0510 - Overflow Destination* (page 402), enter the Voice Mail overflow destination. The destination can be an extension, Ring Group master number of a UCD Group master number.

If no

- In *Program 0510 - Overflow Destination* (page 402), press CLEAR to remove the overflow destination.

Step 8: When all Voice Mail ports are busy, do calls wait for the proper interval before ringing the overflow destination?

If yes

- In *Program 0401 - ACD/UCD Overflow* (page 377), leave the ACD/UCD Overflow interval at its currently assigned value.

If no

- In *Program 0401 - ACD/UCD Overflow* (page 377), change the ACD/UCD Overflow interval to meet the site requirements.

Step-by-step guide for setting up Voice Mail
(Page 3 of 4)

Step 9: Do calls ring the Voice Mail overflow destination for the proper interval before diverting to Key RIng?

If yes

- In *Program 0401 - DIL No Answer* (page 376), leave the DIL No Answer interval at its currently assigned value.

If no

- In *Program 0401 - DIL No Answer* (page 376), change the DIL No Answer interval to meet the site requirements.

Step 10: Should extension have Conversation Record capability?

If yes

- <u>If you want the Conversation Record key on the keyset:</u>
  In *Program 1701 - Voice Mail Record Key* (page 438), assign a keyset programmable key as a Voice Mail Record key (code 17).
- <u>If you want the Conversation Record key on the DSS Console:</u>
  In *Program 1704 - Voice Mail Record Key* (page 446), assign a DSS Console key as a Voice Mail Record key (code 17).
- In *Program 0101 - Conversation Record* (page 365), enter Y to enable Conversation Record in an extension's Class of Service.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

If no

- In *Program 1701 - Voice Mail Record Key* (page 438), make sure a keyset key is not assigned as a Voice Mail Record key (code 17).
- In *Program 1704 - Voice Mail Record Key* (page 446), make sure a DSS Console key is not assigned as a Voice Mail Record key (code 17).
- In *Program 0101 - Conversation Record* (page 365), enter Y to enable Conversation Record in an extension's Class of Service.
- In *Program 1801 - Extension Class of Service Assignment* (page 450), assign Class of Service to extensions.

Step-by-step guide for setting up Voice Mail
(Page 4 of 4)

Step 11: Should extension have access to a Message Center?

If yes

- If you want the Message Center key on the keyset:
  In *Program 1701 - Message Center Key* (page 439), assign a keyset programmable key as a Message Center key (code 24). You must also enter the Message Center mailbox number (300-331).
- If you want the Message Center key on the DSS Console:
  In *Program 1704 - Message Center Key* (page 447), assign a DSS Console key as a Message Center key (code 24). You must also enter the Mesage Center mailbox number (300-331).

If no

- In *Program 1701 - Message Center Key* (page 439), make sure a keyset key is not assigned as a Message Center key (code 24).
- In *Program 1704 - Message Center Key* (page 447), make sure a DSS Console key is not assigned as a Message Center key (code 22).

Programming List

Program 0101 - Conversation Record (page 365)
Enter Y to enable Conversation Record in an extension's Class of Service. If enabled, the user can press either their Conversation Record key or the RECORD soft key to initiate recording. If disabled (N), the user cannot record conversations into their mailbox.

Program 0201 - Voice Mail Installed (page 368)
Enter Y to enable Voice Mail.

Program 0201 - Voice Mail Master Extension Number (page 368)
Enter the number of the Voice Mail master extension (e.g., 700).

Program 0401 - DIL No Answer (page 376)
A call rings the Voice Mail overflow destination for this interval before diverting to Key Ring.

Program 0401 - ACD/UCD Overflow (page 377)
When all Voice Mail ports are busy, a call rings the overflow destination after this interval.

Program 0510 - Group Number (page 402)

Program 0510 - Hunt Group Master Number (page 402)
Select an available UCD Hunt Group and assign the master number (100-899, excluding trunk extension numbers 401-416).

Program 0510 - Overflow Destination (page 402)
Assign the Voice Mail overflow destination. The destination can be an extension, Ring Group Master Number, or UCD Group Master Number

Program 1003 - Direct Termination (Day) (page 426)
To have the Voice Mail Automated Attendant answer the trunk in the day or at night, assign the Voice Mail master number (e.g., 700) as the day termination.

Program 1003 - Direct Termination (Night) (page 426)
To have the Voice Mail Automated Attendant answer the trunk at night (if it has a different termination in the day), assign the Voice Mail Master number (e.g., 700) as the night termination. If the day termination above is the Voice Mail master, the system ignores the assignment in this program.

Program 1701 - Voice Mail Record Key (page 438)
Assign a programmable key on an extension as a Voice Mail Record key (code 17).

Program 1701 - Message Center Key (page 439)
Assign a programmable key as a Voice Mail Message Center key (code 24). The option is the extension number assigned as the Message Center (300-331).

Program 1704 - Voice Mail Record Key (page 446)
Assign a programmable key on an extension as a Voice Mail Record key (code 17).

Program 1704 - Message Center Key (page 447)
Assign a programmable key as a Voice Mail Message Center key (code 24). The option is the extension number assigned as the Message Center (300-331).

Program 1801 - Extension Circuit Type (page 449)
Enter 15 for each Voice Mail analog port connected to an ASTU PCB.
Enter 21 for each Voice Mail analog port connected to a 2-OPX Module.

Program 1801 - Extension Class of Service Assignment (page 450)
Assign Class of Service to extensions.

Program 1802 - Voice Mail Port (page 457)
Enter Y for each analog extension connected to Voice Mail.

Program 1807 - Hunt Type (page 469)
For each extension designated as a Voice Mail port in **Program 1802 - Voice Mail Port** (page 457), enter hunt type 05 (for UCD hunting).

Program 1807 - Hunt Master Number (page 470)
Enter the extension hunting group master number created for Voice Mail in **Program 0510 - Hunt Group Master Number** (page 402).

Other Related Features

Attendant Position (page 24)

- TRF transfers to the attendant from the Voice Mail Automated Attendant flash the Operator Call key and the Ring Indicator lamp. The call does not flash a line/loop key. (Note that Ringing Line Preference will not pick up a call ringing the attendant's Call Queue key.)
- UTRF transfers to the attendant from the Voice Mail Automated Attendant flash the trunk's line/loop key and the Ring Indicator lamp.

Call Forwarding (page 43)
You can forward calls Voice Mail.

Direct Inward Line (page 88)

- The Voice Mail Automated Attendant will answer a DIL terminated to the Voice Mail Master Number.
- If a DIL is terminated to the Voice Mail master number, a System Mode key (code 18 + the Voice Mail number) controls the night mode status of the DIL.

Direct Station Selection (DSS) Console (page 98)
A DSS Console can have Voice Mail Record and Message Center keys.

Extension Hunting (page 121)
For Terminal and Circular Hunting, unsupervised transfers (UTRF) from the Voice Mail Automated Attendant route like trunk calls. Supervised transfers (TRF) from the Voice Mail Automated Attendant route like Intercom calls. In either case, unanswered calls eventually route the initially called extension's mailbox.

Message Waiting (page 187)
A system can have either Voice Mail or Message Waiting activated — not both.

Ringdown Extension (page 249)
If the Ringdown destination is the Voice Mail master number, the Ringdown Extension user hears the Voice Mail main greeting ("*Please enter your mailbox number*") after the call connects.

Feature Operation

Calling Your Mailbox

To call your mailbox:

Your Voice Mail key flashes fast when you have new messages in your mailbox..

1. Press **ICM**.
   Dial tone.
   ICM and **SPK** on.
2. Press **MW**.
   OR
   Dial Voice Mail master number (e.g., 700) followed by your mailbox number.
   Your mailbox number is normally the same as your extension number. You may optionally dial a co-worker's mailbox – or use this procedure to call your mailbox from a co-worker's phone.
3. If requested by Voice Mail, enter your security code.
   Your MW LED goes out.

Leaving a Message

To leave a message in a mailbox of an unanswered extension:

The extension you call can be busy, in DND or unanswered.

1. Press **MW**.
   The Voice Mail system will prompt you to leave a message.

Forwarding Calls to your Mailbox

To activate or cancel Call Forwarding:

1. Press **ICM**.
   Dial tone.
   ICM and **SPK** on.
2. Dial ***3**.
   Dial tone stops.
   ICM and **SPK** on.
3. Dial Call Forwarding type:
   0 = Cancel forwarding
   2 = Busy/No Answer
   4 = Immediate
   6 = No answer
4. Press **MW**.
5. Press **SPK** to hang up.
   Your DND key is on while our calls are forwarded.

Transferring Calls to a Mailbox

To Transfer your active call to a mailbox:

Method A

1. Press **ICM**.

   Dial tone.
   ICM and **SPK** on.
2. Press **MW** and dial the number of the mailbox to receive the Transfer (e.g., 301 for extension 301).
   This number can be your mailbox number (if you're away from your desk) or a co-worker's mailbox number.
   If you want to Transfer the call to the Voice Mail Automated Attendant, dial the Voice Mail master number in stead of pressing MW and dialing an extension number.
3. Press **SPK** to hang up.
   Voice Mail will prompt your caller to leave a message in the mailbox you selected.

Method B

1. Press **ICM**.

   Dial tone.
   ICM and **SPK** on.
2. Press DSS key for co-worker's extension + **MW**.
3. Press **SPK** to hang up.
   Voice Mail will prompt your caller to leave a message in the mailbox you selected.

Method C

1. Press keyset or DSS Console Hotline key.

   Dial tone.
   ICM and **SPK** on.
2. Press **MW**.
3. Press **SPK** to hang up.
   Voice Mail will prompt your caller to leave a message in the mailbox you selected.

Recording your call

To record your active call in your mailbox:

Only one party on a call can use Conversation Record at any one time. This includes Intercom calls and Conference calls.

1. Press Voice Mail Record key.
   The key lights green while the system calls your mailbox. Once recording begins, the key flashes fast you and your caller hear the voice prompt "Recording."
   You can also have a Record key on your DSS Console. It lights red while the system calls your mailbox and flashes fast once recording begins.

Personal Answering Machine Emulation

To activate Answering Machine Emulation:

1. Press **ICM**.

   Dial tone.
   ICM and **SPK** on.

2. Dial ***3**.

Dial tone stops.
ICM and **SPK** on.

3. Dial **7**.
4. Dial Answering Machine Emulation option (2 or hang up to forward all calls, 7 to forward just trunk calls).
5. Press **SPK** to hang up.

To cancel Answering Machine Emulation:

1. Press **ICM**.

Dial tone.
ICM and **SPK** on.

2. Dial ***30**.

Dial tone.
ICM and **SPK** on.

3. Press **SPK** to hang up.

When Answering Machine Emulation broadcasts your caller's message, you can:

- Do nothing to have the caller's message automatically recorded in your mailbox,
- Lift the handset to intercept the call and speak to your caller.

Checking Your Messages

To check your messages:

1. Press **MW**.

   You see: Number of MSG = n (where n is the number of new messages in your mailbox).

Using the Message Center

The Message Center key flashes fast (green) when there are new messages not listened to in the Message Center mailbox..

1. Press **SPK** or lift handset.
2. Press the Message Center key.
3. If requested by Voice Mail, enter the security code for the Message Center mailbox.

   Your MW LED goes out.

Description

LCCPU 01.00.00 | Available.

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 Converence 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 (trunks and/or extensions)	8

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

Conditions

None

Default Setting

Disabled

Programming List

Program 1802 - Off-Hook Signaling for Intercom Calls (page 455)
Enter 3 for each extension that should be able to receive Voice Over.

Other Related Features

Call Coverage Keys (page 40)
An extension can Voice Over after calling a co-worker by pressing their Call Coverage key.
Conference (page 79)
An extension user cannot Voice Over to a co-worker busy on a Conference call.
Direct Station Selection (DSS) (page 95)
An extension can Voice Over after using Direct Station Selection to call a co-worker.
Headset Compatibility (page 154)
An extension user cannot Voice Over to a co-worker in the headset mode.
Hotline (page 160)
An extension cannot Voice Over after calling a co-worker by pressing their Hotline key.
Intercom (page 165)
An extension user can Voice Over to a co-worker busy on an Intercom call.
Message Waiting (page 187)
An extension user cannot leave a Message Waiting after using Voice Over.
Off-Hook Signaling (page 205)
When a user is busy on a call, Off-Hook Signaling indicates that another caller is trying to get through.
Single Line Telephones (page 260)
An SLT can initiate a Voice Over but cannot receive a Voice Over.
Speed Dial (page 263)
An extension user can Voice Over after calling a co-worker by using Personal Speed Dial.
Transfer (page 324)
An extension user can Voice Over after making a Screened Transfer and hearing busy/ring tone.

Feature Operation

To initiate a Voice Over to a busy extension:

You can only leave a Voice Over if you hear busy/ring tone.

1. Dial **9**.

	Two beeps, then you can speak with your co-worker.
	N/A

To respond to a Voice Over alert tone to your extension:

	Two beeps while on a handset call.
	N/A.

1. Press and hold **MIC**.

Release MIC to talk to your initial caller. You can repeat this procedure as long as the Voice Over initiator doesn't hang up.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

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

A keyset user can press VOL ▲ and VOL ▼ to adjust the volume of the following features while they are active:

- Incoming ring[1]
- Paging[1]
- Background Music[1]
- Handsfree speaker and incoming voice announcements broadcast through your telephone speaker[1]
- Handset/headset receiver volume[1]
- Off Hook Ringing
- Incoming Voice Over Announcement

[1]These features retain the volume levels set by the keyset user.

There are six steps in the Volume Control adjustment range. This makes it easier for the keyset user to set up just the right volume levels.

Conditions

None

Default Setting

Enabled

Programming List

None

Other Related Features

Alphanumeric Display (page 19)
While the telephone is idle, pressing VOL ▲ and VOL ▼ adjusts the contrast of the telephone display.

Call Waiting / Camp-On (page 51)
The extension user cannot adjust the volume of incoming Camp On tone.

Intercom (page 165)
The default Intercom (station-to-station) gain is 0 dB. While on an Intercom call, use VOL ▲ and VOL ▼ to change this setting.

Feature Operation

To adjust the volume of a feature while it is active:

While your keyset is active, press VOL ▲ and VOL ▼ adjusts the display contrast.

1. Press VOL ▲ and VOL ▼.

Description

LCCPU 01.00.00 | Available.

The system is fully Y2K (Year 2000) compliant.

The system provides Year 2000 Compliance. The change of the date from one century to the next is handled by the system software and is no different than the change from one year to the next. The day following 12/31/99 will be 01/01/00. The system will process the leap year correctly and will not require an upgrade or reprogramming. In addition, the SMDR report will properly show the years in the 21st century.

Conditions

None

Default Setting

Year 2000 Compliance always enabled.

Programming List

None

Other Related Features

Station Message Detail Recording (page 277)
The SMDR report displays four digits for the year (i.e., 2000, 2001).

Time and Date (page 312)
The system is fully Y2K (year 2000) compliant. The year always displays as four digits and the system correctly recognizes leap years.

Feature Operation

None

Year 2000 Compliance

Chapter 2
Programming

Before You Start Programming

Before Reading This Section

This section provides you with detailed information about the system programs. By changing a program, you change the way the feature associated with that program works. In this section, you find out about each program, the features that the program affects and how to enter the program data into system memory.

Do not start customizing your system without first reading Section 1, Features.

When you want to customize a feature, find it in Section 1 and learn about it. (If you have trouble finding the feature, try cross-referencing it in the Index at the back of this book.) Section 1 will tell you what programs you have to change to get the operation you want. Then, look the program up in this section if you have any questions about how to enter the data.

How to Use This Section

This section lists each program in numerical order. For example, Program 0101 is at the beginning of the section and Program 9905 is at the end. The information on each program is subdivided into the following headings:

Description

Description tells what the program is. Along with the Description are the *Conditions* which describe any limits or special considerations that may apply to the program. get an overview of the feature. For the Default Settings of each programmable option, refer to the information provided with each program. When you first install the system, it uses the Default Setting for all programs.

In each program description there are is a *Software History* icon which summarizes how the program works with different system software levels:

This is the *Software History* icon. Since Nitsuko America is constantly enhancing your system, all options may not be available in all software levels. Read this text to find out the specifics.

Telephone Programming Instructions

Telephone Programming Instructions shows you how to enter the program's data into system memory. For example:

1. Enter the programming mode.
2. 0101 + HOLD

```
0101:CLASS OF SERVIC
COS NUM?XX
```

tells you to enter the programming mode, dial 0101 from the telephone dial pad and then press the HOLD key. After you do, you'll see the message "COS NUM?xx" on the telephone display. To learn how to enter the programming mode, see *How to Enter the Programming Mode* below.

How to Enter the Programming Mode

To enter the programming mode:

1. Go to any working display telephone.
   In a newly installed system, use extension 300 (port 1).
2. Do not lift the handset.
3. Press **ICM**.
4. # * # *

```
LCCPU   VER nn.nn.nn
Enter Password:
```

5. Dial the system password + **HOLD**
   Refer to the following table for the default system passwords.

Table 15: Password Levels

Password Level	Password	Level
System Administrator 1	0000	1
System Administrator 2	9999	2
Installer	372000	3

To change the passwords, use Program 9905 - Password on page 478.

```
USER: nnn
ENTER PROGRAM?
```

Logging On with this Password:	Gives you access to these programs:
System Administrator 1 (level 1) Password = 0000	**Program 0302 - System Identification** (page 372) **Program 1101 - System Speed Dial Numbers** (page 431)

System Administrator 2 (level 1) Password = 9999	**Program 0302 - System Identification** (page 372) **Program 0801 - Selectable Display Messages** (page 414) **Program 1101 - System Speed Dial Numbers** (page 431) **Program 1701 - Programmable Function Key Assignments** (page 436) **Program 1702 - Personal Speed Dial** (page 441) **Program 1703 - DSS Key Assignment** (page 443)
Installer (level 3) Password - 372000	All

How to Exit the Programming Mode

To exit the programming mode:

USER: nnn
ENTER PROGRAM?

1. Press and release the hookswitch.
   OR
   Press **SPK**.
   The system automatically stores your entries in Random Access Memory (RAM).

Using Keys to Move Around in the Programs

Once you enter the programming mode, use the keys in the following chart to enter data, edit data and move around in the menus.

Table 16: Keys for Entering Data

Use this key:	When you want to:
0-9, # and *	Enter data into the program.
HOLD	Complete the programming step you just made (like pressing **Enter** on a PC keyboard). When a program entry displays, press **HOLD** to accept the entry (i.e., bypass the entry without changing it).
CONF	Complete the programming step you just made (like pressing **Enter** on a PC keyboard) and back up one step in the program.
LND	Delete the entry to the left (like pressing **Backspace** on a PC keyboard. To delete an entire name entry (without backspacing over each letter), just reenter the name without pressing **LND** first.
CLEAR	Erase the entire command line you just entered and undefine the entry.
CHECK	Erase the entry you just made and replace it with the prior stored entry.

Table 16: Keys for Entering Data

Use this key:	When you want to:
VOL ▲	Scroll forward through a list of entries in a program. If you enter data and then press this key, the system accepts the data before scrolling forward to the next entry.
VOL ▼	Scroll backward through a list of entries in a program. If you enter data and then press this key, the system accepts the data before scrolling backward to the previous entry.
ICM	Enable the scroll mode. When you press this key and it lights, you can then press **VOL ▲** and **VOL ▼** to scroll through the options. To choose the displayed value, press **HOLD**.

Connecting a PC or Printer

Information to be provided.

Programming Names and Text Messages

Several programs reference require you to enter text. Use the following chart when entering and editing text.

Table 17: Keys for Entering Names

Keys for Entering Names					
Press this key:	**Then one of these keys to enter the character in the white cell:**				
	1	**2**	**3**	**4**	**#**
1	**&**				**1**
2	**A**	**B**	**C**		**2**
3	**D**	**E**	**F**		**3**
4	**G**	**H**	**I**		**4**
5	**J**	**K**	**L**		**5**
6	**M**	**N**	**O**		**6**
7	**P**	**Q**	**R**	**S**	**7**
8	**T**	**U**	**V**		**8**
9	**W**	**X**	**Y**	**Z**	**9**
0	**SPACE**	**:**			**0**
*****					*****
#					**#**

To enter characters in lower case (e.g., **e** instead of **E**), press **MW** before pressing the key in the first shaded column. Use **LND** to backspace over (erase) any characters you want to correct.

Description

LCCPU 01.00.00 | Available.

Use **Program 0101- Class of Service Programming** to set up the Class of Service options. The system has 15 Classes of Service, numbered 1-15. You assign Classes of Service to extensions in *Program 1801: Extension Class of Service Assignment* on page 450. Many extensions can have the same Class of Service. Class of Service 1 is normally reserved for the attendant (port 1).

Conditions

None

Table 18: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Off-Premise Call Forward	Use this option to enable or disable an extension's ability to use Off-Premise Call Forwarding. • See *Call Forwarding, Off-Premise* on page 46 for more.	**OFF PREM FWRD?** Y = Enable N = Disable	N
Barge-In (Intrusion)	Use this option to enable or disable an extension's ability to Barge In on a co-worker. • See *Barge In (Intrusion)* on page 37 for more.	**BREAK-IN?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Camp-On to Busy Extension	Use this option to enable or disable an extension's ability to Camp-On to a busy extension. Enter Y to allow the extension to Camp-On to a busy co-worker. Enter N to prevent the extension from Camping-On to a busy co-worker. Entering N also automatically converts an extension's Camp On to Callback. • See *Call Waiting / Camp-On* on page 51 for more. • See *Callback* on page 54 for more.	**CAMP-ON BUSY EXT?** Y = Enable N = Disable	Y
Internal Call Forwarding	Use this option to enable or disable an extension's ability to use Internal Call Forwarding. • See *Alternate Attendant* on page 21 for more. • See *Call Forwarding* on page 43 for more.	**CALL FORWARDING?** Y = Enable N = Disable	Y
System Speed Dial Access	Use this option to enable or disable an extension's ability to access System Speed Dial. • See *System Speed Dial* on page 263 for more.	**SYS SPDL ACCESS?** Y = Enable N = Disable	Y

Table 18: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Extended Ring	Use this option to enable or disable Extended Ringing at the extension. • See *Extended Ringing* on page 119 for more.	**EXTENDED RING?** Y = Enabled N = Disable	N
Privacy	Use this option to enable or disable Privacy at the extension. • See *Privacy* on page 226 for more.	**PRIVACY**? Y = Enable N = Disable	N
Trunk (Line) Queuing Priority	Use this option to enable or disable Trunk (Line) Queuing Priority at the extension. If more than one extension with Priority is queued on a busy trunk, the system services the Priority extensions on a first-queued, first-served basis. • See *Trunk Queuing Priority* on page 332 for more.	**LINE Q PRIORITY?** Y = Enable N = Disable	N
Forced Trunk Disconnect	Use this option to enable or disable an extension's ability to use Forced Trunk Disconnect. • See *Forced Trunk Disconnect* on page 137 for more.	**FORCE DISCONNECT?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Camp-On to Busy Line	Use this option to enable or disable an extension's ability to Camp-On to a busy trunk. • See *Trunk (Line) Queuing / Trunk Callback* on page 332 for more.	**CAMP ON TO LINES?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Initiate All Call Page	Use this option to enable or disable an extension's ability to make an All Call Paging announcement. • See *Paging* on page 214 for more.	**PAGE ALL CALL?** Y = Enable N = Disable	Y
Access Page Zone 1	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 1. • See *Paging* on page 214 for more.	**PAGE ZONE 1?** Y = Enable N = Disable	Y
Access Page Zone 2	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 2. • See *Paging* on page 214 for more.	**PAGE ZONE 2?** Y = Enable N = Disable	Y
Access Page Zone 3	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 3. • See *Paging* on page 214 for more.	**PAGE ZONE 3?** Y = Enable N = Disable	Y
Access Page Zone 4	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 4. • See *Paging* on page 214 for more.	**PAGE ZONE 4?** Y = Enable N = Disable	Y

Table 18: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Access Page Zone 5	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 5. • See *Paging* on page 214 for more.	**PAGE ZONE 5?** Y = Enable N = Disable	Y
Access Page Zone 6	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 6. • See *Paging* on page 214 for more.	**PAGE ZONE 6?** Y = Enable N = Disable	Y
Access Page Zone 7	Use this option to enable or disable an extension's ability to make a Paging announcement into zone 7. • See *Paging* on page 214 for more.	**PAGE ZONE 7?** Y = Enable N = Disable	Y
Silent Monitor	Use this option to enable or disable an extension's ability to use Silent Monitor. • See *Monitor / Silent Monitor* on page 192 for more.	**SILENT MONITOR?** Y = Enable N = Disable	N
Flash for Single Line Sets	• Not currently supported.	**FLASH FOR SLT?** Y = Enable N = Disable	N
ACD Supervisor	• This option is currently not implemented.	**ACD SUPERVISOR?** Y = Enable N = Disable	N
Single Ring for Single Line Sets	• Use this option to enable or disable single ring for single line telephones. This option only apples to single line telephones. See *Central Office Calls, Answering* on page 58 for more.	**SINGLE RING?** Y = Enable N = Disable	N
View System Alarms	Use this option to enable or disable an extension's ability to view the system alarms. • See *Attendant Position* on page 24 for more.	**VIEW SYS ALARMS?** Y = Enable N = Disable	COS 1 = N COS 2-15 = N
Automatic Hold	Use this option to enable or disable Automatic Hold at an extension. • See *Hold* on page 156 for more.	**AUTO HOLD?** Y = Enable N = Disable	COS 1 = N COS 2-15 = N
Activate Night Mode	Use this option to enable or disable an extension's ability to activate Night Service. • See *Night Service / Night Ring* on page 200 for more.	**ACTIVATE NITES?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Direct Trunk Access	Use this option to enable or disable an extension's ability to use Direct Trunk Access. Note that enabling Direct Trunk Access allows the user to bypass Toll Restriction. • See *Central Office Calls, Placing* on page 63 for more.	**DIRECT TRK ACCES?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N

Table 18: Program 0101 - Class of Service Options

Option	Description	Entries	Default
Remote Call Forwarding / Alternate Attendant	• This option is currently not implemented.	**REMOTE FWRD?** Y = Enable N = Disable	COS 1 = Y COS 2-15 = N
Soft Keys	Use this option to enable or disable a display set's Interactive Soft Keys. • See See *Interactive Soft Keys* on page 163 for more.	**SOFTKEYS** Y = Enable N = Disable	Y
Conversation Record	Use this option to enable or disable an extension's ability to record conversations into their Voice Mail mailbox. If enabled, the user can press either their Conversation Record key or RECORD soft key to initiate recording. • See *Voice Mail* on page 340 for more.	**RECORD CONV** Y = Enable N = Disable	N

Telephone Programming Instructions

1. Enter the programming mode.
2. 0101 + **HOLD**

   0101:CLASS OF SERVIC
   COS NUM?XX
3. Dial the Class of Service you want to program (1-15) + **HOLD**
4. Press **VOL ▲** or **VOL ▼** to scroll to the option you want to change + **HOLD**
5. Enter Y or N for displayed option + **HOLD**
6. Press **VOL ▲** or **VOL ▼** to scroll to another option.
   OR
   Press **HOLD** to return to step 3 and select another Class of Service.
   OR
   Press **HOLD** twice to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **Program 0201- Tenant Option Programming** to set up various options for Tenant Groups.

Conditions

None

Table 19: Program 0201 - Tenant Options

Option	Description	Entries	Default
Call Waiting (Camp-On) Tone	Use this option to enable or disable system wide Call Waiting Tones (double beeps). • See *Call Waiting / Camp-On* on page 51 for more.	**CALL WAIT?** Y = Enable N = Disable	Y
Handsfree Reply on Intercom Calls	Use this option to enable or disable system-wide Handsfree Reply for voice-announced Intercom calls. If you enable this option, you must also enable *Voice-Announced Intercom Calls* below. • See *Handsfree and Handsfree Answer-back* on page 150 for more.	**HF REPLY ON ICM?** Y = Enable N = Disable	Y
Voice-Announced Intercom Calls	Use this option to enable or disable system-wide voice-announced Intercom calls. You must enable this option if you have *Handsfree Reply on Intercom Calls* enabled above. If you disable this option, extension users can only receive ringing Intercom calls. • See *Handsfree and Handsfree Answer-back* on page 150 for more.	**VOICE ANN ICM?** Y = Enable N = Disable	Y
Automatic Handsfree	Use this option to enable or disable Automatic Handsfree system-wide. • See *Automatic Handsfree* on page 30 for more. • See *Handsfree and Handsfree Answer-back* on page 150 for more.	**AUTO HANDSFREE?** Y = Enable N = Disable	Y
Music on Hold	Use this option to enable or disable Music on Hold system wide. • See *Music On Hold* on page 195 for more.	**ENBLE MOH?** Y = Enable N = Disable	Y
MOH on Transfer	Use this option to enable or disable MOH for transferred calls system-wide. If enabled, transferred callers hear Music on Hold while waiting. If disabled, transferred callers hear ringback. • See *Transfer* on page 324 for more.	**MOH ON TRANSFER?** Y = Enable N = Disable	Y

Table 19: Program 0201 - Tenant Options

Option	Description	Entries	Default
Background Music	Use this option to enable or disable Background Music system-wide. • See *Background Music* on page 35 for more.	**ENBLE BGM?** Y = Enable N = Disable	Y
Voice Mail Installed	Enable this option if you have an NVM-series Voice Mail system installed. Disable this option if you don't have Voice Mail installed. If you enable this option, be sure to specify a Voice Mail master extension number in the option below. • See *Voice Mail* on page 340 for more.	**V-MAIL INSTALLED?** Y = Enable N = Disable	N
Voice Mail Master Extension Number	Use this option to specify the Voice Mail master extension number. Be sure to make an entry for this item if you enabled the *Voice Mail Installed* option above. The entry you make must be within the system's number plan. • See *Voice Mail* on page 340 for more.	**V-MAIL MST EXT?** nnn (extension number)	000

Enable Dial-out of # in a Speed Dial Number	Use this option to control how the system handles the dialing of the # digit when it is stored in a Speed Dial number. If enabled, the system outdials the # as part of the number. If disabled, the system bypasses the # without outdialing it. You may want to disable this option if the system is installed behind a PBX.
	• See *Speed Dial* on page 263 for more.
		ENABLE # IN SPDL?
		Y = Enable
		N = Disable
			N

Telephone Programming Instructions

1. Enter the programming mode.
2. 0201 + **HOLD**

   0101:TENANT OPTIONS
   CALL WAIT?XX
3. Enter Y or N for the displayed option.

   OR

   Press **VOL ▲** or **VOL ▼** to scroll to the option you want to change + **HOLD**
4. Enter Y or N for displayed option + **HOLD**
5. Press **VOL ▲** or **VOL ▼** to scroll to another option.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **Program 0301- System Options** to set up various options system-wide options.

Conditions

None

Table 20: Program 0301 - System Options

Option	Description	Entries	Default
Number of Operators	Use this option to set the number of operators (attendants) in the system. The system can have up to four operators. • See *Attendant Position* on page 24 for more.	**NUM OF OPERATORS?** 1-4	01
Operator 1 Extension	Use this option to assign the 1st operator's extension number. • See *Attendant Position* on page 24 for more.	**OPERATOR 1 EXT?** Enter any valid extension number	300
Operator 2 Extension	Use this option to assign the 2nd operator's extension number. Before assigning this option, be sure you have entered the correct number in the *Number of Operators* option. • See *Attendant Position* on page 24 for more.	**OPERATOR 2 EXT?** Enter any valid extension number	Undefined
Operator 3 Extension	Use this option to assign the 3rd operator's extension number. Before assigning this option, be sure you have entered the correct number in the *Number of Operators* option. • See *Attendant Position* on page 24 for more.	**OPERATOR 3 EXT?** Enter any valid extension number	Undefined
Operator 4 Extension	Use this option to assign the 4th operator's extension number. Before assigning this option, be sure you have entered the correct number in the *Number of Operators* option. • See *Attendant Position* on page 24 for more.	**OPERATOR 4 EXT?** Enter any valid extension number	Undefined
Number of Digits in a System Speed Dial Code	Use the option to assign the number of digits the system uses to designate System Speed Dial bins (2, 3 or 4). With 2-digit bins, the system has 10 bins numbered 20-29. With 3-digit bins, the system has 100 bins numbered 200-299. With 4-digit bins, the system as 1000 bins numbered 2000-2999. • See *Speed Dial* on page 263 for more.	**SYS SPDL CODE DGTS?** 2 = 2-digit (20-29) 3 = 3-digit (200-299) 4 = 4-digit (2000-2999)	3

Table 20: Program 0301 - System Options

Option	Description	Entries	Default
CPU Baud Rate	Use this option to set the speed of the LCCPU PCB RS-232-C port. You may want to connect a PC or SMDR printer to this port. • See *Connecting a PC or Printer* on page 360 for more. • See *Station Message Detail Recording* on page 277 for more.	**LCCPU BAUD RATE?** 4 = 9600	04
SMDR Port	Use this option to specify the port the system uses for SMDR. • See *Connecting a PC or Printer* on page 360 for more. • See *Station Message Detail Recording* on page 277 for more.	**SMDR PORT?** 0 = NONE 1 = CPU Serial Port	0
Print SMDR Header	Use this option to include or exclude the header from the SMDR report. • See *Connecting a PC or Printer* on page 360 for more. • See *Station Message Detail Recording* on page 277 for more.	**PRINT SMDR HEADR?** Y = Enable header N = Disable header	Y

Telephone Programming Instructions

1. Enter the programming mode.
2. 0301 + **HOLD**

   0301:SYSTEM OPTIONS
   NUM OF OPERATORS?
3. Enter Y or N for the displayed option.

   OR

   Press **VOL ▲** or **VOL ▼** to scroll to the option you want to change + **HOLD**
4. Enter Y or N for displayed option + **HOLD**
5. Press **VOL ▲** or **VOL ▼** to scroll to another option.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **Program 0302- System Identification** enter information about the system and to set the Time and Date. This information is used in various system reports.

