

Lucent Technologies
Bell Labs Innovations



PARTNER[®] Plus
Communications System
Release 2
Installation and Use



*Lucent Technologies -
formerly the communications
systems and technology
units of AT&T*

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Notice

Every effort was made to ensure that the information in this book was complete and accurate at the time of printing. However, information is subject to change.

Federal Communications Commission (FCC) Interference Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manuals, may cause harmful interference, in which case the user will have to correct the interference at his or her own expense. For additional FCC interference, registration, and repair information, see Appendix E of this book.

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Warranty

AT&T provides a limited warranty for this product. Refer to "AT&T Limited Warranty and Limitation of Liability" in Appendix C.

Ordering Information

The ordering number for this document is 518-455-210. To order copies of this book, call 1-800-432-6600 in the U.S. and 1-800-255-1242 in Canada. For more information on how to order this and other system reference materials, see "Reference Materials" in "About This Guide." For information on ordering replacement parts, accessories, and other compatible equipment, refer to "Product Ordering Information" in Appendix C.

Support Telephone Numbers

In the U. S., AT&T provides a toll-free customer helpline 24 hours a day. Call the AT&T Helpline at 1-800-628-2888 if you need assistance when installing, programming, or using your system.

For assistance in Canada, contact your local AT&T authorized dealer.

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Any references within this text to American Telephone and Telegraph Corporation or AT&T should be interpreted as references to Lucent Technologies Incorporated. The exception is cross references to books published prior to December 31, 1996, which retain their original AT&T titles.

Lucent Technologies—formed as a result of AT&T's planned restructuring – designs, builds, and delivers a wide range of public and private networks, communication systems and software, consumer and business telephone systems, and microelectronic components. The world-renowned Bell Laboratories is the research and development arm for the company.

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About This Guide

PARTNER Plus Communications System: Installation and Use explains what the PARTNER™ Plus Communications System can do, provides instructions for using the system, and shows you how to get the most out of its many features and capabilities.

How to Use This Guide

- If you are a new user, read Chapters 1, 4, and 5 to familiarize yourself with the system's features, learn how to handle calls, and program your phone.
- If you are installing the system for the first time, we suggest you read this guide completely. Chapter 1 is an overview of the system, while the other chapters give specific information on installing, programming, and using it.
- If you are installing additional equipment, see Chapter 2, "Installing the Hardware," Chapter 3, "Programming," and Chapter 5, "Using Auxiliary Equipment."
- If you need to reprogram the system or individual extensions, see Chapter 3, "Programming."
- If you are installing fax machines, answering machines, modems, or other data devices that can be connected to phone lines through the system, see Chapter 5, "Using Auxiliary Equipment."
- Once you are experienced with the system, use the Table of Contents or Index to locate the information you need.

Product Safety Labels

This book contains several product safety labels, identified by a 

CAUTION

Indicates the presence of a hazard that will or can cause minor personal injury or property damage if the hazard is not avoided.

WARNING

Indicates the presence of a hazard that can cause severe or fatal personal injury if the hazard is not avoided.

Carefully read the **WARNING** label on page 2-5. Opening the system modules or backplane will expose you to hazardous voltages, which *can* cause severe personal injury or death.

Also, read "Safety Instructions" on page 2-ii before performing any installation procedures.

Terminology

This guide refers to AT&T phones specifically designed to work with the PARTNER Plus system as *system phones*. System phones include the MLS-34D, MLS-12D, MLS-12, MLS-6, and MLC-6 model telephones. When specific models are discussed, the model numbers are given.

You can also use industry-standard telephones with the system. This guide refers to such telephones as "standard phones."

Reference Materials

The following materials are available to help you install, program, and use the system (the order numbers are in parentheses):

- *System Planner* (518-600-109) provides the forms needed to plan and record how your system and telephones are to be programmed.
- *Installation and Use* (518-455-210) provides instructions for installing, programming, and using the system.
- *Quick Reference for Use with MLS-Series Telephones* (518-455-250, package of 6) contains basic instructions for using system phones.
- *MLC-6 Cordless Telephone: Installation and Troubleshooting* (999-506-143) explains how to install the MLC-6 cordless telephone and how to solve any problems that might occur when using it with your system.
- *MLC-6 Cordless Telephone Quick Reference: Display and Controls* (999-506-146) explains how to use the MLC-6 cordless telephone with your system.

To order additional reference materials, call the AT&T Customer Information Center:

In the U.S.: 1 800 432-6600
In Canada: 1 800 255-1242

How to Comment on This Guide

A feedback form is located at the end of this guide, after the appendixes. If the feedback form is missing, send your comments and recommendations for changes to:

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Overview

1

This guide explains everything you need to know about using your PARTNER™ Plus Communications System. If you are responsible for managing the system—whether you are a receptionist, an office manager, or the “resident expert” on using it—you will find instructions and advice on the following topics:

- **Installing System Hardware.** If your company already has modular jacks for all outside lines and extensions, you may be able to use this existing wiring to install the system hardware and connect telephones to the system yourself (see Chapter 2 for installation instructions). If you prefer to have an AT&T service technician perform the installation and customize your system, call 1 800 247-7000.

The system supports a wide variety of auxiliary equipment, including fax machines, modems, answering machines, and credit card scanners. See Chapter 5 for advice on setting up such industry-standard devices to work effectively with the system.

- **Changing System Settings.** You can change your system’s settings easily to accommodate new or expanding needs. Chapter 3 gives instructions for making whatever system changes are needed—from adding modules to changing the features on a single extension. It gives details on the features that can help you manage your system (“System Programming Options”), explains how to reprogram your system (“System Programming Procedures”), and explains how to change the way a telephone is programmed—either remotely from extension 10 (Centralized Telephone Programming) or directly at the telephone itself (Extension Programming).
- **Training Co-Workers.** Chapter 4 explains how to handle calls and use system features effectively. To help with this task, give each telephone user a *Quick Reference* card and filled-in copies of the “Speed Dial” and “Extension Programming Information” forms in Appendix B.
- **Solving Problems.** Appendix C provides information on solving problems and ordering additional accessories and equipment. If your system or telephones malfunction, you may be able to solve the problem by following the steps provided in the “In Case of Difficulty” section of the appendix. If you still need help, call the 24-hour AT&T Helpline at 1 800 628-2888.
- **Daily Operation.** Depending on how your system is set up, you may need to oversee some of the system’s daily operations. For example, if your system is programmed to use the Night Service feature, you will need to turn on Night Service at the end of each day before leaving the office. (See “Using Night Service” in Chapter 4.)

Features and Capabilities

The following list provides an overview of the basic features of the system, along with the additional capabilities that you can get by customizing the system:

- Connects up to 8 outside lines and 24 extensions.
- Uses interchangeable parts, making the system easy to install, maintain, and upgrade.
- Supports industry-standard touch-tone and rotary telephones.
- Lets you connect fax machines, answering machines, modems, and credit card scanners directly to your phone system. Therefore, you do not have to buy extra lines or expensive adapters to connect these devices to the system.
- Displays prompts and messages to guide you when you program the system, making it easy for you to change the way the system and phones are programmed.
- Includes the following flexible dialing restrictions and permissions that let you control telephone activity and phone bills:
 - Line Access Restrictions and Outgoing Call Restrictions that restrict the kinds of calls a user can make on outside lines.
 - Disallowed Lists that prevent users from dialing certain telephone numbers (such as 900 numbers)
 - Allowed Lists, System Password, Marked System Speed Dial Numbers, and Emergency Numbers for overriding dialing restrictions
- Combines simplicity of use with a wide range of calling features on system phones, including:
 - Speed Dialing
 - Conferencing
 - Last Number Redial
 - Do Not Disturb
 - Privacy
 - Hold
 - Exclusive Hold
 - Transfer
 - Loudspeaker Paging
 - Access to multiple lines
- Supports the following groups of extensions for flexibility in directing and answering calls:
 - Calling Group for ringing or paging (voice-signaling) a group of extensions at once
 - Call Pickup Group for answering an outside call ringing at an extension in the group from any other extension in the system

-
- Night Service Group to prevent unauthorized use of telephones after normal business hours while allowing incoming calls to be answered
 - Allows you to make and answer calls during a power failure (with standard phones), while retaining programmed settings for up to four days. (An optional Uninterruptible Power Supply, or UPS, is also available.)
 - Includes a special procedure to customize system operation for Centrex/PBX telephone service.
 - Supports additional applications such as auto attendants, doorphones, paging systems, hotlines, external alerts, or music-on-hold* systems.

* If you use equipment that rebroadcasts music or other copyrighted materials, you may be required to obtain a license from a third party such as ASCAP or BMI. Or, you can purchase a Magic on Hold® system from AT&T that does not require you to obtain such a license.

System Components

The system's modular hardware design makes it easy to install and expand. Figure 1-1 shows the components in a basic system. A brief description of each component follows the figure.

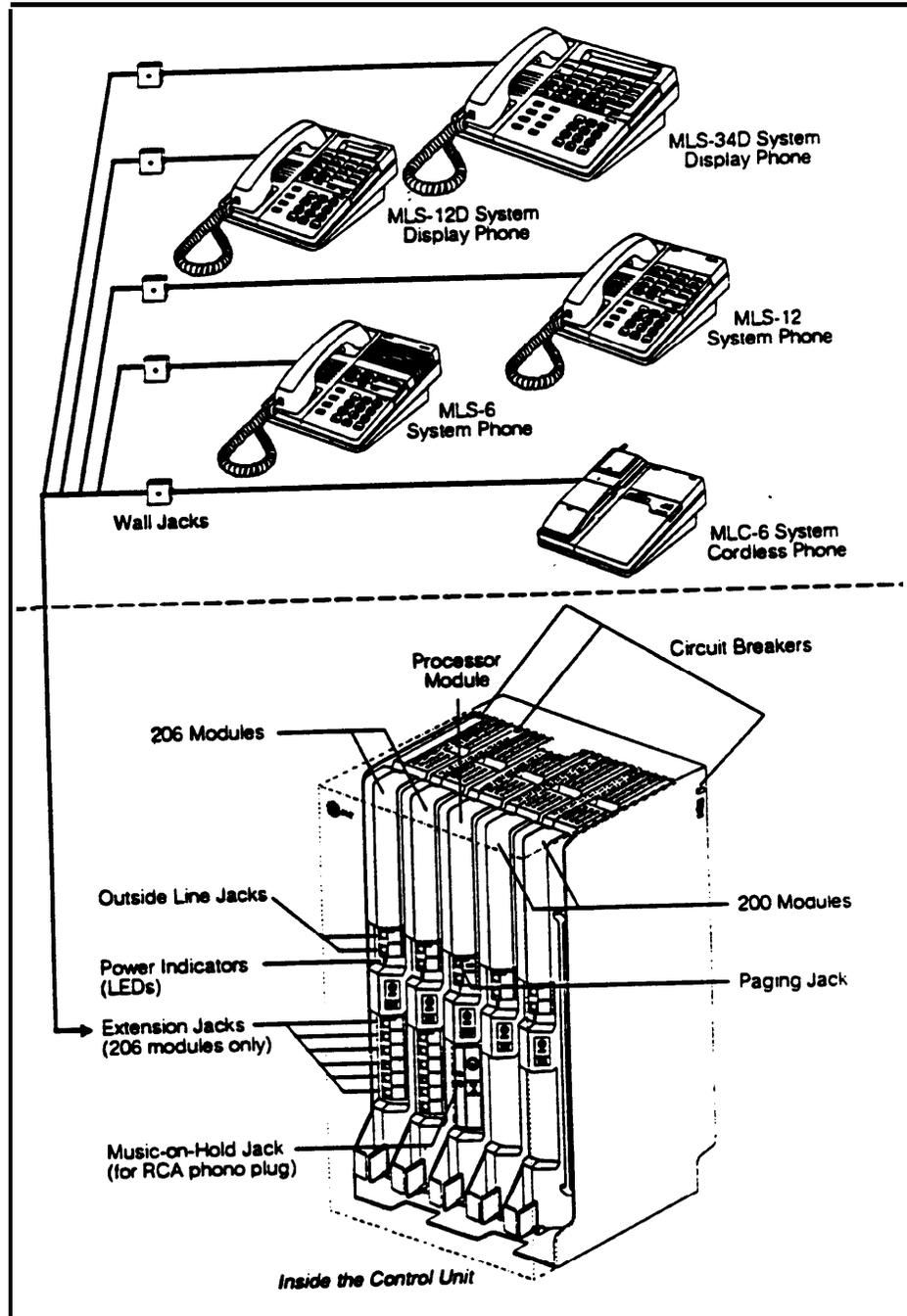


Figure 1-1 System Components

Control Unit

The control unit is the heart of the system. It consists of a backplane, a processor module, up to four 206 or 200 modules, and a cover.

- **Backplane.** All the system modules slide into the backplane, which channels power to the system.
- **Processor Module.** The processor module provides the intelligence that controls most of the system's features. It also has an RCA jack for a music-on-hold audio source and a jack for a loudspeaker paging system.
- **206 Module.** Each 206 module has jacks to connect a maximum of 2 outside telephone lines and 6 extensions. You can connect telephones and other telecommunications devices (such as fax machines, answering machines, or modems) to the extension jacks on the 206 module (either directly or through your building's extension jacks). Each 206 module has a green power indicator that shows when it is turned on. A system can have up to four 206 modules, so the maximum capacity of the system is 8 lines and 24 extensions. *The system requires at least one 206 module.*
- **200 Module.** The 200 module is similar to the 206 module, but without extension jacks. It only has jacks for two outside lines. This module lets you add lines inexpensively when you do not need more extensions.
- **Cover.** The cover slides onto the front of the backplane after all modules have been installed.

Telephones

"MLS" stands for "Multi-Line Set," because an MLS-model telephone can handle more than one outside line.

"MLC" stands for "Multi-Line Cordless."

In order to program the system, you must install an MLS-12D or MLS-34D phone at extension 10.

Two kinds of telephones work with your system:

- AT&T MLS- and MLC-model phones that are designed to make maximum use of the system's features. In this book these phones are called "system phones."
- Industry-standard (non-proprietary) rotary or touch-tone phones, including standard feature phones with built-in feature buttons and lights. In this book these phones are called "standard phones."

AT&T manufactures the following system telephones:

- **AT&T MLS-34D™ Telephone.** This phone is a good choice for extension 10—typically the extension used by the system manager, receptionist, or operator. It has 34 buttons with lights: 8 buttons for outside lines or programmable features, 2 intercom buttons, and 24 lighted programmable

buttons. It also has a built-in speaker and microphone, and a display that shows various status information, including the following:

- Current date, day, and time
- Number you dialed (when you make a call)
- Extension calling you or transferring a call to you (when you receive an inside call)
- Prompts and messages (when you are changing system settings)
- Elapsed time (during a call)
- **AT&T MLS-12D™ Telephone.** This phone has 12 buttons with lights: 8 buttons for outside lines or programmable features, 2 intercom buttons, and 2 lighted programmable buttons. It also has 6 additional programmable buttons without lights, a built-in speaker and microphone, and a display like the one on the MLS-34D.
- **AT&T MLS-12™ Telephone.** This telephone is the MLS-12D telephone without a display.
- **AT&T MLS-6™ Telephone.** This telephone has 6 buttons with lights, including 4 buttons for outside lines or programmable features and 2 intercom buttons. It also has a built-in speaker.
- **AT&T MLC-6 Cordless Telephone.** This cordless telephone works like the MLS-6 corded telephone. It has 6 buttons, including 4 buttons for outside lines or programmable features and 2 intercom buttons, and a display that shows line status. It also includes an On/Off button that you must press before you can use the phone (to save battery power), and some special cordless feature buttons.

Auxiliary Equipment

The system works with many telecommunications devices, not only system telephones. You can connect almost any industry-standard device to your system, and certain models of other devices, all without expensive adapters or additional phone lines.

Industry-Standard Devices

For best results, connect any device with more than one line as a single-line device.

Many types of *industry-standard, single-line* telecommunications devices will work with your system:

- Touch-tone and rotary telephones
- Fax machines
- Answering machines
- Modems
- Credit card scanners
- Cordless telephones

Limitations

You can connect almost any standard device to your system, regardless of the manufacturer. The following limitations apply:

- It must be industry standard and non-proprietary. That is, it cannot be made specifically for use on a particular telephone system. (For example, you cannot connect an AT&T MERLIN® phone because it is specifically designed for use on a MERLIN system.)
- Its Ringer Equivalence Number (REN*) cannot be greater than 2.0. (The REN is shown on a label, usually on the bottom of the device.)

Connecting and Using Standard Devices

You can connect a standard device so that it is on an extension by itself, or so that it shares an extension with another piece of equipment (either another standard device or a system phone). For example, you can connect a standard touch-tone phone and an answering machine to the same extension. To connect two devices on one extension, you need an inexpensive AT&T 267F2 bridging adapter (two are provided with each 206 module). See Chapter 2 for installation instructions.

For additional information on programming and using fax machines, answering machines, modems, or credit card scanners, see Chapter 5.

* REN is a measure of the power it takes to ring a phone. A typical home phone line can handle 4.0-5.0 RENs; each extension jack in your system can handle 2.0 RENs.

Other Devices

You can connect non-standard devices to your system, but *only specific models are compatible with the system*. Contact an AT&T sales representative for details. These devices include:

- **Loudspeaker paging systems** allow you to broadcast a message over a large area, by connecting the paging system to the control unit processor module. The system supports the AT&T PagePac® models. For information on how to use a loudspeaker paging system with the system, see Chapter 4.
- **Music-on-hold systems** allow you to play recorded music to callers while they are on hold, by connecting the music-on-hold system to the control unit processor module. The system supports the AT&T Magic on Hold® system and most models from other manufacturers.
- **DoorPhones** allow visitors to ring up to 5 extensions at once by pressing a button on the doorphone; the person who answers a doorphone call can then use the phone to speak to the visitor over the doorphone. The system supports up to two AT&T PARTNER Plus doorphones, which can be installed indoors or outdoors. A doorphone is especially useful for providing access to offices or departments after hours. For example, you can install a doorphone outside your building entrance to allow visitors to call selected extensions when the receptionist is not there and the front door is locked.
- **Auto attendants** answer calls and route them to appropriate extensions based on user responses to recorded messages.
- **Headsets** allow users to have private, hands-free conversations. A headset is a combination earphone and microphone worn on the head, useful for receptionists, salespeople, or others who may need to have their hands free while talking on the phone. AT&T sells several headsets.
- **Extra alerts** are strobes, lights, chimes, horns, or bells that ring when calls come in. AT&T sells several types of extra alerts.
- **In-Range Out-of-Building (IROB) protectors** prevent electrical surges from damaging your system when phones are installed in another building. The system supports the AT&T 503A1 IROB protector. For installation instructions, refer to the booklet packaged with the protector.

-
- **Speakerphones** provide hands-free two-way operation of the phone without lifting the handset. (The MLS-34D, MLS-12D, and MLS-12 phones have built-in speakers and microphones, eliminating the need for a separate speakerphone.) The system supports the AT&T S203 speakerphone when it is combined on an extension with a standard single-line phone.
 - **Telephone-recording device interfaces** allow you to record both sides of telephone conversations.
 - **Repertory dialers** allow you to store frequently used numbers for one-touch dialing. If you need many speed dial numbers, a repertory dialer can be combined on an extension with a system or standard phone to supplement the system's capabilities.
 - **Hard-of-hearing handsets** are designed for users who need even more amplification than is provided by the volume controls on system phones. Although the volume controls on system phones significantly reduce the need for an amplified handset, hard-of-hearing users may find that the AT&T K6S handset meets their needs.

Chapter 2 explains how to connect these devices to the system and how to combine them on a single extension.

Ordering Auxiliary Equipment

Auxiliary equipment is available from many AT&T sources. Contact any of the following for sales information and advice on the equipment that would best meet your needs:

AT&T Catalog Sales	1 800 451-2100
AT&T Sales Office	1 800 247-7000
AT&T PhoneCenter Store	1 800 222-3111
AT&T-Authorized Dealer	1 800 247-1212

Installing the Hardware

2

Important Safety Instructions

Always follow these basic safety precautions when using the system:

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. DO NOT block or cover the ventilation slots and openings. They prevent the product from overheating. DO NOT place the product in a separate enclosure, unless proper ventilation is provided.
4. Never spill liquid on the product or drop objects into the ventilation slots and openings. Doing so may result in serious damage to the components.
5. Repair or service must be performed by a qualified repair person.
6. The product is provided with a 3-wire grounding type plug. This is a safety feature. DO NOT defeat the safety purpose of the grounding type plug. DO NOT staple or otherwise attach the AC power supply cord to building surfaces.
7. DO NOT use the product near water or in a wet or damp place (such as a wet basement).

Additional Safety Instructions for Installation Personnel

Install the product to meet all the environmental and electrical requirements listed in the specifications (see Appendix D).

1. DO NOT install telephone wiring during a lightning storm.
2. DO NOT install telephone jacks in a wet location unless the jack is specifically designed for wet locations.
3. Never touch uninsulated telephone wires or terminals, unless the telephone line has been disconnected at the network interface.
4. Use caution when installing or modifying telephone lines.
5. The system control unit must be securely wall mounted.



CAUTION:

If any wiring from the extension jacks leaves the building premises, you must install AT&T 503A1 IROB protectors (see Appendix D).



CAUTION:

Use only AT&T-manufactured PARTNER modules in the PARTNER Plus Communications System.

SAVE THESE INSTRUCTIONS

Line and Extension Numbering

After you turn the system on and the internal battery is fully charged (24 hours), the system will retain all settings for up to four days in the event of a power failure.

The way that you install system modules in the control unit determines the numbering of lines and extensions. The system supports up to eight telephone lines, which connect to the top jacks on 206 or 200 modules in the system's control unit. When you first supply power to the system, it "counts" the 206 or 200 modules in the control unit and calculates the number of lines—two lines for each module installed. The system then numbers lines from 1 through 8 (if you have the maximum number of lines), as shown in Figure 2-1.

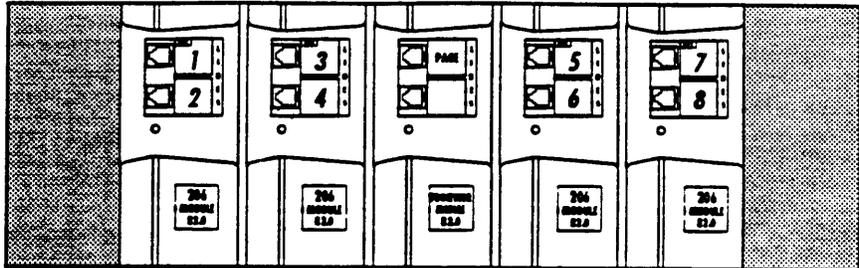


Figure 2-1 Line Numbering

For each 206 module, the system assigns six extensions. With four 206 modules, extensions are numbered 10 through 33, as shown in Figure 2-2.

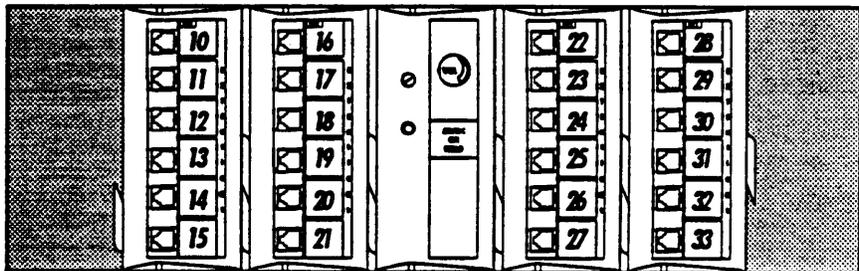


Figure 2-2 Extension Numbering for 206 Modules

Be sure that the 200 modules are installed to the RIGHT of all 206 modules. Otherwise, your extensions will not be consecutively numbered.

If you install 206 modules *and* 200 modules, the system assigns two lines and six extensions for each 206 module, and only two lines for each 200 module (because 200 modules have no extension jacks). Figure 2-3 shows a system with two 206 modules and two 200 modules; this system has eight lines and twelve extensions (numbered 10 through 21).

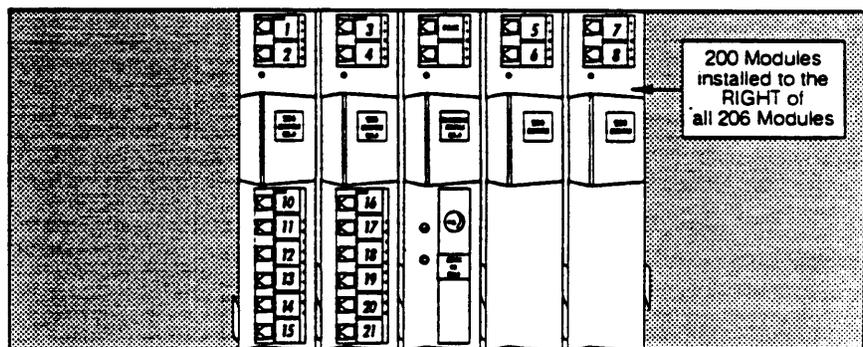


Figure 2-3 Extension Numbering for 206 and 200 Modules

An Example System Setup

These two pages show an example system with two 206 modules and one 200 module, giving it a capacity of 6 outside lines and up to 12 extensions. In the example, system phones and industry-standard equipment are connected to 9 extensions. An ordinary 110 VAC grounded wall outlet (not controlled by an on/off switch) supplies power to the control unit. The circled numbers in the figure refer to the following list, which gives a brief description of the system's hardware components.

Control Unit

The control unit consists of a backplane, cover (not shown), one processor module, and up to four 206 or 200 modules.

- ① **Backplane.** The backplane channels power to the system and connects the modules together.
- ② **Processor Module.** The processor module provides most of the system features. It also has Music-on-Hold and paging jacks.
- ③ **206 Modules.** Each 206 module has jacks for 2 incoming telephone lines and 6 extensions. The system must have at least one 206 module, and can have up to four, so the maximum system capacity is 8 lines and 24 extensions.
- ④ **200 Module.** The 200 module is similar to the 206 module, but without extension jacks. You can have up to three 200 modules in the system (installed to the right of all 206 modules). Each 200 module provides 2 additional outside lines but no additional extensions.
- ⑤ **Line Jacks.** Outside telephone lines connect to the top two jacks on each 200 or 206 module.
- ⑥ **Extension Jacks.** Inside wiring for telephones and other telecommunications equipment connects to the bottom six jacks on each 206 module.
- ⑦ **Music-on-Hold Jack.** The audio source plugs directly into this jack. You can connect any type of audio equipment to your system (including a CD player, cassette player, stereo receiver), but you must supply an audio cord with an RCA phono plug. In this example, AT&T Music On Hold is connected directly to the Music-on-Hold jack on the processor module to provide customized music and messages for callers on hold. For information on Music on Hold, call your AT&T representative or call the AT&T Sourcebook at 1 800 451-2100.
- ⑧ **PAGE Jack.** The loudspeaker paging system plugs directly into this modular jack on the processor module. Your phone system is compatible with AT&T's PagePac paging systems. The PagePac6 is shown here.
- ⑨ **Network Interface Jacks.** These jacks provide access to telephone lines coming from the local telephone company or from another system, such as a PBX (Private Branch Exchange) or Centrex system. To connect each outside line to your system, plug one end of a line cord into one of these jacks and the other end into a line jack on a 200 or 206 module.

Extensions

This example system shows various devices—including both system telephones and industry-standard devices—connected to each extension. System extensions connect to the extension jacks in the control unit by way of your building's inside wiring.

- ⑩ **Extension 10:** The following devices are on extension 10:
 - **MLS-34D Display Phone.** In this example, the receptionist on extension 10 has a 34-button display phone. This phone can handle 8 outside lines. You can also program all extensions on your system as Auto Dial buttons (see

Chapter 3), to show the status of up to 24 extensions. To program the system or system telephones from extension 10, you must use a system display phone (MLS-34D or MLS-12D). The display on these phones shows the date, day, time, number dialed, duration of calls, and programming messages.

- **AT&T 267F2 Bridging Adapter.** This adapter lets you connect two devices—in this example an MLS-34D display phone and a standard touch-tone phone on one extension jack. The adapter has two modular jacks, one for each phone. The bridging adapter plugs into a wall jack or directly into an extension jack on the 206 module.

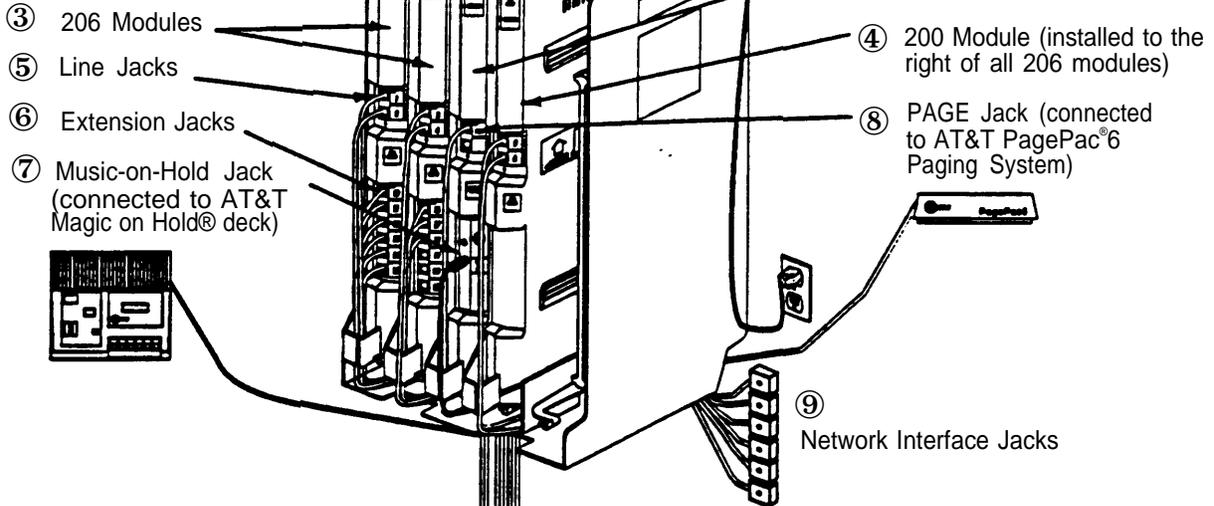
- **Standard Touch-Tone Telephone for Power Failure Operation.** In the event of a power failure, the first extension jack on each 206 module connects to the first outside line on that module, to provide continuous service to standard telephones. In this example, the MLS-34D phone on extension 10 will not work during a power failure. However, the receptionist can use the standard touch-tone phone connected to extension 10 to place and answer calls on line 1.

- ⑪ **Extension 11: MLS-12 Telephone.** This 12-button system phone has the same controls as the MLS-12D telephone (see extension 16), but it has no display.
- ⑫ **Extension 12: MLS-6 Telephone and Answering Machine.** Using a 267F2 bridging adapter, both a 6-button system phone and an answering machine are connected to one extension. The MLS-6 phone accommodates up to 4 outside lines.
- ⑬ **Extension 13: Industry-Standard Telephone.** A standard single-line touch-tone phone (such as you might have in your home) is connected directly to the extension jack.
- ⑭ **Extension 14: Doorphone.** A doorphone is installed at the entrance. When someone at the entrance presses the button on the doorphone, up to 5 designated telephones in the office ring automatically.
- ⑮ **Extension 15: Bell.** A loud bell is connected directly to the extension jack.
- ⑯ **Extension 16: MLS-12D Display Phone.** In this example, extension 16 has a 12-button display phone. This phone can handle 8 outside lines and has a display showing the date, day, time, number dialed, duration of calls, and programming messages. Also, its programmable buttons (two with lights) can store additional features and Auto Dial numbers.
- ⑰ **Extension 17: Fax Machine and Standard Telephone.** A fax machine and standard touch-tone phone are connected together on an extension jack. This setup lets you share the fax line with a telephone.

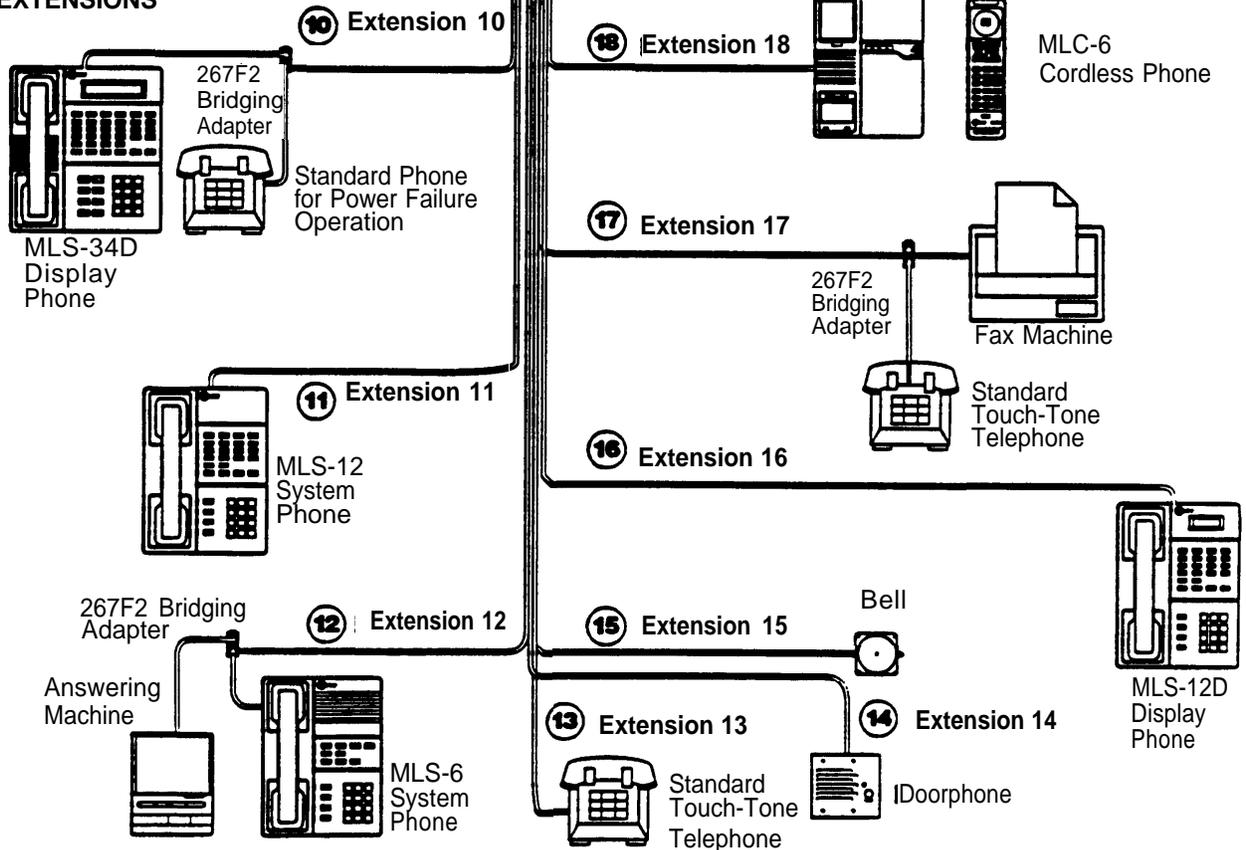
Alternatively, you can use a system phone at another extension to monitor the fax machine (Fax Management). To do so, first use System Programming to identify the fax machine extension. Then program a lighted button on the system phone with the fax extension as an Auto Dial number. You can then use the Auto Dial number to quickly transfer calls from that extension to the fax machine. In addition, the light on that button shows whether the fax machine is in use, busy, returning a call you transferred to it, or not answering calls. If your AT&T fax machine includes the Notify feature, the fax machine can also notify you when a fax has been received.
- ⑱ **Extension 18: MLC-6 Cordless Telephone.** An AT&T MLC-6 cordless system telephone is connected to extension 18. This phone works like the corded MLS-6 system phone, but gives you mobility.

