Lucent Technologies
Bell Labs Innovations

INTUITY™ Messaging Solutions

Release 4

Supplement for Technicians

585-313-401
Comcode 108381104
Issue 2
March 2000

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Part 68: Answer-Supervision Signaling. Allowing this equipment to be operated in a manner that does not provide proper answer-supervision signaling is in violation of Part 68 Rules. This equipment returns answer-supervision signals to the public switched network when:

- Answered by the called station
- Answered by the attendant
- Routed to a recorded announcement that can be administered by the CPE user

This equipment returns answer-supervision signals on all DID calls forwarded back to the public switched telephone network. Permissible exceptions are:

- A call is unanswered
- A busy tone is received
- A reorder tone is received

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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 Nomérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la class A préscrites dans le reglement sur le brouillage radioélectrique édicté par le ministére des Communications du Canada.

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EMC Directive	89/336/EEC
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CE	The "CE" mark affixed to the equipment means that it conforms to the above directives.

Comments
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Acknowledgment
This document was prepared by Product Documentation, Lucent Technologies, Columbus, OH.

Contents

About This Book

Purpose

This book, *Lucent™ INTUITY™ Messaging Solutions Release 4 Supplement for Technicians, Issue 1*, 585-313-401 contains information on changes to the Lucent INTUITY system. These changes affect both the installation and maintenance books for the MAP/5P, MAP/5PV3, MAP/40, MAP/40P, MAP/100, and MAP/100P.

Intended Audiences

This book is intended primarily for the on-site service technician and system administrators. Secondary audiences include the following from Lucent Technologies:

- Field support
  - Technical Service Organization (TSO)
  - Global Support Organization (GSO)
- Helpline personnel

Release History

This is the second release of this book.

How to Use This Book

The information in this book is designed to either supplement or replace existing information in the MAP/5P, MAP/5PV3, MAP/40, MAP/40P, MAP/100, and MAP/100P maintenance and installation books.

Chapter 1, "Update for MAP/5P System Installation"

This chapter provides supplemental information. Use this information in conjunction with Appendix C, "Troubleshooting Procedures," in *Lucent INTUITY Messaging Solutions Release 4 MAP/5P System Installation*, 585-310-185.

Chapter 2, "Update for MAP/40P or MAP/100 System Installation"

This chapter provides supplemental information. Use this information in conjunction with Appendix C, "Troubleshooting Procedures," in *Lucent INTUITY Messaging Solutions Release 4 MAP/40P System Installation*, 585-310-196 or in *Lucent INTUITY Messaging Solutions Release 4 MAP/100 System Installation*, 585-310-173.

Chapter 3, "Update for Integration with MERLIN LEGEND Communications Systems"

This chapter provides additional troubleshooting procedures for switch integration with the MERLIN LEGEND Communication System in locations outside of the United States. Use this information in conjunction with the system installation books for each platform.

Chapter 4, "Installing Electromagnetic Conductance Reduction Equipment"

This chapter provides instructions for installing toroids and ferrites on the MAP/5P and the MAP/40P. Use this information in conjunction with Chapter 2, "Unpacking the Platform and Installing Nonassembled Hardware," in both *Lucent INTUITY Messaging Solutions Release 4 MAP/5P System Installation*, 585-310-185, and *Lucent INTUITY Messaging Solutions Release 4 MAP/40P System Installation*, 585-310-196.

Chapter 5, "Replacing or Installing Hardware Components"

This chapter provides instructions for installing the P5 200 MHz CPU circuit card, settings for the MAP/5P CMOS, installing the video controller circuit card, and the newest hard disk drives.

The P5 200 MHz CPU circuit card information replaces the “P5 120 MHz CPU Circuit Card” section of Chapter 5, “Replacing or Installing Circuit Cards,” in the MAP/40, MAP/40P, MAP/100, and MAP/100P platform maintenance books.

The MAP/5P CMOS settings applies to any MAP/5P motherboard used before the MAP/5PV3 and replaces information in the MAP/5P Maintenance book.

The information on the new video circuit card replaces the information in Chapter 6, “Replacing the Video Controller Circuit Card” in each of the platform maintenance books.

The information on the new hard disk drives replaces the jumper setting information in Chapter 6, “Replacing a Hard Disk Drive,” in each of the platform maintenance books.

Chapter 6, “Update for MAP/5PV3 Components”

This chapter lists the differences between the old and new MAP/5P systems, then includes either a list or shows graphics to illustrate the differences between the two systems. This information enhances or replaces the chapters in the MAP/5P maintenance book regarding the circuit cards, hard disk drive, and other components. Although the motherboard may be different, the circuit card configuration is the same for both the old and new MAP/5P systems.

This chapter also includes a procedure for replacing the motherboard in the new system and a list of the correct CMOS settings for the motherboard and system.

Chapter 7, “Installing the Base System Software”

This chapter provides the installation procedures for loading the base system software if Disk 0 fails. This chapter replaces the “Installing Base System Software” chapters in each of the platform maintenance books.

This chapter also provides the installation procedures for loading the Lucent INTUITY system software. This chapter replaces the “Installing Lucent INTUITY System Software” chapters in each of the platform maintenance books.

The information on installing the remote maintenance circuit card driver package replaces the “Installing the Remote Maintenance Circuit Card Software Package” section of Chapter 5, “Replacing or Installing Circuit Cards,” in each platform maintenance book.

Chapter 8, “Installing the Optional Feature Software”

This chapter provides the installation procedures for loading the optional feature software. This chapter replaces the “Installing Optional Feature Software” chapters in each of the platform maintenance books.

Chapter 9, “Installing an RFU”

This chapter provides the installation procedures for loading an RFU. This chapter replaces the “Installing an RFU” chapters in each of the platform maintenance books.

Conventions Used in This Book

This section describes the conventions used in this book.

Terminology

- The word “type” means to press the key or sequence of keys specified. For example, an instruction to type the letter “y” is shown as

  Type **y** to continue.

- The word "enter" means to type a value and then press ENTER. For example, an instruction to type the letter “y” and press ENTER is shown as

  Enter **y** to continue.

- The word “select” means to move the cursor to the desired menu item and then press ENTER. For example, an instruction to move the cursor to the start test option on the Network Loop-Around Test screen and then press ENTER is shown as

  Select `Start Test.`

- The Lucent INTUITY system displays *windows, screens, and menus*. “Windows” show and request system information (Figure 1 and Figure 2, respectively). “Screens” request that you enter a command at the `enter command:` prompt (Figure 3). “Menus” (Figure 4) present options from which you can choose to view another menu, or a screen or window.

- The words “subscriber” and “user” are interchangeable terms that describe a person administered on the Lucent INTUITY system. The word “user” is the preferred term in the text; however, “subscriber” appears on most of the screens.

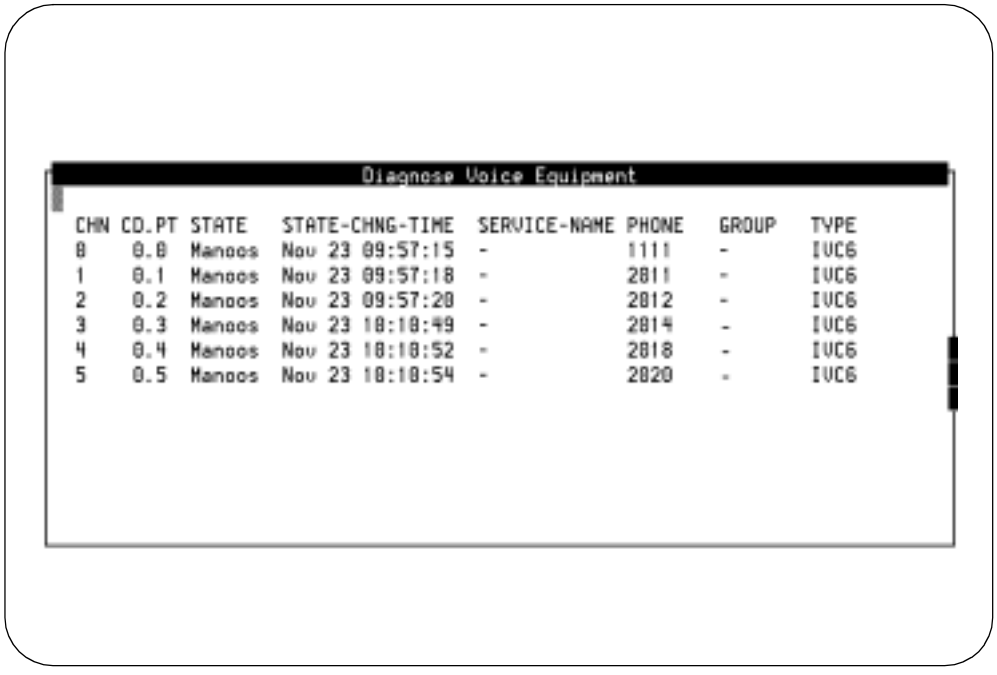

Figure 1. Example of an Lucent INTUITY Window

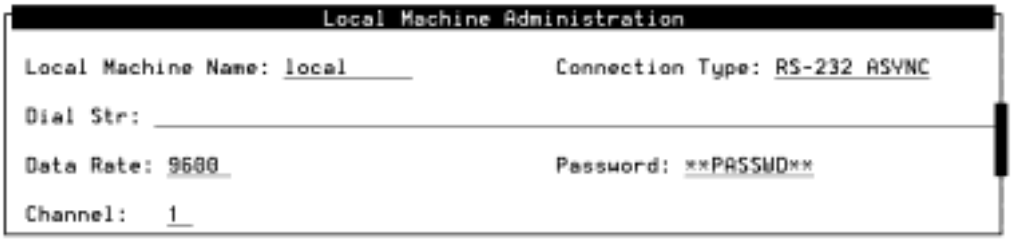

Figure 2. Example of an Lucent INTUITY Window

Figure 3. Example of an Lucent INTUITY Screen

Figure 4. Example of an Lucent INTUITY Menu

Terminal Keys

- Keys that you press on your *terminal or PC* are represented as rounded boxes. For example, an instruction to press the enter key is shown as

  Press ENTER.

- Two or three keys that you press at the same time on your *terminal or PC* (that is, you hold down the first key while pressing the second and/or third key) are represented as a series of separate rounded boxes. For example, an instruction to press and hold ALT while typing the letter “d” is shown as

Press ALT D.

- Function keys on your terminal, PC, or system screens, also known as *soft keys*, are represented as round boxes followed by the function or value of that key enclosed in parentheses. For example, an instruction to press function key 3 is shown as

  Press F3 (Choices).

- Keys that you press on your *telephone keypad* are represented as square boxes. For example, an instruction to press the first key on your telephone keypad is shown as

  Press 1 to record a message.

Screen Displays

- Values, system messages, field names, and prompts that appear on the screen are shown in typewriter-style `constant-width` type, as shown in the following examples:

  Example 1:

  Enter the number of ports to be dedicated to outbound traffic in the `Maximum Simultaneous Ports` field.

  Example 2:

  ```
  Alarm Form Update was successful.

  Press <Enter> to continue.
  ```

- The sequence of menu options that you must select to display a specific screen or submenu is shown as follows:

  Start at the Lucent INTUITY Main menu and select

  ```
  > Customer/Services Administration
      > Alarm Management
  ```

  In this example, you would access the Lucent INTUITY Main menu and select the Customer/Service Administration menu. From the Customer/Service Administration menu, you would then select the Alarm Management screen.

- Screens shown in this book are examples only. The screens you see on your machine will be similar, but not exactly the same.

Other Typography

- Commands and text you type in or enter appear in **bold type**, as in the following examples:

  Example 1:

  Enter **change-switch-time-zone** at the `enter command:` prompt.

  Example 2:

  Type **high** or **low** in the `Speed:` field.

- Command variables are shown in ***bold italic*** type when they are part of what you must type in and *regular italic* type when they are not, for example:

  Enter **ch ma *machine_name***, where *machine_name* is the name of the call delivery machine you just created.

Safety and Security Alert Labels

This book uses the following symbols to call your attention to potential problems that could cause personal injury, damage to equipment, loss of data, service interruptions, or breaches of toll fraud security:

CAUTION:
Indicates the presence of a hazard that if not avoided can or will cause minor personal injury or property damage, including loss of data.

WARNING:
Indicates the presence of a hazard that if not avoided can cause death or severe personal injury.

DANGER:
Indicates the presence of a hazard that if not avoided will cause death or severe personal injury.

SECURITY ALERT:
Indicates the presence of a toll fraud security hazard. Toll fraud is the unauthorized use of a telecommunications system by an unauthorized party.

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Related Resources

This section describes additional documentation and training available for you to learn more about installation of the Lucent INTUITY product.

Documentation

NOTE:
The *INTUITY Messaging Solutions Release 4 Documentation Guide*, 585-310-540, contains a detailed description of all books included in the Release 4 Lucent INTUITY documentation library. Always refer to the appropriate book for specific information on planning, installing, administering, or maintaining an Lucent INTUITY system.

It is suggested that you obtain and use the following books, based on your platform, in conjunction with this supplement:

- *INTUITY Messaging Solutions System Description*, 585-310-235, for a complete description of the Lucent INTUITY product and features
- *Lucent INTUITY Messaging Solutions Release 4 MAP/5P System Installation*, 585-310-185.
- *Lucent INTUITY Messaging Solutions Release 4 MAP/5P Maintenance*, 585-310-186.
- *Lucent INTUITY Messaging Solutions Release 4 MAP/40P System Installation*, 585-310-196.
- *Lucent INTUITY Messaging Solutions Release 4 MAP/40P Maintenance*, 585-310-197.

- *Lucent INTUITY Messaging Solutions Release 4 MAP/100 System Installation*, 585-310-173.
- *Lucent INTUITY Messaging Solutions Release 4 MAP/100 Maintenance*, 585-310-174.

It is suggested that you obtain and use the following book for information on security and toll fraud issues:

- *BCS Products Security Handbook*, 555-025-600

See the inside front cover for information on how to order Lucent INTUITY books.

Training

For more information on training for the Lucent INTUITY and other Lucent products, visit the Lucent Technologies training web site at www.lucenttraining.com.

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Update for MAP/5P System Installation

1

Overview

This chapter is an update to Appendix C, “Troubleshooting Procedures”, in *Lucent INTUITY™ Messaging Solutions Release 4 MAP/5P System Installation*, 585-310-185.

Purpose

The purpose of this chapter is to provide updated troubleshooting procedures for switch integration.

⚠ CAUTION:
Before you begin these troubleshooting procedures, you must have already completed all relevant procedures in Chapter 6, "Initial Administration for Switch Integration". See your switch administrator to verify the correct settings for your switch, if necessary, before beginning these troubleshooting procedures.

You may need to complete the following procedures if:

- Outcalling functions, including fax outcalling, do not work
- Disconnect tone is not recognized
- Calls are not transferred
- Dialtone is not detected

Due to the frequency limitations of the Lucent INTUITY system, there may be some problems in detecting the far-end disconnect in some countries. Additional administration may be required on the switch to ensure that the far-end disconnect is recognized.

By default, most switches use U.S. parameter settings for different switch tones in all countries. Therefore, all dial tone, busy tone detection, and reorder tones are based on U.S. settings. These tones do not create any problems in the internal call answer function. Problems arise in countries where the disconnect (usually busy) tone is provided by the network.

Therefore, when the voice is being coded or recorded from an external call and the external caller disconnects the call, the Lucent INTUITY system might not be able to do call progress tone detection or to detect the disconnect tone. In this case, the disconnect tone is recorded with the message until Lucent INTUITY finally times out.

NOTE:
This problem does not occur if the public switch network gives a polarity disconnect or wink disconnect. The polarity disconnect or wink disconnect option needs to be ordered from the central office, if possible.

Setting Frequencies and Frequency Groups for Call Progress Tones

Use this procedure to set the country-specific and switch-specific frequencies and frequency groups that the Lucent INTUITY system uses to recognize call progress tones that the switch sends.

Each call progress tone is made up of one or two frequencies. Accordingly, a frequency group is either a single frequency or a set of two frequencies that you define as a group so the group can then be assigned to a particular type of tone.

The frequencies and frequency groups set on this window are also displayed on the following windows used to set the parameters for call progress tones. See “Setting Parameters for Basic Call Progress Tones” on page 1-8 and “Setting Additional Call Progress Tones” on page 1-13.

- Windows for basic call progress tones:
  - Dial Tone window
  - Busy Tone window
  - Reorder Tone window
  - Ring Tone window
  - Stutter Tone window

- Windows for custom-specified call progress tones:
  - First Additional Tone window
  - Second Additional Tone window
  - Third Additional Tone window

The required frequencies may differ for the five types of call progress tones, though in general each country (or switch) uses a small number of frequencies to define all tones. In some cases a single frequency is used for all tones.

NOTE:
Besides frequency, call progress tones are also distinguished by *cadence*, that is the number and duration of ON/OFF cycles that compose the tone. The cadence is set on the various tone windows. See "Setting Parameters for Basic Call Progress Tones" on page 1-8 and below.

For ease of administration of the call progress tones, you can assign as many as three distinct frequency groups that contain appropriate sets of frequencies (one, two, or three frequencies) to cover all the types of tones your system uses.

This procedure also allows you to enable *dial tone training*. In dial tone training, the system analyzes the dial tone that the switch sends to determine its constituent frequencies. If the frequencies obtained from the analysis differ from the frequencies set in your Lucent INTUITY system, these settings are automatically overwritten with the values obtained from analysis. (See "Example" on page 1-7 following Table 1-1 on page 1-6 for more information.)

Complete the following procedure to set call frequencies and call frequency groups for call progress tones:

1. Start at the Lucent INTUITY main menu (Figure 1-1).

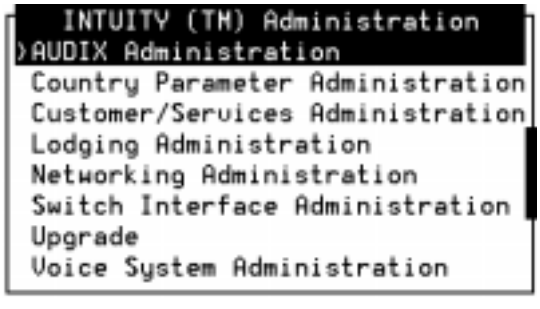

Figure 1-1. Lucent INTUITY Main Menu

2. Select

```
> Switch Interface Administration
    > Telephony Interface Administration
        > Analog Interface
            >Switch Tones
                Frequency Specification
```

The system displays the Frequency Specification window (Figure 1-2) with defaults for your integration. If the parameters have been previously administered, the system displays the current values instead.