Conditions

None

Table 21: Program 0302 - System Identification Options

Option	Description	Entries	Default
Company Name	Use this option to enter your company's name. The name prints in system reports. • See *System Identification* on page 285 for more.	**NAME?** 24 characters max (For instructions on entering names. see *Keys for Entering Names* on page 361.)	No entry

Company Phone Number	Use this option to enter your company's phone number. This is the number the system will call to report a problem (***not*** the system's number). You must enter a trunk access code (9, 9X or #9XX) before the number. For more information about trunk access codes, see *Central Office Calls, Placing* on page 63.
	• See *System Identification* on page 285 for more.
		PHONE?
		24 digits max, using:
		0-9, # and *
		P = Pause
		T = Tone Detection
		F = Flash
		D = Delay
			No entry

System Type	This option displays your system's type. It shows DS-2000. You cannot edit this option. • See *System Identification* on page 285 for more.	**SYS TYP:** Automatically displayed.	DS-2000
Software Version	This option displays your system's software level. It is for viewing only. You cannot edit this option. • See *System Identification* on page 285 for more.	**S/W VER:** Automatically displayed.	Depends on software level
Time	Use this option to set the system time. Enter data using the 24-hour format HH:MM:SS. For example, 13:00:00 = 1:00 PM. • See *Time and Date* on page 312 for more.	**TIME?** HH:MM:SS HH = Hours (0-24) MM = Minutes (0-59) SSS = Seconds Enter in 24-hour format	Current time

Table 21: Program 0302 - System Identification Options

Option	Description	Entries	Default
Date	Use this option to enter the system Time and Date. The system shows Time and Date on telephone displays and in various system reports. • See *Time and Date* on page 312 for more.	**DATE?** MM-DD-YY MM = Month (1-12) DD = Day (1-31) YYYY = Year (e.g., 2000)	Current date

Telephone Programming Instructions

1. Enter the programming mode.
2. 0302 + **HOLD**

   0302:SYSTEM ID
   NAME?
3. Enter the system name (up to 14 characters) + **VOL ▲**.
   (Refer to *Programming Names and Text Messages* on page 361 if you need help in entering names)

   OR

   Press **VOL ▲** to scroll to the next option.

   0302:SYSTEM ID
   PHONE?

   After pressing **VOL ▲** *to scroll to the next entry, you can press* **CONF** *to exit the program.*
4. Enter the site phone number (up to 14 digits) + **VOL ▲**.

   OR

   Press **VOL ▲** to scroll to the next option.

   0302:SYSTEM ID
   SYS TYP:DS-1000

   You cannot edit this entry.
5. Press **VOL ▲** to scroll to the next option.

   0302:SYSTEM ID
   S/W VER:

   You cannot edit this entry.
6. Press **VOL ▲** to scroll to the next option.

   0302:SYSTEM ID
   TIME?
7. Enter the system time (HH:MM:SS in 24-hour format) + **VOL ▲**.

   OR

   Press **VOL ▲** to scroll to the next option.

   0302:SYSTEM ID
   DATE?:
8. Enter the system date (MM:DD:YYYY) + **VOL ▲**.

   OR

   Press **VOL ▲** to scroll to the next option.

OR

Press **CONF** to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 0401- System Timers** to enter the values for system-wide timers. ***Conditions***
None

Table 22: Program 0401 - System Timers

Option	Description	Entries	Default
Park Orbit	Use this timer to set how long a call stays in System Park Orbit before it recalls the extension that parked it. This timer if for orbits 60-67 only. The recall for orbits 68 and 69 is fixed at 5 minutes. • See *Park* on page 218 for more.	**PARK RECALL?** 1-9999 sec. 0 = Disabled	60 sec.
Modem Reserve	Use this timer to set how long the system reserves a modem, once requested by an extension user, from the modem pool before returning in to the pool. • See *Computer Telephony Integration* on page 78 for more. • See *System Diagnostics* on page 284 for more.	**MODEM RESERVE?** 1-9999 sec. 0 = Disabled	30 sec.
Transfer Recall	Use this timer to set how long a transferred call rings the destination extension before recalling the extension from which it was initially transferred. This option pertains to all idle extensions, as well as busy multibutton extensions. *Note that this timer does not control how long a transferred call rings a busy operator.* • See *Transfer* on page 324 for more.	**TRANSFER RECALL?** 1-9999 sec. 0 = Disabled	30 sec.
Intercom Inter-digit	When an extension user places a call, they must dial each succeeding digit within this interval. • See *Intercom* on page 165 for more. •	**ICM INTERDIGIT?** 1-9999 sec. 0 = Disabled	6 sec.
Meet-Me Conference	When a user initiates a Meet-Me Conference, the system waits this interval for the Paged party to join the call. • See *Meet-Me Conference* on page 184 for more.	**MEET ME CONF?** 1-9999 sec. 0 = Disabled	30 sec.

Table 22: Program 0401 - System Timers

Option	Description	Entries	Default
Dialing Pause	For Automatic Route Selection, the system waits this interval when it encounters a pause in an ARS Dial Treatment. • See *Automatic Route Selection* on page 34 for more. For Speed Dial, the system waits this interval when it encounters a pause in a Speed Dial bin. • See *Speed Dial* on page 263 for more.	**DIALING PAUSE?** 1-9999 sec. 0 = Disabled	1 sec.
Page Duration	Use this timer to set the maximum length of Page announcements. • See *Paging* on page 214 for more.	**PAGE DURATION?** 1-9999 sec. 0 = Disabled	30 sec.
Door Unlock	When a single line (2500 type) user hook-flashes while talking to a Door Box, the Door Box strike opens for this interval. • See *Door Box* on page 116 for more.	**DOOR UNLOCK?** 1-9999 sec. 0 = Disabled	30 sec.
DIL No Answer	This timer sets how long a DIL rings an idle extension before Key Ring occurs. Key Ring rings all extensions programmed to ring for that line. • See *Direct Inward Line* on page 88 for more.	**DIL NO ANSWER?** 1-9999 sec. 0 = Disabled	15 sec.
Trunk Revert	This timer sets how long Hold Recall rings the extension that placed the call on hold before Key Ring occurs. Key Ring rings all extensions programmed to ring for that line. • See *Hold* on page 156 for more. • See *Key Ring* on page 170 for more. This timer also sets how long a Transfer Recall rings the extension that initially transferred the call before Key Ring occurs. • See *Transfer* on page 324 for more.	**TRUNK REVERT?** 1-9999 sec. 0 = Disabled	15 sec.
Trunk Delay Ring	Use this timer to set how long the system waits before ringing an extension that has the Delayed Ringing option enabled. • See *Central Office Calls, Answering* on page 58 for more. • See *Delayed Ringing* on page 82 for more.	**TRK DELAY RING?** 1-9999 sec. 0 = Disabled	10 sec.
Trunk Overflow	• Information to be provided.	**TRUNK OVERFLOW?** 1-9999 sec. 0 = Disabled	20 sec.

Table 22: Program 0401 - System Timers

Option	Description	Entries	Default
Centrex Type Feature Key Delay	This timer sets how long the system waits when it finds a Centrex delay (i.e., D) programmed in a Centrex Feature Key. • See *PBX/Centrex Compatibility* on page 222 for more.	**CENTRX FTR DLY?** 1-9999 sec. 0 = Disabled	50 sec.
ACD/UCD Overflow	This timer sets when UCD overflow occurs. When all UCD agents are busy, a queued call rings for this interval and then overflows to the UCD Overflow destination. • See *Extension Hunting* on page 121 for more.	**ACD/UCD OVRFLOW?** 1-9999 sec. 0 = Disabled	60 sec
Number of Password Attempts	Use this option to set how many times the system allows a user to enter the incorrect programming password before locking them out. • See *System Programming List* on page 289 for more.	**PSWD ATTEMP NUM?**	3
Program Lockout Time	Once the system locks out a user, it will wait this interval before allowing the user to reenter the programming mode. • See *System Programming List* on page 289 for more.	**PROGRAM LOCKOUT?** 1-9999 sec. 0 = Disabled	10 sec.
Force Program Exit	If a telephone in the programming mode is inactive longer than this interval, the system automatically cancels the programming mode and makes the telephone idle. • See *System Programming List* on page 289 for more.	**FORCE PROG EXIT?** 1-9999 sec. 0 = Disabled	10 sec.

Telephone Programming Instructions

1. Enter the programming mode.
2. 0401 + **HOLD**

   0401:SYSTEM TIMERS
   PARK RECALL?
3. Enter data for the displayed timer + **HOLD**.

   OR

   Press **VOL ▲** or **VOL ▼** to scroll to the timer you want to change + **HOLD**
4. Enter data for the displayed timer + **HOLD**
5. Press **VOL ▲** or **VOL ▼** to scroll to another timer.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **Program 0402- Trunk Timers** to enter the values for trunk timers.***Conditions***
None

Table 23: Program 0402 - Trunk Timers

Option	Description	Entries	Default
Camp-On	• Information to be provided.	**CAMP ON?** 0-9999 sec.	60 sec.
Line Response	When the system fails to detect loop current on a trunk, it will wait this interval before marking the trunk as defective. Be sure the value you enter is compatible with the local telco. If you set this value too short, the system may mark properly functioning trunks as defective. If too long, defective trunks may be left in service. • See *System Timers, Trunks* on page 300 for more.	**LINE RESPONSE?** 4-1020 in 100 mS increments (e.g., 4 = 400 mS, 10 - 1000 mS)	100 (10 seconds)
Dial Tone Detect	When the system seizes a line to place a Speed Dial call, it waits this interval for dial tone before outdialing the call. The system requires that the first dial tone be at least.5 seconds long and the second dial tone to be at least 2.5 seconds long. Be sure the value you enter is compatible with the local telco. If you set this value too short, the system may not seize properly functioning trunks. If too long, there will be too long a delay before the system skips over a defective trunk. • See *Speed Dial* on page 263 for more. • See *System Timers, Trunks* on page 300 for more.	**DL TONE DETECT?** 0-9999 in 100 mS increments (e.g., 10 = 1 second, 100 = 10 seconds)	10 (1 second)

Table 23: Program 0402 - Trunk Timers

Option	Description	Entries	Default
PBX/Centrex Flash	Use this timer to set the Flash interval. When a user flashes a trunk, the system opens the trunk circuit for this interval. For accurate flash function, be sure to set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco may not always register the flash. If too long, inadvertent disconnects may occur. • See *Flash* on page 132 for more. • See *PBX/Centrex Compatibility* on page 222 for more. • See *System Timers, Trunks* on page 300 for more.	**FLASH PBX?** 16-4080 mS	800 mS
Flash Disconnect	• TBD	**FLASH DISC.?** 16-4080 mS	2496mS
Force Idle (Trunk Guard Time)	Use this timer to set the guard time for trunks. When the system disconnects a trunk (e.g., after a user hang up), the system keeps the line idle until this timer expires. The Trunk Guard Time helps prevent call collisions. If you set this interval too short, call collisions may occur. If too long, there will be unnecessary delays before you can use the trunk for a new call. • See *System Timers, Trunks* on page 300 for more.	**FORCE IDLE?** 10-9999 in 100 mS increments (e.g., 10 = 1 second)	25 (2.5 sec)
PBX Pause	Use this timer to set the delay that occurs after the system dials a PBX access code. After the system dials the code, it waits this interval before outdialing the rest of the number. If you set this interval too short, the PBX may not have enough time to set up the call and return dial tone. If too long, the PBX may disconnect the call. • See *PBX/Centrex Compatibility* on page 222 for more. • See *System Timers, Trunks* on page 300 for more.	**PBX PAUSE?** 0-9999 sec. 0 = No pause	0

Table 23: Program 0402 - Trunk Timers

Option	Description	Entries	Default
Minimum Ring Detection Timer	Use this timer to set the threshold for ring detection. If the ring signal is longer than this interval, the system interprets the signal as valid ringing. If the signal is equal to or shorter than this interval, the system ignores the ringing. Be sure the value you enter is compatible with the local telco. If you set this value too short, the system may detect line spikes and anomalies as ringing. If too long, the system may not properly interpret a valid ringing signal. • See *System Timers, Trunks* on page 300 for more.	**MIN RING DET?** 8-2040 mS	104 mS
DP Make Timer	Use this timer to set the duration of the Dial Pulse Make signal (i.e., relay closed). This is the "on" time in a Dial Pulse digit. Set this timer for compatibility with the connected telco or PBX/Centrex. Keep in mind that there are three components of a Dial Pulse digit: Make interval, Break interval and Interdigit interval. An improper setting may cause misdialing. • See *System Timers, Trunks* on page 300 for more.	**PULSE DIAL MAKE?** 4-1020 mS	40 mS
DP Break Timer	Use this timer to set the duration of the Dial Pulse Break signal (i.e., relay open). This is the "off" time in a Dial Pulse digit. Set this timer for compatability with the connected telco or PBX/Centrex. Keep in mind that there are three components of a Dial Pulse digit: Make interval, Break interval and Interdigit interval. An improper setting may cause misdialing. • See *System Timers, Trunks* on page 300 for more.	**PULSE DIAL BRK?** 4-1020 mS	60 mS
DP Interdigit Timer	Use this timer to set the duration of the Dial Pulse Interdigit signal (i.e., relay open time ***b****etween* each digit). Set this timer for compatability with the connected telco or PBX/Centrex. Keep in mind that there are three components of a Dial Pulse digit: Make interval, Break interval and Interdigit interval. An improper setting may cause misdialing. • See *System Timers, Trunks* on page 300 for more.	**PULSE INTRDIGIT?** 100-9999 mS	800 mS

Table 23: Program 0402 - Trunk Timers

Option	Description	Entries	Default
Manual DTMF Tone On	This timer sets the duration of DTMF digits for trunk calls manually dialed by an extension user. This is required because the system buffers the digits the user dials. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to properly detect the DTMF digit. If too long, outbound dialing is unnecessarily slowed down. • See *System Timers, Trunks* on page 300 for more.	**MAN DTMF ON?** 10-2550 mS	250 mS
Manual DTMF Tone Off	This timer sets the duration of the interval between DTMF digits for trunk calls manually dialed by an extension user. This is required because the system buffers the digits the user dials. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to set up to receive the next DTMF digit. If too long, outbound dialing is unnecessarily slowed down. • See *System Timers, Trunks* on page 300 for more.	**MANB DTMF OFF?** 10-2550 mS	100 mS
Speed Dial DTMF Tone On	This timer sets the duration of DTMF digits for Speed Dial trunk calls automatically dialed by the system. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to properly detect the DTMF digit. If too long, outbound dialing is unnecessarily slowed down. • See *Speed Dial* on page 263 for more. • See *System Timers, Trunks* on page 300 for more.	**SPDL DTMF ON?** 10-2550 mS	100 mS

Table 23: Program 0402 - Trunk Timers

Option	Description	Entries	Default
Speed Dial DTMF Tone Off	This timer sets the duration the quiet time between DTMF digits for Speed Dial trunk calls automatically dialed by the system. Set this timer for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the telco or PBX/Centrex may not be able to set up to receive the next DTMF digit. If too long, outbound dialing is unnecessarily slowed down. • See *Speed Dial* on page 263 for more. • See *System Timers, Trunks* on page 300 for more.	**SPDL DTMF ON?** 10-2550 mS	100 mS
Loop Current Detection Time	For loop start trunks, loop current must be present for this interval before the system seizes the trunk. Set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the system may inadvertently seize unstable trunks. If too long, the system may not properly seize a valid trunk. • See *System Timers, Trunks* on page 300 for more.	**LOOP CURRENT?** 4-1020 mS	800 mS
Codec Digitizing Method	Use this option to set the system's codec companding method type for the trunk. ***Be sure this option is always set to 0 (μ-law companding enabled).*** Do not set this option to 1 (A-law companding enabled). • See *System Timers, Trunks* on page 300 for more.	**CODEC A/D TYPE?** 0 = μ-law 1 = A-law	0 (μ-law)
Setting for International Rotary Disk	Set this option for compatibility with the type of rotary dial (500 type) telephone used. ***Be sure to always set this option to 0.*** • See *System Timers, Trunks* on page 300 for more.	**DP FOR INT'L?** 0 = US standard 1 = Norwegian 2 = Swedish	0 (US standard)

Table 23: Program 0402 - Trunk Timers

Option	Description	Entries	Default
Far End Disconnect	Use this timer to set the loop disconnect interval for trunk calls. If the system detects a loop current interruption longer than this interval it assumes the telco has disconnected the trunk. It then returns the trunk trunk to idle. Set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the system may inadvertently disconnect valid trunks. If too long, the system may leave trunks connected that it should tear down. • See *System Timers, Trunks* on page 300 for more.	**FAR END DISC.?** 4-1020 mS	300 mS
Minimum Single Ring Detection Timer	The system uses this timer to detect valid ringing signal from the connected telco or PBX. Valid single ring must be longer than this interval. • See *System Timers, Trunks* on page 300 for more.	**SNGL RG MIN DET?** 8-2040 mS	504 mS
Minimum Double Ring Detection Off Timer	The system uses this timer to detect valid double ring from the connected PBX. Valid double ring must be longer than this interval. • See *System Timers, Trunks* on page 300 for more.	**DBL RG MIN OFF?** 8-2040 mS	104 mS
Maximum Double Ring Detection Off Timer	The system uses this timer to detect valid double ring from the connected PBX. Valid double ring must be less than this interval. • See *System Timers, Trunks* on page 300 for more.	**DBL RG MAX OFF?** 8-2040 mS	304 mS
Ringing Signal End Detect Timer	If the ringing signal on a trunk call is interrupted for longer than this interval, the system assumes ringing has stopped and terminates the call. Set this option for compatibility with the connected telco or PBX Centrix. If this interval is set to short, valid ringing will be inadvertently cut off. If too long, the system will leave the call set up even after ringing has stopped. • See *System Timers, Trunks* on page 300 for more.	**SIGNAL STOP DET?** 64-16320 mS	6016 mS

Table 23: Program 0402 - Trunk Timers

Option	Description	Entries	Default
Caller ID Detection Timer	***Caller ID is currently not available. Do not change this timer from its default setting.*** The Caller ID Timer is the amount of time a system DSP is turned on, "listening" for Caller ID digits on a trunk. The listen mode starts 100 mS after the first ring burst and continues until the AC Impedance Timer times out. Only change this timer is you are having errors in the displayed Caller ID digits. • See *Caller ID* on page 57 for more. • See *System Timers, Trunks* on page 300 for more.	**CID DETECT** 64-16320 mS	3268 mS
Ground Start Timer	Before the system can start a ground start trunk, the telco's tip ground must be present for longer than this interval. Set this interval for compatibility with the connected telco or PBX/Centrex. If you set this interval too short, the system may inadvertently start a trunk it should not set up. If too long, the system may not start trunks that are functioning normally. • See *System Timers, Trunks* on page 300 for more.	**GROUNDING** 16-4080 mS	800 mS
Pause Timer	This timer sets the system pause interval. For example, if a user programs a pause into a Speed Dial bin, the system will wait this interval and then proceed with dialing the remaining digits in the bin. • See *System Timers, Trunks* on page 300 for more.	**PAUSE** 64-16320 mS	3008 mS
DP Mute Timer	Information to be provided. • See *System Timers, Trunks* on page 300 for more.	**DP MUTE** 4-1020 mS	8 mS
P.F. Recovery Detect Timer	When the ATRU PCB recovers from a power failure, it checks the power failure trunk (trunk 1) for loop current for the P.F. Recovery Detect interval. If loop current is detected, it assumes the Power Failure Telephone is still connected and does not tear down the call. If loop current is not detected, the ATRU PCB switches the trunk out of the power failure mode. • See *System Timers, Trunks* on page 300 for more.	**PF RECOVERY** 64-16320 mS	3008 mS

Telephone Programming Instructions

1. Enter the programming mode.
2. 0402 + **HOLD**

   0402:TRUNK TIMERS
   CAMP ON?
3. Enter data for the displayed timer + **HOLD**.

   OR

   Press **VOL ▲** or **VOL ▼** to scroll to the timer you want to change + **HOLD**
4. Enter data for the displayed timer + **HOLD**
5. Press **VOL ▲** or **VOL ▼** to scroll to another timer.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **Program 0403- Station Timers** to enter the values for station timers.

Conditions

None

Table 24: Program 0403 - Station Timers

Option	Description	Entries	Default
Hold Recall	Use this timer to set how long a call stays on Hold before it recalls the extension that initially placed it on Hold. • See *Hold* on page 156 for more.	**HOLD RECALL?** 0-9999 sec.	60 sec.
Exclusive Hold	Use this timer to set how long a call stays on Exclusive Hold before it recalls the extension that initially placed it on Exclusive Hold. • See *Hold* on page 156 for more.	**EX-HOLD RECALL?** 0-9999 sec.	90 sec.
Camp-On	• Information to be provided.	**CAMP-ON?** 0-9999 sec.	60 sec.
Call Forward Ring No Answer	When Call Forwarding Ring No Answer is enabled, this timer sets how long a forwarded call rings an unanswered extension before routing to the forwarding destination. In addition, use this timer to set how long a transferred call rings a busy operator extension before recalling the extension from which it was initially transferred. *Note that this timer does not control how long a transferred call rings any other busy extension.* This timer also sets how long a call will ring an idle UCD Hunting group member before cycling to the next member of the group. • See *Call Forwarding* on page 43 for more. • See *Extension Hunting* on page 121 for more.	**FWRD NO ANSWER?** 0-9999 sec.	10 sec.

Table 24: Program 0403 - Station Timers

Option	Description	Entries	Default
Call Waiting Tone Interval	Use this timer to set the interval between Call Waiting tones. • See *Call Waiting / Camp-On* on page 51 for more. Also use this timer to set the interval between Off Hook Signaling alert tones. • See *Off-Hook Signaling* on page 205 for more.	**CL WAIT INTIRVL?** 0-9999 sec.	10 sec.
Call Coverage Delay	For extensions with Delayed Ringing Call Coverage keys, this timer sets how long a call flashes the key at an extension before it starts to ring. • See *Call Coverage Keys* on page 40 for more.	**CL CVR DLY RING?** 0-9999 sec.	10 sec.
Hook flash Transfer	• This timer is currently not implemented.	**HOOK FLASH XFER?** 0-9999 sec.	2 sec.
Hook Flash Disconnect	• This timer is currently not implemented.	**FLSH DISCONNECT?** 0-9999 sec.	12 sec.
Number of Extended Rings	If an extension's Class of Service enables Extended Ringing, use the timer to set the duration of the Extended Ringing. • See *Extended Ringing* on page 119 for more.	**EXTENDED RING?** 0-9999 sec.	20 sec.
Drop Pulse Send	Use this timer to set the duration of the ASTU PCB drop pulse. This pulse is sent from the ASTU PCB to the connected analog device to initiate a disconnect. • See *Off-Premise Extensions / On-Premise SLT Extensions* on page 207 for more.	**DROP PULSE SEND?** 0-9999 mS	300 mS
DTMF Detect	Use this timer to set the DTMF detection threshold for single line (analog device) ports. If the analog device sends a DTMF signal longer than this interval, the system recognizes it as a valid DTMF tone and decodes it. If the DTMF signal is equal to or less than this interval, the system ignores it. • See *Off-Premise Extensions / On-Premise SLT Extensions* on page 207 for more.	**DTMF DETECT?** 0-9999 mS	70 mS

Table 24: Program 0403 - Station Timers

Option	Description	Entries	Default
Ring No Answer Hunt	Use this timer to set the Extension Hunting Ring No Answer Time. A call will ring a hunt group member extension for this interval before automatically cycling to the next extension in the group. • See *Extension Hunting* on page 121 for more.	**RG NO ANS HUNT?** 0-9999 sec.	10 sec.

Telephone Programming Instructions

1. Enter the programming mode.
2. 0403 + **HOLD**

   0403:STATION TIMERS
   HOLD RECALL?
3. Enter data for the displayed timer + **HOLD**.

   OR

   Press **VOL ▲** or **VOL ▼** to scroll to the timer you want to change + **HOLD**
4. Enter data for the displayed timer + **HOLD**
5. Press **VOL ▲** or **VOL ▼** to scroll to another timer.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **0404: Analog Station Timers** to set parameters and timers for ASTU PCBs.

Conditions

None

Option	Description	Entries	Default
Country Data	Use this option to define the country of use and the codec digitizing method for ASTU PCBs. This timer consists of two bits (xy), with bit x defining the country and bit y defining the digitization method. For example, the default entry 00 is for North America (x=0) and u-law digitization method (y=0). ***Do not change this entry from its default value (00).***	**COUNTRY DATA?** xy x= 0 (North America), 1 (International) or 2 (Japan) y = 0 (u-law) or 1 (A-law)	00 (xy)
Rotary Dial Type	Use this option to define the rotary dial pulsing method for the system's ASTU PCBs. ***Do not change this entry from its default value (01).***	**ROTARY TYPE?** 0 = Standard (1-10) 1 = Norwegian (9-1, 10) 2 = Swedish (10, 1-9)	Standard (0)
Loop Current	Use this option to set the maximum allowed loop current for the system's ASTU PCBs. Normally choose 25mA for short loops and 35mA for long loops. In general, a long loop is 3000 feet or longer and a short loop is less than 3000 feet.	**LOOP CURRENT** 0 = 25mA (short loop) 1 = 35 mA (long loop)	25mA (0)
Ringing Frequency	Use this option to define the AC ringing frequency for the system's ASTU PCBs. ***Do not change this entry from its default value (20 Hz).***	**RINGING FREQ?** 0 = 25 Hz 1 = 20 Hz 2 = 16 Hz	20 Hz (1)
Minimum Break Time	This timer defines the minimum amount of time the loop must be opened to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	**MIN BREAK TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	2 (10 mS)
Maximum Break Time	This timer defines the maximum amount of time the loop must be opened to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	**MAX BREAK TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	20 (100 mS)

Option	Description	Entries	Default
Minimum Make Time	This timer defines the minimum amount of time the loop must be closed to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	**MIN MAKE TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	2 (10 mS)
Maximum Make Time	This timer defines the maximum amount of time the loop must be closed to properly decode the dial pulse digits sent from analog devices connected to ASTU PCBs. ***Change this value only if the connected analog devices are set to dial at a rate other than 10 PPS.***	**MIN MAKE TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	20 (100 mS)
Minimum Hookflash Time	For ASTU PCBs, this timer defines the minimum amount of time the loop must be opened before the system starts to detect a transfer or hang up sequence. Open loop intervals shorter than the setting are ignored by the ASTU PCB.	**MIN FLASH TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	21 (105 MS)
Maximum Hookflash Time	For ASTU PCBs, this timer defines the maximum amount of time the loop can be opened in order for the system to detect a Transfer sequence. Open loop intervals longer than the setting are interpreted as hang up.	**MAX FLASH TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	200 (1000 mS / 1 second)
Minimum Ground Flash Time	For ground start applications with ASTU PCBs, this timer sets the amount of time a ground must be applied before the system detects a transfer sequence. The ASTU uses this timer when analog telephones use ground Transfer instead of open loop Transfer. ***This timer is not used in North America. Do not change this timer from its default value.***	**MIN GND TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	21 (105 mS)
Minimum Off-Hook Time	For ASTU PCBs, this timer defines how long a connected analog device must remain off-hook before the system recognizes the off-hook status.	**MIN GND TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	21 (105 mS)
Off-Hook Guard Time	The ASTU PCB waits this interval after an analog device hangs up before accepting any additional input from the device. This timer helps prevent erroneous detection due to hardware stabilization.	**OFF HOOK GUARD?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	60 (300 mS)

Option	Description	Entries	Default
Dial Pulse Guard Timer	The ASTU PCB waits this interval between dial pulse digits before attempting to detect any additional DP digits. This timer helps prevent erroneous DP dialing due to hardware stabilization.	**DIAL GUARD?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	70 (350 mS)
Loop Disconnect Time	When the far end disconnects, the ASTU PCB opens the loop to the connected analog device for this interval.	**LOOP DISC TIME?** 1-255 (5-1275 mS in 5 mS increments [e.g., 2 = 10mS, 3 = 15 mS, 4 = 20 mS)	40 (200 mS)
Ring/MW Wait Period Time	This timer determines the ringing sequence for the devices connected ASTU PCBs. Because of power consumption, it is not possible to ring all analog devices on an ASTU simultaneously. Instead, the card is divided into 4 groups with two ports in each group. Ringing cycles between the 4 groups, ringing each group for this interval.	**RING/MW PERIOD?** 1-255 (50-12750 mS in 50 mS increments [e.g., 2 = 100 mS, 3 = 150 mS, 4 = 200 mS)	15 (750 mS)

Telephone Programming Instructions

1. Enter the programming mode.
2. 0404 + **HOLD**

   0403:ASTU TIMERS
   COUNTRY DATA?
3. Enter data for the displayed timer + **HOLD**.

   OR

   Press **VOL ▲** or **VOL ▼** to scroll to the timer you want to change + **HOLD**
4. Enter data for the displayed timer + **HOLD**
5. Press **VOL ▲** or **VOL ▼** to scroll to another timer.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **Program 0501- Numbering Plan** to customize the system's number plan. For each dialed digit (0-9, excluding # and *), assign a *Function Type* and an *Expected Digits* entry. *Function Type* defines the digit's function in the system (see the table below).

Function Type	Description
1	Operator Access
2	Intercom and Direct Trunk Access
3	Trunk Group Access

Expected Digits sets how many digits the system expects to receive when the digit string begins with selected digit. For example, digit 3 has *Function Type* 2 and *Expected Digits* 3. This means that digits 300-399 are Intercom numbers.
Refer to *Flexible Numbering Plan* on page 134 for more on customizing the system's number plan.

Conditions

None

Table 25: Program 0501 - Numbering Plan

Option	Description	Entries	Default
Digit 0 Options	Use this option to define the function type for dial strings beginning with 0. These strings are normally used for telephone system operator access (1). • See *Attendant Position* on page 24 for more. • See *Intercom* on page 165 for more.	**"0" FUNCTION TYP?** 1-3	1
	Use this option to define the total length of dial strings beginning with 0. These strings are normally two digits long (2). • See *Attendant Position* on page 24 for more. • See *Intercom* on page 165 for more.	**"0" EXPECTED DGTS"** 1-3	2
Digit 1 Options	Use this option to define the function type for dial strings beginning with 1. These strings are normally reserved for Intercom access (2). • See *Intercom* on page 165 for more.	**"1" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 1. These strings are normally three digits long (3). • See *Intercom* on page 165 for more.	**"1" EXPECTED DGTS"** 1-3	3

Table 25: Program 0501 - Numbering Plan

Option	Description	Entries	Default
Digit 2 Options	Use this option to define the function type for dial strings beginning with 2. These strings are normally reserved for Intercom access (2). • See *Intercom* on page 165 for more.	**"2" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 2. These strings are normally three digits long (3). • See *Intercom* on page 165 for more.	**"2" EXPECTED DGTS"** 1-3	3
Digit 3 Options	Use this option to define the function type for dial strings beginning with 3. These strings are by default assigned to Intercom access (2). • See *Intercom* on page 165 for more.	**"3" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 3. These strings are normally three digits long (3). • See *Intercom* on page 165 for more.	**"3" EXPECTED DGTS"** 1-3	3
Digit 4 Options	Use this option to define the function type for dial strings beginning with 4. These strings are by default assigned to Direct Trunk Access (2). • See *Central Office Calls, Placing* on page 63 for more. • See *Direct Trunk Access* on page 106 for more.	**"4" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 4. These strings are normally three digits long (3). • See *Central Office Calls, Placing* on page 63 for more. • See *Direct Trunk Access* on page 106 for more.	**"4" EXPECTED DGTS"** 1-3	3
Digit 5 Options	Use this option to define the function type for dial strings beginning with 5. These strings are normally reserved for Intercom access (2). • See *Intercom* on page 165 for more.	**"5" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 5. These strings are normally three digits long (3). • See *Intercom* on page 165 for more.	**"5" EXPECTED DGTS"** 1-3	3

Table 25: Program 0501 - Numbering Plan

Option	Description	Entries	Default
Digit 6 Options	Use this option to define the function type for dial strings beginning with 6. These strings are normally reserved for Intercom access (2). • See *Intercom* on page 165 for more.	**"6" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 6. These strings are normally three digits long (3). • See *Intercom* on page 165 for more.	**"6" EXPECTED DGTS"** 1-3	3
Digit 7 Options	Use this option to define the function type for dial strings beginning with 7. These strings are normally reserved for Intercom access (2). • See *Intercom* on page 165 for more.	**"7" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 7. These strings are normally three digits long (3). • See *Intercom* on page 165 for more.	**"7" EXPECTED DGTS"** 1-3	3
Digit 8 Options	Use this option to define the function type for dial strings beginning with 8. These strings are normally reserved for Intercom access (2). • See *Intercom* on page 165 for more.	**"8" FUNCTION TYP?** 1-3	2
	Use this option to define the total length of dial strings beginning with 8. These strings are normally three digits long (3). • See *Intercom* on page 165 for more.	**"8" EXPECTED DGTS"** 1-3	3
Digit 9 Options	Use this option to define the function type for dial strings beginning with 9. These strings are normally reserved to trunk access (3). • See *Automatic Route Selection* on page 34 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Trunk Group Routing* on page 329 for more. • See *Trunk Groups* on page 335 for more.	**"9" FUNCTION TYP?** 1-3	3

Table 25: Program 0501 - Numbering Plan

Option	Description	Entries	Default
Single Digit Access	Use this option to enable or disable single digit access. If enabled (Y), users can dial 9 to select their assigned dial 9 Trunk Group. If disabled, users must dial 9 followed by the Trunk Group number (0-8 for Trunk Groups 0-8). • See *Central Office Calls, Placing* on page 63 for more. • See *Trunk Group Routing* on page 329 for more.	**SINGL DGT ACCESS?** Y or N	Y

Telephone Programming Instructions

1. Enter the programming mode.
2. 0501 + **HOLD**

   0501:NUMBERING PLAN
   "0" FUNCTION TYP?
3. Enter data for the displayed option + **VOL ▲**.

   OR

   Press **VOL ▲** or **VOL ▼** to scroll to the option you want to change + **HOLD**
4. Enter data for the displayed option + **HOLD**
5. Press **VOL ▲** or **VOL ▼** to scroll to another option.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.

Use **Program 0504- Trunk Port Extension Numbers** to assign extension numbers to trunk ports. The extension numbers you enter must be unique and not overlap extension numbers used for extensions, ACI ports, DCI ports and Extension Hunting master numbers.

- Ports 001 -016 are the system's physical trunk ports.

Ports 017-032 are virtual ports used for DID trunks and OPX extensions.

Conditions

None

Table 26: Program 0504 - Trunk Port Extension Numbers

Option	Description	Entries	Default
Extension Number	For the trunk port selected, use this option to enter the extension number associated with the port. • See *Central Office Calls, Placing* on page 63 for more. • See *Flexible Numbering Plan* on page 134 for more.	**EXT NUM?**	Not assigned
Name	For the trunk port selected, this option shows the name associated with the port. • See *Names for Extensions and Trunks* on page 198 for more. •	**NAME?** View only	View only

Telephone Programming Instructions

1. Enter the programming mode.
2. 0504 + **HOLD**

   0504:TRUNK ID
   TRUNK PORT?
3. Enter the number of the trunk port you want to program (01-32) + **HOLD**.