CONTROL UNIT

NOTE:
This sample system
has six lines (1-6)
and
nine extensions (10-18)



EXTENSIONS



Installing the Control Unit

Before you begin, use the *System Planner* to decide where phones and other equipment are to be installed, and how the system and phones are to be programmed. Instructions for installing the control unit, telephones, and other equipment are on the following pages.

⚠ CAUTION:

Environmental and electrical conditions must meet the specifications in Appendix D.

⚠ CAUTION:

Do not connect the AC power cord before you install modules in the backplane.

Installing the Backplane and System Modules

Before installing the backplane and system modules, be sure you have the parts shown in Figure 2-4 (if not, call the Helpline). Depending on the number of lines and extensions in your system, you will have up to three packages of system components; Figure 2-4 shows the contents of each package in an area marked by a dashed line.

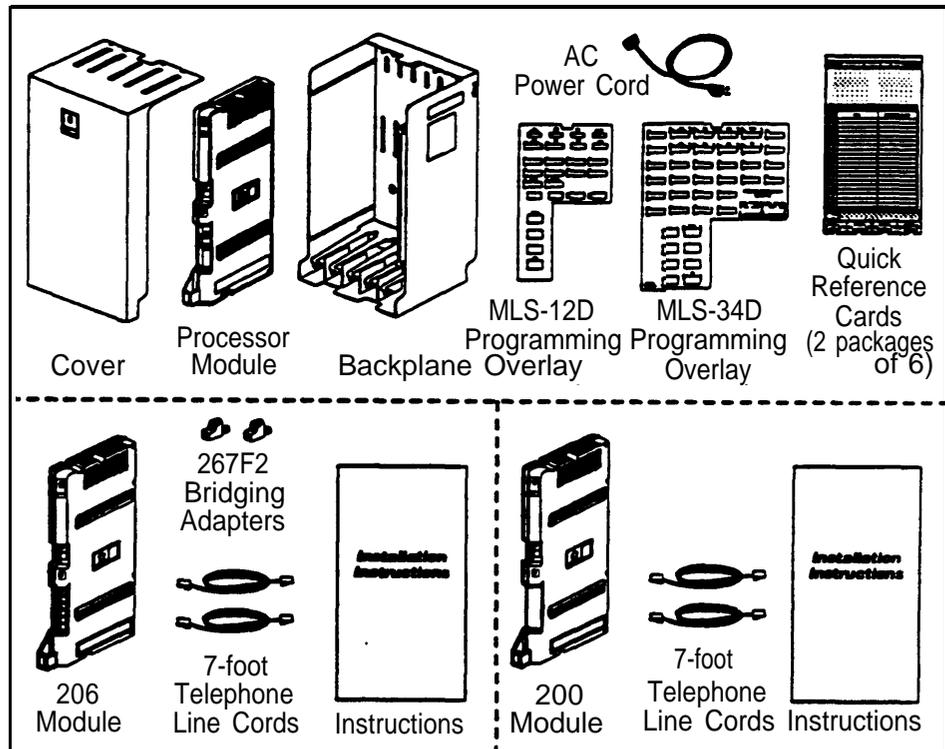
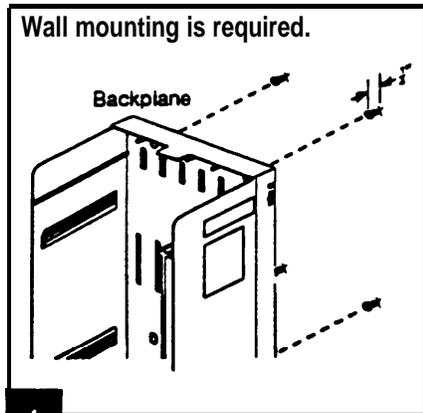


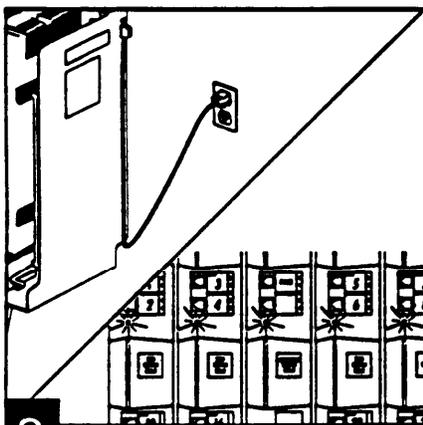
Figure 2-4 System Parts

If you are wall mounting the control unit, you also need four #12 screws appropriate for the type of wall and weight of the control unit.



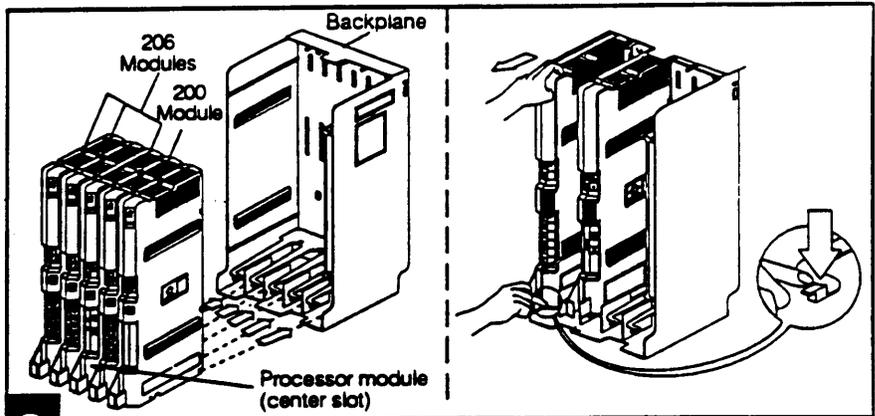
1

Wall mounting is required. Mount the backplane on the wall, leaving at least 6 inches clearance at the top and sides and 2 feet at the front and bottom. When using the supplied 7-foot cords, install within 5 feet of an electrical outlet not controlled by a switch and the network interface jacks. Hold the backplane against the wall... Using the four screw keyholes in the backplane as a template, mark screw locations on the wall. Start four #12 screws, leaving the screw heads approximately 1/4" away from the wall. Use screws appropriate for the wall surface—when loaded with five modules, the control unit weighs 27.5 pounds. Slip the backplane onto the screws and tighten them.



3

A Connect the AC power cord. **B** Check all green lights on the front of the unit. If any lights are out, check to be sure all circuit breakers are pushed in (see step 5 on page 2-6), then remove the power cord and reseal the module.



2

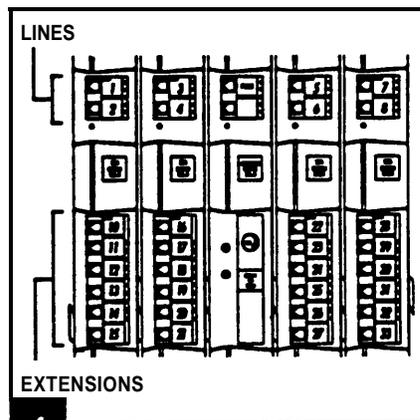
A Slide the first 206 module into the leftmost slot of the backplane. (The system will not work if a 206 module is not installed in this slot.) Push slowly but firmly until the module locks into place with two snaps, so that it is attached to the rear of the backplane and held in place by the locking tab on the bottom front of the slot. Do not force the module. If it does not insert easily, remove the module as shown in step 2B, clear any obstruction, and reinsert.

Insert the next module in the second slot from the left, aligning the dovetails between the modules. Insert the processor module in the center slot and remaining modules from left to right, without skipping slots.

B To replace a system module, first disconnect the AC power cord from the wall outlet, then slide the control unit cover off the backplane.

Place one hand on top of the module. With the other hand, grip the plastic bracket on the bottom front of the module, and use one finger to hold down the locking tab just below the bracket. Slide the module straight out being careful not to strain the wires connected to the module. (If there is not enough slack in the wires, label and disconnect them before removing the module.)

Disconnect the wires from the old module and plug them into the same jacks on the new module. (Transfer the wires one at a time, to make sure that you know where each wire goes.) Insert the new module as in step 2A.



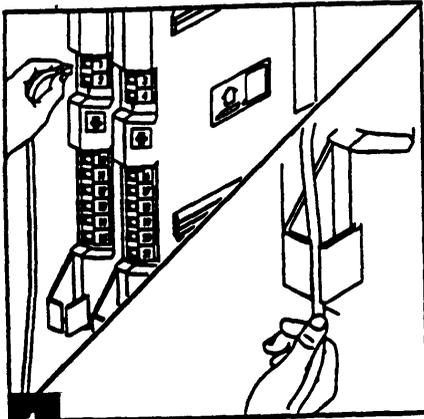
4

Label the line and extension jacks as shown above.

▲ WARNING:

There are no customer-serviceable components inside the system modules backplane. Hazardous voltages within. DO NOT OPEN THE MODULES!

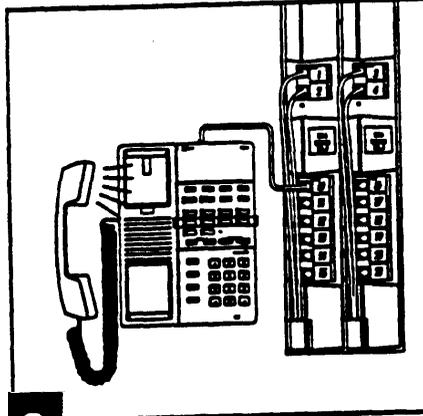
Connecting Lines and Extensions



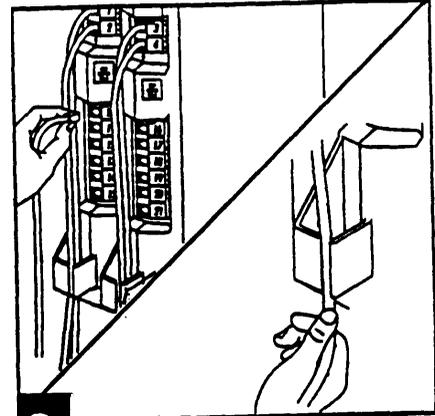
1 **A** Connect telephone cords to line jack on modules, starting with the top line jack on leftmost 206 module. **B** Route cords through bracket at bottom of module. Leave at least 2 feet of slack in cords so that you can easily reconnect cords during replacement. Connect free end of each line cord to the appropriate network interface jack.

NOTE:

Test for dial tone at network interface jacks before connecting outside lines.



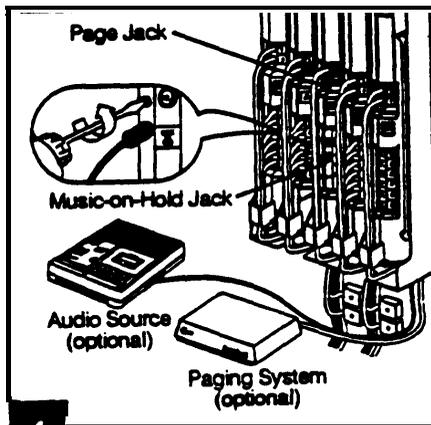
2 Test the lines. Plug a system phone into extension 10. Press the line button for each outside line and listen for dial tone. Repeat for extensions 16, 22, and 28 (if available). Disconnect power before continuing.



3 **A** Connect modular line cords to 206 module extension jacks, starting at top the jack on the leftmost module. **B** Route cords through the hook on front of the module, then through the slot between module and base of backplane. Leave at least 2 feet of slack to allow easy replacement of system modules. Connect each cord to a wall jack for an extension.

NOTE:

If extensions are not wired to modular jacks, call a qualified service technician.



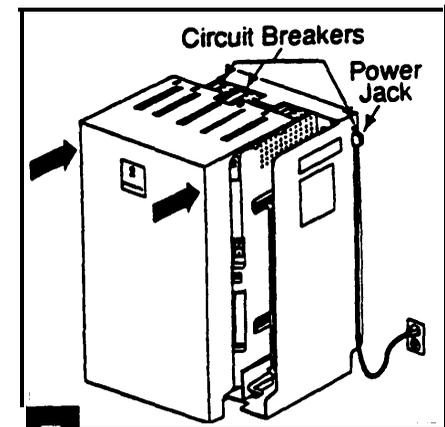
4 To install an (optional) paging system, use a two-pair cord. Insert the modular plug for the paging system into the jack labeled PAGE on processor. Route cord as for line and extension cords, then connect to loudspeaker paging system.

To connect an audio source, insert an RCA plug into the Music-on-Hold jack on the processor. Route the cord as you did for the line and extension

NOTE:

Only the steps for connection to the control unit are included here. Follow the manufacturer's directions for setting up and using your music-on-hold or paging system.

cords, then connect the cord to the audio source. To adjust volume, see the inset illustration in step 4. First use a flathead screwdriver to turn the volume control on the processor counterclockwise to the lowest setting, then connect AC power as in step 5. Place a call on hold and listen while adjusting volume. If you do not hear music at any setting, check system programming procedure #602 (see Chapter 3).



5 Connect AC power cord. Press firmly into power jack on top right rear of backplane until it locks into place. Make sure circuit breakers on the backplane and modules are pushed in. Plug the other end of the cord into a grounded 3-prong wall outlet not controlled by a switch.

Holding the sides of the cover, slide the cover onto the front of the modules until it meets the backplane.

Installing Phones and Devices

Guidelines

System Phones

System phones require at least 2-pair wiring and are compatible with AT&T 4-pair SYSTIMAX™ wiring. If you need a shorter cord, use AT&T's 2-foot D4BU-29 mounting cord (available separately—see “Product Ordering Information” in Appendix C). Connect an MLS-12D or MLS-34D phone to extension 10 for system programming. (See page 2-9 for instructions on assembling system phones.)

Industry-Standard Devices

Industry-standard equipment (including standard phones) requires 1-pair mounting cords; AT&T D2R mounting cords are recommended.

Combination Extensions

You can connect an industry-standard device (such as a standard phone or a fax machine) on an extension by itself, or you can use an AT&T 267F2 bridging adapter *only* combine it with another standard device or a system phone (see Figure 2-5). You cannot install two system phones on the same extension, and the combined REN of two devices on an extension must be no more than 2.0.

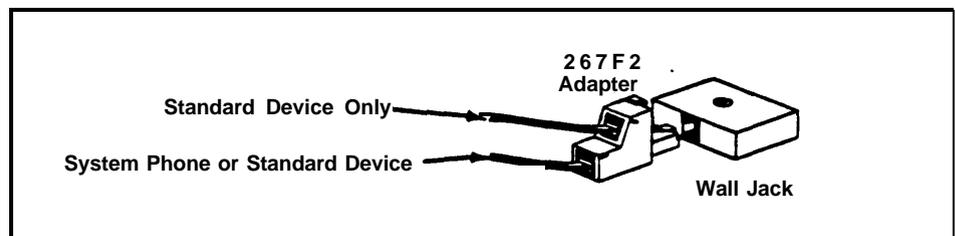


Figure 2-5 Connecting Two Devices on an Extension

Power Failure Operation

During a power failure, system phones will not work because they require power to operate. However, if a standard phone is connected to extension 10, 16, 22, or 28, it can place and answer calls on lines 1, 3, 5, and 7, respectively. Connect a standard phone to one or more of these extensions, either alone or combined with a system phone. If you combine a standard phone and system phone on one extension, you may want to turn off the standard phone's ringer during normal use.

Out-of-Building Installations

Installing phones in a different building from the control unit requires AT&T 503A1 In-Range Out-of-Building (IROB) protectors to prevent damage due to lightning (installation instructions are included with the protector).

Fax Machines

If you install a fax machine, use System Programming (#601) to identify the fax extension (see Chapter 3). See Chapter 5 for advice on setting up fax machines.

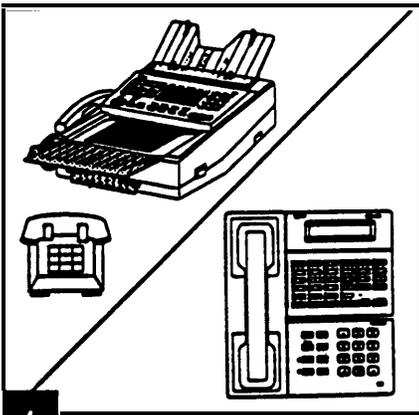
Doorphones

Do not connect doorphones to extensions 10, 11, 16, 17, 22, 23, 28, or 29. Use System Programming (#604-#606) to identify the doorphone and alerting extensions.

Hotlines

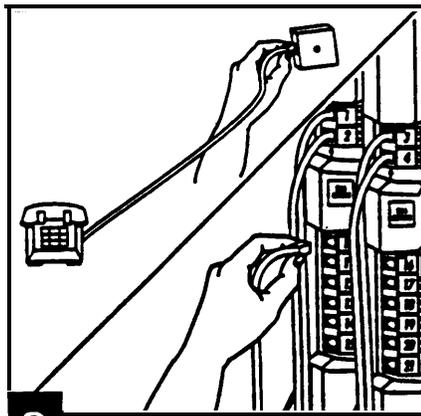
A hotline phone must be a standard phone—not a system phone—but it can ring any type of phone. Do not connect a Hotline phone to extensions 10, 16, 22 or 28, to keep them available for power failure use. Use System Programming (#603) to identify the hotline and alerting extensions.

Installation Instructions



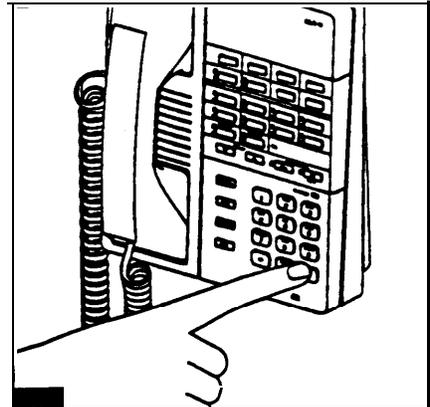
1 Assemble a standard phone or other industry-standard device according to the manufacturer's instructions.. (For system phones, see "Assembling System Phones" on page 2-9.)

NOTE: To connect devices to the system, follow only these instructions, not the instructions provided by the manufacturer.



2 Plug the telephone cord into a modular wall jack or directly into a 206 module extension jack. To install two devices on a single extension, see Figure 2-5 on page 2-7.

If the telephone cord provided with a standard device is loose, use an AT&T D2R mounting cord instead.



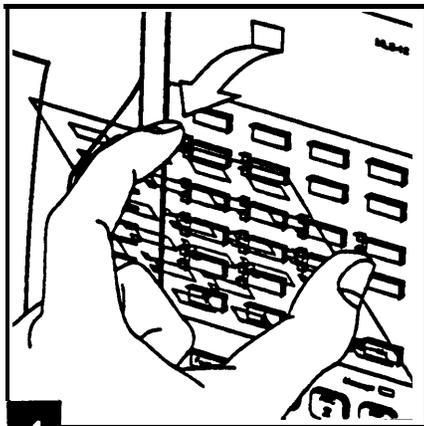
3 Test the telephone for proper operation. To test the power and lights on a system phone, press and hold the [#] button for 5 seconds. Before releasing the [#] button, lift the handset. All lights should light, the ringer should sound, and (on the MLS-12 or MLS-34D phones only) a test pattern should appear on the display. If not call the Helpline at 1 800 628-2888. Replace the handset; the phone is now in normal operating mode.

To test the intercom, lift the handset and press an intercom button. You should hear an intercom dial tone. If not, see "Troubleshooting" in Appendix C.

Next, test the outside line connection. Lift the handset and press an outside line button. You should hear an outside dial tone. If not, see "Troubleshooting" in Appendix C.

If you are installing two phones on one extension, pick up the handset of the first phone and listen for dial tone. Then pick up the handset of the second phone and listen for dial tone. If no dial tone, see "Troubleshooting" in Appendix C.

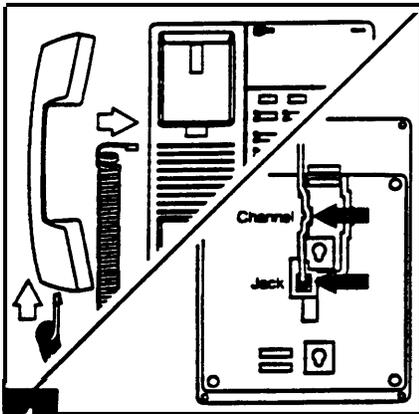
To test a standard phone, lift the handset and listen for a dial tone. If you don't hear a dial tone, see "Troubleshooting" in Appendix C.



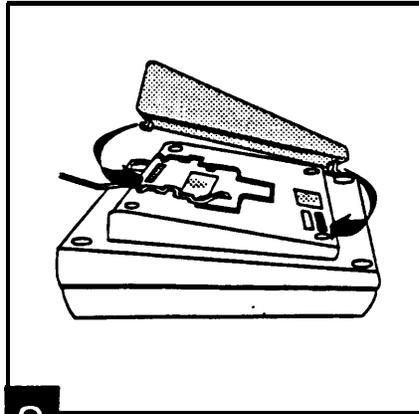
4 To put the button sheet on a system phone, remove the clear plastic cover from the phone—gently pull the center tab down (toward the front of the phone), then lift. Place a filled-out button label sheet on the phone so the holes on the sheet fit over the buttons. Replace the plastic cover.

Assembling System Phones

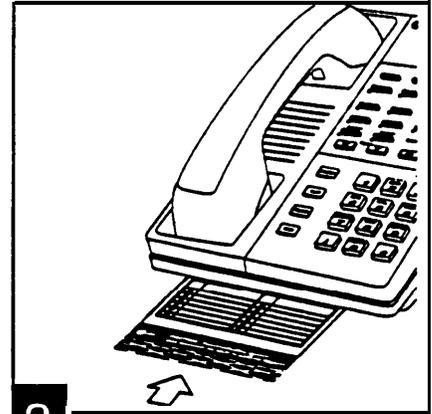
Desk Mounting (Stand Required for MLS-34D)



- 1** **A** Plug one end of the handset cord into the jack on the handset and the other end into the small jack on the left side on the bottom of the phone. **B** Plug one end of the phone cord into the big jack on the bottom of the phone. Push the cord in place along the channel on the bottom of the phone.



- 2** To install the telephone stand, gently place the phone upside down with the low end of the phone to your right. Insert the tab on the narrow end of the stand into the right slot on the bottom of the phone. Then insert the other tab into the left slot pushing the stand down and slightly inward until the tab locks into place.



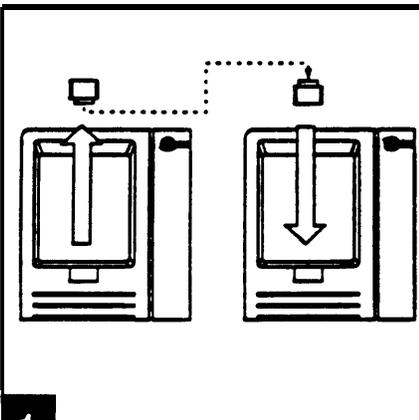
- 3** Slide the *Quick Reference* card under the phone.

NOTES:

If you wall mount a display phone, the display may be difficult to read, so desk mounting is recommended.

Position MLC-6 cordless system phones at least 20 feet away from the control unit.

Wall Mounting (Stand Required)*

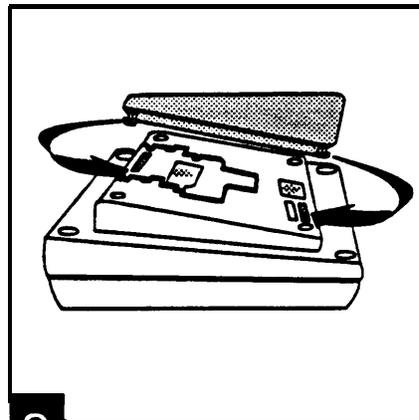


- 1** Reverse the plastic hook that sits in the earpiece part of the handset cradle.

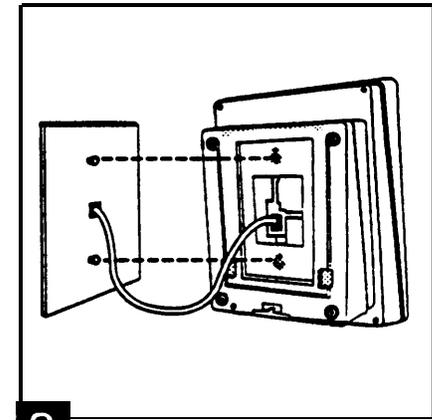


CAUTION:

Do not unscrew the bottom of the phone. To do so will expose you to a risk of electrical shock.



- 2** Install the telephone stand. To snap the stand onto the bottom of the phone, gently place the phone upside down with the low end of the phone to your right. Insert the tab on the narrow end of the stand into the left slot on the bottom of the phone. Then insert the other tab into the right slot, pushing the stand down and slightly inward until the tab locks into place.



- 3** Insert the phone cord through the center of the stand and plug it into the jack on the bottom of the phone, then plug the other end into the modular wall jack. Push any excess cord into the space inside the stand, then mount the phone on the wall jack using the screw keyholes on the bottom of the stand. For proper mounting, the wall jack must be an AT&T 630B connecting block. Finally, connect the handset cord as described in "Desk Mounting," step 1A.

*These wall mounting instructions apply to corded MLS-model phones only. To wall mount an MLC-6 cordless phone, follow the instructions in the *Installation and Troubleshooting* booklet provided with the phone.

Alphabetical List of System and Telephone Programming Procedures

For information on a programming procedure, see the page cited in this table. System programming procedures are identified by the procedure code following the procedure name (for example, #305 for Abbreviated Ringing). Telephone programming procedures show only the procedure name.

Procedure	Page	Procedure	Page
Abbreviated Ringing #305	3-15	Lines, Number of #104	3-14
Allowed List Assignments #408	3-16	Loudspeaker Paging	3-23
Allowed Phone Number Lists #407	3-16	Message Light Off	3-23
Attendant/VMS Extensions #607	3-17	Message Light On	3-23
Auto Dialing	3-22	Music On Hold #602	3-17
Automatic Extension Privacy #304	3-15	Night Service Button #503	3-17
Automatic Line Selection	3-22	Night Service Group #504	3-17
Call Pickup	3-23	Number of Lines #104	3-14
Calling Group Extensions #502	3-17	Outgoing Call Restrictions #401	3-16
Conference Drop	3-23	Outside Conference #109	3-14
Conference, Outside #109	3-14	Password, System #403	3-16
Copy Settings #399	3-15	PBX/Centrax Mode #721	3-14
Date, System #101	3-14	PBX Dial-Out Code #106	3-14
Day, system #102	3-14	Personal Speed Dial Numbers	3-22
Dial mode #201	3-15	Pickup Group	3-23
Disallowed List Assignment #405	3-16	Pickup Group Extensions #501	3-17
Disallowed Phone Number Lists #404	3-16	Privacy	3-23
Display Language #303	3-15	Privacy, Automatic Extension #304	3-15
Do Not Disturb	3-22	Recall	3-22
Doorphone 1 Extension #604	3-17	Recall Timer Duration #107	3-14
Doorphone 2 Extension #605	3-17	Reset #728	3-14
Doorphone Alert Extensions #606	3-17	Restricton, Line Access #302	3-15
Drop, Conference	3-23	Restrictions, Outgoing Call #401	3-16
Emergency Phone Number List #406	3-16	Ringin, Abbreviated #305	3-15
Exclusive Hold	3-22	Ringin, Line	3-22
Fax Machine Extensions #601	3-17	Rotary Dialing Timeout #108	3-14
Group Calling	3-23	Save Number Redial	3-22
Group Paging	3-23	SpeedDial Numbers, Personal	3-22
Hold Disconnect Time #203	3-15	Speed Dial Numbers, System	3-18
Hotline #603	3-17	System Password #403	3-16
Language, Display #303	3-15	System Speed Dial Numbers	3-18
Last Number Redial	3-23	Time, System #103	3-14
Line Access Restriction #302	3-15	Toll Call Prefix #402	3-16
Line Assignment #301	3-15	Touch-Tone Enable	3-23
Line Ringing	3-22	Transfer Return Extension #306	3-15
Line Selection, Automatic	3-22	Transfer Return Rings #105	3-14

After you install the system hardware as described in Chapter 2, you can customize the system control unit and telephones to meet the requirements of your business. This chapter explains how to use *programming* to customize your system.

There are two types of programming:

- **System Programming** defines how the control unit will work with the telephones and other devices connected to it. When the system is first installed, it uses factory settings that reflect the most common settings, which you can change as needed. The “System Programming Options” section in this chapter explains your choices.

You program the system from extension 10, using an MLS-34D or MLS-12D phone, with the appropriate *programming overlay* placed on top of the phone.

System Programming procedures are identified by # and a three-digit code (for example, System Date is #101). A complete list of programming procedures, including brief descriptions and factory settings, is on the inside back cover of this book. Descriptions and step-by-step programming instructions are in the “System Programming Procedures” section in this chapter.

- **Telephone Programming** further customizes the individual telephones in the system. For example, you use telephone programming to define how the phone at an extension will ring and to store calling features on the programmable buttons of a system telephone, so that a user can access a feature by pressing a single button.

Telephone programming can be performed in two ways:

- From extension 10 using an MLS-34D or MLS-12D phone; this is called *Centralized Telephone Programming*.
- Users with system phones can also program their own telephones (this is called *Extension Programming*).

For more details on programming telephones, see the “Telephone Programming” section in this chapter.

Initial System Setup

When first installing the system hardware, you must perform the following procedures to setup your system:

- **System Date (#101)** sets the month, day, and year.
- **System Day (#102)** sets the day of the week.
- **System Time (#103)** sets the time of day.

-
- **Dial Mode (#201)** identifies any rotary lines in your phone system.

Other programming procedures are optional, but strongly recommended if you want to make the most of your investment. See “System Programming Options” in this chapter for details.

Changing Settings after Installation

If your system was programmed to meet your requirements at the time it was installed, you may still want to change those settings occasionally as the needs of your business change. The following settings are typically changed periodically:

- **Changing the System Clock.** You may need to change or reset the system clock for daylight saving time, after a prolonged power failure, or after a complete system reset. To change the system clock, use the following procedures:
 - **System Date (#101).** Sets the month, day, and year.
 - **System Day (#102).** Sets the day of the week.
 - **System Time (#103).** Sets the hour.
- **Changing to PBX or Centrex Service.** If your system operates behind a PBX or Centrex system, you can use PBX/Centrex Mode (#721) to customize your system for Centrex operation (see Appendix A for details).
- **Changing to Rotary or Touch-Tone Service.** See procedure #201 (Dial Mode).
- **New Lines.** If you add an outside line to your system after installation, use one or more of the following procedures:
 - **Dial Mode (#201)** identifies the new line as rotary or touch-tone.
 - **Line Assignment (#301)** assigns the line for a particular extension.
 - **Line Ringing** (Centralized Telephone Programming) specifies how the line rings on a particular extension.
 - **Line Access Restriction (#302)** restricts call activity on the line for a particular extension.
- **New Extensions.** If you add an extension to your system after installation, use one or more of the following procedures:
 - **Line Assignment (#301)** assigns specific lines to the extension. (The factory setting is for all lines to be available on all extensions.)
 - **Line Access Restriction (#302)** restricts call activity on specific lines assigned to the extension.
 - **Outgoing Call Restriction (#401)** specifies the type of outgoing calls the extension is allowed to make.

If you want to give a new extension the same settings as a previously programmed extension, you can use the Copy Settings procedure (#399) to copy the settings to the new extension. See "Telephone Programming Procedures" in this chapter for details.

-
- **Disallowed List Assignment (#405)** assigns a Disallowed Phone Number list to the extension. Use the Disallowed Phone Numbers Lists (#404) procedure to compile lists of outside numbers that extensions *cannot* dial.
 - **Allowed List Assignment (#408)** assigns an Allowed Phone Number list to the extension. Use the Allowed Phone Numbers Lists (#407) procedure to compile lists of outside numbers that extensions *can* dial.
 - **Group Assignment** procedures let you assign an extension to the Pickup Group (#501), Calling Group (#502), or Night Service Group (#504).
 - **Auxiliary Equipment Extension** procedures let you identify any extension on which you have installed a fax machine (#601), doorphone (#604—#606), or auto attendant (#607).
 - **Automatic Extension Privacy (#304)** prevents anyone from joining a call at the extension. It is typically used for an extension connected to a modem, fax, or credit card scanner—any device whose function can be disrupted by someone attempting to join it. (To program Privacy onto a system phone button, so that it can be turned on and off, see “Telephone Programming Procedures” at the end of this chapter.)
 - **Display Language (#303)** specifies the language (English, French, or Spanish) to appear on system display phones (MLS-34D or MLS-12D).
 - **Automatic Line Selection** (Centralized Telephone Programming) specifies the order in which the system tries to select an available line (intercom or outside) when the user lifts the handset to make a call.
 - **Line Ringing** (Centralized Telephone Programming) specifies how each outside line on an extension rings when a call comes in.