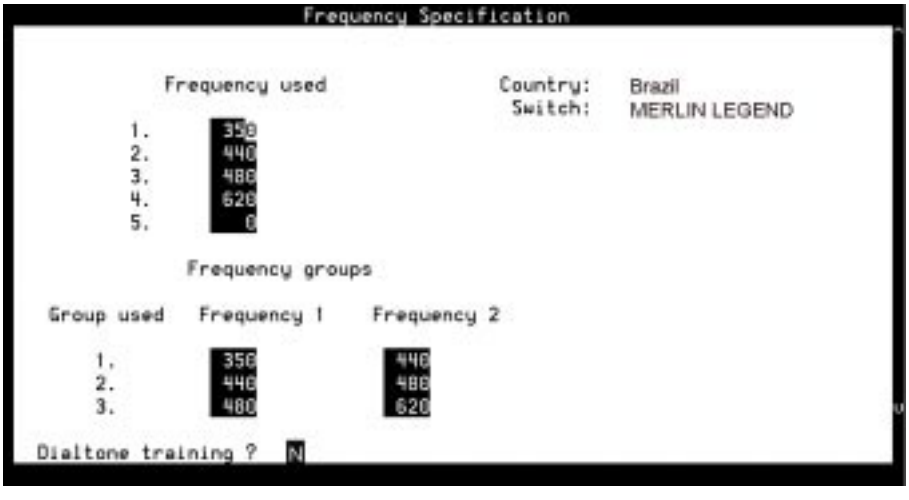

Figure 1-2. Frequency Specification Window

3. Enter values in the `Frequency used` fields, as necessary to represent all the frequencies used for all the tones in your system (see Table 1-1).

NOTE:
You must enter disconnect tone frequencies first. If only one frequency is used for disconnect tone, enter it in the first `Frequency used` field. If two frequencies are used, enter them first and second.

If all the `Frequency used` fields are filled and there is no vacant field, the Ringtone frequency field can be deleted and replaced with some other field. If there is a field with no entry, then the disconnect tone entry should be placed in the first `Frequency Used` field and the ringtone frequency should be deleted.

NOTE:
If you have already completed a tone capture analysis, these values should match the values from the `Frequency 1` field and the `Frequency 2` field on the "Tone Capture and Analysis Window" on page 1-18.

4. In the `Group used` row, enter frequencies in the `Frequency 1` and `Frequency 2` fields for frequency group 1 (see Table 1-1 on page 1-6).
5. Repeat Step 4 for additional frequency groups that you want to set (see Table 1-1).
6. Enter **n** in the `Dialtone training?` field.
7. Press F3 (Save).

   The system displays the following message:

   ```
   Your changes have been saved. You need to restart the
   Voice System to make these changes active.
   ```

8. Press F1 (Acknowledge Message).
9. Press F6 (Cancel) five times to return to the Lucent INTUITY main menu (Figure 1-1 on page 1-3).

Table 1-1. Frequency Specification Window — Field Descriptions

Field	Description	Values
`Country:`	Displays the country set on the Switch Selection window.	Display only.
`Switch:`	Displays the switch type set on the Switch Selection window.	Display only.
`Frequency used (five fields)`	Enables you to list up to five different frequencies used in the country for which you are setting tones. The values you enter here are displayed on the Busy Tone, Dial Tone, Reorder Tone, Ring Tone, Stutter Tone, First Additional Tone, Second Additional Tone, and Third Additional Tone windows. **NOTE:** You *must* specify the frequencies used for disconnect as the first tones in this list.	Range 300-4000 Hz. Unused frequency fields are indicated by 0 (zero). **NOTE:** The first frequency can *never* be 0. If a frequency is 0, the following frequencies on the list must also be 0. The system will treat them as 0 even if they are set to another value.
`Group used`	Provides a reference number (1, 2, or 3) for each of the three frequency groups you can set.	1, 2, or 3. Display only.

Table 1-1. Frequency Specification Window — Field Descriptions

Field	Description	Values
`Frequency 1`	Defines the first frequency in a set of two (maximum) frequencies that can make up a tone.	Frequencies used in these groups must be defined in the `Frequency used` fields. If a frequency group is unused, by default the values for both Frequency 1 and Frequency 2 are zero (0). **NOTE:** If a group has only one frequency, enter that frequency in the `Frequency 1` field and enter zero (0) in the `Frequency 2` field.
`Frequency 2`	Defines the second frequency in a set of two (maximum) frequencies that can make up a tone.	
`Dialtone training?`	Specifies whether your system uses dial tone training. Thus, if your system uses the same frequencies for other call progress tones besides dial tone, you can define two different groups using the same frequencies. One group can be used for dial tone and the other group for other call progress tones.	■ y to enable dial tone training ■ n to disable dial tone training If the dial tone on your system is not continuous, the dial tone training flag is internally set to N and the system ignores this field.

(2 of 2)

Example

Suppose dial tone is 440 Hz + 480 Hz, and you want to assign Group 1 for dial tone. To do so, enter 440 in the `Frequency 1` field and 480 in the `Frequency 2` field for Group 1. Later when defining dial tone on the Dial Tone window, you can simply specify that it uses Group 1 and the system will recognize the correct frequencies.

Special Considerations for Dial Tone Training

If dial tone training is enabled, the system overwrites the frequencies assigned for dial tone with whatever frequencies dial tone training analysis detects. The system is configured to expect the first frequency or frequencies on the list on the `Frequency used` field to be for dial tone. If dial tone training detects only one

frequency in the dial tone, the system overwrites the first frequency specified. If it detects two frequencies in the dial tone, the system overwrites the first two frequencies.

CAUTION:
Any changes to the frequencies made through dial tone training are not indicated on the windows in the user interface.

Problems may arise, however, if the switch tones for dial tone are not precisely tuned. For example, suppose your system is configured to expect the single frequency of 440 Hz for dial tone and all other tones and that 440 Hz is listed as the first and only frequency in the `Frequency Used` field. Suppose further that dial tone training detects 441 Hz as the actual frequency sent by the switch. The system overwrites 440 Hz with 441 Hz. In this case, the system will recognize dial tone but not any of the other switch tones.

To ensure that this sort of problem does not occur, it is recommended that you enter the frequency or frequencies used for dial tone more than once in the `Frequency used` field. In the example above, then entry would be:

Frequency used	
1.	440
2.	440

If your system uses 350 and 440 Hz, the recommended entry would be:

Frequency used	
1.	350
2.	440
3.	350
4.	440

Setting Parameters for Basic Call Progress Tones

Use this procedure to set the frequencies and cadence your system recognizes for call progress tones that the switch sends. Parameters can be set for the five basic call progress tones — busy tone, dial tone, reorder tone, ring tone, and stutter tone. Each tone is made up of one or two frequencies and consists of a series of ON and OFF timing cycles, called the *cadence*.

This procedure also allows you to specify whether the Lucent INTUITY system should interpret the tone you are setting as a disconnect signal (if call progress tones are used for disconnects in your system).

1. Starting at the Lucent INTUITY main menu (Figure 1-1), select

```
> Switch Interface Administration
    > Telephony Interface Administration
        > Analog Interface
            >Switch Tones
```

The system displays the Switch Tones menu (Figure 1-3).

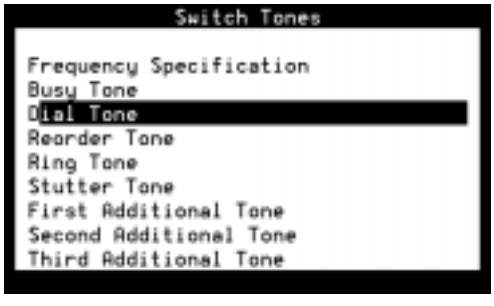

Figure 1-3. Switch Tones Menu

2. Select one of the following menu items corresponding to the tone you want to set:
   - Busy Tone
   - Dial Tone
   - Reorder Tone
   - Ring Tone
   - Stutter Tone

   The system displays the appropriate window for the tone you selected with defaults for your integration. If the parameters have been previously administered, the system displays the current values instead. The window also displays the frequency groups set in the Frequency Specification window (Figure 1-2 on page 1-4).

NOTE:
Figure 1-4 on page 1-10 shows the Dial Tone window. Windows for the other basic tones are identical except for their titles.

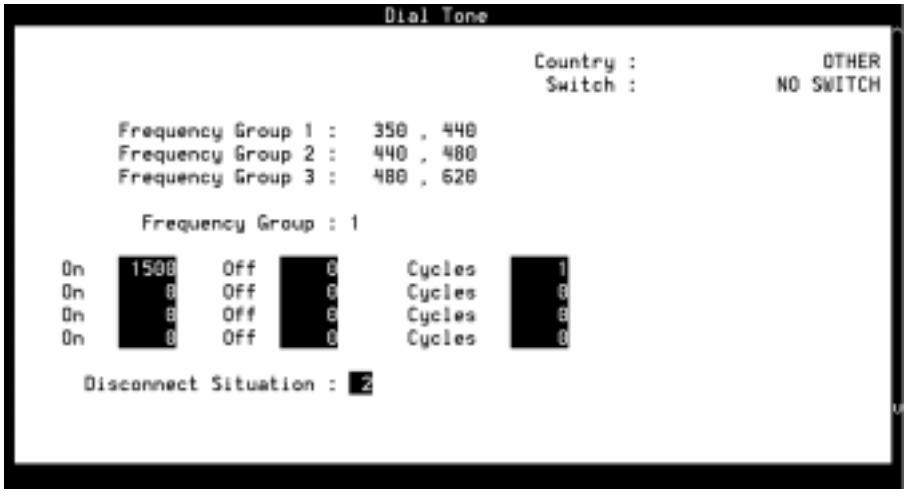

Figure 1-4. Example of Switch Tone Window — Dial Tone

3. In the `Frequency group` field, select one of the frequency groups (1, 2, or 3) displayed at the top of the window for the system to use for this tone.

   NOTE:
   These groups are assigned on the Frequency Specification window.

4. Enter values in the `On`, `Off`, and `Cycles` fields (see Table 1-2 on page 1-11), as necessary to represent the tone cadence. (See the examples following Table 1-2 for information on how to represent the cadence.)

   NOTE:
   If you set stutter tone, be sure the timing used for continuous tone (minimum on duration) matches the timing used for continuous tone on the dialtone screen. For example, if dialtone is set as continuous tone, minimum 2 seconds, then stutter tone might be 200 msec ON, 200 msec OFF (3 cycles) followed by continuous tone, minimum 2 seconds.

5. Enter the appropriate value in the `Disconnect Situation` field, depending on whether your system interprets this type of tone as a disconnect signal (see Table 1-2).

6. Press F3 (Save).

   The system displays the following message:

   ```
   Do you wish to continue with this change (Y/N)?
   ```

7. Enter **y**

   The system displays the following message:

   ```
   Your changes been saved. You need to stop and start the
   Voice System to make these changes active.
   ```

8. Press F1 (Acknowledge Message).

9. Do you want to set the frequency and cadence for another tone?

   - If no, press F6 (Cancel) five times to return to the Lucent INTUITY main menu (Figure 1-1). You have completed this procedure.
   - If yes, do the following:

     a. Press F6 (Cancel) to return to the Switch Tones menu.

     b. Repeat Steps 2 on page 1-9 through 9 on this page for the tone you select.

Table 1-2. Basic Tone Windows – Field Descriptions

Field	Description	Values
NOTE: These field descriptions apply to all the windows used for setting the five basic call progress tones, including the Busy Tone, Dial Tone, Reorder Tone, Ring Tone, and Stutter Tone windows.		
`Country`	Displays the country set on the Switch Selection window.	Display only.
`Switch`	Displays the switch type set on the Switch Selection window.	
`Frequency Group 1:`	These fields display the frequency groups set on the Frequency Specification window (Figure 1-2).	
`Frequency Group 2:`		
`Frequency Group 3:`		
`Frequency Group:`	Sets the group of frequencies the system uses to generate the selected tone (see Figure 1-2).	1, 2, or 3. You can specify only one frequency group per tone.

(1 of 2)

Table 1-2. Basic Tone Windows – Field Descriptions

Field	Description	Values
On	Sets the duration of the tone cadence ON cycle.	Range 0-6000 msec. If an ON timing is 0, it is assumed that the row is blank, and that the OFF timing and cycles are also 0 (see "Examples" on page 1-12).
Off	Sets the duration of the tone cadence OFF cycle.	
Cycles	Sets the number of times an ON/OFF cycle repeats.	A cycle consists of an ON duration and an OFF duration of specified lengths (see "Examples" on page 1-12).
Disconnect Situation:	Specifies when the tone should be treated as a disconnect signal. **NOTE:** This parameter is significant only in countries where disconnect signaling is done using call progress tones.	■ 0 — Do not treat as disconnect. ■ 1 — Treat as disconnect during voice coding only. ■ 2 — Treat as disconnect at all times except outcalling.
Report as	Specifies the type of tone you are defining.	■ Busy ■ Dial ■ Ringback ■ Reorder ■ Stutter

(2 of 2)

Examples

The ON/OFF cycles that make up the cadence of a call progress tone must be specified in order. These examples illustrate how the cadence is set on the basic call progress tone windows.

- Four rows are needed to specify the following tone:

  250 msec ON, 250 msec OFF
  500 msec ON, 500 msec OFF
  250 msec ON, 250 msec OFF
  500 msec ON, 500 msec OFF

```
On    250       Off   250       Cycles   1
On    500       Off   500       Cycles   1
On    250       Off   250       Cycles   1
On    500       Off   500       Cycles   1
```

- Three rows are needed for the following tone. Since the first two cycles repeat exactly (250 msec ON, 250 msec OFF), their setting can be entered once and specified as repeating twice (2 cycles).

  250 msec ON, 250 msec OFF
  250 msec ON, 250 msec OFF
  500 msec ON, 500 msec OFF
  250 msec ON, 250 msec OFF

```
On    250       Off   250       Cycles   2
On    500       Off   500       Cycles   1
On    250       Off   250       Cycles   2
```

Setting Additional Call Progress Tones

In some cases you may need to assign more than one set of parameters for a certain call progress tone. For example, if your switch and the switch at your public telephone network office use different dial tone parameters, you may need to set both in your INTUITY system.

Use this procedure to set the frequencies and cadence the INTUITY system recognizes for additional call progress tones. As many as three additional tones can be specified as either busy tone, dial tone, reorder tone, ring tone, or stutter tone. Like the basic tones (see "Setting Parameters for Basic Call Progress Tones" on page 1-8), each additional tone is made up of one or two frequencies and consists of a series of on and off timing cycles (cadence).

NOTE:
Unlike for basic tones, here you cannot enable any additional tone you set to be recognized as a disconnect signal.

1. Starting at the Lucent INTUITY main menu (Figure 1-1), select

```
> Switch Interface Administration
    > Telephony Interface Administration
        > Analog Interface
            >Switch Tones
```

The system displays the Switch Tones menu (Figure 1-5).

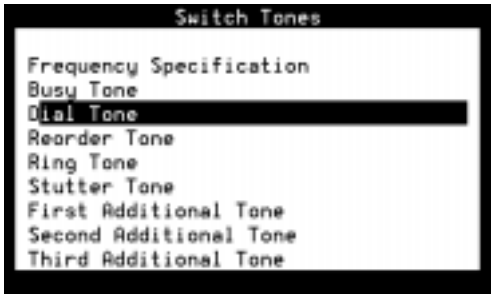

Figure 1-5. Switch Tones Menu

2. Select one of the following menu items corresponding to the additional tone you want to set:
   - `First Additional Tone`
   - `Second Additional Tone`
   - `Third Additional Tone`

   The system displays the appropriate window for the tone you selected. If the parameters have been previously administered, the system displays the current values instead. If the parameters have not been previously administered, the value in the `Report as` field is `unused`. The window also displays the frequency groups set in the Frequency Specification window (Figure 1-2).

   Figure 1-6 shows the First Additional Tone window. Windows for the other additional tones are identical except for their titles.

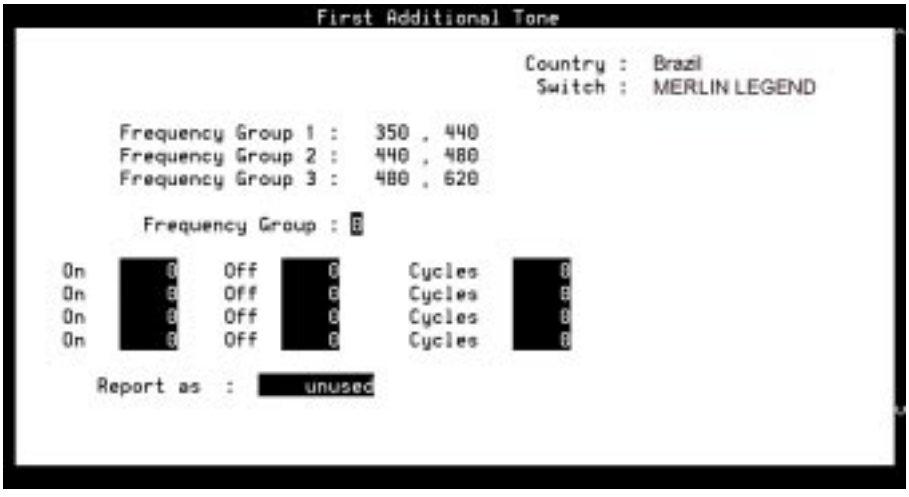

Figure 1-6. Example of Additional Tone Window — First Additional Tone

3. In the `Frequency Group:` field, select one of the frequency groups (1, 2, or 3) displayed at the top of the window for the system to use for this tone (See Table 1-2 on page 1-11).

   NOTE:
   These groups are assigned on the Frequency Specification window.

4. Enter values in the `On`, `Off`, and `Cycles` fields as necessary to represent the tone cadence.

   See ''Examples'' on page 1-12 for information on how to represent the cadence.

   NOTE:
   If you set stutter tone, be sure the timing used for continuous tone (minimum on duration) matches the timing used for continuous tone on the dialtone screen. For example, if dialtone is set as continuous tone, minimum 2 seconds, then stutter tone might be 200 msec ON, 200 msec OFF (3 cycles) followed by continuous tone, minimum 2 seconds.

5. Enter the appropriate tone name in the `Report as:` field (see Table 1-3 on page 1-16), corresponding to the additional basic tone you are defining.

   For example, if you are defining an additional dial tone, enter **dial**

6. Press F3 (Save).

   The system displays the following message:

   `Do you wish to continue with this change (Y/N)?`

7. Enter **y**

   The system displays the following message:

   ```
   Your changes been saved. You need to stop and start the
   Voice System to make these changes active.
   ```

8. Press F1 (Acknowledge Message).
9. Do you want to define another additional tone?
   - If no, press F6 (Cancel) five times to return to the Lucent INTUITY main menu (Figure 1-1). You have completed this procedure.
   - If yes, do the following:
     a. Press F6 (Cancel) to return to the Switch Tones menu.
     b. Repeat Step 2 on page 1-9 through Step 9 on this page for the tone you selected.

Table 1-3. Additional Tone Windows— Field Descriptions

Field	Description	Values
NOTE: These field descriptions apply to all windows used for setting the three additional call progress tones, including the First Additional Tone, Second Additional Tone, and Third Additional Tone windows.		
`Country`	See Table 1-2.	
`Switch`		
`Frequency Group 1:`		
`Frequency Group 2:`		
`Frequency Group 3:`		
`On`		
`Off`		
`Cycles`		
`Report as:`	Specifies the type of tone you are defining.	■ Busy ■ Dial ■ Ringback ■ Reorder ■ Stutter

10. Press F6 (Cancel) four times to return to the Lucent INTUITY main menu (Figure 1-1).

Determining Call Progress Tones

Use the Tone Capture and Analysis Screen (Figure 1-7 on page 1-18) to evaluate call progress tones on various switches in cases where the system defaults must be tuned. This tool enables you to:

- Use a set of OPCODE commands to simulate a call scenario that makes the switch generate a tone
- Capture the tone
- Analyze the tone to determine its frequency and cadence

After analysis, you can tune the tone parameters set in the Lucent INTUITY system to match the actual switch parameters by accessing the appropriate window in the telephony interface: Dial Tone, Busy Tone, Reorder Tone, Ringback Tone or Stutter Tone window.

