Lucent Technologies
Bell Labs Innovations

MERLIN LEGEND® Communications System

Release 7.0

Installation, SPM, Maintenance and Troubleshooting Supplement

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Notice

Every effort has been made to ensure that the information in this guide is complete and accurate at the time of printing. Information, however, is subject to change. See Appendix A, “Customer Support Information,” in *System Programming* for important information.

Your Responsibility for Your System’s Security

Toll fraud is the unauthorized use of your telecommunications system by an unauthorized party—for example, persons other than your company’s employees, agents, subcontractors, or persons working on your company’s behalf. Note that there may be a risk of toll fraud associated with your telecommunications system, and, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

You and your system manager are responsible for the security of your system, such as programming and configuring your equipment to prevent unauthorized use. The system manager is also responsible for reading all installation, instruction, and system administration documents provided with this product in order to fully understand the features that can introduce risk of toll fraud and the steps that can be taken to reduce that risk. Lucent Technologies does not warrant that this product is immune from or will prevent unauthorized use of common-carrier telecommunication services or facilities accessed through or connected to it. Lucent Technologies will not be responsible for any charges that result from such unauthorized use. For important information regarding your system and toll fraud, see Appendix A, “Customer Support Information,” in *System Programming*.

Federal Communications Commission Statement

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the 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 manual, 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 be required to correct the interference at their own expense. For further FCC information, see Appendix A, “Customer Support Information,” in *System Programming*.

Canadian Department of Communications (DOC) Interference Information

This digital apparatus does not exceed the Class A limits for radio noise emissions set out in the radio interference regulations of the Canadian Department of Communications.

Le Présent Appareil Numérique n’émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A préscrites dans le réglement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

Year 2000 Compliance

The MERLIN LEGEND Communications System is certified to be Year 2000 compliant. Additional information on this certification, and other issues regarding Year 2000 compliance, is available online at http://www.lucent.com/enterprise/sig/yr2000.

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For more information about Lucent Technologies documents, refer to the section entitled “Related Documents” in “About This Guide” in *System Programming*.

Support Telephone Number

In the continental US, Lucent Technologies provides a toll-free customer helpline 24 hours a day. Call the Lucent Technologies Helpline at **1-800-628-2888** or your Lucent Technologies authorized dealer if you need assistance when installing, programming, or using your system. Outside the continental US, contact your local Lucent Technologies authorized representative.

Network Engineering Group

For assistance in designing a private network, call the Network Engineering Group at **1-888-297-4700**.

Lucent Technologies Corporate Security

Whether or not immediate support is required, all toll fraud incidents involving Lucent Technologies products or services *should be reported* to Lucent Technologies Corporate Security at **1-800-821-8235**. In addition to recording the incident, Lucent Technologies Corporate Security is available for consultation on security issues, investigation support, referral to law enforcement agencies, and educational programs.

Lucent Technologies Fraud Intervention

If you *suspect you are being victimized* by toll fraud and you need technical support or assistance, call BCS National Service Assistance Center at **1-800-628-2888**.

Warranty

Lucent Technologies provides a limited warranty on this product. Refer to “Limited Warranty and Limitation of Liability” in Appendix A, “Customer Support Information,” of *System Programming*.

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IMPORTANT SAFETY INSTRUCTIONS

The exclamation point in an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

To reduce the risk of fire, electrical shock, and injury to persons, follow these basic safety precautions when installing telephone equipment:

- Read and understand all instructions.
- Follow all warnings and instructions marked on or packed with the product.
- Never install telephone wiring during a lightning storm.
- Never install a telephone jack in a wet location unless the jack is specifically designed for wet locations.
- Never touch uninsulated telephone wires or terminals unless the telephone wiring has been disconnected at the network interface.
- Use caution when installing or modifying telephone lines.
- Use only Lucent Technologies-manufactured MERLIN LEGEND Communications System circuit modules, carrier assemblies, and power units in the MERLIN LEGEND Communications System control unit.
- Use only Lucent Technologies-recommended/approved MERLIN LEGEND Communications System accessories.
- If equipment connected to the analog extension modules [008 (ATL), 408 (LS-ATL), and 408 GS/LS], the MLX telephone modules (008 MLX, 408 GS/LS-MLX, 408 GS/LS-ID-MLX, and 016 MLX), or the ETR telephone modules (412 LS-ID-ETR and 016 ETR) is to be used for in-range out-of-building (IROB) applications, IROB protectors are required.
- Do not install this product near water—for example, in a wet basement location.
- Do not overload wall outlets, as this can result in the risk of fire or electrical shock.