System Programming

Read this section before programming your system. "System Programming Options" explains the choices that are available to you; "System Programming Procedures" explains how to perform each System Programming procedure.

System Programming Options

This section explains how you can set up your system to operate most efficiently, taking into account your company's telephone service, personnel, and equipment, as well as the special needs of any particular department.

Dialing Restrictions and Permissions

The system has several procedures for restricting telephone use, and several used for overriding those restrictions. You can use any combination of these procedures to design a system that meets your needs.

NOTE:

While procedures that restrict dialing are very effective, absolute protection against misuse cannot be guaranteed. System phones give more protection than standard phones. Therefore, we strongly recommend that you install system phones where restricting phone use is important.

Restricting Access to Outside Lines

Two programming procedures control an extension's access to outside lines:

- **Line Assignment (#301)** assigns lines to an extension. If a line is not assigned, the extension cannot normally make any calls on the line.
- **Line Access Restriction (#302)** partially blocks an extension's access to a certain line. For example, you may want a secretary to answer calls on a manager's line, but not to make any outgoing calls on the line; in this case you can set the manager's line on the secretary's extension to "incoming only." The following choices are available:
 - *No restrictions.*
 - *Outgoing only.* The extension cannot receive calls on the line (except transferred calls), but can make outgoing calls.
 - *Incoming only.* The extension can receive but not make calls on the line. If you restrict a line on an extension to incoming calls only, the user cannot select that line to dial out.
 - *No access.* The extension can see the status of the line (by looking at the lights), join a call, and pickup a transferred or held call. However, the extension cannot make or receive calls on the line.

These two procedures control an extension's access to an outside line. Once an extension is on an outside line, what it can dial is controlled by Outgoing Call Restrictions and Disallowed Phone Number Lists (see page 3-5).

Controlling Calls on Outside Lines

When an extension is allowed access to an outside line, you can use the following procedures to control calling:

- **Outgoing Call Restrictions (#401)** controls calling for *all* lines available on an extension. You have the following choices:
 - *No restrictions* allows long distance, local, and inside calling.
 - *Local only* allows local and inside calling only (make sure the Toll Call Prefix is set properly, using procedure #402).
 - *Inside only* allows intercom calls only.
- **Disallowed Phone Number Lists (#404)** creates lists of numbers that cannot be dialed. The numbers on a disallowed list can be entire telephone numbers or numbers of a certain type (such as all numbers in a particular area code, such as all 900 numbers). You can store as many as four different lists of up to 10 numbers each.

After you create the Disallowed Phone Number lists, use the Disallowed List Assignment (#405) procedure to assign one or more of the lists to a specific extension. When a Disallowed Phone Number list is assigned to an extension, the list applies to *all* the lines on that extension.

- **Night Service** causes after-hour calls to ring immediately at the extensions in the Night Service Group, regardless of line ringing during normal day operation. If you define a system password, turning Night Service on also restricts outside calling by all extensions in the Night Service Group. See page 3-8 for details on Night Service.

Overriding Dialing Restrictions

The following programming procedures provide ways to override all dialing restrictions, except those imposed by Line Access Restriction (#302):

- **Emergency Phone Number List (#406)** defines a list of up to 10 numbers that any extension in the system can dial (if it has access to an outside line). A typical example is 911.
- **Marked System Speed Dial Numbers** can be dialed by any extension with access to an outside line. Speed Dial numbers are outside telephone numbers that a user can dial automatically by pressing [Feature] (or [#] on a standard phone), followed by a two-digit code. Marking a System Speed Dial number lets any user in the system dial it, overriding any dialing restrictions for the extension.
- **System Password (#403)** creates a password that, when entered at any MLS-model phone, overrides dialing restrictions for the duration of a call. This means that a person who knows the password can make a call from a restricted extension, as long as the extension has access to an outside line.

The following procedure can be used to override all dialing restrictions except Night Service with a System Password and Line Access Restriction:

- **Allowed Phone Number Lists (#407)** allows you to create lists of numbers that specific extensions are allowed to dial. Even if an extension's settings for Outgoing Call Restrictions and Disallowed Phone Numbers would normally prevent the extension from dialing a number, defining the number as an Allowed Phone Number lets the extension dial it. (For example, if you put 900 numbers on a Disallowed list but want users to be able to call a specific 900 technical support hotline, put that number in an Allowed list.) The system stores as many as four different allowed lists of up to 10 numbers each. After creating allowed lists, use the Allowed List Assignment (#408) procedure to assign one or more of the lists to a specific extension.

NOTES:

1. Users can always place and receive intercom calls and can always receive transferred calls, regardless of the dialing restrictions placed on an extension.
2. There are a variety of factors that influence the effectiveness of dialing restrictions. Avoid putting 800 numbers in your Emergency list. If you need to allow restricted users to access 800 numbers, put those numbers in an Allowed list.

Summary

Table 3-1 on the next page summarizes the available dialing restrictions and permissions, showing how they can be combined in a variety of ways to customize an extension's dialing privileges.

Type of Permissions or Restrictions for Extension	Setting for Line Assignment (#301)	Setting for Line Access Restriction (#302)	Setting for Outgoing Call Restrictions (#401)	Setting for Disallowed Phone Number List (#404)
Can receive and place intercom (inside) calls only	No outside lines assigned	—	Inside only	—
	<i>Example: Clerks in a supermarket can call the service desk to check prices, but they cannot make outgoing calls.</i>			
Cannot use a specific outside line	Outside line not assigned	—	—	—
	<i>Example: On an 8-line system, all phones get lines 1-7: the fax machine extension gets line 8. Line 8 is removed from all other extensions, to keep the line free for the fax machine.</i>			
Can only monitor call activity and pick up held calls on a specific line	Outside line assigned	No access	—	—
	<i>Example: The receptionist's phone has the boss's private line on it, so the receptionist can see when the boss is on the line and can pick up calls the boss has put on hold.</i>			
Can only receive calls on a specific line	Outside line assigned	Incoming only	—	—
	<i>Example: A line is only used for taking sales orders.</i>			
Can place outgoing calls only on a specific line	Outside line assigned	Outgoing only	—	—
	<i>Example: A line is only used for telemarketing.</i>			
Can place intercom and local calls only	Outside line assigned	No restriction	Local only	Any local numbers extension should not dial
	<i>Example: An extension in the lobby permits visitors to make local and intercom calls, but they are prevented from making long-distance calls.</i>			
Can place intercom, local, and long-distance calls	Outside line assigned	No restriction	No restriction	Any local and long-distance numbers the extension should not dial
	<i>Example: An employee can make any type of call on lines appearing on his or her phone, except calls to foreign countries and "900" numbers.</i>			
<i>Emergency Numbers, Marked System Speed Dial Numbers, Allowed Phone Numbers, and numbers dialed using the System Password override all dialing restrictions if a user has access to an outside line to dial the call.</i>				

Settings that restrict an extension's access to a specific line

Settings that restrict an extension's dialing once it gets an outside line

Table 3-1 Dialing Restrictions and Permissions

Setting Up Groups of Extensions

You can set up three types of extension groups: a Pickup Group that lets any user in the system answer calls for any extension in the group, a Calling Group that lets users ring or page all extensions in the group simultaneously, and a Night Service Group that receives calls after hours.

Pickup Group

The Pickup Group feature allows you to create one group of extensions in which any *outside* call ringing at an extension in the group can be answered *from any other extension in the system* by dialing a special code. In other words, when an outside call rings in the Pickup Group, you can answer that call from any extension (regardless of whether that extension is in the group or what type of phone you are using) by dialing the code.

The Pickup Group is typically used for a group of people who can handle each other's incoming calls.

Example: A group of typists work in a large room separated by cubicles. If any one of the typists is away from his or her desk, anyone can answer an incoming call (*without knowing whose phone is ringing*) simply by dialing [Intercom] [6] [6] (the Pickup Group dial code). Another way to use this feature is to put all extensions in the Pickup Group. This allows anyone on the system to answer any ringing phone.

Pickup Group Extensions (#501) assign extensions to the Pickup Group.

Calling Group

The Calling Group feature allows you to make an intercom call—either ringing or voice-signaled—to an entire group of extensions simultaneously. If one extension in the group answers the call, the ringing stops at the other extensions in the group.

Example: A car dealership puts all extensions for the sales group into the Calling Group. To talk to any salesperson, the sales manager simply places an intercom call to the Calling Group by dialing [Intercom] [7] [1], the Calling Group dial code. All the phones in the group would ring, and the sales manager would be connected to the first salesperson to pick up. (Alternatively, the sales manager could page (voice signal) the group through their system phones' speakers by dialing [*] [7] [1] instead.)

Calling Group Extensions (#502) assign extensions to the Calling Group. You can create one Calling Group. Exclude extensions with fax machines, hotline phones, or doorphones from the Calling Group.

Night Service

The Night Service feature allows you to change how a group of extensions operate after normal business hours. When Night Service is turned on, all incoming calls will ring *immediately* at all extensions in the Night Service Group, even if Line Ringing for those extensions is set for "delayed ring" or "no ring" during normal daytime use.

Three procedures are used to program Night Service:

- **Night Service Button (#503)** programs the Night Service On/Off feature onto a specific programmable button on the system display phone at extension 10 *only* (see Figure 3-1 for the location of the button). Press the button to turn Night Service on or off. (You must assign a Night Service button before you can use the Night Service feature.)

Example: In a real estate office, all calls normally come through a receptionist. The receptionist goes home at 5:00 in the evening, but some agents work later. At 5:00, the receptionist turns on Night Service, so all phones in the Night Service Group ring immediately when a call comes in.

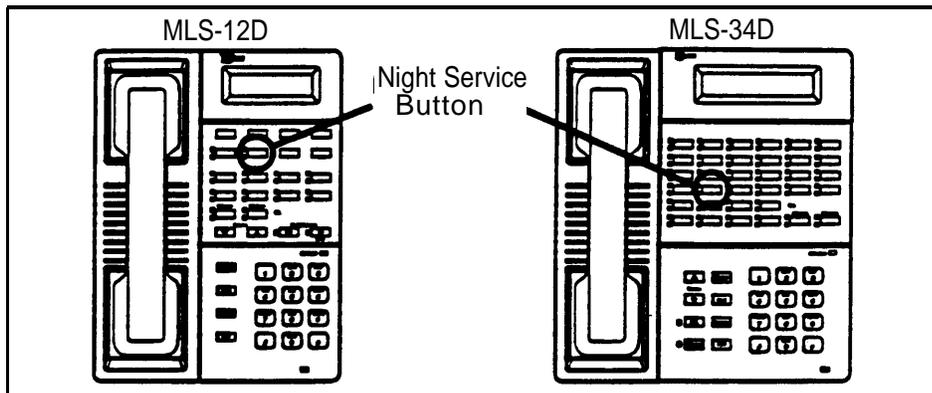


Figure 3-1 Location of Night Service Button

- **Night Service Group (#504)** assigns extensions to the Night Service Group.
- **System Password (#403)** (optional) identifies the system password. If a password is programmed, you must enter it to turn Night Service on or off. If Night Service is on and a password has been programmed, extensions in the Night Service Group must enter the System Password before dialing outside telephone numbers (except Emergency Numbers and Marked System Speed Dial numbers).

Setting Up Auxiliary Equipment

"System Programming Procedures" later in this chapter provides information on the programming procedures discussed in this section. In addition, Chapter 5, "Using Auxiliary Equipment," gives advice on installing and using fax machines, modems, and credit card scanners.

In addition to telephones, your system can include fax machines, answering machines, auto attendants, modems, doorphones, loudspeaker paging systems, and other kinds of auxiliary equipment that use telephone lines.

The following programming procedures help you manage auxiliary equipment:

- **Fax Machine Extensions (#601)** lets you identify an extension on which a fax machine is installed. If you also program that extension number as an Auto Dial button on a system telephone, and the button has a light, the button will show the status of the fax machine. If the light is on, the fax is in use, is returning a transferred call, or needs paper.

To prevent other extensions from interrupting a fax transmission, also program the fax extension for Automatic Extension Privacy (#304). Extensions with fax machines, answering machines, hotline phones, or doorphones should not be included in the Calling Group (#502) or Night Service Group (#504).

A hotline phone must be a standard rotary or touch-tone telephone (not a system phone).

- **Music on Hold (#602)** activates or deactivates the Music-on-Hold jack on the processor module.
- **Hotline (#603)** allows you to create a Hotline extension. Lifting the handset on a Hotline extension automatically makes an intercom call to another predetermined extension.

Example: A supermarket installs a Hotline phone at its meat counter. When a customer lifts the Hotline phone's handset, the butcher's phone rings.

When programming a Hotline, you should also perform these procedures:

- **Automatic Line Selection** for the Hotline extension *must* be programmed to Intercom only.
- **Line Assignment (#301)** makes sure that no outside lines are assigned to the Hotline extension.
- **Doorphone Extensions (#604 and #605)** identify the extensions on which doorphones are installed. **Doorphone Alert Extensions (#606)** identifies the extensions that ring when the button on a doorphone is pressed. A single extension cannot be both a doorphone and a hotline phone.
- **Auto Attendant/VMS Extensions (#607)** identifies extensions on which you have installed an auto attendant. Auto attendants answer calls and route them to the appropriate extension based on caller responses. Also, use **Transfer Return Extension (#306)** to ensure that calls transferred by an auto attendant are not returned to the auto attendant if the destination extension does not answer.

System Speed Dialing

You can program frequently dialed phone numbers—such as suppliers, repair services, customers, or other business associates—so that users can dial them quickly. Three kinds of speed dialing are available:

- **System Speed Dialing** and **Personal Speed Dialing** let users dial outside numbers by pressing three buttons: **[Feature]** (or **[#]** on a standard phone) plus a two-digit code. The following differences distinguish System Speed Dial numbers and Personal Speed Dial numbers:
 - Personal Speed Dial numbers are stored in an extension's memory and so are for the private use of that extension. System Speed Dial numbers are stored in the control unit's memory, so any extension can dial them.
 - The system can have a maximum of 60 System Speed Dial numbers (dial codes 20-79); each extension can have a maximum of 20 Personal Speed Dial numbers (dial codes 80-99).

-
- Personal Speed Dial numbers can be programmed either from extension 10 (Centralized Telephone Programming) or at a user's extension; System Speed Dial numbers *must* be programmed from extension 10.
 - A System Speed Dial number can be "marked" so that it overrides any dialing restrictions an extension may have. A Personal Speed Dial number cannot be marked.

Appendix B provides a form on which to record Speed Dial numbers. Each user should get a copy of that form with System Speed Dial numbers filled in.

- **Auto Dialing**, the fastest speed dialing feature, lets a user dial an extension number or outside telephone number by pressing one button. An Auto Dial number can be programmed onto any programmable button (*only* on a system phone), either from extension 10 or at the extension itself.

System Programming Procedures

System Programming changes the system's factory settings. It requires an MLS-34D or MLS-12D phone at extension 10, with a *programming overlay* placed over the phone's dial pad.

System Programming Procedures are identified by # and a three-digit code (for example, System Date is #101).

In general, you can program the system in one of two ways:

You can be talking on the phone while you program. This is useful if you need to talk with someone at the AT&T Helpine about programming. However, you must call before you enter programming mode, and you must use the handset to talk, not the speaker and microphone.

- **Direct Method.** With this method, you access a programming procedure by dialing the code for that procedure. This method is best when you are using only a few procedures during a programming session and know the codes.
- **Cycle Method.** With this method, you cycle through the procedures in numerical order by pressing [Next Procedure] or [Prev Procedure] (see the programming overlay). This method is best when programming the system for the first time or when changing a series of related settings. With this method you can skip procedures without changing their settings.

Step-by-step instructions for using each procedure are given in "System Programming Reference," starting on page 3-14.

The Programming Overlays

During System Programming, the normal functions of several buttons on the display phone at extension 10 change. For example, the left [Intercom] button becomes [System Program], the button used to enter program mode. To identify these buttons while programming, place the appropriate programming overlay provided with the system on the dial pad of the phone at extension 10. Figures 3-2 and 3-3 show the programming overlays for the MLS-12D and MLS-34D phones, with descriptions of the special buttons.

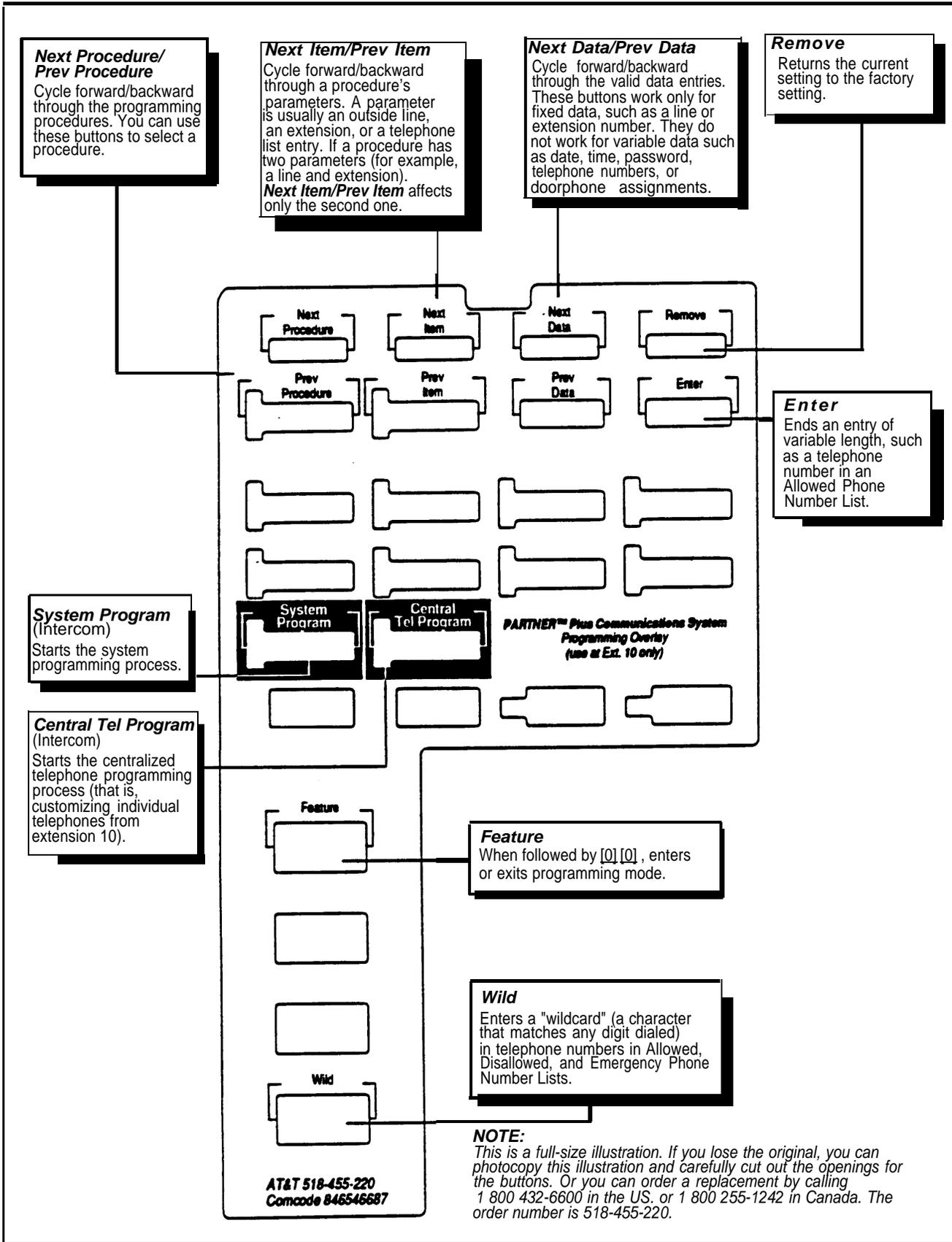


Figure 3-2 Programming Overlay for the MLS-12D Phone

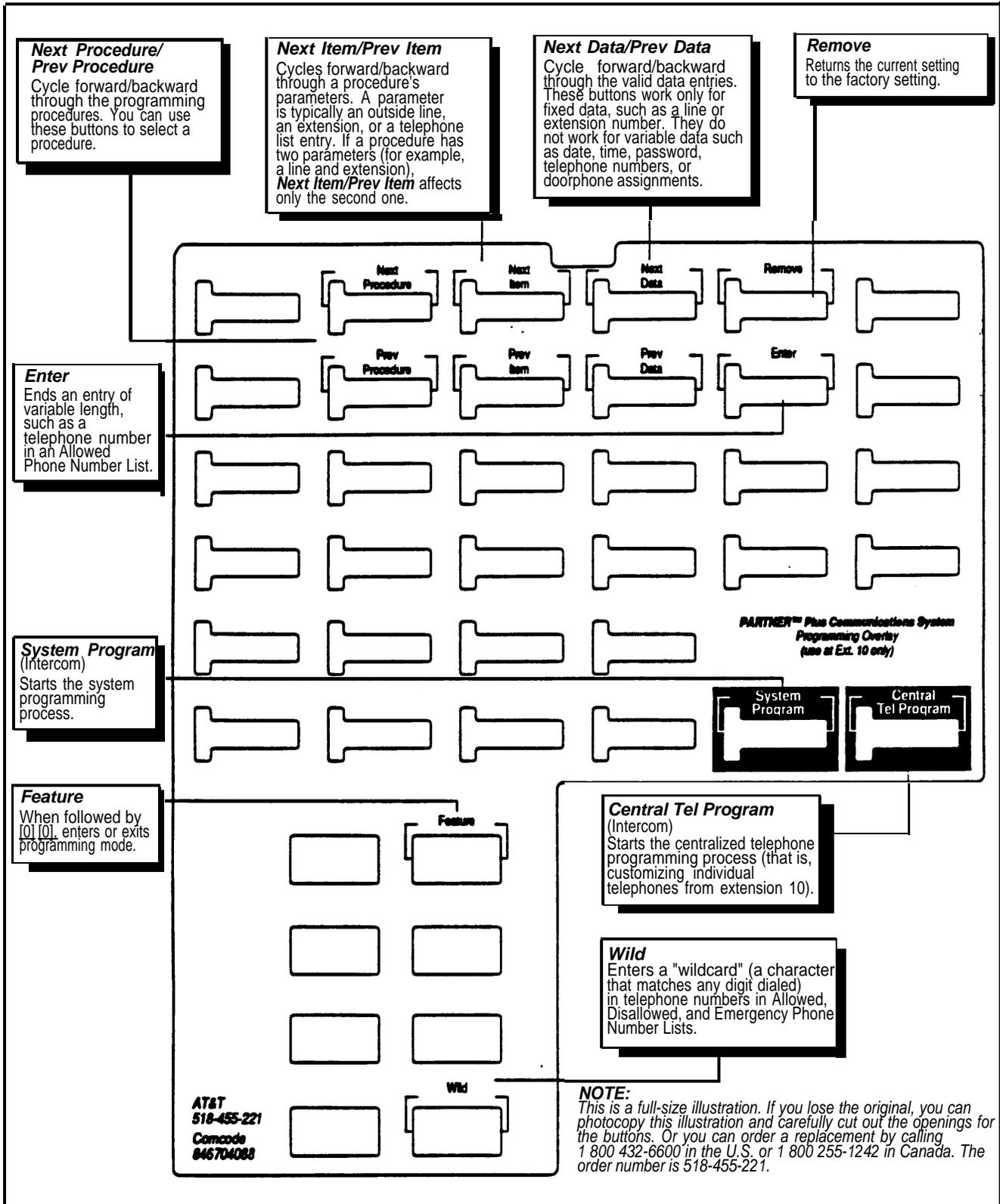


Figure 3-3 Programming Overlay for the MLS-34D Phone

System Programming Reference

System Programming changes settings for the system as a whole, or for individual lines or extensions. You can also use System Programming to set up dialing restrictions, define groups, and set up optional equipment.

Place the Programming Overlay on the dial pad of the system display phone at Extension 10

TO START SYSTEM PROGRAMMING

PRESS [Feature] [0] [0]

PRESS [System Program]

PRESS [System Program]

TO END SYSTEM PROGRAMMING

PRESS [Feature] [0] [0]

TO USE A SPECIFIC PROCEDURE

DIAL [#] and the 3-digit procedure code

Example: [#] [1] [0] [1] for System Date

TO CYCLE THROUGH SYSTEM PROGRAMMING PROCEDURES

PRESS [Next Procedure] or [Prev Procedure]

NOTE: Procedures #399, #721, and #728—shown below in dashed boxes—are skipped when cycling

TO CYCLE THROUGH AVAILABLE SETTINGS

PRESS [Next Data] or [Prev Data]

TO RETURN TO FACTORY SETTING

PRESS [Remove]

SYSTEM

SYSTEM DATE

Sets the month, day, and year to appear on system display phones (MLS-12D and MLS-34D). Including leading zeroes for single-digit months or days (for example, January 3, 1991, is entered as 010391).

DIAL #101

DIAL the date in MMDDYY form

SYSTEM DAY

Sets the day of the week to appear on system display phones (MLS-12D and MLS-34D).

DIAL #102

DIAL 1 = Sunday ✓
 2 = Monday
 3 = Tuesday
 4 = Wednesday
 5 = Thursday
 6 = Friday
 7 = Saturday

SYSTEM TIME

Sets the time to appear on system display phones (MLS-12D and MLS-34D). Enter four digits in 24-hour military notation, from 0000 for 12 midnight to 2359 for 11:59 p.m. (for example, 8:15 a.m. = 0815). System displays times as a.m. or p.m.

DIAL #103

DIAL the time in HHMM form

NUMBER OF LINES

Use only when first setting up the system, to assign the same number of outside lines to all extensions (For example, entering 6 means that all extensions are assigned lines 1-6.)

DIAL #104

DIAL one digit for the number outside lines in the system (1 to 8)

✓ 2 per 200 or 206 module

IMPORTANT: This procedure changes Line Access Restriction, Automatic Line Selection, Line Ringing, and Hold Disconnect Time (#203) to factory settings. To change line assignments without affecting other settings, use Line Assignment (#301).

TRANSFER RETURN RINGS

For all system extensions, defines the number of times transferred calls ring before returning to the extension that transferred the call (or to a programmed Transfer Return Extension, #306).

NOTE: For fax or answering machine extensions, set this number to be greater than the ring delay for the device, to prevent calls from being returned before the device answers

DIAL #105

DIAL one digit for the number of rings before the call returns (0 to 9)

4 rings ✓

0 rings = no return

PBX DIAL-OUT OCDE

If your system operates in PBX/Centrex mode (#721), this procedure identifies the digit you dial to an outside line.

DIAL #106

DIAL the digit for the code needed to reach the PBX or Centrex (0 to 9)

✓ = 9

RECALL TIMER DURATION

The Recall feature sends a timed signal (switchhook flash) to the local phone company or to the PBX/Centrex system to which your phone system is connected. This setting changes the length of the signal in 25-millisecond (msec) increments. (For example, 01 = 25 msec, 80 = 2000 msec.)

Factory setting is correct for most PBX systems. Change the factory setting only if:

- your system is connected to a Centrex system (set to 32 = 800 msec for most Centrex systems).
- using Recall drops calls (shorten the time).
- using Recall has no effect—i.e., no dial tone (lengthen the time).

DIAL #107

DIAL two digits to set the length of a switchhook flash (01 to 80)

✓ = 18 (450 msec)

ROTARY DIALING TIMEOUT

Change the factory setting only if you have trouble calling out on rotary lines with standard touch-tone phones. (For example, if users dial slowly and calls are not completed or are connected to wrong numbers, lengthen the timeout.) Use only if the Dial Mode (#201) for at least one line is set to "rotary."

DIAL #108

DIAL 1 = 4 seconds
 2 = 8 seconds ✓
 3 = 12 seconds

OUTSIDE CONFERENCE

Determines whether users can include more than one outside party in a conference call (affects all system users).

DIAL #109

DIAL 1 = Allowed ✓
 2 = Disallowed

PBX/CENTREX MODE

Customizes the system for operation with Centrex or PBX. In PBX/Centrex mode, all lines use PBX/Centrex settings, the system uses Centrex features for conference calls and call transfers, and phone numbers dialed from memory (such as Speed Dial numbers) assume a PBX dial-out code is needed for outside calls.

IMPORTANT: Using this procedure disconnects any active calls but retains system settings.

DIAL # 721

DIAL 1 = Active
 2 = Not Active ✓

SYSTEM RESET — PROGRAMMING SAVED

IMPORTANT: Using this procedure disconnects any active calls but retains system settings. Use it only if the system fails to function correctly after a power failure or down period.

DIAL #728

✓ = Factory Setting

System Programming Reference (cont'd)

LINES

DIAL MODE

Identifies information lines as touch-tone or rotary. You may also need to adjust the Rotary Dialing Timeout (#108).

DIAL #201

DIAL a line number

DIAL 1=Touch-Tone ✓
2=Rotary

PRESS [Next Item] to program another line

HOLD DISCONNECT TIME

Selects the signal that the system uses to detect when a caller on hold hangs up. Change the setting to "long" if the system disconnects callers on hold before they hang up, or to "short" if user gets a dial tone when trying to retrieve calls on hold.

DIAL #203

DIAL a line number

DIAL 1=Long (450 msec) ✓
2=Short (50msec)

PRESS [Next Item] to program another line

✓ = Factory Setting

EXTENSIONS

LINE ASSIGNMENT

Assigns the outside lines that are available at an extension, in consecutive order. The order of line assignment is from left to right, starting with the bottom row of line buttons on a system phone. To put the lines in a different order, first use this procedure to unassign all lines; then assign lines in the desired order (as you assign each line, it goes onto the first available button).

DIAL #301

DIAL an extension number

DIAL a line number (1 to 8)

DIAL 1=Assigned
2=Not Assigned

✓ 2 lines per 200 or 206 module

PRESS [Next Item] to assign another line to this extension

To program another extension:

PRESS [Next Procedure] [Prev Procedure], enter a new extension number, and repeat above steps

LINE ACCESS RESTRICTION

RESTRICTS CALLING ON INDIVIDUAL LINES Assigned to an Extension.

DIAL #302

DIAL an extension number

DIAL a line number

DIAL 1=No Restriction ✓

2=Outgoing Only

3=Incoming Only

4=No Access (line appears on button to see line status, but can use line only to join a call or to pick up a transferred or held call)

PRESS [Next Item] to program another line

To program another extension:

PRESS [Next Procedure] [Prev Procedure], enter a new extension number, and repeat above steps

DISPLAY LANGUAGE

Identifies the language used in display messages on an MLS-12D or MLS-34D phone at the extension.

DIAL #303

DIAL an extension number

DIAL 1=English ✓

2=Spanish

3=French

PRESS [Next Item] to program another extension

AUTOMATIC EXTENSION PRIVACY

Prevents other extensions from joining a call on a specified extension. For example, use this procedure to prevent users from interrupting calls on a extension with a fax machine or modem.

DIAL #304

DIAL an extension number

DIAL 1=Assigned

2=Not Assigned ✓

PRESS [Next Item] to program another extension

ABBREVIATED RINGING

Determines whether a call rings repeatedly at an extension when the extension is busy on another call. If Abbreviated Ringing is on and you are busy on a call, the call rings once; the green button for the line continues to flash until you answer the call or the caller hangs up.

DIAL #305

DIAL an extension number

DIAL 1=Active (On—1 ring) ✓

2=Not Active (Off—repeated ringing)

PRESS [Next Item] to program another extension

TRANSFER RETURN EXTENSION

Identifies where transferred calls should go if the extension receiving the transfer does not answer. (Useful for extensions with auto attendants, so the caller only hears the device's greetings once.)

DIAL #306

DIAL an extension number

DIAL number of the extension to which call should return if not answered

✓ Extension transferring the call

PRESS [Next Item] to program another extension

COPY SETTINGS

Copies the following settings from one extension to another:

- #301 Line Assignment
- #302 Line Access Restriction
- #303 Display Language
- #304 Automatic Privacy
- #305 Abbreviated Ringing
- #306 Transfer Return Extension
- #401 Outgoing Call Restriction
- #405 Disallowed List Assignment
- #408 Allowed List Assignment
- #501 Pickup Group Extensions
- #502 Calling Group Extensions
- #504 Night Service Group
- #601 Fax Machine Extensions
- #607 Auto Attendant/VMS Extensions

Automatic Line Selection

Line Ringing

DIAL #399

DIAL a source extension number

DIAL a target extension number

✓ = Factory Setting

System Programming Reference (cont'd)

System Programming changes settings for the system as a whole, or for individual lines or extensions. You can also use System Programming to set up dialing restrictions, define groups, and set up optional equipment.

Place the Programming Overlay on the dial pad of the system display phone at Extension 10

TO START SYSTEM PROGRAMMING

PRESS [Feature] [0] [0]

PRESS [System Program]

PRESS [System Program]

TO END SYSTEM PROGRAMMING

PRESS [Feature] [0] [0]

TO USE A SPECIFIC PROCEDURE

DIAL [#] and the 3-digit procedure code

Example: [#] [1] [0] [1] for System Date

TO CYCLE THROUGH SYSTEM PROGRAMMING PROCEDURES

PRESS [Next Procedure] or [Prev Procedure]

NOTE: Procedures #399, #721, and #728—shown below in dashed boxes—are skipped when cycling

TO CYCLE THROUGH AVAILABLE SETTINGS

PRESS [Next Data] or [Prev Data]

TO RETURN TO FACTORY SETTING

PRESS [REMOVE]

DIALING RESTRICTIONS AND PERMISSIONS

OUTGOING CALL RESTRICTIONS

Restricts calling on *all* lines at extension.
NOTE: Emergency numbers, Marked System Speed Dial numbers, and Allowed List numbers override call restrictions: a user can also enter the System Password to override restrictions.

DIAL #401

DIAL an extension number

DIAL 1=No Restriction ✓
2= Inside (intercom) Only
3= Local (intercom and local) Only

PRESS [Next Item] to select another extension

TOLL CALL PREFIX

Indicates whether users must dial 0 or 1 to make a long-distance call.