1. Starting at the Lucent INTUITY main menu (Figure 1-1), select

```
> Switch Interface Administration
    > Telephony Interface
        > Tone Capture and Analysis
```

The system displays the Tone Capture and Analysis window (Figure 1-7).

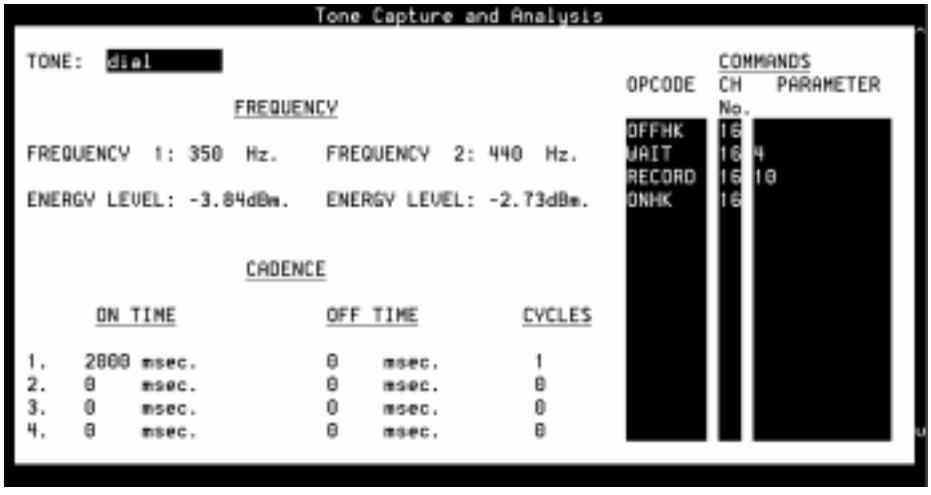

Figure 1-7. Tone Capture and Analysis Window

2. Enter a name for the tone you are to capture (see Table 1-4 on page 1-19).
3. Enter commands in the OPCODE, CH No., and PARAMETER fields (see Table 1-5 on page 1-21 and the examples following the table.)

   NOTE:
   Once the cursor is in the commands fields, you can press F8 (Change Keys) to access keys that allow you to delete a command line F4 (Delete Line), insert a command line F5 (Insert Line), or move the cursor to the Tone field F7 (Home).

   Press F8 (Change Keys) again to change to the original keys. Or, if you move the cursor out of the commands fields, the keys automatically change back.

4. Press F4 (Capture).

   The system captures the tone generated by the OPCODE commands.

5. Press F5 (Analyze).

   The system analyzes the captured tone and displays its frequency and cadence in the output fields on the window (see Table 1-4).

6. Do you want to save the commands for future use?
   - If no, go to Step 7.
   - If yes, do the following:
     a. Press F3 (Save).

        The system displays the following message:

```
Do you wish to continue with this change
(y/n)?
```

b. Enter **y**

NOTE:
To delete a tone name and its associated commands, position the cursor in the Tone field and press F8 (Delete Tone).

7. Press F6 (Cancel) three times to return to the Lucent INTUITY main menu (Figure 1-1).

Table 1-4. Tone Capture and Analysis Window — Input Fields

Field	Description	Values
TONE	Allows you to enter a name for the tone. Commands for capturing the tone are read from a file using this name. All output files are also generated using this name. If you save the OPCODE commands associated with this name, they are displayed whenever you enter the name in this field.	Maximum of 10 characters.
FREQUENCY 1: FREQUENCY 2:	These fields display the result of the tone frequency analysis, which can contain one or two frequency components. Frequency 1 is the lower frequency and Frequency 2 is the upper frequency.	■ If only one component is present, the Frequency 2 field is blank. ■ If no frequency is detected, both fields are blank. This may be a result of improper capturing of the tone.
ENERGY LEVEL: (two fields)	These fields display the results of analysis of the energy level of each frequency component.	Displayed in dBm.
ON TIME (four fields)	These fields display the results of analysis of the tone cadence ON time.	Displayed in msec.
OFF TIME (four fields)	These fields display the results of analysis of the tone cadence OFF time in.	Displayed in msec.

Table 1-4. Tone Capture and Analysis Window — Input Fields

Field	Description	Values
CYCLES (four fields)	These fields display the results of analysis of the number of occurrences of the ON time/OFF time cycles.	Integer.
OPCODE	Allows you to enter the **OPCODE** portion of the OPCODE command syntax.	Specifies the operation to be performed on the channel (seeTable 1-5).
CH. No.	Allows you to enter the required ***<CH_No.>*** portion of the OPCODE command syntax.	The port number on the Tip/Ring card.
PARAMETER	Allows you to enter the ***<PARAMETER>*** portion of the OPCODE command syntax.	An OPCODE-dependent qualifier. Not required for all OPCODE commands (see Table 1-5). Possible values are: ■ ***<duration>*** — Specifies the number of msec for the operation to be performed. ■ ***<digit_string>*** — Specifies a dial string. Valid characters are 0-9, #, and *.

(2 of 2)

The system recognizes the following OPCODE commands (Table 1-5).

Table 1-5. OPCODE Commands

Command	Description
OFFHK ***<CH_No.>***	Seizes the specified line.
ONKH ***<CH_No.>***	Emulates an on-hook condition on the specified line.
DIAL ***<CH_No.> <digit_string>***	Dials out dual-tone multifrequency (DTMF) digits through the specified line.
FLASH ***<CH_No.> <duration>***	Performs hook flash on the channel for the specified number of msec.
RECORD ***<CH_No.> <duration>***	Captures the pulse code modulation (PCM) data of the voice on the line and stores it in a file. The duration is specified in seconds and should be suitably chosen to capture a sufficient number of on/off cycles of the tone.
PLAY ***<CH_No.>***	Plays the stored tone on the specified channel.
WAIT ***<CH_No.> <duration>***	**Introduces a number of seconds of delay in execution of the next command. This command can be introduced anywhere in the command sequence.**

Examples

The command sequence shown in the window in Figure 1-7 on page 1-18 captures dial tone.

The following command sequence captures a busy tone:

Table 1-6.

OFFHK	**01**		Make line 01 busy.
DIAL	**01**	**1234**	Dial extension number of line 01.
OFFHK	**02**	**126**	Cause the switch to inject busy tone on line 02.
DIAL	**02**	**127**	Dial extension number of line 02.
RECORD	**02**	**3**	Record the tone for 3 seconds.
ONHK	**01**		Unbusy line 01.

Another way to capture busy tone is to do the following:

1. Identify a valid extension number (switch station).
2. Take the station offhook manually.
3. Use the following command sequence:

OFFHK	**01**		Make line 01 busy.
DIAL	**01**	***<number that you busied out by taking offhook>***	Dial extension <*number*>.
RECORD	**01**	**10**	Record the tone for 10 seconds.
ONHK	**01**		Unbusy line 01.

The following command sequence captures a stutter tone:

OFFHK	**01**		Make line 01 busy.
RECORD	**01**	**3**	Record the tone for 3 seconds.
ONHK	**01**		Unbusy line 01.

The following command sequence captures a ringback tone:

OFFHK	**01**		Make line 01 busy.
DIAL	**01**	**1234**	Dial extension 1234.
RECORD	**01**	**10**	Record the tone for 10 seconds.
ONHK	**01**		Unbusy line 01.

Update for MAP/40P and MAP/100 System Installation

2

Overview

This chapter is an update to Appendix C, “Troubleshooting Procedures”, in *Lucent INTUITY™ Messaging Solutions Release 4 MAP/40P System Installation*, 585-310-196 and in *Lucent INTUITY™ Messaging Solutions Release 4 MAP/100 System Installation*, 585-310-173.

Purpose

The purpose of this chapter is to provide updated troubleshooting procedures for switch integration.

⚠ CAUTION:
Before you begin these troubleshooting procedures, you must have already completed all relevant procedures in Chapter 6, “Initial Administration for Switch Integration”, in Lucent INTUITY Messaging Solutions Release 4 MAP/40P System Installation, 585-310-196 *or in Lucent INTUITY Messaging Solutions Release 4 MAP/100 System Installation*, 585-310-173*. See your switch administrator to verify the correct settings for your switch, if necessary, before beginning troubleshooting procedures.*

Tone Customization Update

Due to the frequency limitations of the Lucent INTUITY system, there may be some problems in detecting the far-end disconnect in some countries. Additional administration may be required on the switch to ensure that the far-end disconnect is recognized.

By default, most switches use U.S. parameter settings for different switch tones in all countries. Therefore, all dial tone, busy tone detection, and reorder tones are based on U.S. settings. These tones do not create any problems in the internal call answer function. Problems arise in countries where the disconnect (usually busy) tone is provided by the network.

Therefore, when the voice is being coded or recorded from an external call and the external caller disconnects the call, the Lucent INTUITY system might not be able to do call progress tone detection or to detect the disconnect tone. In this case, the disconnect tone is recorded with the message until Lucent INTUITY finally times out.

NOTE:
This problem does not occur if the public switch network gives a polarity disconnect or wink disconnect. The polarity disconnect or wink disconnect option needs to be ordered from the central office, if possible.

Frequency Specification Update

1. Start at the Lucent INTUITY main menu (Figure 2-1).

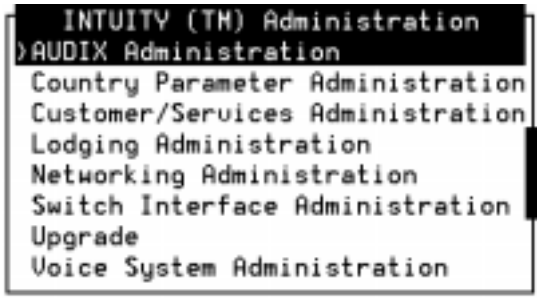

Figure 2-1. Lucent INTUITY Main Menu

2. Select

```
> Switch Interface Administration
    > Telephony Interface Administration
        > Analog Interface
            >Switch Tones
                Frequency Specification
```

The system displays the Frequency Specification window (Figure 2-2) with defaults for your integration. If the parameters have been previously administered, the system displays the current values instead.

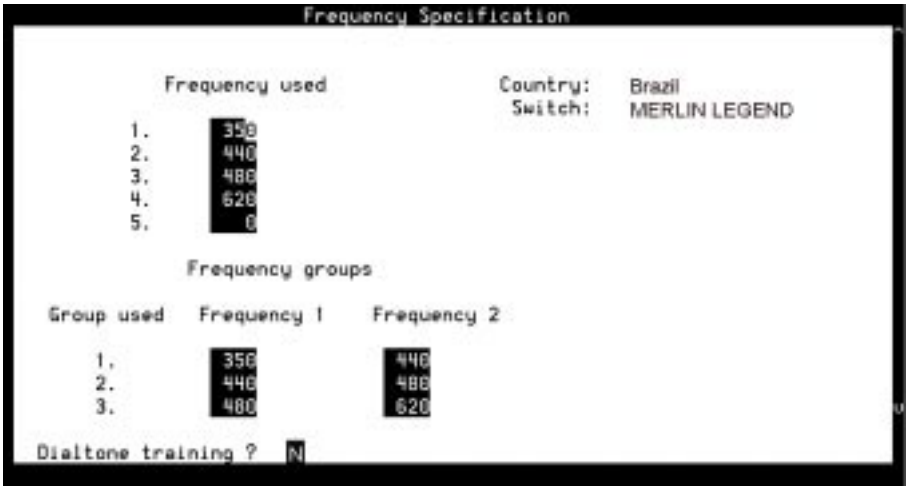

Figure 2-2. Frequency Specification Window

3. Enter values in the `Frequency used` fields, as necessary to represent all the frequencies used for all the tones in your system (see Table 2-1 on page 2-4).

Table 2-1. Frequency Specification Window — Field Descriptions

Field	Description	Values
`Country:`	Displays the country set on the Switch Selection window.	Display only.
`Switch:`	Displays the switch type set on the Switch Selection window.	Display only.
`Frequency used (five fields)`	Enables you to list up to five different frequencies used in the country for which you are setting tones. The values you enter here are displayed on the Busy Tone, Dial Tone, Reorder Tone, Ring Tone, Stutter Tone, First Additional Tone, Second Additional Tone, and Third Additional Tone windows. **NOTE:** You *must* specify the frequencies used for disconnect as the first tones in this list.	Range 300-4000 Hz. Unused frequency fields are indicated by 0 (zero). **NOTE:** The first frequency can *never* be 0. If a frequency is 0, the following frequencies on the list must also be 0. The system will treat them as 0 even if they are set to another value.
`Group used`	Provides a reference number (1, 2, or 3) for each of the three frequency groups you can set.	1, 2, or 3. Display only.

(1 of 2)

Table 2-1. Frequency Specification Window — Field Descriptions

Field	Description	Values
`Frequency 1`	Defines the first frequency in a set of two (maximum) frequencies that can make up a tone.	Frequencies used in these groups must be defined in the `Frequency used` fields. If a frequency group is unused, by default the values for both Frequency 1 and Frequency 2 are zero (0). **NOTE:** If a group has only one frequency, enter that frequency in the `Frequency 1` field and enter zero (0) in the `Frequency 2` field.
`Frequency 2`	Defines the second frequency in a set of two (maximum) frequencies that can make up a tone.	
`Dialtone training?`	Specifies whether your system uses dial tone training. Thus, if your system uses the same frequencies for other call progress tones besides dial tone, you can define two different groups using the same frequencies. One group can be used for dial tone and the other group for other call progress tones.	■ y to enable dial tone training ■ n to disable dial tone training If the dial tone on your system is not continuous, the dial tone training flag is internally set to N and the system ignores this field.

(2 of 2)

NOTE:
You must enter disconnect tone frequencies first. If only one frequency is used for disconnect tone, enter it in the first `Frequency used` field. If two frequencies are used, enter them first and second.

If all the `Frequency used` fields are filled and there is no vacant field, the Ringtone frequency field can be deleted and replaced with some other field. If there is a field with no entry, then the disconnect tone entry should be placed in the first `Frequency Used` field and the ringtone frequency should be deleted.

NOTE:
If you have already completed a tone capture analysis, these values should match the values from the `Frequency 1` field and the `Frequency 2` field on the “Tone Capture and Analysis Window” in Appendix C, “Troubleshooting Procedures”, in *Lucent INTUITY Messaging Solutions Release 4 MAP/40P System Installation,*

585-310-196 or in the *Lucent INTUITY Messaging Solutions Release 4 MAP/100 System Installation* book.

Update for Integration with MERLIN LEGEND Communications System

3

Overview

This chapter contains additional troubleshooting procedures for switch integration with the MERLIN LEGEND® outside of the U.S. You may need to complete the following procedures if:

- Disconnect tone is not recognized
- Dial tone is not detected
- Outcalling functions, including fax outcalling, do not work
- Calls are not transferred

NOTE:
See your switch administrator to verify the correct settings for your switch if necessary.

Purpose

The purpose of this chapter is to ensure proper integration of the MERLIN LEGEND Communications system with the Lucent INTUITY™ system in markets outside of the U.S.

Disconnect Tone Is Not Recognized

Due to the frequency limitations of the Lucent INTUITY system, there may be some problems in detecting the far-end disconnect in some countries. Additional administration may be required on the switch to ensure that the far-end disconnect is recognized.

By default, the MERLIN LEGEND uses U.S. parameter settings for different switch tones in all countries. Therefore, all dial tone, busy tone detection, and reorder tones are based on U.S. settings. These tones do not create any problems in the internal call answer function. Problems arise in countries where the disconnect (usually busy) tone is provided by the network.

Therefore, when the voice is being coded or recorded from an external call and the external caller disconnects the call, the Lucent INTUITY system might not be able to do call progress tone detection or to detect the disconnect tone. In this case, the disconnect tone is recorded with the message until Lucent INTUITY system finally times out.

NOTE:
This problem does not occur if the public switch network gives a polarity disconnect or wink disconnect. The polarity disconnect or wink disconnect option needs to be ordered from the central office, if possible.

Additional administration of the switch tones is required for the central office-based disconnect recognition. This administration can be done on-site for specific cases. This work around could involve a trade-off between detecting MERLIN LEGEND ring tones versus the network disconnects.

The following procedures need to be completed if calls are not disconnected:

- Tone capture and analysis
- Frequency specification
- Tone specification
- First additional tone specification

Tone Capture and Analysis

There are two methods for Tone Capture and Analysis. These methods are:

- External call
- Call through INTUITY AUDIX®

External Call Method

Under this method, a call is made from an outside number to a number on INTUITY AUDIX. This call is received on the channel selected for tone capture. The caller then disconnects and the disconnect tone frequency and cadence is recorded on the Tone Capture and Analysis Screen.

Complete the following procedures for the external call method:

1. Speak to the telephone service providers and get information about the disconnect tone and disconnect frequencies.
2. Start at the Lucent INTUITY main menu (Figure 3-1 on page 3-3).

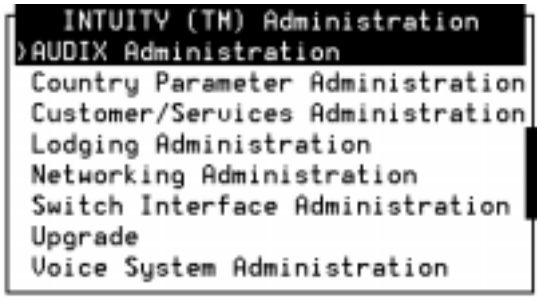

Figure 3-1. Lucent INTUITY Main Menu

3. Select

> Switch Interface Administration
>
> > Telephony Interface
> >
> > > Tone Capture and Analysis

The system displays the Tone Capture and Analysis window (Figure 3-2).

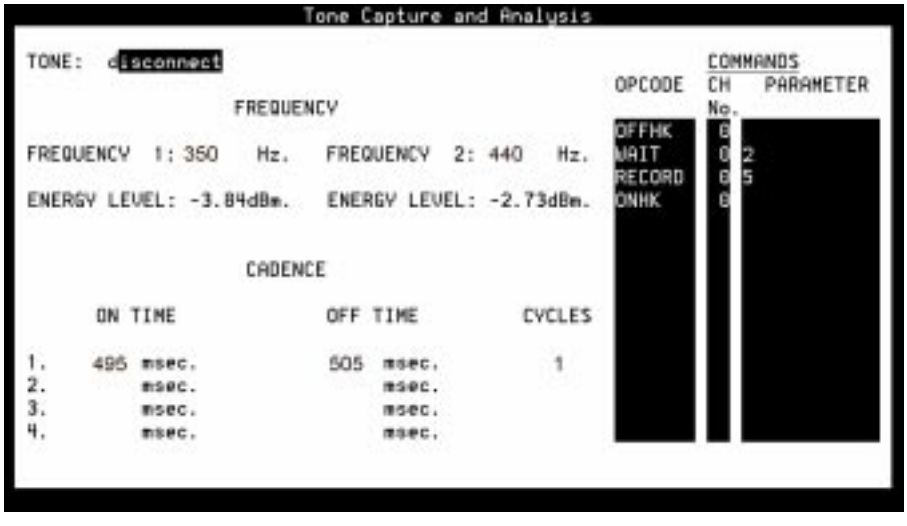

Figure 3-2. Tone Capture and Analysis Window

4. Enter a name for the tone you want to capture in the `Tone:` field. For example, for disconnect not recognized enter **disconnect** or for dial tone not recognized, enter **dial**
5. Under the Commands section enter **OFFHK** under the `OPCODE` column. In the Channel Number column enter the channel for which the tone capture and analysis test is to be conducted, example 0.
6. In the next row enter **WAIT** under the `OPCODE` column and the same channel number specified in the previous line. Under the parameter column, enter an approximate amount of waiting time, example 2 seconds.