- The MERLIN LEGEND Communications System is equipped with a 3-wire grounding-type plug with a third (grounding) pin. This plug will fit only into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact an electrician to replace the obsolete outlet. Do not defeat the safety purpose of the grounding plug.
- The MERLIN LEGEND Communications System requires a supplementary ground.
- Do not attach the power supply cord to building surfaces. Do not allow anything to rest on the power cord. Do not locate this product where the cord will be abused by persons walking on it.
- Slots and openings in the module housings are provided for ventilation. To protect this equipment from overheating, do not block these openings.
- Never push objects of any kind into this product through module openings or expansion slots, as they may touch dangerous voltage points or short out parts, which could result in a risk of fire or electrical shock. Never spill liquid of any kind on this product.
- Unplug the product from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use cleaners or aerosol cleaners.
- Auxiliary equipment includes answering machines, alerts, modems, and fax machines. To connect one of these devices, you must first have a Multi-Function Module (MFM).
- Do not operate telephones if chemical gas leakage is suspected in the area. Use telephones located in some other safe area to report the trouble.

WARNING:

- For your personal safety, DO NOT install an MFM yourself.
- ONLY an authorized technician or dealer representative shall install, set options, or repair an MFM.
- To eliminate the risk of personal injury due to electrical shock, DO NOT attempt to install or remove an MFM from your MLX telephone. Opening or removing the module cover of your telephone may expose you to dangerous voltages.

SAVE THESE INSTRUCTIONS

New Features and Enhancements

Release 7.0 Enhancements (April 1999)

Release 7.0 includes all Release 6.1 functionality, plus the enhancements listed below. For a description of features and enhancements in prior releases, see “Prior Releases: Features and Enhancements” in *System Programming*.

MLS and Enhanced Tip/Ring (ETR) Telephone Support

One of the most important new capabilities of MERLIN LEGEND Release 7.0 is its support for MLS and ETR telephones, allowing existing customers with either telephones the ability to migrate to a MERLIN LEGEND Communications System. The MLS telephones include the MLS-6®, MLS-12®, MLS-12D®, MLS-18D®, and MLS-34D®. The ETR telephones include the ETR-6, ETR-18, ETR-18D, and ETR-34D. The Business Cordless 905 telephone and the TransTalk™ 9000 Digital Wireless System are also supported.

The MLS, ETR, and Business Cordless 905 telephones, as well as the TransTalk 9000 Digital Wireless System, require ETR station ports. To

provide support for these telephones and for the TransTalk 9000 system, two new modules have been designed:

- **412 LS-ID-ETR Module**. The 412 LS-ID-ETR module provides 4 LS trunks with Caller ID and 2 touch tone receivers (TTRs), plus 12 ETR station ports, including 4 with Tip/Ring (T/R) functionality. On the 412 LS-ID-ETR module, the first 8 ports are ETR ports only—these ports do not have T/R functionality. The remaining 4 ports (ports 9 through 12) can be programmed to support either T/R or ETR, but not both simultaneously.

  This module does not have a separate PFT port. In the event of a power failure, port 12 becomes the PFT port for line 1. If the port is programmed for ETR operation, a single-line telephone must be plugged into the port for operation during power failure.

  If caller identification is subscribed to from the local telephone company, the 412 LS-ID-ETR module displays the telephone number of incoming callers (from supported areas) on ETR and MLS display telephones. In addition, a button on the ETR and MLS telephone can be programmed to toggle between displaying caller name or caller number.

- **016 ETR Module**. The 016 ETR module provides 16 ETR station ports, including 6 with T/R functionality and 4 TTRs. On the 016 ETR module, the first 10 ports are ETR ports only—these ports do not have T/R functionality. The remaining 6 ports (ports 11 through 16) can be programmed to support either T/R or ETR, but not both simultaneously.

Expanded Digital Endpoint Connectivity

Release 7.0 increases the maximum number of digital telephones supported from 127 to 200 by introducing a new 016 MLX module. In addition, each of the 200 ports can support an MFM adjunct which increases the current 255 station endpoints to 400.