DIAL #402

DIAL 1= 0/1 plus area code and Number ✓
2= Area Code and Number Only

SYSTEM PASSWORD

Defines a 4-digit password. Users can enter it to override dialing restrictions. If password is defined, users in the Night Service Group must enter it to make outgoing calls (other than emergency numbers and marked System Speed Dial numbers) when Night Service is on.

DIAL #403

DIAL 4 digits to set the password

✓ = Factory Setting

DISALLOWED PHONE NUMBER LISTS

Creates up to 4 lists of telephone numbers that users *cannot* dial (up to 10 numbers per list.) Use procedure #405 to assign lists to extensions.

DIAL #404

DIAL a list number (1 to 4)

DIAL a list entry (01 to 10)

To add entry:

DIAL the phone number (up to 12 digits)

PRESS [Enter]

NOTE: For instructions on entering phone numbers, see "Entering Telephone Numbers in Lists" (see box, bottom left).

PRESS [Remove] to remove a list entry

PRESS [Next Item] to select another list entry

To program another list:

PRESS [Next Procedure] [Prev Procedure], enter a new extension number, and repeat above steps

DISALLOWED LIST ASSIGNMENTS

Assigns one or more Disallowed Lists to an extension.

DIAL #405

DIAL an extension number

DIAL a list number

DIAL 1= Assigned ✓
2= Not Assigned ✓

PRESS [Next Item] to program another list

To program another extension:

PRESS [Next Procedure] [Prev Procedure], enter a new extension number, and repeat above steps

EMERGENCY PHONE NUMBER LIST

Creates a list of up to 10 telephone numbers that all users *can* dial regardless of dialing restrictions.

DIAL #406

DIAL a list entry (01 to 10)

To add entry:

DIAL the telephone number (up to 12 digits)

PRESS [Enter]

NOTE: For instructions on entering phone numbers, see "Entering Telephone Numbers in Lists" (see box, below left).

PRESS [Remove] to remove a list entry

PRESS [Next Item] to program another list entry

ALLOWED PHONE NUMBER LISTS

Creates up to 4 lists of telephone numbers that users *can* dial regardless of dialing restrictions (up to 10 numbers per list). Lists must also be assigned to extensions using procedure #408.

DIAL #407

DIAL a list number (1 to 4)

DIAL a list entry (01 to 10)

To add entry:

DIAL the telephone number (up to 12 digits)

PRESS [Enter]

NOTE: For instructions on entering phone numbers, see "Entering Telephone Numbers in Lists" (see box at left)

PRESS [Remove] to remove a list entry

PRESS [Next Item] to select another list entry

To program another list:

PRESS [Next Procedure] [Prev Procedure], enter a new list number, and repeat above steps

ALLOWED LIST ASSIGNMENTS

Assigns one or more Allowed List to an extension.

DIAL #408

DIAL an extension number

DIAL a list number

DIAL 1= Assigned ✓
2= Not Assigned ✓

PRESS [Next Item] to select another list

To program another extension:

PRESS [Next Procedure] [Prev Procedure], enter a new extension number, and repeat above steps

Entering Telephone Numbers In Lists

TYPE OF TELEPHONE NUMBER(S)	LIST ENTRIES REQUIRED	
	... If you dial 0 or 1 for long distance calls	... If you just dial area code and number
Full Telephone Number Examples: 555-5678 411	555-5678 411	555-5678 411
All Numbers in an Area Code Example: 900 numbers	1900 0900	900 0900
All Numbers in an Exchange Example: 976 exchange (!= wild card, see note below)	976 1!0!976 1!1!976 0!0!976 0!1!976 1976 0976	976 !0!976 !1!976
International Numbers (011 prefix)	011	011

NOTE: You can enter the wild card character ! by pressing Wild (the [Hold] button on your system phone). This character represents *any single character* in a phone number.

GROUPS

PICKUP GROUP EXTENSIONS

Assigns an extension to the Pickup Group. Outside calls to the Pickup Group can be picked up by any user in the system.

DIAL #501

DIAL an extension number

DIAL 1 = Assigned to group

2 = Not assigned to group ✓

PRESS [Next Item] to assign another extension

CALLING GROUP EXTENSIONS

Assigns an extension to the Calling Group. Any user in the system can ring or page all extensions in the Calling Group at the same time (the first user to pickup the Call is connected to the caller).

DIAL #502

DIAL an extension number

DIAL 1 = Assigned to group

2 = Not assigned to group ✓

PRESS [Next Item] to assign another extension

NIGHT SERVICE BUTTON

Programs the Night Service On/Off feature onto the second programmable button on the system display phone at extension 10 (see Figure 3-1). To use Night Service, first assign a Night Service button using this procedure; then assign extensions to the Night Service Group (procedure #504). If a system password is programmed, you must enter it when turning Night Service on or off.

DIAL #503

DIAL 1 = Assigned to ext 10

2 = Not assigned ✓

NIGHT SERVICE GROUP

Assigns an extension to the Night Service Group. When Night Service is on, any lines set to "no ring" or "delayed ring" on extensions in the Night Service Group change to "immediate ring." If a system password has been programmed, members of the Night Service Group can only dial Emergency numbers and Marked System Speed Dial numbers.

DIAL #504

DIAL an extension number

DIAL 1 = Assigned to group

2 = Not assigned to group ✓

PRESS [Next Item] to assign another extension

✓ = Factory Setting

AUXILIARY EQUIPMENT

FAX MACHINE EXTENSIONS*

Identifies an extension to which a fax machine is connected. To monitor the status of the fax machine from a system phone in another location, see "Fax Management" (the bottom half of this box).

DIAL #601

DIAL an extension number

DIAL 1 = Assigned

2 = Not Assigned ✓

PRESS [Next Item] to identify another extension

*FAX MANAGEMENT

To monitor the status of fax machines from system phones:

1. Use System Programming procedure #601 to identify extensions connected to fax machines.
2. For each fax extension to be monitored from a system phone, program a lighted button on the phone with the fax extension as an Auto Dial number. Label the phone's Auto Dial button appropriately (for example, "FAX 12").

MUSIC ON HOLD

Activates and deactivates the Music-on-Hold jack. When active and an audio source is connected to the jack and turned on, callers on hold hear music or recorded messages.

DIAL #602

DIAL 1 = Active ✓

2 = Not Active

HOTLINE

Identifies a "hotline" extension and a "alert" extension. When a user picks up the hotline phone, it rings the alert extension. The hotline phone must be a standard touch-tone or rotary phone; the alert extension can have any type of phone.

NOTE: Use #301 to remove outside lines from the hotline extension, and #502 and #504 to remove the hotline extension from the Calling and Night Service Groups. Set Automatic Line Selection for the hotline extension to intercom only.

DIAL #603

DIAL an extension number (except 10) to be the hotline

DIAL an extension number (except the hotline) to be the alerted extension

To remove the hotline and alert:

PRESS [Remove]

DOORPHONE 1 EXTENSION

Identifies a doorphone extension. When a person uses the doorphone, it rings all the alert extensions for the doorphone at the same time.

NOTE: Use #301 to remove outside lines from the doorphone extension, and #502 and #504 to remove the doorphone extension from the Calling and Night Service Groups. Set Automatic Line Selection for the doorphone extension to intercom only.

DIAL #604

DIAL an extension number (12-15, 18-21, 24-27, or 30-33)

DOORPHONE 2 EXTENSION

Refer to "Doorphone 1 Extension" above for full description.

DIAL #605

DIAL an extension number (12-15, 18-21, 24-27, or 30-33)

DOORPHONE ALERT EXTENSIONS

Identifies up to 5 extensions for a doorphone extension (identified using procedures #604 or #605) to alert. When a person uses the doorphone, it rings all alert extensions at the same time. If the alert extension is a system phone, the call rings with a unique "ding-dong" sound to distinguish it from other calls.

DIAL #606

DIAL an extension number (except a doorphone extension)

DIAL 1 = Not an alert ✓
2 = Doorphone 1 alert
3 = Doorphone 2 alert
4 = Doors 1 and 2

PRESS [Next Item] to select another extension (up to 5 alert extensions per doorphone)

ATTENDANT/VMS EXTENSIONS

Identifies an extension on which an auto attendant or voice mail system is installed.

DIAL #607

DIAL an extension number

DIAL 1 = Assigned

2 = Not Assigned ✓

PRESS [Next Item] to select another extension

✓ = Factory Setting

System Speed Dial Programming Reference

From extension 10, you can store up to 60 outside numbers as System Speed Dial numbers. Once System Speed Dial numbers have been stored, any user can dial a number automatically by pressing **[Feature]** a two-digit code (from 20-79).

NOTE: In addition, each extension can store up to 20 Personal Speed Dial numbers (80-99) for the private use of the user at the extension; see page 3-22 for programming instructions.

TO PROGRAM A SYSTEM SPEED DIAL NUMBER (At extension 10 only)

PRESS **[Feature]** **[0]** **[0]** to enter program mode.

PRESS **[Feature]** ←

DIAL a two-digit code (20 to 79)

DIAL the telephone number—up to 20 digits including special functions (see “Entering Special Characters in Speed Dial and Auto Dial Numbers” below)

*To mark a number (which overrides dialing restrictions), dial **[*]** before the telephone number*

To program another speed dial number, or to change a number, repeat the last three steps.

PRESS **[Feature]** **[0]** **[0]** to exit program mode.

TO REMOVE A SPEED DIAL NUMBER (At extension 10 only)

PRESS **[Feature]** **[0]** **[0]** to enter program mode.

PRESS **[Feature]** ←

DIAL the two-digit code (20 to 79) for the System Speed Dial number to be removed.

PRESS **[Mic]**

To remove another Speed Dial number, repeat the last three steps.

PRESS **[Feature]** **[0]** **[0]** to exit program mode.

IMPORTANT:

If you program 911 or other emergency numbers as Speed Dial numbers and want to place test calls:

1. Remain on the line and briefly explain to the dispatcher the reason for the call before hanging up.
2. Perform such activities in the off-peak hours, such as early morning or late evening.

Entering Special Characters in Speed Dial and Auto Dial Numbers

These special characters can be included in Personal Speed Dial, System Speed Dial, and Auto Dial numbers.

Function	Button	Display	What It Does
Pause	[Hold]	P	<p>Inserts a 1.5 second pause in dialing sequence, to wait for a response such as a dial tone or a computer voice message.</p> <p>Example: To call an answering machine at 555-0529, wait 15 seconds, and then dial 10 to retrieve messages, enter [5] [5] [5] [0] [5] [2] [9] [Hold] [Hold] [Hold] [Hold] [Hold] [Hold] [Hold] [Hold] [Hold] [1] [0].</p>
Recall	[Spkr]	R	<p>Sends a timed switchhook flash over the phone line, to get a dial tone or to access a PBX/Centrex custom calling feature. Use Recall <i>only</i> as the first entry in a Speed Dial number.</p> <p>Example To use a favorite Centrex feature, you have to send a timed switchhook flash and then dial 388. Enter [Spkr] [3] [8] [8].</p>
Stop	[Mic]	S	<p>Stops dialing so that the user can enter additional digits, such as a password or credit card number. After a stop, the user can press [Feature] and the Speed Dial code again to continue.</p> <p>NOTE: Since MLS-6 phones have no [Mic] button, you must program numbers that include the Stop function from extension 10.</p> <p>Example: Your local bank-by-phone service requires you to enter a password before the account number. To program a Speed Dial number to call the bank at 555-7696, include a stop for manually entering the password, and continue with the bank account number (679 556 88), enter [5] [5] [5] [7] [8] [9] [8] [Mic] [6] [7] [9] [5] [5] [6] [8] [8].</p>
Touch-Tone Enable	[Transfer]	T	<p>Sends touch-tone digits over a rotary line, to electronic equipment such as an answering machine or bank computer.</p> <p>Example: Your system is connected to rotary lines but you want to call an answering machine at 555-3454 to retrieve messages. Since the answering machine requires touch tones. enter [5] [5] [5] [3] [4] [5] [4] [Transfer]. All digits pressed during the rest of the call are sent as touch tones.</p>

Telephone Programming

System telephones are ready to use when installed, but they can be programmed to meet each user's needs. Two methods can be used to program phones: Centralized Telephone Programming (from extension 10) or Extension Programming (at the extension of the phone being programmed).

Telephone Programming Options

Automatic Line Selection

Program this feature from extension 10 only, using Centralized Telephone Programming; individual users cannot program it at their own extensions.

When a user lifts the handset on a telephone, the system chooses an idle line automatically. The Automatic Line Selection procedure sets the order in which the system looks for an idle line. You can set the system to look for outside lines first—in any desired order—or to select an inside (intercom) line first.

The factory setting causes the system to look through outside lines in numerical order (starting with line 1), and to connect the user to an intercom line if no outside line is free. Users with system phones can press **[Intercom]** to select an intercom line. Since a standard phone has no **[Intercom]** button, change the order to "Intercom first" for any extension on which a standard phone is installed (except on a Centrex system).

Line Ringing

Program this feature from extension 10 only, using Centralized Telephone Programming; individual users cannot program it at their own extensions.

Line Ringing defines when each outside line rings at a phone. For any line at an extension, specify immediate ring, delayed ring (20 seconds), or no ringing. If you want all calls to ring directly at users' extensions—with the receptionist providing backup—set the lines assigned for each user to immediate ringing. Then assign all lines on the system to the receptionist with delayed ringing.

Extension Speed Dialing

System extensions can have Personal Speed Dial numbers and (for system phones *only*) Auto Dial numbers.

Personal Speed Dial numbers are outside phone numbers that a user dials by pressing **[Feature]** (on system phones) or **[#]** (on standard phones), plus a two-digit code (80-99) assigned during programming. Personal Speed Dial numbers are available *only* at the extension for which they are programmed, unlike System Speed Dial numbers, which are available to *all* extensions (see "System Speed Dialing" earlier in this chapter). Personal Speed Dial numbers can be programmed from extension 10 or at a user's phone.

Auto Dial numbers are intercom or outside numbers that are programmed onto a system phone button for one-touch dialing. They can be programmed from extension 10 or at the extension.

Dial Code Features

The system supports many *dial code* or *calling features* (such as Last Number Redial and Loudspeaker Paging) that you use by dialing a code for the feature. If you put a calling feature on a system phone button, you can use it with a single touch.

All the dial code features are explained on pages 3-22 and 3-23. Note that the Privacy and Do Not Disturb features require buttons with lights, as shown by a



in the instructions.

Programming a Receptionist Extension

To program the system, you must install an MLS-34D or MLS-12D phone at extension 10.

Extension Auto Dialing is sometimes known as "Direct Station Selection (DSS);" Busy Extension Indication is sometimes known as "Busy Lamp Fields (BLF)."

If you set up a centralized telephone answering position at extension 10, use the following settings to customize the answering position:

- **Immediate call answering.** If the receptionist should answer all calls, assign all lines to extension 10 (#301). Set Line Ringing for all lines at extension 10 to "immediate ring;" set the lines assigned at each user's extension to "delayed ring."
- **Backup call answering.** If the receptionist should answer some lines only when a user does not pick up, set Line Ringing for those lines at extension 10 to "delayed ring."
- **No answering.** If some lines should not be picked up by the receptionist at all, either set Line Ringing for those lines at extension 10 to "no ring" or simply do not assign those lines to extension 10.
- **Extension Auto Dialing and Busy Extension Indication.** If you install an MLS-34D phone at extension 10, the phone can be programmed so the receptionist can dial any extension in the system with one touch and can see which ones are busy. Simply program the MLS-34D phone so it has Intercom Auto Dial buttons for every extension in the system (see page 3-22). The lights next to an Intercom Auto Dial button will show the status of the extension, so you can tell whether the phone at the extension is idle (*no lights*), busy (*red on*), calling you (*green flash*), or ringing back after you transferred a call (*green flutter*). If the extension is identified as a fax extension (System Programming procedure #601), the button also shows when the fax machine at the extension is not responding (for example, when it is out of paper). (For more information, see "Lights" in Chapter 4.)

Your system can have a maximum of 23 extensions in addition to extension 10. You can assign calling features to any unused programmable buttons. The MLS-34D phone shown in Figure 3-4 has Auto Dial buttons for extensions 11 through 31, starting with the top left programmable button. Calling features are assigned to three unused buttons (just above Lines 5-7).

Telephone Programming Procedures

If you program a feature on an unused line button and later assign a line to that button, the feature will be erased. If you assign the same feature to two buttons, only the last button will have the feature; the first button's programming is erased. (Save Number Redial is an exception: you can program that feature onto more than one button.)

An MLS-6 phone with 4 lines assigned to it has no programmable buttons.

The rest of this chapter gives step-by-step instructions for each Telephone Programming procedure. To program a phone from extension 10, use the instructions at the top of page 3-22. To program at the extension, use the instructions at the bottom of page 3-23, then go to the appropriate box on pages 3-22 and 3-23 for instructions on programming an individual feature.

During Centralized Telephone Programming, the display phone at extension 10 takes on the characteristics of the phone being programmed, including any System Programming and the lines assigned to the phone. When you enter Centralized Telephone Programming, green lights appear next to any line buttons that are already assigned.

Figure 3-4 shows the system telephone models: ML-34D, MLS-12D, MLS-12, MLS-6, and MLC-6. You can program Auto Dial numbers and dialing features on any of the programmable buttons or unused line buttons. As you program buttons, fill out the phone's labeling sheet (see the examples in Figure 3-4).

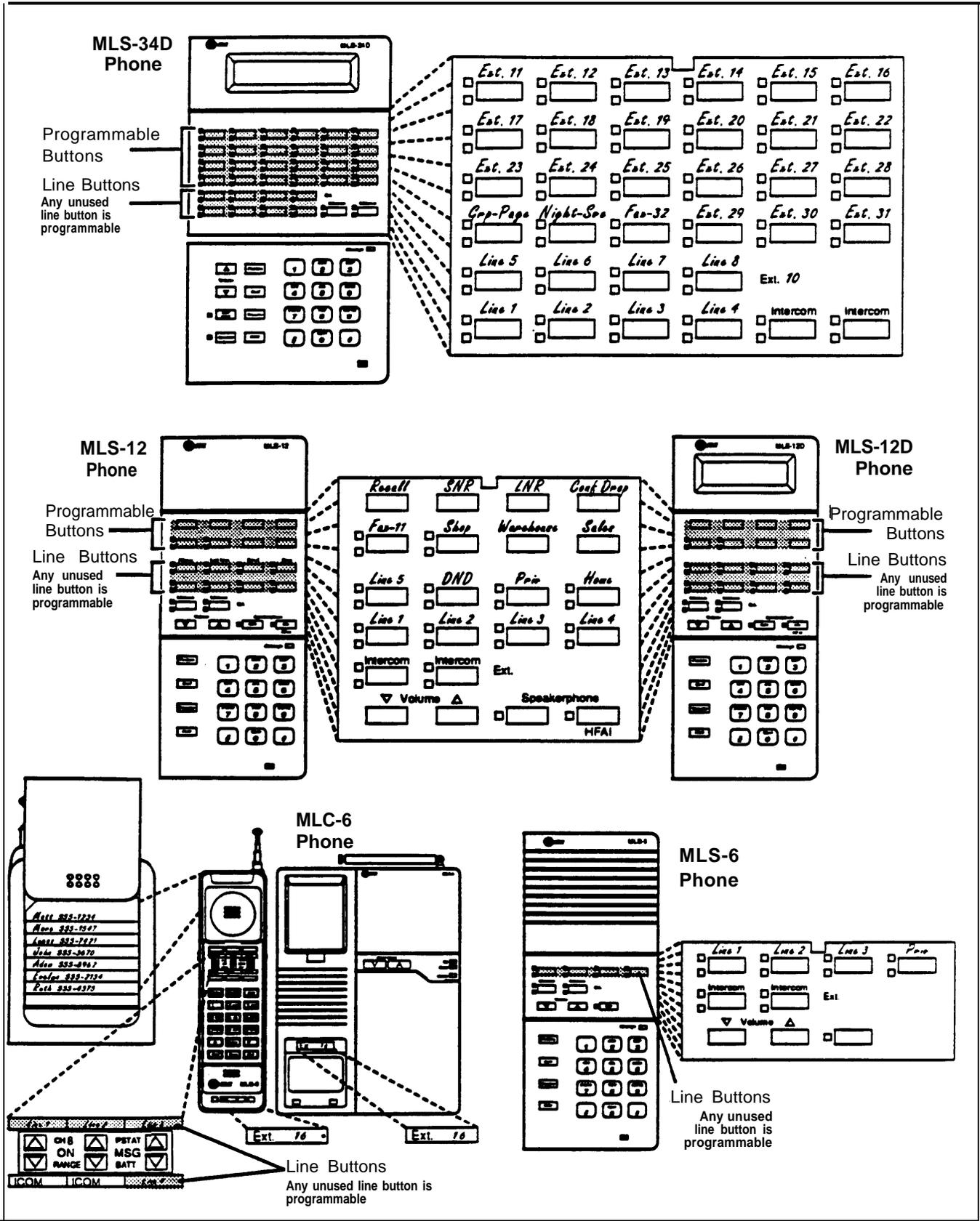


Figure 3-4 Programmable Buttons and Labeling Sheets on System Phones

Telephone Programming Reference

Centralized Telephone Programming

Use Centralized Telephone Programming to program features or store telephone numbers for individual extensions. Automatic Line Selection and Line Ringing must be programmed from extension 10 (using Centralized Telephone Programming); all other features can be programmed on a system phone at the user's extension (see "Extension Programming" on the next page). If a user has a standard phone, Personal Speed Dial numbers for the extension must be programmed from extension 10.

Place the Programming Overlay on the dial pad of the system display phone at Extension 10

TO START PROGRAMMING

PRESS [Feature] [0] [0]

PRESS [System Program]

PRESS [System Program]

PRESS [Central Tel Program]

DIAL the extension number to be programmed

Buttons on which lines are assigned for the extension to light up to show the current Line Ringing setting; remaining buttons can be programmed with Auto Dial number or dial code features

TO PROGRAM ANOTHER FEATURE AT THE SAME EXTENSION

After you finish changing a setting, simply continue with the instructions in the box shown for the next feature on pages 3-22 or 3-23

TO CHANGE SETTING FOR ANOTHER EXTENSION

PRESS [Central Tel Program]

DIAL the new extension's number

TO ERASE A FEATURE OR AUTO DIAL BUTTON

PRESS the programmed button

PRESS [Mic]

TO END PROGRAMMING

PRESS [Feature] [0] [0]

NOTE: Program Automatic Line Selection first.

LINES

AUTOMATIC LINE SELECTION

Determines the line a user is connected to after lifting the handset to make a call. When the user picks up the handset, the system looks for a free line in the order specified by this procedure and selects the first available line. For example, if you specify outside lines first for an extension, but all outside lines are busy, the user hears intercom dial tone after lifting the handset.

- For standard touch-tone or rotary phones, or for any phone used mainly to call other extensions, set the phone to select Intercom first.
- If your system is connected to a Centrex system, set all phones to select outside lines first.
- For hotline, doorphone, and automated attendant extensions, set to Intercom only (no outside lines).

- ✓ Outside lines 1,2,3,4,5,6,7,8. Intercom

PRESS [*] [*]

PRESS the line/intercom buttons in the desired order

PRESS [*] [*]

LINE RINGING

Determines how outside lines ring at the extension:

- Immediate ring (green steady) ✓
- Delayed ring—starts ringing after 20 seconds (green slow flashing)
- No ring (green fast flutter)

PRESS each line button until the desired ringing option appears in the display

✓ Factory setting



Requires a button with lights;

SPEED DIALING

PERSONAL SPEED DIAL NUMBERS

Stores up to 20 Personal Speed Dial numbers for a user's extension. Users with system phones can program Personal Speed Dial numbers; standard phones must be programmed from extension 10.

PRESS [Feature]

DIAL a 2-digit code (80 to 99)

DIAL the phone number—up to 20 digits including special characters (see page 3-18)

After programming, the user can dial the number automatically by pressing [Feature] plus the two-digit code.

AUTO DIALING—INSIDE AND OUTSIDE NUMBERS*

Stores phone numbers on programmable buttons of system phones, so users can dial simply by pressing a button. If you program an extension number on a button with lights, the lights show calling activity at the extension. If you have an MLS-34D system phone at extension 10, you can program all of the extensions on your system (up to 24) on Auto Dial buttons; this lets your receptionist see activity at all extensions with a glance and transfer calls to any extension by pressing one button.

PRESS a programmable button

To program an outside number:

DIAL the number—up to 20 digits, including special dialing special characters (see page 3-18)

NOTE: If your system is behind a PBX or Centrex system, include the PBX dial-out code as part of any outside number.

To program an extension number:

PRESS left [Intercom]

PRESS the extension number (for an Auto Dial button that is used to ring the extension) or [*] plus the extension number (for an Auto Dial button that is used to voice-signal the extension)

DIAL CODE FEATURES

DO NOT DISTURB

Prevents the phone from ringing; outside callers hear ringing and inside callers hear a busy signal. This feature is recommended only if someone else answers outside calls for your extension.

PRESS a programmable button with lights

PRESS [Feature] [0] [1]

EXCLUSIVE HOLD

Prevents other extensions that share a line from picking up calls placed on hold.

PRESS a programmable button

PRESS [Feature] [0] [2]

RECALL

Sends a timed switchhook flash over the phone line. This lets the user end a call and get a dial tone to make another call without hanging up and lifting the handset, or to access a PBX/Centrex custom calling feature.

PRESS a programmable button

PRESS [Feature] [0] [3]

SAVE NUMBER REDIAL

Saves an outside number into temporary memory, by pressing the button before hanging up the call. Pressing the Save Number Redial button then redials the number, even after intervening calls.

NOTE: This feature can be programmed onto more than one button.

PRESS a programmable button

PRESS [Feature] [0] [4]

*IMPORTANT:

If you program 911 or other emergency numbers as Speed Dial numbers and want to place test calls:

1. Remain on the line and briefly explain to the dispatcher the reason for the call before hanging up.
2. Perform such activities in the off-peak hours, such as early morning or late evening.

Telephone Programming Reference (cont'd)

DIAL CODE FEATURES

LAST NUMBER REDIAL

Automatically redials the last outside number dialed.

PRESS a programmable button
PRESS [Feature] [0] [5]

CONFERENCE DROP

Drops the last outside party added to a conference call, without disconnecting the other parties.

PRESS a programmable button
PRESS [Feature] [0] [6]

PRIVACY

Prevents other extensions that share a line from joining telephone conversations.

PRESS a programmable button with lights
PRESS [Feature] [0] [7]

TOUCH-TONE ENABLE

Lets users with rotary lines use phone services such as "Bank by Phone" that require touch-tone digits. After the user presses Touch-Tone Enable, all numbers dialed during the call are sent as touch-tone digits.

PRESS a programmable button
PRESS [Feature] [0] [8]

MESSAGE LIGHT ON

Turns on the message light at an extension with a system phone. To use this feature, you can enter the feature code or press a programmed button, then enter the extension number.

PRESS a programmable button
PRESS [Feature] [0] [9]

MESSAGE LIGHT OFF

Turns off the message light at an extension with a system phone. To use this feature, you can enter the feature code or press a programmed button, then enter the extension number.

PRESS a programmable button
PRESS [Feature] [1] [0]

CALL PICKUP

Picks up any call ringing at another extension.

PRESS a programmable button
PRESS left [Intercom] [6]
DIAL the extension number

PICKUP GROUP

Picks up an outside call ringing at any extension in the Pickup Group (see System Programming procedure #501).

PRESS a programmable button
PRESS left [Intercom] [6] [6]

LOUDSPEAKER PAGING

Connects the user to the (optional) loudspeaker paging system.

PRESS a programmable button
PRESS left [Intercom] [7] [0]

GROUP CALLING

Simultaneously rings all extensions in the Calling Group (see System Programming procedure #502). The first user to answer is connected to the caller.

PRESS a programmable button
PRESS left [Intercom] [7] [1]

GROUP PAGING

Simultaneously places a voice-signalled call to all extensions in the Calling Group (see System Programming procedure #502). When using this feature, the caller hears a beep and begins speaking: the caller's voice is then heard on the speakers of all system phones in the Calling Group. The first user to answer the call (by picking up the handset or pressing the [Mic] button) is connected to the caller.

PRESS a programmable button
PRESS left [Intercom] [*] [7] [1]



Requires a button with lights

Extension Programming

Users can program features or store telephone numbers at their own phones using Extension Programming. Automatic Line Selection and Line Ringing must be programmed from extension 10 (using Centralized Telephone Programming); all other features can be programmed on a system phone at the user's extension. If a user has a standard phone, Personal Speed Dial numbers for the extension must be programmed from extension 10.

TO PROGRAM OR CHANGE A PERSONAL SPEED DIAL NUMBER, AUTO DIAL NUMBER, OR DIAL CODE FEATURE

PRESS [Feature] [0] [0] to enter program mode.

Follow the boxed instructions in "Centralized Telephone Programming" above to program the first number or feature.

To program more numbers or features, follow their boxed instructions.

PRESS [Feature] [0] [0] when you are finished programming.

TO REMOVE AN AUTO DIAL NUMBER OR A DIAL CODE FEATURE FROM A BUTTON

PRESS [Feature] [0] [0] to enter program mode.

PRESS the programmed button. ←

To remove another number or feature, repeat the last two steps.

PRESS [Feature] [0] [0] when you are finished programming

Using Telephones

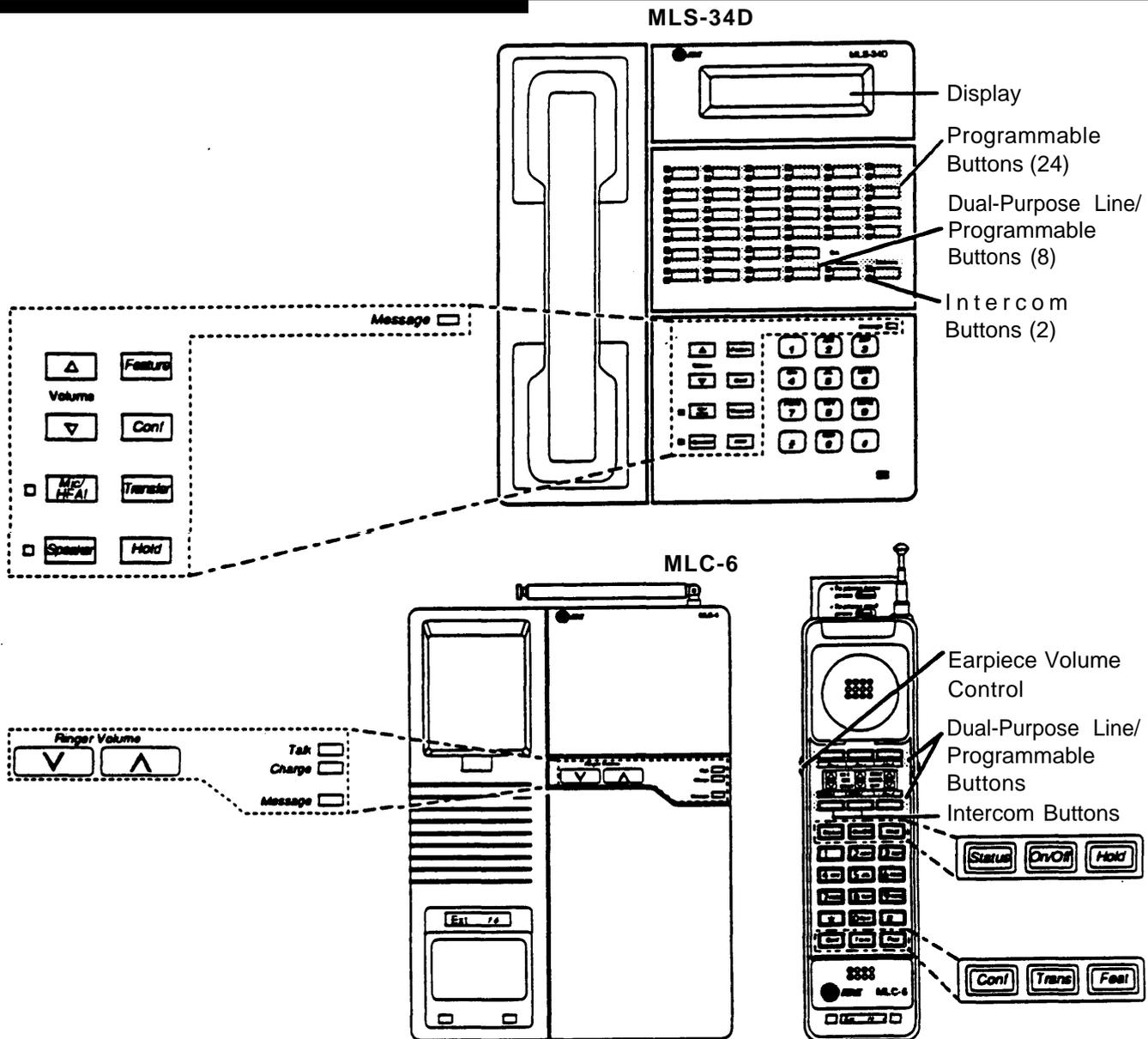
4

System Telephones–Overview

System phones have some common buttons and indicators. The following pages explain where they are and how they work.

Call handling instructions for both system and industry-standard phones begin on page 4-11.

Buttons and Indicators



The following buttons and displays appear on system phones. (Some controls and indicators are not available on all phones.)

Display. (MLS-12D and MLS-34D only) Shows date, day, and time when phone is idle, extension number dialed when placing a call, extension number calling when receiving an intercom call, transfer return information for transferred calls that were not answered, and duration while a call is in progress. When programming, shows settings, options, and prompts.

Programmable Buttons. Can be programmed with dial-code features (such as Do Not Disturb) or telephone numbers (such as Auto Dial numbers). The MLS-34D has 24 buttons (all with lights), and the MLS-12D and MLS-12 have 8 buttons (2 with lights).

Dual-Purpose Line/Programmable Buttons. Used for outside lines or (if no line is assigned on a button) for programming dial-code features or telephone numbers. When a line is assigned, you can press the line button to make a call on a specific line (lights show status of line). When no line is assigned, the button may be programmed. The MLS-34D, MLS-12D, and MLS-12 phones have 8 line/programmable buttons; the MLS-6 and MLC-6 phones have 4 line/programmable buttons.