   NOTE:
   For Dial tone capture and analysis do not enter the Wait OPCODE command.

7. In the consecutive row, enter **RECORD** under the `OPCODE` column and the same channel number specified in the previous line. Under the parameter column enter an approximate amount of recording time, example 5 seconds.
8. In the next row, enter **ONHK** under the `OPCODE` column and the same channel number specified in the previous line.
9. Get connected to an external telephone line and dial into INTUITY AUDIX. Ensure that the call is received on the channel number on which the tone capture is to be done.
10. Press F4 (Capture). Hang-up on the external call. The system captures the public switch network disconnect tone generated by the central office. The steps that are followed are in the order of the defined OPCODE commands.
11. Press F5 (Analyze). The system analyzes the captured tone and displays its frequency and cadence in the output fields of the window. (See Table 3-1 on page 3-8).

    NOTE:
    If the frequency and the cadence displayed in the output fields match those given by your telephone service provider, save the commands. If the frequency and cadence displayed in the output fields do not match those of your telephone service provider, contact your telephone service provider for additional assistance.

    If you do not want to save the commands go to Step 12 on page 3-5. If you want to save the commands for future use, do the following:

    a. Press F3 (Save).

       The system displays the following message:

       ```
       Do you wish to continue with this change (y/n)?
       ```

    b. Enter **y**

NOTE:
To delete a tone name and its associated commands, position the cursor in the `Tone` field and press F8 (Delete Tone).

12. Press F6 (Cancel) three times to return to the Lucent INTUITY main menu (Figure 3-1).

Call Through INTUITY AUDIX

Under this method, a call is made from one INTUITY AUDIX channel to another. An external link is established from the specified channel and a call is placed to a number on INTUITY AUDIX. This call is received on the channel selected for tone capture. The caller then disconnects and the disconnect tone frequency and cadence is recorded on the Tone Capture and Analysis Screen.

Complete the following procedures for the calls through INTUITY AUDIX method:

1. Speak to the telephone service providers and get information about the disconnect tone and disconnect frequencies.
2. Starting at the Lucent INTUITY main menu (Figure 3-1), select

```
> Switch Interface Administration
    > Telephony Interface
        > Tone Capture and Analysis
```

The system displays the Tone Capture and Analysis window (Figure 3-3 on page 3-6).

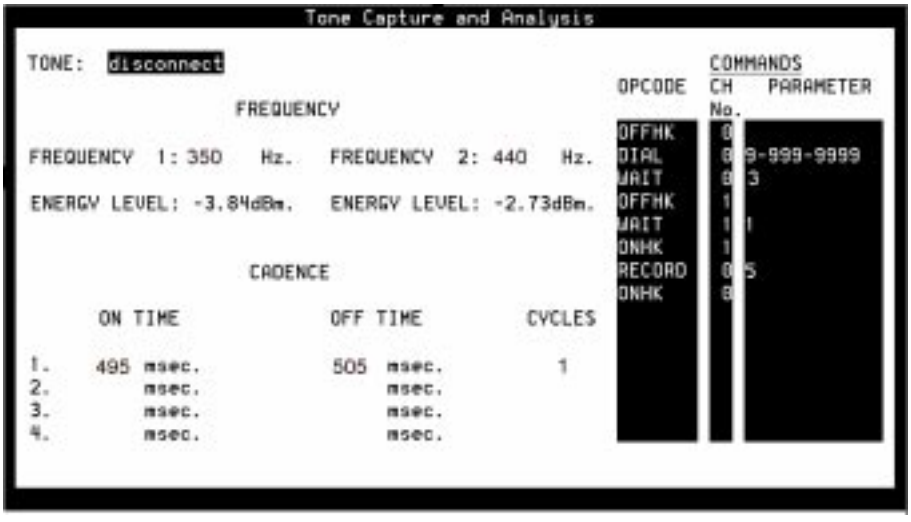

Figure 3-3. Tone Capture and Analysis Window for Call Through INTUITY AUDIX Method

3. Enter a name for the tone you want to capture in the Tone: field. For example, for disconnect not recognized enter **disconnect** or for dial tone not recognized, enter **dial**
4. Under the Commands section enter **OFFHK** under the OPCODE column. In the Channel Number column enter the channel for which the tone capture and analysis test is to be conducted, example 0.
5. In the next row enter **DIAL** under the OPCODE column and the same channel number specified in the previous line. In the parameter column enter a telephone number which is connected to an INTUITY AUDIX group. Ensure that the digit which is required to connect the user to the external line is also entered, example 9-999 (city code) - 999 (area code) - 9999 (INTUITY AUDIX number). This call should be received on Channel 1 as per example.
6. In the following row enter **WAIT** under the OPCODE column and the same channel number specified in the previous line, that is 0. Under the parameter column enter an approximate amount of waiting time, example 3 seconds.

   NOTE:
   For Dial tone capture and analysis do not enter the Wait OPCODE command.

7. In the consecutive row, enter **OFFHK** under the OPCODE column. In the Channel Number column, enter the number of the channel that is being called.

8. In the following row enter **WAIT** under the OPCODE column and the same channel number specified in the previous line, that is 1. Under the parameter column enter an approximate amount of waiting time, example 1 second.

   NOTE:
   For dial tone capture and analysis do not enter the Wait OPCODE command.

9. In the next row, enter **ONHK** under the OPCODE column and the same channel number specified in the previous line.
10. In the consecutive row, enter **RECORD** under the OPCODE column and the same channel number specified for the tone capture and analysis which in this case is 0. Under the parameter column enter an approximate amount of recording time, example 5 seconds.
11. In the next row, enter **ONHK** under the OPCODE column and the same channel number specified in the previous line which, in the example, is 0.
12. Press F4 (Capture).

    The system captures the public switch network disconnect tone generated by the central office. The steps that are followed are in the order of the defined OPCODE commands.
13. Press F5 (Analyze).
14. The system analyzes the captured tone and displays its frequency and cadence in the output fields of the window. (See Table 3-1 on page 3-8).

    NOTE:
    If the frequency and the cadence displayed in the output fields match those given by your telephone service provider, save the commands. If the frequency and cadence displayed in the output fields do not match those of your telephone service provider, contact your telephone service provider for additional assistance.

    a. If you do not want to save the commands, go to Step 18 on page 3-8. If you want to save the commands for future, do the following: Press F3 (Save).

       The system displays the following message:

       ```
       Do you wish to continue with this change (y/n)?
       ```

    b. Enter **y**

       NOTE:
       To delete a tone name and its associated commands, position the cursor in the Tone field and press F8 (Delete Tone).

15. Press F3 (Save).

    The system displays the following message:

    ```
    Do you wish to continue with this change (y/n)?
    ```

16. Enter **y**
17. To delete a tone name and its associated commands, position the cursor in the `Tone` field and press F8 (Delete Tone).
18. Press F6 (Cancel) three times to return to the Lucent INTUITY main menu (Figure 3-1).

Table 3-1. Tone Capture and Analysis Window

Field	Description	Values
`TONE`	Allows you to enter a name for the tone. Commands for capturing the tone are read from a file using this name. All output files are also generated using this name. If you save the OPCODE commands associated with this name, they are displayed whenever you enter the name in this field.	Maximum of 10 characters.
`FREQUENCY 1:` `FREQUENCY 2:`	These fields display the result of the tone frequency analysis, which can contain one or two frequency components. Frequency 1 is the lower frequency and Frequency 2 is the upper frequency.	■ If only one component is present, the Frequency 2 field is blank. ■ If no frequency is detected, both fields are blank. This may be a result of improper capturing of the tone.
`ENERGY LEVEL: (two fields)`	These fields display the results of analysis of the energy level of each frequency component.	Displayed in dBm.
`ON TIME (four fields)`	These fields display the results of analysis of the tone cadence ON time.	Displayed in msec.
`OFF TIME (four fields)`	These fields display the results of analysis of the tone cadence OFF time in.	Displayed in msec.

Table 3-1. Tone Capture and Analysis Window

Field	Description	Values
CYCLES (four fields)	These fields display the results of analysis of the number of occurrences of the ON time/OFF time cycles.	Integer.
OPCODE	Allows you to enter the **OPCODE** portion of the OPCODE command syntax.	Specifies the operation to be performed on the channel (seeTable 3-2).
CH. No.	Allows you to enter the required ***<CH_No.>*** portion of the OPCODE command syntax.	The port number on the Tip/Ring card.
PARAMETER	Allows you to enter the ***<PARAMETER>*** portion of the OPCODE command syntax.	An OPCODE-dependent qualifier. Not required for all OPCODE commands (see Table 3-2). Possible values are: ■ ***<duration>*** — Specifies the number of msec for the operation to be performed. ■ ***<digit_string>*** — Specifies a dial string. Valid characters are 0-9, #, and *.

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The system recognizes the following OPCODE commands (Table 3-2).

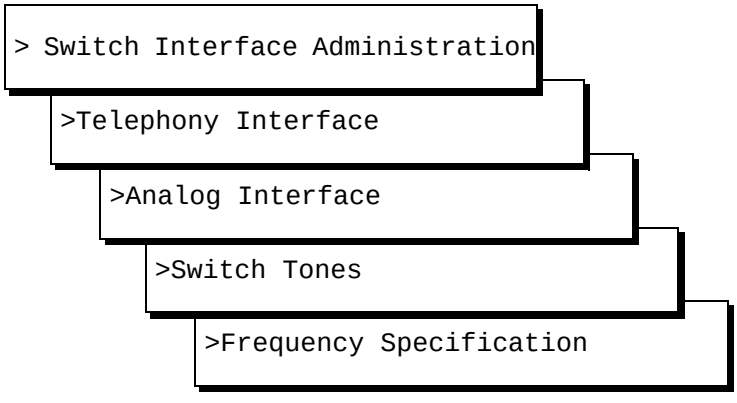
Table 3-2. OPCODE Commands

Command	Description
OFFHK ***<CH_No.>***	Seizes the specified line.
ONKH ***<CH_No.>***	Emulates an on-hook condition on the specified line.
DIAL ***<CH_No.> <digit_string>***	Dials out dual-tone multifrequency (DTMF) digits through the specified line.
FLASH ***<CH_No.> <duration>***	Performs hook flash on the channel for the specified number of msec.
RECORD ***<CH_No.> <duration>***	Captures the pulse code modulation (PCM) data of the voice on the line and stores it in a file. The duration is specified in seconds and should be suitably chosen to capture a sufficient number of on/off cycles of the tone.
PLAY ***<CH_No.>***	Plays the stored tone on the specified channel.
WAIT ***<CH_No.> <duration>***	Introduces a number of seconds of delay in execution of the next command. This command can be introduced anywhere in the command sequence.

Frequency Specification

Complete the following procedure for frequency specification administration:

1. Starting at the Lucent INTUITY main menu (Figure 3-1), select



The system displays the Frequency Specification window (Figure 3-4 on page 3-11).

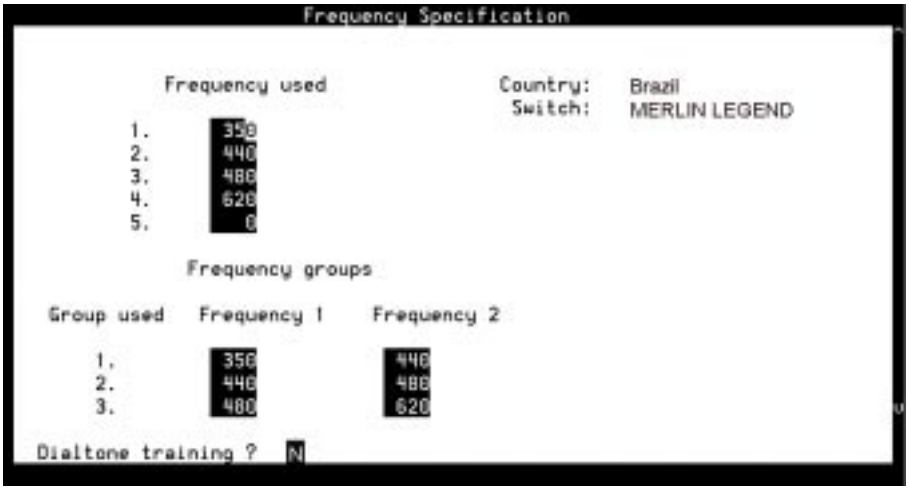


Figure 3-4. Frequency Specification Window

2. Enter values in the `Frequency used` fields, as necessary to represent all the frequencies used for all the tones in your system (see Table 3-3 on page 3-12). These values should be the values from the Frequency 1 and Frequency 2 fields in Figure 3-2 on page 3-3.

   If all the `Frequency used` fields are filled and there is no vacant field, the Ringtone frequency field can be deleted and replaced with some other field. If there is a field without an entry, then the disconnect tone entry should be made in the first `Frequency used` field and the ringtone frequency should be deleted.

   NOTE:
   You must enter disconnect frequencies first. If the disconnect tone is same as the dial tone, then the dial tone can be entered first. If only one frequency is used for the disconnect tone, enter it in the first `Frequency used` field. If two frequencies are used, enter them first and second. You can enter the other frequencies your system uses in any order. (See "Example" on page 3-13 following Table 3-3 on page 3-12 for more information.)

3. In the `Group used` row, enter frequencies in the `Frequency 1` and `Frequency 2` fields for frequency group 1 (see Table 3-3).

   Repeat Step 3 for any more frequency groups that you want to set (see Table 3-3).

NOTE:
No more than two frequencies can be specified for disconnect. If more than two frequencies are required, the disconnect tone will not be recognized by the MERLIN LEGEND.

4. The entry in the `dialtone training` field should be ***n.***
5. Press F3 (Save).

   The system displays the following message:

   ```
   Your changes have been saved. You need to restart the
   Voice System to make these changes active.
   ```

6. Press F1 (Acknowledge Message).
7. Press F6 (Cancel) five times to return to the Lucent INTUITY main menu (Figure 3-1).

Table 3-3. Frequency Specification Window — Field Descriptions

Field	Description	Values
`Country:`	Displays the country set on the Switch Selection window.	Display only.
`Switch:`	Displays the switch type set on the Switch Selection window.	Display only.
`Frequency used (five fields)`	Enables you to list up to five different frequencies used in the country for which you are setting tones. The values you enter here are displayed on the Busy Tone, Dial Tone, Reorder Tone, Ring Tone, Stutter Tone, First Additional Tone, Second Additional Tone, and Third Additional Tone windows. **NOTE:** You *must* specify the frequencies used for disconnect as the first two tones in this list. However, if the dial tone frequencies and the disconnect frequencies are the same, then the dial tone frequencies can be placed first.	Range 300-4000 Hz. Unused frequency fields are indicated by 0 (zero). **NOTE:** The first frequency can *never* be 0. If a frequency is 0, the following frequencies on the list must also be 0. The system will treat them as 0 even if they are set to another value.
`Group used`	Provides a reference number (1, 2, or 3) for each of the three frequency groups you can set.	1, 2, or 3. Display only.

Table 3-3. Frequency Specification Window — Field Descriptions

Field	Description	Values
`Frequency 1`	Defines the first frequency in a set of two (maximum) frequencies that can make up a tone.	Frequencies used in these groups must be defined in the `Frequency used` fields. If a frequency group is unused, by default the values for both Frequency 1 and Frequency 2 are zero (0). **NOTE:** If a group has only one frequency, enter that frequency in the `Frequency 1` field and enter zero (0) in the `Frequency 2` field.
`Frequency 2`	Defines the second frequency in a set of two (maximum) frequencies that can make up a tone.	
`Dialtone training?`	Specifies whether your system uses dial tone training. Thus, if your system uses the same frequencies for other call progress tones besides dial tone, you can define two different groups using the same frequencies. One group can be used for dial tone and the other group for other call progress tones.	■ y to enable dial tone training ■ n to disable dial tone training If the dial tone on your system is not continuous, the dial tone training flag is internally set to N and the system ignores this field.

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Example

Suppose dial tone is 440 Hz + 480 Hz, and you want to assign Group 1 for dial tone. To do so, enter 440 in the `Frequency 1` field and 480 in the `Frequency 2` field for Group 1. Later when you define dial tone on the Dial Tone window, you can simply specify that it uses Group 1 and the system will recognize the correct frequencies.

Tone Specification

Complete the following procedure for dial tone, busy tone, or re-order specification:

1. Starting at the Lucent INTUITY main menu (Figure 3-1), select

```
>Switch Interface Administration
    >Telephony Interface
        >Analog Interface
            Switch Tones
```

The system displays the Switch Tone options menu (Figure 3-5).

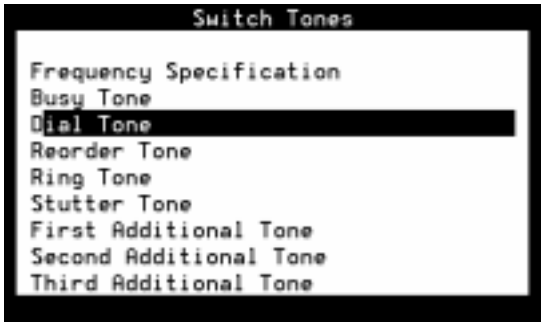

Figure 3-5. Switch Tones Menu

From the above menu, select dial tone, busy tone, or reorder tone as required to set the disconnect frequency and cadence. If none of the above options are suitable to set the disconnect frequency cadence, the first additional tone screen can be used.

All of the tone specification screens follow the same format as the Dial Tone screen (Figure 3-6 on page 3-15).

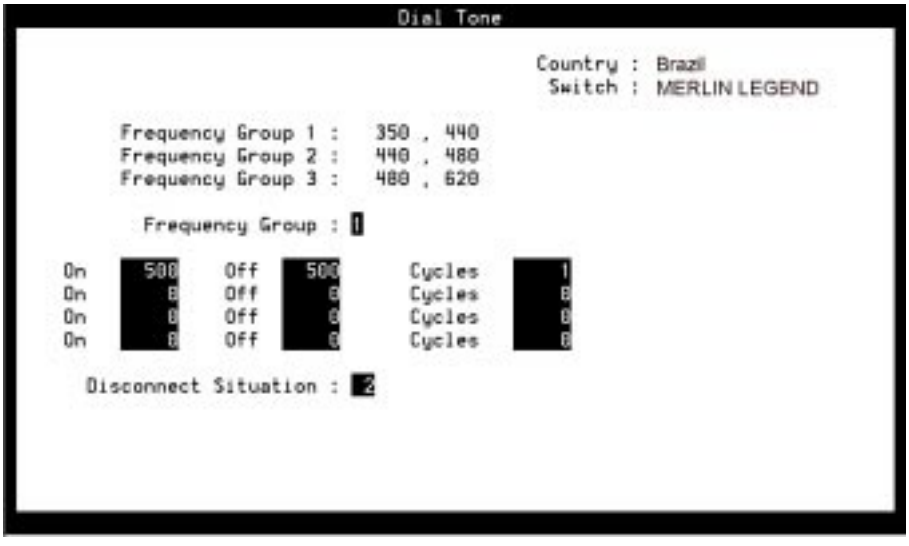

Figure 3-6. Example of Switch Tone Window, Dial Tone

2. In the `Frequency group` field, select one of the frequency groups (1, 2, or 3) displayed at the top of the window for the system to use for this tone. See Table 3-4 on page 3-16 for more information.