- **016 MLX Module**. Each 016 MLX module provides 16 digital station ports and has an additional 32K of dual port RAM.
- **Processor Module**. The 016 MLX module can only be utilized with the CKE4 or later processor module with upgrade to R7.0 software. The CKE4 processor module provides the lead to access the additional 32K of RAM on the 016 MLX module.

Voice Announce on Idle Only Option on MLX Telephones

Prior to Release 7.0, no options were available for disabling intercom voice announcements at an MLX telephone when busy. In Release 7.0, a new option—Voice Announce on IDLE ONLY—is available with the existing Voice Announce feature. This new option allows a user to receive intercom voice announcements only when they are not active on another call.

Priority Call Queuing

Priority call queuing provides the ability to:

- Place some callers ahead of others who are waiting for the same agent group.
- Give key clients priority over others.
- Automatically increase the number of agents answering calls during busy times, while continuing to offer callers the choice to leave a message instead of waiting.
- Keep costs down by handling toll free calls (calls arriving on 800 and 888 lines) before processing calls on local lines.

Priority call queuing is accomplished in Release 7.0 by allowing you to define a supportive relationship between calling groups. Calls that arrive in one calling group can be processed by another calling group when no one from the first calling group is available to answer the call. Through

system programming, a calling group can be assigned a priority level between 1 (highest priority) and 32 (lowest priority) and then designated as a support group for another group.

Calling Party Name on Caller ID

Release 7.0 continues to support Calling Party Number and adds a new functionality for Calling Party Name. By programming a button on the telephone or with a feature code through centralized programming, users are able to toggle between displaying the caller's telephone number or the caller's name. In order to use this feature, users must subscribe to caller identification from their local exchange carrier (LEC).

Calling Party Name can be 15 characters in length for MLX telephones as well as for ETR and MLS telephones. Calling Party Name is not recorded on SMDR reports. In addition, neither Calling Party Name nor Calling Party Number are displayed on analog multiline telephones.

This feature requires loop-start (LS) trunks. The existing LS-ID delay feature must be programmed for each line, as well. This prevents Calling Party Number and Name information from being lost when a call is answered too quickly.

Release 7.0 software also supports the Caller ID capability of the 408 GS/LS-ID-MLX module. Although previously orderable, the Caller ID capability of this module could not be used until Release 7.0 software became available.

MLX Headset Operation

Headset operation in Release 7.0 has been enhanced so that MLX headset operation more closely mimics the handset operation in the following ways:

- When a person is on a call using a headset and the headset auto-answer is turned on, the user hears a short ring when another call is coming in. In previous releases, this ring was not provided.

- When a person receives a voice-announced call and handles the call by using a headset and turning off the speakerphone, the associated LEDs (the DSS button and the inside Auto Dial button) for that extension at other telephones are lit. In previous releases, the LEDs for that extension did not light at the other telephones.
- When a reliable disconnect occurs on a headset-handled call, the associated LEDs (the DSS button and the inside Auto Dial button) for that extension at other telephones are turned off. In previous releases, the LEDs for that extension remained lit at the other telephones unless the user pressed the Headset Hangup button.

Touch-Tone or Rotary Signaling

Beginning in Release 7.0, you can program tip/ring ports to use rotary signaling. You can program any tip/ring port on an individual basis (including ports on the 412 LS-ID-ETR and 016 ETR modules that are programmed for tip/ring operation). The factory setting is that rotary signaling is disabled.

Whenever the system receives a rotary digit on a port, it determines if the port is programmed as rotary-enabled. If the port is rotary-enabled, the system processes the digit. If the port is not rotary-enabled, the digit is rejected. Touch-tone digits are always accepted by the port, regardless whether it is rotary-enabled or not.

Abandoned Call Information Reported to MERLIN LEGEND Reporter

For abandoned calls, you are now able to identify the queue or the agent where the call was abandoned. The MERLIN LEGEND Release 7.0 software has been modified so that either of the following occurs:

- If the caller hangs up while the call is in queue, the Auto Login/ Logout Group ID is entered into the Station Message Detail Recording (SMDR) record.
- If the caller hangs up while the call is ringing at a group member's extension, that group member's extension number is entered into the SMDR record.

Introduction

1

Release 7.0 of the MERLIN LEGEND Communications System enhances the operation of the system through both hardware and software. Because these are the Release Notes for the Installation Guide, the focus of this document is the hardware and the process of upgrading to the new release.