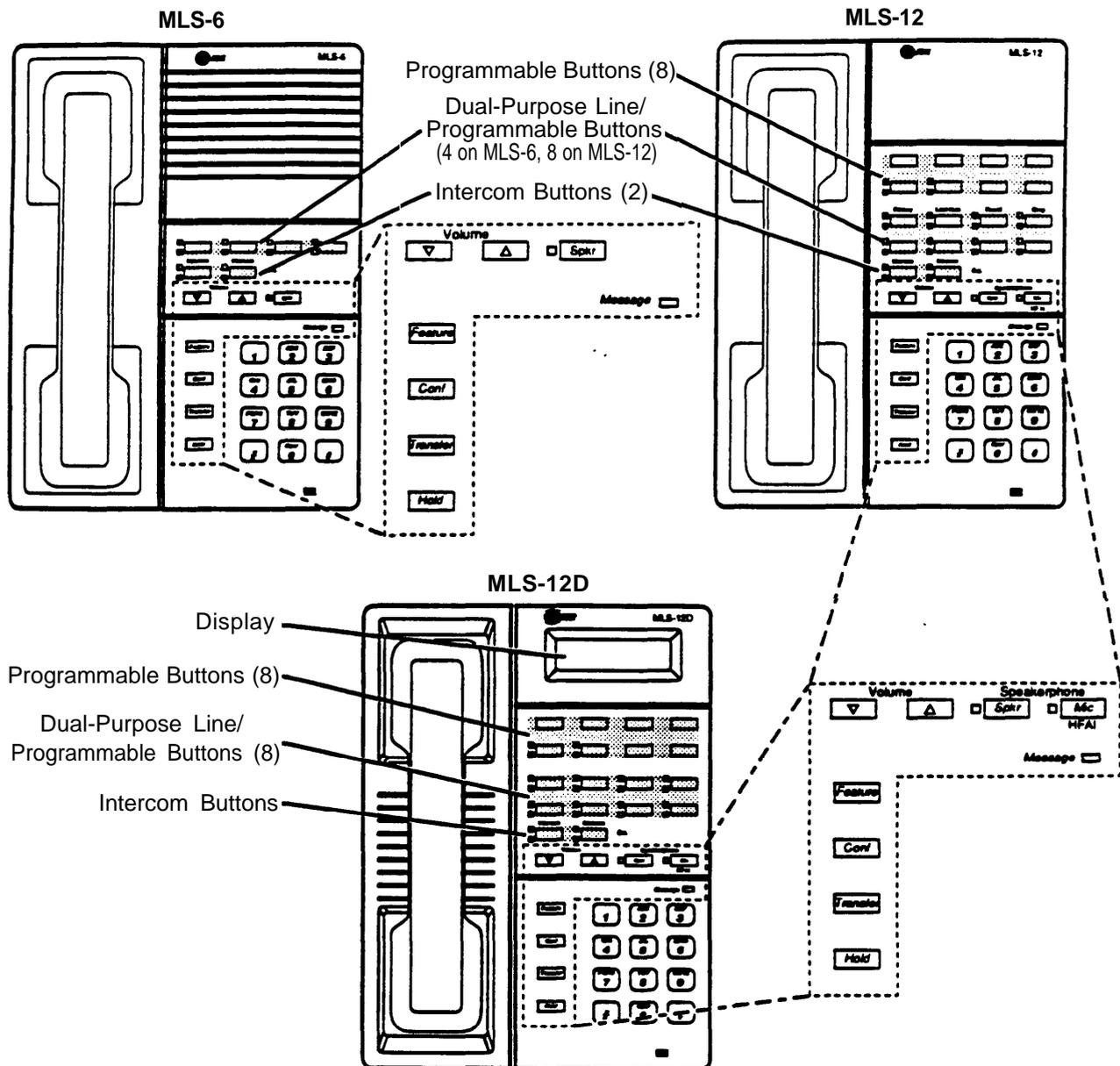
Intercom Buttons. Press either button to place an intercom (inside) call to another extension.

Other Buttons and Indicators (shown in exploded views)

Feature. Press to change programmed settings or use dial-code features.

Conf (Conference). Press to add other parties to your call.

Transfer. Press 10 transfer a call to another extension.



Hold. Press to put a call on hold.

Spkr (Speaker). Press to talk without lifting the handset. Turns on speaker and microphone (if available), so you can dial or have a conversation without lifting the handset.

Mic (Microphone) (MLS-12, MLS-12D, and MLS-34D only). Leave on to use Hands-Free Answer on Intercom feature. The light next to this button shows when the microphone is turned on; press this button to turn off the microphone when you are using the built-in speaker.

Message Indicator. Lights when someone signals you with the Message Light On feature.

Volume Control Buttons. Press ▼ to decrease or ▲ to increase the volume of the ringer, speaker, and handset.

■ To adjust ringer volume, press ▼ or ▲ while phone is idle and handset is on the phone.

■ To adjust speaker volume, press ▼ or ▲ while listening to a call through the speaker.

■ To adjust handset volume, press ▼ or ▲ while listening through the handset.

On/Off (MLC-6 only). Turns the handset on and off. (You must turn the handset on to make calls.)

Status (MLC-6 only). Quickly updates the display on the MLC-6 handset.

Talk (MLC-6 only). Lights when handset is lifted and turned on.

Charge (MLC-6 only). Lights when handset is placed on the base and handset batteries are charging.

Lights

Each line button has a green light and a red light. The meaning of these lights varies, depending on whether a button is used to access an outside line, is programmed with a dial-code feature, or is programmed with an Intercom (extension) Auto Dial number. (Auto Dial buttons for fax extensions show additional information; these “Fax Management” buttons are described in Chapter 5.)

Table 4-1 shows the meanings of the various light patterns for each possible button assignment.

Light Pattern	Line Button	Feature Button	Intercom Auto Dial Button
Steady On 	Line is busy. Green means your phone is busy; red means another extension is busy on the line.	Feature is on.	Red means extension is busy (making or answering a call).
Off  <i>(steady off)</i>	Line is idle (not being used).	Feature is off.	Extension is idle (not being used).
Flash  <i>(long on, long off)</i>	A call is ringing on the line. Green flash means a call is ringing at your extension. Red flash means a call is ringing on the line, but not at your extension.	—	Green flash means extension is calling you.
Wink  <i>(long on, long off)</i>	A call on the line is on hold. When the green light winks, the call is on hold at your extension. When the red light winks, the call is on hold at another extension. (Anyone who has the line can retrieve the call.)	—	—
Flutter  <i>(short on, short off)</i>	Green flutter means a call is on exclusive hold at your extension. (Only the extension that placed the call on hold can retrieve it.)	—	Green flutter means a call transferred to the extension is now ringing at your phone.
Broken Flutter  <i>(short on/off, long off)</i>	—	—	Fax Management only—the fax extension is not answering calls (may be out of paper).
Alternate Red/Green Flash  <i>(red on, green on, red on, green on)</i>	Alternating green and red flash appears on both extensions in a joined call, and on any extension connected in a conference call.	—	—

Table 4-1 Light Patterns for System Phones

NOTE:

When a phone is in programming mode, the lights show information about programmed settings. See Chapter 3 for details.

Ringling Patterns

A transferred call will ring like an intercom call (ring BEEP or, on a standard phone, ring-ring) until the person transferring the call hangs up, at which time the call will ring like a transferred call (ring BEEP BEEP or, on a standard phone, ring-ring-ring).

You can tell what kind of call you are receiving by the way your telephone rings.

- A single ring (*ring. . . ring. . . ring. . .*) means that you are receiving an outside call.
- A ring and a beep (*ring BEEP. . . ring BEEP. . . ring BEEP. . .*) means that another extension is calling you. If you have a system display phone, the number of the extension calling you appears on the display.
- A ring and two beeps (*ring BEEP BEEP. . . ring BEEP BEEP. . . ring BEEP BEEP. . .*) means either that a transferred call is coming in, or that a transferred call was not answered and is ringing back.

Dial Tones

You will encounter two different dial tones when making calls with the system:

- **Outside dial tone** is generated by your local phone company to indicate that you are connected with an outside line.
- **Intercom dial tone** is generated by the system to indicate that you are connected with an inside line. You hear this dial tone when you are making an inside, or *intercom*, call.

To hear the difference between the two types of dial tones on a system phone, press a line button. The dial tone you hear is an outside line dial tone. To hear an intercom dial tone, press an [\[Intercom\]](#) button.

Using the Handset, Speaker, and Microphone on MLS-Model Phones

Every MLS-model telephone has a speaker, which you can turn on by pressing [\[Spkr\]](#). When the green light next to the [\[Spkr\]](#) button is on, the speaker is on.

MLS-34D, MLS-12D, and MLS-12 phones also have a microphone. On these phones, pressing [\[Spkr\]](#) turns on *both* the speaker *and* the microphone. In addition, you can turn *just* the microphone on and off by pressing [\[Mic\]](#). When the green light next to the [\[Mic\]](#) button is on, the microphone is on.

The call handling instructions in this chapter explain how to use the handset to make and answer calls. However, if you prefer to dial and conduct calls without lifting the handset, you can use the speaker and the microphone instead. Use the following techniques to make calls with the speaker and (if you have one) the microphone:

- To make a call without lifting the handset, press [\[Spkr\]](#) to get a dial tone; then dial the number and you will hear the call ringing. If you have a microphone, it is turned on automatically when you press [\[Spkr\]](#) (if it is not on already); when the other party answers, you can talk without lifting the handset. On MLS-6 system phones (which have no microphone), you *must* lift the handset to talk when the other party answers.

-
- To turn off the microphone when you are using the speaker, press **[Mic]**. This will "mute" your voice so the other party cannot hear you.
 - If you are already on a call, you can switch from the handset to the speaker and microphone (on an MLS-34D, MLS-12D, or MLS-12 phone) by pressing **[Spkr]** and hanging up the handset. Conversely, if you are using the speaker and microphone and want to switch to the handset, lift the handset and the speaker and microphone will turn off.
 - Use the Hands-Free Answer on Intercom (HFAI) feature to answer voice-signalled calls without lifting the handset.

Hands-Free Answer On Intercom (HFAI)

Since MLS-6 and MLC-6 phones do not have microphones, you must lift the handset to answer voice-signalled calls to those phones.

When you receive a *voice-signalled* intercom call (are "paged"), your phone beeps to indicate that your speaker has been turned on, and you hear the caller's voice over your phone's speaker. If you leave the microphone on all the time, you can simply start talking when you hear the caller, to answer without lifting the handset. This feature is called *Hands-Free Answer on Intercom*.

Any user in the system can make a voice-signalled call to a system telephone by pressing **[*]** and then dialing an extension number. (You can make a voice-signalled call *from* either a system phone or a standard phone. However, if you try to make a voice-signalled call to a standard phone, it will ring.)

NOTE:

The HFAI feature can only be turned on or off when your phone is idle.

Speakerphone Performance Tips

Your MLS-12, MLS-12D, or MLS-34D telephone's speakerphone has a sound-activated switch that turns the microphone on when you talk and turns the speaker on when a caller is talking. Room acoustics and background noise can affect the proper operation of the speakerphone.

To ensure that your speakerphone works effectively, follow these guidelines:

- Avoid placing your phone in areas with high background noise caused by loud voices, radios, printers, copiers, typewriters, other noisy office equipment, and heater and air conditioning fans.
- Avoid rustling papers near the microphone (lower right corner of your phone).
- Avoid talking before the other person is finished speaking. When you both talk at the same time, only one person's voice comes through.
- When talking, always face your phone and stay within two feet of it.
- Place your phone at least six inches away from the edge of your desk.
- If you have difficulty hearing the other party, increase the speaker volume. If the difficulty persists, lift your handset to continue the conversation.

Standard Telephones—Overview

Single-line cordless phones, and fax machines and answering machines with built-in phones, work the same way standard phones do as described in this chapter.

Set Automatic Line Selection for standard phones to “intercom first” (see “Telephone Programming” in Chapter 3).

During a power failure, standard phones at power failure extensions can be used only to place and receive calls. Other system features are not available during power failure operation.

In addition to system phones, you can connect standard touch-tone or rotary dial telephones—and even some standard phones with built-in calling features—directly to the system. You can also combine standard phones on the same extension with system phones or other devices, without using expensive adapters or connectors.

Standard telephones can do many of the things that system telephones can do, and you can save money by using them in certain situations when a system telephone is not needed. Follow these guidelines when using standard phones:

- Use standard phones as power failure backups. In the event of a power failure, standard phones at extensions 10, 16, 22, and 28 connect to lines 1, 3, 5, and 7, respectively, for continued operation; but system phones will not work. You can connect standard phones in combination with system phones at power failure extensions, or you can simply keep spare standard phones at those extensions to serve as replacements in case of a power failure.
- To use a dial-code feature, press [#] followed by its dial code. (For details, see “Dial Code Features” at the end of this chapter.)
- To use a Speed Dial number, press [#] followed by its two-digit code. (For programming information, see “System Speed Dialing” in Chapter 3.)
- Use the switchhook on a standard phone to place calls on hold, transfer a call, or set up a conference call. (For details, see “Using the Switchhook” on page 4-9, or the call handling instructions later in this chapter.)

Ringing Patterns

Standard phones have these ringing patterns:

- An outside call will *ring. . . ring. . . ring.*
- An intercom call will *ring-ring. . . ring-ring. . . ring-ring.*
- A transferred call will *ring-ring-ring. . . ring-ring-ring. . . ring-ring-ring.*

Dial Tones

A standard phone has two different dial tones:

- **Outside dial tone is** generated by your local phone company to indicate that you are connected with an outside line.
- **Intercom dial tone is** generated by the system to indicate that you are connected with an inside line. You hear this dial tone when you are making an inside, or *intercom*, call.

To hear the difference between the two dial tones, lift the handset. The dial tone you hear is an intercom dial tone. To hear an outside line dial tone, press [9].

Using the Switchhook

Some of the call handling instructions in this chapter direct you to “rapidly press and release the switchhook.” Pressing the switchhook down for 1/4 to 1 second sends a signal over the line called a *switchhook flash*. However, do not press the switchhook *too* quickly. If you press the switchhook and nothing happens, try again, pressing a *little* longer.

NOTE:

If your feature phone has a button labeled “Recall” or “Flash,” use it instead of pressing the switchhook.

Limitations

Because standard phones do not have system line buttons, feature buttons, or dedicated function buttons, basic call handling procedures are sometimes different from those for system telephones. In addition, the following actions cannot be performed at a standard telephone:

- Because there are no line buttons on standard phones, you cannot manually select a line. You can only make outside calls on automatically selected lines (for information on Automatic Line Selection, see “Telephone Programming” in Chapter 3).
- You cannot receive a second call when you are already on a call.
- You cannot join a call at another extension.
- You cannot pick up a call on hold at another extension.
- You can make a voice-signalled call *from* a standard phone, but if you try to make a voice-signalled call *to* a standard phone, it rings.
- You cannot enter program mode.
- You cannot use the System Password.
- You cannot use the following dial code features: Do Not Disturb, Exclusive Hold, Save Number Redial, or Privacy.
- If a standard phone has a message waiting light, it will not work.

Feature Phones

Set Automatic Line Selection for feature phones to "intercom first" (see "Telephone Programming" in Chapter 3).

A *feature phone* is a standard telephone that has feature buttons in addition to the regular 12-key dial pad. For example, there are feature phones that have programmable auto dial buttons, last number redial buttons, hold buttons, and built-in speakerphones. Most of the features on these phones will work with the system. You can use the system's dial code features from a feature phone, and program them onto a feature phone button. However, there are some limitations to what these phones can do.

The capabilities of a feature phone are *in the phone itself*. For example, if you store a number on a feature phone's auto dial button, that number is stored *in* the feature phone. (This is different from storing a number on a system phone's Auto Dial button. When you program a button on a system phone, the number is actually stored in the control unit.) Similarly, when you press a **[Hold]** button on a feature phone, the call is held at the phone itself. Other phones in the system cannot see that the call is on hold (it appears as a busy line).

If you want to program an outside number on a feature phone's auto dial button, you must add a **[9] [pause] [pause]** before each outside number. (The **[9]** gets an outside line, and the **[pause]** allows a few seconds to get an outside dial tone.)

Note that the feature phone's last number redial button may not work for an outside call. To redial the last number, use the system's Last Number Redial feature by pressing **[#] [0] [5]**.

Combination Extensions

The combined ringer equivalence number (REN) of two devices on a combination extension must be no more than 2.0

A *combination extension* is an extension with two standard devices connected— a system telephone and a standard device. For instructions on how to install a combination extension, see Figure 2-5 in Chapter 2.

The following are examples of useful combination extensions:

- System phone plus standard telephone, for power failure backup on extensions 10, 16, 22, and 28.
- System phone plus answering machine
- System phone plus fax machine
- System phone plus tip-ring headset
- System phone plus external alert (such as a bell or chime).

Using the telephones in a combination extension is fairly simple. The main thing to understand is that the two telephones share a single extension in the same way that several home telephones share a single number. A system telephone works like it always does and a standard telephone works like it always does when connected to the system. Only one phone can be used at a time, unless you want to join the two on a single call (the same way two people can pick up the same call on different telephones at home). For example:

- Both phones share the same extension number.
- Both phones share the same *voicepath*; when either one is busy, the extension is busy.
- The lights on the system phone show what the standard telephone is doing as well as what the system phone is doing. For an explanation of light patterns, see “Lights” at the beginning of this chapter.
- Calls ring at both phones.
- You can handle a call on the standard telephone by pressing buttons on the system telephone. For example, you can use the system phone to select a specific outside line, and conduct the call on the standard phone. Or, if someone is on a call using the standard telephone, someone else can put that call on hold by pressing **[Hold]** on the system phone. To do this, it is not necessary to lift the handset of the system phone. (Held calls cannot be retrieved from a standard phone in a combination extension.)
- You can also activate dial code features from the system telephone while the standard phone is on a call. Simply press **[Feature]** plus the two-digit dial code.
- If you make a voice-signalled intercom call to a combination extension with a system phone, only the system phone signals.

Using Your Telephone

The charts below explain how to handle calls with both system and standard phones. When prior programming is required, the page number where you can find programming instructions is shown in the left column.

Placing Calls

You can place a call by dialing the entire outside phone number or an extension number. There are also several ways to “speed dial” a number that has been stored in your telephone or in the system.

If dialing restrictions have been programmed for an extension, the system may prevent you from placing certain calls. For example, an extension may not be allowed to dial 900 numbers. (Or an extension may be programmed to take incoming calls only, so that you will not be able to dial out at all). If a system password has been programmed, you can enter the password to override all dialing restrictions (see “Dialing Restrictions and Permissions” in Chapter 3.)

	On a System Phone* 	On a Standard Phone 
To make an outside call	<ol style="list-style-type: none"> 1. If you want to dial out on a specific line, press an idle (unlit) [Line] button. 2. Lift the handset or press [Spkr] . <i>The [Line] button light is steady green.</i> 3. Dial the number. <i>On a display phone, the dialed number appears on the display and the call timer begins.</i> <p>If a line you want to use is busy (steady red light): You can reserve the line and your phone will beep when the line becomes free. Press the busy [Line] button without lifting the handset or touching [Spkr] . When the line is free and your phone beeps, lift the handset and dial the number. (If more than one person reserves a line, all their phones beep when the line is free. The first person to pick up the phone after the beep gets the line, and the other reservations are canceled.) This Line Reserve feature is useful when you share a line—such as a WATS line—with other people.</p>	<ol style="list-style-type: none"> 1. Lift the handset. <i>You hear the intercom dial tone.</i> 2. Dial [9] to get an outside line. <i>You hear the outside line dial tone.</i> 3. Dial the number.
To Auto Dial an outside number <i>See page 3-22 for programming instructions.</i> <i>You can dial an Auto Dial number—for example, an account number for an automatic banking service—while on an outside call, but not while on an intercom call.</i>	<ol style="list-style-type: none"> 1. If you want to call on a specific line, press the [Line] button. <i>You can lift the handset or press [Spkr] before dialing.</i> 2. Press the button on which the Auto Dial number is programmed. <i>If you did not select an outside line, the system automatically selects a line, turns on the speaker if the handset is on the hook, and dials the Auto Dial number.</i> 	Feature not available.
<p>* If you are using an MLC-6 cordless phone, make sure the handset is on before following these instructions. For more information on-using the MLC-6, see <i>AT&T MLC-6 Cordless Telephone Quick Reference: Display and Controls</i>.</p>		

	On a System Phone* 	On a Standard Phone 
<p>To enter a System Password to override dialing restrictions</p> <p>See page 3-16 for programming instructions.</p> <p>You cannot use the System Password on an MLC-6 phone.</p>	<p>Before lifting the handset or turning on the speaker...</p> <ol style="list-style-type: none"> 1. Press [Hold] . 2. Enter the password. <i>The password overrides all dialing restrictions, but not Line Access Restriction (#302).</i> 3. Press an outside [Line] button. 4. Lift the handset and dial the number. <i>The password remains in effect until you hang up the phone.</i> 	<p>Feature not available.</p>
<p>To dial a System or Personal Speed Dial Number</p> <p>See pages 3-18 and 3-22 for programming instructions.</p> <p>Ask your System Manager for a copy of the Speed Dial Numbers form showing your company's System Speed Dial numbers.</p>	<ol style="list-style-type: none"> 1. If you want to call on a specific line, press the [Line] button before dialing. 2. Press [Feature] . 3. Dial the two-digit Speed-Dial code. <i>The code for a System Speed Dial number is two digits from 20-79; for a Personal Speed Dial number, 80-99.</i> <i>If you did not specify an outside line, the system automatically selects one, turns on the speaker if the handset is on the hook, and dials the number.</i> 	<ol style="list-style-type: none"> 1. Lift the handset. <i>You hear the intercom dial tone.</i> 2. Press [#] . 3. Dial the two-digit Speed-Dial code. <i>The code for a System Speed Dial number is two digits from 20-79; for a Personal speed Dial number, 80-99.</i> <i>The system automatically selects an outside line and dials the Speed Dial number.</i>
<p>To call another extension on your system (an inside call)</p> <p>If you try to voice signal a standard phone or MLC-6 cordless phone, the phone will ring.</p>	<ol style="list-style-type: none"> 1. Press an idle [Intercom] button. <i>You can lift the handset or press [Spkr] before dialing. You hear intercom dial tone, and the light next to the [Intercom] button is steady green.</i> 2. To ring the extension, dial the two-digit extension number, or To voice-signal a system phone at the extension, dial [*] plus the two-digit extension number. When you hear a beep, start talking. <i>Your voice is heard on the other extension's speaker. If someone is using the phone at the other extension, it will ring instead.</i> 	<ol style="list-style-type: none"> 1. Lift the handset. <i>You hear the intercom dial tone.</i> 2. To ring the extension, dial the two-digit extension number, or To voice-signal a system phone at the extension, dial [*] plus the two-digit extension number. When you hear a beep, start talking. <i>Your voice is heard on the other extension's speaker. If someone is using the phone at the other extension it will ring instead.</i>
<p>To Auto Dial another system extension</p> <p>See page 3-22 for programming instructions. You can program an Intercom Auto Dial button to make ringing or voice-signalled calls.</p> <p>You can use an intercom Auto Dial button to make one-touch transfers to an extension.</p> <p>You cannot dial an Auto Dial number while on an intercom call.</p>	<ol style="list-style-type: none"> 1. Press the button on which the Auto Dial number is programmed. <i>The phone automatically turns on the speaker if the handset is on the hook and dials the Auto Dial number.</i> 	<p>Feature not available.</p>
<p>* If you are using an MLC-6 cordless phone, make sure the handset is on before following these instructions. For more information on using the MLC-6, see <i>AT&T MLC-6 Cordless Telephone Quick Reference: Display and Controls</i>.</p>		

	On a System Phone* 	On a Standard Phone 
<p>To ring or page all extensions in the Calling Group</p> <p>See page 3-17 for instructions on setting up a Calling Group. You can program [Intercom] [7] [1] onto a programmable button (see page 3-22) to call the Calling Group with a single touch. When the call is answered—by someone either lifting the handset or pressing [Mic]—only the phone that answered hears your voice.</p>	<ol style="list-style-type: none"> 1. Lift the handset and press [Intercom] (in either order). <i>You hear the intercom dial tone.</i> 2. To make a ringing call, dial [7] [1]. <i>All available extensions in the Calling Group ring.</i> To make a voice-signaled call, dial [*] [7] [1]. After the beep, start talking. <i>All Calling Group system phones that are not busy hear your voice through their speakers.. This feature is called "group paging."</i> 	<ol style="list-style-type: none"> 1. Lift the handset. <i>You hear the intercom dial tone.</i> 2. To make a ringing call, dial [7] [1]. To make a voice-signaled call, dial [*] [7] [1]. After the beep, start talking. <i>All Calling Group system phones that are not busy hear your voice through their speakers. This feature is called "group paging."</i>
<p>* If you are using an MLC-6 cordless phone, make sure the handset is on before following these instructions. For more information on using the MLC-6, see <i>AT&T MLC-6 Cordless Telephone Quick Reference: Display and Controls</i>.</p>		

Putting a Call on Hold

	On a System Phone 	On a Standard Phone 
<p>To put a call on hold (anyone with the line can retrieve it)</p> <p>Only one party on an intercom call can put the call on hold. If both parties try to put the call on hold, the call will be disconnected.</p>	<ol style="list-style-type: none"> 1. Press [Hold]. <i>The light next to the [Line] button winks</i> <i>You can make and receive other calls while a call is on hold. If a call is left on hold for longer than one minute, the extension at which the call is held generates a short hold Reminder Tone. The reminder tone sounds once every minute until the held call is retrieved, or until the caller hangs up.</i> 	<p><i>While active on the call.....</i></p> <ol style="list-style-type: none"> 1. Press the switchhook down once rapidly. <i>You hear the intercom dial tone. The call is on hold.</i> <i>Do not hang up the handset while the call is on hold. If you do hang up the handset, the phone will ring. Answering the ring will reconnect you with the held call.</i>
<p>To put an outside call on Exclusive Hold (only you can retrieve it)</p> <p>You can program Exclusive Hold ([Feature] [0] [2]) onto a programmable button. See page 3-22 for programming instructions.</p>	<ol style="list-style-type: none"> 1. Press [Feature] [0] [2]. <i>The light next to the [Line] button flutters green.</i> 	<p>Feature not available.</p>
<p>To retrieve a held call*</p>	<ol style="list-style-type: none"> 1. Press the [Line] button on which the call is held. <i>(For a call on Exclusive Hold, you must be at your own phone.) The light next to the [Line] button changes from winking or fluttering to steady green.</i> 2. Lift the handset. <i>You are reconnected with the held call.</i> 	<ol style="list-style-type: none"> 1. Hang up. <i>The call "rings back."</i> 2. Lift the handset. <i>You are reconnected with the held call.</i>
<p>* If you are using an MLC-6 cordless phone, make sure the handset is on before following these instructions. For more information on using the MLC-6, see <i>AT&T MLC-6 Cordless Telephone Quick Reference: Display and Controls</i>.</p>		

Answering Calls

	On a System Phone* 	On a Standard Phone 
<p>To answer a call</p>	<p>When the telephone is ringing. . .</p> <ol style="list-style-type: none"> Lift the handset. <i>You are connected to the incoming call. If more than one line is ringing, you are connected to the line that has been ringing longest.</i> <i>If the call is an intercom call and you have a display phone, the caller's extension number will briefly appear on your display.</i> <p>To answer a call when you are already on a call:</p> <ol style="list-style-type: none"> Press [Hold] . <i>The call you are on is placed on hold.</i> Press the [Line] button for the new call. <i>You are connected to the new call.</i> <p>To return to the first call:</p> <ol style="list-style-type: none"> Put the second call on hold and press the [Line] button for the first call, or Hang up when you are finished with the second call. <i>The first call rings back.</i> <p>To answer a call on a specific line:</p> <ol style="list-style-type: none"> Press the [Line] button and lift the handset. <i>You are connected to the incoming call. If a line has been programmed for "delayed ring" or "no ring," or the Do Not Disturb feature is turned on, a call on the line appears as a flashing red light but does not ring.</i> 	<p>When the telephone is ringing. . .</p> <ol style="list-style-type: none"> Lift the handset. <i>You are connected to the incoming call.</i> <p>To answer a call when you are already on a call: Feature not available.</p> <p>To answer a call on a specific line: Feature not available.</p>
<p>To answer a call ringing at another extension</p> <p><i>The call can be an outside call, an intercom call, or a transferred call, and can be on a line not assigned to your extension.</i></p> <p><i>See page 3-17 for instructions on programming a Pickup Group.</i></p> <p><i>You can program [Intercom] [6] [6] onto a programmable button (see page 3-23) to pick up calls ringing at extensions in the Pickup Group with a single touch.</i></p>	<p>When any extension in the system is ringing. . .</p> <ol style="list-style-type: none"> Lift the handset. Press [Intercom] . Dial [6] Plus the two-digit number of the ringing extension to pickup the call. <p><i>When a Pickup Group extension is ringing (if Pickup Group extensions have been programmed). . .</i></p> <ol style="list-style-type: none"> Dial [Intercom] [6] [6] to pick up an outside call ringing at any extension in the group. 	<p>When any extension in the system is ringing. . .</p> <ol style="list-style-type: none"> Lift the handset. <i>You hear intercom dial tone.</i> Dial [6] plus the two-digit number of the ringing extension to pick up the call. <p><i>When a Pickup Group extension is ringing (if Pickup Group extensions have been programmed) . . .</i></p> <ol style="list-style-type: none"> Dial [6] [6] to pick up an outside call ringing at any extension in the group.
<p>* If you are using an MLC-6 cordless phone, make sure the handset is on before following these instructions. For more information on using the MLC-6, see <i>AT&T MLC-6 Cordless Telephone Quick Reference: Display and Controls</i>.</p>		

Transferring a Call

	On a System Phone* 	On a Standard Phone 
<p>To transfer a call</p> <p><i>You can transfer both outside and intercom calls to other system extensions. You cannot transfer calls to the Calling Group.</i></p> <p><i>To transfer calls to an extension with a single touch, program the extension number onto an Auto Dial button (see page 3-22). For an extension that has a system phone, you can program [*] plus the extension number on the Auto Dial button and announce calls over the phone's speaker before you transfer them.</i></p> <p><i>To program a different Transfer Return extension for calls you transfer that are not answered, see page 3-15.</i></p>	<ol style="list-style-type: none"> 1. While on a call, press [Transfer] . <i>You hear the intercom dial tone. The call is put on hold and its associated light winks green.</i> 2. Dial the two-digit number of the extension where you want the call transferred; or If the extension where you want to transfer the call has a system phone and you want to page the user over the phone's speaker before transferring the call, dial [*] plus the two-digit extension number. <i>When you transfer a call from a display phone, the extension number you transfer the call to briefly appears on the display. The call rings at the other extension with an intercom ring (ring BEEP) until you hang up, then rings with a transfer ring (ring BEEP BEEP).</i> 3. To announce the call, wait for the other extension to answer. Otherwise, hang up when you hear ringing. <i>If no one answers, the call will ring back at your extension (unless a different transfer return extension is programmed). If you have a display phone, the number of the extension that is returning the call will briefly appear on the display.</i> Press the [Line] button next to the winking green light and you are reconnected to the caller. 	<ol style="list-style-type: none"> 1. While active on the call, press the switchhook down once rapidly. <i>You hear the intercom dial tone. The call is put on hold.</i> 2. Dial the two-digit number of the extension where you want the call transferred. If the extension where you want to transfer the call has a system phone and you want to announce the call over the phone's speaker, dial [*] plus the two-digit extension number. <i>The call rings at the other extension with an intercom ring (ring BEEP) until you hang up, then rings with a transfer ring (ring BEEP BEEP).</i> 3. To announce the call, wait for the other extension to answer. Otherwise, hang up when you hear ringing. <i>If no one answers, the call will ring back at your extension (unless a different transfer return extension is programmed).</i> If no one answers, press the switchhook down once rapidly and you are reconnected with the caller. (If the person at the other extension refuses the transfer but does not hang up, press the switchhook twice and you will be reconnected with the first call.)

Making a Conference Call

A conference call connects up to five parties (including the originator) in a single call. You can connect both outside calls and intercom calls in a conference call, but the call cannot include more than two outside parties. You cannot have two outside calls in a conference call if your system is programmed for Outside Conference Denial (#109); see Chapter 3 for details. You can use System Speed Dial, Personal Speed Dial, or Auto Dial numbers to add calls to the conference.

Do not add a busy or ringing outside call to a conference; if you do, all callers hear the busy or ringing signal. If you hear a busy signal when you are setting up a second call, or if the second party does not answer, reconnect with the held party by pressing the **[Line]** button. You cannot join a conference call: the originator must add each party to the conference.

If the conference originator puts the call on hold during the conference, other parties can continue to talk while the originator is on hold. Other inside parties cannot put their extensions on hold. When the originator hangs up, the conference is disconnected. You cannot transfer a conference call.

During the conference call, any inside party can exit the call at anytime simply by hanging up. However, if an outside party hangs up during a conference call, the callers that remain will hear a dial tone. A system feature called Conference Drop removes the last added outside party from a conference call.

	On a System Phone 	On a Standard Phone 
<p>To set up a conference call</p> <p><i>A system phone can connect up to five parties (including the originator) in a conference call. A standard phone can connect a total of three parties—the originator and two additional parties.</i></p>	<ol style="list-style-type: none"> 1. Set up the call to the first party. <i>(You can call the party, pick up the call from hold, or answer an incoming call.)</i> 2. Press [Conf]. <i>The first party is on hold.</i> 3. Set up the call to the second party. <i>You are connected with the second party. If you are adding an intercom extension to a call, wait until the extension answers.</i> 4. Press [Conf] again to add the second party to the call. <i>You can now speak with the first and second parties.</i> 5. Repeat steps 2—4 to add up to two more parties. 	<p><i>You are connected with the first party . . .</i></p> <ol style="list-style-type: none"> 1. Press the switchhook down once rapidly. <i>The first party is put on hold. You hear the intercom dial tone.</i> 2. To add an outside party, dial [9] plus the outside number. If the number is busy or does not answer, hang up and the first party rings back. To add an inside party, dial the two-digit extension number. If the extension is busy or does not answer, press the switchhook down once rapidly and you will be reconnected with the first party. 3. When the second party answers, press the switchhook down once rapidly. <i>You are connected with both parties.</i>
<p>To drop parties from a conference call</p> <p><i>The Conference Drop feature can be programmed as a button feature. See page 3-23 for details.</i></p>	<ol style="list-style-type: none"> 1. Press [Feature] [0] [6]. <i>The last added outside party is dropped.</i> 	<ol style="list-style-type: none"> 1. Press the switchhook down once rapidly. <i>The last added party is dropped.</i>

Joining a Call

If you have a system phone, you can *join* an outside call if the call is on a line assigned to your phone. Joining is adding yourself to a call in progress, like joining a call on a home phone by picking up another phone on the same line (unlike conferencing, where the originator “pulls you into” the call).