   NOTE:
   These groups are assigned on the Frequency Specification window. See "Frequency Specification" on page 3-10.

3. Enter values in the `On`, `Off`, and `Cycles` fields (see Table 3-4) with the values in the "Tone Capture and Analysis Window" on page 3-3. The figures need to be rounded off to ensure that if there are minor differences between the frequencies recorded and the frequencies used, the system does not ignore them because the figures are not a perfect match. (See the examples following Table 3-4 for information on how to represent the cadence.)

   NOTE:
   If you set stutter tone, be sure the timing used for continuous tone (minimum on duration) matches the timing used for continuous tone on the Dial Tone screen. For example, if dial tone is set as continuous tone, minimum 2 seconds, then stutter tone might be 200 msec ON, 200 msec OFF (3 cycles) followed by continuous tone, minimum 2 seconds.

4. Enter the appropriate value in the `Disconnect Situation` field, depending on whether your system interprets this type of tone as a disconnect signal (see Table 3-4).

5. Press F3 (Save).

   The system displays the following message:

   ```
   Do you wish to continue with this change (Y/N)?
   ```

6. Enter **y**

   The system displays the following message:

   ```
   Your changes been saved. You need to stop and start the
   Voice System to make these changes active.
   ```

7. Press F1 (Acknowledge Message).

8. Do you want to set the frequency and cadence for another tone?

   - If no, press F6 (Cancel) five times to return to the Lucent INTUITY main menu (Figure 3-1). You have completed this procedure.
   - If yes, do the following:

     a. Press F6 (Cancel) to return to the Switch Tones menu.

     b. Repeat Step 2 on page 3-11 through Step 6 on this page for each tone you select.

Table 3-4. Basic Tone Windows – Field Descriptions

Field	Description	Values
NOTE: These field descriptions apply to all the windows used for setting the five basic call progress tones, including the Busy Tone, Dial Tone, Reorder Tone, Ring Tone, and Stutter Tone windows.		
`Country`	Displays the country set on the Switch Selection window.	Display only.
`Switch`	Displays the switch type set on the Switch Selection window.	
`Frequency Group 1:`	These fields display the frequency groups set on the Frequency Specification window (Figure 3-4 on page 3-11).	
`Frequency Group 2:`		
`Frequency Group 3:`		
`Frequency Group:`	Sets the group of frequencies the system uses to generate the selected tone (see Figure 3-4 on page 3-11).	1, 2, or 3. You can specify only one frequency group per tone.

Table 3-4. Basic Tone Windows – Field Descriptions

Field	Description	Values
On	Sets the duration of the tone cadence ON cycle.	Range 0-6000 msec. If an ON timing is 0, it is assumed that the row is blank, and that the OFF timing and cycles are also 0 (see "Examples" on this page).
Off	Sets the duration of the tone cadence OFF cycle.	
Cycles	Sets the number of times an ON/OFF cycle repeats.	A cycle consists of an ON duration and an OFF duration of specified lengths (see "Examples" on this page).
Disconnect Situation:	Specifies when the tone should be treated as a disconnect signal. **NOTE:** This parameter is significant only in countries where disconnect signaling is done using call progress tones.	■ 0 — Do not treat as disconnect. ■ 1 — Treat as disconnect during voice coding only. ■ 2 — Treat as disconnect at all times except outcalling.
Report as	Specifies the type of tone you are defining.	■ Busy ■ Dial ■ Ringback ■ Reorder ■ Stutter

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Examples

The ON/OFF cycles that make up the cadence of a call progress tone must be specified in order. These examples illustrate how the cadence is set on the basic call progress tone windows.

- Four rows are needed to specify the following tone:

  250 msec ON, 250 msec OFF
  500 msec ON, 500 msec OFF
  250 msec ON, 250 msec OFF
  500 msec ON, 500 msec OFF

```
On    250       Off   250       Cycles   1
On    500       Off   500       Cycles   1
On    250       Off   250       Cycles   1
On    500       Off   500       Cycles   1
```

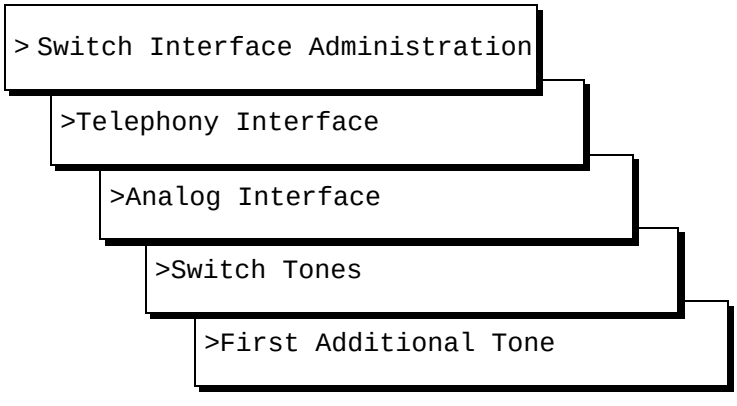
- Three rows are needed for the following tone. Since the first two cycles repeat exactly (250 msec ON, 250 msec OFF), their setting can be entered once and specified as repeating twice (2 cycles).

  250 msec ON, 250 msec OFF
  250 msec ON, 250 msec OFF
  500 msec ON, 500 msec OFF
  250 msec ON, 250 msec OFF

```
On    250       Off   250       Cycles   2
On    500       Off   500       Cycles   1
On    250       Off   250       Cycles   2
```

First Additional Tone Screen

1. Start at the Lucent INTUITY main menu (Figure 3-1) and select



   The system displays the First Additional Tone window (Figure 3-7 on page 3-19).

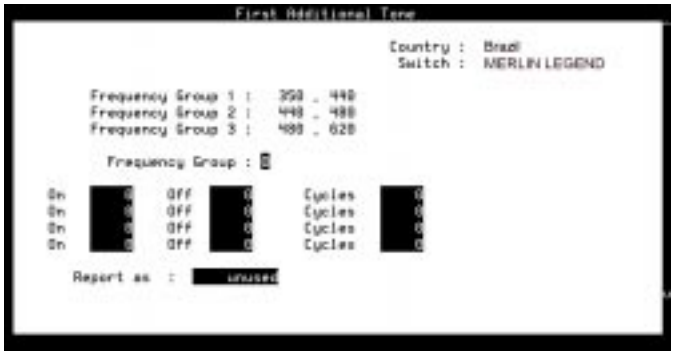


Figure 3-7. Example of Additional Tone Window, First Additional Tone

2. In the `Frequency Group:` field, select one of the frequency groups (1, 2, or 3) displayed at the top of the window for the system to use for this tone (See Table 3-4 on page 3-16).

   NOTE:
   These groups are assigned on the Frequency Specification window (see "Frequency Specification Window" on page 3-11).

3. Enter values in the `On`, `Off`, and `Cycles` fields as necessary to represent the tone cadence.

   See "Examples" on page 3-17 for information on how to represent the cadence.

   NOTE:
   If you set stutter tone, be sure the timing used for continuous tone (minimum on duration) matches the timing used for continuous tone on the dial tone screen. For example, if dial tone is set as continuous tone, minimum 2 seconds, then stutter tone might be 200 msec ON, 200 msec OFF (3 cycles) followed by continuous tone, minimum 2 seconds.

4. Enter the appropriate tone name in the `Report as:` field (see Table 3-5 on page 3-20), corresponding to the additional basic tone you are defining.

   For example, if you are defining an additional dial tone, enter **dial**

5. Press F3 (Save).

   The system displays the following message:

   `Do you wish to continue with this change (Y/N)?`

6. Enter **y**

   The system displays the following message:

   ```
   Your changes been saved. You need to stop and start the
   Voice System to make these changes active.
   ```

7. Press F1 (Acknowledge Message).
8. Do you want to define another additional tone?
   - If no, press F6 (Cancel) five times to return to the Lucent INTUITY main menu (Figure 3-1). You have completed this procedure.
   - If yes, do the following:
     a. Press F6 (Cancel) to return to the Switch Tones menu.
     b. Repeat Step 2 on page 3-15 through Step 7 on this page for the tone you selected.

Table 3-5. Additional Tone Windows— Field Descriptions

Field	Description	Values
NOTE: These field descriptions apply to all windows used for setting the three additional call progress tones, including the First Additional Tone, Second Additional Tone, and Third Additional Tone windows.		
`Country`	See Table 3-4 on page 3-16.	
`Switch`		
`Frequency Group 1:`		
`Frequency Group 2:`		
`Frequency Group 3:`		
`On`		
`Off`		
`Cycles`		
`Report as:`	Specifies the type of tone you are defining.	■ Busy ■ Dial ■ Ringback ■ Reorder ■ Stutter

9. Press F6 (Cancel) four times to return to the Lucent INTUITY main menu (Figure 3-1).

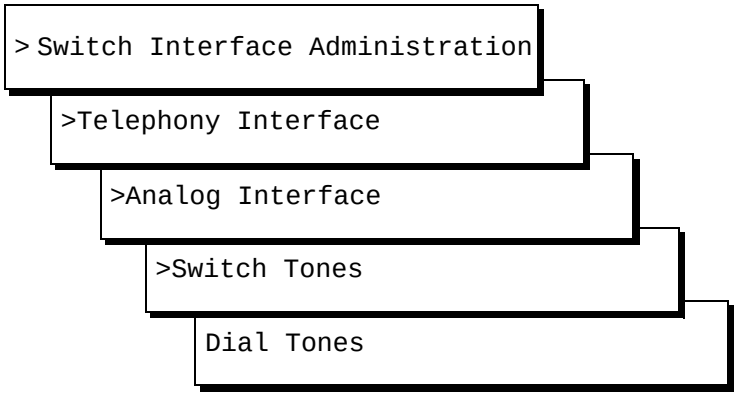
NOTE:
If the central office-based dial tone needs to be detected then the above process can be repeated to administer the "Second Additional Tone" window. This can only be possible if the dial tone frequency and the central office-based disconnect frequency are of the same value. However, the On and Off time would vary in each case.

Dial Tone Is Not Detected

If the dial tone is not detected then additional administration may be required on the switch.

Additional administration of the switch tones is required for the central office-based dial tone detection. This administration can be done on site for specific cases. To administer central office-based dial tone detection, complete the following procedures:

1. Complete the procedure specified in "Tone Capture and Analysis" on page 3-2.
2. Complete the procedure specified in "Frequency Specification" on page 3-10.
3. Complete the following procedure:
   a. Starting at the Lucent INTUITY main menu (Figure 3-1), select



   The system displays the Dial Tone Specification window (Figure 3-5 on page 3-14).
   b. Follow Step 2 to Step 7 defined under "Tone Specification" on page 3-13.
   c. Follow the table "Basic Tone Windows – Field Descriptions" on page 3-16.

Outcalling Functions Do Not Work

Outcalling for external numbers does not work with the MERLIN LEGEND switch. This limitation stems from the lesser number of frequencies available and the MERLIN LEGEND using U.S. tone defaults in all countries.

Outcalling will work for internal numbers or for all the numbers behind the MERLIN LEGEND switch. This is possible because the MERLIN LEGEND can detect the internal U.S.-based dial tone.

If outcalling does not work for the internal numbers, complete the following procedures:

1. Verify that the outcalling settings are correct on the Lucent INTUITY system. See Appendix C, “Troubleshooting Procedures”, in the installation book specific to your platform.
2. Complete the dial tone detection procedure in the section, ““First Additional Tone Screen’’ on page 3-18”.

Calls Are Not Transferred

If calls are not transferred, complete the following procedures:

1. Verify that the dial tone settings are correct on the Lucent INTUITY system. See Appendix C, “Troubleshooting Procedures”, in the installation book specific to your platform.
2. Complete the dial tone detection procedure in the section, “Additional Administration for Dialtone Detection”.

Installing Electromagnetic Conductance Reduction Components

4

Overview

This chapter describes procedures for installing ferrites on the:

- MAP/5P
- MAP/5PV3
- MAP/40P

Purpose

The purpose of this chapter is to ensure that ferrites are installed correctly.

Electromagnetic Conductance Reduction Components Overview

Before connecting peripherals or external devices, install ferrites to each interface cable. All installations require the use of ferrites to meet the individual country agency EMC (electromagnetic conductance) regulations. Installation of ferrites must be in accordance with these procedures to meet individual country compliances.

A ferrite is a 1 inch (2.5 cm) rectangular device. Ferrites are made of a variable conductive carbon type material to reduce special EMC frequency band width. Available in split and solid ferrite forms, a special snap-back protective cover is used to install and keep the halves together.

A toroid (Type A) is a 2.5 inch (6.4 cm) circular ferrite (comcode: 405853458). Toroids are made of a highly conductive carbon type of material that is very brittle. If a toroid ring fractures, it should immediately be replaced.

Handle toroids and ferrites with care. Toroids and ferrites are easily fractured and broken. Immediately replace any fractured or broken toroids or ferrites as they are no longer effective for EMC control.

General Toroid and Ferrite Installation Guidelines

CAUTION:
Handle all toroids and ferrites with care. They are easily broken. Do not use any that are broken or fractured.

When installing toroids or ferrites:

- Place toroids or ferrites as close as possible to the computer chassis.
- Minimize the amount of cable between the toroids or ferrites and the chassis.
- Wrap cables as tightly as possible. Do not leave large amounts of slack in the loop(s).
- Use large cable ties behind the ferrite to help them to stay in place.

Installing a Toroid

The following is the general toroid installation procedure. Figure 4-1 on page 4-3 shows a paired toroid example installation.

To install a toroid, do the following:

1. Wrap each modular cable tightly around the toroid.
2. Secure the cable(s) with a small cable tie to reduce cable movement.
3. Trim off any excess from the cable tie.

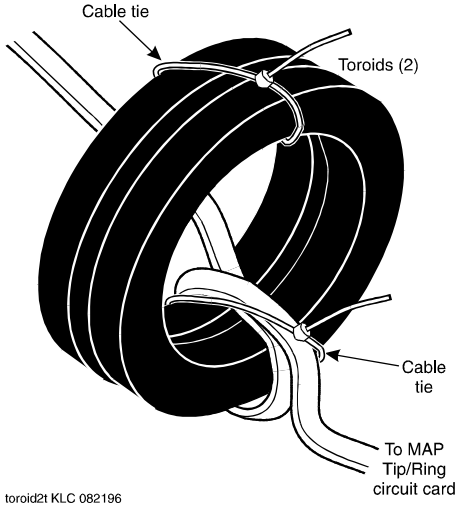


Figure 4-1. Example Toroid Installation

Installing a Ferrite

To install a ferrite, do the following:

1. Open the ferrite by gently pulling the fastener away from the body of the ferrite.
2. Place the cord or cable in the groove inside the ferrite (Figure 4-2 on page 4-4).

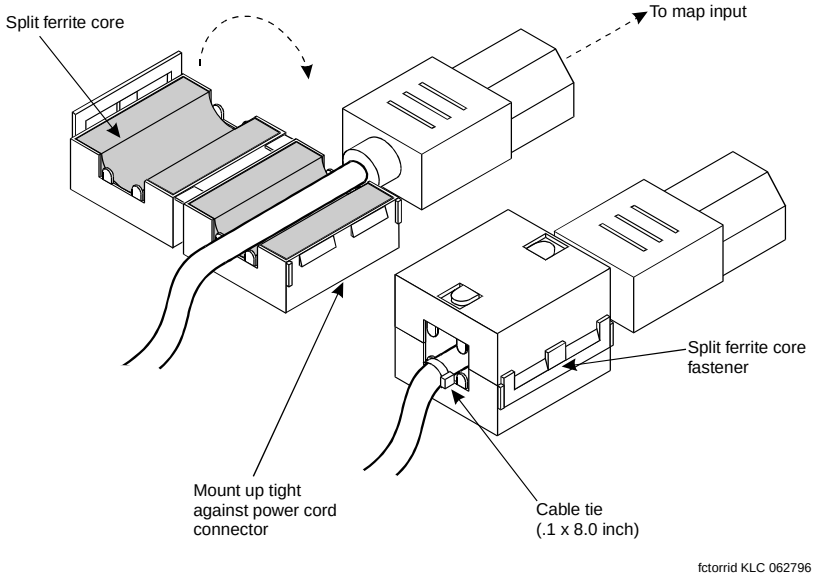


Figure 4-2. Example Ferrite (Type B) Installation

3. If the cable is to be wrapped around the ferrite, wrap the cable tightly around half of the ferrite and place the cable into the groove (Figure 4-3).

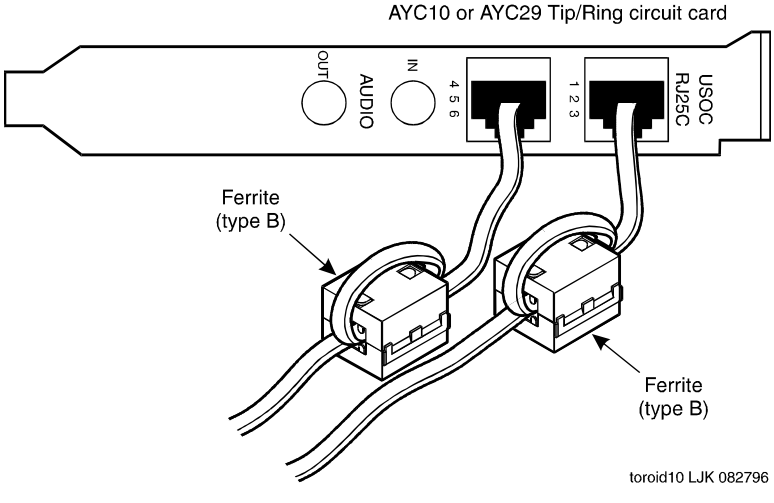


Figure 4-3. Example Ferrite Installation

4. Gently snap the ferrite shut.
5. Attach a large cable tie directly behind the ferrite to secure it.

   NOTE:
   If the cable is wrapped around the ferrite, no cable tie is required.

6. Trim the cable tie.

MAP/5P Electromagnetic Conductance Reduction Components

Table 4-1 lists the ferrites to be installed on MAP/5P system installed in a European location. Table 4-2 lists the ferrites to be installed on a MAP/5P system installed in Australia. There are no ferrites to be installed on domestic systems.

Table 4-1. European MAP/5P Ferrite Installation

Component	Location	Cabling
Tip/Ring circuit card (AYC30)	Place the ferrite on each modular cable.	Wrap the modular cable once around the ferrite.