New Control Unit Modules

The following are the new control unit modules for Release 7.0:

- 016 ETR
- 016 MLX
- 412 LS-ID-ETR

The 408 GS/LS-ID-MLX module is not new in Release 7.0, but the Caller ID capabilities of the module are supported in Release 7.0 and later systems.

These modules are discussed in detail in Chapter 2.

NOTE:
If you use an 016 MLX module in your system, you must have a CKE4 or later processor module.

New Telephones Supported

In addition to the current MLX, analog multiline, and single-line telephones, Release 7.0 also supports the following telephones:

- ETR-6
- ETR-18/18D
- ETR-34D
- MLS-6
- MLS-12/12D
- MLS-18D
- MLS-34D
- TransTalk (MDC/MDW) cordless telephone when connected to a 412 LS-ID-ETR or 016 ETR module port programmed for enhanced tip/ring operation
- Business Cordless 905 telephone
- 6210 single-line telephone
- 6220 single-line telephone

Additional Topics

Additional topics covered include upgrading the system to Release 7.0, board renumbering, some new troubleshooting scenarios, and two new error codes.

Control Unit Modules

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New control unit modules have been developed for Release 7.0 of the MERLIN LEGEND Communications System. One of the modules supports MLX telephones, and two of the modules support enhanced tip/ring telephones. In addition, one module supports Caller ID when it is subscribed to from the central office.

The following are the new control unit modules for Release 7.0:

- 016 ETR
- 016 MLX
- 412 LS-ID-ETR

Another module, the 408 GS/LS-ID-MLX module, has been introduced in a previous release of the system, but now its Caller ID functionality is supported in Release 7.0 and later systems.

408 GS/LS-ID-MLX Module

The 408 GS/LS-ID-MLX module combines four line/trunk ports with eight MLX telephone ports. The module also supports the transmission of Caller ID information when the customer subscribes to Caller ID from the central office.

NOTE:
While the 408 GS/LS-ID-MLX module is fully backwards compatible, the Caller ID functionality is supported only in Release 7.0 and later systems.

You can program the four line/trunk ports for loop-start or ground-start operation. Caller ID requires loop-start operation.

Like the 408 GS/LS-MLX module, the 408 GS/LS-ID-MLX module has a dedicated power-failure transfer jack, the topmost, that functions as a tip/ring port in the event of a power failure.

016 ETR Module

The 016 ETR module supports up to 16 enhanced tip/ring telephones. You can program ports 11 through 16 for tip/ring operation. Once these ports are programmed for tip/ring operation, you can connect single-line telephones, fax machines, and other standard tip/ring devices to the ports.

NOTE:
When you change a port on an 016 ETR module from ETR to tip/ring operation, or from tip/ring to ETR operation, all programming assigned to the extension is cleared (in other words, the extension is removed from coverage groups, calling groups, etc.). All settings for the extension revert to the factory settings, including calling restrictions and button assignments.

The 016 ETR module also contains four touch-tone receivers (TTRs).

016 MLX Module

With the addition of the 016 MLX module, you can now have up to 200 digital endpoints on the MERLIN LEGEND Communications System. Each 016 MLX module supports 16 MLX telephones.

NOTE:
If you use the 016 MLX module in your system, you must also have a CKE4 or later processor module. If the system has a CKE3 or earlier processor, ports 9–16 of the 016 MLX module do not function.

Operator positions are supported on the 1st, 5th, 9th, and 13th jacks.

412 LS-ID-ETR Module

The 412 LS-ID-ETR module provides four loop-start line/trunk jacks and 12 jacks for the connection of enhanced tip/ring telephones. The two series of enhanced tip/ring telephones that work with the MERLIN LEGEND System Release 7.0 or later are the ETR and MLS telephones.

You also can program ports 9 through 12 to be tip/ring ports. Once these ports are programmed for tip/ring operation, you can connect single-line telephones, fax machines, and other standard tip/ring devices to the ports.

NOTE:
When you change a port on a 412 LS-ID-ETR module from ETR to tip/ring operation, or from tip/ring to ETR operation, all programming assigned to the extension is cleared (in other words, the extension is removed from coverage groups, calling groups, etc.). All settings for the extension revert to the factory settings, including calling restrictions and button assignments.