   0504:TRUNK ID-PT:nnn
   EXT NUM?nnn

   The previously programmed extension number displays.
4. Enter the number of the extension you want assigned to the port.

   OR

   Press **HOLD** to leave the entry unchanged.

   0504:TRUNK ID-PT:nnn
   NAME?(name)

   The previously programmed name displays.

5. Return to step 3 and enter another trunk port.
   OR
   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00 | Available.Will swap port/extension numbers but not programming.

Use **Program 0505- Station Port Extension Numbers** to assign extension numbers to station ports. The extension numbers you enter must be unique and not overlap extension numbers used for trunks, ACI ports, DCI ports and Extension Hunting master numbers.

- Ports 001 -032 are the system's physical extension ports.
- Ports 033-048 are virtual ports used for DID trunks and OPX extensions.

Conditions

None

Table 27: Program 0505 - Station Port Extension Numbers

Option	Description	Entries	Default
Extension Number	For the station port selected, use this option to enter the extension number associated with the port. • See *Flexible Numbering Plan* on page 134 for more.	**EXT NUM?**	Not assigned
Name	For the station port selected, this option shows the name associated with the port. • See *Names for Extensions and Trunks* on page 198 for more. •	**NAME?** View only	View only

Telephone Programming Instructions

1. Enter the programming mode.
2. 0505 + **HOLD**

   0505:STA ID
   STATION PORT?
3. Enter the number of the station port you want to program (01-48) + **HOLD**.

   0505:STA ID-PT:nnn
   EXT NUM?nnn

   The previously programmed extension number displays.
4. Enter the number of the extension you want assigned to the port.

   OR

   Press **HOLD** to leave the entry unchanged.

   0505:STA ID-PT:nnn
   NAME?(name)

   The previously programmed name displays.
5. Return to step 3 and enter another station port.

   OR

   Press **HOLD** to return to step 2 and enter another program number.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

Use **Program 0510- ACD/UCD Master Extension Numbers and Names** to assign extension numbers and names to the ACD/UCD master extensions. The system can have up to eight ACD/UCD groups (1-8). The extension numbers you enter must be unique and cannot be a physical port (e.g., 300).

Conditions

None

Table 28: Program 0510 - ACD/UCD Master Extension Numbers and Names

Option	Description	Entries	Default
Group Number	Use this option to select the ACD/UCD group you want to program.	**GROUP NUM?**	N/A
Hunt Group Master Number	Use this option to enter the master extension number associated with the group selected. • See *Automatic Call Distribution (ACD)* on page 28 for more. • See *Flexible Numbering Plan* on page 134 for more. • See *Extension Hunting* on page 121 for more.	**EXT NUM?** UCD Hunting group master numbers can be 100-299, 332-400, or 417-899. They cannot be in the extension (300-331) or trunk (401-416) number range. By default, the systems uses codes beginning with 0 for operator access and 9 for trunk/trunk group access.	Group 1 = 700 (for Voice Mail). All other groups are not assigned.
Overflow Destination	Use this option to assign the ACD/UCD Group overflow destination. • See *Extension Hunting* on page 121 for more.	**OVERFLOW DEST?** 300-331 (extensions 300-331), Ring Group Master Number, or UCD Group Master Number	Not assigned
Name	Use this option to enter the name associated with the group selected. • See *Automatic Call Distribution (ACD)* on page 28 for more. • See *Extension Hunting* on page 121 for more. • When entering names, use *Table 17: Keys for Entering Names* on page 361.	**NAME?**	Not assigned

Telephone Programming Instructions

1. Enter the programming mode.

2. 0510 + **HOLD**

   0510:ACD ID
   GROUP NUM?

3. Enter the number of the group you want to program (1-8) + **HOLD**.

   0510:ACD ID-GROUP:nn
   EXT NUM?nnn

   The previously programmed extension number displays.

4. Enter the number of the extension you want assigned to the group.

   OR

   Press **HOLD** to leave the entry unchanged.

   0510:ACD ID-GROUP:nn
   NAME?(name)

   The previously programmed name displays.

5. Enter the name for the group (10 character maximum) + **HOLD**

   OR

   Press **HOLD** to leave the displayed name unchanged.

   0510:ACD ID
   GROUP NUM?

6. Return to step 3 and enter another group.

   OR

   Press **HOLD** to return to step 2 and enter another program

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0511 - Ring Group Master Extension Numbers and Names

Description

LCCPU 01.00.00 | Available.

Use **Program 0511- Ring Group Master Extension Numbers and Names** to assign extension numbers and names to the Ring Group master extensions. The system can have up to eight Ring Groups (1-8). The extension numbers you enter must be unique and not overlap extension numbers used for trunks, extensions, ACI ports, DCI ports or Extension Hunting master numbers.

Conditions

None

Table 29: Program 0511 - Ring Group Master Extension Numbers and Names

Option	Description	Entries	Default
Extension Number	Use this option to enter the extension number associated with the Ring Group selected. • See *Central Office Calls, Answering* on page 58 for more. • See *Flexible Numbering Plan* on page 134 for more. • See *Ring Groups* on page 248 for more.	**EXT NUM?** Ring Group master numbers can be 100-299, 332-400, or 417-899. They cannot be in the extension (300-331) or trunk (401-416) number range. By default, the systems uses codes beginning with 0 for operator access and 9 for trunk/trunk group access.	Not assigned
Name	Use this option to enter the name associated with the Ring Group selected. • See *Central Office Calls, Answering* on page 58 for more. • See *Ring Groups* on page 248 for more. • When entering names, use *Table 17: Keys for Entering Names* on page 361.	**NAME?**	Not assigned

Telephone Programming Instructions

1. Enter the programming mode.
2. 0511 + **HOLD**

   0511:RING GROUP ID
   GROUP NUM?
3. Enter the number of the group you want to program (1-8) + **HOLD**.

   0511:RING GROUP:nn
   EXT NUM?nnn

   The previously programmed extension number displays.
4. Enter the number of the extension you want assigned to the group.

   OR

   Press **HOLD** to leave the entry unchanged.

   0511:RING GROUP:nn
   NAME?(name)

   The previously programmed name displays.
5. Enter the name for the group (10 character maximum) + **HOLD**

   OR

   Press **HOLD** to leave the displayed name unchanged.

   0511:RING GROUP ID
   GROUP NUM?
6. Return to step 3 and enter another group.

   OR

   Press **HOLD** to return to step 2 and enter another program

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Description

LCCPU 01.00.00 | Not available.

Use **Program 0601- Toll Restriction Options** to assign Toll Restriction options to each of the seven Toll Levels (1-7). When you assign a Toll Level to an extension, the extension uses the options set up in this program.

Conditions

None

Table 30: Program 0601 - Toll Restriction Options

Option	Description	Entries	Default
Program Toll Restriction	Use this option to program Toll Restriction. (You must always use the following option to initialize Toll Restriction before using it for the first time.) • See *Toll Restriction* on page 314 for more.	**PROG-P** P = Program	N/A
Initialize Toll Restriction	Use this option to initialize Toll Restriction. You must always initialize Toll Restriction before using if for the first time. If you have already programmed Toll Restriction, initializing will erase all your entries and reinstate the default Toll Restriction values. • See *Toll Restriction* on page 314 for more.	**INIT-I** I = Initialize	N/A
Toll Restriction Level	Use this option to select the Toll Restriction level you want to program. The entries that follow pertain to the Toll Restriction Level you select in this step. • See *Toll Restriction* on page 314 for more.	**TOLL LEVEL** 1-7	1
Active Dial Pad	Use this option to enable or disable Active Dial Pad (continuous dialing) for trunk calls. • See *Toll Restriction* on page 314 for more.	**ACTIVE DIAL PAD?** Y = Enable N = Disable	Y
N11 Dialing	Use this option to enable or disable dial N11 services such as directory assistance (411) and repair (611). This option does not restrict 911 or 1 + 911 calls. These calls are always allowed. • See *Toll Restriction* on page 314 for more.	**N11 DIALING?** Y = Enable N = Disable	Y

Table 30: Program 0601 - Toll Restriction Options

Option	Description	Entries	Default
0 + Dialing	Use this option to enable or disable an extension's ability to manually dial 0 + (operator assisted) calls. • See *Toll Restriction* on page 314 for more.	**0 + DIALING?** Y = Enable N = Disable	Y
International Dialing	Use this option to enable or disable 011 (international) dialing. • See *Toll Restriction* on page 314 for more.	**INT'L DIAL?** Y = Enable N = Disable	Y
Equal Access Dialing	This option allows/prevents an extension user from directly dialing Equal Access (10XXX) calls. The system compares the 10XXX codes the user dials to the 10XXX table that you program. • See *Toll Restriction* on page 314 for more. • See *Toll Restriction Rules* on page 317 for more.	**10+XXX DIALING ALLOW OR DENY TABLE?** A = Allow Table D = Deny Table	A (Allow table)
	• Enter A to set the table up as an allow table, or D to set the table up as a deny table. • D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.	**ADD-A/VIEW-V/DEL-D** A = Add a code to the table D = Delete a code from the table V = View the table entries	N/A
NXX Dialing	This option allows/prevents an extension user from directly dialing NXX (local exchange) calls. The system compares the NXX codes the user dials to the NXX table that you program. • See *Toll Restriction* on page 314 for more. • See *Toll Restriction Rules* on page 317 for more.	**NXX DIALING ALLOW OR DENY TABLE?** A = Allow Table D = Deny Table	A (Allow table)
	• Enter A to set the table up as an allow table, or D to set the table up as a deny table. • D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.	**ADD-A/VIEW-V/DEL-D** A = Add a code to the table D = Delete a code from the table V = View the table entries	N/A

0601 - Toll Restriction Options

Table 30: Program 0601 - Toll Restriction Options

Option	Description	Entries	Default
NPA Dialing	This option allows/prevents an extension user from directly dialing NPA (area code) calls. The system compares the NPA codes the user dials to the NPA table that you program. • See *Toll Restriction* on page 314 for more. • See *Toll Restriction Rules* on page 317 for more.	**NPA DIALING ALLOW OR DENY TABLE?** A = Allow Table D = Deny Table	A (Allow table)
	• Enter A to set the table up as an allow table, or D to set the table up as a deny table. • D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.	**ADD-A/VIEW-V/DEL-D** A = Add a code to the table D = Delete a code from the table V = View the table entries	N/A
6-Digit Analysis	This option enables/disables 6-Digit Analysis. With 6-Digit Analysis, the system restricts a call according the NPA and NXX the user dials. The system compares the codes the user dials to the 6-Digital Analysis table that you program. • See *Toll Restriction* on page 314 for more. • See *Toll Restriction Rules* on page 317 for more.	**6 DGT ANALYSIS ALLOW OR DENY TABLE?** A = Allow Table D = Deny Table	A (Allow table)
	• Enter A to set the table up as an allow table, or D to set the table up as a deny table. • D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.	**ADD-A/VIEW-V/DEL-D** A = Add a code to the table D = Delete a code from the table V = View the table entries	N/A

Telephone Programming Instructions

To quickly locate the procedure for a Toll Restriction option, go to the steps listed below:

- To select the Toll Level you want to program, go to step 4.
- To enable or disable Active Dial Pad, go to step 5.
- If setting up N11 Dialing, go to step 6.
- When enabling or disabling 0+ Dialing, go to step 7.
- For International Dialing options, go to step 8.
- When programming Equal Access (10XXX) Dialing, go to step 9.
- If you want to configure NXX Dialing, go to step 12.
- To select the NPA Dialing options, go to step 15.
- To set up 6-Digit Analysis, go to 18.

1. Enter the programming mode.
2. 0601 + **HOLD**.

   0601:TOLL RESTRICT
   PROG-P / INIT-I?
3. Enter P (7) to program Toll Restriction and go to the next step.

   0601:TOLL RESTRICT
   TOLL LEVEL?1

   OR

   Enter I (4) + **HOLD** to initialize Toll Restriction and return to the previous step.

   0601:TOLL RESTRICT
   TABLES INITIALIZED!

   You must always initialize Toll Restriction when programming it for the first time. If you initialize an existing Toll Restriction setup, you'll return all your programmed entries to their factory-installed initial values.

Toll Level

4. Enter the Toll Level you want to program (1-7) + **HOLD**

   OR

   Press **HOLD** to select the currently displayed Toll Level.

   0601:TOLL LEVEL:n
   ACTIVE DIAL PAD?n

   The options that follow pertain to the Toll Level selected.

Active Dial Pad

5. Enter Y to enable or N to disable Active Dial Pad + **VOL ▲**.

   OR

   Press **VOL ▲** to select the currently displayed value.

   0601:TOLL LEVEL:n
   N11 DIALING?nnn

   The previously programmed value displays.

N11 Dialing

6. Enter Y to enable or N to disable N11 Dialing + **VOL ▲**.

OR

Press **VOL ▲** to select the currently displayed value.

```
0601:TOLL LEVEL:n
0 + DIALING?nnn
```

The previously programmed value displays

0+ Dialing

7. Enter Y to enable or N to disable 0+ Dialing + **VOL ▲**.

   OR

   Press **VOL ▲** to select the currently displayed value.

```
0601:TOLL LEVEL:n
INT'L DIAL?nnn
```

The previously programmed value displays

International Dialing

8. Enter Y to enable or N to disable International Dialing + **VOL ▲**.

   OR

   Press **VOL ▲** to select the currently displayed value.

```
0601:10+XXX DIALING
ALLOW OR DENY TABLE?
```

The previously programmed table type displays (A = allow, D = deny).

Equal Access (10XXX) Dialing

9. Enter A to set up the table as an allow table.

   OR

   Enter D to set up the table as a deny table.

```
0601:10+XXX ALLW TBL
ADD-A/VIEW-V/DEL-D?
```

   OR

```
0601:10+XXX DENY TBL
ADD-A/VIEW-V/DEL-D?
```

   Enter D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.

10. Press A to add codes into the table.

    OR

    Press D to delete codes from the table.

    OR

    Press V to view the current contents of the table.

    If you press V to view the table, the bottom line of the display will show the first set of table entries. Press V to see the remaining entries. The prompt **TABLE DONE** *tells you when you are at the end of the table or the table is empty. The prompt* **>** *tells you that there is additional data in the table to view.*

    If you press A or D to add codes into the table, you see the prompt **DATA**. *Just enter the codes you want into the table. When entering data, new data appears to the right of the previously entered data. (The system automatically assumes that every group of three digits is an entry.)*

11. When you are done entering data, press **VOL ▲** to go to the next option.

```
0601:NXX DIALING
ALLOW OR DENY TABLE?
```

The previously programmed table type displays (A = allow, D = deny).

NXX Dialing

12. Enter A to set up the table as an allow table.
    OR
    Enter D to set up the table as a deny table.

```
0601:NXX ALLOW TABLE
ADD-A/VIEW-V/DEL-D?
```

    OR

```
0601:NXX DENY TABLE
ADD-A/VIEW-V/DEL-D?
```

    Enter D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.

13. Press A to add codes into the table.
    OR
    Press D to delete codes from the table.
    OR
    Press V to view the current contents of the table.

    If you press V to view the table, the bottom line of the display will show the first set of table entries. Press V to see the remaining entries. The prompt **TABLE DONE** *tells you when you are at the end of the table or the table is empty. The prompt* **>** *tells you that there is additional data in the table to view.*

    If you press A or D to add codes into the table, you see the prompt **DATA**. *Just enter the codes you want into the table. When entering data, new data appears to the right of the previously entered data. (The system automatically assumes that every group of three digits is an entry.)*

14. When you are done entering data, press **VOL ▲** to go to the next option.

```
0601:NPA DIALING
ALLOW OR DENY TABLE?
```

    The previously programmed table type displays (A = allow, D = deny).

NPA Dialing

15. Enter A to set up the table as an allow table.
    OR
    Enter D to set up the table as a deny table.

```
0601:NPA ALLOW TABLE
ADD-A/VIEW-V/DEL-D?
```

    OR

```
0601:NPA DENY TABLE
ADD-A/VIEW-V/DEL-D?
```

    Enter D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.

16. Press A to add codes into the table.
    OR
    Press D to delete codes from the table.
    OR
    Press V to view the current contents of the table.

    If you press V to view the table, the bottom line of the display will show the first set of table entries. Press V to see the remaining entries. The prompt **TABLE DONE** *tells you when you are at the end of the table or the table is empty. The prompt* **>** *tells you that there*

is additional data in the table to view.

If you press A or D to add codes into the table, you see the prompt **DATA**. *Just enter the codes you want into the table. When entering data, new data appears to the right of the previously entered data. (The system automatically assumes that every group of three digits is an entry.)*

17. When you are done entering data, press **VOL ▲** to go to the next option.

```
0601:6 DGT ANALYSIS
ALLOW OR DENY TABLE?
```

The previously programmed table type displays (A = allow, D = deny).

6-Digit Analysis

18. Enter A to set up the table as an allow table.

OR

Enter D to set up the table as a deny table.

```
0601:6 DGT ALLOW TBL
ADD-A/VIEW-V/DEL-D?
```

OR

```
0601:6 DGT ALLOW TBL
ADD-A/VIEW-V/DEL-D?
```

Enter D to convert an existing allow table into a deny table, or enter A to convert an existing deny table into an allow table.

19. Press A to add codes into the table.

OR

Press D to delete codes from the table.

OR

Press V to view the current contents of the table.

If you press V to view the table, the bottom line of the display will show the first set of table entries. Press V to see the remaining entries. The prompt **TABLE DONE** *tells you when you are at the end of the table or the table is empty. The prompt* **>** *tells you that there is additional data in the table to view.*

If you press A or D to add codes into the table, you see the prompt **DATA**. *Just enter the codes you want into the table. When entering data, new data appears to the right of the previously entered data. (The system automatically assumes that every group of six digits is an entry.)*

20. When you are done entering data, press **VOL ▲** to go back to the Active Dial Pad option for the currently selected Toll Level.

```
0601:TOLL LEVEL:n
ACTIVE DIAL PAD?nn
```

OR

Press CONF to go back to the Program/Initialize option.

```
0601:TOLL RESTRICT
PROG-P / INIT-I
```

OR

Press CONF twice to exit Toll Restriction programming.

Description

LCCPU 01.00.00 | Not available.

Description

LCCPU 01.00.00 | Available.

Use **Program 0801 - Selectable Display Messages** to program the system's 16 Selectable Display Messages. Each message can be up to 20 characters long, including a blank spaces you may want to ad for readability. All messages are appendable by user-entered digits.

When entering names, use *Table 17: Keys for Entering Names* on page 361. When creating a new user-appendable message, consider adding a space at the end of the text portion to improve readability. In the table, the X characters reserve space for user-entered digits.

- See *Selectable Display Messaging* on page 256 for more.

Conditions

None

Table 31: Program 0801 - Selectable Display Messages

Option	Default
Message 01	CALL (plus 15 user entries)
Message 02	BACK BY (plus 12 user entries)
Message 03	MEETING IN RM (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 THE MEETING (plus 7 user entries)
Message 09	OUT UNTIL (plus 10 user entries)
Message 10	GONE FOR THE DAY (plus 3 user entries)
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)

Telephone Programming Instructions

1. Enter the programming mode.
2. 0801 + **HOLD**

   0801:DISPLAY MESSAGE
   MESSAGE NUM?

3. Enter the number of the message you want to program + HOLD.

   0801:DISPLAY MESSAGE
   (message text)

   The previously programmed message displays.

4. Enter the new display message + **HOLD**.

   When entering a message, refer to 0506 - ACI/CPU Analog Port Extension Numbers and Names on page 400.

   OR

   Press **HOLD** to leave the current value unchanged.

   0801:DISPLAY MESSAGE
   MESSAGE NUM?

Description

LCCPU 01.00.00 | Available.

Use **Program 1001 - Trunk Port Description** to program various options for trunks ports.

Also see *Program 1003 - Trunk Options* on page 426.

Conditions

Per FCC regulations, do not set *1001- Trunk Transmit Gain* on page 417 higher than 0 dB.

Table 32: Program 1001 - Trunk Port Description

Option	Description	Entries	Default
Trunk Circuit Type	Use this option to set the trunk's circuit type. Set this option for compatibility with the connected telco or PBX. • See *Central Office Calls, Answering* on page 58 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Direct Inward Dialing* on page 87 for more. • See *Direct Inward Line* on page 88 for more. • • See *Pulse to Tone Conversion* on page 240 for more.	**TYP?** 00 = Uninstalled 51 = Loop start DTMF 52 = Loop start DP	51
Trunk Extension Number	This option displays the trunk's extension number programmed in *0504 - Trunk Port Extension Numbers* on page 396. This is for viewing only. You cannot edit this option from Program 1001.	**EXT:** (View only)	4nn (View only)
Trunk Name	Use this option to assign a name to the trunk port. • Refer to *Table 17: Keys for Entering Names* on page 361 when entering names. • See *Names for Extensions and Trunks* on page 198 for more.	**NAME:**	TRUNK nn

Table 32: Program 1001 - Trunk Port Description

Option	Description	Entries	Default
Trunk Transmit Gain	Use this option to set the trunk's transmit gain. This gain setting allows you to compensate for the transmit gain characteristics of the connected telco or PBX. • See *Central Office Calls, Answering* on page 58 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Direct Inward Dialing* on page 87 for more. • • See *PBX/Centrex Compatibility* on page 222 for more.	**TRANSMIT GAIN?** 0 = 0 dB gain 1 = .5 dB gain 2 = 1 dB gain 3 = 1.5 dB gain 4 = 2 dB gain 5 = 2.5 dB gain 6 = 3 dB gain 7 = 3.5 dB gain 8 = 4 dB gain 9 = 4.5 dB gain 10 = 5 dB gain 11 = 5.5 dB gain 12 = 6 dB gain 13 = 6.5 dB gain 14 = 7 dB gain 15 = 7.5 dB gain 16 = 8 dB gain 17 = 8.5 dB gain 18 = 9 dB gain 19 = 9.5 dB gain 20 = 10 dB gain 21 = 10.5 dB gain 22 = 11 dB gain 23 = -11.5 dB gain 24 = 12 dB gain 25 = 12.5 dB gain 26 = 13 dB gain 27 = 13.5 dB gain 28 = 14 dB gain 29 = 14.5 dB gain 30 = 15 dB gain	0

Table 32: Program 1001 - Trunk Port Description

Option	Description	Entries	Default
		TRANSMIT GAIN? (Cont'd) 31 = .5 dB loss 32 = 1 dB loss 33 = 1.5 dB loss 34 = 2 dB loss 35 = 2.5 dB loss 36 = 3 dB loss 37 = 3.5 dB loss 38 = 4 dB loss 39 = 4.5 dB loss 40 = 5 dB loss 41 = 5.5 dB loss 42 = 6 dB loss 43 = 6.5 dB loss 44 = 7 dB loss 45 = 7.5 dB loss 46 = 8 dB loss 47 = 8.5 dB loss 48 = 9 dB loss 49 = 9.5 dB loss 50 = 10 dB loss 51 = 10.5 dB loss 52 = 11 dB loss 53 = 11.5 dB loss 54 = 12 db loss 55 = 12.5 dB loss 56 = 13 dB loss 57 = 13.5 dB loss 58 = 14 dB loss 59 = 14.5 loss 60 = 15 dB loss	0

Table 32: Program 1001 - Trunk Port Description

Option	Description	Entries	Default
Trunk Receive Gain	Use this option to set the trunk's receive gain. This gain setting allows you to compensate for the receive gain characteristics of the connected telco or PBX. • See *Central Office Calls, Answering* on page 58 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Direct Inward Dialing* on page 87 for more. • • See *PBX/Centrex Compatibility* on page 222 for more.	**RECEIVE GAIN?** 0 = 0 dB gain 1 = .5 dB gain 2 = 1 dB gain 3 = 1.5 dB gain 4 = 2 dB gain 5 = 2.5 dB gain 6 = 3 dB gain 7 = 3.5 dB gain 8 = 4 dB gain 9 = 4.5 dB gain 10 = 5 dB gain 11 = 5.5 dB gain 12 = 6 dB gain 13 = 6.5 dB gain 14 = 7 dB gain 15 = 7.5 dB gain 16 = 8 dB gain 17 = 8.5 dB gain 18 = 9 dB gain 19 = 9.5 dB gain 20 = 10 dB gain 21 = 10.5 dB gain 22 = 11 dB gain 23 = -11.5 dB gain 24 = 12 dB gain 25 = 12.5 dB gain 26 = 13 dB gain 27 = 13.5 dB gain 28 = 14 dB gain 29 = 14.5 dB gain 30 = 15 dB gain	0

Table 32: Program 1001 - Trunk Port Description

Option	Description	Entries	Default
		RECEIVE GAIN? (Cont'd) 31 = .5 dB loss 32 = 1 dB loss 33 = 1.5 dB loss 34 = 2 dB loss 35 = 2.5 dB loss 36 = 3 dB loss 37 = 3.5 dB loss 38 = 4 dB loss 39 = 4.5 dB loss 40 = 5 dB loss 41 = 5.5 dB loss 42 = 6 dB loss 43 = 6.5 dB loss 44 = 7 dB loss 45 = 7.5 dB loss 46 = 8 dB loss 47 = 8.5 dB loss 48 = 9 dB loss 49 = 9.5 dB loss 50 = 10 dB loss 51 = 10.5 dB loss 52 = 11 dB loss 53 = 11.5 dB loss 54 = 12 db loss 55 = 12.5 dB loss 56 = 13 dB loss 57 = 13.5 dB loss 58 = 14 dB loss 59 = 14.5 loss 60 = 15 dB loss	0
Trunk Class of Service Assignment	Use this option to assign Class of Service (1-15) to OPX trunks and tie lines. • • See *Tie Lines* on page 311 for more.	**CLASS OF SERVICE?** 1-15	1
PBX Line	Use this option to designate a trunk as a PBX line. Enable this option if the trunk connects to a PBX instead of the telco. • See *PBX/Centrex Compatibility* on page 222 for more.	**PBX LINE** Y = Enable N = Disable	N
Loop Length	Use this option to compensate for a trunk's loop length. Use the short option (1) only when the system is very close to the central office or behind a PBX. Use the long option (2) for normal installations. • See *Central Office Calls, Answering* on page 58 for more. • See *Central Office Calls, Placing* on page 63 for more.	**LOOP LENGTH** 1 = Short loop 2 = Long loop	2 (Long loop)

Table 32: Program 1001 - Trunk Port Description

Option	Description	Entries	Default
Trunk Toll Restriction Level	Use this option to set the Toll Level of the trunk during the day mode. If this Toll Level is higher than the extension's Toll Level, it may cause additional dialing restrictions. If it is lower, it will have no effect. • See *Toll Restriction* on page 314 for more.	**TOLL LEVEL?** 0-7	0
Override Extension Toll Restriction	Use this option to "release" the Toll Restriction on a trunk. If enabled, any user can dial any number on the trunk without restriction. • See *Toll Restriction* on page 314 for more.	**OVRD EXT TL LVL?** Y = Toll Restriction overridden N = Toll Restriction not overridden	No
Print SMDR	Use this option to have the SMDR report include or exclude the trunk. • See *Station Message Detail Recording* on page 277 for more.	**PRINT SMDR?** Y = Yes (include in SMDR report) N = No (exclude from SMDR report)	Yes

Telephone Programming Instructions

1. Enter the programming mode.
2. 1001 + **HOLD**

   1001:TRK DESCRIPTION
   TRUNK PORT?
3. Enter the number of the trunk you want to program (1-16) + **HOLD**.

   1001: TRUNK PORT?:n
   TYPE?n

   The previously programmed value displays.
4. Enter the new trunk circuit type + **VOL ▲**.

   OR

   Press **VOL ▲** to leave the current circuit type unchanged

   1001: TRUNK PORT?:n
   EXT:nnn

   The extension number programmed in 0504 - Trunk Port Extension Numbers on page 396*displays. You cannot edit this option.*
5. Press **VOL ▲**.

   1001: TRUNK PORT?:n
   NAME:nnnnnn

   Enter the trunk name. Refer to Programming Names and Text Messages on page 361 *if you need help with entering names.*
6. Press **VOL ▲**.

   1001: TRUNK PORT?:n
   TRANSMIT GAIN?
7. Enter the new transmit gain + **VOL ▲**.

OR

Press **VOL ▲** to leave the transmit gain unchanged

1001: TRUNK PORT?:n
RECEIVE GAIN?

8. Enter the new receive gain + **VOL ▲**.
   OR
   Press **VOL ▲** to leave the current receive gain unchanged

1001: TRUNK PORT?:n
CLASS OF SERVICE?

9. Enter the new Class of Service for the trunk + **VOL ▲**.
   OR
   Press **VOL ▲** to leave the current Class of Service unchanged

1001: TRUNK PORT?:n
PBX LINE?

10. Enter Y ro assign or N to unassign the line as a PBX line + **VOL ▲**.
    OR
    Press **VOL ▲** to leave the current assignment unchanged

1001: TRUNK PORT?:n
LOOP LENGTH?

11. Enter 1 for shor loop or 2 for long loop (the normal setting) + **VOL ▲**.
    OR
    Press **VOL ▲** to leave the current assignment unchanged

1001: TRUNK PORT?:n
TOLL LEVEL?

12. Enter the new Toll Level for the trunk (1-7) + **HOLD**.
    OR
    Press **VOL ▲** to leave the current Toll Level unchanged

1001: TRUNK PORT?:n
OVRD EXT TL LVL?

Press **VOL ▲** to leave the current assignment unchanged.

13. Enter Y + **VOL ▲** to override (release) Toll Restriction for the trunk.
    OR
    Enter N + **VOL ▲** to enforce the extension's Toll Restriction.
    OR
    Press **VOL ▲** to leave the current assignment unchanged.

1001: TRUNK PORT?:n
PRINT SMDR?

14. Enter Y + **VOL ▲** to have calls on the trunk included on the SMDR report.
    OR
    Enter N + **VOL ▲** to have the calls excluded from the SMDR report.
    OR
    Press **VOL ▲** to leave the current assignment unchanged.

1001:TRUNK PORT?:n
TYPE?nnnnnnnn

15. Enter new circuit type data for the selected trunk.
    OR
    Press **CONF** to select another trunk.

OR
Press **CONF** twice to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 1002 - Trunk Groups** to assign trunks (1-16) to trunk groups (0-8). This program also lets you assign the priority of trunks within each group. When a user seizes a trunk group, the system selects the lowest order trunk in the group first. If the lowest order trunk is busy or out of service, the system searches sequentially by order number (e.g., from order 01 to order 02) for the first available trunk.

Conditions

None

Table 33: Program 1002 - Trunk Groups

Option	Description	Entries	Default
Trunk Group	• Use this option to select the trunk group you want to program. A trunk can only be in one group.See *Loop Keys* on page 179 for more. • See *Trunk Group Routing* on page 329 for more. • See *Trunk Groups* on page 335 for more.	TRUNK GROUP? 0-8	Trunks 1-8 are not assigned to a trunk group. Trunks 9-16 are in group 0.
Order Number	Use this option to set the priority of the trunk within the group. When a user seizes a trunk group, the system selects the lowest priority trunk within the group first. • See *Trunk Groups* on page 335 for more.	ORDER nn: TRK NUM?nn	The trunk's order is the same as its port number (e.g., 1=1, 2=2).

Telephone Programming Instructions

1. Enter the programming mode.
2. 1002 + **HOLD**

   1002: TRUNK GROUPS
   TRUNK GROUP?
3. Select the trunk group you want to program + **HOLD**.

   1002: TRUNK GROUP nn
   ORDER 01: TRK NUM?nn

   The trunk currently assigned to order 01 displays.
4. Enter the trunk you want to assign to order 01 + **HOLD**.

   OR

   Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

   1002:TRUNK GROUP nn
   ORDER 02: TRK NUM?nn
5. When you are done entering data for the group, press **HOLD**
6. Return to step 2 and select another trunk group to program.

OR
Press **CONF** to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 1003 - Trunk Options** to program various options for trunks.

Also see *Program 1001 - Trunk Port Description* on page 416.

Conditions

None

Table 34: Program 1003 - Trunk Options (Part 2)

Option	Description	Entries	Default
Call Pickup Group	Use this option to have an incoming call on the trunk ring all the extensions in the assigned pickup group. • See *Group Call Pickup* on page 139 for more.	**PICK-UP GROUP?** 1-8 0 = Unassigned	0
Direct Termination (Day)	If the trunk is a Direct Inward Line, use this option to set the day termination (answering point). The DIL rings the answering point directly. This option has no effect on other types of trunks. • See *Direct Inward Line* on page 88 for more. • See *Key Ring* on page 170 for more.	**DAY TERMINATION?** 300-331 (extensions), UCD master number, Voice Mail master number, Ring Group master number or Key Ring (by pressing CLEAR)	Key Ring
Activate Overflow During the Day	Use this option to enable or disable overflow during the day mode. • See *Direct Inward Line* on page 88 for more. • See *Key Ring* on page 170 for more.	**DAY OVERFLOW?** Y = Day overflow enabled N = Day overflow disabled	N
Day Overflow Destination	Use this option to set the overflow destination for day mode calls (including DILs). • See *Direct Inward Line* on page 88 for more. • See *Key Ring* on page 170 for more.	**DAY OVRFLW DEST?** 300-331 (extensions), UCD master number, Voice Mail master number, Ring Group master number or Key Ring (by pressing CLEAR)	300
Direct Termination (Night)	If the trunk is a Direct Inward Line, use this option to set the night termination (answering point). The DIL rings the answering point directly at night. This option has no effect on other types of trunks. • See *Direct Inward Line* on page 88 for more. • See *Key Ring* on page 170 for more.	**NT TERMINATION?** 300-331 (extensions), UCD master number, Voice Mail master number, Ring Group master number or Key Ring (by pressing CLEAR)	Key Ring

Table 34: Program 1003 - Trunk Options (Part 2)

Option	Description	Entries	Default
Activate Overflow at Night	Use this option the enable or disable Night Ring (Universal Night Answer). If enabled, the trunk will activate UNA if it rings while the system is in the night mode. • See *Direct Inward Line* on page 88 for more. • See *Key Ring* on page 170 for more. • See *Night Service / Night Ring* on page 200 for more.	**NIGHT OVERFLOW?** Y = Night overflow enabled N = Night overflow disabled	N
Night Overflow Destination	Use this option to set the overflow destination for Night Mode calls. • See *Direct Inward Line* on page 88 for more. • See *Key Ring* on page 170 for more. • See *Night Service / Night Ring* on page 200 for more.	**NT OVRFLW DEST?** 300-331 (extensions), UCD master number, Voice Mail master number, Ring Group master number or Key Ring (by pressing CLEAR)	300
Distinctive Ring	Use this option to set the Distinctive Ring tone for the trunk. Extension users can adjust the ring frequency of tones 1-6. Tones 7 and 8 are fixed. • See *Distinctive Ringing, Tones and Flash Patterns* on page 113 for more.	**DISTINCTIVE RING?** 1-8	1
MOH Source	Use this option to assign the Music on Hold music source. • See *Music On Hold* on page 195 for more.	**MOH SOURCE?** 0 = None 1 = External (CPU terminals) 2 = Tone 1 (low pitch) 3 = Tone 2 (high pitch) 4 = ACI port (currently not used)	1
Tandem Trunk	Use this option to enable or disable a trunk's ability to be included in an Unsupervised Conference. • See *Tandem Trunking / Unsupervised Conference* on page 307 for more.	**TANDEM TRUNK?** Y = Unsupervised Conference enabled N = Unsupervised Conference disabled	N

Telephone Programming Instructions

1. Enter the programming mode.
2. 1003 + **HOLD**

1003: TRUNK OPTION
TRUNK PORT?