Table 4-2. Australian MAP/5P Ferrite Installation

Component	Location	Cabling
Tip/Ring circuit card (AYC29)	Place the ferrite on each modular cable.	Wrap the modular cable once around the ferrite.

MAP/40P Electromagnetic Conductance Reduction Components

Table 4-3 on page 4-6 lists the ferrites to be installed on MAP/40P system installed in the United States or Canada. Table 4-4 on page 4-6 lists the toroids and ferrites to be installed on a MAP/40P system installed in Europe. Table 4-5 on page 4-7 lists the ferrites to be installed on a MAP/40P system installed in Australia.

Table 4-3. Domestic MAP/40P Ferrite Installation

Component	Location	Cabling
Multi-port serial circuit card	Place 2 ferrites on each cable.	Wrap the modular cord once around each ferrite.
Tip/Ring circuit card (AYC10)	Place 2 ferrites on each modular cable.	Wrap the modular cable once around each ferrite.

Table 4-4. European MAP/40P Toroid and Ferrite Installation

Component	Location	Cabling
Remote maintenance circuit card	Place 2 ferrites on each cable.	Wrap the modular cord once around each ferrite.
Multi-port serial circuit card	Place 2 ferrites on each cable.	Wrap the modular cord once around each ferrite.
Tip/Ring circuit card (AYC30)	Place 2 ferrites on each modular cable.	Wrap each modular cord twice through a toroid. Wrap the modular cable once around each ferrite.

Table 4-5. Australian MAP/40P Ferrite Installation

Component	Location	Cabling
Monitor	Place the ferrite on the monitor cable near the MAP/40P video port.	Do not wrap the cable around the ferrite.
Modem	Place the ferrite on the shielded serial cable.	Wrap the shielded serial cable once around the ferrite.
Remote maintenance circuit card (AYC55)	Place the ferrite on the shielded serial cable.	Wrap the shielded serial cable once around the ferrite.
ACCX circuit card	Place the ferrite on the shielded serial cable.	Do not wrap the cable around the ferrite.
Switch interface circuit card	Place the ferrite on the shielded serial cable.	Do not wrap the cable around the ferrite.
Tip/Ring circuit card (AYC29)	Place the ferrite on each modular cable.	Wrap the modular cable once around the ferrite.

Replacing or Installing Hardware Components

5

Overview

This chapter includes information for all R4 platforms, except for the MAP/5PV3. Information about the MAP/5PV3 may be found in Chapter 6, ‘‘Update for MAP/5PV3 Hardware Components’’.

It describes replacing or installing the:

- P5 200 MHz CPU circuit card
- MAP/5P CMOS settings
- Video card
- Hard disk drives

Purpose

The purpose of this chapter is to ensure that:

- Hardware is installed correctly
- Resource options are set correctly

Installing the P5 200 MHz CPU Circuit Card

The P5 200 MHz CPU is packaged on a single PC/AT-compatible circuit card (Figure 5-3 on page 5-5) that plugs into the backplane. There is one P5 200 MHz CPU circuit card installed in the platform. This circuit card is used only in the MAP/40P and MAP/100P. Comcodes for the card are 408007193 and 408053171.

To install the P5 200 MHz CPU circuit card in the platform, do the following:

1. Verify that the replacement circuit card is on site and appears to be in usable condition, with no obvious shipping damage.
2. Confirm that the circuit card for the system is the correct card.

   NOTE:
   This circuit card is used only in the MAP/40P and MAP/100P. Comcodes for the card are 408007193 and 408053171.

3. Remove the incoming power. See ‘‘Removing Power from the Computer’’, in Chapter 4, ‘‘Getting Inside the Computer’’, of your platform maintenance book for this procedure.
4. Access the circuit card cage. See ‘‘Accessing the Circuit Card Cage’’, in Chapter 4, ‘‘Getting Inside the Computer’’, of your platform maintenance book for the procedure.
5. Remove any circuit card that inhibits access to the P5 200 MHz CPU circuit card. See “Removing a Circuit Card” in Chapter 5, “Replacing or Installing Circuit Cards,” in your platform maintenance book for the procedure.
6. Remove all cables from the CPU circuit card.
7. Remove the damaged P5 200 MHz CPU circuit card.

   NOTE:
   If the circuit card being replaced is defective, note all symptoms of failure and include this information with the circuit card when it is returned.

8. Verify the circuit card switch and jumper settings. Ensure address switches and jumpers are set to match the old card. See Figure 5-1 on page 5-3 for more information.

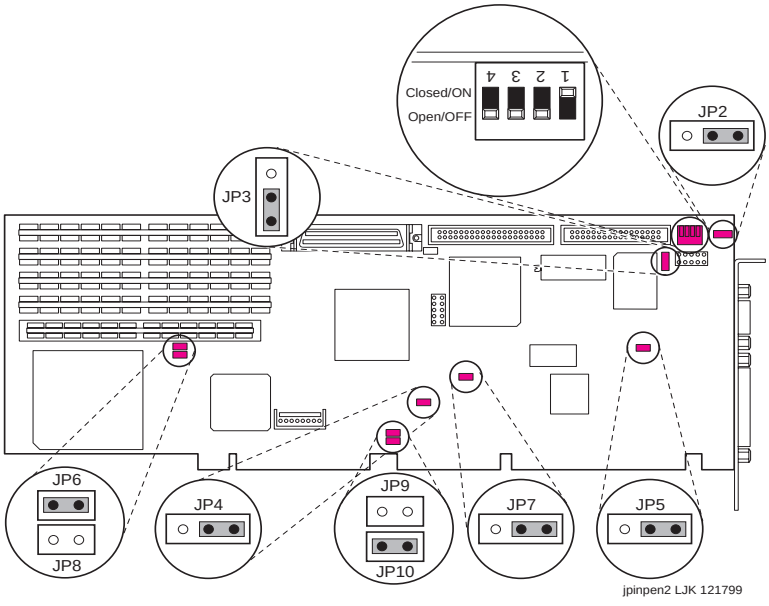
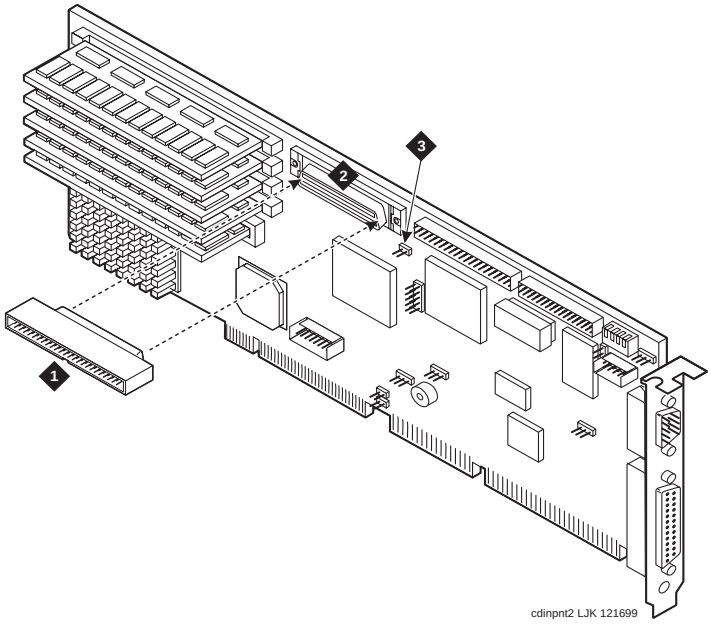


Figure 5-1. P5 200 MHz CPU Circuit Card Jumper and Switch Settings

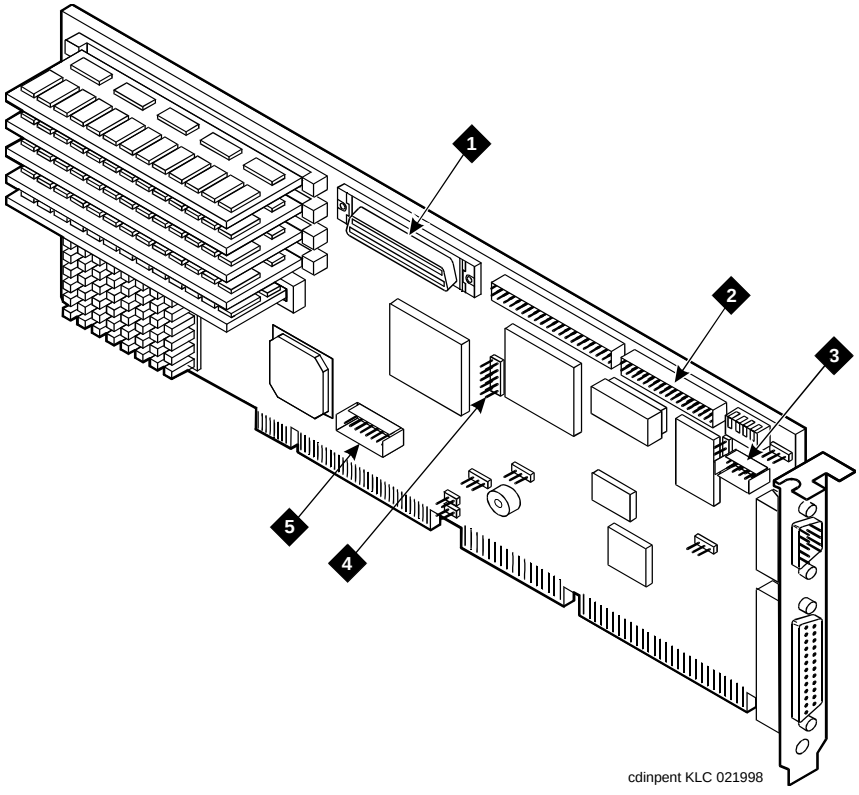
9. Attach the SCSI cable adapter to the P5 200 MHz CPU circuit card (Figure 5-2 on page 5-4).



1 SCSI cable adapter
2 SCSI cable connector
3 Hard disk drive activity connector

Figure 5-2. Attaching the SCSI Cable Adapter

10. Attach the disk activity cable to the P5 200 MHz CPU circuit card (#3 in Figure 5-2).
11. Install the rear COM2 cable to the P5 200 MHz CPU circuit card (Figure 5-3 on page 5-5).



1 SCSI cable connector
2 Diskette cable connector
3 COM2 cable connector
4 Mouse cable connector (not used)
5 Keyboard cable connector

Figure 5-3. P5 200 MHz CPU Circuit Card and Jumper Locations

12. Attach the SCSI cable to the SCSI controller pins on the P5 200 MHz CPU circuit card.
13. Attach the diskette drive cable to the diskette drive cable pins on the P5 200 MHz CPU circuit card.
14. Attach the keyboard cable to the keyboard pins on the new P5 200 MHz CPU circuit card.
15. Replace circuit cards you removed. If necessary, see Appendix A, ‘‘System Configuration’’ in your platform maintenance book to determine the correct slot in which to place the card.
16. Secure each circuit card faceplate into position by replacing the retaining screw.

17. Replace all cables removed from other cards. Make sure these cables are attached to their proper terminations.
18. Close the computer. See Chapter 4, ‘‘Getting Inside the Computer’’ in your platform maintenance book for dress cover installation procedures.
19. Apply power to the unit. See Chapter 4, ‘‘Getting Inside the Computer’’ in your platform maintenance book for instructions on restoring power.
20. Do one of the following:
    - If you are confirming the Host Adapter parameter settings, go to Step 2 on page 5-6.
    - If you are not confirming the Host Adapter parameter settings, allow the system to start normally.

Verifying the Parameter Settings

P5 200 MHz CPU circuit card parameter settings are pre-loaded. There are two types of settings:

- Host Adapter settings
- CMOS Parameter settings

Host Adapter Parameter Settings

To verify these settings, do the following.

CAUTION:
Do not change the settings if there is a mismatch. Contact your remote maintenance center for assistance.

1. Reboot the system. See “Shutting Down and Rebooting the Lucent INTUITY System” in Chapter 3, “Common System Procedures,” of your platform maintenance book for the procedure.
2. After the power on self test (POST) but before the system boots, press CONTROL + A when prompted.

   The system displays the Host Adapter Configuration screen (Figure 5-4 on page 5-7).

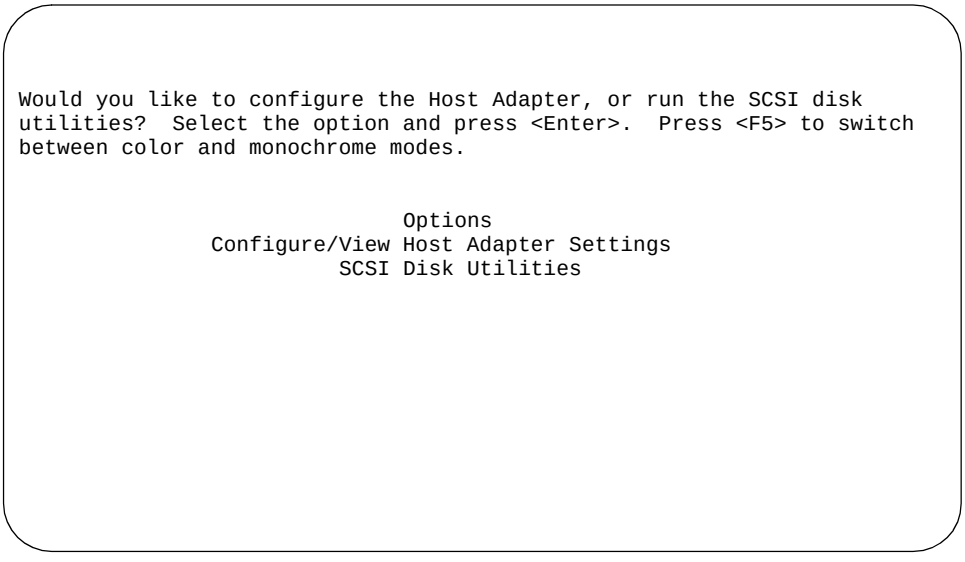


Figure 5-4. Host Adapter Configuration Screen

3. Place the cursor on Configure/View Host Adapter Settings. Use the up ▲ and down ▼ arrows to move the cursor.
4. Press ENTER.
5. Compare the settings shown on the screen with the parameters listed in Table 5-1.

Table 5-1. SCSI Bus Interface Definitions

Option	Setting
Host Adapter SCSI ID	7
SCSI Parity Checking	Enabled
Host Adapter SCSI Termination	Low ON/High ON

6. Place the cursor on Boot Device Options. Use the up ▲ and down ▼ arrows to move the cursor.
7. Press ENTER.

   Compare the settings shown on the screen with the correct parameters listed in Table 5-2 on page 5-8.

Table 5-2. Boot Device Options

Option	Setting
`Boot Target ID`	`0`
`Boot Lun Number`	`0`

8. Press ESC.

   The system displays the SCSI bus interface definitions screen.

9. Place the cursor on `SCSI Device Configuration`. Use the up ▲ and down ▼ arrows to move the cursor.

10. Press ENTER.

    Compare the settings shown on the screen with the correct parameters listed in Table 5-3.

    NOTE:
    These settings must be applied to all SCSI IDs (0 – 7) shown.

Table 5-3. SCSI Device Configuration

Option	Setting
`Initiate Sync Negotiation`	`Yes`
`Maximum Sync Transfer Rate`	`20.0`
`Enable Disconnection`	`Yes`
`Initiate Wide Negotiation`	`Yes`
`Send Start Unit Command`	`No`

11. Press ESC.

    The system displays the SCSI bus interface definitions screen.

12. Place the cursor on `Advanced Configuration Options`. Use the up ▲ and down ▼ arrows to move the cursor.

13. Press ENTER.

    Compare the settings shown on the screen with the correct parameters listed in Table 5-4 on page 5-9.

Table 5-4. Advanced Configuration Options

Option	Setting
`Host Adapter BIOS`	`Enabled`
`Support Removable Disks`	`Boot Only`
`Extended BIOS Translation`	`Disabled`
`Display <Ctrl-A> Message`	`Enabled`
`Multiple Lun Support`	`Disabled`
BIOS Support for More	Enabled

14. Press ESC.

    The system displays the SCSI bus interface definitions screen.

15. Press ESC.

    The system displays the following message:

    ```
    Exit Utilities
        Yes
        No
    ```

16. Place the cursor on `Yes`. Use the up ▲ and down ▼ arrows to move the cursor.

17. Press ENTER.

    The system displays the following message:

    ```
    Please press any key to reboot.
    ```

18. Press ENTER.

    The system reboots.

19. Do one of the following:

    - If you are confirming the CMOS parameter settings, watch for the POST sequence and then press F2. Go to Step 2 on page 5-10.
    - If you are not confirming the CMOS parameter settings, allow the system to continue a normal boot sequence.

      The system displays the console login prompt.

You have completed verifying the Host Adapter settings.

CMOS Parameter Settings

CAUTION:
Do not change the settings if there is a mismatch. Contact your local technical support representative for assistance.

1. Perform a hard reboot of the system. See “Rebooting the UNIX System” in Chapter 3, “Common System Procedures” of your system’s maintenance book for the procedure.

   NOTE:
   You must perform a hard reboot to access the CMOS parameter settings.

2. During the POST, press F2.

   The system displays the following message:

   ```
   Please standby for SETUP Utility...
   ```

   After the system has installed the BIOS it displays the CMOS basic options set-up menu.

3. Compare the P5 200 MHz CPU circuit card settings in the setup menu with the default parameters listed in Table 5-5.

   NOTE:
   The settings in Table 5-5 may differ from the default parameters if a remote maintenance circuit card or an ISA video circuit card is installed in system.

Table 5-5. CMOS Basic Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
Time and Date	
Set the time and date to the current time and date.	
Floppy Disks	
Floppy Controller	Enabled
Select Drive A: Type	3.5 Inch, 1.44 MB
Select Drive B: Type	Not Installed
Floppy Seek during POST	Enabled

Table 5-5. CMOS Basic Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
Fixed Disks	
IDE Controller Setup	Disabled
Auto Detect IDE Drives	Enabled
Set Hard Disk (1 - 4) Type	
Large Disk DOS Compatible	Disabled
Keyboard	
Keyboard Typematic Sound	Enabled
Keyboard Typematic Delay	500 msec
Keyboard Typematic Rate	15 chars/sec
Shadow RAM	
Shadow Select C000:0 32K	SHADOW
Shadow Select C800:0 12K	SHADOW
Shadow Select D400:0 2K	ROM **NOTE:** This line will only appear if the system is equipped with a remote maintenance circuit card.
Shadow Select E000:0 64K	SHADOW
Shadow Select F000:0 64K	SHADOW
Boot Options	
101-Key Keyboard Numlock at Boot	Enabled
Set Boot Drive Sequence	Diskette, Hard, CD-ROM Drives
Report POST Errors	Enabled
Report Option ROM Errors	Disabled
Show F2 Message for Setup	Enabled
Quiet Boot Enable/Disable	Enabled
Password Edit	
Password Options	Disabled

(2 of 2)

4. To change the parameter settings, complete the following Steps a through d.
    a. Place the cursor on the appropriate heading. Use the up ▲ and down ▼ arrows to move the cursor.
    b. Press ENTER to select the heading.
    c. Change the parameters. Use the up ▲ and down ▼ arrows to move the cursor.
    d. Press ENTER.
5. Place the cursor on `Advanced Options`.
6. Press ENTER.