The 412 LS-ID-ETR module also contains two touch-tone receivers (TTRs).

In addition to supporting enhanced tip/ring telephones, the 412 LS-ID-ETR module supports Caller ID information when the customer subscribes to that central office service.

Unlike other line/trunk modules, the 412 LS-ID-ETR module (Release 7.0 and later systems) does not have a dedicated jack for a power-failure telephone. Instead, in the event of a power failure, the top extension port automatically becomes a tip/ring port and receives dial tone from the first loop-start line port. You then can plug in a single-line telephone to make calls outside the system. You cannot use an ETR or MLS telephone.

Line and Extension Jacks

Although the different modules have different numbers of ports, the positioning of the ports remains relatively the same. Port 1 on a module is always the lowest physical jack. On a module that has both line and extension jacks, the extension jacks are located on the bottom of the module, and the line jacks are on top of the extension jacks. The numbering of the ports starts with the lowest extension jack and continues sequentially up the module through the line jacks.

For example, on a 408 GS/LS-ID-MLX module, the eight ports on the bottom of the module are the extension jacks. The four ports at the top are the line jacks. The numbering of the ports starts at the bottom with 01 to 08 for the extension jacks and 09 to 12 for the line jacks.

Jack Orientation

The jacks on the 016 ETR and the 412 LS-ID-ETR modules face the opposite way from jacks on modules designed for releases before

Release 7.0. The latch on the 016 ETR and the 412 LS-ID-ETR jacks is on the right; in previous modules the latch is on the left.

Determining ETR or T/R Functionality

To determine if a port on an 016 ETR or 412 LS-ID-ETR module is functioning in enhanced tip/ring or tip/ring mode, do either of the following:

- Print out the Extension Print Report. This shows the programming of the port as enhanced tip/ring (ETR) or tip/ring (T/R).
- View the extension `PROFILE` by following this Maintenance screen sequence: `MAINTENANCE`→`PORT`→`STATION`→`STATUS`. The programming of the port appears as enhanced tip/ring (ETR) or tip/ring (T/R).

100D Module and Common-Channel Signaling

CCS is not an option with T1 when you use a 100D module of apparatus code 517M15 or later. CCS is used primarily for an earlier “AT&T Proprietary” connection between a MERLIN LEGEND Communications System and a DEFINITY® or System 25® System. If CCS is required, a prior release of the module is needed. A 100D module of apparatus code 517M15 or later does not work in the following situations:

- If a 64-kbps clear data channel is required between connected systems *and* PRI is not an option.
- If the customer is replacing a 100D module programmed as CCS, either an older 100D module that supports CCS with T1 must be used, or PRI must be programmed on both connected systems.

Upgrading to Release 7.0

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WARNING:
System upgrades should be performed only by qualified technicians or service personnel. Installation or maintenance of this product by anyone other than qualified personnel may damage or impair the product; your limited warranty does not cover such damage. For details, see your limited warranty in Appendix A, "Customer Support Information," in System Programming.

NOTE:
Upgrading the MERLIN LEGEND Communications System to Release 7.0 may require replacing the processor module. The sections below indicate what is necessary for the upgrade. To perform the actual upgrade, refer to *System Programming* for detailed procedures.

Overview

This section contains an overview of upgrading from Releases 1.0, 1.1, 2.0, 2.1, 3.0, 3.1, 4.0, 4.1, 4.2, 5.0, 6.0, and 6.1 to Release 7.0. Before you begin the upgrade to Release 7.0, you need the following items:

- Any version of DOS SPM or WinSPM to back up system programming.
- WinSPM Release 2 or later, which contains SPM Version 7.15 or later to convert and restore system programming information.

  If SPM is already installed, the `Welcome to SPM` screen that appears when you start SPM identifies the version on both the last line of the console simulation window and in the upper left corner of the screen. If you have Version 7.15, `V7` appears in the upper left corner of the screen and `Version 7.15` appears on the last line of the console simulation window.

  NOTE:
  The version of SPM packaged with Intuity does not support conversion. The most current version of DOS or UNIX SPM is available for download from the NSAC bulletin board.

- A CKE4 or later processor module, if one is not already installed in the system.
- An R7.0 Forced Installation PCMCIA Memory Card.