If you call on an outside line, up to three more system extensions can join you on the call (for a total of one outside caller and four inside parties).

	On a System Phone* 	On a Standard Phone 
<p>To join an outside call</p> <p><i>You can program the Privacy feature onto a system phone button to prevent other extensions from joining a call on your phone (see page 3-23). In addition, the Automatic Extension Privacy feature can be programmed for an extension to prevent other extensions from joining any calls (see page 3-15). You cannot put a joined call on hold.</i></p>	<ol style="list-style-type: none"> 1. Press the button of the line on which the call is being conducted. <i>A steady red light at a [Line] button indicates a call in progress. You can only join a call on an outside line that is assigned to your extension.</i> 2. Lift the handset to speak. <i>The red and green lights alternately flash. You are now joined with the call. You can tell when someone has joined a call of yours when the lights next to the [Line] button change to alternately flashing red and green.</i> 	<p>Feature not available.</p> <p><i>If a system phone joins a call on a standard phone, there is a momentary "break" in the call on the standard phone.</i></p>
<p>* If you are using an MLC-6 cordless phone, make sure the handset is on before following these instructions. For more information on using the MLC-6, see <i>AT&T MLC-6 Cordless Telephone Quick Reference: Display and Controls</i>.</p>		

Loudspeaker Paging

	On a System Phone* 	On a Standard Phone 
<p>To make an announcement over a loudspeaker paging system</p>	<ol style="list-style-type: none"> 1. Lift the handset and press [Intercom] (in either order). 2. Dial [7] [0] . 3. If your paging system is an AT&T PagePac6, speak into the handset. Your voice is heard through the loudspeaker system. <i>If system is an AT&T PagePac6 Plus:</i> <ol style="list-style-type: none"> 1. Press [1] to make an announcement in zone 1; press [2] for zone 2; press [3] for zone 3; press [4] for zones 2 and 3; press [5] for zones 1 and 3; press [6] for zones 1 and 2; press [7] for all zones. 2. Speak into the handset. <i>If you have a paging system other than a PagePac6 or PagePac6 Plus, follow the manufacturer's instructions.</i> 	<ol style="list-style-type: none"> 1. Lift the handset. 2. Dial [7] [0] 3. If your paging system is an AT&T PagePac6, speak into the handset. Your voice is heard through the loudspeaker system. <i>If you have a touch-tone phone and your system is an AT&T PagePac6 Plus:</i> <ol style="list-style-type: none"> 1. Press [1] to make an announcement in zone 1; press [2] for zone 2; press [3] for zone 3; press [4] for zones 2 and 3; press [5] for zones 1 and 3; press [6] for zones 1 and 2; press [7] for all zones. 2. Speak into the handset. <i>If you have a paging system other than a PagePac6 or PagePac6 Plus, follow the manufacturer's instructions.</i>
<p>* If you are using an MLC-6 cordless phone, make sure the handset is on before following these instructions. For more information on using the MLC-6, see <i>AT&T MLC-6 Cordless Telephone Quick Reference: Display and Controls</i>.</p>		

Using Night Service

If your system uses Night Service with a System Password defined, users can enter the password when Night Service is on, to override calling restrictions for the duration of a call. See page 4-12 for instructions on entering a System Password.

	On a System Phone 	On a Standard Phone 
<p>To turn on Night Service</p> <p><i>Before using this feature, you must program a Night Service Button (#503) for extension 10 and assign extensions to the Night Service Group (#504); see page 3-17 for instructions.</i></p> <p><i>Night Service can only be turned on and off from the system display phone at extension 10.</i></p>	<ol style="list-style-type: none"> Press the Night Service button on extension 10. <i>If a system password is programmed, the light next to the button flashes green; you must go on to step 2. If no system password is programmed, the light is steady green and Night Service is on</i> Enter the password. <i>The light is steady green. Night Service is on.</i> 	Feature not available.
<p>To turn off Night Service</p>	<ol style="list-style-type: none"> Press the Night Service button on extension 10. <i>If a system password is defined, the light next to the button flashes green; you must go on to step 2. If no system password is programmed, the light goes off and Night Service is off.</i> Enter the password. <i>The green light goes off. Night Service is on.</i> 	Feature not available.

Dial Code Features

Dial code features are features that you can use by dialing a code. The most popular features are Exclusive Hold, Conference Drop, and Last Number Redial; but a complete list is shown below in Table 4-2.

There are two ways to use a dial code feature:

- Dial it manually as shown in Table 4-2 (for example, to use Last Number Redial on a system phone, press [Feature] [0] [5]).
- Program the feature onto a programmable button, so that you can use it automatically, with a single touch. (For programming instructions, see pages 3-22 and 3-23 of this guide or the *Quick Reference* card).

NOTES:

1. Do Not Disturb and Privacy cannot be dialed manually; they must be programmed onto a lighted button.
2. If you use all four [Line] buttons on an MLS-6 or MLC-6 phone, you cannot program any dial code features on the phone.

Dial Code Feature	Manual Dialing on System Phone 	Manual Dialing on Standard Phone 	What the Feature Does
Do Not Disturb		Not available	Prevents your phone from ringing. Outside callers hear ringing; intercom callers hear a busy signal. If you transfer a call and it returns to you, your phone will ring even if Do Not Disturb is on. To use this feature, you must first program [Feature] [0] [1] onto a button with a light. Use the button like a switch—when the light is on, Do Not Disturb is on.
Exclusive Hold	[Feature] [0] [2]	Not available	Prevents any other extension from picking up a call you put on hold. Enter the feature code (or press a programmed button) to hold a call, and press the line button on which the call is held to retrieve the call.
Recall	[Feature] [0] [3]	[#] [0] [3]	Gives you a dial tone without having to press the switchhook. (Many PBX/Centrex features often require a Recall operation in order to work.) Recall will disconnect an intercom call.
Save Number Redial	[Feature] [0] [4]	Not available	Saves an outside number (maximum 20 digits per phone number). After it is saved, the number can be redialed any time until you save a different number. Allows you to make calls before redialing a number. Enter the feature code (or press a programmed button) before hanging up to save a number into memory; enter the feature code again to redial the saved number.
Last Number Redial	[Feature] [0] [5]	[#] [0] [5]	Redials the last outside number dialed (maximum 20 digits per phone number). Useful for redialing a busy number.

 = Must be programmed onto a button with a light (see pages 3-22 and 3-23). You cannot dial these features manually.

Table 4-2 Dial Code Features

Dial Code Feature	Manual Dialing on System Phone 	Manual Dialing on Standard Phone 	What the Feature Does
Conference Drop	[Feature] [0] [6]	Not available	Drops the last added outside party from a conference call without disconnecting the other parties.
Privacy		Not available	Prevents other extensions who share lines with you from joining a call on your phone. To use this feature, you must first program [Feature] [0] [7] onto a button with a light. Use the button like a switch; when the light is on, Privacy is on. If Automatic Extension Privacy—system programming procedure #304—is programmed for your extension, your extension will normally be private. However, if you will sometimes need to have coworkers join your conversations, you can program Privacy on a button with lights. This will let you temporarily override Automatic Extension Privacy.
Touch-Tone Enable	[Feature] [0] [8]	Not available	Sends touch-tone signals over a rotary line. Allows you to use phone services such as "Bank-by-Phone" that require dialing touch-tone digits. Enter the feature code (or press a programmed button) at the point in the call when you need touch-tone signals. The rest of the numbers you dial during the call will be touch-tone digits.
Message Light On	[Feature] [0] [9]	[#] [0] [9]	Turns on the Message light on another system phone. Although anyone can use this feature, it is typically used by a receptionist to let someone know a message is waiting. To use this feature: 1. Enter the feature code (or press a programmed button) 2. Dial the extension number or press an Auto Dial button.
Message Light Off	[Feature] [1] [0]	[#] [1] [0]	Turns off a previously lit Message light on another system phone. To use this feature: 1. Enter the feature code (or press a programmed button) 2. Dial the extension number or press an Auto Dial button.
Call Pickup	[Intercom] [6]	[6]	Picks up a call ringing at any extension in the system. To use this feature: 1. Enter the feature code (or press a programmed button) 2. Dial the extension number or press an Auto Dial button.
Pickup Group	[Intercom] [6] [6]	[6] [6]	Picks up a call ringing at any extension in the Pickup Group. To use this feature, enter the feature code (or press a programmed button).
Group Calling	[Intercom] [7] [0]	[7] [0]	Simultaneously rings all extensions in the Calling Group. To use, enter the feature code (or press a programmed button).
Loudspeaker Paging	[Intercom] [7] [1]	[7] [1]	Connects you to the (optional) loudspeaker paging system. See page 4-18 for instructions on using a loudspeaker paging system.
Group Paging <i>Group Paging is not available on the MLC-6 cordless phone.</i>	[Intercom] [*] [7] [1]	[*] [7] [1]	Simultaneously voice signals all extensions in the Calling Group. To use this feature: 1. Enter the feature code (or press a programmed button). 2. When you hear a beep, begin speaking; your voice is heard on the speakers of all system phones in the Group. When someone in the group answers, the call becomes a normal intercom call between you and the person who answered.

 = Must be programmed onto a button with a light (see pages 3-22 and 3-23). You cannot dial these features manually.

Table 4-2 Dial Code Features (cont'd.)

Using Auxiliary Equipment

5

There are many ways to set up auxiliary equipment—the setup you choose depends upon your needs and the number of devices you have. This chapter presents the most common setups.

It does not cover how to physically connect the equipment or how to perform each programming procedure. See Chapter 2 for installation instructions and Chapter 3 for programming instructions.

Fax Machines

This section presents several ways that you can set up and use fax machines to work with your system. It includes instructions for programming and using a Fax Management button on a system phone (in order to monitor the status of a fax machine and transfer calls to it with a single touch), transferring calls to the fax machine extension, and using an AT&T fax machine's Notify button.

Setting Up Fax Machines

There are many ways to set up fax machines. The following configurations are basic and easy to use:

- **Single fax machine.** Good for light or moderate fax traffic. This basic setup uses a published fax number.
- **Fax machine line saver.** Good for light fax traffic, with no need for a published fax number.
- **Send and receive fax machines.** Good for high volume fax traffic. One machine sends, the other receives.

You can install both a telephone and a fax machine on the same extension using an AT&T 267F2 bridging adapter. This lets you receive both voice and fax calls on the same line (but not at the same time). If you pick up the phone and hear a fax signal, push the **[Start]** button on your fax machine and then hang up.

Restricting Dialing from a Fax Machine

You can use dialing restrictions to restrict calling activity on a fax machine. For example, you can use the Outgoing Call Restrictions (#401) procedure to restrict the fax machine to local calls only. For a more detailed discussion of dialing restrictions, see Chapter 3.

Single Fax Machine

The single fax machine setup (see Figure 5-1) is good for moderate traffic. The fax machine has its own line (Line A), the number of which is published as the fax number. (The fax line can be used by other phones when all other lines are busy.) The fax machine is connected to its own extension (extension X).

To use:

The fax machine automatically answers all calls that come in on the fax line. If a call comes in on another line, you can transfer the call to the fax extension (see “Transferring a Call to the Fax Machine”).

When you pick up the handset to send a fax, the system automatically selects the fax line.

If you have programmed a Fax Management button, you can transfer a call to the fax machine with a single touch, as well as monitor the status of the fax machine (see “Fax Management Feature” later in this chapter).

Fax Line Saver

If you don’t use your fax machine enough to justify paying for its own outside line, you can put the fax on its own extension. With this setup, you must transfer calls to it manually. Figure 5-2 shows the setup.

To use:

The person at extension X answers a call and hears a fax machine signaling on the other end. Realizing that a fax call is coming in, this person transfers the call to extension Y—the fax machine extension. To send a fax transmission in this setup, simply lift the handset on the fax machine—an outside line will be automatically selected.

If you have programmed a Fax Management button, you can transfer a call to the fax machine with a single touch, as well as monitor the status of the fax machine (see “Fax Management Feature” later in this chapter).

Send and Receive Fax Machines

If your business has high volume fax traffic, you can set up two fax machines, one that only sends and the other that only receives. For example, in Figure 5-3, there are two fax machines. Fax 1 is the *send* machine, fax 2 is the *receive* machine. Line B is the fax line, the number of which is published as the fax number. If fax 2 doesn’t answer line B, fax 1 will.

To use:

When you want to send a fax, just lift the handset of fax 1 and an outside line will be automatically selected. Incoming fax calls on the fax line are answered automatically by fax 2. If a fax comes in on a line other than line B, you can transfer the call to fax 2 (see “Transferring a Call to the Fax Machine”). If fax 1 is set for delayed ring on line B, fax 1 can pick up fax transmissions when fax 2 does not answer.

If you have programmed a Fax Management button, you can transfer a call to the fax machine with a single touch, as well as monitor the status of the fax machine (see “Fax Management Feature” later in this chapter).

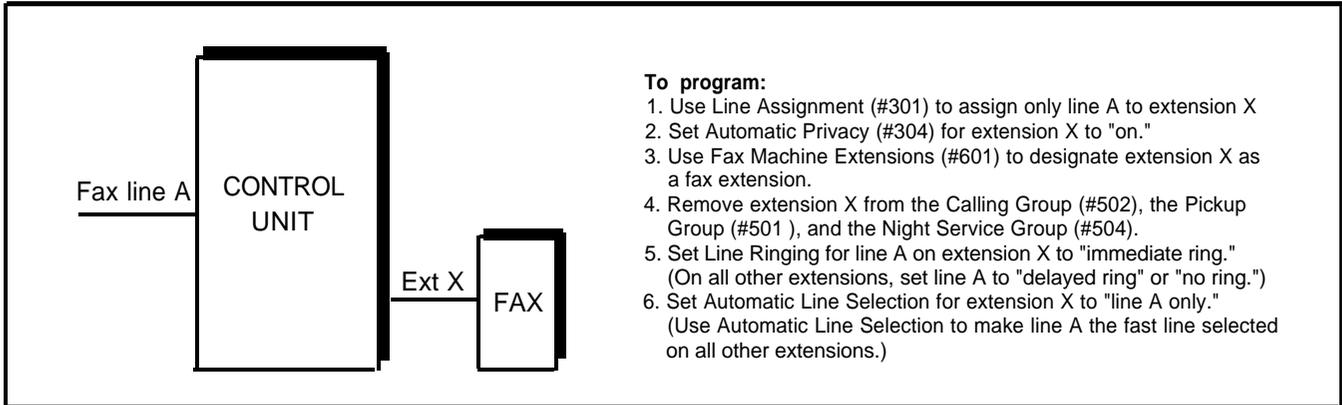


Figure 5-1 Single Fax Machine

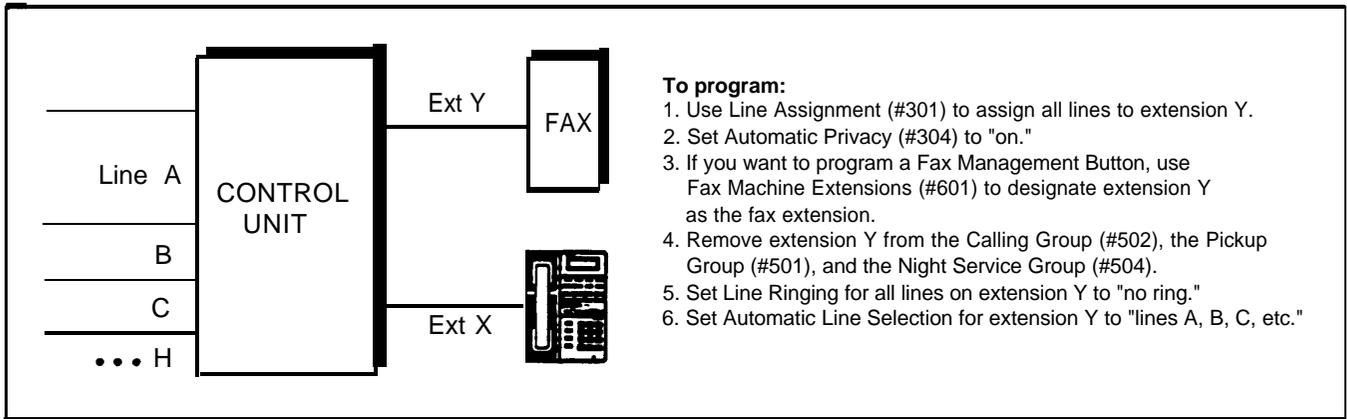


Figure 5-2 Fax Line Saver

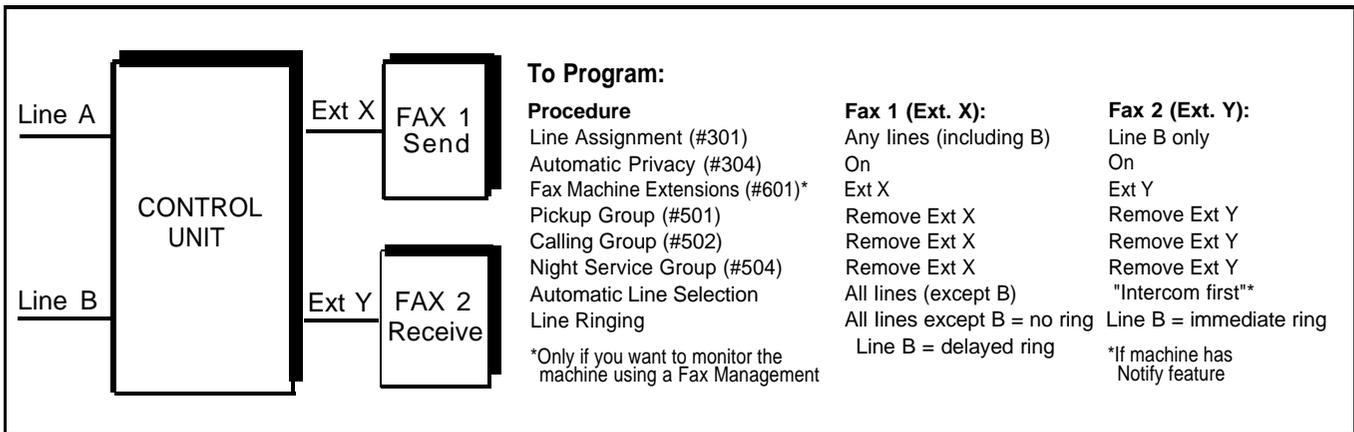


Figure 5-3 Send and Receive Fax Machines

Using Fax Machines

Fax Management Feature

On any system telephone, you can program a button with a light to serve as a Fax Management button. The light next to this button can tell you when the fax machine is in use, when it is available, or when it is not answering (for example, when it is out of paper). You can also use the button to transfer calls from your extension to the fax machine with a single touch.

Programming for Fax Management

To program a Fax Management button, you must first designate the fax machine extension using the Fax Machine Extensions procedure (#601). (See Chapter 3 for more details.) Then you can program an intercom Auto Dial button for the fax machine extension. See "Telephone Programming" in Chapter 3.

Using the Fax Management Button

The light next to the Fax Management button shows what is happening at the fax machine.

Table 5-1 Fax Management Button Light Patterns

<u>Light Pattern</u>	<u>Indicates . . .</u>
Off	Fax idle.
Red broken flutter	Fax trouble. Fax machine is not answering. If broken flutter occurs because machine is out of paper, refill the paper. The light clears the next time the machine makes or answers a call. If machine takes longer than 4 rings to answer, light shows fax trouble ; when machine does answer, light changes to fax busy (red steady).
Red steady	Fax busy. Fax machine is busy making or answering a call.
Green flash	Fax calling. The green flash indicates that the fax machine extension is calling you. An AT&T fax machine with the "Notify" feature can call you automatically after it receives a transmission. See "Using the Fax Machine's Notify Feature."
Green flutter	Fax transfer return. A call you transferred to the fax machine is returning to you.

Transferring a Call to the Fax Machine

There are two situations in which you would want to transfer a call to your fax machine:

- You might answer an outside call and hear a fax machine signaling. (A fax signal is a single beep sequence— *beep. . . . beep. . . . beep*). If you hear this sequence, transfer the call immediately to the fax machine extension.
- You might be on a call and the person to whom you are speaking has a fax machine connected to his or her phone and wants to fax you something. You can receive the fax by transferring the call to the fax extension. Tell the other party to wait until he or she hears the fax tone before pressing the [Start] button on their fax machine.

There are three ways to transfer the call to the fax extension:

- If you have a Fax Management button, simply press the button.
- If you do not have a Fax Management button, press [Transfer] plus the fax's extension number. When the fax machine answers, hang up.
- On a standard phone, rapidly press and release the switchhook to place the call on hold, then dial the fax extension number and hang up.

Using the Fax Machine's Notify Feature

Some AT&T fax machines (for example, models 5300, 5350, 9025 Plus, and 9035 Plus) have a feature called *Notify*. After such a machine receives a fax call, it automatically dials a number and plays a recorded message, such as, "You have just received a fax." If you need to know exactly when a fax comes in, or if your fax machine is located in an isolated part of your building, you can use Notify in any of the following ways:

- Program the fax machine to make a ringing or voice-signaled intercom call to an individual extension or to a Calling Group. (Program the fax machine to dial [*] plus the extension number for a voice-signaled call; [7] [1] for a call to the Calling Group.)
- Program the fax machine to turn on the Message light at someone's extension by dialing [#] [0] [9] plus the extension number.
- Program the fax machine to dial [7] [0] to make its recorded announcement over your loudspeaker paging system.

For all of the above examples, program the fax machine extension's Automatic Line Selection for "Intercom first," followed by whatever outside lines you want to assign to it. If the machine has an auto dial feature, program [9] [pause] [pause] before each auto dial number. When manually making a call, dial [9] to get an outside line. For instructions on how to set the Automatic Line Selection, see Chapter 3.

Answering Machines

You can use an answering machine to answer calls at night when no one is around, or during business hours when no one can get to the phone. If you own an AT&T answering machine with the Call Intercept feature, you can pick up a call that has been answered by the answering machine by joining the call from any system phone. When you do so, the system sends the answering machine a signal that causes it to hang up.

The following are ways you can connect answering machines to your system:

- **Single answering machine.** This basic setup can cover all the lines in the system. Anyone on the system can call the machine to retrieve messages.
- **Multiple answering machines.** If you get too many calls for one machine to cover, you can connect two or more machines to cover all calls.
- **Personal answering machine.** An answering machine can share an extension with a phone (via a bridging adapter) to answer calls to the extension.
- **Answering machine backup for fax machine.** You can back up your fax machine with an answering machine so that no incoming fax call goes unanswered.

The following pages describe the programming required for each of these examples.

Single Answering Machine

The single answering machine setup (Figure 5-4) serves the entire system. It is connected to its own extension, and can cover all the lines in the system, or as many lines as you assign to it.

To retrieve messages:

- Go to the machine to manually play back messages.
- From inside the system, make an intercom call to the answering machine extension. When the machine answers, dial its message retrieval code.
- From outside the system, call in on any line assigned to the machine. When the machine answers, dial its message retrieval code.

Multiple Answering Machines

If a single answering machine cannot handle all your calls, you can set up two or more machines (Figure 5-5). A setup such as this might be used by a movie theater to announce movie times to people calling for information.

To retrieve messages:

- Go to the machines to manually play back messages.
- From inside the system, make an intercom call to an answering machine extension. When the machine answers, dial its message retrieval code.
- From outside the system, call in on any line assigned to the machine. When the machine answers, dial its message retrieval code. Note, however, that when calling in from outside, you can only retrieve messages from the first machine that answers.

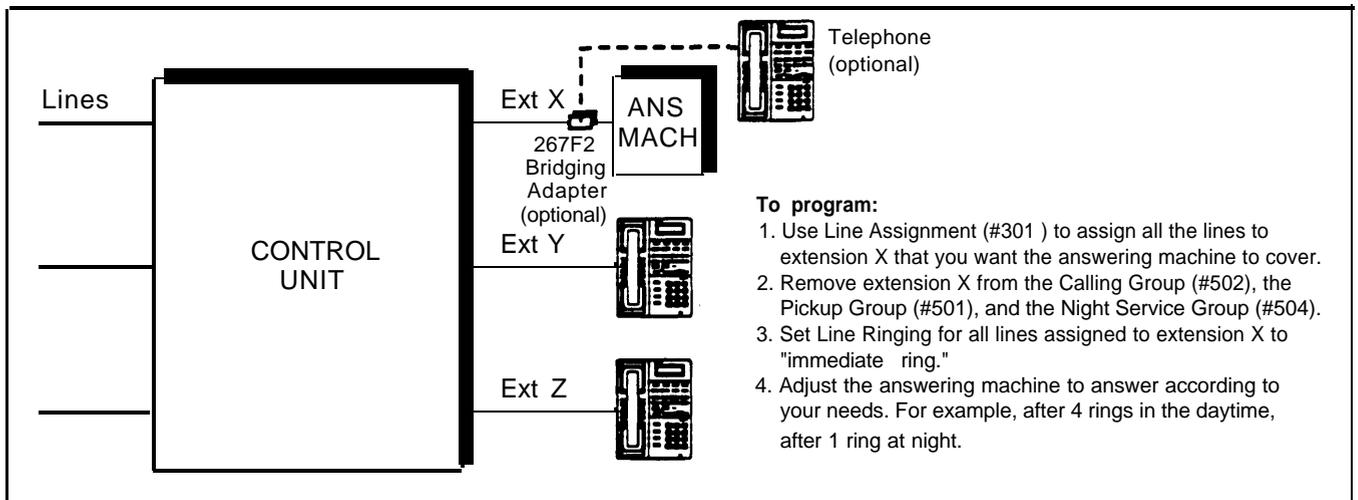


Figure 5-4 Single Answering Machine

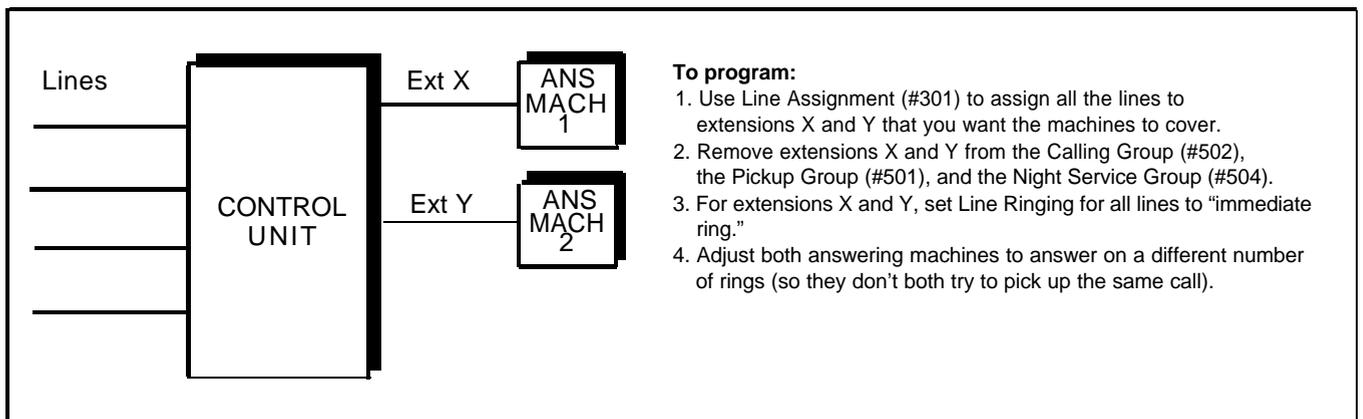


Figure 5-5 Multiple Answering Machines

Personal Answering Machine

A personal answering machine is used to answer all the calls that ring on the lines at a certain extension (Figure 5-6). It is useful for the following situations:

- When you don't want to dedicate an extension to an answering machine
- When the extension receives a lot of intercom calls
- When outside calls come through a receptionist and are transferred to the extension
- When an extension has a private line.

To retrieve messages:

- From inside the system, make an intercom call to the extension. When the machine answers, dial the retrieval code.
- From outside the system, call in and have someone transfer you to the extension. When the machine answers, dial the message retrieval code. Or, call in after hours, when no one will answer before the answering machine does.

Answering Machine Backup for Fax Machine

If you do not want an incoming fax call to go unanswered because your fax machine is out of paper, you can back up the fax machine with an answering machine. With this setup, in the event that your fax machine does not answer, the call is switched over to the answering machine. The answering machine plays a message like: "The fax machine is busy—please call back in five minutes."

Figure 5-7 shows how to set up the fax machine and answering machine on separate extensions.

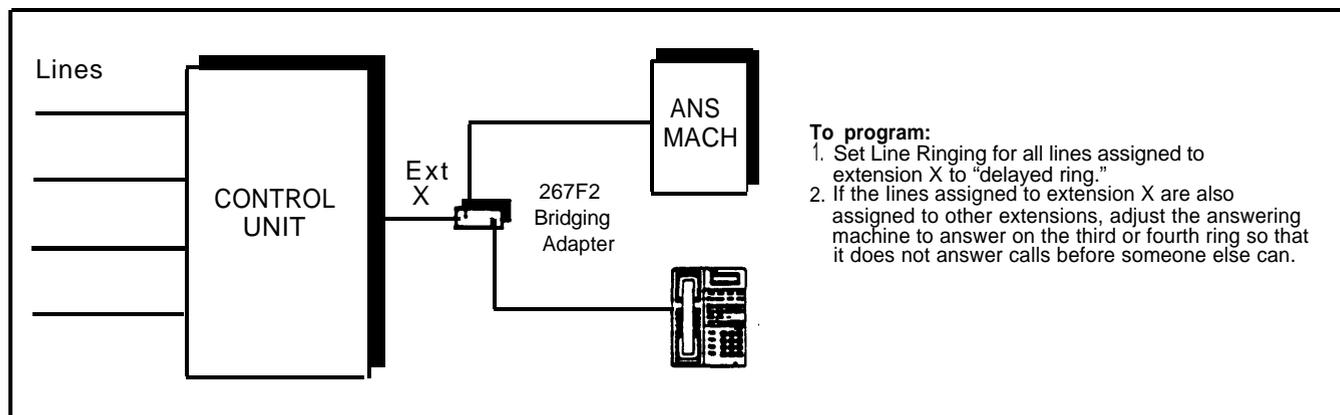


Figure 5-6 Personal Answering Machine

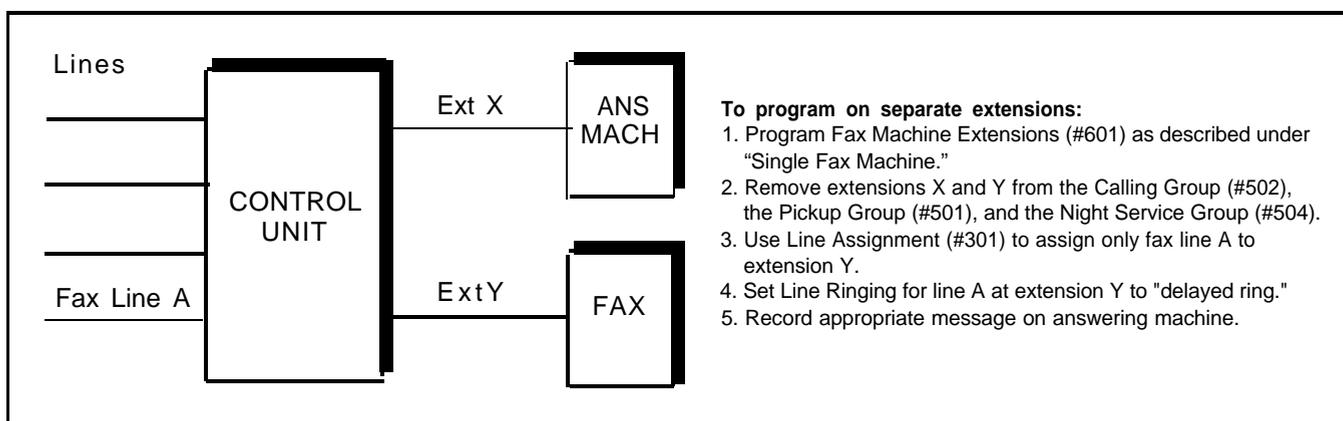


Figure 5-7 Answering Machine Backup for Fax Machine

Modems

Modems can connect directly to an extension jack without an adapter. To connect modems to the system, see Chapter 2. There are several ways to use modems with your system.

Stand-Alone Modem for Placing Calls Only

A modem and a terminal allow you to dial out and connect to computer bulletin boards and other data services. This setup, which lets you dial out but not receive calls, is shown in Figure 5-8. Note that the 267F2 bridging adapter and telephone are optional, and can be used if you want the terminal to share an extension with a phone.

To use:

Follow the modem manufacturer's instructions.

Send and Receive Modem

If you need to place *and* receive calls with the modem, use the setup shown in Figure 5-9. This setup makes line B the primary modem line, but keeps the line available for users at other extensions when all other lines are busy.

To use:

Calls on the modem line (Line B) ring only at extension X. Likewise, line B is the *last* line selected by other extensions in the system, so the modem line is unavailable for the modem *only when all lines in the system are being used*.

Modem Pool

You can set up your system as a small data switch that allows several people to use a single on-premises computer at the same time (Figure 5-10). With this setup, the modem on extension V can dial out only. The modems on extensions W, X, Y, and Z (all assigned to the Calling Group) can dial out or receive calls.

To Install:

Plug each modem connected to the computer into its own extension.

To use:

If your extension has a modem, dial into the computer by calling the Calling Group. The first available extension with a modem will pick up the call.