Press **CONF** *at any time to back up to the previous entry. This automatically saves your data entry,*

3. Select the trunk port you want to program + **HOLD**.

```
1003: TRUNK OPTION
PICK-UP GROUP?nn
```

The previously programmed Pickup Group displays.

4. Enter the number of the Pickup Group to which the trunk should belong (1-8, 0 for unassigned) + **HOLD**.

OR

Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

```
1003:TRUNK OPTION
DAY TERM?nnn
```

The previously programmed assignment displays.

5. Enter the day mode termination for the trunk + **HOLD**.

OR

Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

```
1003:TRUNK OPTION
DAY OVERFLOW?n
```

The previously programmed assignment displays.

6. Enter Y to enable or N to disable day mode ringing for the trunk + **HOLD**.

OR

Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

```
1003:TRUNK OPTION
DAY OVRFLW DEST?nnn
```

The previously programmed assignment displays.

7. Enter the day mode overflow destination + **HOLD**.

OR

Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

```
1003:TRUNK OPTION
NIGHT TERM?nnn
```

The previously programmed assignment displays.

8. Enter the night mode termination for the trunk + **HOLD**.

OR

Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

```
1003:TRUNK OPTION
NIGHT OVERFLOW?n
```

The previously programmed assignment displays.

9. Enter Y to enable or N to disable night mode ringing for the trunk + **HOLD**.

OR

Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

```
1003:TRUNK OPTION
NT OVRFLW DEST?nnn
```

The previously programmed assignment displays.

10. Enter the night mode overflow destination + **HOLD**.

OR

Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

```
1003:TRUNK OPTION
DISTINCTIVE RING?
```

The previously programmed assignment displays.

11. Enter the Distinctive Ringing tone for the trunk (1-8) + **HOLD**.
    OR
    Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

    ```
    1003:TRUNK OPTION
    MOH SOURCE?nnn
    ```

    The previously programmed assignment displays.
12. Enter the MOH source for the trunk (0 = No MOH, 1 = External at CPU terminals, 2 = Tone 1 [low pitch], 3 = Tone 2 [high pitch], 4 = ACI port [currently not used]) + **HOLD**.
    OR
    Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

    ```
    1003:TRUNK OPTION
    TANDEM TRUNK?n
    ```

    The previously programmed assignment displays.
13. Enter Y to enable or N to disable Tandem Trunking capability for the trunk + **HOLD**.
    OR
    Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.
    OR
    Press **CONF** to return to step 3 and program another trunk.
    OR
    Press **CONF** twice to exit this program.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

Use **Program 1101 - System Speed Dial Numbers** to enter numbers and names into the System Speed Dial bins. The system has up to 1000 Speed Dial bins, depending on the setting of *Program 0301 - Number of Digits in a System Speed Dial Code* on page 370.

When *Number of Digits in a System Speed Dial Code* is:	System Speed Dial bin numbers are:	And the total number of System Speed Dial bins is:
2	20-29	10
3	200-299	100
4	2000-2999	1000

Speed Dial numbers can be up to x?x? digits long, use 0-9, # and *. In addition, you can enter the following for additional dialing options:

For this option		Or use this telephone programming option:
Pause		MIC
Flash		FLASH

Conditions

None

Table 35: Program 1101 - System Speed Dial Numbers

Option	Description	Entries	Default
System Speed Dial Bin	Use this option to select the System Speed Dial bin you want to program. • See *Speed Dial* on page 263 for more.	**BIN?** 1-10 1-100 1-1000	Not assigned
Line	Use this option to choose the trunk System Speed Dial normally selects for the bin you are programming. • See *Speed Dial* on page 263 for more.	**LINE** 1-16	1
System Speed Dial Number	For the bin selected above, use this option to enter the System Speed Dial number. The number can be up to x?x? digits long, using 0-9, # and *. You can also enter special characters (see the table above). Special characters count as a single digit. • See *Speed Dial* on page 263 for more.	**NUM?** 0-9, #, *, MIC (Pause), DND (Dial Tone Detect), FLASH (Flash) or DIAL (Delay)	Not assigned

1101 - System Speed Dial Numbers

Table 35: Program 1101 - System Speed Dial Numbers

Option	Description	Entries	Default
System Speed Dial Name	Use this option to enter the name for the System Speed Dial bin (up to 16 characters). • See *Speed Dial* on page 263 for more. • When entering names, see *Programming Names and Text Messages* on page 361.	**NA?** Not assigned	Not assigned

Telephone Programming Instructions

1. Enter the programming mode.
2. 1101 + **HOLD**

   1101: SYS SPEED DIAL
   BIN?nnn

   The previously programmed bin displays.
3. Select the System Speed Dial bin you want to program (20-29, 200-299 or 2000-2999) + **HOLD**.

   OR

   Press **VOL ▲** to program the currently selected bin.

   1101:SPDL BIN:nnnn
   NUM?

   The System Speed Dial number previously programmed for this selected bin displays.
4. Enter the System Speed Dial number for the selected bin + **HOLD**.

   OR

   Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

   1101:SPDL BIN:nnnn
   NA?
5. Enter the name for the selected System Speed Dial bin + **HOLD**.

   OR

   Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

Description

LCCPU 01.00.00 | Available.

Use **Program 1102 - Speed Dial Block Assignment** to designate blocks for System and Personal Speed Dial. The system has 57 blocks, with 20 Speed Dial numbers in each block. The following chart shows how you can allocate blocks in your system, depending on the setting of *Program 0301 - Number of Digits in a System Speed Dial Code* on page 370. System Speed Dial can require either 1, 5 or 50 blocks. These leaves 56, 52 or 7 blocks available for extensions, respectively. If an extension wants a unique set of Personal Speed Dial numbers, it must have one unique block assigned to it.

System bins	Blocks required for System Speed dial	Blocks available for extensions
10 (20-29)	1	56
100 (200-299)	5	52
1000 (2000-2999)	50	7

Table 36: Program 1102 - Speed Dial Block Assignment

Option	Description	Entries	Default
Extension Speed Dial Blocks	Use this option to specify the number of blocks you want assigned to Personal Speed Dial. • See *Speed Dial* on page 263 for more.	**NUM OF EXT BLKS?** 1-56	32
System Speed Dial Blocks	Use this option to specify the number of blocks you want assigned to System Speed Dial. • See *Speed Dial* on page 263 for more.	**NUM OF SYS BLKS?** 1-50	25

Conditions

None

Telephone Programming Instructions

1. Enter the programming mode.
2. 1102 + **HOLD**

   1102: SPDL BLK ASSNMT
   NUM OF EXT BLKS?nn

   The previously programmed entry displays.
3. Enter the number of blocks you want assigned to Personal Speed Dial + **HOLD**.
   OR

Press **VOL ▲** to leave the current entry unchanged

1102: SPDL BLK ASSNMT
NUM OF SYS BLKS?nn

The previously programmed entry displays.

4. Enter the number of blocks you want assigned to System Speed Dial + **HOLD**.
   OR
   Press **VOL ▲** to leave the current entry unchanged

Description

LCCPU 01.00.00 | Not available.

Description

LCCPU 01.00.00 | Available.

Use **Program 1701 - Programmable Function Key Assignments** to assign the programmable keys on a keyset. By default, keys 1-8 are line keys, keys 9 and 10 are Fixed Loop keys for trunk group 0, key 11 is an Auto Timer key and key 12 is an All Call Page key. (The last key on an attendant telephone is automatically an Operator Call key.)

Conditions

None

Table 37: Program 1701 - Programmable Function Key Assignments

Option	Description	Key Code	Entry
Undefined	Use this option to designate a key as undefined (no function). • See *Programmable Function Keys* on page 235 for more.	**00**	**UNDEFINED**
Switched Loop Key	Use this option to assign a programmable key as a switched loop key. • See *Loop Keys* on page 179 for more. • See *Programmable Function Keys* on page 235 for more.	**01**	**SWITCH LOOP** (01)
Fixed Loop Key	Use this option to assign a programmable key as a Fixed Loop Key. • See *Loop Keys* on page 179 for more. • See *Programmable Function Keys* on page 235 for more.	**02 + nn (trunk group)**	**FIXED LOOP GRP** 00-08 = Trunk Groups 0-8
Line Key	Use this option to assign a programmable key as a line key. • See *Central Office Calls, Answering* on page 58 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Line Keys* on page 176 for more. • See *Private Line* on page 231 for more. • See *Programmable Function Keys* on page 235 for more.	**03 + nn (trunk number)**	**LINE** 01-16 = Trunks 1-16
Park Orbit Key	Use this option to assign a programmable key as a Park Orbit key. • See *Park* on page 218 for more. • See *Programmable Function Keys* on page 235 for more.	**04 + n (Park Orbit 0-9)**	**PARK ORBIT?n** 0-9 = System Park Orbits 0-9
Hotline Key	Use this option to assign a programmable key as a Hotline key. • See *Hotline* on page 160 for more. • See *Programmable Function Keys* on page 235 for more.	**05 + nnn (extension number)**	**HOTLINEnnn** 300-331 = Hotline partner's extension number (300-331)

Table 37: Program 1701 - Programmable Function Key Assignments

Option	Description	Key Code	Entry
Call Coverage Immediate Ring	Use this option to assign a programmable key as an immediately ringing Call Coverage Key. • See *Call Coverage Keys* on page 40 for more. • See *Programmable Function Keys* on page 235 for more.	**06 + nnn (extension number)**	**CALL CVR RING** Covered extension number, Ring Group master number, or UCD Group master number
Call Coverage No Ring	Use this option to assign a programmable key as a lamp only (no ring) Call Coverage Key. • See *Call Coverage Keys* on page 40 for more. • See *Programmable Function Keys* on page 235 for more.	**07 + nnn (extension number)**	**CALL CVR NO RING** Covered extension number, Ring Group master number, or UCD Group master number
Call Coverage Delay Ring	Use this option to assign a programmable key as a delayed ring Call Coverage Key. • See *Call Coverage Keys* on page 40 for more. • See *Programmable Function Keys* on page 235 for more.	**08 + nnn (extension number)**	**CALL CVR DELAY** Covered extension number, Ring Group master number, or UCD Group master number
Group Pickup Immediate Ring	Use this option to assign a programmable key as an immediate ring Group Call Pickup key. • See *Group Call Pickup* on page 139 for more. • See *Programmable Function Keys* on page 235 for more.	**09 + nn (Pickup Group 01-08)**	**GRP PCKUP RING** 01-08 = pickup groups 1-8
Group Pickup No Ring	Use this option to assign a programmable key as a lamp only (no ring) Group Call Pickup key. • See *Group Call Pickup* on page 139 for more. • See *Programmable Function Keys* on page 235 for more.	**10 + nn (Pickup Group 01-08)**	**GRP PCKUP NO RING** 01-08 = pickup groups 1-8
Group Pickup Delay Ring	Use this option to assign a programmable key as a delay ring Group Call Pickup key. • See *Group Call Pickup* on page 139 for more. • See *Programmable Function Keys* on page 235 for more.	**11 + nn (Pickup Group 01-08)**	**GRP PCKUP DELAY** 01-08 = pickup groups 1-8
Page Zone Key	Use this option to assign a programmable key as a Page Zone key. • See *Paging* on page 214 for more. • See *Programmable Function Keys* on page 235 for more.	**13 + n (Page Zone 1-7, 0 for All Call)**	**PAGE ZONE** 0-7 (Page Zones 1-7 or 0 for All Call Page)

Table 37: Program 1701 - Programmable Function Key Assignments

Option	Description	Key Code	Entry
System Speed Dial Key	Use this option to assign a programmable key as a System Speed Dial key. You assign the key to specific System Speed Dial bin. • See *Programmable Function Keys* on page 235 for more. • See *Speed Dial* on page 263 for more.	**14 + nnn (System Speed Dial bin normally 200-299)**	**SYS SPDL BIN**
Personal Speed Dial Key	Use this option to assign a programmable key as a Personal Speed Dial key. You assign the key to a specific Personal Speed Dial bin. • See *Programmable Function Keys* on page 235 for more. • See *Speed Dial* on page 263 for more.	**15 + nnn (701-720)**	**PERS SPDL BIN**
Call Timer Key	Use this option to assign a programmable key as a Call Timer key. There are two types of timer key: manual and automatic. • See *Call Timer* on page 48 for more. • See *Programmable Function Keys* on page 235 for more.	**16 + n (1 = Manual Call Timer, 2 = Automatic Call Timer)**	**CALL TIMER**
Voice Mail Record Key	Use this option to assign a programmable key as a Voice Mail Record key. • See *Programmable Function Keys* on page 235 for more. • See *Voice Mail* on page 340 for more.	**17**	**RECORD**
Night Key	Use this option to assign a programmable key as a Night Key. • See *Night Service / Night Ring* on page 200 for more. • See *Programmable Function Keys* on page 235 for more.	**18 + CLEAR** (to control the system's night mode) **18 + Master Number** (to control the night mode of a DIL terminated to the master number)	**SYS MODE**
Data Key	• This option is currently not used.	**19 + nnn (extension number)**	**DATA**
Split Key	Use this option to assign a programmable key as a Split key. • See *Programmable Function Keys* on page 235 for more. • See *Split (Alternate)* on page 272 for more.	**20**	**SPLIT**
ICM Directory Key	Use this option to assign a programmable key as an Intercom Directory Dialing key. • See *Directory Dialing* on page 110 for more. • See *Programmable Function Keys* on page 235 for more.	**21**	**ICM DIR**
ACD Log On Key	• This option is currently not used.	**22**	**ACD LOG**

Table 37: Program 1701 - Programmable Function Key Assignments

Option	Description	Key Code	Entry
Reverse Voice Over Key	Use this option to assign a programmable key as a Reverse Voice Over key. • See *Programmable Function Keys* on page 235 for more. • See *Reverse Voice Over* on page 245 for more.	**23 + nnn (extension number)**	**REV VOICE OVER**
Message Center Key	Use this option to assign a programmable key as a Message Center key. • See *Programmable Function Keys* on page 235 for more. • See *Voice Mail* on page 340 for more.	**24 + nnn (extension number)** Note that the extension number does not have to be an installed extension.	**MESSAGE CTR** 300-331 (extension numbers 300-331)
Save Key	Use this option to assign a programmable key as a Save Number Dialed key. • See *Programmable Function Keys* on page 235 for more. • See *Save Number Dialed* on page 254 for more.	**25**	**SAVE**

Telephone Programming Instructions

1. Enter the programming mode.
2. 1701 + **HOLD**

   1701:KEY PROGRAMMING
   STATION #?
3. Enter the number of the station port you want to program + **HOLD**

   1701:STA:nnn
   KEY NUMBER 1?
4. Enter the number of the key you want to program + **HOLD**.

   OR

   Press **HOLD** to select the currently displayed key.

   1701:STA:nnn KEY:n
   nnnnnnnnn n?

   The previously programmed key definition displays.
5. Enter key code and options as required + **VOL ▲**.

   OR

   Press **VOL ▲** to leave the current assignment unchanged.
6. Enter data for another key.

   OR

   Press **CONF** to return to step 4 and select another key to program.

   OR

   Press **CONF** twice to return to step 3 and select another extension to program.

   OR

   Press **CONF** three times to exit the program.

1701 - Programmable Function Key Assignments

Description

LCCPU 01.00.00 | Available.

Use **Program 1702 - Personal Speed Dial** to program an extension's Personal Speed Dial bins (1-20). Extension users can also program their Personal Speed Dial bins from their own telephone.

Personal Speed Dial numbers can be up to x?x? digits long, use 0-9, # and *. In addition, you can enter the following for additional dialing options:

For this option		Or use this telephone programming option:
Pause		MIC
Flash		FLASH

Conditions

None

Table 38: Program 1702 - Personal Speed Dial

Option	Description	Entries	Default
Personal Speed Dial Bin	Use this option to select the Personal Speed Dial bin you want to program. • See *Speed Dial* on page 263 for more.	**BIN?** 0-19	Not assigned
Personal Speed Dial Number	For the bin selected above, use this option to enter the Personal Speed Dial number. The number can be up to x?x? digits long, using 0-9, # and *. You can also enter special characters (see the table above). Special characters count as a single digit. • See *Speed Dial* on page 263 for more.	**NUM?** Not assigned	Not assigned
Personal Speed Dial Name	Use this option to enter the name for the Personal Speed Dial bin (up to 16 characters). • See *Speed Dial* on page 263 for more. • When entering names, see *Programming Names and Text Messages* on page 361.	**NA?** Not assigned	Not assigned

Telephone Programming Instructions

1. Enter the programming mode.
2. 1702 + **HOLD**

   1702:PERS SPEED DIAL STATION PORT?
3. Enter the number of the station port you want to program (1-32) + **HOLD**

   1702:P-SPDL S_PT:nnn BIN?

   The previously programmed bin displays.

4. For the extension chosen, select the Personal Speed Dial bin you want to program (1-20) + **HOLD**.

   OR

   Press **VOL ▲** to program the currently selected bin.

   1702:P-SPDL S_PT:nnn
   NUM?

   The Personal Speed Dial number previously programmed for this selected bin displays.

5. Enter the Personal Speed Dial number for the selected bin + **HOLD**.

   OR

   Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

   1702:P-SPDL S_PT:nnn
   NA?

6. Enter the name for the selected Personal Speed Dial bin + **HOLD**.

   OR

   Press **VOL ▲** to leave the current assignment unchanged and advance to the next entry.

Description

LCCPU 01.00.00 | Available.

Use **Program 1703 - DSS Key Assignment** to program an extension's DSS keys. Programmable Function Keys automatically become DSS keys when the user press **ICM**. While in the DSS mode, the extension has one button Intercom access and a Busy Lamp Field for the assigned co-worker. By default, BLF keys 1-24 are assigned to extensions 300-323.

Conditions

None

Table 39: Program 1703 - BLF Key Assignment

Option	Description	Entries	Default
Key Number	Use this option to select the key you want to program. • See *Direct Station Selection (DSS)* on page 95 for more.	**KEY?** 1-24	Not assigned
BLF Extension Assignment	Use this option to assign an extension to the BLF key. • See *Direct Station Selection (DSS)* on page 95 for more.	**BLF EXT NUM?** 300-331	Not assigned

Telephone Programming Instructions

1. Enter the programming mode.
2. 1703 + **HOLD**

   1703:BLF LEVEL KEYS
   STATION PORT?
3. Enter the number of the station port (1-32) you want to program + **HOLD**

   1703:BLF LEVEL KEYS
   KEY?
4. For the station port selected, enter the number of the key (1-24) you want to program + **HOLD**

   1703:BLF LEVEL KEYS
   BLF EXT NUM?nnn

   The previously programmed assignment displays.
5. Enter the number of the extension (300-331) assigned to the BLF key + **HOLD**

   OR

   Press **VOL ▲** to leave the current assignment unchanged.

   1703:BLF LEVEL KEYS
   KEY?

Description

LCCPU 01.00.00 | Available.

Use **Program 1704 - DSS Console Key Assignment** to assign the keys for the system's DSS Consoles. There are two types of DSS Consoles: 24-button and 110 button. For default assignments, refer to the following table.

DSS Console Default Assignments	
These keys:	**Have this function:**
24-Button DSS Console	
1-24	Hotlines to extensions 300-323
110-Button DSS Console	
1-32	Hotlines to extensions 300-331
33-48	Lines 1-16
49-59	System Speed Dial bins 200-209
59-78	Personal Speed Dial bins 700-719
79, 80	Page zones 0 (All Call) and 1.
81-82	System Park Orbits 0 and 1.
83-110	Unassigned

Conditions

None

Table 40: Program 1704 - DSS Console Key Assignment

Option	Description	Key Code	Entry
Undefined	Use this option to designate a key as undefined (no function). • See *Direct Station Selection (DSS) Console* on page 98 for more.	**00**	**UNDEFINED** (00)
Line Key	Use this option to assign a programmable key as a line key. • See *Central Office Calls, Answering* on page 58 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Direct Station Selection (DSS) Console* on page 98 for more.	**03 + nn (trunk number)**	**LINE?nn** 01-16 = Trunks 1-16

Table 40: Program 1704 - DSS Console Key Assignment

Option	Description	Key Code	Entry
Park Orbit Key	Use this option to assign a programmable key as a Park Orbit key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Park* on page 218 for more.	**04 + n (Park Orbit 0-9)**	**PARK ORBIT?n** 0-9 = System Park Orbits 0-9
Hotline Key	Use this option to assign a programmable key as a Hotline key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Hotline* on page 160 for more.	**05 + nnn (extension number)**	**HOTLINE?nnn** 300-331 = Hotline partner's extension number (300-331)
Call Coverage Immediate Ring	Use this option to assign a programmable key as an immediately ringing Call Coverage Key. • See *Call Coverage Keys* on page 40 for more. • See *Direct Station Selection (DSS) Console* on page 98 for more.	**06 + nnn (extension number)**	**CALL CVR RING** Covered extension number, Ring Group master number, or UCD Group master number
Call Coverage No Ring	Use this option to assign a programmable key as a lamp only (no ring) Call Coverage Key. • See *Call Coverage Keys* on page 40 for more. • See *Direct Station Selection (DSS) Console* on page 98 for more.	**07 + nnn (extension number)**	**CALL CVR NO RING** Covered extension number, Ring Group master number, or UCD Group master number
Call Coverage Delay Ring	Use this option to assign a programmable key as a lamp only (no ring) Call Coverage Key. • See *Call Coverage Keys* on page 40 for more. • See *Direct Station Selection (DSS) Console* on page 98 for more.	**08 + nnn (extension number)**	**CALL CVR DELAY** Covered extension number, Ring Group master number, or UCD Group master number
Group Pickup Immediate Ring	Use this option to assign a programmable key as an immediately ringing Group Call Pickup key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Group Call Pickup* on page 139 for more.	**09 + nn (Pickup Group 01-08)**	**GRP PKUP RING** 01-16 = pickup groups 1-16
Group Pickup No Ring	Use this option to assign a programmable key as a lamp only (no ring) Group Call Pickup key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Group Call Pickup* on page 139 for more.	**10 + nn (Pickup Group 01-08)**	**GRP PKUP NO RING** 01-16 = pickup groups 1-16

Table 40: Program 1704 - DSS Console Key Assignment

Option	Description	Key Code	Entry
Group Pickup Delay Ring	Use this option to assign a programmable key as a delay ring Group Call Pickup key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Group Call Pickup* on page 139 for more.	**11 + nn (Pickup Group 01-08)**	**GRP PKUP DELAY** 01-16 = pickup groups 1-16
Page Zone Key	Use this option to assign a programmable key as a Page Zone key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Paging* on page 214 for more.	**13 + n (Page Zone 1-7, 0 for All Call)**	**PAGE ZONE?** 0-7 (Page Zones 1-7 or 0 for All Call Page)
System Speed Dial Key	Use this option to assign a programmable key as a System Speed Dial key. You assign the key to specific System Speed Dial bin. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Speed Dial* on page 263 for more.	**14 + nnn (System Speed Dial bin, normally 200-299)**	**SYS SPDL BIN?**
Personal Speed Dial Key	Use this option to assign a programmable key as a Personal Speed Dial key. You assign the key to a specific Personal Speed Dial bin. The DSS Console shares Personal Speed Dial bins with the extension to which it is attached. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Speed Dial* on page 263 for more.	**15 + nnn (701-720)**	**PERS SPDL BIN?**
Voice Mail Record Key	Use this option to assign a programmable key as a Voice Mail Record key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Voice Mail* on page 340 for more.	**17**	**RECORD?**
Night Key	Use this option to assign a programmable key as a Night key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Night Service / Night Ring* on page 200 for more.	**18 + CLEAR** (to control the system's night mode) **18 + Master Number** (to control the night mode of a DIL terminated to the master number)	**SYS MODE?**
Data Key	• This option is currently not used.	**19 + nnn (extension number)**	**DATA?**
Split Key	Use this option to assign a programmable key as a Split key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Split (Alternate)* on page 272 for more.	**20**	**SPLIT**

Table 40: Program 1704 - DSS Console Key Assignment

Option	Description	Key Code	Entry
ICM Directory Key	Use this option to assign a programmable key as an Intercom Directory Dialing key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Directory Dialing* on page 110 for more.	**21**	**ICM DIR**
ACD Log On Key	• This option is currently not used.	**22**	**ACD LOG**
Reverse Voice Over Key	Use this option to assign a programmable key as a Reverse Voice Over key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Reverse Voice Over* on page 245 for more.	**23 + nnn (extension number)**	**REV VOICE OVER**
Message Center Key	Use this option to assign a programmable key as a Message Center key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Voice Mail* on page 340 for more.	**24 + nnn (extension number)** Note that the extension number does not have to be an installed extension.	**MESSAGE CTR** 300-331 (extension numbers 300-331)
Save Key	Use this option to assign a programmable key as a Save Number Dialed key. • See *Direct Station Selection (DSS) Console* on page 98 for more. • See *Save Number Dialed* on page 254 for more.	**25**	**SAVE**

Telephone Programming Instructions

1. Enter the programming mode.
2. 1704 + **HOLD**

   1704:DSS KEY PROG
   DSS BLOCK NUM?
3. Select the block that corresponds to the DSS Console you want to program + **HOLD**

   1704:DSS KEY PROG
   DSS KEY 1
4. For the console selected, enter the number of the key you want to program + **HOLD**.

   OR

   Press **HOLD** to select key 1.

   DSS BLOCK:n KEY:n
   nnnnnnnnn n?

   The previously programmed key definition displays.
5. Enter key code and options as required + **VOL ▲**.

   OR

   Press **VOL ▲** to leave the current assignment unchanged.

You can optionally press ICM and then VOL ▲ or VOL ▼ to scroll through the available key definitions, then HOLD to select your entry.

6. Enter data for another key.
   OR
   Press **CONF** to return to step 4 and select another key to program.
   OR
   Press **CONF** twice to return to step 3 and select another console.
   OR
   Press **CONF** three times to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 1801 - Extension Port Description** to set up various options for extensions. Also see *Program 1802 - Extension Options (Part 1)* on page 455 and *Program 1807 - Extension Options (Part 2)* on page 469.

Conditions

None

Table 41: Program 1801 - Extension Options (Part 1)

Option	Description	Entries	Default
Extension Circuit Type	Use this option to assign circuit type to station devices. In the column at right, the numbers in square brackets [ ] indicate how many ports the device requires. • See *Door Box* on page 116 for more. • See *Initial Startup Programming* on page 6 for more. • See *Off-Premise Extensions / On-Premise SLT Extensions* on page 207 for more. • See *Station Instruments* on page 274 for more. •	**PT TYP?** 00 = Uninstalled [1] 01 = 22-Button Standard [1] 02 = 22-Button Display [1] 06 = 34-Button Display [1] 09 = 34-Button Super Display [1] 10 = Door Box [1] 15 = Analog station [1] 21 = 2OPX [2]	00 (Uninstalled)
DCI Type	• This option is currently not used.	**DCI TYP?**	0
Device Number	• This option is currently not used.	**DEVICE ORDER NUM?**	1
Extension Numbering	This option shows the extension number assigned to the station port. This option is view only — you cannot edit this entry. • See *0505 - Station Port Extension Numbers* on page 398 for more. • See *0506 - ACI/CPU Analog Port Extension Numbers and Names* on page 400 for more. • See *0507 - DCI Extension Numbers and Names* on page 401 for more. •	**EXT:** View only	View only
Extension Name	Use this option to assign a name to the extension port. • Refer to *Table 17: Keys for Entering Names* on page 361 when entering names. • See *Names for Extensions and Trunks* on page 198 for more.	**NAME:**	STATION nn

1801 - Extension Port Description

Table 41: Program 1801 - Extension Options (Part 1)

Option	Description	Entries	Default
DSS Type	Use this option to specify the type of DSS Console plugged into the telephone (1 = 24-button, 2 = 110-button, 0 = unassigned). • See *Direct Station Selection (DSS) Console* on page 98 for more.	**DSS TYP?** 0 = Uninstalled 1 = 24-Button 2 = 110 Button	300 = 1 301-331 = 0
DSS Block Number	Use this option to assign a DSS block to the console. • See *Direct Station Selection (DSS) Console* on page 98 for more.	**DSS BLOCK NUM?** 00 = Unassigned 01-04	01
Second Channel Option	• This option is currently not implemented.	**2ND CHANNEL?** N = No Y = Yes	N
Extension Class of Service Assignment	Use this option to assign the extension's Class of Service. • See *Class of Service* on page 73 for more.	**CLASS OF SERVICE?** 1-15	01
Extension Toll Level Day	Use this option to assign an extension's Toll Level during the day mode. • See *Toll Restriction* on page 314 for more.	**STA TOLL LVL DAY?** 1-7, 0 = No restriction	00
Extension Toll Level Night	Use this option to assign an extension's Toll Level during the night mode. • See *Toll Restriction* on page 314 for more.	**STA TOLL LVL NITE?** 1-7, 0 = No restriction	00
DCI Class of Service Assignment	• This option is currently not used.	**DCI COS?** 1=15	1
DCI Toll Level Day	• This option is currently not used.	**DCI TOLL LVL DAY?** 1-7, 0 = No restriction	1
DCI Toll Level Night	• This option is currently not used.	**DCI TOLL LVL NITE?** 1-7, 0 = No restriction	1
Access Level	• This option is currently not used.	**ACCESS LVL?** 0-5	5
Station Overflow Destination	• This option is currently not implemented.	**OVRFLW EXT?** 300-331	300
Overflow Condition for Intercom Calls	• This option is currently not implemented..	**ICM OVRFLOW B-R-D?**	0
Overflow Condition for External Calls	• This option is currently not implmented.	**CO OVRFLW B-R-D?**	0

Table 41: Program 1801 - Extension Options (Part 1)

Option	Description	Entries	Default
Overflow Condition for DID Calls	• This option is currently not implemented.	**DID OVRFLW B-R-D?**	0
Overflow Condition for Tie Line Calls	• This option is currently not implemented.	**E&M OVRFLW B-R-D?**	0

Telephone Programming Instructions

1. Enter the programming mode.
2. 1801 + **HOLD**

   1801:EXTENSION PROG
   STATION PORT?
3. Enter the number of the station port you want to program (1-32) + **HOLD**

   OR

   Press **HOLD** to select port 1 (extension 300).

   1801: STA PORT n
   PT TYPE?n

   The previously programmed value displays. See the chart above for valid circuit types.
4. Enter the new station circuit type + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current circuit type unchanged

   1801: STA PORT n
   DCI TYP?n

   The previously programmed value displays. See the chart above for valid DCI types.
5. Enter the DCI circuit type (if installed) + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current entry unchanged

   1801: STA PORT n
   DEVICE ORDER NUM?n

   The previously programmed value displays.
6. Enter the software port (for 3DCI, 3ACI, VAU and VAU Expansion Modules only) + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current entry unchanged

   1801: STA PORT n
   EXT:nnn

   This display shows the extension number assigned to the port. This option is view only — you cannot edit or change it.
7. Press **VOL ▲**.

   1801: STA PORT n
   NAME:nnnnnnn

   Use this option to enter or change the extension's name. Refer to Programming Names and Text Messages on page 361 *for more.*

8. Press **VOL ▲**.

```
1801: STA PORT n
DSS TYP?n
```

The previously programmed value displays.

9. If installed, enter the DSS Console type (00-02) + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
DSS BLOCK NUM?
```

10. If installed, enter the DSS Console block number (if installed) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
2nd CHANNEL?n
```

The previously programmed value displays.

11. Enter Y to enable or N to disable second channel operation + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
CLASS OF SERVICE?n
```

The previously programmed value displays.

12. Enter extension's Class of Service (1-15) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
STA TOLL LVL DAY?n
```

The previously programmed value displays.

13. Enter the extension's day mode Toll Level (1-7, 0 = No restriction) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
STA TOLL LVL NITE?n
```

The previously programmed value displays.

14. Enter the extension's night mode Toll Level (1-7, 0 = No restriction) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
DCI COS?n
```

The previously programmed value displays.

15. For 3DCI Modules, enter the module's Class of Service (1-15) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
DCI TOLL LVL DAY?n
```

The previously programmed value displays.

16. For 3DCI Modules, enter the module's day mode Toll Level (1-7, 0 = No restriction) + **VOL ▲**
    OR

Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
DCI TOLL LVL NITE?n
```

The previously programmed value displays.

17. For 3DCI Modules, enter the module's night mode Toll Level (1-7, 0 = No restriction) + **VOL ▲**

    OR

    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
ACCESS LEVEL?n
```

The previously programmed value displays.

18. Enter the extension's Access Level (0-5) + **VOL ▲**

    OR

    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
OVRFLW EXT?nnn
```

The previously programmed value displays.

19. Enter the extension's overflow destination (300-331) + **VOL ▲**

    OR

    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
ICM OVRFLW B-R-D?n
```

The previously programmed value displays.

20. Enter the overflow condition for Intercom calls (0 = no overflow, 1 = busy, 2 = ring and 3 = delay) + **VOL ▲**

    OR

    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
CO OVRFLW B-R-D?n
```

The previously programmed value displays.