    The system displays the CMOS advanced options set-up menu.
7. Compare the P5 200 MHz CPU circuit card settings in the set-up menu with the default parameters listed in Table 5-6.

    NOTE:
    The settings in Table 5-6 may differ from the default parameters due to other equipped feature circuit cards in your system.

Table 5-6. CMOS Advanced Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
Serial Ports	
16550 Compatible UART 1:	03F8h, IRQ4
16550 Compatible UART 2:	02F8h, IRQ3 **NOTE:** Disable this port if the remote maintenance circuit card is installed.
Parallel Ports	
Select Parallel Port Address:	0378h IRQ 7
Parallel Port Mode	AT Compatible
Redirection	
Select Redirection Destination	Disabled
Memory Cache	
External Cache	Enabled
Advanced Chipset	
DRAM Speed	70ns
DMA Alias	Disabled
ECC/Parity Configuration	ECC
Memory Gap Block Size	Disabled
I/O Recovery	
8 bit I/O Recovery Time	6.5 SYSCLK
16 bit I/O Recovery Time	6.5 SYSCLK
ISA Guaranteed Access Time	Disabled
Delayed Transactions	Enabled
Miscellaneous	
SPEAKER Configuration	Enabled
Watchdog Timer Delay:	1.2 sec
Allocate USB Resources	Disabled
PS2 Mouse	
PS2MOUSE Configuration	Disabled

8. To change the parameter settings, complete the following Steps a through d.
    a. Place the cursor on the appropriate heading. Use the up ▲ and down ▼ arrows to move the cursor.
    b. Press ENTER.
    c. Change the parameters. Use the up ▲ and down ▼ arrows to move the cursor.
    d. Press ENTER.
9. Place the cursor on `PCI Options`.
10. Press ENTER.

    The system displays the CMOS PCI options set-up menu.
11. Compare the P5 200 MHz CPU circuit card settings in the set-up menu with the default parameters listed in Table 5-7 on page 5-15.

    NOTE:
    The settings in Table 5-7 may differ from the default parameters due to other equipped feature circuit cards in your system.

Table 5-7. CMOS PCI Option Settings for the P5 200 MHz CPU Circuit Card

Option	Setting
IRQs Setup	
PCI IRQ Line1	IRQ14
PCI IRQ Line2	IRQ14
PCI IRQ Line3	IRQ10
PCI IRQ Line4	IRQ10
PCI Devices[1]	
0x8086/0x1250 Bridge-Host	No IRQ
0x9004/0x7078 MassStorage-SCSI	INTA->IRQ14
0x8086/0x7000 Bridge-ISA	No IRQ
0x8086/0x7010 MassStorage-IDE	No IRQ
0x5333/0x8A01 Display-VGA	INTA->IRQ14
PCI Performance	
Delay for PCI Configuration	Disabled
PCI Latency for Bus 0 Device 13	Auto
PCI Latency for Bus 0 Device 14	Auto
PCI Latency for Bus 0 Device 15	Auto
PCI Latency for Bus 0 Device 16	Auto
PCI Latency for Bus 0 Device 17	Auto
PCI Latency for Bus 0 Device 18	Auto
PCI Latency for Bus 0 Device 19	Auto
PCI Latency for Bus 0 Device 20	Auto
PCI Cache Line Size	Auto
Onboard SCSI	
Onboard PCI SCSI	Enabled

1. These lines are informational only and may not be changed.

12. To change the parameter settings, complete the following Steps a through d.

    a. Place the cursor on the appropriate heading. Use the up ▲ and down ▼ arrows to move the cursor.

    b. Press ENTER.

    c. Change the parameters. Use the up ▲ and down ▼ arrows to move the cursor.

    d. Press ENTER.

13. Place the cursor on `Basic Options`.

14. Press ENTER.

    The system displays the CMOS basic options set-up menu.

15. If you have changed any option from what is indicated in Table 5-5 on page 5-10, Table 5-6 on page 5-13, and Table 5-7 on page 5-15, press ESC.

    This will reboot the system using the values you entered without creating a Flash it backup. If you have entered any incorrect values you can still go back to the original CMOS settings.

    If you are certain the CMOS settings are correct and that the system will operate properly, place the cursor on `Flash It!` and press ENTER.

    The system displays the following message.

    ```
    Make Settings Permanent
            Yes
            No
    ```

16. Place the cursor on `Yes`.

17. Press ENTER.

    The system displays the following message.

    ```
    Reset in progress.
    ```

    After approximately three minutes, the system reboots and displays the console login.

Checking the MAP/5P CMOS Settings

Use this section to set the motherboard and CMOS correctly.

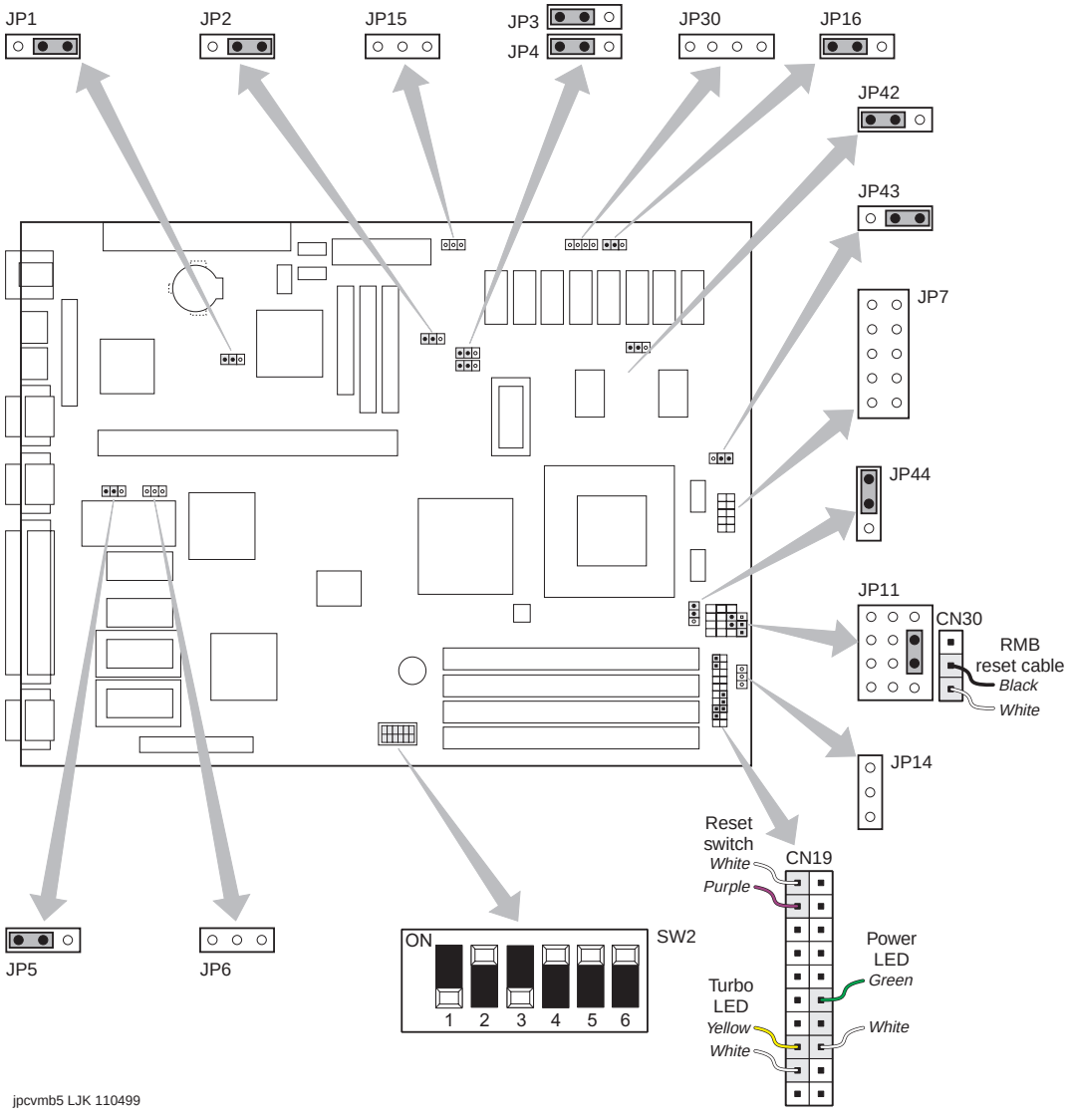


Figure 5-5. MAP/5P 200 Mhz Motherboard Jumper Settings

The comcodes for this motherboard are 407868850 (SCSI) and 408071173 (SCSI). If the comcode is 407711548, it is a 133 Mhz motherboard. The settings in the table are also used for the 133 Mhz system

NOTE:
For the MAP/5PV3, see “Checking the MAP/5PV3 CMOS Settings’’ on page 6-13.

Checking the MAP/5P CMOS Settings

Use this procedure to determine whether the system is configured correctly. These settings are used whether the motherboard is 133 or 200 Mhz.

CAUTION:
Do not change the settings if there is a mismatch. Contact your local technical support representative for assistance.

1. Perform a hard reboot of the system. See “Rebooting the UNIX System” in Chapter 3, “Common System Procedures” of your system’s maintenance book for the procedure.

   NOTE:
   You must perform a hard reboot to access the CMOS configuration settings.

   After the memory test, the system displays:

   ```
   Enter setup, press Ctrl_Alt_Esc key.
   ```

2. When this prompt displays, press CONTROL ALT ESC.

   The system displays the BIOS Utility menu, which is used to change the CMOS settings (Figure 5-6 on page 5-19).

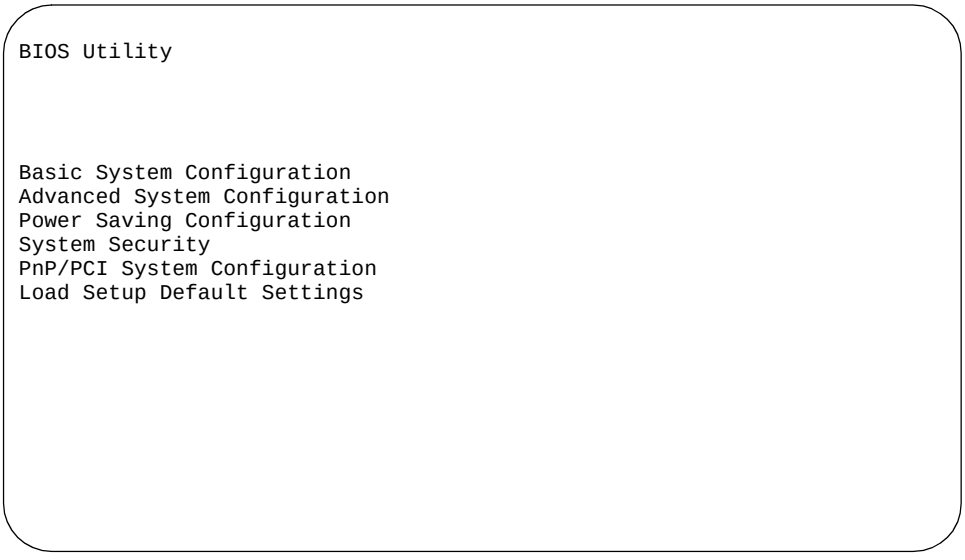


Figure 5-6. BIOS Utility Menu

3. While the BIOS Utility menu is displayed, press F4 to display all settings on the Advanced System Configuration menu.

   NOTE:
   The system does not display any confirmation of the function key press. However, additional screens are displayed after selecting the Advanced System Configuration menu option.

4. Press the up ▲ and down ▼ arrows to move the cursor to the appropriate menu option.

   NOTE:
   Do not select the `Load Setup Default Settings` menu option.

5. Press ENTER to select the heading.
6. Follow the directions on the screen for navigation or to change a setting.
7. Compare the motherboard CMOS settings to the standard parameters listed in Table 5-8 on page 5-20.

   NOTE:
   The settings in Table 5-8 may differ from the default parameters due to other equipped feature circuit cards in your system.

8. When you are finished checking or changing the settings, press ESC to return to the BIOS Utility menu. Press ESC again to exit the utility.

   NOTE:
   Only save changes to the CMOS settings when told to do so by Remote Support Center staff.

   The system displays the following message:

   ```
   Do you want to save CMOS data?
   ```

9. Select the appropriate response and press ENTER.

   The system reboots.

CMOS Settings for the MAP/5P

Use the following table to set the MAP/5P CMOS correctly.

Table 5-8. CMOS Settings for the MAP/5P

Option	Setting
Basic System Configuration	
IDE 0	AUTO
IDE 1	AUTO
IDE 2	AUTO
IDE 3	AUTO
On-board IDE Controller	Disabled
Hard Disk Block Mode	Disabled
Advanced PIO Mode	Disabled
Hard Disk Size >504 MB	Disabled
Hard Disk 32 Bit Access	Disabled
Large Memory Support Mode	Normal
Number Lock After Boot	Enabled
Memory Test	Enabled
Quiet Boot	Enabled
Configuration Table	Disabled
Advanced System Configuration	
Internal Cache (CPU Cache)	Enabled

Table 5-8. CMOS Settings for the MAP/5P

Option	Setting
External Cache	Enabled
Cache Scheme	Write Back
ECC/Parity Mode Selection	ECC
Memory @ 15MB-16MB Reserved for	[System] use
EDO Page Mode Read Timing	X-2-2-2
Page Mode Read Timing	X-3-3-3
EDO or Page Mode Write Timing	X-3-3-3
Pipelined Function	Enabled
CPU to PCI Write Buffer	Enabled
Linear-Merge	Enabled
Word-Merge	Enabled
Write-Burst	Enabled
Programmable Frame Buffer	Enabled
Size of Programmable Frame Buffer	2M
Clock Select	Auto
DMA Line Buffer	Enabled
ISA Line Buffer	Enabled
I/O Recovery	Enabled
Period	1.75 us
Refresh Cycle	15 us
6x86 Burst Mode	1+4
Power Saving Configuration	
Power Management Mode	Disabled
Power Saving Operation Mode	[Traditional]
IDE Hard Disk Standby Timer	Off
Monitor Power Saving Timer	Off
System Standby Timer	Off
System Suspend Timer	Off
IRQ2, IRQ9	Disabled

Table 5-8. CMOS Settings for the MAP/5P

Option	Setting
IRQ3	Disabled
IRQ4	Disabled
IRQ5	Disabled
IRQ7	Disabled
IRQ10	Disabled
IRQ11	Disabled
IRQ12	Disabled
IRQ15	Disabled
Quick Start State Timer	Off
Point Device Location	[None]
System Security	
Diskette Drive	Normal
Hard Disk Drive	Normal
System Boot Drive	Drive A then Drive C
Boot from CD-ROM	Disabled
Serial Port 1 Base Address	[3F8h]
Serial Port 2 Base Address	Disabled
Parallel Port Address	[378(IRQ7)]
Operation Mode	[Standard Parallel Port SPP] Mode
On-board PS/2 Mouse (IRQ12)	Disabled
Set-up Password	[None]
Power on Password	[None]
PnP/PCI System Configuration	
PCI IRQ Setting	Manual
PCI Slot 1	INTA 14
PCI Slot 2	INTD 14
PCI Slot 3	INTC 14
On-Board VGA	--
PCI IRQ Sharing	[No]

Table 5-8. CMOS Settings for the MAP/5P

Option	Setting
VGA Palette Snoop	[Disabled]
Plug & Play OS	[No]
Reset Resources Assignment	[No]

(4 of 4)

Video Circuit Card

The video circuit card is used to display activities on the system monitor. This section includes installing a new video circuit card in the platform.

NOTE:
There are no jumper or switch settings on the video circuit card.

1. Verify that the replacement circuit card (Figure 5-7 on page 5-24) is on site and appears to be in usable condition, with no obvious shipping damage.

   NOTE:
   If the circuit card being replaced is defective, note all symptoms of failure and include this information with the circuit card when it is returned.

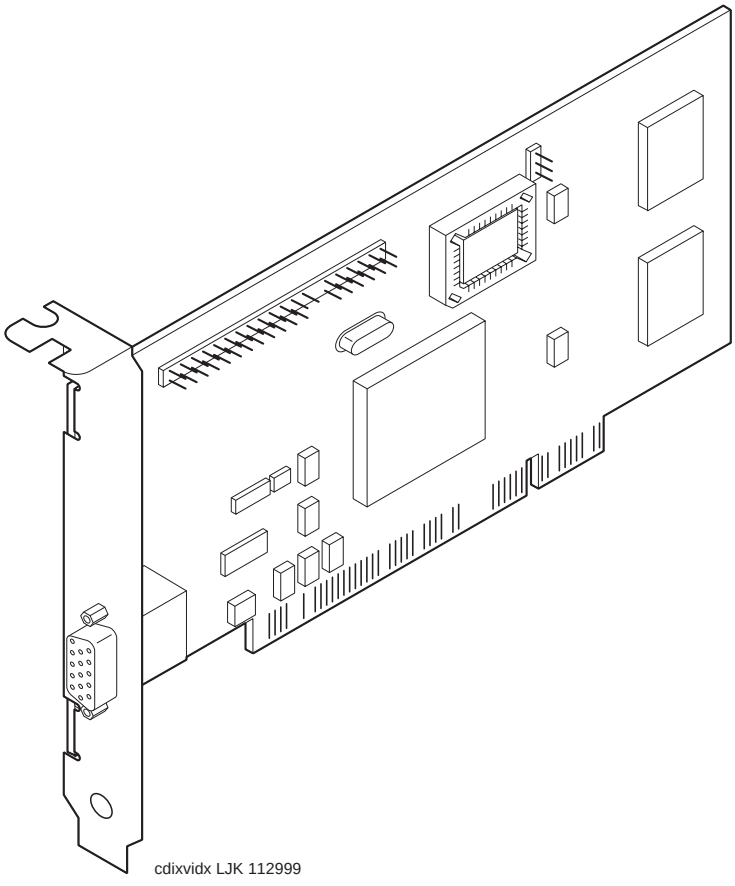


Figure 5-7. Video Circuit Card

2. Shut down the system if the system is in operation. See “Shutting Down and Rebooting the Lucent INTUITY System” in Chapter 3, “Common System Procedures,” of your platform maintenance book for the procedure.
3. Turn the power switch off.
4. Disconnect the video monitor cable from the back of the system.
5. Access the circuit card cage. See ‘‘Accessing the Circuit Card Cage’’, in Chapter 4, ‘‘Getting Inside the Computer’’, of your platform maintenance book for the procedure.
6. Remove any circuit card that inhibits access to the video circuit card. See “Removing a Circuit Card” in Chapter 5, “Replacing or Installing Circuit Cards,” in your platform maintenance book for the procedure.
7. Remove the defective video circuit card.

8. Holding the circuit card by its corners, slide the card into the backplane connector slot position from which you removed the damaged card.
9. Apply even pressure to both corners of the circuit card until it is locked into the backplane.
10. Secure the circuit card faceplate into position by replacing the retaining screw.
11. Replace any other circuit card you removed. See “Installing a Circuit Card” in Chapter 5, “Replacing or Installing Circuit Cards,” of your platform maintenance book for the procedure.
12. Replace all cables removed from other cards. Make sure these cables are attached to their proper terminations.
13. Close the computer. See Chapter 4, “Getting Inside the Computer’’ in your platform maintenance book for dress cover installation procedures.
14. Reconnect the video monitor cable to the connector in the back of the system.