Please note the following:

- If a new processor module is installed as part of the upgrade procedure, the system software is already installed. Use the R7.0 Forced Installation Memory Card only if you are upgrading a system and the processor module has not been replaced.

- If you are upgrading Releases 1.0/1.1 or 2.0/2.1 to Release 7.0, you need a new CKE4 processor module. Also, you must install a Release 7.0 CKE4 processor module for any earlier system release (1.0 to 6.1) that has a CKE3 or earlier processor module. The processor name appears on the label on the front of the module. If “CKE4” does not appear on the label, you must replace the module.

  As with previous releases, Release 2.B cannot be converted to 7.0.

- If you are using an 016 MLX module, you need a CKE4 or later processor module. The processor name appears on the label on the front of the module. If “CKE4” does not appear on the label, you must replace the module.

Upgrade Procedure

To upgrade to Release 7.0, you must back up, convert, and restore system programming information. Follow these steps:

1. Back up the system programming.

   This step creates a file containing system programming information. Any version of SPM may be used to back up system programming.

2. Install DOS SPM or WinSPM.

   - If you are using DOS SPM, you must have Version 7.15 to upgrade the system to Release 7.0. If DOS SPM Version 7.15 is already installed on your system, proceed to Step 3.
   - If you are using WinSPM, you must have Release 2.0 to upgrade the system to Release 7.0. If WinSPM Release 2.0 is already installed on your system, proceed to Step 3.

3. Convert your backup file.

4. Turn off the AC power switches on the control unit power supplies in the following order:
   a. Basic carrier
   b. Expansion carrier 1
   c. Expansion carrier 2
5. If the system already has a CKE4 or later processor module, proceed to Step 6. Otherwise, follow these steps to replace the processor module:
   a. Unplug the interface cords from the SPM and SMDR printer ports on the processor module.
   b. Remove the processor module from Slot 0.
   c. Install the new CKE4 or later processor module in Slot 0.
   d. Plug the interface cords into the SPM and SMDR printer ports on the processor module.
6. If a new processor module was installed in Step 5, go to Step 7. Otherwise, insert a Release 7.0 Forced Installation Memory Card into the PCMCIA memory card slot on the processor module.

   NOTE:
   Using the Forced Installation Memory Card causes a frigid start.

7. Turn on the AC power switches on the power supply modules in the control unit in the following order:
   a. Expansion carrier 2
   b. Expansion carrier 1
   c. Basic carrier
8. Restore the system programming.

NOTE:
The system is forced idle and cannot be used during this procedure.

9. Program new features. If you want to use the factory settings for the new Release 7.0 features, skip this step.

NOTE:
When upgrading from a networked Release 6.0 system (not a Release 6.1 system), the non-local dial plan extension ranges must be programmed to suit the customer's configuration.

For more detailed information and procedures (including error conditions and recovery, as well as procedures for translation conversion), see *Maintenance and Troubleshooting*, *System Programming and Maintenance,* and *System Programming*.

Programming the New Enhancements

After you have upgraded the system, you can program the new enhancements available in Release 7.0. Table 3-1 shows the programming sequences for these enhancements. For an explanation of these features, see the "New Features and Enhancements" section in this book.

Table 3-1. Programming New Enhancements

Feature	Sequence
Voice Announce (on Idle Only for MLX telephones)	`Extensions`→Dial ext. no.→`Enter`→ `SysProg`→`Start`→Choose a button→ `ListFeat`→More→More→More→More→ `VoiceAnnounce`

Priority Call Queuing	`Extensions`→More→`GrpCalling`→More→ `Priority`→Type group priority number→`Enter`
	
	`Extensions`→More→`GrpCalling`→More→ `Support`→Type support group number→ `Enter`

Tip/ring operation on 016 ETR and 412 LS-ID-ETR modules	`Extensions`→More→More→`ETR`→Type extension number→`Enter`→Type ETR tip/ring port→Select port type→`Enter`
Rotary Dial Enable on tip/ring ports	`Extensions`→More→More→`RotaryEnable`→ Type the extension number→`Enter`

Maintenance and Troubleshooting

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For Release 7.0 systems, new error codes have been added. Also, some additional troubleshooting scenarios have emerged. Finally, there is a suggestion about printing system reports.

New Error Codes

Release 7.0 adds two error codes.

Board Renumbering Error Code

A new error code has been added to indicate that a Board Renumber procedure occurred. The new error code number is 5802; this error remains in the Transient Error Log until it is manually removed.