21. Enter the overflow condition for trunk calls (0 = no overflow, 1 = busy, 2 = ring and 3 = delay) + **VOL ▲**

    OR

    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
DID OVRFLW B-R-D?n
```

The previously programmed value displays.

22. Enter the overflow condition for DID calls (0 = no overflow, 1 = busy, 2 = ring and 3 = delay) + **VOL ▲**

    OR

    Press **VOL ▲** to leave the current entry unchanged

```
1801: STA PORT n
E&M OVRFLW B-R-D?n
```

The previously programmed value displays.

23. Enter the overflow condition for tie line calls (0 = no overflow, 1 = busy, 2 = ring and 3 = delay) + **VOL ▲**

    OR

Press **VOL ▲** to go back to the first option for this port.

1801: STA PORT n
PT TYP?n

The previously programmed value displays.

24. Press **CONF** to select another station port to program.
    OR
    Press **CONF** twice to exit this program.

Description

LCCPU 01.00.00 | Available.

Use **Program 1802 - Extension Options (Part 1)** to set up additional options for extensions. Also see *Program 1801 - Extension Port Description* on page 449 and *Program 1807 - Extension Options (Part 2)* on page 469.

Conditions

None

Table 42: Program 1802 - Extension Options (Part 1)

Option	Description	Entries	Default
Do Not Disturb	Use this option to enable or disable Do Not Disturb at the extension. • See *Do Not Disturb* on page 114 for more.	**ALLOW DND?** Y = Enable N = Disable	Y
Ring Group Number	Use this option to assign an extension to a Ring Group. • See *Group Ring* on page 144 for more. • See *Ring Groups* on page 248 for more.This may be the same as Group Ring.	**RING GROUP NUM?** 1-8 0 = Unassigned	0
Call Pickup Group Number	Use this option to assign an extension to a Pickup Group. • See *Group Call Pickup* on page 139 for more.	**PK-UP GROUP NUM?** 1-8 0 = Unassigned	0
Privacy Release Group	Use this option to assign an extension to a Privacy Release Group. • See *Privacy* on page 226 for more.	**PRIV REL GRP NUM?** 1-16 0 = Unassigned	0
Off-Hook Signaling for Intercom Calls	Use this option to assign an extension's Off-Hook Signaling options for Intercom calls. • See *Voice Over* on page 350 for more.	**OHS ICM?** 0 = No Off-Hook Signaling 1 = Call Wait beeps over speaker 3 = Voice Over	1
Off-Hook Signaling for Hotline Partner	• This option is currently not used.	**OHS HS?**	2

1802 - Extension Options (Part 1)

Table 42: Program 1802 - Extension Options (Part 1)

Option	Description	Entries	Default
Off-Hook Signaling for CO Calls	Use this option to assign an extension's Off-Hook Signaling options for trunk calls. • See *Attendant Position* on page 24 for more. • See *Central Office Calls, Answering* on page 58 for more. • See *Off-Hook Signaling* on page 205 for more.	**OHS CO?** 0 = No Off-Hook Signaling 1 = Camp On tone 2 = Off hook ringing	1
Handsfree Reply on Intercom Calls	Use this option to enable or disable Handsfree reply (Handsfree Answerback). Calls ring if disabled. • See *Handsfree and Handsfree Answerback* on page 150 for more.	**HF REPLY ON ICM?** Y = Enable N = Disable	Y
Automatic Handsfree	Use this option to enable or disable Automatic Handsfree. • See *Automatic Handsfree* on page 30 for more. • See *Handsfree and Handsfree Answerback* on page 150 for more.	**AUTO HANDSFREE?** Y = Enable N = Disable	Y
Busy Lamp Field	Use this option to enable or disable the DSS function for an extension's Programmable Function Keys. • See *Direct Station Selection (DSS)* on page 95 for more.	**BUSY LAMP FIELD?** Y = Enable N = Disable	Y
Line Dial Up	Use this option to enable or disable an extension's ability to access lines 1-16 by dialing trunk access codes #901-#916. • See *Central Office Calls, Placing* on page 63 for more.	**LINE DIAL UP?** Y = Enable N = Disable	N
Station's Dial 9 Group	Use this option to assign the trunk group a user accesses when they dial 9 for an outside line or press a switched loop key. This option does not apply to systems with ARS installed. • See *Central Office Calls, Placing* on page 63 for more. • See *Loop Keys* on page 179 for more. • See *Trunk Group Routing* on page 329 for more. • See *Trunk Groups* on page 335 for more.	**DIAL 9 GROUP?** 0-8	1
Retain Trunk Volume Setting	• Currently not used.	**RETAIN TRK VOL?** Y = Enable (retain user setting) N = Disable (use median system setting)	Y

Table 42: Program 1802 - Extension Options (Part 1)

Option	Description	Entries	Default
Key Access to Outbound Lines	Use this option to enable or disable the extension user's ability to press a Programmable Function Key to access and outside line. • See *Central Office Calls, Placing* on page 63 for more. • See *Line Keys* on page 176 for more. • See *Programmable Function Keys* on page 235 for more.	**KEY ACESS TO LN?** Y = Enable N = Disable	Y
Page Zone Member	Use this option to assign the extension to a Page Zone (1-7). • See *Paging* on page 214 for more.	**PAGE ZONE MEMBER?** Y = Include extension in Page Zone N = Do not include extension in Page Zone	Y
BGM	Use this option to enable or disable Background Music at the extension. • See *Background Music* on page 35 for more.	**BGM?** Y = Enable N = Disable	Y
Extension's Operator	Use this option to assign the extension's operator. This is the co-worker the extension user reaches when they dial 0. • See *Attendant Position* on page 24 for more.	**EXT'S OPERATOR?** 300-331	300
Ring Down Destination	Use this option to assign the extension's Ring Down destination. To use this option, you must also enable the *Ring Down* option above. • See *Ringdown Extension* on page 249 for more.	**RG DN DEST?** 0 = None (Ring Down disabled) Extension number (300-331), UCD master number, Voice Mail master number, Ring Group master number	UND
Speed Dial Block	Use this option to assign a Speed Dial block to an extension. • See *Speed Dial* on page 263 for more.	**SPDL BLOCK NUMN?** 1-57	1
Voice Mail Port	For analog ports, use this option to assign the port as a Voice Mail port. • See *Voice Mail* on page 340 for more.	**VOICE MAIL PORT?** Y = Assigned as a Voice Mail port N = Not a Voice Mail port	N

Telephone Programming Instructions

1. Enter the programming mode.
2. 1802 + **HOLD**

1802:EXT OPT PART I
STATION PORT?

3. Enter the extension number (300-331) you want to program + **HOLD**
   OR
   Press **HOLD** to select extension 300.

   1802: STA PORT n
   ALLOW DND?nnn

   The previously programmed value displays.
4. Enter the Y to enable or N to disable Do Not Disturb + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current assignment unchanged

   1802: STA PORT n
   RING GROUP NUM?n

   The previously programmed value displays.
5. Enter the extension's Ring Group (1-8, 0 = Unassigned) + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged

   1802: STA PORT n
   PK-UP GROUP NUM?n

   The previously programmed value displays.
6. Enter the extension's Pickup Group (1-8, 0 = Unassigned) + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged

   1802: STA PORT n
   PRIV REL GRP NUM?nn

   The previously programmed value displays.
7. Enter the extension's Privacy Release Group (1-16, 0 = Unassigned) + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged

   1802: STA PORT n
   OHS ICM

   The previously programmed value displays.
8. Enter the Off-Hook Signaling for Intercom Calls option (0 = None, 1 = Call Wait beeps over speaker, 3 = Voice Over, + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged

   1802: STA PORT n
   OHS HL?

   The previously programmed value displays.
9. This option is currently not used. Press **VOL ▲** to leave the current entry unchanged

   1802: STA PORT n
   OHS CO

   The previously programmed value displays.
10. Enter the Off-Hook Signaling for trunk calls (0 = None, 1 = Call Wait beeps over speaker, 2 = Off-hook ringing, + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

    1802: STA PORT n

HF REPLY ON ICM?nnn

The previously programmed value displays.

11. Enter Y to enable or N to disable Handsfree Answerback + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
AUTO HANDSFREE?nnn

The previously programmed value displays.

12. Enter Y to enable or N to disable Automatic Handsfree + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
BUSY LAMP FIELD?nnn

The previously programmed value displays.

13. Enter Y to enable or N to disable the programmable key BLF mode + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
LINE DIAL UP?nnn

The previously programmed value displays.

14. Enter Y to enable or N to disable the extension's ability to dial #901-#916 + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
DIAL 9 GROUP?nn

The previously programmed value displays.

15. Enter the extension's dial 9 trunk group (0-8) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
RETAIN TRK VOL?nnn

The previously programmed value displays.

16. Enter Y to retain user setting or N to use median system setting + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
KEY ACCESS TO LN?nnn

The previously programmed value displays.

17. Enter Y to enable or N to disable programmable key access to trunks + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
PAGE ZONE MEMBER?nnn

The previously programmed value displays.

18. Enter Y to include or N to exclude the extension + **VOL ▲**
    OR

Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
BGM?nnn

The previously programmed value displays.

19. Enter Y to enable or N to disable Background Music at the extension + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
EXT'S OPERATOR?nnn

The previously programmed value displays.

20. Enter the extension's operator (300-331, 0 = Unassigned) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
RING DOWN?nnn

The previously programmed value displays.

21. Enter Y to enable or N to disable Ring Down for the extension + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
RG DN DEST?nnn

The previously programmed value displays. If you enable Ring Down, you must assign a Ring Down destination in the next step.

22. Enter the extension's Ring Down destination (24 digits max., 0 = Unassigned) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
SPDL BLOCK NUM?nn

The previously programmed value displays.

23. Enter the extension's Speed Dial block (1-57, 0 = Unassigned) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
VOICE MAIL PORT?nnn

The previously programmed value displays.

24. For analog ports, enter Y to assign or N to unassign the port as a Voice Mail port + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged

1802: STA PORT n
ALLOW DND?nnn

The previously programmed value displays.

25. Press **CONF** to select another extension port.
    OR
    Press **CONF** twice to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 1803 - Extension Line Access Assignments** to assign the incoming and outgoing trunk access for extensions.

Conditions

None

Table 43: Program 1803 - Extension Line Access Assignments

Option	Description	Entries	Default
Access Option	For each extension, use this option to assign the access option for each trunk. • See *Initial System Startup* on page 6 for more. • See *Automatic Route Selection* on page 34 for more. • See *Call Forwarding, Off-Premise* on page 46 for more. • See *Central Office Calls, Answering* on page 58 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Conference* on page 79 for more. • See *Direct Inward Dialing* on page 87 for more. • See *Direct Inward System Access (DISA)* on page 94 for more. • See *Direct Trunk Access* on page 106 for more. • See *Forced Trunk Disconnect* on page 137 for more. • See *Group Call Pickup* on page 139 for more. • See *Last Number Redial* on page 174 for more. • See *Line Keys* on page 176 for more. • See *Loop Keys* on page 179 for more. • See *Night Service / Night Ring* on page 200 for more. • See *Privacy Release Groups* on page 228 for more. • See *Private Line* on page 231 for more. • See *Save Number Dialed* on page 254 for more. • See *Speed Dial* on page 263 for more. • See *Tandem Trunking / Unsupervised Conference* on page 307 for more. • See *Tie Lines* on page 311 for more. • See *Trunk Group Routing* on page 329 for more. • See *Trunk Groups* on page 335 for more.	NO ACCESS? 0 = No access INCOMING ONLY? 1 = Incoming only OUTGOING ONLY? 2 = Outgoing only FULL ACCESS? 3 = Full access	3 (All trunks, all extensions)

Telephone Programming Instructions

1. Enter the programming mode.
2. 1803 + **HOLD**

```
1803:LINE ACCESS
STATION #?nnn
```

3. Enter the number of the station you want to program + **HOLD**
   OR
   Press **HOLD** to select extension 300.

```
1803: STA:nnn
LINE NUMBER?n
```

   The previously programmed value displays.

4. Enter the number of the trunk you want to program + **HOLD**
   OR
   Press **HOLD** to select trunk 1.

```
1803:STA:nnn   LINE:n
nnnnnnnnnnn
```

   The previously programmed value displays on the second line. The first line of the display shows the extension and trunk you are programming.

5. Enter the access option for the trunk selected (0 = No access, 1 = Incoming only, 2 = Outgoing only, 3 = Full access) + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current unchanged.

```
1803:S_PT:n   LINE:n
nnnnnnnnnnn
```

   You see the options for the next consecutive trunk. The previously programmed value displays.

6. Enter the access option for the currently selected trunk + **VOL ▲**
   OR
   Press **CONF** to select another trunk.
   OR
   Press **CONF** twice to select another extension port.
   OR
   Press **CONF** three times to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 1804 - Extension Trunk Group Access** to assign the outgoing access to trunk groups. Incoming trunk group access is always allowed.

Conditions

None

Table 44: 1804 - Extension Trunk Group Access

Option	Description	Entries	Default
Trunk Group Access	For each extension, use this option to assign outgoing access for each trunk group. • See *Initial System Startup* on page 6 for more. • See *Central Office Calls, Placing* on page 63 for more. • See *Trunk Groups* on page 335 for more.	LINE GROUP n:nnn Y = Allow N = Prevent	Y (All extensions, all trunk groups)

Telephone Programming Instructions

1. Enter the programming mode.
2. 1804 + **HOLD**

   1804:LINE GRP ACCESS
   STATION #?nnn
3. Enter the number of the extension you want to program + **HOLD**

   OR

   Press **HOLD** to select extension 300.

   1804: STA:nnn
   LINE GROUP?n

   The previously programmed value displays.
4. Enter the number of the trunk group (0-8) you want to program + **HOLD**

   OR

   Press **HOLD** to select trunk group 1.

   1804:STA:nnn GRP:n
   LINE GROUP n:nnn

   The previously programmed value displays on the second line. The first line of the display shows the extension and trunk group you are programming.
5. Enter Y to allow or N to prevent outgoing access to the trunk group selected + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current unchanged.

   1804:STA:nnn GRP:n
   LINE GROUP n:nnn

   You see the options for the next consecutive trunk group. The previously programmed value displays.

6. Enter Y to allow or N to prevent outgoing access to the trunk group selected + **VOL ▲**
   OR
   Press **CONF** to select another trunk group.
   OR
   Press **CONF** twice to select another extension.
   OR
   Press **CONF** three times to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 1805 - Ring Assignments** to set up incoming ringing for each trunk at each extension.

Conditions

None

Table 45: 1805 - Ring Assignments

Option	Description	Entries	Default
Ring Assignment	For each extension, use this option to assign the access option for each trunk. • See *Initial System Startup* on page 6 for more. • See *Central Office Calls, Answering* on page 58 for more. • See *Delayed Ringing* on page 82 for more. • See *Direct Inward Dialing* on page 87 for more. • See *Direct Inward System Access (DISA)* on page 94 for more. • See *Group Call Pickup* on page 139 for more. • See *Key Ring* on page 170 for more. • See *Line Keys* on page 176 for more. • See *Loop Keys* on page 179 for more. • See *Night Service / Night Ring* on page 200 for more. • See *Private Line* on page 231 for more. • See *Tie Lines* on page 311 for more.	1 = Lamp only (day and night) 2 = Ringing day and night 3 = Night Ring only, lamp during the day 4 = Delay ring day and night	2 (All extensions, all trunks)

Telephone Programming Instructions

1. Enter the programming mode.
2. 1805 + **HOLD**

   1805:RING ASSIGNMENT
   STATION #?n
3. Enter the number of the station you want to program + **HOLD**

   OR

   Press **HOLD** to select extension 300.

   1805: STA:nnn
   LINE NUMBER?n

   The previously programmed value displays.
4. Enter the number of the trunk you want to program + **HOLD**

   OR

Press **HOLD** to select trunk 1.

```
1805:STA:nnn   LINE:n
DAY / NITE RING
```

The previously programmed value displays on the second line. The first line of the display shows the extension and trunk you are programming.

5. For the extension and trunk selected, enter the ring option (1 = Lamp only (day and night), 2 = Ringing day and night, 3 = Night Ring only, lamp during the day, 4 = Delay ring day and night) + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current entry unchanged.

```
1805:STA:nnn   LINE:n
DAY / NITE RING
```

   You see the options for the next consecutive trunk. The previously programmed value displays.

6. Enter the ring option for the trunk + **VOL ▲**

   OR

   Press **CONF** to select another trunk.

   OR

   Press **CONF** twice to select another extension.

   OR

   Press **CONF** three times to exit the program.

— This program is not used. —

Description

LCCPU 01.00.00 | Available.

Use **Program 1807 - Extension Features (Part 2)** to additional options for extensions. Also see *Program 1801 - Extension Port Description* on page 449 and *Program 1802 - Extension Options (Part 1)* on page 455.

Conditions

None

Table 46: 1807 - Extension Features (Part 2)

Option	Description	Entries	Default
Station Voice Announced Intercom Calls	Use this option to enable or disable incoming voice-announced Intercom calls while the extension is ***not*** in the headset mode. If disabled, all Intercom calls to the extension ring. • See *Handsfree and Handsfree Answerback* on page 150 for more.	**STA VOICE CALL**	Y
Headset Voice-Announced Intercom Calls	Use this option to enable or disable incoming voice-announced Intercom calls while the extension is in the headset mode. • See *Headset Compatibility* on page 154 for more. •	**HDSET VOICE CALL?** Y = Enable N = Disable	Y
Paging Through Speaker	Use this option to enable or disable Paging through the telephone speaker. • See *Paging* on page 214 for more.	**PAGE THRU SPK?** Y = Enable N = Disable	Y
Headset	Use this option to enable or disable the Headset mode. • See *Group Listen* on page 142 for more. • See *Headset Compatibility* on page 154 for more.	**HEADSET?** Y = Enable N = Disable	N
Ringing Line Preference	Use this option to enable or disable Ringing Line Preference. • See *Ringing Line Preference* on page 251 for more.	**RING LINE PREF?** Y = Enable (i.e., enable Ringing Line Preference) N = Disable (i.e., enable idle line preference)	N
Hunt Type	Use this option to assign the hunt type for the extension. • See *Extension Hunting* on page 121 for more.	**HUNT TYPE?** 0 = None 1= Trunk RNA 2 = T Busy RNA 3 = A Busy RNA 4 = Trunk Busy 5 = UCD 6 = ACD	None

Table 46: 1807 - Extension Features (Part 2)

Option	Description	Entries	Default
Hunt Destination	(For type 1-4 hunting only) Use this option to assign the next extension in a Circular or Terminal Hunt group. • See *Extension Hunting* on page 121 for more.	**HUNT DEST?** 300-331 CLEAR = Undefined	Undefined
Hunt Master Number	(For type 5 and 6 hunting only) Use this option to assign the hunt group master number to the member extension. These numbers are set up in *0510 - ACD/UCD Master Extension Numbers and Names* on page 402. • See *Extension Hunting* on page 121 for more.	**ENTER MASTER NUM:** Any valid master number CLEAR = Undefined	Undefined
Prime Line Key	Use this option to assign a trunk as the extension's Prime Line. You enter the Prime Line's key number (1-24). • See *Prime Line Preference* on page 223 for more.	**PRIME LINE KEY?** 1-16 0 = Unassigned	0
Walking Class of Service Security Code	• This option is currently not used.	**W-COS CODE?** 8-digits long, using 0-9, # and *.	No entry

Telephone Programming Instructions

1. Enter the programming mode.
2. 1807 + **HOLD**

   1807:EXT OPT PART II
   STATION PORT?n
3. Enter the number of the station port you want to program (1-32) + **HOLD**

   OR

   Press **HOLD** to select port 1 (extension 300).

   1807:STA PORT:n
   HDSET VOICE CALL?nnn

   The previously programmed value displays. The top line of the display indicates the extension port you are programming.
4. Enter Y to enable or N to disable incoming voice-announced Intercom calls while the extension is in the headset mode + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current entry unchanged.

   1807:STA PORT:n
   PAGE THRU SPK?nnn

   The previously programmed value displays.
5. Enter Y to enable or N to disable Paging through the telephone speaker + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current entry unchanged.

   1807:STA PORT:n

WHISPER PAGE?nnn

The previously programmed value displays.

6. Enter Y to enable or N to disable Voice Over + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged.

1807:STA PORT:n
HEADSET?nnn

The previously programmed value displays.

7. Enter Y to enable or N to disable the headset mode + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged.

1807:STA PORT:n
RING LINE PREF?nnn

The previously programmed value displays.

8. Enter Y to enable or N to disable Ringing Line Preference + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged.

1807:STA PORT:n
PRIME LINE PREF?n

The previously programmed value displays.

9. Enter the extension's Prime Line trunk assignment (1-16, 0 = Unassigned) + **VOL ▲**
   OR
   Press **VOL ▲** to leave the current entry unchanged.

1807:STA PORT:n
LINE PREF TYPE?n

The previously programmed value displays.

10. Enter the extension's Prime Line trunk group assignment (0-8) + **VOL ▲**
    OR
    Press **VOL ▲** to leave the current entry unchanged.

1807:STA PORT:n
HDSET VOICE CALL?nnn

The previously programmed value displays.

11. Enter Y to enable or N to disable the headset mode for the extension + **VOL ▲**
    OR
    Press **CONF** to select another extension port.
    OR
    Press **CONF** twice times to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 9801 - Copy Command** to copy Class of Service, extension and trunk data. You can copy data from a single source to a single destination, or from a single source to a range of COSs, extensions or trunks.

Program 9801 - Copy Command will copy data in the following programs:

Program 0101: Class of Service Options
Program 1001: Trunk Port Description
Program 1003: Trunk Options
Program 1701: Programmable Function Key Assignments
Program 1702: Personal Speed Dial
Program 1703: DSS Key Assignment
Program 1801: Extension Port Description
Program 1802: Extension Options (Part 1)
Program 1803: Extension Line Access Assignments
Program 1804: Extension Trunk Group Access
Program 1805: Ring Assignments
Program 1807: Extension Options (Part 2)

Conditions

None

Telephone Programming Instructions

1. Enter the programming mode.
2. 9801 + **HOLD**

   ```
   9801:COPY COMMAND
   ENTER PGM#
   ```

3. Enter the number of the program in which you want to copy data.

   ```
   COPY:    nnnn
   SOURCE  nnnn
   ```

   COPY displays the program you selected. SOURCE will display the trunk or extension that will be the source for the copied data.
4. Enter the source (extension or trunk) from which you want to copy data + HOLD.

   ```
   COPY (program)   (source)
   DEST RANGE
   ```

5. If copying to a single destination, enter the destination trunk or extension number.
   OR
   If copying to a range of extensions or trunks, enter the ***lowest*** numbered extension or trunk in the range.
6. Press **HOLD**.

   ```
   COPY (program)   (source)
   DEST RANGE  nnn-
   ```

7. If copying to a single destination, enter the enter the same destination trunk or extension you entered in step 5 above.

OR

If copying to a range of extensions or trunks, enter the ***highest*** numbered extension or trunk in the range.

8. Press **HOLD**.

```
COPY (program)   (source)
COPY COMPLETE!
```

9. Press **CONF** to select another program to copy.

   OR

   Press **CONF** twice to exit the program.

9901 - Reset Station Port

Description

LCCPU 01.00.00 | Available.

Use **Program 9901 - Reset Station Port** to reset an extension. This program also gives you the option of reviewing the status of the extension before you reset it.

Conditions

None

Telephone Programming Instructions

1. Enter the programming mode.
2. 9901 + **HOLD**

   9901:RESET STA PORT
   STATION PORT?n
3. Enter the number of the station port you want to program (1-32) + **HOLD**

   OR

   Press **HOLD** to select port 1 (extension 300).

   9901:STA PORT:n
   EXT:nnnn

   The first line of the display indicates the station port you have selected.
4. Press **VOL ▲**.

   9901:STA PORT:n
   NAME:nnnnnnnnnn

   The extension's name displays.
5. Press **VOL ▲**.

   9901:STA PORT:n
   RESET STA PT?nnn
6. Enter Y + **VOL ▲** to reset the station port.

   OR

   Enter N + **VOL ▲** to skip to the next station port without resetting the port.

Description

LCCPU 01.00.00	Not available.

9903 - System and PCB Reset

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00	Not available.

Description

LCCPU 01.00.00 | Available.

Use **Program 9905 - Password** to change the system passwords. The table below shows the default system passwords. Turn to *System Programming List* on page 289 for more on the system passwords.

Table 47: Password Levels

Password Level	Password	Level
System Administrator 1	0000	1
System Administrator 2	9999	2
Installer	372000	3

Conditions

None

Telephone Programming Instructions

1. Enter the programming mode.
2. 9905 + **HOLD**

   9905:SYS PASSWORD
   ENTER PSWD LEVEL?
3. Enter the level (1-3) for the password you want to change + **VOL ▲**

   9905:SYS PASSWORD
   LVL x?nnnnnnnnnnnnn

   The level selected and previously programmed password displays.
4. Enter the password for the level selected + **VOL ▲**

   OR

   Press **VOL ▲** to leave the current entry unchanged.

   9905:SYS PASSWORD
   ENTER PSWD LEVEL?
5. Repeat from step 3 to enter another password level.

   OR

   Press **CONF** to exit the program.

Description

LCCPU 01.00.00 | Available.

Use **Program 9906 - Database Save** to back up site data to PC Card P/N 85880 or P/N 80050-V**.**. Refer to your Hardware Manual for the specifics.

Conditions

The following table lists the PC Card Backup Error Messages that you may see when using the instructions below.

This error message:	Means this:
No PCCARD	The PC Card is not installed. *Install the PC Card and try again.*
ERASE FAILED	The system could not overwrite an existing data base on the PC Card. *Repeat the procedure. If you get the message again, try another PC Card.*
SAVE FAILED	The system could not save data to the PC Card. *Repeat the procedure. Of you get the error message again, try another PC Card.*

Telephone Programming Instructions

1. Insert the PC Card into the CPU.
   Refer to the Hardware Manual for additional information.
2. Be sure the CPU mode switch is set to **RUN**.
3. Enter the programming mode.
4. 9906 + **HOLD**

   9906:DATABASE SAVE START?
5. Enter Y + **HOLD**.

   9906:DATABASE NAME

   To quit program 9906 instead, enter N + HOLD.
6. Enter a name for the database you want to save (up to 10 characters long).

   9906:DATABASE NAME (name)

   Refer to Programming Names and Text Messages on page 361 *if you need help when entering names.*
   Skip this step if you want to save data in an address that already has a name assigned.
7. When you are done entering the name, press **HOLD**.

   9906:DB 00 (time) (name) (date)

You see the address, name and date of the first data base stored. If you data bases are stored, you see:

```
9906:DB 00
(empty)
```

8. The system assigns the name you entered in step 7 to the address you select below:
   - Press VOL ▲ or VOL ▼ to scroll through the 12 data base addresses (DB 00 through DB 11)
     OR
   - Skip this step to select the currently displayed data base.
9. Press **HOLD**.

   Normally, you see:

```
9906:SAVING
. . . . . .
```

   The PC Card Active LED is on during backup.
   If the address you choose already has data stored in it. you see:

```
9906:DATABASE SAVE
REPLACE DB nn Y/N
```

   - Press N + **HOLD** to back up to step 5.
     OR
   - Press Y + **HOLD** to proceed.
     You automatically exit programming when the upload completes.

Description

LCCPU 01.00.00 | Available.

Use **Program 9907 - Database Load** to load site data previously saved to PC Card P/N 85880 or P/N 80050-V**.** into the system data base. Refer to your Hardware Manual for the specifics.

Conditions

The following table lists the PC Card Load Error Messages that you may see when using the instructions below.

This error message:	Means this:
No PCCARD	The PC Card is not installed. *Install the PC Card and try again.*
NO DATABASE	There is no data stored in the data base address you selected. *Select another data base address and try again.*

Telephone Programming Instructions

1. Insert the PC Card into the CPU.
   Refer to the Hardware Manual for additional information.
2. Be sure the CPU mode switch is set to **RUN**.
3. Enter the programming mode.
4. 9907 + **HOLD**

   9907:DATABASE LOAD
   START?

5. Enter Y + **HOLD**.

   9907:DB 00 (time)
   (name) (date)

   You see the name and date of the first data base stored. If no data bases are stored, you see:

   9907:DB 00
   (empty)

6. Press VOL ▲ or VOL ▼ to scroll through the 12 data base addresses (DB 00 through DB 11) and select the one you want to restore.
7. When the data base you want to restore displays, press **HOLD**.
   The PC Card Active LED is on during restore.
   You automatically exit programming when the upload completes.

Description

LCCPU 01.00.00 | Available.

Use **Program 9999 - System Initialization** to initialize the system database.

! Warning!
Initializing the system erases all your programmed entries and replaces them with the factory-installed default values.

Conditions

None

Telephone Programming Instructions

1. Enter the programming mode.
2. 9999 + **HOLD**

   9999:INITIALIZATION
   INITIALIZE SYS?nnn
3. Enter Y + **HOLD** to initialize the system.

   OR

   Enter N + **HOLD** to exit the program without initializing.

   If you enter Y, the system will initialize with the factory-installed default and return to the idle state.

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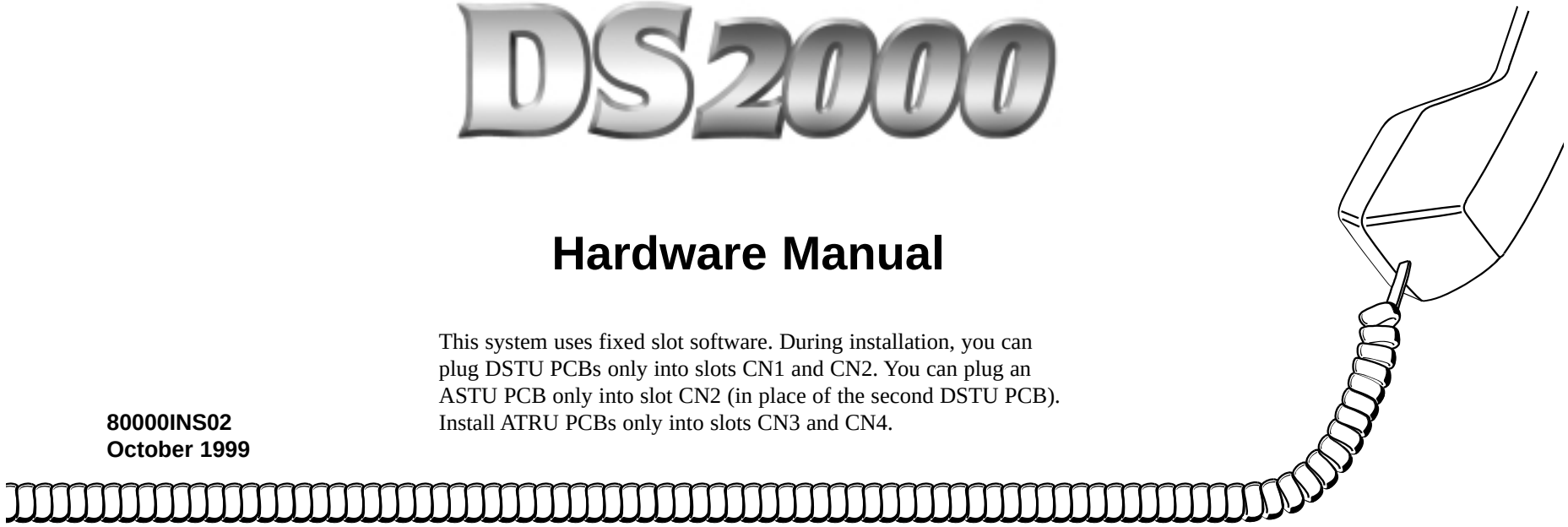
Nitsuko

DS2000

Hardware Manual

This system uses fixed slot software. During installation, you can plug DSTU PCBs only into slots CN1 and CN2. You can plug an ASTU PCB only into slot CN2 (in place of the second DSTU PCB). Install ATRU PCBs only into slots CN3 and CN4.



80000INS02
October 1999

10/13/99

1. Installing the Cabinet | 2. PCB Installation | 3. Installing Extensions and Trunks | 4. Optional Equipment | 5. Maintenance Options and SMDR | 6. Specifications and Parts

This manual has been developed by Nitsuko America. 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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Attention: Manager, Technical Publications

Nothing contained in this guide shall be deemed to be, and this guide does not constitute, a warranty of, or representation with respect to, any of the equipment covered. This guide is subject to change without notice and Nitsuko America has no obligation to provide any updates or corrections to this guide. Further, Nitsuko America also reserves the right, without prior notice, to make changes in equipment design or components as it deems appropriate. No representation is made that this guide is complete or accurate in all respects and Nitsuko America shall not be liable for any errors or omissions. In no event shall Nitsuko America be liable for any incidental or consequential damages in connection with the use of this guide.

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Year 2000 Compliance

The DS2000 is unaffected by the date change to year 2000. The system processes the Leap Year correctly and does not require any additional upgrades or reprogramming.

Section 1, INSTALLING THE CABINET

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— For Your Notes —

INSTALLING THE CABINET

Unpacking

Unpack the equipment and check it against your equipment lists. Inspect for physical damage. If you are not sure about a component's function, review the Product Description Manual. Contact your Sales Representative if you have additional questions.

Have the appropriate tools for the job on hand, including: a test set, a punch down tool and a digital voltmeter.

Before Installing

Make sure you have a building plan showing the location of the common equipment, extensions, the telco demarcation and earth ground. In addition, the installation site must meet the requirements outlined in the Standard Practices Manual.

Site Requirements

The common equipment is contained in the wall-mounted Main Equipment Cabinet. Choose a central location for the cabinet that allows enough space for the equipment — and provides enough room for you to comfortably work. The Installation Layout (Figure 1-1 on the next page) shows you *about* how much space your system requires.

INSTALLING THE CABINET

Planning the Installation (Figure 1-1)

Before installing the common equipment, you should mount a Main Distribution Frame (MDF) plywood backboard in a centrally located spot. A 1/2 sheet of plywood (4’ x 4’) should be more than adequate. Mount this backboard using suitable fasteners, taking care to adhere to standard installation practices and local codes.

The equipment cabinet requires a three-prong, dedicated 110 VAC 60 Hz circuit (NEMA 5-15 receptacle) located within 7 feet of the AC receptacle.

Normally, you install the extension and trunk blocks to the right of the Main Cabinet. Telco should also install the RJ21X to the right of the Main Cabinet.

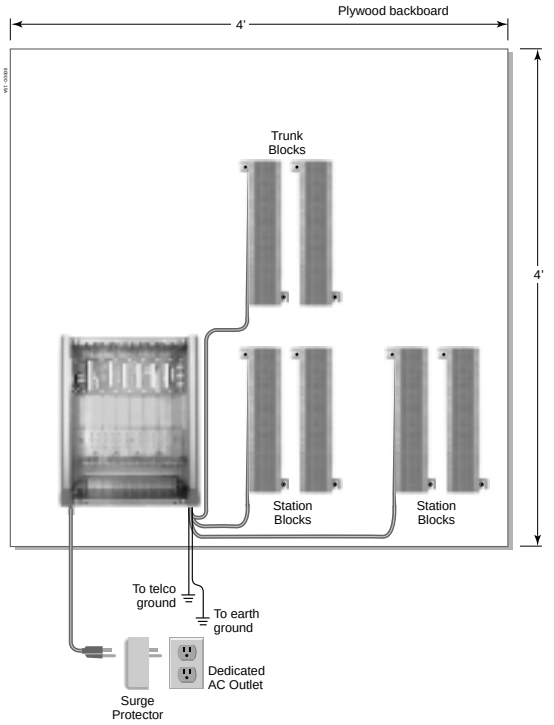

Figure 1-1 INSTALLATION LAYOUT

INSTALLING THE CABINET

Removing the Cover (Figure 1-2)

Before wall-mounting, remove the cover on the Main Equipment Cabinet.

1. Unscrew the two captive screws on the front of the cabinet cover.
2. Lift up slightly on the front of the cover — then gently slide the cover back to remove it.

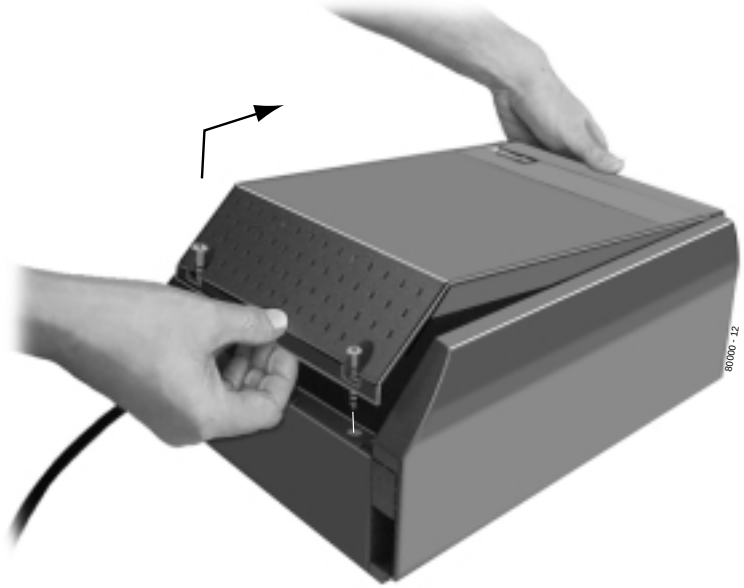

Figure 1-2 REMOVING THE COVER

INSTALLING THE CABINET

Unpacking the Wall Mount Bracket (Figure 1-3)

The wall mount bracket and screws are taped to the packing material in the Main Equipment Cabinet box. Unpack the wall mount bracket and mounting screws.

Figure 1-3 WALL MOUNT BRACKET

Mounting the Wall Mount Bracket (Figure 1-4)

Mount the wall mount bracket on the MDF in a convenient location, about 12” higher than where you want the bottom of the cabinet to line up.

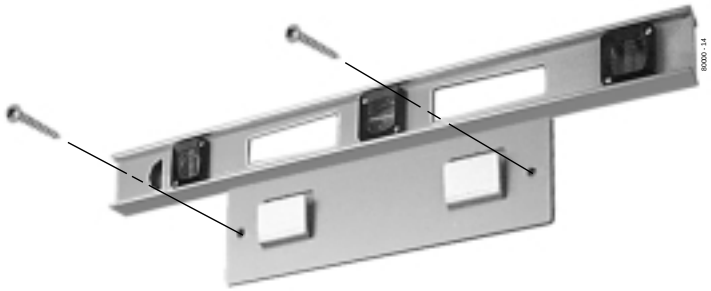

Figure 1-4 MOUNTING THE WALL MOUNT BRACKET

INSTALLING THE CABINET

Hanging the Cabinet (Figure 1-5)

1. Hang the Main Equipment Cabinet on the wall mount hanger as shown at right.
2. Using the remaining two screws that were packed with the hanger, secure the cabinet to the plywood backboard.

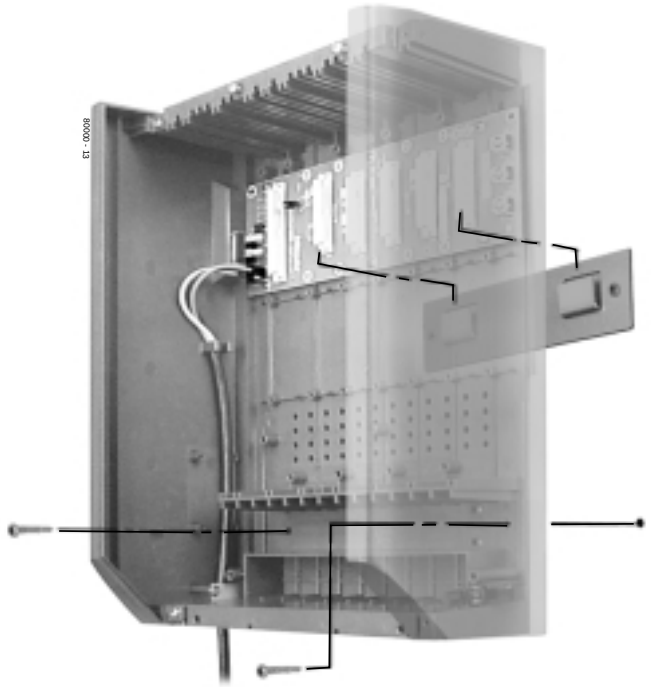

Figure 1-5 HANGING THE CABINET

GROUNDING THE CABINET

Removing the Right Side Panel (Figure 1-6)

Remove the cabinet right side panel to gain easy access to the ground lugs and system cabling. The cabinet has two ground connections: ETH (Earth Ground) and PBXG (PBX Ground).

1. Remove the two screws that secure the right side panel to the cabinet.
2. Carefully slide the right side panel down until it swings clear of the cabinet.

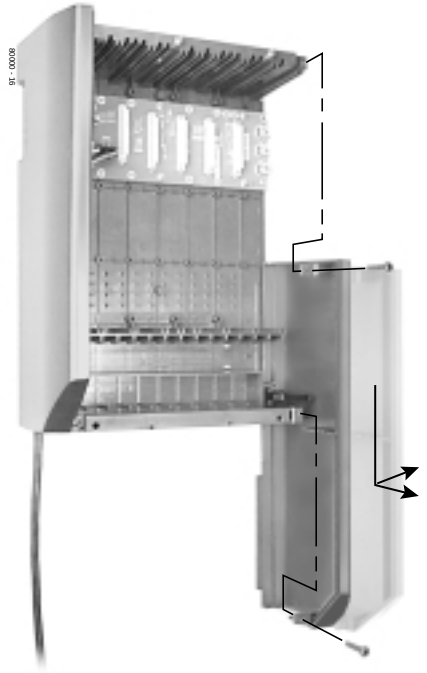

Figure 1-6 REMOVING THE SIDE PANELS

GROUNDING THE CABINET

Attaching the Ground Wires (Figures 1-7 and 1-8)

The system provides two ground terminations. Each ground connects from the system to the ground termination using 12 AWG stranded copper wire (see Figure 1-7).

- ●. Use the ETH (Earth Ground) for safety/system ground. You ***must*** connect ETH to a known earth ground.
- ●. Use the PBXG (PBX Ground) if you have trunks that require telco ground (such as ground start trunks). This ground is not required for loop start trunks.

1. Remove the lug on the ground connection you want to connect.
2. Following Figure 1-8, run the ground wire(s) through the RFI Suppressor Assembly as shown.
3. *For Earth Ground:*
   Run a ground wire from the ETH lug to a known earth ground.
   For PBX Ground:
   Run a ground wire from the PBXG lug to the telco ground.
4. Crimp ring terminals as required to the ground wires.
5. Reinstall and firmly tighten the lug(s) removed in step 1 above.

Do not plug in the power cord or reinstall the right side panel until all PCB installation and cabling are complete.

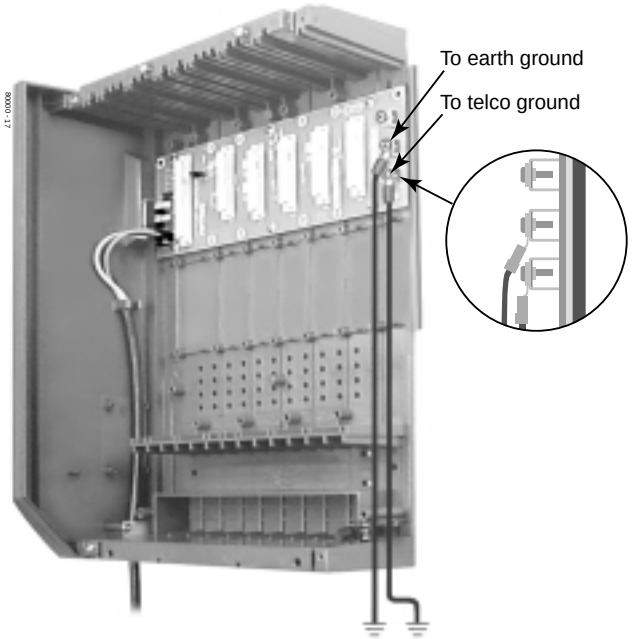

Figure 1-7 ATTACHING THE GROUND WIRES

GROUNDING THE CABINET

!! Install RFI Suppressor Assemblies as shown below !!

You must install separate RFI Suppressor Assemblies for the ground wire, the CPU connections (i.e., mod jack and RS-232 cables), each trunk cable and each station cable. The suppressors ***must*** be mounted inside the cabinet and as close to the appropriate PCB as possible.

Figure 1-8 INSTALLING THE RFI SUPPRESSOR

POWER SUPPLY INSTALLATION

Installing the Power Supply (Figures 1-9 and 1-10)

The power supply provides the DC power sources required to operate the system:

1. Slide the power supply into the CN101 slot as shown at right.
2. Using a long-shaft phillips head screwdriver, tighten the two screws that secure the power supply.

Figure 1-9 POWER SUPPLY

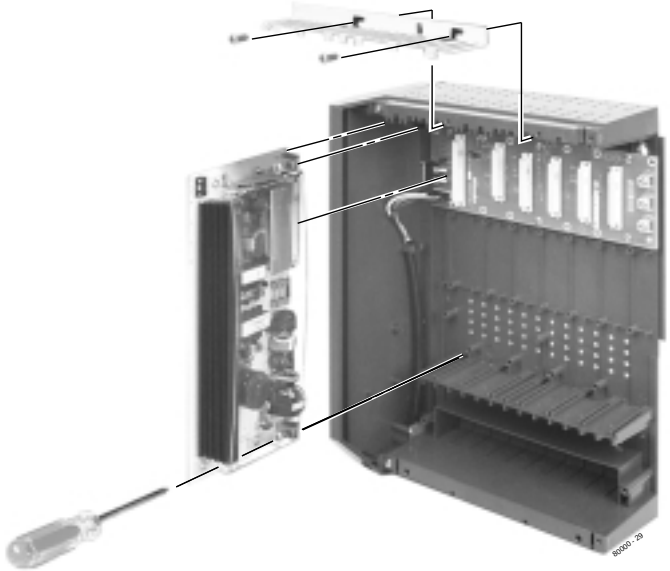

Figure 1-10 Installing the Power Supply

System Configuration

Your cabinet uses fixed slot software. This means:

- You can plug DSTU PCBs only into slots CN1 and CN2.
- You can plug an ASTU PCB only into slot CN2 (in place of the second DSTU PCB).
- Install ATRU PCBs only into slots CN3 and CN4.

Load Factor

- Load factor in your fixed slot system is an issue only if you have DSS Consoles and 2-OPX Modules installed (see the load factor chart below). ***Exceeding the load factor will cause your system's power supply to automatically shut down.***
- The maximum configuration of your fixed slot system is **16 trunks** and **32 extensions**.

System Load Factor Calculations

Item	Load Factor	Qty	Total Load
16DSTU PCB	16	___	___
4ASTU PCB	8	___	___
8ASTU PCB	12	___	___
110-Button DSS	2	___	___
24-Button DSS	1	___	___
2-OPX Module	3	___	___
Total load for this configuration (Cannot exceed 48)			___

Section 2, PCB INSTALLATION AND STARTUP

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!! Important !!

Install telephones connected to DSTU and ASTU PCBs as on-premise extensions only.

PCB LOCATION

Where to Install the PCBs (Figure 2-1)

Maximum Configuration:	**16 Trunks**
	32 Extensions

Follow the chart below and Figure 2-1 when installing PCBs.

Item	Description	Location	Max.
CPU	Central Processing Unit	CN0	1
16DSTU	16 Digital Stations	CN1 and CN2	2
ASTU	4 or 8 Analog Stations	CN2	1
8ATRU	8 Analog Trunks	CN3 and CN4	2

Caution

Do not plug in the CPU PCB hot (i.e., with the system power applied).

You can plug in ASTU and ATRU PCBs hot as required.

You can plug in DSTU PCBs hot provided you first disconnect the station cabling from the PCB.

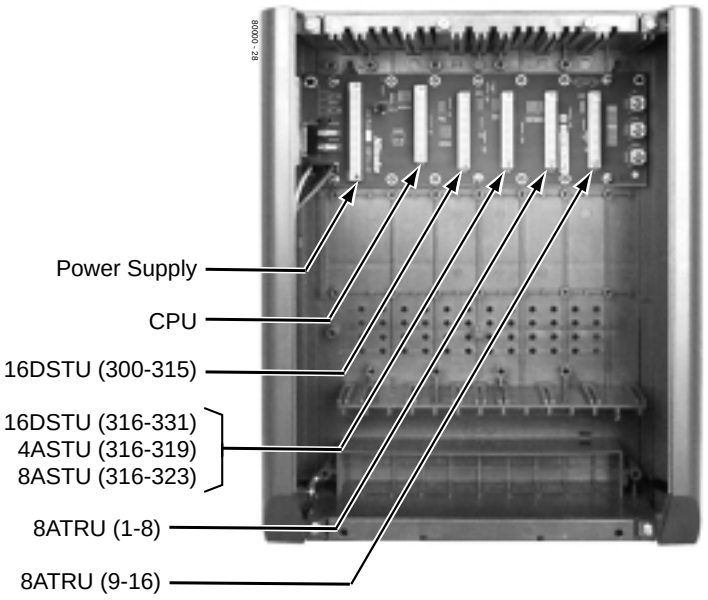

Figure 2-1 PCB LOCATION

Central Processing Unit (CPU) PCB (Figure 2-2)

The CPU provides:

- The system's central processing, stored program and memory for the customer's site-specific data.
- PC Card interface.
- Conference circuits, DTMF receivers and DTMF generators.
- External music input and on-board synthesized music source.
- External paging output and associated relay.
- Real Time Clock
- Battery for short term (14 day) backup of the customer's site-specific data.

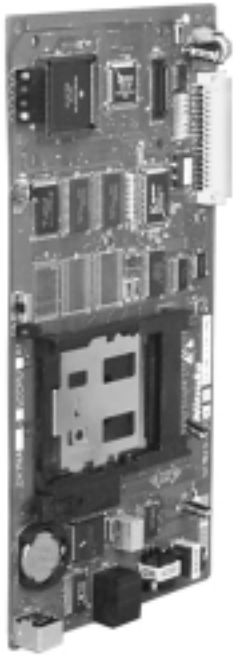

Figure 2-2 CPU PCB

INSTALLING PCBs

Installing the CPU (Figures 2-3 and 2-4)

CPU PCB installs in the CN0 slot in the Main Equipment Cabinet.

● **To install the CPU PCB:**

1. Slide the Mode Switch to the RUN position (see Figure 2-3).
2. Insert the battery into the battery clips.
3. Plug the CPU into slot CN0 (see Figure 2-4).

Refer to *Part 4, Installing Optional Equipment* for instructions on connecting the music source, External Paging and the auxiliary relay.

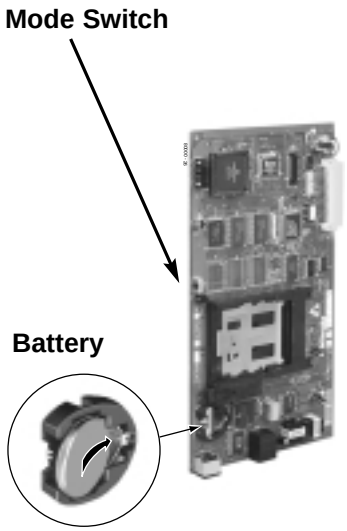

Figure 2-3 Setting up the CPU

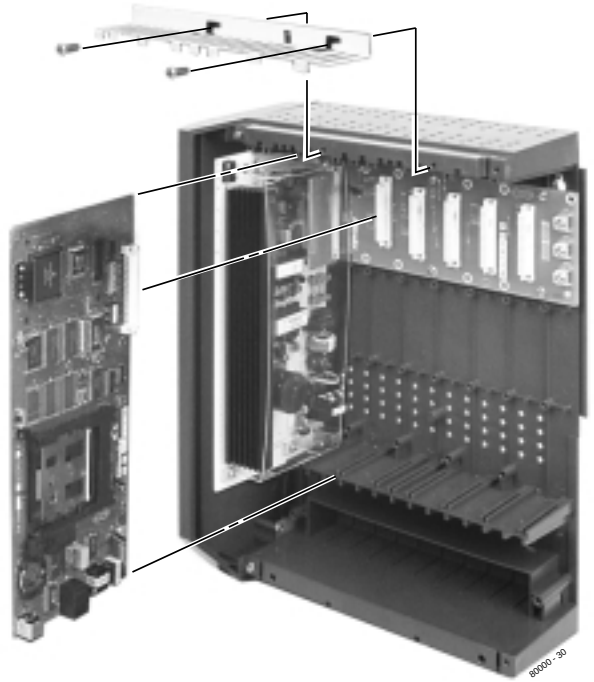

Figure 2-4 INSTALLING THE CPU

INSTALLING PCBs

Digital Station (16DSTU) PCB (Figures 2-5 and 2-6)

The 16DSTU provides connection for 16 digital telephones. Refer to *Section 3, Installing Extensions and Trunks* for wiring instructions.

● To install the 16DSTU PCB:

1. Plug the 16DSTU PCB for extensions 300-315 into slot CN1.
2. Plug the 16DSTU PCB for extensions 316-331 into slot CN2.
3. Set the mode switch on each installed 16DSTU to RUN.

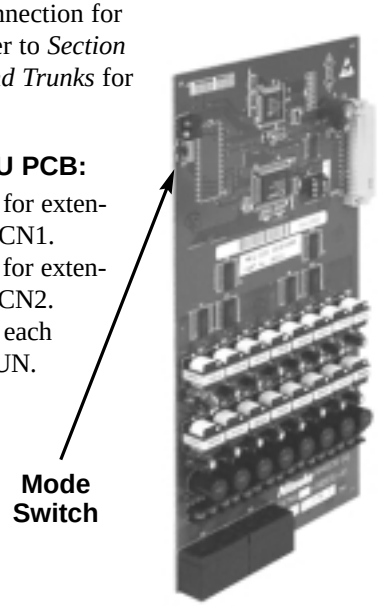

Figure 2-5 DIGITAL STATION (16DSTU) PCB

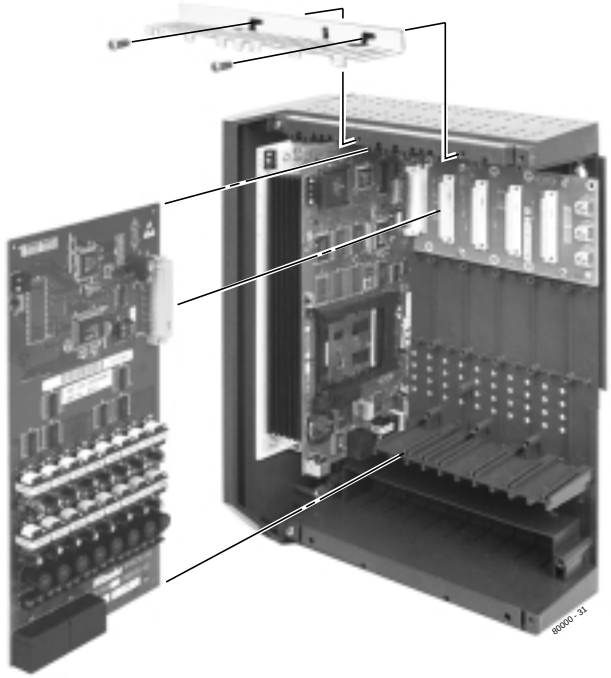

Figure 2-6 INSTALLING THE 16DSTU PCB

Analog Station (8ASTU and 4ASTU) PCBs
(Figures 2-7 and 2-8)

The 8ASTU PCB provides connection for 8 analog extensions. The 4ASTU PCB provides connection for 4 analog extensions. Refer to *Section 3, Installing Extensions and Trunks* for wiring instructions.

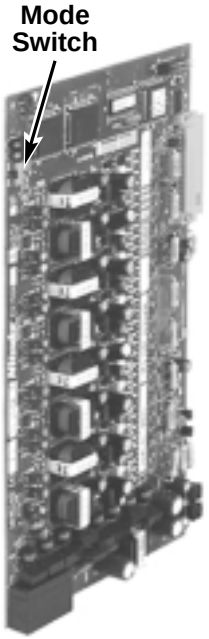

Figure 2-7 ANALOG STATION (ASTU) PCB

● To install the ASTU PCB:

1. Plug the ASTU PCB into slot CN2.
   With an 8ASTU PCB, this provides extensions 316-323.
   With a 4ASTU PCB, this provides extensions 316-319.
   You should reserve slot CN1 for a 16DSTU PCB.
2. Set the mode switch on the ASTU to RUN.

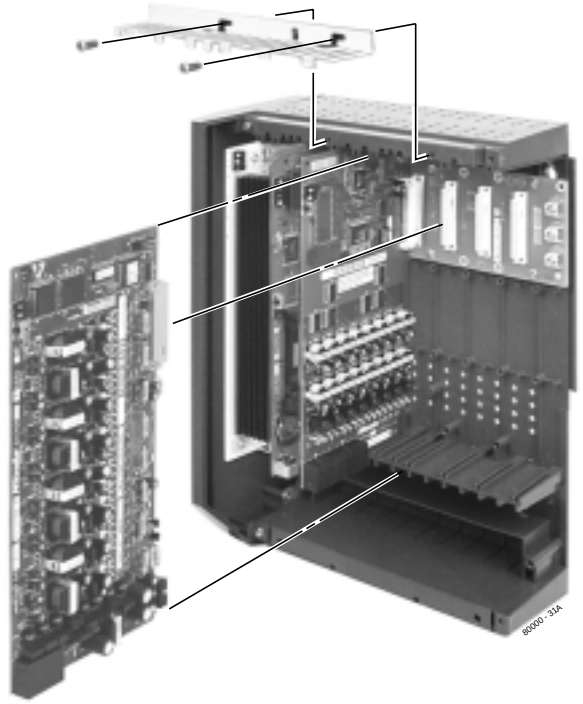

Figure 2-8 INSTALLING THE ASTU PCB

Analog Trunk (8ATRU) PCB (Figures 2-9 and 2-10)

The 8ATRU provides connection for 8 loop start analog trunks. Refer to *Section 3, Installing Extensions and Trunks* for wiring instructions.

● **To install the 8ATRU PCB:**

1. Plug the 8ATRU PCB for trunks 1-8 into slot CN3.
2. Plug the 8ATRU PCB for trunks 9-16 into slot CN4.
3. Set the mode switch on each installed 8ATRU to RUN.

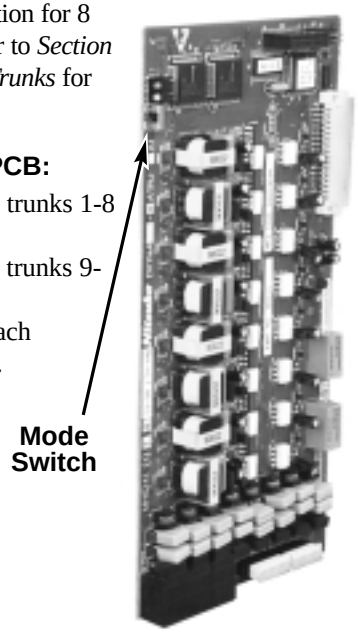

Figure 2-9 ANALOG TRUNK (8ATRU) PCB

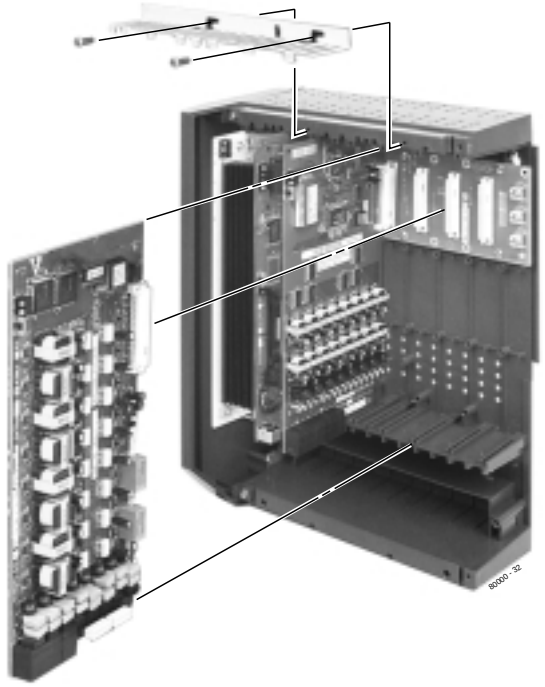

Figure 2-10 INSTALLING THE 8ATRU PCB

CONNECTING BLOCKS

Working With 8-Pin Jacks

The system uses 8-pin mod jacks to connect extensions, trunks and optional equipment. Using the Installation Cable (P/N 80892) makes it easy to connect the PCBs to standard 66M1-50 connecting blocks. These cables have 6 8-pin modular jacks on one end and are unterminated on the other. In general, each cabinet needs:

- One 66M1-50 block and Installation Cable (P/N 80892) for extensions and optional equipment.
- One 66M1-50 block and Installation Cable (P/N 80892) for trunks.

Note: Depending on your PCB configuration and local codes, you may need an additional 66M1-50 block and Installation Cable (P/N 80892) for optional equipment.

Punching Down the Cables (Figures 2-11 to 2-14)

The Installation Cables have 6 8-pin jacks installed on one end and are unterminated on the other. Each 8-pin jack connects 4 extensions or 4 trunks.

1. For each 66M1-50 block, punch down the Installation Cable in standard color-code order.
   - Use Figure 2-11 when connecting extensions.
   - Use Figure 2-12 when connecting trunks.
2. After you have punched down your cables, route them through the side of the cabinet and secure them with the strain relief (Figure 2-13).
3. Following Figure 2-14, snap an RFI Suppressor Assembly around each 50-pin cable.

Making your own Cables (Figure 2-15)

If you want to make your own cables (instead of using Installation Cable P/N 80892), follow the pinouts in Figure 2-15.

CONNECTING BLOCKS

Extensions 300-323 Shown

RJ61X	25-PAIR CABLE			
	BLOCK TERM	COLOR CODE	FUNCTION	RJ-61X
1	1	WHT-BLU	300 T	5
	2	BLU-WHT	300 R	4
	3	WHT-ORN	301 T	3
	4	ORN-WHT	301 R	6
	5	WHT-GRN	302 T	2
	6	GRN-WHT	302 R	7
	7	WHT-BRN	303 T	1
	8	BRN-WHT	303 R	8
2	9	WHT-SLT	304 T	5
	10	SLT-WHT	304 R	4
	11	RED-BLU	305 T	3
	12	BLU-RED	305 R	6
	13	RED-ORN	306 T	2
	14	ORN-RED	306 R	7
	15	RED-GRN	307 T	1
	16	GRN-RED	307 R	8
3	17	RED-BRN	308 T	5
	18	BRN-RED	308 R	4
	19	RED-SLT	309 T	3
	20	SLT-RED	309 R	6
	21	BLK-BLU	310 T	2
	22	BLU-BLK	310 R	7
	23	BLK-ORN	311 T	1
	24	ORN-BLK	311 R	8
4	25	BLK-GRN	312 T	5
	26	GRN-BLK	312 R	4
	27	BLK-BRN	313 T	3
	28	BRN-BLK	313 R	6
	29	BLK-SLT	314 T	2
	30	SLT-BLK	314 R	7
	31	YEL-BLLU	315 T	1
	32	BLU-YEL	315 R	8
5	33	YEL-ORN	316 T	5
	34	ORN-YEL	316 R	4
	35	YEL-GRN	317 T	3
	36	GRN-YEL	317 R	6
	37	YEL-BRN	318 T	2
	38	BRN-YEL	318 R	7
	39	YEL-SLT	319 T	1
	40	SLT-YEL	319 R	8
6	41	VIO-BLU	320 T	5
	42	BLU-VIO	320 R	4
	43	VIO-ORN	321 T	3
	44	ORN-VIO	321 R	6
	45	VIO-GRN	322 T	2
	46	GRN-VIO	322 R	7
	47	VIO-BRN	323 T	1
	48	BRN-VIO	323 R	8
	49	VIO-SLT	NC	
	50	SLT-VIO	NC	

80000 - 19A

Figure 2-11 CONNECTING EXTENSIONS

For Power Failure Telephone connections, refer to *Section 4, Optional Equipment*.

Trunks 1-16

RJ61X	25-PAIR CABLE			
	BLOCK TERM	COLOR CODE	FUNCTION	RJ-61X
1	1	WHT-BLU	1 T	5
	2	BLU-WHT	1 R	4
	3	WHT-ORN	2 T	3
	4	ORN-WHT	2 R	6
	5	WHT-GRN	3 T	2
	6	GRN-WHT	3 R	7
	7	WHT-BRN	4 T	1
	8	BRN-WHT	4 R	8
2	9	WHT-SLT	5 T	5
	10	SLT-WHT	5 R	4
	11	RED-BLU	6 T	3
	12	BLU-RED	6 R	6
	13	RED-ORN	7 T	2
	14	ORN-RED	7 R	7
	15	RED-GRN	8 T	1
	16	GRN-RED	8 R	8
3	17	RED-BRN	9 T	5
	18	BRN-RED	9 R	4
	19	RED-SLT	10 T	3
	20	SLT-RED	10 R	6
	21	BLK-BLU	11 T	2
	22	BLU-BLK	11 R	7
	23	BLK-ORN	12 T	1
	24	ORN-BLK	12 R	8
4	25	BLK-GRN	13 T	5
	26	GRN-BLK	13 R	4
	27	BLK-BRN	14 T	3