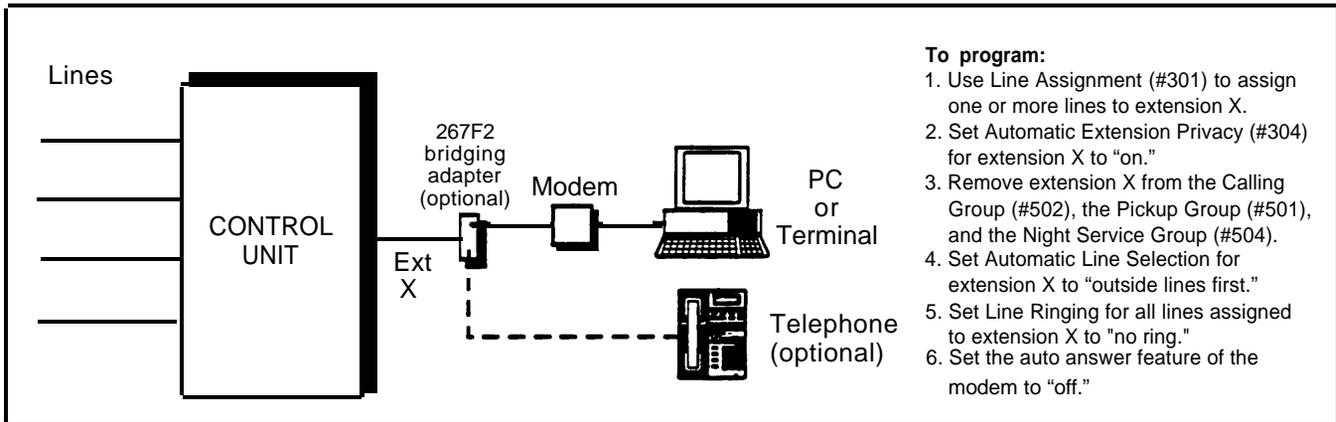


Figure 5-8 Stand-Alone Modem (Place Calls Only)

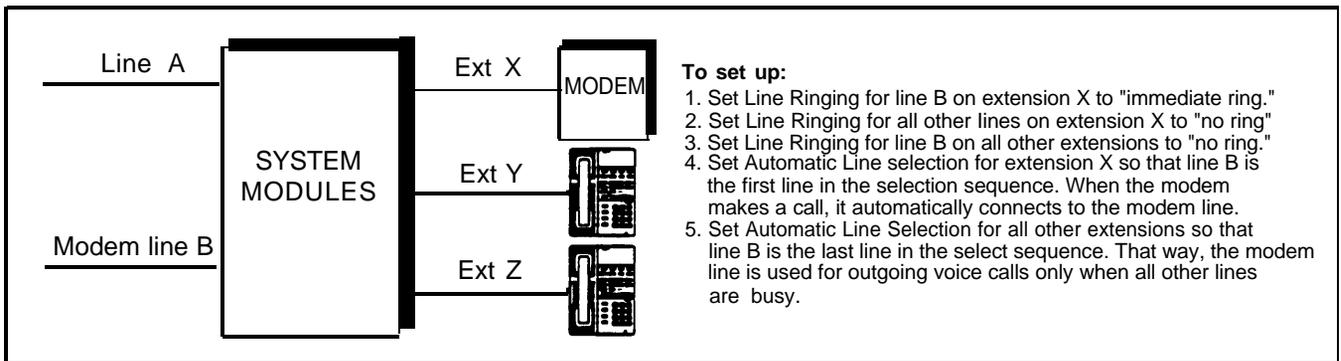


Figure 5-9 Send and Receive Modem

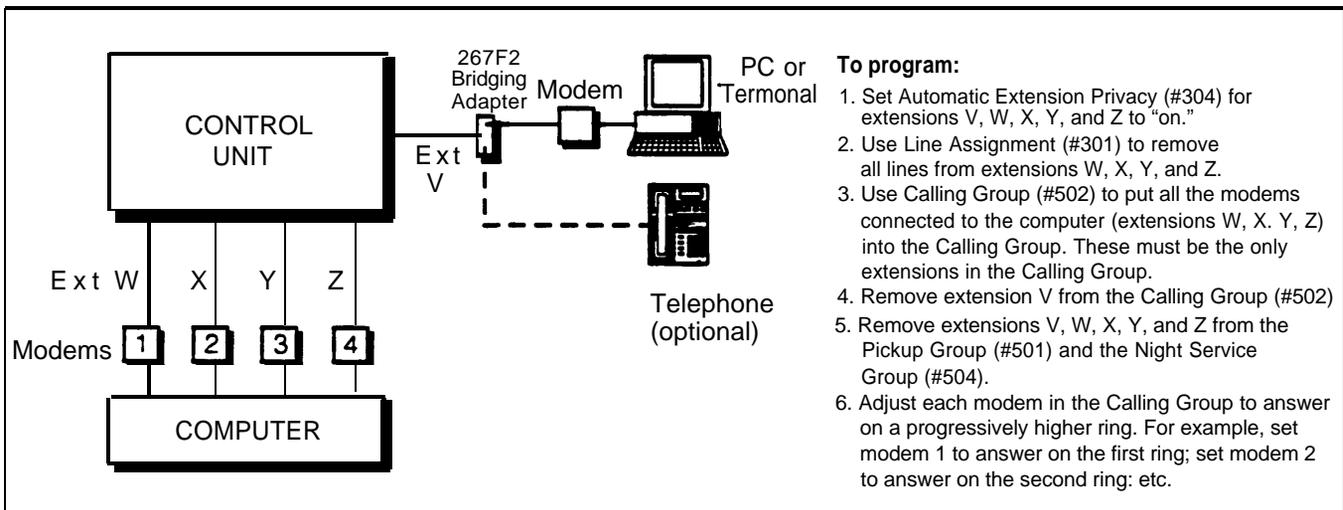


Figure 5-10 Modem Pool

Credit Card Scanners

Many retail businesses and restaurants use credit card scanners to get instant approval of credit card purchases. The system allows your credit card scanners to share the lines in your system (as shown in Figure 5-11). You can install the credit card scanner on an extension by itself, or combine it with a system phone or a standard phone on the same extension.

To use:

When you make a call on the credit card scanner, an outside line is automatically selected.

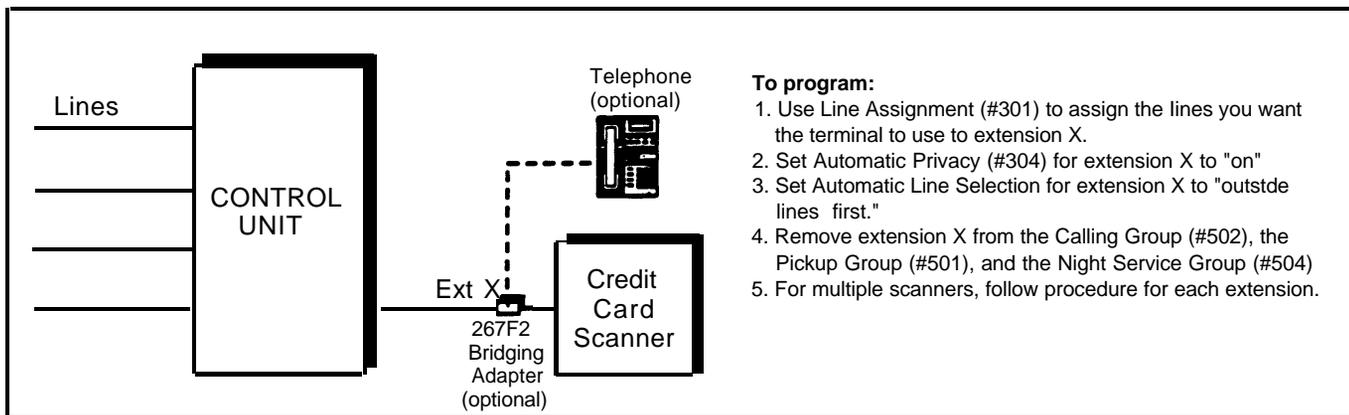


Figure 5-11 Credit Card Scanner

Night Service Operation

You can set up modems, fax machines, and answering machines to receive calls automatically after hours. When Night Service is on, calls ring immediately at the appropriate extensions, so that no human intervention is required to transfer calls to the fax, modem, or answering machine. When Night Service is off, you can use the auxiliary equipment lines for normal business purposes, so that lines are dedicated to auxiliary equipment *only* after hours.

By putting auxiliary equipment in the Night Service Group as described in this section, you can have auxiliary equipment start ringing and answering calls whenever you turn Night Service on. In other words, the Night Service button at extension 10 acts as a switch, turning auxiliary equipment on and off as well as putting the system into Night Service.

Figure 5-12 shows a system with a fax machine and a modem connected to separate extensions. Line A is published as the fax line, and line B is published as the modem line.

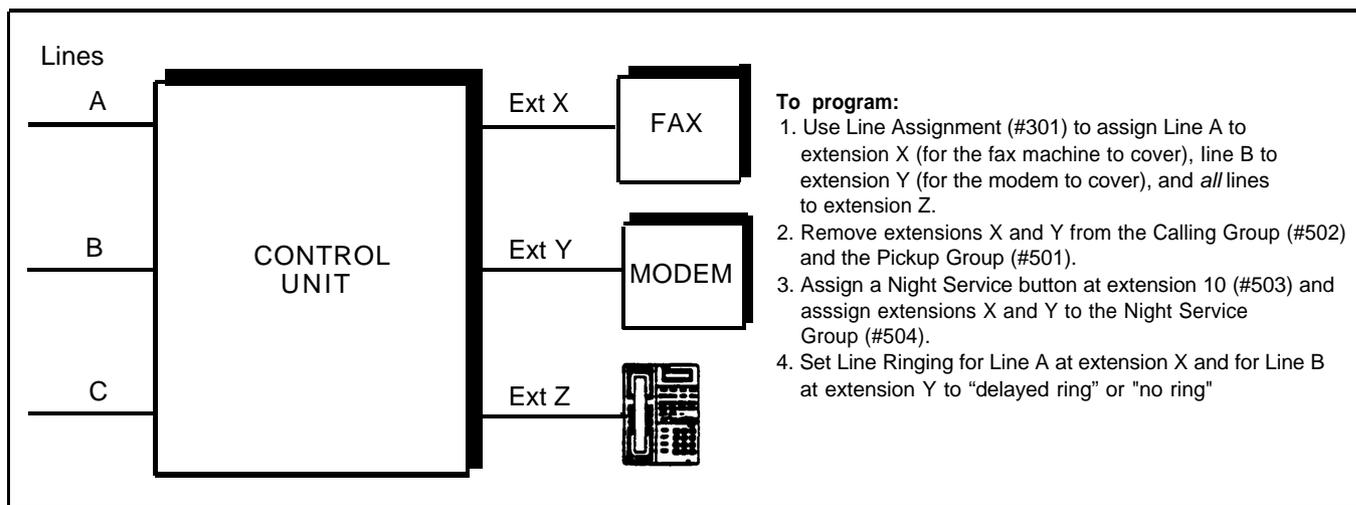


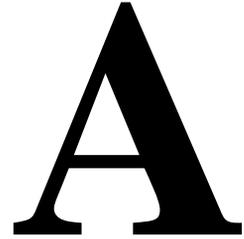
Figure 5-12 Night Service with Fax Machine and Modem

To use:

During the day, lines A and B ring after a delay or do not ring at all—depending on the Line Ringing settings—at extensions X and Y. When you turn Night Service on, calls on line A ring immediately at the fax (extension X). Since that line is not assigned to any other extension in the Night Service Group, only extension X receives fax transmissions. Likewise, with Night Service on, calls on line B ring immediately at the modem (extension Y). All lines ring at the system phone at extension Z.

If answering machines are connected to Night Service extensions, you can join a call that was already answered by an answering machine from any system phone. If you have an AT&T answering machine with the CallIntercept feature, the answering machine drops off the call when you join it.

Use with PBX or Centrex Systems



Overview

Your company's phone service may be provided through a switch that belongs to your company—known as a *private branch exchange (PBX)*—or it may be an integrated package of lines and calling features that resembles a PBX—known as a *Centrex system*. Such systems often provide special calling features that users can access by “flashing” the [Recall] button on a system phone, or by pressing the switchhook on a standard phone. Another common feature of PBX/Centrex systems is the need to press a digit (known as a “dial-out code”) to exit the system and get an outside telephone line. The features available in such a package, and the way users access those features, varies considerably from one package to another.

A special mode of operation is used behind a PBX or Centrex system. This mode of operation changes how certain features work on the system so that the system and PBX/Centrex features complement each other.

If users must use a dial-out code to get out of the PBX/Centrex system, we strongly suggest PBX/Centrex Mode operation. If you have questions about setting up your system for PBX/Centrex operation, call the Helpline.

Figure A-1 shows a system with Centrex extensions 101, 102, and 103 (lines 1, 2, and 3 on the system).

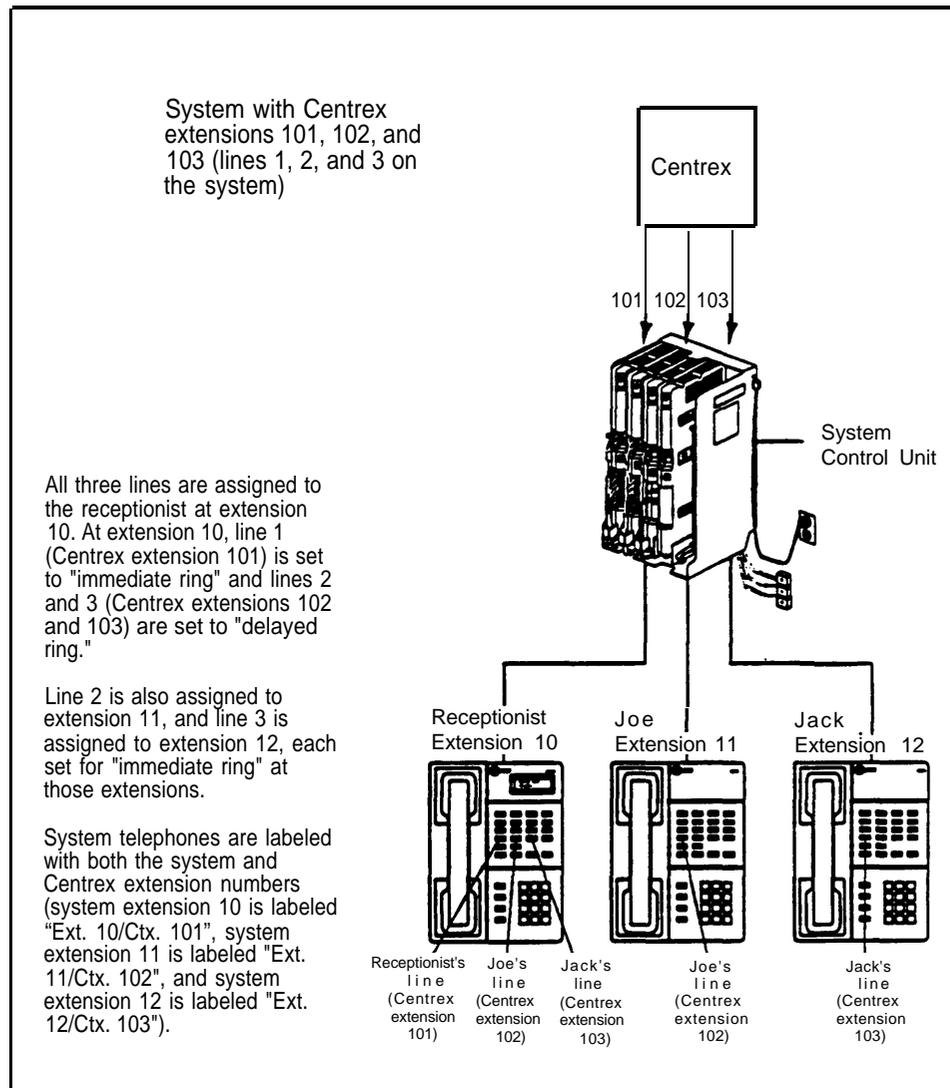


Figure A-1 Example of a Centrex System Setup

Users can place inside calls in two ways: by pressing the [Intercom] buttons on their phones and then dialing the system extension number, or by pressing an outside line button and then dialing the Centrex extension number. For example, extension 101 (system extension 10) can dial extension 102 (system extension 11) in two ways:

- Pick up the handset, press [Intercom] , and then dial 11; or
- Pick up the handset and dial 102.

To dial a number outside the Centrex system, the user dials the PBX dial-out code followed by the outside number.

In order to keep Centrex lines free, your company may prefer that users dial other extensions using [Intercom] buttons.

PBX/Centrex Mode Operation

When you choose PBX/Centrex operation, you combine the strengths of the PBX/Centrex system with those of your phone system—while minimizing the effects on the way you use your phone system. Most system and call handling features are the same as when your system is operating normally. For example, you still have access to one-touch Auto Dial numbers and all the capabilities of multi-line system phones. (For more information on programmable features, see Chapter 3; for information on using telephones, see Chapter 4.)

The following features operate differently in PBX/Centrex mode:

When the system is in PBX/Centrex mode, the LEDs on system telephones do not show call status information for the Conference and Transfer features as described elsewhere in this guide, because those features are controlled by the PBX/Centrex system.

- The Conference and Transfer features normally used by the system are disabled. Instead, pressing the **[Conf]** or **[Transfer]** buttons on system telephones sends switchhook flashes to access the PBX/Centrex versions of those features. The Conference Drop feature is disabled (users can still access the Drop feature on the PBX/Centrex system by entering the appropriate PBX/Centrex code manually while on a conference call, or by programming the PBX/Centrex feature code on a system phone button).
- Users cannot transfer calls using an Intercom Auto Dial button. However, a user may be able to get the same effect by programming a PBX/Centrex extension number as an Auto Dial button on a system phone.
- System Programming procedures #105 (Transfer Return Rings) and #109 (Outside Conference) have no effect.
- Calling restrictions for long distance calls and Disallowed List numbers do not apply unless the user dials the PBX dial-out code first. (Phone numbers entered for Allowed List, Disallowed List, and Emergency List should be entered without including the PBX dial-out code.)
- To program Auto Dial or Speed Dial numbers for calls outside the system, but within the PBX/Centrex system, simply store the desired number. To program Auto Dial or Speed Dial numbers for calls outside the PBX/Centrex system, store the PBX dial-out code plus the phone number. The system automatically includes a pause between the dial-out code and the phone number, allowing a few seconds to get an outside dial tone.
- Last Number Redial and Save Number Redial can be used to save both outside and PBX/Centrex numbers. For numbers outside the PBX/Centrex system, the system automatically inserts a pause after the dial-out code.

Using PBX/Centrex Features

In addition to providing customized PBX/Centrex operation, the system lets users take advantage of any additional features available on the Centrex or PBX:

- Users can program PBX/Centrex features by creating an Auto Dial number that includes the appropriate PBX/Centrex code.
- If the PBX/Centrex system includes dialing restrictions, use the PBX/Centrex restrictions, not the dialing restrictions described in this book.

Putting Your System in PBX/Centrex Mode

The following procedures customize your system for PBX/Centrex operation:

- **PBX/Centrex Mode (#721)** activates PBX/Centrex mode operation. (Using this System Programming procedure disconnects any calls in progress.)
- **PBX Dial-Out Code (#106)** can be used (if necessary) to change the PBX dial-out code from the factory setting of 9.
- **Recall Timer Duration (#107)** sets the length of a switchhook flash. You can enter a value from 01 to 80, where each unit equals 25 milliseconds (msec). For most PBX systems, use the factory setting of 18 (450 msec); for most Centrex systems, use a setting of 32 (800 msec).

After setting the recall timer duration, test the Recall button on a system phone; if it does not work properly, you may need to adjust the setting. Contact your PBX or Centrex supplier for the correct setting, or adjust the setting upward or downward to find the correct setting.

- **Line Assignment (#301)** customizes line assignments for each extension.

In most PBX/Centrex systems, assign all lines to extension 10, so the receptionist or system manager can access the lines for all users in the system. (Use "delayed ringing" for all except the primary line at extension 10, so the receptionist can cover those lines if the users are not available. You may also want to set all secondary lines to take only incoming calls.)

Using Standard Phones in PBX/Centrex Mode

Standard phones can operate in two different ways in PBX/Centrex mode, depending on how the Automatic Line Selection procedure (see "Centralized Telephone Programming" on page 3-22) is programmed.

The two options are:

- Set all extensions to "outside line first." In this case, the user with a standard phone dials another extension by picking up the handset and dialing the PBX/Centrex extension number. To dial a number outside PBX/Centrex, the user dials the PBX dial-out code followed by the phone number. (This setting prevents standard telephones from accessing any of the built-in features of your phone system, and forces standard phones to call other extensions using PBX/Centrex lines.)
- With regular telephone service, standard phones are usually set to *intercom first*. If you use this setting in PBX/Centrex mode, users with standard phones must dial 9 before they can dial a PBX/Centrex extension number. To dial a number outside PBX/Centrex, the user must dial 9 *plus* the PBX dial-out code, followed by the phone number.

B

This appendix contains a Speed Dial form to be photocopied and handed out to system users. It provides space on which to write System and Personal Speed Dial numbers and system extension numbers. For instructions on programming System Speed Dial numbers, see Chapter 3 in this guide.

We suggest you fill in a *photocopy* of the form, leaving the blank original in the book, in case you need to distribute revisions in the future.

Speed Dial Numbers

To Dial ● On MLS- or MLC-model telephone, press **[Feature] + Code** ● On standard touch-tone telephone, press **[#] + Code** while receiving intercom dial tone.

System Speed Dial Numbers

Code	Name/Company	*	Telephone Number
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			

Code	Name/Company	*	Telephone Numbers
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			

Code	Name/Company	*	Telephone Number
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			

Personal Speed Dial Numbers

Code	Name/Company	Telephone Number
80		
81		
82		
83		
84		
85		
86		
87		
88		
89		
90		
91		
92		
93		
94		
95		
96		
97		
98		
99		

* You can dial System Speed Dial codes with a (*) at any time, regardless of dialing restrictions placed on your extension. System Speed Dial numbers are programmed by the System Manager (report problems and suggested revisions to your System Manager). To program Personal Speed Dial numbers, see the *Quick Reference* card.

System Extensions

To call another extension ● On MLS- or MLC-model telephone, press **[Intercom] + Ext** ● On standard telephone, dial **Ext** while receiving intercom dial tone

Ext	Name	Call Pickup Group*	Calling/Paging Group*	Night Service Group*
▲ 10				
11				
12				
13				
14				
15				
16				
17				

Ext	Name	Call Pickup Group*	Calling/Paging Group*	Night Service Group*
18				
19				
20				
21				
22				
23				
24				
25				

Ext	Name	Call Pickup Group*	Calling/Paging Group*	Night Service Group*
26				
27				
28				
29				
30				
31				
32				
33				

* An "X" in the column means the extension is a member of the Call Pickup Group, Calling/Paging Group, or Night Service Group.

▲ System Manager's extension.

Maintenance and Customer Support

C

Maintenance

Your system is designed to provide trouble-free performance without any special maintenance procedures. To reduce the risk of accidental damage:

- Keep the system modules in an area free of dust, smoke, and moisture, and do not block the air vents by placing objects on top of the control unit.
- Do not place telephones near a heating duct, radiator, or other heat source, and do not drop or expose to excessive shock or vibration.
- Unplug the telephone if its cord is damaged, if liquid is spilled into it, or if its housing becomes cracked or otherwise damaged.
- To clean your telephone, wipe the outside housing with a soft, dust-free cloth. If absolutely necessary, you may use a soft cloth *slightly* dampened with a mild soap and water solution. Dry quickly with a soft cloth.



CAUTION:

Your telephone contains sensitive electronic parts. Never submerge it in any kind of liquid, and never use detergents, alcohols, solvents, abrasive cleaners, or an excessive amount of water when cleaning the housing and faceplate. To do so could result in irreparable damage.

In Case of Difficulty

If you have a problem with your system, you may be able to solve it yourself by following the appropriate troubleshooting procedure described in this appendix. If you still need help, call the appropriate Helpline toll-free number 24 hours a day:

United States:	1 800 628-2888
Canada:	
Eastern Canada and Ottawa:	1 800 363-1882
Ontario:	1 800 387-4268
Central and Western Canada:	1 800 663-9817

If you call, have the following information ready so that the representatives can better help you:

- The kind of system you have (for example, PARTNER Plus, Release 2)
- The number of lines and extensions in your system
- The model number of the problem phone, if applicable (located on the upper right-hand corner of the phone—MLS-34D, MLS-12D, MLS-12, MLS-6, or MLC-6).

If you followed a troubleshooting procedure and need more help, tell the representative what you did.

Power Failure Operation

When power to the system is cut off, the first line on each 206 module automatically connects to the first extension on the module. For example, Line 1 connects to extension 10, Line 3 connects to extension 16, Line 5 connects to extension 22, and Line 7 connects to extension 28. This allows the system to maintain telephone service during a power outage.

During a power failure, standard phones can only make and receive calls. Other system features are not available.

To answer calls during a power failure, *you must use a standard touch-tone or rotary telephone at extensions 10, 16, 22, and 28.* For this reason, *it is strongly suggested* that you have a standard telephone connected—either directly or by 267F2 bridging adapter—to the first extension jack of every 206 module (extensions 10, 16, 22, or 28).

The system can stay programmed for approximately four days after it stops receiving power. After four days elapse, all of the system's programmed settings return to the factory settings.

Troubleshooting

The charts on pages C-3 to C-7 describe various problems that can occur, possible causes for each problem, and procedures you can follow to try to solve the problem yourself.

Problem	Possible Cause	Do This	If...	Then...
1. All Phones Dead: No Dial Tone or Lights	1. Control unit not receiving power.	Make sure the control unit's power cord is plugged securely into the wall outlet. Also make sure all circuit breakers (little plastic pop-up tabs shown in Figure 1-1) are in the "ON" position (pushed down). To see circuit breakers, remove the control unit cover.	<p>The green indicator lights on the modules are "ON" and the trouble is gone,</p> <p>The green indicator lights on the modules are "ON" but the trouble remains,</p> <p>The green indicator lights on the modules are "OFF,"</p> <p>The green indicator lights on the modules are "FLASHING,"</p>	<p>The problem is corrected.</p> <p>Call 1 800 628-2888.</p> <p>Go to Possible Cause 2.</p> <p>Call 1 800 628-2888.</p>
	2. The power outlet may be faulty.	Test the outlet by plugging in an appliance, like a lamp or radio.	<p>The appliance does not work,</p> <p>The appliance works,</p>	<p>The outlet is faulty. Plug control unit into different outlet, check fuse box, or call an electrician.</p> <p>Call 1 800 628-2888.</p>
2. Trouble Making Outside Calls Trouble could be any of the following: You hear a dial tone, but it continues as you try to dial. You hear a dial tone and it cuts off when you dial, but the line does not ring. you hear a busy signal as you dial. You hear nothing at all.	1. Dial Mode incorrectly set. For touch-tone service, must be set to "touch-tone" and for rotary service, must be set to "rotary."	Find out if you have touch-tone or rotary service and set the Dial Mode (#201) to "touch-tone" or "rotary"	You can make a call, The Dial Mode is already set correctly,	The problem is solved. Go to possible Cause 2.
	2. Someone changed your Outgoing Call Restrictions settings.	Find out: were you able to make a call without any trouble before?	You were able to call on the phone before and no one changed your Outgoing Call Restrictions settings,	Go to Possible Cause 3.
	3. Local phone company is not accurately receiving the dialing signals.	Isolate the problem. Use the telephone to make calls on different lines. Then, make calls on each line using different phones.	<p>You cannot make calls from one phone on all lines,</p> <p>You cannot make calls using different phones,</p>	<p>Follow procedure for "Other Problems with Phones," page C-7, Possible Cause 2.</p> <p>Go to possible Cause 4.</p>
	4. Too many standard devices trying to dial simultaneously (if the problem is on a system phone, go to Possible Cause 5).	Stay on the line and wait for dial tone, or try your call later.	<p>You can make a call,</p> <p>You wait 30 seconds and still do not hear a dial tone,</p>	<p>You may still wish to expand system capacity to avoid future problems. Call 1 800 628-2888.</p> <p>Go to Possible Cause 5.</p>
	5. Local phone company line is faulty.	One at a time, unplug each outside line from the 206 or 200 module inside the control unit. Plug it into a standard telephone and try to make a call.	<p>The trouble appears on the standard phone,</p> <p>The trouble does not appear on the standard phone,</p>	<p>Try another line cord. Or there may be a problem with your outside line; report the trouble to your local phone company.</p> <p>The trouble is with your control unit. Call 1 800 628-2888.</p>

Problem	Possible cause	Do This	If...	Then...
3. Phone Does Not Ring	1. Volume control is set too low (system phone) or turned off (standard phone).	Press the volume control button to increase ringer volume, or turn the ringer on.	Phone rings louder, Phone still does not ring,	Problem is solved: Go to Possible Cause 2.
	2. Do Not Disturb feature turned on.	Check to see if Do Not Disturb is turned on.	Do Not Disturb is turned on, Do Not Disturb is not turned on,	Turn it off by pressing the programmed button. Go to Possible Cause 3.
	3. Phone's Line Ringing may be programmed for "no ring" or "delayed ring."	Check to see if the phone's Line Ringing is programmed for "no ring" or "delayed ring." Refer to "Telephone Programming" in Chapter 3.	Line Ringing is set for "no ring" or "delayed ring," Line Ringing is set for "immediate ring,"	Change programming if necessary. Phone may be faulty. Follow troubleshooting procedure for "Other Problems with Phones," page C-7.
4. Calls are Answered Automatically A call rings once, then disappears as though it were answered.	1. An optional device, such as a fax machine, answering machine, or modem answers when it should not.	Be sure the device is set to answer correctly. If the device answers before it should adjust it to answer on a later ring. If the device should not answer calls at all, turn its auto-answer feature off. Refer to the device's user manual. For every optional device connected to your system, either set the device itself to answer on a later ring (when the Line Ringing for the device's extension is set to "immediate ring") or set the extension's Line Ringing to "delayed ring."	The optional device was set properly, The optional device was set improperly,	Check Line Ringing for the extension. Reset device. If problem remains, call 1 800 628-2888.
5. Trouble Hearing Called Party Answer	1. If you are using a speakerphone, there may be environmental factors that affect the performance of the speaker or microphone (for example, too much background noise).	See "Speakerphone Performance Tips" on page 4-6 for suggestions on the proper use of the speakerphone.	The problem is not solved,	Go to Possible Cause 2
	2. If the system is set for rotary dialing, the Rotary Dialing Timeout interval is too long. (If the system is set for touch-tone dialing, you could have a faulty phone or cord. See "Other Problems with Phones," page C-7.)	Reduce the Rotary Dialing Timeout (#108) interval. Refer to "System Programming" in Chapter 3.	You can hear the called party answer, The problem is not solved,	The problem is solved. Call 1 800 628-2888.

Problem	Possible Cause	Do This	If...	Then...
6. Using the Recall Feature Has No Effect	Recall Timer Duration set too short.	Increase the Recall Timer Duration (#107) by 100 milliseconds. See "System Programming" in Chapter 3.	The Recall feature works, The Recall feature still doesn't work,	The problem is solved. Continue increasing the Recall Timer Duration by increments of 100 milliseconds until the problem is solved.
7. Using Recall Feature Disconnects call This applies when the system is installed behind PBX or Centrex, or when "Call Waiting" is provided by your local phone company.	Recall Timer Duration set too long.	Decrease the Recall Timer Duration (#107.) by 100 milliseconds. See Chapter 3.	The Recall feature works properly, The Recall feature still disconnects calls,	The problem is solved. Continue decreasing the Recall Timer Duration by increments of 100 milliseconds until the problem is solved.
8. Calls on Hold Are Disconnected	Hold Disconnect Time is programmed incorrectly—too short.	Change the Hold Disconnect Time (#203) from "short" to "long." See Chapter 3.	Calls on hold are no longer disconnected, Calls on hold still get disconnected, or the Hold Disconnect Time was already set to "long,"	The problem is solved. Call 1 800 628-2888.
9. Call on Hold Hangs up, but Line Does Not Disconnect	1. Hold Disconnect Time is programmed incorrectly—too long.	Change the Hold Disconnect Time from "long" to "short" See Chapter 3.	Abandoned calls on hold are disconnected, Abandoned calls on hold still do not get disconnected, or the Hold Disconnect Time was already "short"	The problem is solved. Go to Possible Cause 2
	2. Local phone company does not send hold release signal.	Call your phone company to find out whether they send a hold release signal.	If they do not, or if they do but the problem still occurs,	Call 1 800 628-2888.
10. Phone Rings Back After Call with No One at Other End	1. Switchhook (on a standard phone) is accidentally pressed and released, so a call on hold rings back.	Always replace handset carefully.	Problem was not solved,	Go to Possible Cause 2
	2. Automatic Line Selection is programmed incorrectly.	If one of the phones involved is a standard single-line rotary or touch-tone telephone, program its Automatic Line Selection to "Intercom first."	The problem is not solved,	Call 1 800 628-2888.

Problem	Possible Cause	Do This	If...	Then...
11. Combination Extension Problem: Phone Does Not Ring Properly	1. Ringer equivalents are too high for the extension.	If this is a combination extension (two devices,) be sure the total of their Ringer Equivalence Numbers (REN) does not exceed 20. (See page 2-7.) If it exceeds 20, unplug one of the devices.	The ringer functions properly, Trouble still appears,	Problem is with optional device. The system is okay. Go to Possible Cause 2.
	2. Optional device (fax, answering machine, etc.) is faulty.	Remove the optional device from the extension and plug in an optional device that you know rings properly.	The ringer functions properly, Trouble still appears,	Problem is in the optional device. The system is okay. Go to Possible Cause 3.
	3. Bad adapter or combination device.	First, make sure the standard device in the combination is plugged into the correct slot on the 267F2 bridging adapter (see Figure 2-5). If the extension still does not work properly, unplug the adapter from the wall jack. Unplug the phone's cord from the adapter and plug it directly into the wall jack.	The phone works, The phone does not work,	There is a problem with the other device attached to extension or bridging adapter. Replace the other device. If the problem is still not fixed, call 1 800 628-2888. Call 1 800 628-2888.
12. Phone Display Does Not Work	Date, day, and time do not display properly.	Re-enter the date, day, and time using System Programming (#101, #102 and #103).	The display works, The display still does not work	Problem is solved. Follow procedure for "Other Problems with Phones," page C-7.
13. Combination Extension Problem: System Phone Does Not Work	1. System phone is plugged into wrong jack on bridging adapter.	Plug into the correct jack (see Figure 2-5 on page 2-7).	The system phone works properly, The problem remains,	The problem is solved. Go to Possible Cause 2.
	2. Wrong cord and wrong bridging adapter used to connect standard phone.	First, unplug the bridging adapter from the wall jack. Then, unplug the system phone from the adapter and plug it into the wall jack.	The system phone works properly,	Either the cord or the adapter must be replaced. (Use only an AT&T 267F2 bridging adapter.) Call 1 800 628-2888 for details.