After a board renumber has occurred and the system is functioning properly, you only have to remove the error from the Transient Error Log. If the system is not functioning properly, check the Transient Error Log to verify that a board renumber took place. Then compare the system's previous configuration to the one after board renumbering to determine if the board renumber caused logical IDs to shift.

ETR Error Code

A new error code has been added to indicate a problem with an enhanced tip/ring telephone or module. This new error code's number is 8001 and the description appears as UNEXPECTED ETR MESSAGE.

This error code can appear for any one of the following reasons:

- An unsupported enhanced tip/ring telephone is connected to a module.
- An ETR or MLS telephone is faulty.
- A 412 LS-ID-ETR or 016 ETR module is faulty.
- The software is showing the message in error.

If a single user complains that an ETR or MLS telephone is not working properly, check that the telephone is a supported model. If the telephone is a supported model, replace the faulty telephone. (Obviously, if the telephone is not a supported model, replace it with a telephone that is supported.)

If multiple ETR or MLS telephone users connected to the same ETR module complain that the telephones are not working properly, troubleshoot the module and replace it if necessary.

If no telephone users are complaining, clear the error from the error log.

New Troubleshooting Scenarios

The following are some additional troubleshooting scenarios that have occurred, along with their possible solutions.

Private Network Calling Problems

Add the following scenario to the section under "Call to Non-Local Extension: Silence or Fast Busy Tone."

Switch A can call Switch B across a private network, but when Switch B calls Switch A, Switch B receives a fast busy tone.

Possible Cause: *Switch B has more B-channels than Switch A. When Switch B calls Switch A, it is trying to establish contact on a higher number B-channel than Switch A has. Therefore, Switch B receives the fast busy tone.*

What To Do: Remove the extra B-channels from Switch B so that Switch B has the same number of B-channels as Switch A.

T1 to PRI Conversion

T1 to PRI conversion sometimes fails. Here is a typical scenario.

The hub system in a private network has two 100D modules configured as tandem PRI. The 100D module in Slot 5 used B-channel group 80, and the 100D module in Slot 10 used B-channel group 79. Then the 100D module in Slot 5 was reconfigured for T1, and the translations were backed up.

Whenever the 100D module in Slot 5 needs to be converted back to PRI, follow these steps to populate a B-channel group:

1. **Move a B-channel from group 79 to 80.**
2. **Select PRI for Slot 5.**
3. **Change the switch type to something other than LEGEND-PBX or LEGEND-Ntwk.**
4. **Change the switch type back to LEGEND-PBX or LEGEND-Ntwk.**

The B-channel group 78 will be occupied.

PRI B-Channel Alarms are Not Dropped

When a B-channel that has been assigned to a PRI B-channel group is removed from the group, the alarms on that B-channel are not automatically dropped. This causes the system to track alarms on facilities that are not in service. It also renders the channel useless when you try to reassign the B-channel.

In addition, even when you manually drop the PRI SVC AUDIT TIMEOUT alarm from the permanent alarm table, it reappears 15 minutes later after it tries to remove alarms from the B-channel.

To remove alarms from a B-channel that has been taken out of a PRI B-channel group, follow these steps:

1. **Manually drop the alarm or alarms.**
2. **Immediately back up the programming.**
3. **Verify that the alarm or alarms dropped in Step 1 has not been re-logged. If the alarm or alarms has been re-logged, return to Step 1 and follow the procedure.**
4. **Frigid-start the MERLIN LEGEND System.**
5. **Restore the backed-up programming.**

Powering Up After Troubleshooting

Whenever you power up a system after working on it, be sure that you power up all the carriers. If you do not turn on all the carriers, you may cause a cold-start. See “Powering Up the System” in Chapter 2 of the Installation Guide.

016 MLX Module Ports Not Working

Sometimes ports 1–8 on an 016 MLX module work, but not ports 9–16.

Possible Cause: *The processor module installed in the system is a CKE3 or earlier model.*

What To Do: Check the System Inventory screens to determine if a CKE3 or earlier processor module is installed. If so, replace the processor module with a CKE4 or later model.

Printing System Programming Reports

When you print system reports, if you select the ALL option, the reports take from 30 minutes to 6 hours to print, depending on the size of the system. You may want to schedule printing during off-peak hours.

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