	28	BRN-BLK	14 R	6
	29	BLK-SLT	15 T	2
	30	SLT-BLK	15 R	7
	31	YEL-BLLU	16 T	1
	32	BLU-YEL	16 R	8
NC	33	YEL-ORN		5
	34	ORN-YEL		4
	35	YEL-GRN		3
	36	GRN-YEL		6
	37	YEL-BRN		2
	38	BRN-YEL		7
	39	YEL-SLT		1
	40	SLT-YEL		8
	41	VIO-BLU		5
	42	BLU-VIO		4
	43	VIO-ORN		3
	44	ORN-VIO		6
	45	VIO-GRN		2
	46	GRN-VIO		7
	47	VIO-BRN		1
	48	BRN-VIO		8
	49	VIO-SLT		
	50	SLT-VIO		

80000 - 20

Figure 2-12 CONNECTING TRUNKS

CONNECTING BLOCKS

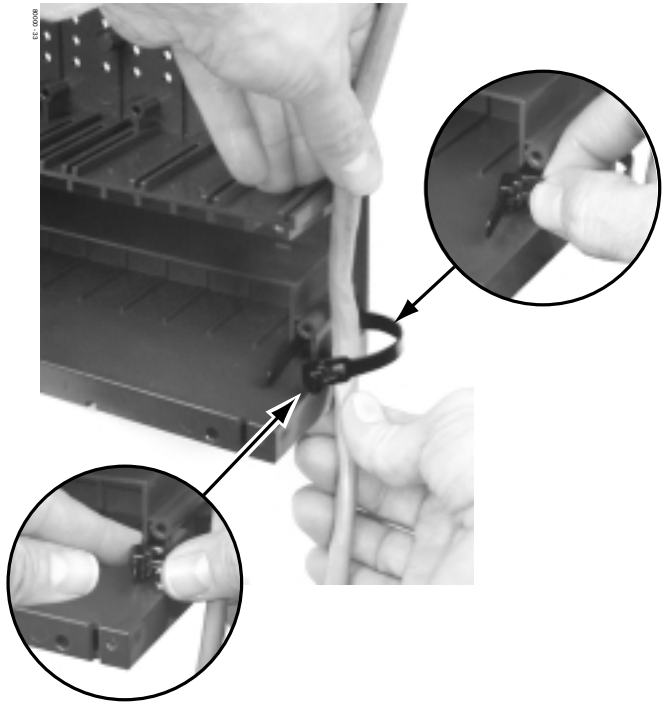

Figure 2-13 SECURING THE CABLES

!! Install RFI Suppressor Assemblies as shown below !!

You must install separate RFI Suppressor Assemblies for the ground wire, the CPU connections (i.e., mod jack and RS-232 cables), each trunk cable and each station cable. The suppressors ***must*** be mounted inside the cabinet and as close to the appropriate PCB as possible.

Figure 2-14 INSTALLING THE RFI SUPPRESSOR

CONNECTING BLOCKS

The following products should help if you make your own cables:

- Suttle SE-266-8K 8 Position Modular Plug (requires an SE-166 or SE-166-6 modular crimping tool).
- Hubbell BRFTP4P Snap-On 8 Position Modular Plug (does not require a special crimping tool).

Check with your local supplier for other comparable products.

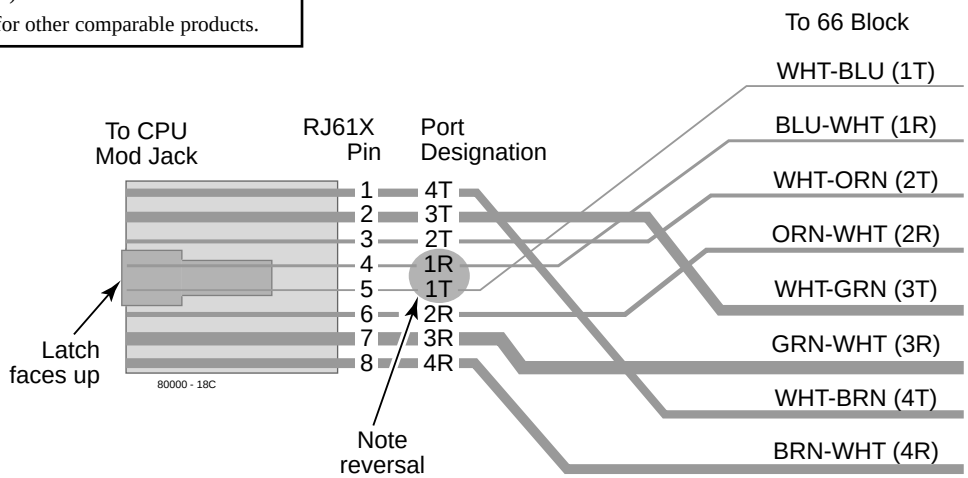

Figure 2-15 8-PIN (RJ61X) JACK PINOUTS

Section 3, INSTALLING EXTENSIONS AND TRUNKS

In this section . . .

	Page
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Connecting Extensions	3-2
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Connecting Analog Trunks	3-3
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Power Up	3-4
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Reinstalling the Front Cover	3-7

CONNECTING EXTENSIONS

Connecting Extensions (Figure 3-1)

Each 16DSTU PCB connects 16 digital extensions. Each 8ASTU PCB connects 8 analog extensions. Each 4ASTU PCB connects 4 analog extensions.

1. Using Figure 2-11 as a guide, insert the mod jacks into the appropriate connector on the PCB.
2. Install a modular jack for each extension within 6 feet of the telephone's location.
3. For each extension, run one-pair 24 AWG station cable from the cross-connect block to the modular jack.
4. Terminate the station cable WHT/BLU - BLU/WHT leads to the RED and GRN lugs in the modular jack.
5. Back at the main equipment location, run one pair of cross-connect wire between the pins on the B block and cross-connect block to complete the connection.
6. Install bridging clips as required.

You can also connect analog extensions to 2-OPX modules. See page 4-14 for more.

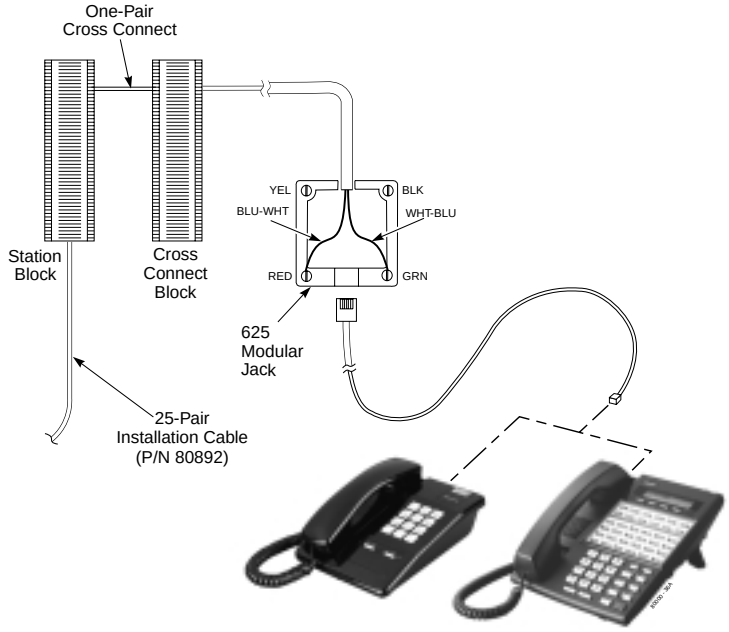


Figure 3-1 CONNECTING EXTENSIONS

CONNECTING TRUNKS

Connecting Analog Trunks (Figure 3-2)

Each 8ATRU PCB connects 8 loop start CO trunks.

1. Using Figure 2-12 as a guide, insert the mod jacks into the appropriate connector on the PCB.
2. For each trunk, run one pair cross-connect wire between the pins on the cross-connect block and the CPE (customer side) of the telco's RJ21X.
3. Install bridging clips as required.

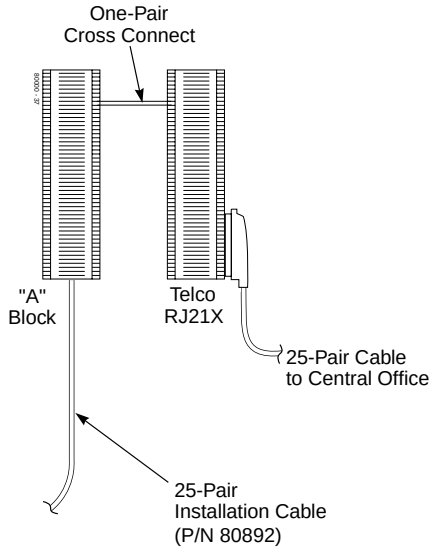


Figure 3-2 CONNECTING ANALOG TRUNKS

POWER UP AND SYSTEM LEDS

Power-Up (Figures 3-3 to 3-5)

Now that all the PCBs you need are installed and you have cabled the system, you can now power-up. You do not need to reattach the right side panel before powering up the system. Leaving the right side panel removed makes the station and trunk cabling more accessible.

● **To power up the system:**

1. Make sure the system is properly grounded and the PCB bracket is reinstalled and secured.
2. Install surge protectors in the AC outlet you intend to use for system power.
3. Plug the main cabinet's AC power cord into its surge protector.
4. Turn on the main cabinet power switch.

After about 30 seconds, verify that the PCB LEDs agree with the illustrations at right and on page 3-5.

➠ indicates the LEDs normal (i.e., system OK) status.

+ 5 V DC (Green)

➠ On: +5 V DC power present
Off: +5 V DC power not present

- 5 V DC (Yellow)

➠ On: -5 V DC power present
Off: -5 V DC power not present

- 40 V DC (Red)

➠ On: -40 V DC power present
Off: -40 V DC power not present

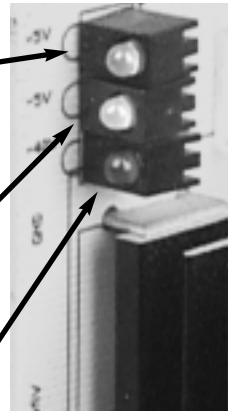


Figure 3-3 POWER SUPPLY STATUS LEDS

➠ indicates the LEDs normal (i.e., system OK) status.

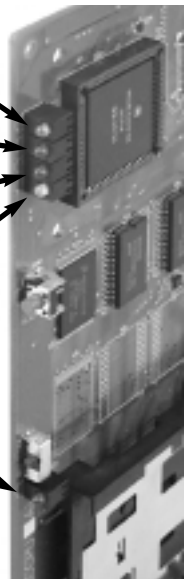
CPU Running (Green)
➠ Slow flash: CPU OK
On: CPU starting

Major Alarm (Red)
On: Major alarm present
➠ Off: Major alarm not present

Minor Alarm (Red)
On: Minor alarm present
➠ Off: Minor alarm not present

RS-232 Port (Yellow)
Flashing: RS-232 port active
➠ Off: RS-232 idle

PC Card (Red)
Flashing:PC card write/read active
➠ Off: PC card idle



3-4 CPU STATUS LEDS

➠ indicates the LEDs normal (i.e., system OK) status.

Sync Status (Green)
Fast flash: PCB running, waiting for sync. Same as having mode switch set to stop.
➠ Slow flash: PCB running, in sync.

Port Activity (Yellow)
➠ Off: All ports on PCB idle.
Flash: Port(s) busy. The faster the flash, the more ports are busy.

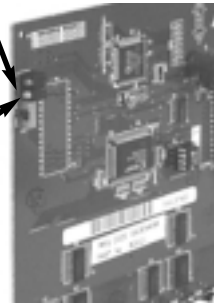


Figure 3-5 DSTU, ASTU and ATRU STATUS LEDS

FINISHING THE INSTALLATION

Reinstalling the Side Panel (Figure 3-6)

● **To reinstall the side panel:**

1. Carefully realign the right side panel and slide it into position.
2. Reattach the two screws that secure the right side panel to the cabinet.

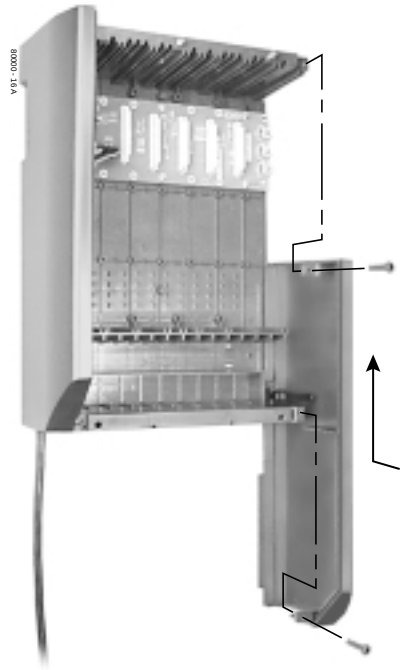


Figure 3-6 REINSTALLING THE SIDE PANELS

FINISHING THE INSTALLATION

Reinstalling the Front Cover (Figure 3-7)

● **To reinstall the front cover:**

1. Hook the tabs on the rear of the cover into their associated slots.
2. Push the front of the cover into place.
3. Screw in the two captive screws that secure the cover to the cabinet.

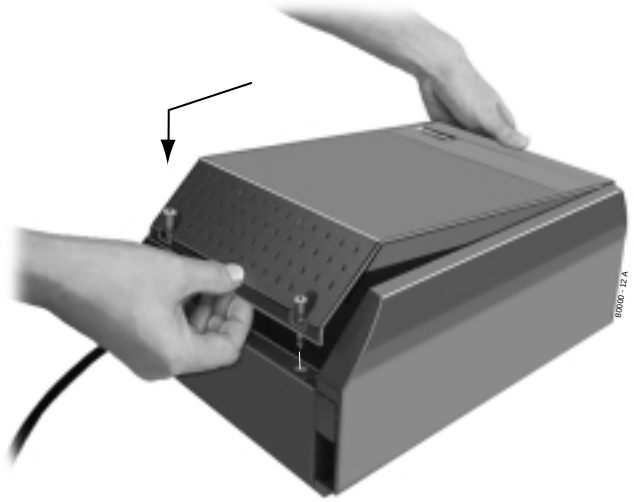


Figure 3-7 REINSTALLING THE FRONT COVER

— For Your Notes —

Section 4, INSTALLING OPTIONAL EQUIPMENT

In this section . . .

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EXTERNAL PAGING AND PAGE RELAYS

Installing External Paging (Figure 4-1)

The CPU provides an External Paging output and associated relay contacts. You connect the Paging output to audio inputs on customer provided Paging systems. In some Paging systems, you can use the associated CPU relays to automatically turn the amplifiers on and off. The control relays are normally open and close whenever the External Paging is activated.

- **To connect an External Paging amplifier:**

1. Find an available connector in a station cable and make sure it is correctly punched down at the 66M1-50 block.

   Follow standard color code order. Be sure the block is properly cross-connected.

2. For the connector chosen, locate pins 1T and 1R (see Figure 4-1) and connect the music source.
3. Plug the modular jack into the CPU modular connector.

Be sure the connected Paging equipment is compatible with the following CPU page output specifications:

Output Impedance: 600 Ohms
Output Level: 0 dBr @ 1.0 kHz

EXTERNAL PAGING AND PAGE RELAYS

The following products should help if you make your own cables:

- Suttle SE-266-8K 8 Position Modular Plug (requires an SE-166 or SE-166-6 modular crimping tool).
- Hubbell BRFTP4P Snap-On 8 Position Modular Plug (does not require a special crimping tool).

Check with your local supplier for other comparable products.

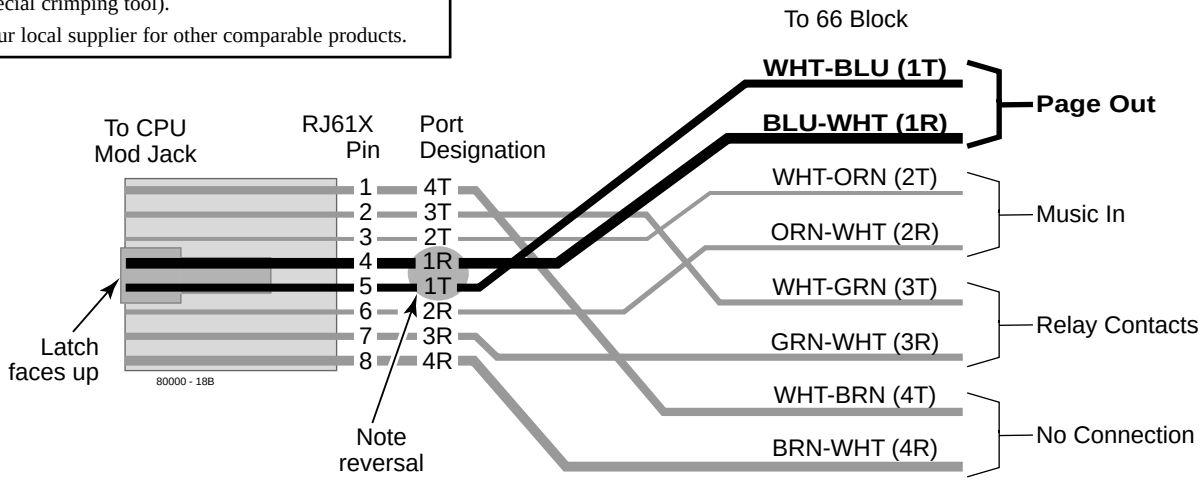


Figure 4-1 CONNECTING EXTERNAL PAGING

EXTERNAL PAGING AND PAGE RELAYS

Installing External Paging Control Relays (Figure 4-2)

You can program the CPU relays to automatically close when External Paging or night ringing is active. The control relays are normally open and close when active.

● **To connect an External Paging Control Relays:**

1. Find an available connector in a station cable and make sure it is correctly punched down at the 66M1-50 block.

   Follow standard color code order. Be sure the block is properly cross-connected.

2. For the connector chosen, locate pins 3T and 3R (see Figure 4-2) and connect to the device the relays will control.
3. Plug the modular jack into the CPU modular connector.

Be sure the equipment connected to the relays is compatible with the following CPU relay specifications:

Output Impedance:	600 Ohms
Output Level:	Nominal 250 mV (-10dBm)
Maximum Output:	400 mV RMS
Configuration:	Normally open

EXTERNAL PAGING AND PAGE RELAYS

The following products should help if you make your own cables:

- Suttle SE-266-8K 8 Position Modular Plug (requires an SE-166 or SE-166-6 modular crimping tool).
- Hubbell BRFTP4P Snap-On 8 Position Modular Plug (does not require a special crimping tool).

Check with your local supplier for other comparable products.

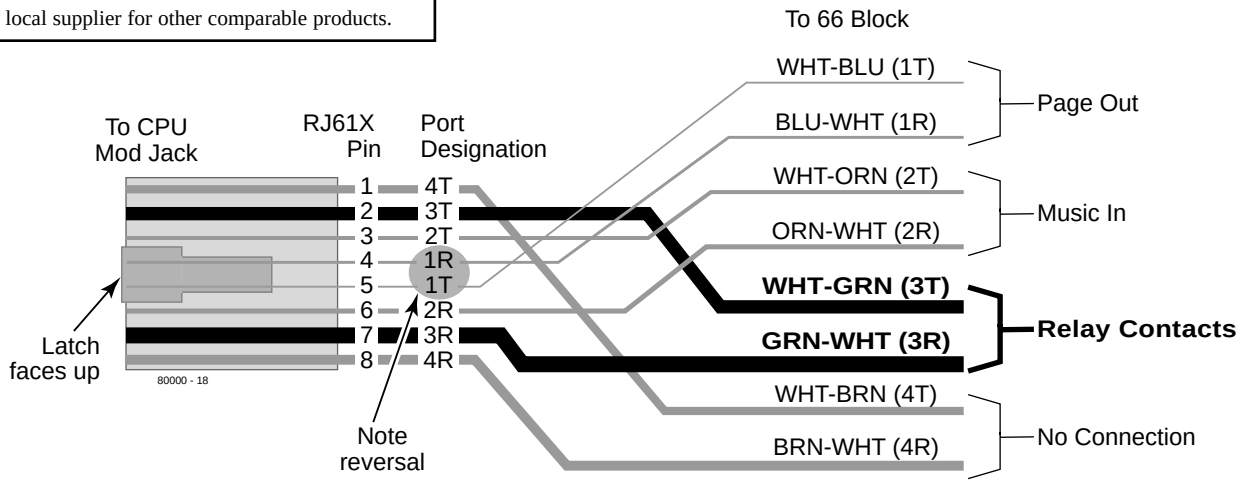


Figure 4-2 CONNECTING CONTROL RELAYS

DOOR BOX

Installing the Digital Door Box (Figure 4-3)

Any available 16DSTU PCB port can support a Digital Door Box (P/N 92246).

● To install the Digital Door Box:

1. Snap open the Door Box case.
2. Punch down one end of a two-pair twisted station cable on the extension block as shown in Figure 4-3.
3. Run the station cable through the hole in the back of the Door Box.

   When wall mounting, use the two holes in the base of the Door Box for the mounting screws.
4. Strip the conductors back about 1/2 inch and connect to the Door Box terminals.

Programming the Digital Door Box

● 1801: Extension Circuit Type

Assign the Door Box circuit type 10.

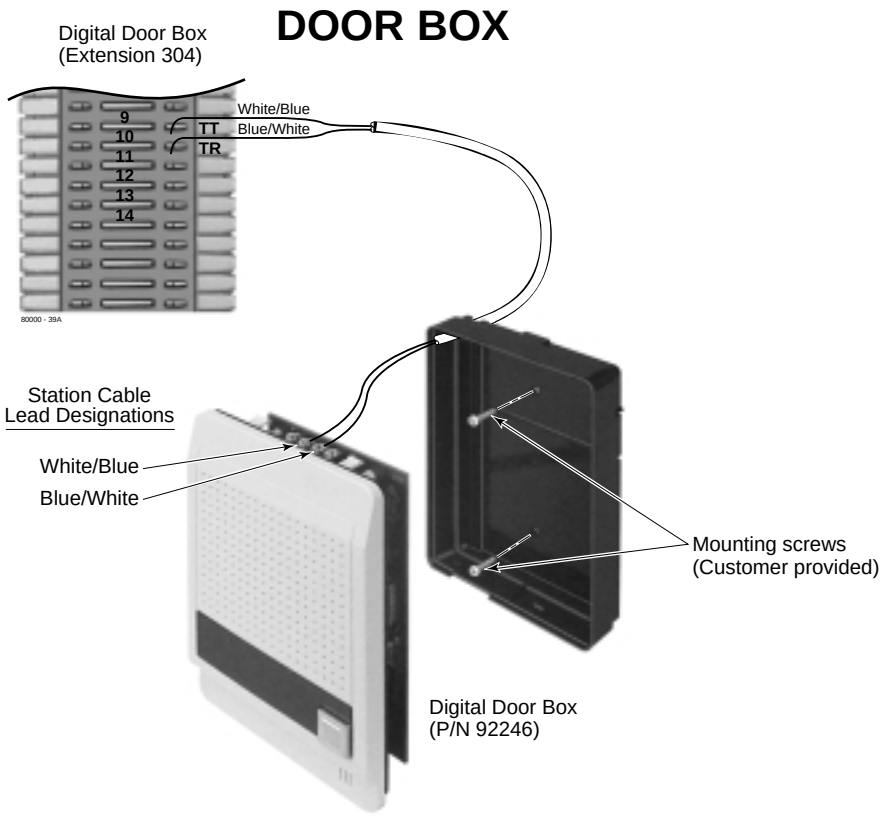


Figure 4-3 CONNECTING A DOOR BOX

MUSIC SOURCES

Installing a Music Source (Figure 4-4)

The CPU provides connection for a customer provided music source. Use this music source for Background Music and Music on Hold.

● To connect a music source:

1. Find an available connector in a station cable and make sure it is correctly punched down at the 66M1-50 block.

   Follow standard color code order. Be sure the block is properly cross-connected.

2. For the connector chosen, locate pins 2T and 2R (see Figure 4-4) and connect the music source.
3. Plug the modular jack into the CPU modular connector.

Be sure the connected music source is compatible with the following CPU music input specifications:

Input Impedance:	10K Ohms
Output Level:	+18 dBr (+/- 2 dBr) @ 1.0 kHz

Programming Background Music

● 0201: Background Music
Enter Y to enable Background Music system-wide.

● 1802: BGM
Enter Y to enable Background Music at the extension.

Programming Music on Hold

● 0201: Music on Hold
Enter Y to enable Music on Hold system-wide.

● 0201: MOH on Transfer
Enter Y to enable Music on Hold for transferred calls.

MUSIC SOURCES

The following products should help if you make your own cables:

- Suttle SE-266-8K 8 Position Modular Plug (requires an SE-166 or SE-166-6 modular crimping tool).
- Hubbell BRFTP4P Snap-On 8 Position Modular Plug (does not require a special crimping tool).

Check with your local supplier for other comparable products.

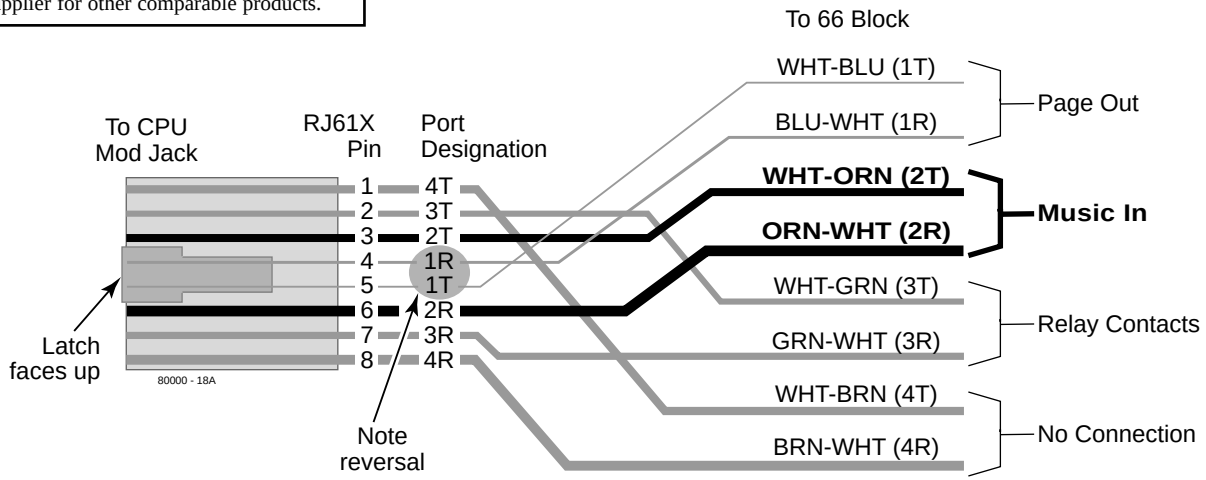


Figure 4-4 INSTALLING A MUSIC SOURCE

POWER FAILURE TELEPHONES

Power Failure Cut-Through (Figure 4-5)

When system AC power fails, the 8ATRU PCB automatically cuts through the first 2 trunk circuits to 2 Power Failure Telephone connections.

● To install Power Failure Cut-Through:

1. Locate an available 8-pin jack in a trunk (A) block or station (B) block.

   Local codes may prevent you from using a DDK connector on the A block for optional equipment.

2. For the 8-pin jack chosen, cross-connect the associated wire pair from the A or B block to the cross-connect block.
3. Install a modular jack for each Power Failure Telephone within six feet of the telephone's location.
4. For each Power Failure Telephone, run one-pair of 24 AWG station cable from the cross-connect block to the telephone's modular jack.
5. Terminate the station cable WHT/BLU - BLU/WHT leads to the RED and GRN lugs in the modular jack.
6. Install bridging clips as required.

● To test the Power Failure Telephone:

1. Connect a Power Failure Telephone per Figure 4-5.
2. Power down the system.
3. At the Power Failure Telephone, lift the handset.

   You should hear dial tone on the trunk you connected in Figure 4-5.

4. Place a test call.

   If power is restored while a cut-through call is in progress, the call is maintained until the user hangs up the Power Failure Cut-Through telephone.

POWER FAILURE TELEPHONES

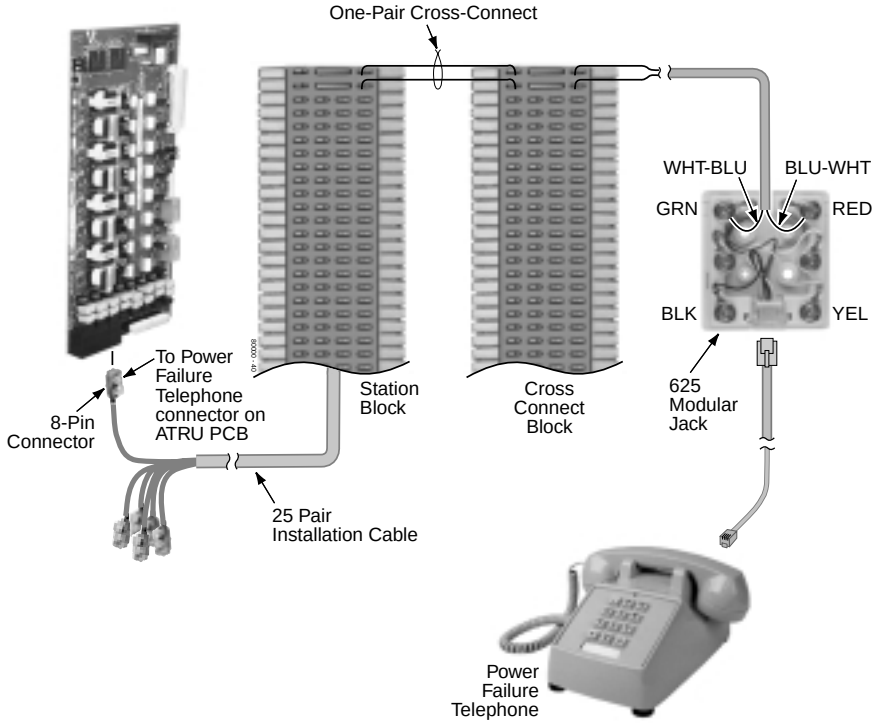


Figure 4-5 CONNECTING A POWER FAILURE TELEPHONE

DSS CONSOLE

Installing a DSS Console (Figures 4-6 and 4-7)

The DSS Console gives a keyset user a Busy Lamp Field (BLF) and one-button access to extensions, trunks and system features. Keep the following in mind when installing DSS Consoles:

- You can only connect DSS Consoles to Super Display or 34-Button Display telephones.
- A DSS Console does not require a separate station port – it connects directly to the keyset.

● To install a DSS Console:

1. Turn the telephone upside down and remove the plastic filler plug from the DSS modular connector.
2. Plug the DSS Console's 8-pin modular line cord into the telephone's DSS connector.
3. Plug the other end of the 8-pin line cord into the DSS Console's 8-pin jack.
4. If you have a 24-Button DSS Console, attach the metal plate to both the DSS Console and telephone as shown.

Programming DSS Consoles

● 1801: DSS Type

For the extension to which you have connected the DSS Console, enter 1 for 24-button, 2 for 110-button and 0 for unassigned.

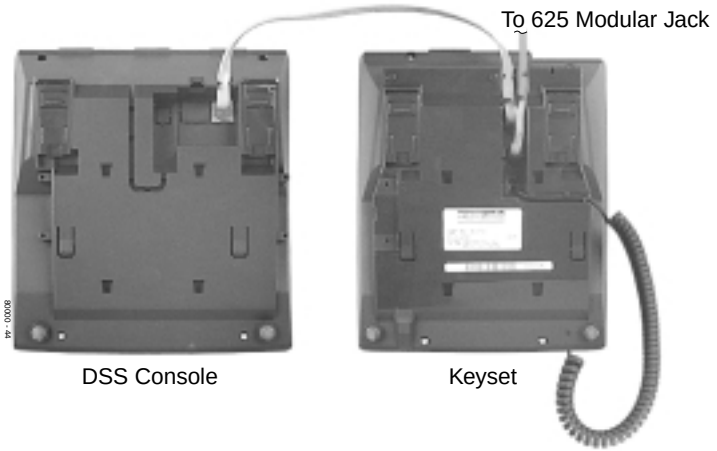
● 1801: DSS Block Number

For the extension to which you have connected the DSS Console, enter the number of the block that corresponds to the connected console. A block is a unique DSS Console assignment. The system provides up to 4 blocks. If your system has more than 4 DSS Consoles connected, some will have to share DSS Console Key Assignment Programming (see below).

● 1704: DSS Console Key Assignment

Program the DSS Console's keys. Refer to the software manual for additional programming details.

DSS CONSOLE



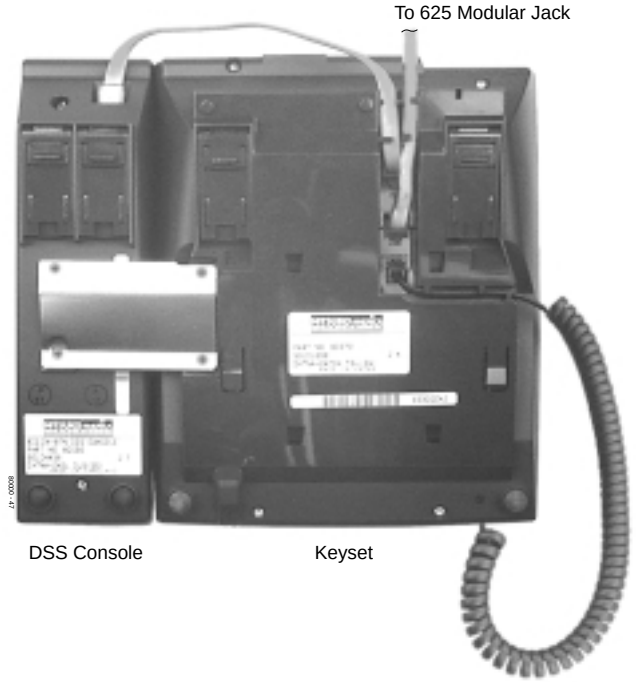


Figure 4-6 INSTALLING A 110-BUTTON DSS CONSOLE

Figure 4-7 INSTALLING A 24-BUTTON DSS CONSOLE

2-OPX MODULE

Installing the 2-OPX Module (Figure 4-8)

The 2-OPX Module provides two 2500 type analog circuits for connection to on-premise 2500 type single line devices (i.e., telephones, fax machines, modems, etc.) and to telco OL13B/C OPX circuits. It uses a single digital extension circuit for the power and signaling for both analog ports.

● To install a 2-OPX Module:

1. Locate an 8-pin modular connector in a trunk (A) block or station (B) block.

   Local codes may prevent you from using a DDK connector on the A block for optional equipment.

2. For the connector chosen, cross-connect the associated wire pair from the A or B block to the cross-connect block.
3. Install a modular jack for the 2 OPX Module within six feet of the module's location.
4. Run one-pair 24 AWG station cable from the cross-connect block to the modular jack.
5. Terminate the station cable WHT/BLU - BLU/WHT leads to the RED and GRN lugs in the modular jack.
6. Install bridging clips as required.
7. Ground the 2-OPX Module by connecting a 12 AWG ground wire from the FG lug to a known earth ground.
8. Plug a line cord into the 2-OPX unit and the 2-OPX's modular jack.

   The DS1 LED on the 2-OPX Module lights steadily.

Programming 2-OPX Modules

● 1801: Extension Circuit Type

Assign the 2-OPX extension circuit type 21.

The 2-OPX Module uses a single port.

When connected to the first DSTU PCB in the system, the first 2-OPX extension number is the same as the port's extension number. The second 2-OPX extension number is the first port ***plus*** 201. For example, the two extension numbers for the 2-OPX Module plugged into extension 314 are 314 and 515.

When connected to the second DSTU PCB in the system, the first 2-OPX extension number is the same as the port's extension number. The second 2-OPX extension number is the first port ***plus*** 217. For example, the two extension numbers for the 2-OPX Module plugged into extension 316 are 316 and 533.

2-OPX MODULE

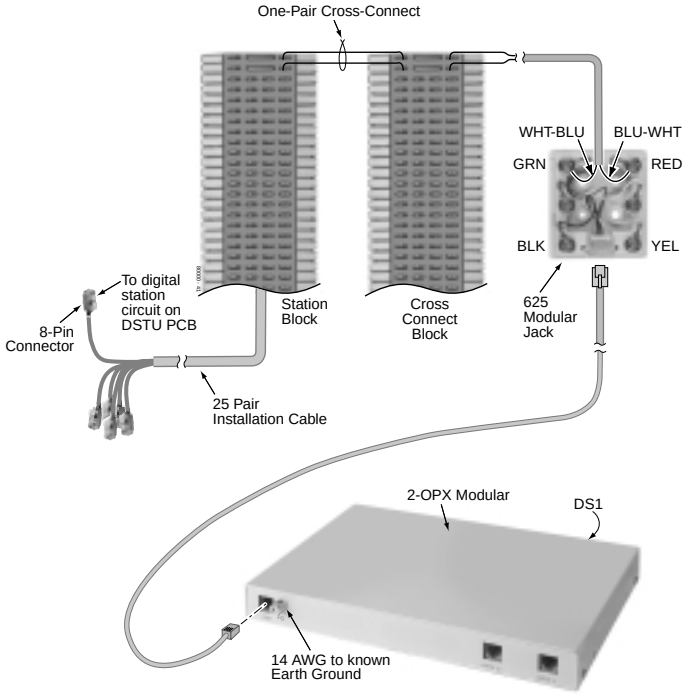


Figure 4-8 CONNECTING THE 2-OPX MODULE

WALL-MOUNT KIT

Installing the Wall-Mount Kit

You can use a wall-mount kit to attach any key telephone to a wall. The wall-mount kit includes a mounting bracket, wall-mount screws and a handset hanger.

Installing the Wall-Mount Handset Hanger (Figure 4-9)

1. Remove the rubber plug that covers the slots for the handset hanger. Store the plug in a safe place.
2. Insert the handset hanger in the slot provided beneath the telephone's hookswitch.

Figure 4-9 INSTALLING THE WALL-MOUNT HANGER

WALL-MOUNT KIT

Wall-Mounting a Key Telephone (Figures 4-10 through 4-12)

- **To mount the telephone on the wall** (Figure 4-10)**:**

1. Using the screws provided, attach the wall-mount bracket to the wall in the desired location.
2. Plug in the telephone's modular line cord.
3. Run the telephone's line cord through one of the slots in the bottom of the wall-mount bracket.
4. Plug the line cord into the telephone's 625 modular jack.
5. Place the telephone on top of the wall-mount bracket and snap into place.

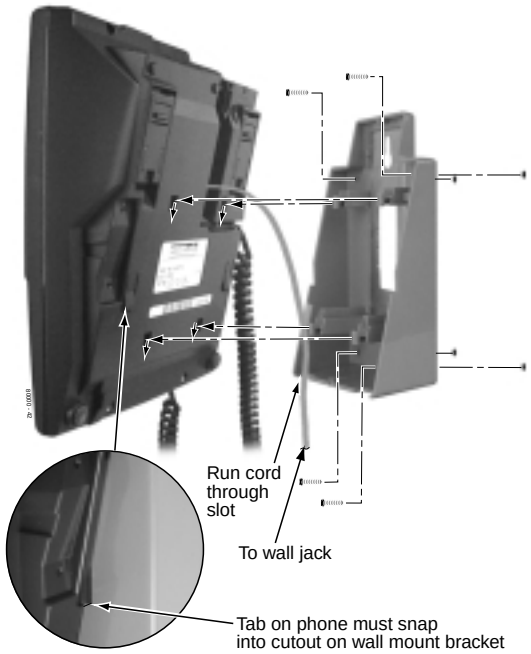


Figure 4-10 INSTALLING THE WALL MOUNT BRACKET

● **To mount the telephone on a wall plate** (Figure 4-11)**:**

1. Snap the wall-mount bracket onto the wall plate.