Problem	Possible Cause	Do This	If...	Then...
14. Other Problems with Phones	1. Phone needs to be reset.	Unplug the cord from the bottom of the phone and (with the handset plugged in) plug the cord in again.	The problem remains,	Go to Possible Cause 2.
	2. Possible faulty telephone.	Unplug the cord from the base of the problem phone and plug it into a phone that works.	The other phone works, Other phone does not work,	The old phone was faulty Call 1 800 628-2888 arrange for a replacement Go to Possible Cause 3.
	3. Defective telephone cord.	Unplug the cord from the base of the phone and the wall jack. Replace it with a cord that works.	If the phone works, If the phone does not work, and it is part of a combination extension, If the phone does not work, and it is not part of a combination extension,	The cord is bad. Call 1 800 628-2888 to arrange for a replacement. See "Combination Extension Problem: Phone Does Not Ring Properly," Possible Cause 3. Call 1 800 628-2888.
15. Other Problems with System	System needs a hardware reset.	Unplug the control unit's power cord, wait 10 seconds, and plug back in.	The problem is not solved,	Call 1 800 628-2888.

Repair Information

In-Warranty Repairs

If you purchased or leased your system directly from AT&T, AT&T will repair it free of charge during the one-year warranty period. Simply call the Helpline at 1 800 628-2888 to ask for service.

Business-Day service is standard during the warranty period for both the control unit and system phones. Business-Day service is performed during normal business hours. However, if you need 24-hour service protection during the warranty period on the control unit, in case there is a major system failure, you can purchase an Around-the-Clock service contract from your local AT&T sales office (1 800 247-7000). (Around-the-Clock service is not available for phones.)

If you purchased or leased your system through an AT&T-authorized dealer, contact your dealer for repairs.

Post-Warranty Repairs

If you purchased your system from AT&T and you have a post-warranty service contract, AT&T service is provided under the terms of that contract.

If you do not have a contract, AT&T service is provided on a time-and-materials basis by calling the Helpline at 1 800 628-2888. To eliminate unexpected repair costs after the warranty period, you can purchase a post-warranty service contract from AT&T. A contract entitles you to unlimited service calls with no charge for parts and labor, plus preferred dispatch priority. Both Business-Day and Around-the-Clock coverages of varying lengths are available. To order a post-warranty service contract, please call 1 800 247-7000.

If you leased your system from AT&T, Business-Day service is included in your lease. To upgrade to Around-the-Clock service, call 1 800 247-7000.

If you purchased or leased your system through an AT&T-authorized dealer, contact your dealer for repairs.

AT&T Limited Warranty and Limitation of Liability

AT&T warrants to you, the customer, that your system will be in good working order on the date AT&T or its authorized reseller delivers or installs the system, whichever is later ("Warranty Date"). If you notify AT&T or its authorized reseller within one year of the Warranty Date that your system is not in good working order, AT&T will without charge to you repair or replace, at its option, the system components that are not in good working order. Repair or replacement parts may be new or refurbished and will be provided on an exchange basis. If AT&T determines that your system cannot be repaired or replaced, AT&T will remove the system and, at your option, refund the purchase price of your system, or apply the purchase price towards the purchase of another AT&T system.

If you purchased your system directly from AT&T, AT&T will perform warranty repair in accordance with the terms and conditions of the specific type of AT&T maintenance coverage you selected. A written explanation of AT&T's types of maintenance coverage may be obtained from AT&T by calling 1 800 247-7000. If you purchased your system from an AT&T-authorized reseller, contact your reseller for the details of the maintenance plan applicable to your system.

This AT&T limited warranty covers damage to the system caused by power surges, including lightning.

Unless otherwise expressly agreed to in a written agreement signed by AT&T, AT&T will not be responsible under this limited warranty for damages resulting from:

- Failure to follow AT&T's installation, operation, or maintenance instructions;
- Unauthorized system modification, movement, or alteration;
- Unauthorized use of common carrier communication services accessed through the system;
- Abuse, misuse, or negligent acts or omissions of the customer and persons under the customer's control; or
- Acts of third parties and acts of God.

AT&T's obligation to repair, replace, or refund as set forth above is your exclusive remedy.

Except as specifically set forth above, AT&T, its affiliates, suppliers, and authorized resellers make no warranties, express or implied, and specifically disclaim any warranties of merchantability or fitness for a particular purpose.

Limitation of Liability

Except for personal injury, direct damages to tangible personal property proximately caused by AT&T, and liability otherwise expressly assumed in a written agreement signed by AT&T the liability of AT&T its affiliates, suppliers, and authorized resellers for any claims, losses, damages, or expenses from any cause whatsoever (including acts or omissions of third parties), regardless of the form of action, whether in contract, tort, or otherwise, shall not exceed an amount equal to the lesser of the direct damages proven or the purchase price of the system. In no event shall AT&T or its affiliates, suppliers, or authorized resellers be liable for incidental, reliance, consequential, or any other indirect loss or damage (including lost profits or revenues) incurred in connection with the system. This limitation of liability shall survive failure of the exclusive remedy set forth in the limited warranty above.

Product Ordering Information

Ordering additional telephones and modules, accessories, and replacement parts for your system is convenient. Table C-1 (on the next page) shows where you can buy system components in the United States.

To take full advantage of your system, the sources shown below can also provide you with the optional equipment you might want for your system, such as AT&T fax machines, answering machines, standard phones, modems, paging systems, doorphones, headsets, bells, lights, strobes, and music-on-hold systems.

You can obtain most items from more than one source, either directly from AT&T or from authorized dealers. Sources in the United States are:

- **AT&T Catalog Sales.** This source is AT&T's national phone/mail sales center in Cincinnati. A Catalog Associate will place your order, including AT&T installation if you need it. Or you can charge your order on a VISA, Mastercard, or American Express card. The Catalog Associate can also give you sales advice and mail you AT&T's "Sourcebook" catalog of systems, telephones, and accessories. Call 1 800 451-2100.
- **AT&T Sales Offices.** Sales offices to serve the small business customer are located throughout the country. To contact the office closest to you, call 1 800 247-7000. A representative will place your order, including AT&T installation if you want it.
- **AT&T PhoneCenter Stores.** Your local PhoneCenter Store carries most items. To locate the nearest store, call 1 800 222-3111 or see your local white pages under "AT&T PhoneCenter Store."
- **AT&T-Authorized Dealers.** You can also buy most items from one of AT&T's authorized dealers. To find the dealer nearest you, call 1 800 247-1212.
- **AT&T National Parts Sales Center.** This national sales center, located in Denver, stocks replacement parts for the control unit and telephones. Telephone orders can be placed by calling 1 800 222-PART.

In Canada, order these items from AT&T Canada:

Eastern Canada and Ottawa:	1 514 335-7200
Ontario:	1 416 756-5236
Central and Western Canada:	1 800 561-5165

To use Table C-1, first locate the item you want. A triangle(▲)indicates where you can obtain it.

	SOURCE (U.S.)				
	AT&T Catalog Sales (Sourcebook) (800) 451-2100	AT&T Sales Office (800) 247-7000	AT&T Phone Center Store *	AT&T Authorized Dealer **	AT&T National Parts Sales Center (800) 222-PART
System Modules and Wiring:					
Processor module				▲	▲
Expansion Unit (206 module) includes 206 module, two 7-foot line cords, two 267F2 bridging adapters, and installation instructions	▲	▲	▲	▲	▲
Expansion Unit (200 module) Includes 200 module, two 7-foot line cords, and installa- tion instructions	▲	▲	▲	▲	▲
Backplane				▲	▲
System cover				▲	▲
AC power cord				▲	▲
Line cord (D2R) Connects 200/206 modules to network interface (clear color) Specify length: 7 (standard length), 14, or 25 foot	▲			▲	▲
267F2 bridging adapter Connects two devices to one extension	▲		▲	▲	▲
In-Range Out-of-Building (IROB) protector (503A1) Required when installing extensions in another building from the control unit (two required per MLS-model telephone, one per standard phone or device)		▲	▲	▲	▲
Z300A Electromagnetic Interference (EMI) filter Includes filter, 7-foot line cord, and installation instructions		▲		▲	▲
267C line adapter Splits two outside lines from an RJ14 network interface jack, so that each line has its own modular plug (do not use at extension jacks)	▲		▲	▲	
System Telephones and Accessories:					
MLS-34D corded telephone, black or white	▲	▲	▲	▲	
MLS-12D corded telephone, black or white	▲	▲	▲	▲	
MLS-12 corded telephone, black or white	▲	▲	▲	▲	
MLS-6 corded telephone, black or white	▲	▲	▲	▲	
MLC-6 cordless telephone, black or white	▲	▲	▲	▲	
Telephone stand, black or white	▲			▲	▲
Button label package (specify telephone model) 12 labels (6 labels for MLS-34D), plus clear plastic cover	▲			▲	▲
Handset (K2S1), black or white Standard for MLS-model phones	▲			▲	▲
Amplified handset (K6S), black or white Optional for hard-of-hearing users with MLS-model	▲	▲		▲	▲
Handset cord, 9 foot, black or white, coiled Connects handset to telephone	▲		▲	▲	▲
Telephone mounting cord (D4BU) Connects phone to wall jack, jack panel, or directly to 206 module extension jack. Specify length: 2, 7, or 14 foot (14 foot standard)	▲		▲	▲	▲
Modular telephone extension cord —8-connector Extends the D4BU mounting cords Specify length 14, 25, 50, 75, or 100 foot	▲			▲	
* To locate the AT&T PhoneCenter Store nearest you, see the listing in your local telephone directory's white pages (under AT&T), or call 1 800 222-3111.					
**To locate the nearest AT&T Authorized Dealer, call 1 800 247-1212					

Table C-1 Sources of Additional Equipment and Replacement Parts (U.S.)

Specifications

D

Capacities	System	206 Module	Extension Jack
	<ul style="list-style-type: none"> ■ 8 outside lines via line jacks on four 206 or 200 modules ■ 24 extensions via extension jacks on four 206 modules ■ 1 loudspeaker paging system ■ 1 audio source via Music-On-Hold jack on processor module ■ 2 doorphones, using 2 extension jacks 	<ul style="list-style-type: none"> ■ 2 outside lines ■ 6 extensions <p>200 Module 2 outside lines</p>	<ul style="list-style-type: none"> ■ Maximum 2 devices per extension jack, total REN on jack not to exceed 2.0* (2 devices require AT&T 267F2 bridging adapter) System phone REN: 0 (zero) ■ No more than one system phone per jack <p><i>For programming, a system display phone must be connected to Extension 10.</i></p>
Dimensions and Weights (assembled, approx.)	<ul style="list-style-type: none"> ■ Processor module ■ 206 module ■ 200 module ■ Backplane & cover ■ MLC-6 phone ■ MLS-6 phone ■ MLS-12 phone ■ MLS-12D phone ■ MLS-34D phone 	<ul style="list-style-type: none"> 11"(D) x 17"(H) x 1.5"(W) or 27.9cm x 43.2cm x 3.8cm 11"(D) x 17"(H) x 1.5"(W) or 27.9cm x 43.2cm x 3.8cm 11"(D) x 17"(H) x 1.5"(W) or 27.9cm x 43.2cm x 3.8cm 12"(D) x 19"(H) x 11"(W) or 30.5cm x 48.3cm x 27.9cm 9.4"(D) x 3.4"(H) x T(W) or 23.9cm x 8.6cm x 17.8cm 9.5"(D) x 5"(H) x 6.75"(W) or 24.1cm x 12.7cm x 17.1cm 9.5"(D) x 5"(H) x 6.75"(W) or 24.1cm x 12.7cm x 17.1cm 9.5"(D) x 5"(H) x 6.75"(W) or 24.1cm x 12.7cm x 17.1cm 9.7"(D) x 5.3"(H) x 10"(W) or 24.6cm x 13.5cm x 25.4cm 	<ul style="list-style-type: none"> 4.0 lbs or 1.8 kgs 4.5 lbs or 2.0 kgs 4.0 lbs or 1.8 kgs 5.5 lbs or 2.5 kgs 2.9 lbs or 1.3 kgs 1.8 lbs or 0.8 kgs 2.0 lbs or 0.9 kgs 2.1 lbs or 1.0 kgs 2.6 lbs or 1.2 kgs
Switch Fabric	<ul style="list-style-type: none"> ■ Full digital, nonblocking 		
Electrical Specifications	<ul style="list-style-type: none"> ■ 10 Watts (35 BTUs/hour) per 200 module, normal and peak power consumption ■ 65 Watts (225 BTUs/hour) per 206 module during normal operation ■ 100 Watts (350 BTUs/hour) per 206 module during peak power consumption ■ 4 Amps peak current at full system capacity (processor module and four 206 modules) ■ 4-day memory backup (96 hours) 		

*The two devices combined on an extension jack can be a system phone with a standard device, or two standard devices. DO NOT connect two system phones to the same extension jack. If a device lists two RENs, use the higher number when adding up RENs.

Extension Jack Specifications	<ul style="list-style-type: none"> ■ Ringing voltage: +5VDC, -140 VDC peak to peak; trapezoidal wave shaping ■ Talk battery: 35 to 38 Volts ■ Ringing frequency: 20 Hz
PAGE Jack Specifications	<ul style="list-style-type: none"> ■ Draws current on inner wire pair ■ Provides contact closure on outer wire pair ■ 600 Ohm impedance
Environmental Requirements—Control Unit	<ul style="list-style-type: none"> ■ Mount on a wall at least 2 feet (0.6 meters) from the floor (wall mounting required) ■ Locate within 5 feet (1.5 meters) of an electrical outlet not controlled by a switch and within 5 feet (1.5 meters) of the network interface jacks, when using supplied 7-foot (2.1-meter) cords ■ Operating temperature 32° to + 104°F (0° to + 40°C), not in direct sunlight ■ Humidity 15%-90%, noncondensing ■ For proper ventilation and easy replacement of modules, provide at least 6" (2.34 cm) clearance at the top and sides, and 2 feet (0.6 meters) at the front and bottom of the control unit. ■ Locate in an area free of excess moisture, corrosive gases, dust, and chemicals
Electrical Requirements	<ul style="list-style-type: none"> ■ 90-130 VAC, 50-60 Hz, 3-prong outlet separate ground, separately fused at 15 amps ■ Outlet must not be controlled by an on/off switch ■ Grounding to comply with Underwriters Laboratories (UL) 1459: <ul style="list-style-type: none"> A. An insulated grounding conductor that is not smaller in size and equivalent in insulation material and thickness to the grounded and ungrounded branch circuit supply conductors except that it is green with or without one or more yellow stripes, is to be installed as part of the circuit that supplies the product or system. B. The grounding conductor mentioned in item A is to be connected to ground at the service equipment. C. The attachment-plug receptacles in the vicinity of the product or system are all to be of a grounding type, and the grounding conductors serving these receptacles are to be connected to earth ground at the service equipment.
Requirements for Out-of-Building Extensions	<p>Installation of a telephone or other standard (tip/ring) device in another building requires the following In-Range Out-of-Building (IROB) protectors to protect the control unit and device from electrical surges:</p> <ul style="list-style-type: none"> ■ MLS-model telephone: two AT&T 503A1 protectors ■ Standard device: one AT&T 503A1 protector, plus one carbon block protector
Wiring	<ul style="list-style-type: none"> ■ MLS-model phones: AT&T SYSTIMAX™ or at least 2-pair (4-wire) star ("home run" not "loop") ■ Other standard telecommunications equipment (single-line phones, fax machines, answering machines, etc.): 1-pair (2-wire) mounting cords (AT&T D2R mounting cords recommended) ■ Bridging adapter: AT&T 267F2 ■ Range: 1,000 feet (305 meters) for MLS phones; 3,000 feet (915 meters) for standard devices
Processor Module Specifications	<ul style="list-style-type: none"> ■ 68000 microprocessor, 64K RAM, 256K ROM
Local Phone Company Information	<ul style="list-style-type: none"> ■ FCC registration number: AS5 USA-61630-KF-E ■ REN (outside line jack): 0.9A per line jack ■ Jack type: RJ11C ■ Loop start lines

FCC Information



Federal Communications Commission (FCC) Interference Information

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manuals, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will have to correct the interference at his or her own expense.

FCC Notification and Repair Information

This equipment is registered with the FCC in accordance with Part 68 of its rules. In compliance with those rules, you are advised of the following:

- **Means of Connection:** Connection to the telephone network shall be through a standard network interface jack USOC RJ11C. These USOCs must be ordered from your local telephone company.

This equipment may not be used with party lines or coin telephone lines.

- **Notification to the Telephone Companies:** Before connecting this equipment, you or your equipment supplier must notify your local telephone company's business office of the following:
 - The telephone number(s) you will be using with this equipment.
 - The appropriate registration number and ringer equivalence number (REN), which can be found on the right hand side of the control unit.
 - The facility interface code, which is 02LS2.

You must also notify your local telephone company if and when this equipment is permanently disconnected from the line(s).

- **Repair Instructions:** If you experience trouble because your equipment is malfunctioning, the FCC requires that the equipment not be used and that it be disconnected from the network until the problem has been corrected. Repairs to this equipment can only be made by the manufacturer, its authorized agents, or by others who may be authorized by the FCC. In the event repairs are needed on this equipment, please contact the AT&T National Service Assistance Center (NSAC) at 1 800 628-2888. For warranty information, see Appendix C.

- **Rights of the Local Telephone Company:** If this equipment causes harm to the telephone network, the local telephone company may discontinue your service temporarily. If possible, they will notify you in advance. But if advance notice is not practical, you will be notified as soon as possible. You will also be advised of your right to file a complaint with the FCC.

Your local telephone company may make changes in its facilities, equipment, operations, or procedures that affect the proper functioning of this equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

- **Hearing Aid Compatibility:** The custom telephones for this system are compatible with inductively coupled hearing aids as prescribed by the FCC.

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Centralized Telephone Quick Reference

Place the Programming Overlay on the dial pad of the system display phone at Extension 10

TO START PROGRAMMING

PRESS [Feature] [0] [0]

PRESS [System Program]

PRESS [System Program]

PRESS [Central Tel Program]

DIAL the extension number to be preprogrammed

Buttons on which lines are assigned for the extension light up to show the current Line Ringing setting; remaining buttons can be programmed with Auto Dial numbers or dial code features

TO PROGRAM ANOTHER FEATURE AT THE SAME EXTENSION

After you finish changing a setting, simply continue with the instructions in the box shown for the new feature on this page

TO CHANGE SETTING FOR ANOTHER EXTENSION

PRESS [Central Tel Program]

DIAL the new extension's number

TO ERASE A FEATURE OR AUTO DIAL BUTTON

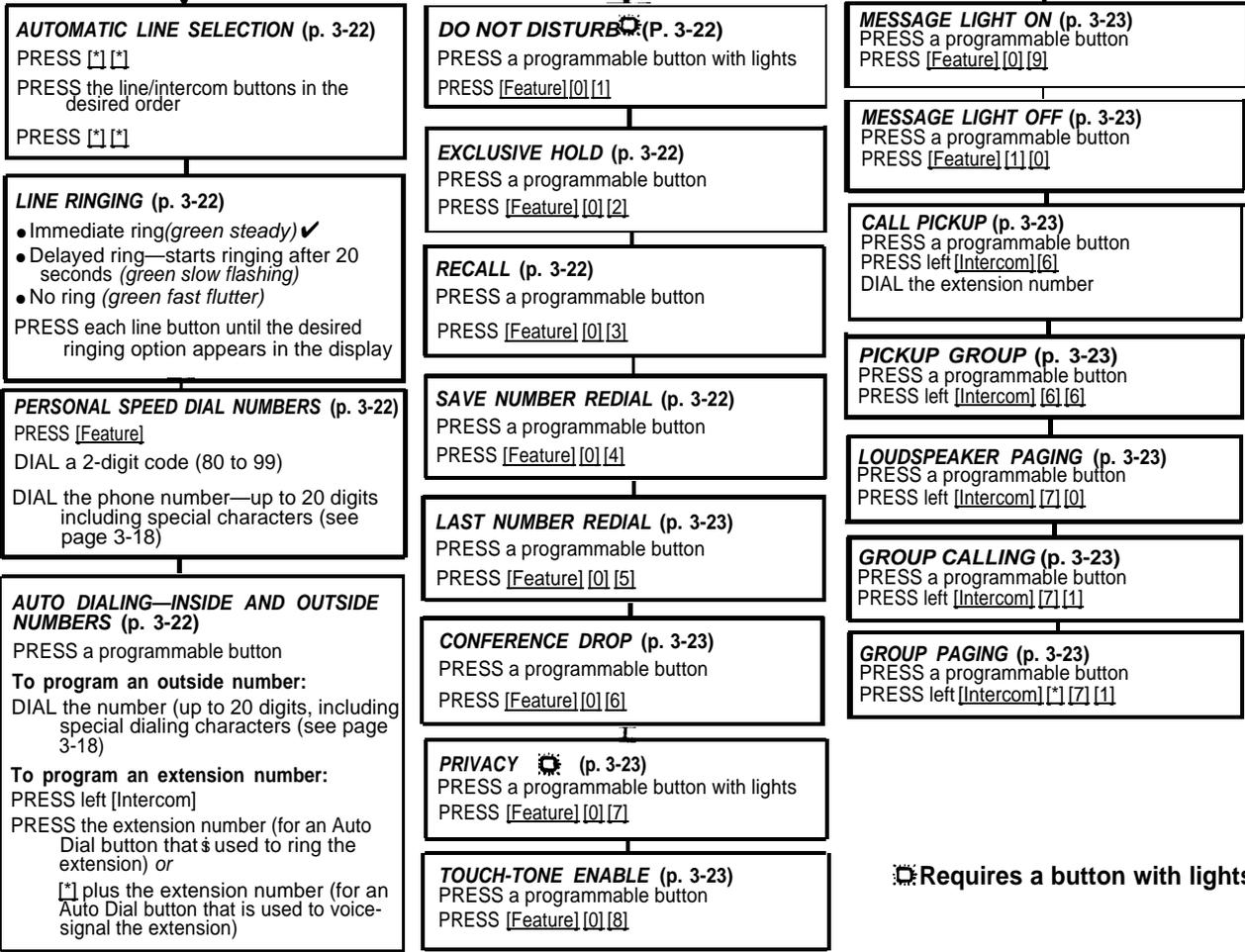
PRESS the programmed button

PRESS [Mic]

TO END PROGRAMMING

PRESS [Feature] [0] [0]

NOTE: Program Automatic Line Selection first.



Extension Programming

Users can program features or store telephone numbers at their own phones using Extension Programming. Automatic Line Selection and Line Ringing must be programmed from extension 10 (using Centralized Telephone programming); all other features can be programmed on a system phone at the users extension. If a user has a standard phone, Personal Speed Dial numbers for the extension must be programmed from extension 10

TO PROGRAM OR CHANGE A PERSONAL SPEED DIAL NUMBER, AUTO DIAL NUMBER, OR DIAL CODE FEATURE

PRESS [Feature] [0] [0] to start programming.
 Follow the boxed instructions above to program the first number or feature.
 To program more numbers or features, follow their boxed instructions.
 PRESS [Feature] [0] [0] when you are finished programming.

TO REMOVE AN AUTO DIAL NUMBER OR A DIAL CODE FEATURE FROM A BUTTON

PRESS [Feature] [0] [0] to enter program mode.
 PRESS the programmed button
 PRESS [Mic]
 To remove another number or feature, repeat the last two steps.
 PRESS [Feature] [0] [0] when you are finished programming.

System Programming Quick Reference

Place the Programming Overlay on the dial pad of the system display phone at Extension 10

TO START SYSTEM PROGRAMMING

PRESS [Feature] [0] [0]
PRESS [System Program]
PRESS [System Program]

TO END SYSTEM PROGRAMMING

PRESS [Feature] [0] [0]

TO USE A SPECIFIC PROCEDURE

DIAL [#] and 3-digit procedure code
Example: [#] [1] [0] [1] for System Date

TO CYCLE THROUGH SYSTEM PROGRAMMING PROCEDURES

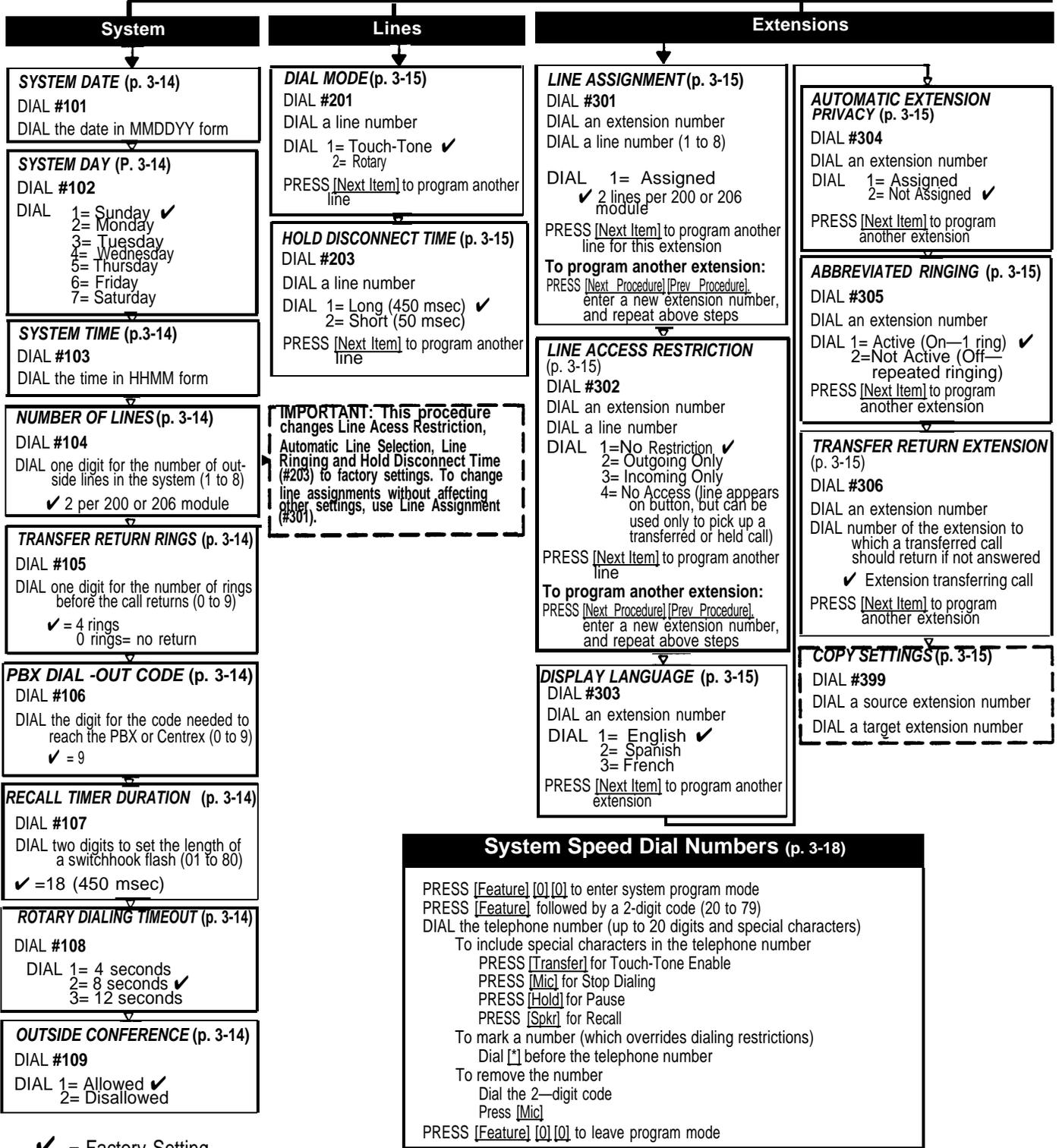
PRESS [Next Procedure] or [Prev Procedure]
NOTE: Procedures #399, #721, and #728—shown below in dashed boxes—are skipped when cycling

TO CYCLE THROUGH AVAILABLE SETTINGS

PRESS [Next Data] or [Prev Data]

TO RETURN TO FACTORY SETTING

PRESS [Remove]



✓ = Factory Setting

☛ For Telephone Programming, see previous page

PBX/CENTREX MODE (p. 3-14)

DIAL #721
DIAL 1= Active
2= Not Active ✓

SYSTEM RESET - PROGRAMMING SAVED (p. 3-14)

IMPORTANT: Using this procedure disconnects any active calls but retains system settings. Use it only if the system fails to function correctly after a power failure or a down period.

DIAL #728

Dialing Restrictions and Permissions

OUTGOING CALL RESTRICTIONS

(p. 3-16)
DIAL #401
DIAL an extension number
DIAL 1= No Restriction ✓
2= Inside (intercom) Only
3= Local (intercom and local) Only
PRESS [Next Item] to select another extension

TOLL CALL PREFIX (p. 3-16)

DIAL #402
DIAL 1= 0/1 plus Area Code and Number ✓
2= Area Code and Number Only

SYSTEM PASSWORD (p. 3-16)

DIAL #403
DIAL 4 digits to set the password

DISALLOWED PHONE NUMBER LISTS (p. 3-16)

DIAL #404
DIAL a list number (1 to 4)
DIAL a list entry (01 to 10)
To add entry:
DIAL the phone number (up to 12 digits)
PRESS [Enter]
PRESS [Remove] to remove a list entry
PRESS [Next Item] to select another list entry
To program another list:
PRESS [Next Procedure] [Prev Procedure], enter a new list number, and repeat above steps

DISALLOWED LIST ASSIGNMENTS (p. 3-16)

DIAL #405
DIAL an extension number
DIAL a list number
DIAL 1= Assigned ✓
2= Not Assigned ✓
PRESS [Next Item] to program another list
To program another extension:
PRESS [Next Procedure] [Prev Procedure], enter a new extension number, and repeat above steps

EMERGENCY PHONE NUMBER LIST (p. 3-16)

DIAL #406
DIAL a list entry (01 to 10)
To add entry:
DIAL the telephone number (up to 12 digits)
PRESS [Enter]
PRESS [Remove] to remove a list entry
PRESS [Next Item] to program another list entry

ALLOWED PHONE NUMBER LISTS (p. 3-16)

DIAL #407
DIAL a list number (1 to 4)
DIAL a list entry (01 to 10)
To add entry:
DIAL the telephone number (up to 12 digits)
PRESS [Enter]
PRESS [Remove] to remove a list entry
PRESS [Next Item] to select another list entry
To program another list:
PRESS [Next Procedure] [Prev Procedure], enter a new list number, and repeat above steps

ALLOWED LIST ASSIGNMENTS (p. 3-16)

DIAL #403
DIAL an extension number
DIAL a list number
Text 1= Assigned ✓
2= Not Assigned ✓
PRESS [Next Item] to select another list
To program another extension:
PRESS [Next Procedure] [Prev Procedure], enter a new extension number, and repeat above steps

Groups

PICKUP GROUP EXTENSIONS

(p. 3-17)
DIAL #501
DIAL an extension number
DIAL 1= Assigned to group
2= Not assigned to group ✓
PRESS [Next Item] to assign another extension

CALLING GROUP EXTENSIONS

(p. 3-17)
DIAL #502
DIAL an extension number
DIAL 1= Assigned to group
2= Not assigned to group ✓
PRESS [Next Item] to assign another extension

NIGHT SERVICE BUTTON (p. 3-17)

DIAL #503
DIAL 1= Assigned to ext 10
2= Not Assigned ✓

NIGHT SERVICE GROUP (p. 3-17)

DIAL #504
DIAL an extension number
DIAL 1= Assigned to group
2= Not assigned to group ✓
PRESS [Next Item] to assign another extension

Auxiliary Equipment

FAX MACHINE EXTENSIONS*

(p. 3-17)
DIAL #601
DIAL an extension number
DIAL 1= Assigned
2= Not assigned ✓
PRESS [Next Item] to assign another extension

***FAX MANAGEMENT (p. 3-17)**

To monitor fax machines:
1. Use procedure #601 to identify fax extensions.
2. Program a lighted button on one or more system phones with the fax extension as an Auto Dial number. Label the button appropriately (for example, "FAX 12").

MUSIC ON HOLD (p. 3-17)

DIAL #602
DIAL 1= Active ✓
2= Not Active

HOTLINE (p. 3-17)

DIAL #603
DIAL the hotline extension number (not ext. 10)
DIAL the alerted extension number (not the hotline)
To remove the hotline and alert:
PRESS [Remove]

DOORPHONE 1 EXTENSION (p. 3-17)

DIAL #604
DIAL an extension number (12-15, 18-21, 24-27, or 30-33)

DOORPHONE 2 EXTENSION (p. 3-17)

DIAL #605
DIAL an extension number (12-15, 18-21, 24-27, or 30-33)

DOORPHONE ALERT EXTENSIONS (p. 3-17)

DIAL #606
DIAL an extension number (except a doorphone extension)
DIAL 1= Not an alert ✓
2= Doorphone 1 alert
3= Doorphone 2 alert
4= Doors 1 and 2
PRESS [Next Item] to select another extension (up to 5 alert extensions per doorphone)

ATTENDANT/VMS EXTENSIONS (p. 3-17)

DIAL #607
DIAL an extension number
DIAL 1= Assigned
2= Not Assigned ✓
PRESS [Next Item] to select another extension

✓ = Factory Setting