2. Plug the telephone's line cord into the jack in the wall plate and into the telephone.
3. Place the telephone on top of the wall-mount bracket and snap into place.

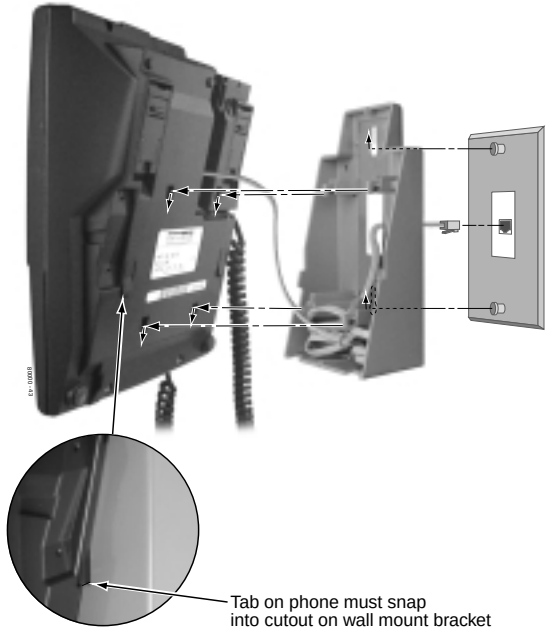


Figure 4-11 MOUNTING ON A WALL PLATE

● **To remove the telephone from the wall mount kit** (Figure 4-12)**:**

1. From the front of the phone, grab the tabs that secure the telephone to the wall-mount kit.
2. While pressing in the tabs, lift up the phone until it snaps clear of the wall-mount kit.

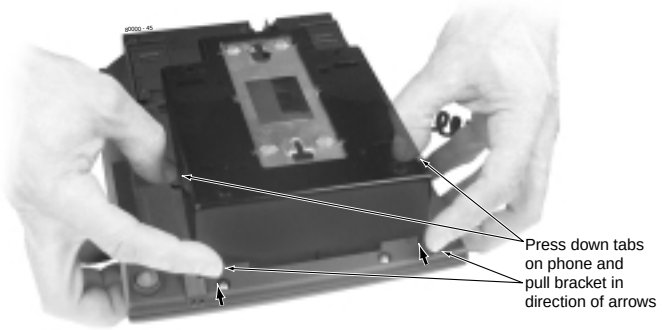


Figure 4-12 REMOVING THE WALL MOUNT BRACKET

— For Your Notes —

DESK STAND

Using the Desk Stand (Figure 4-13)

Each telephone has an integrated desk stand. You can extend the desk stand in one of two positions: low and high.

- **To use the desk stand low position:**

1. Flip up each telephone leg until it snaps into place.

- **To use the desk stand high position:**

1. Flip up each telephone leg into the low position.
2. Push out the leg extender.
3. Slide the extender up, then down until it locks in place as shown at right.

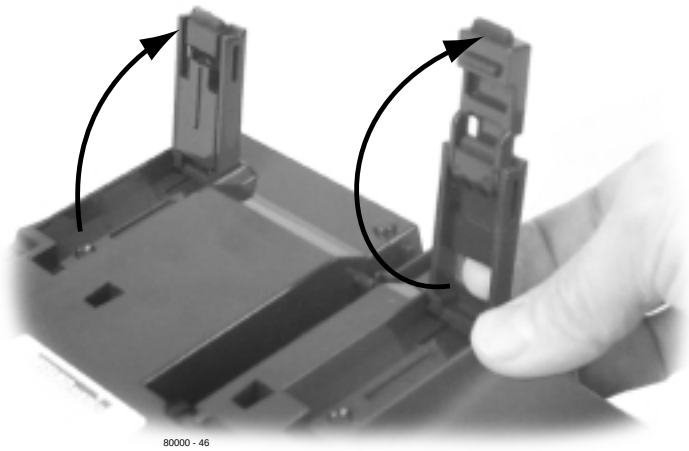


Figure 4-13 USING THE DESK STAND

REJ RECORDING JACK

Installing the REJ Recording Jack (Figure 4-14)

Use the REJ Recording Jack (P/N 80175) to connect a Super Display or 34-Button Display Telephone to an external tape recorder or amplifier. The REJ output is a mono sub-miniature jack which connects directly to an AUX level input. The REJ broadcasts both sides of your conversation (i.e., your voice and your caller's voice) whenever you lift your handset. The REJ does not broadcast Paging announcements or activate for Handsfree calls.

CAUTION

Be sure the connected audio device provides a standard AUX level input.

● To install the REJ Recording Jack:

1. Unplug the telephone line cord and handset cord, and turn the telephone face down on a non-abrasive surface.
2. Remove the 4 screws that secure the telephone base.
3. Separate the telephone faceplate from the telephone base.
4. On the left side of the telephone base, remove the plastic molding that covers the hole for the REJU connector. ***You only need to remove the top half of the molding.***
5. Install the REJ as shown (with the components facing down).
6. Secure with the supplied screw.

● To connect the REJ Recording Jack:

1. Route the REJ wires through the guides in the telephone base.
2. Plug the REJ cable into the connector in the telephone PCB.

   The connector is keyed so you can't plug in the cable the wrong way.
3. Reassemble the telephone, plug in the handset, and reconnect the line cord.
8. Using an audio cable, connect the REJ to the amplifier's mono AUX input.

   To connect to a stereo AUX input, use a commercially available mono-to-stereo splitter cable.

REJ RECORDING JACK

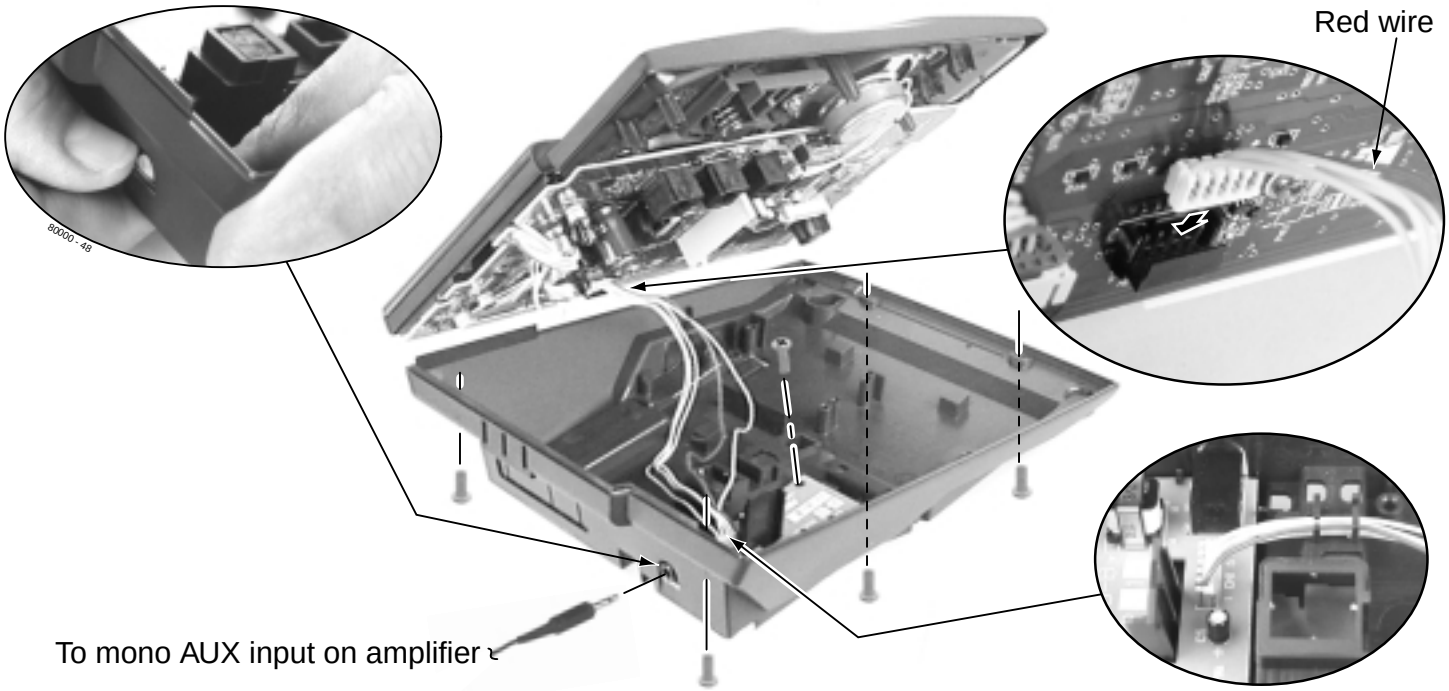


Figure 4-14 INSTALLING THE REJ

REJ RECORDING JACK

— For Your Notes —

Section 5, MAINTENANCE OPTIONS AND SMDR

In this section . . .	Page
Backing Up Site Data	**5-3**
Backing Up Site Data with a PC Card	5-3
PC Card Backup Error Messages	5-5
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Programming SMDR	5-8
Modem Installation	**5-10**
Installing a Modem	5-10
Making your own Data Cables	**5-12**

— For Your Notes —

BACKING UP SITE DATA

Backing Up Site Data with a PC Card (Figure 5-1)

You can use PC Card P/N 85880 or P/N 80050-V**.** (with system software preloaded) to back up and restore your site data.

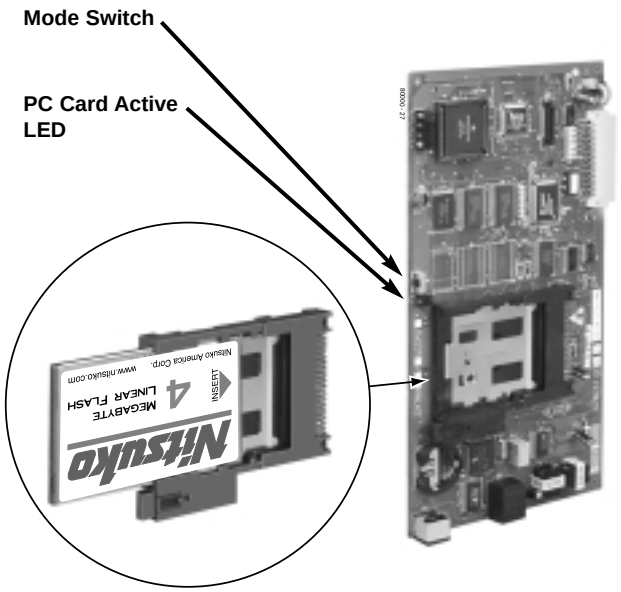


Figure 5-1 USING THE PC CARD

● **To use the PC Card to back up site data:**

1. Insert the PC Card into the CPU.
2. Be sure the CPU mode switch is set to **RUN**.
3. Enter the programming mode.

   ICM + ##* + 372000 + HOLD*
4. Dial 9906 + HOLD.

   You see: START?

   To quit program 9906 instead, dial N + HOLD .
5. Dial Y + HOLD.

   You see: 9906: DATABASE NAME
6. Enter a name for the database you want to save (up to 10 characters long).

   *Refer to **Keys for Entering Names** on the next page if you need help when entering names.*

   Skip this step if you want to save data in an address that already has a name assigned.

Keys for Entering Names					
Press this key . . .	Then one of these keys to enter the character in the white cell . . .				
	1	2	3	4	#
1	&				1
2	A	B	C		2
3	D	E	F		3
4	G	H	I		4
5	J	K	L		5
6	M	N	O		6
7	P	Q	R	S	7
8	T	U	V		8
9	W	X	Y	Z	9
0	SPACE	:			0
*					*
#					#

To enter characters in lower case (e.g., **e** instead of **E**), press **MW** before pressing the key in the first shaded column.

Figure 5-2 ENTERING NAMES

7. When you are done entering the name, press HOLD.

   You see the name and date of the first database stored. If no data bases are stored, you see:

   9906: DB00
   (empty)

8. The system assigns the name you entered in step 7 to the address you select below:
   - Press VOL ▲ or VOL ▼ to scroll through the 12 data base addresses (DB 00 through DB 11).

     OR
   - Skip this step to select the currently displayed data base.

9. Press HOLD.

   Normally, you see
   9906: SAVING . . . . . .

   The PC Card Active LED is on during backup.

   If the address you choose already has data stored in it, you see: REPLACE DB nn Y/N.
   - Press N + HOLD to back up to step 5.
   - Press Y + HOLD to proceed.

   You automatically exit programming when the upload completes.

PC Card Backup Error Messages

This error message . . .	Means this . . .
NO PCCARD	The PC card is not installed. *Install the PC card and try again.*
ERASE FAILED	The system could not overwrite an existing data base on the PC card. *Repeat the procedure. If you get the message again, try another PC card.*
SAVE FAILED	The system could not save data to the PC card. *Repeat the procedure. If you get the message again, try another PC card.*

Restoring Site Data from a PC Card

● **To use the PC Card to restore site data:**

1. Insert the PC Card into the CPU (see Figure 5-1).
2. Be sure the CPU mode switch is set to **RUN**.
3. Enter the programming mode.

   ICM + ##* + 372000 + HOLD*
4. Dial 9907 + HOLD.

   You see: START?
5. Dial Y + HOLD.

   You see the name and date of the first database stored. If no data bases are stored, you see:

   9907: DB00
   (empty)
6. Press VOL ▲ or VOL ▼ to scroll through the 12 data base addresses (DB 00 through DB 11) and select the one you want to restore.
7. When the data base you want to restore displays, press HOLD.

   The PC Card Active LED is on during restore.

   You automatically exit programming when the upload completes.

PC Card Restore Error Messages

This error message . . .	Means this . . .
NO PCCARD	The PC card is not installed. *Install the PC card and try again.*
NO DATABASE	There is not data stored in the data base address you selected. *Select another data base address and try again.*

LOADING NEW SYSTEM SOFTWARE

Loading System Software from a PC Card

- **To use the PC Card to load system software (P/N 80050-V**.** only):**

  Loading new system software will automatically reload the factory installed (default) program entries.

1. Insert the PC Card into the CPU (see Figure 5-1).
2. Be sure the CPU mode switch is set to **BOOT**.
3. Press the reset switch on the CPU to reset the system.

   The LEDs on the CPU will start to cycle.

   After about 1 minute, the system will restart with the new software loaded using the factory installed (default) entries. The LEDs on the CPU will then flash normally (see Figure 5-3).
4. Once the system restarts, switch the CPU mode switch to **RUN**.

➠ indicates the LEDs normal (i.e., system OK) status.

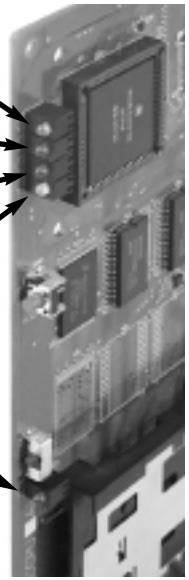
CPU Running (Green)
➠ Slow flash: CPU OK
On: CPU starting

Major Alarm (Red)
On: Major alarm present
➠ Off: Major alarm not present

Minor Alarm (Red)
On: Minor alarm present
➠ Off: Minor alarm not present

RS-232 Port (Yellow)
Flashing: RS-232 port active
➠ Off: RS-232 idle

PC Card (Red)
Flashing:PC card write/read active
➠ Off: PC card idle



5-3 CPU STATUS LEDS

SMDR

Installing SMDR (Figure 5-4)

Station Message Detail Recording (SMDR) provides a record of the system's outside calls. Once set up in programming, SMDR automatically outputs from the RS-232 (serial) port on the CPU to a customer-provided printer, terminal or SMDR data collection device. When connecting SMDR, you can use one of the ready-made cables or make one of your own (see page 5-12).

You can also connect a PC to the CPU serial port to collect call history data.

● To connect an SMDR device:

1. Plug the DIN end of the 8-Pin DIN to Mod-8 Cable (P/N 80893) into the CPU serial port.
2. Plug one end of the DB9 to Mod-8 Adaptor (P/N 85980) into the cable.
3. Plug the other end of the adaptor into the DB9M COM connector on the back of your PC.

The default communications parameters of the CPU serial port are 4800 8 N 1 (4800 baud, eight data bits, no parity and 1 stop bit).

If you have a PC connected to collect history data, press Shift 1 to turn history on and off.

Programming SMDR

● 0301: CPU Baud Rate

Assign the baud rate for the RS-232-C port on the CPU. The options are 2 (1200), 3 (2400), 4 (4800), 5 (9600) and 6 (19200).

You can also press Ctrl Break on a PC connected to the CPU serial port to toggle through the available CPU baud rates.

● 0301: SMDR Port

Enter 1 to enable SMDR output from the CPU RS-232-C port.

● 0301: Print SMDR Header

Enter Y to have the beginning of the SMDR report include the column header data. Enter N to have the SMDR report only include the call data (without the header).

● 1001: Print SMDR

Enter Y to have the SMDR report include calls on the trunk. Enter N to have the SMDR report exclude calls on the trunk.

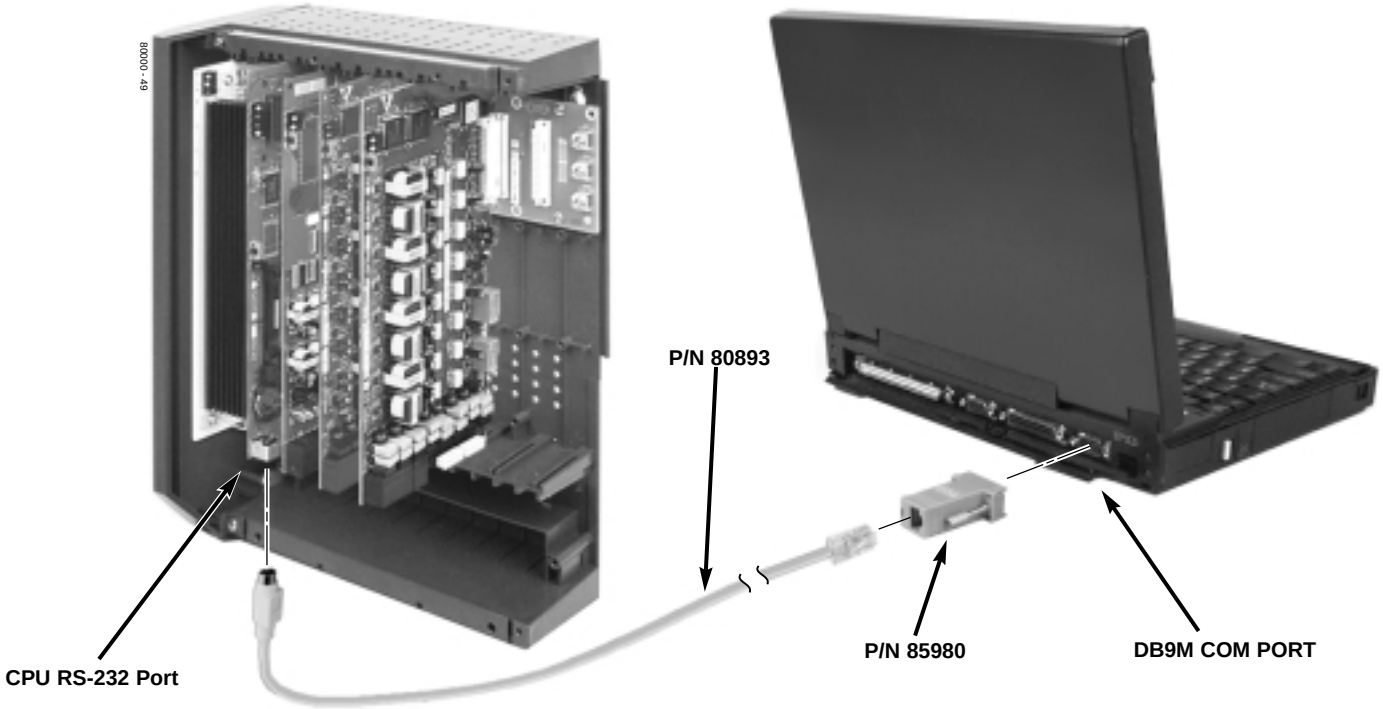


Figure 5-4 CONNECTING SMDR

MODEM INSTALLATION

Installing a Modem (Figure 5-5)

You can connect a modem to the CPU serial port to remotely collect history data and/or SMDR.

- **To connect a modem:**

1. Plug the DIN end of the 8-Pin DIN to Mod-8 Cable (P/N 80893) into the CPU serial port.
2. Plug one end of the DB25 to Mod-8 Adaptor (P/N 85981) into the cable.
3. Plug the other end of the adaptor into the DB25F connector on the back of your modem.
4. Following the instructions that came with your modem, connect a trunk and the modem's power supply.

- **To call from a PC at a remote site:**

The remote PC must have a modem connected. Also, the default communications parameters of the CPU serial port are 4800 8 N 1 (4800 baud, eight data bits, no parity and 1 stop bit).

1. Using commercially available communications software, dial the phone number of the trunk connected to the modem at the telephone system site.
2. To test history, type Shift 1 on the remote PC.

If history doesn't output correctly, press Ctrl Break on the remote PC to toggle through the available CPU baud rates.

MODEM INSTALLATION

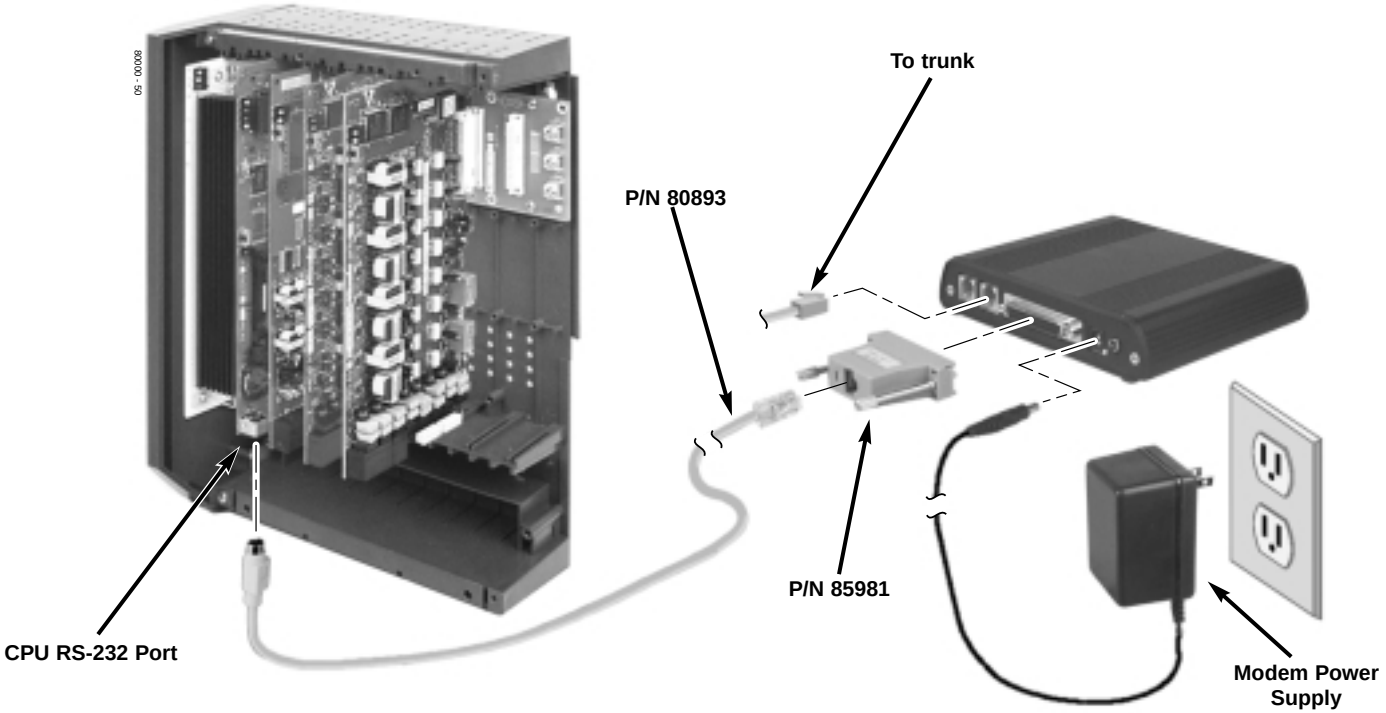
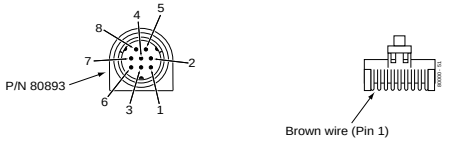
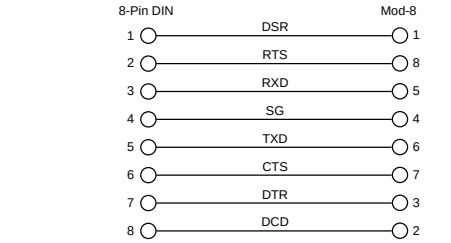
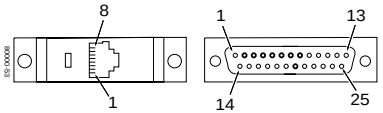


Figure 5-5 INSTALLING A MODEM

MAKING YOUR OWN DATA CABLES



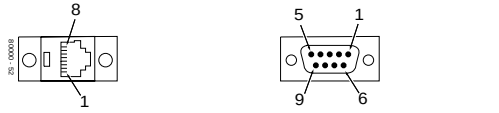




8 x 8 JACK WIRING	
PIN	COLOR
1	BLUE
2	ORANGE
3	BLACK
4	RED
5	GREEN
6	YELLOW
7	BROWN
8	SLATE

DB25 WIRING	
PIN	COLOR
2	YELLOW
3	GREEN
4	SLATE
5	BROWN
6	BLUE
7	RED
8	ORANGE
20	BLACK

Mod-8 to 25-Pin Connector
for Modem Connection



8 x 8 JACK WIRING	
PIN	COLOR
1	BLUE
2	ORANGE
3	BLACK
4	RED
5	GREEN
6	YELLOW
7	BROWN
8	SLATE

DB9 WIRING	
PIN	COLOR
1	JUMPER TO PIN 6
2	YELLOW
3	GREEN
4	BLUE AND ORANGE
5	RED
6	BLACK JUMPERED TO PIN 1
7	BROWN
8	SLATE

Mod-8 to 9-Pin Connector
for PC/Laptop Connection

Figure 5-6 MAKING YOUR OWN DATA CABLES

Section 6, SPECIFICATIONS AND PARTS LIST

In this section . . .	Page
Specifications	6-2
Parts List	6-6

telemanuals.com

SPECIFICATIONS

System Capacities

Cabinets:	1
Talk Timeslots (Intercom/line):	Non-blocking
Analog Trunks (CO/PBX lines):	16
Digital and/or Analog Telephones:	32
DSS Consoles:	1 max. per keyset
Power Failure Telephones:	4 (2 per 4ATRU PCB)
Door Boxes (digital):	1 per digital station port
External Paging Zones:	1 (1 per CPU)
Internal Paging Zones:	8 (7 and All Call)

Note: The 4-slot cabinet accepts a total of 32 stations maximum. This total includes digital stations, analog stations and DSS consoles. Do not exceed this maximum.

System Capacities

Conference Circuits	32 Conference circuits dynamically allocated, with 8 parties max. per Conference. Conference circuits provided on CPU.
8ATRU Analog Trunk PCB:	2
16DSTU Digital Station PCB:	2
8ASTU Analog Station PCB:	2
CPU Central Processing Unit:	1
REJ Recording Jack Units	1 max. per keyset

SPECIFICATIONS

Environmental Requirements

Meeting established environmental standards maximizes the life of the system. Refer to the Standard Practices Manual for further information. Be sure that the site is not:

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 comes 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 seven feet of the cabinet is required. You should install a separate dedicated outlet for each cabinet.

Environmental Specifications

Cabinets and Key Telephones

Temperature: 0-45^{o}C (32-113^{o}F)
Humidity: 10-95% (non-condensing)

Door Box

Temperature: -20-60^{o}C (-4-140^{o}F)
Humidity: 10-95% (non-condensing)

Electrical Specifications

Power Supply:	120 VAC ±- 10% @ 50-60 Hz
4-Slot Output Power	91 Watts @ 100% full load
4-Slot Input Current	1.50A @ 110 V
4-Slot VA	165
4-Slot Kwh	.165
4-Slot BTU	563
Grounding Requirements:	12 AWG copper wire

SPECIFICATIONS

Mechanical Specifications

Equipment	Width	Depth	Height	Weight
4-Slot KSU	10 3/4””	5 7/8””	13 11/16”	4 lbs 5 oz
Non-display Keyset	7 1/4”	9”	2 7/8””	1 lb 11 oz
Display Keyset	7 1/4”	9”	2 7/8”	1 lb 12 oz
Super Display Keyset	7 1/4”	9”	2 7/8”	1 lb 16 oz
DSS Console	7 7/8”	8 7/8”	2 3/4”	1 lb 6 oz
Door Box	4”	1 1/2”	5 3/16”	10 oz
2-OPX Module	9 3/8”	7 3/8”	1 1/4”	3 lbs

External Paging Contacts

Output Impedance:	600 Ohm
Output Level:	Nominal 250 mV (-10 dBm)
Maximum Output:	400 mV RMS
Configuration:	Normally open

External Paging

Output Impedance:	600 Ohm
Output Level:	0 dBr at 1.0 KHz

ACI Module Input/Output

Audio/Music Input

Input Impedance:	47 KOhm @ 1Khz

Audio/Paging Output

Output Impedance:	600 Ohms @ 1 KHz
Maximum Output:	+3 dBm

Relay Contacts

Configuration:	Normally Open
Maximum Contact Ratings:	30 VDC @ 60 mA 90 VAC @ 10 mA
Minimum Application Load:	1 VDC @ 1 mA

SPECIFICATIONS

BGM/MOH Music Source Input

Input Impedance:	10K Ohms
Input Level:	+18 dBr (+/- 2 dBr) t 1.0 KHz

Music input is located on the CPU PCB.

FCC Registration Information

Model:	DS2000
Manufacturer:	Nitsuko
FCC Part 15 Registration:	Class A
FCC Registration Number:	1ZDTHA27007-KF-E 1ZDTHA27044-MF-E
Industry Canada Certificate (DOC) Number	854 9522 A

Reg. Status	FIC	Mfrs. Port Identifier	Ringer Eq. Number	Network Jacks
Original	02LS2	80010 80011	0.6B	RJ11C RJ21X

Cabling Requirements

1. 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.
2. When cables must be run on the floor, use cable protectors.
3. Cable runs for key telephones, single line telephones, Door Boxes and 3-ACI Modules must be a dedicated, isolated cable pair.

Device	Cable Type	Cable Run Length (ft)	Notes
Key Telephone,	2-wire 26 AWG	1300	
	2-wire 24 AWG	2000	
3-ACI Module &	2-wire 24 AWG	2000	
3-DCI Module	2-wire 22 AWG	2000	
Single Line	2-wire 26 AWG	TBD	at constant 20 mA
Telephone		TBD	at constant 35 mA
	2-wire 24 AWG	TBD	at constant 20 mA
		TBD	at constant 35 mA
	2-wire 22 AWG	TBD	at constant 20 mA
		TBD	at constant 35 mA
Door Box	2-wire 24 AWG	2000	
	2-wire 22 AWG	2000	
2-OPX	2-wire 24 AWG	1000	

PARTS LIST

Station Equipment

Description	Part Number
34-Button Super Display Telephone	80673
34-Button Display Telephone	80663
22-Button Telephone	80570
22-Button Display Telephone	80573
24-Button DSS Console	80556
110-Button DSS Console	80555
Wall Mount Kit	TBD
Analog Telephones (customer provided)	

Peripheral Station Equipment

Description	Part Number
2-OPX Module	92177A

Common Equipment

Description	Part Number
4-Slot KSU	80000
DS2000 Power Supply	80005
Installation Cable	80892
Blank PC Card	85880
PC Card with system software preloaded (**.** denotes the system software level)	80050-V**.**
8-Pin DIN to Mod-8 Cable	80893
DB9 to Mod-8 Adaptor	85980
DB25 to Mod-8 Adaptor	85981
Spare KSU Hanger	80578

PARTS LIST

PCBs

Description	Part Number
CPU Central Processing Unit	80025
16DSTU Digital Station PCB	80021
8ASTU 8 Port Analog Station PCB	80041
4ASTU 4 Port Analog Station PCB	80040
4ATRU 4 Port Analog Trunk PCB (loop start)	80010
8ATRU 8 Port Analog Trunk PCB (loop start)	80011

Replacement Parts

Description	Part Number
Handset and Cord Assembly	TBD
Handset Coil Cord - Black 6’	TBD
Handset Coil Cord - Black 9’	TBD
Handset Coil Cord - Black 13’	TBD
22 Btn Tel Plastic C.O. Cover	TBD
34 Btn Tel Plastic C.O. Cover	TBD
22 Btn Designation Strip	TBD
34 Btn Designation Strip	TBD
24-Button DSS Console Designation Strip	TBD
110-Button DSS Console Designation Strip	TBD

— For Your Notes —

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Customer Service: 203-926-5444
Customer Service FAX: 203-926-5454
Technical Service: 203-925-8801
Discontinued Product Service: 900-990-2541
Technical Training: 203-926-5430
Emergency Technical Service (After hours) 203-929-7920
(Excludes discontinued products)

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