Hard Disk Drives

The Lucent Intuity system supports the Quantum Viking and IBM Draco hard disk drives. Use Figure 5-8 on page 5-26 to determine the jumper settings for the Quantum Viking hard disk drive. Use Figure 5-9 on page 5-28 to determine the jumper settings for the IBM Draco hard disk drives.

If the existing hard disk drive must be replaced, use the comcodes in Table 5-9 in the order.

Table 5-9. Lucent Intuity Hard Disk Drive Comcodes

Manufacturer and Model Name	MAP/5P (including V3) 68-pin	MAP/40P 50-pin	MAP/100P 80-pin
Seagate Medalist		407968668	
IBM Capricorn	407711647 or 408025799		
Quantum Viking		407876366	408047496
IBM Draco	408089423	408089415	408089472

NOTE:
Illustrations and settings are provided for the Seagate Medalist and IBM Capricorn hard disk drives in the existing maintenance books for each platform.

Quantum Viking Hard Disk Drive Settings

Use Figure 5-8 to determine the jumper settings for the Quantum Viking hard disk drive when it is installed in a MAP/40P. The Quantum Viking hard disk drive, when used in the MAP/100P, requires no jumper settings because the SCSI ID is set by the system.

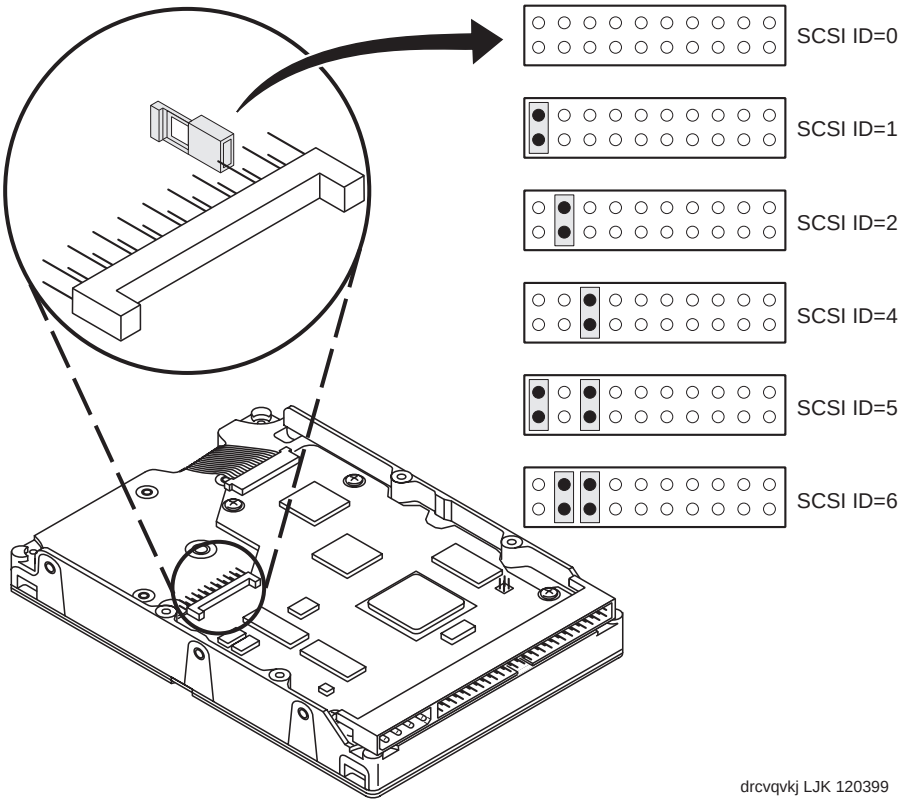


Figure 5-8. Quantum Hard Disk Drive and MAP/40P Jumper Settings

The Quantum MAP/40P comcode is 407876366. The Quantum MAP/100P comcode is 408047496.

IBM Draco Hard Disk Drive Settings

Use Table 5-10 and Figure 5-9 on page 5-28 to determine the jumper settings for the IBM Draco hard disk drives.

Table 5-10. SCSI ID Settings for each system

System	SCSI IDs	Notes
MAP/5P	0, 1[1]	One drive used
MAP/40	0, 1	Two drives used
MAP/40P	0, 1	Two drives used
MAP/100	0, 1, 2, 4, 5, 6	Two to five drives used
MAP/100P	No settings	SCSI IDs assigned by the system

1. Only applies to an early MAP/5P SCSI system that has a second hard disk drive, not to single-disk systems, including the MAP/5PV3.

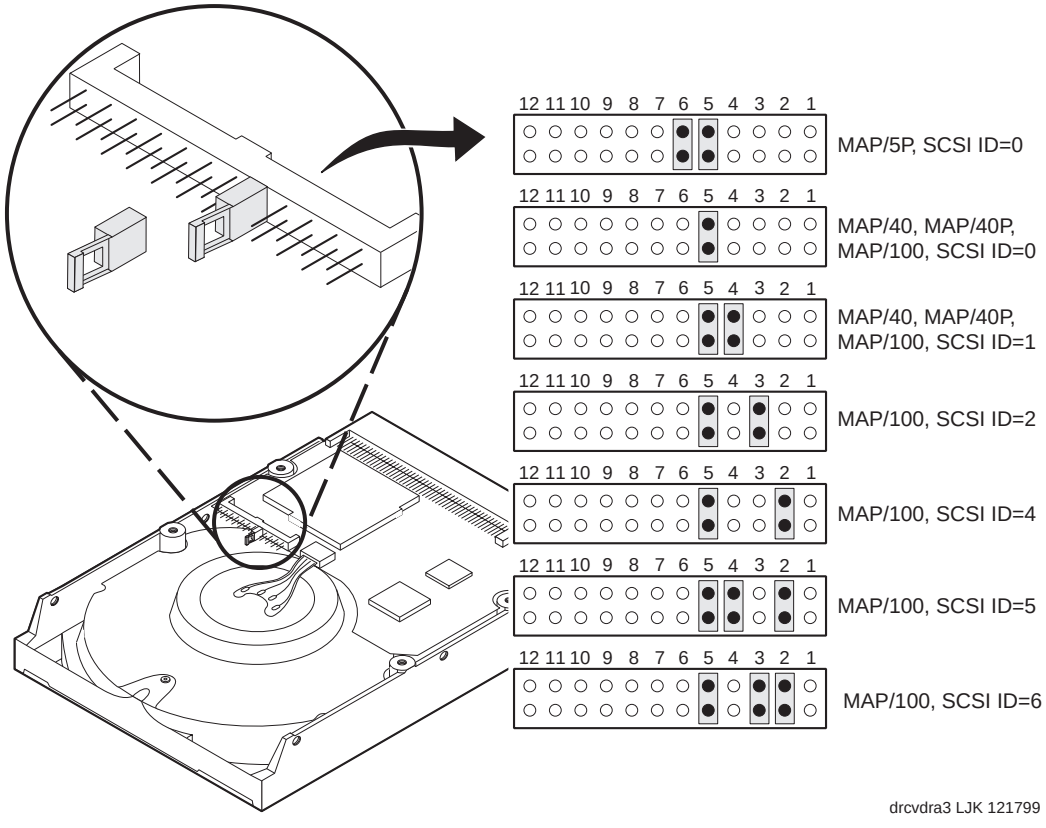


Figure 5-9. IBM Draco Hard Disk Drive and Jumper Settings

The IBM Draco MAP/5P comcode is 408089423. The IBM Draco MAP/40P comcode is 408089415. The IBM Draco MAP/100P comcode is 408089472.

Update for MAP/5PV3 Hardware Components

6

Overview

This chapter lists the differences between the older MAP/5P system and the new MAP/5P Version 3 system. This chapter also includes procedures for installing the MAP/5PV3 motherboard, CPU, or DIMM components.

NOTE:
For hard disk drive information about the MAP/5PV3, see “Hard Disk Drives’’ on page 5-25.

Purpose

The purpose of this chapter is to:

- Ensure that the user can identify the MAP/5PV3 system
- Provide installation procedures for the MAP/5PV3 motherboard, CPU and DIMM if the components are damaged
- Understand the differences between the new and old systems.

Differences between the MAP/5P and the MAP/5PV3 Systems

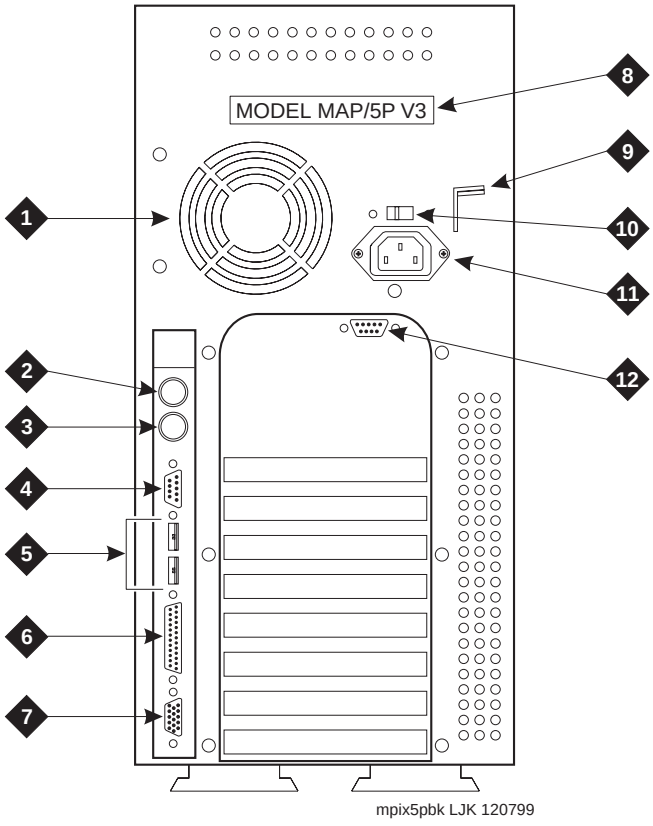
The MAP/5P Version 3 uses a new configuration (Table 6-1).

Table 6-1. MAP/5P and MAP/5PV3 Differences

Characteristic	MAP/5P	MAP/5PV3	Notes
Sticker location	None	Back of system	See Figure 6-1 on page 6-3
Power outlets	Power inlet and outlet receptacles	Power inlet receptacle only	
Power cord	One power cord to the system and one power cord between the monitor and system.	One power cord that connects to a Y-cord that provides power for both the system and monitor	See Figure 6-2 on page 6-4
Middle LED	On only when the system is on	On whenever the system is connected to power	See Figure 6-3 on page 6-5
Power switch and power source connections	Switch is part of power supply only	Switch is wired through chassis and motherboard	See Figure 6-4 on page 6-6
COM2 location	Back, on the lower left side	Back, in the center and top slot	See Figure 6-1 on page 6-3
Memory configuration	Four SIMMs	One DIMM	See Figure 6-5 on page 6-7
CPU	Socketed	Slotted	
CMOS	See Table 5-8 on page 5-20	See Table 6-2 on page 6-14	

MAP/5PV3 Connections

The MAP/5PV3 has a label on the back of the chassis for definite system confirmation. There is no outlet for monitor power. The COM2 port is located at the top of the circuit card bay, instead of at the lower left of the machine.

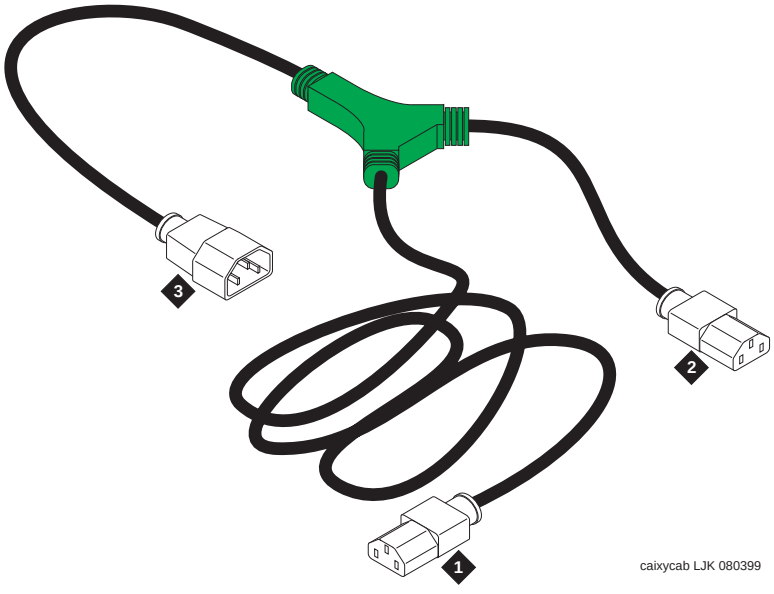


1 Power supply fan intake
2 Keyboard connector
3 Mouse connector
4 COM1
5 USB ports (not used)
6 Parallel port
7 Video connector
8 Platform label
9 Dress cover lock
10 AC voltage selector switch
11 AC power inlet receptacle
12 COM2

Figure 6-1. Back View of the MAP/5PV3

MAP/5PV3 Power Cord

There are two cables for power. One resembles a standard power cable and the other is a Y-cable. The Y-cable has 2 female plugs and 1 male. The male connector connects to the power cable. The longer female connector powers the monitor and the shorter female connector powers the system (Figure 6-2 on page 6-4).

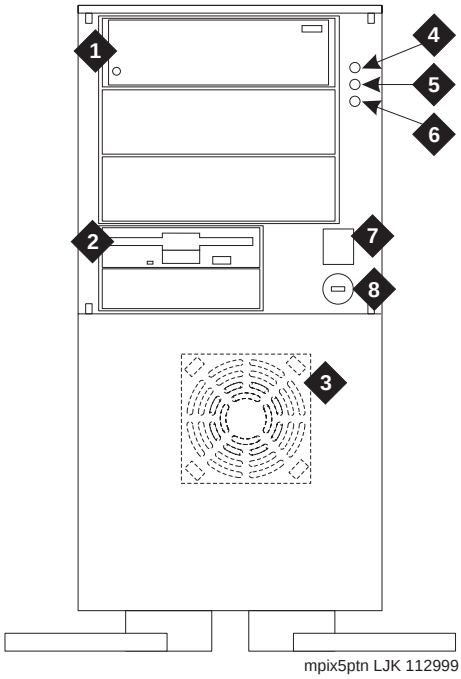


1 Connect to the monitor
2 Connect to the platform
3 Connect to the power cord

Figure 6-2. Y-Cable Connections

MAP/5PV3 Power Switch and Wiring

The front of the MAP/5PV3 system is very similar to the older system, except for the way the LEDs are illuminated. The middle LED on older MAP/5P systems was illuminated when the system was turned on. Now, however, the middle LED is illuminated when the system is connected to power (Figure 6-3 on page 6-5). This requires a different wiring configuration (Figure 6-4 on page 6-6 and Figure 6-8 on page 6-11).

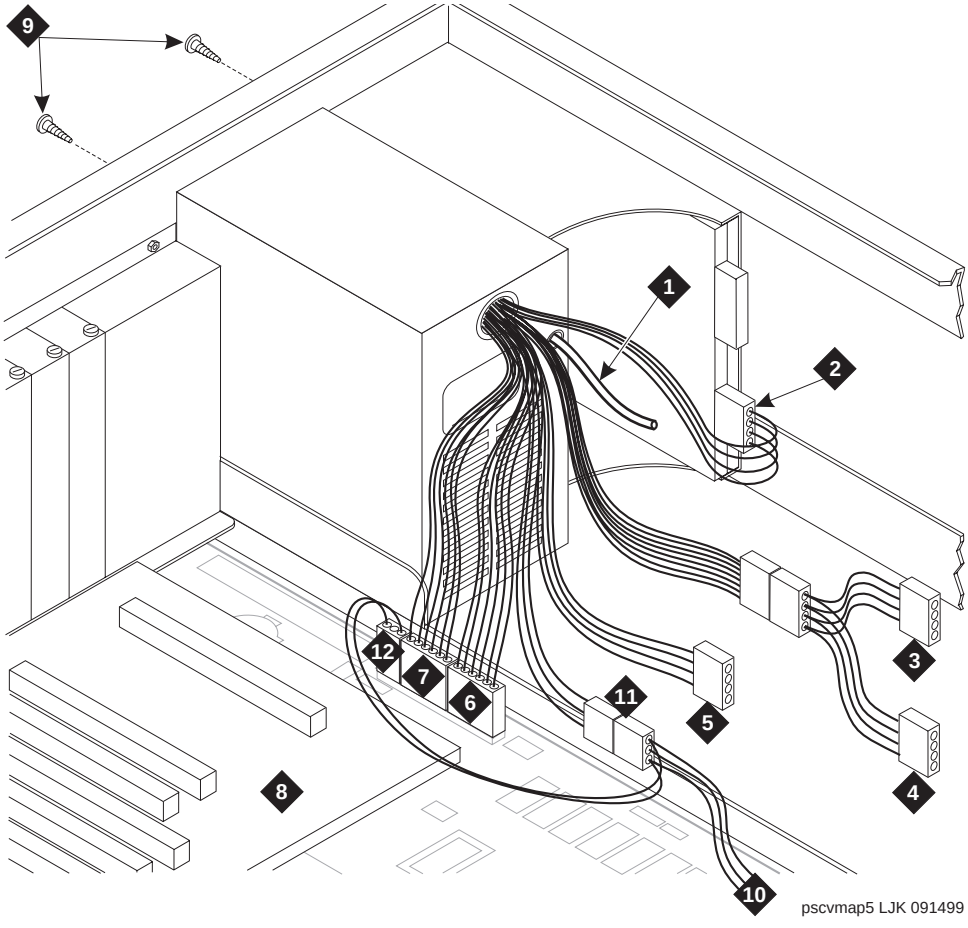


1 Cartridge tape drive
2 Diskette drive
3 Circuit card cage fan
4 Hard disk drive status LED
5 Power connected LED
6 Power on LED
7 Power button
8 Reset button

Figure 6-3. Front View of the MAP/5PV3

The MAP/5PV3 uses a different wiring configuration for the power switch than the older MAP/5P. This configuration lights the middle LED when the power cord is connected to power (Figure 6-3).

The older MAP/5P used the middle lamp as a speed indicator and lit the lower lamp when the system power was turned on.



1 Not used
2 Hard disk drive connector
3 Diskette drive connector
4 Not used
5 Tape drive connector
6 Motherboard connector
7 Motherboard connector
8 Riser card
9 Power supply retaining screws
10 3-wire power cable to the power switch
11 Power and power switch connectors
12 Standby power connector for 2-wire cable from the power switch connector

Figure 6-4. MAP/5PV3 Power Supply Wiring

Memory configuration

The older MAP/5P used up to four slots for SIMM memory cards. The MAP/5PV3 has three slots and comes equipped with one 128 MB DIMM (Figure 6-5). The MAP/5PV3 CPU is mounted in a slot that stands up from the motherboard. The CPU has a fan and cooling blades as shown in Figure 6-5.

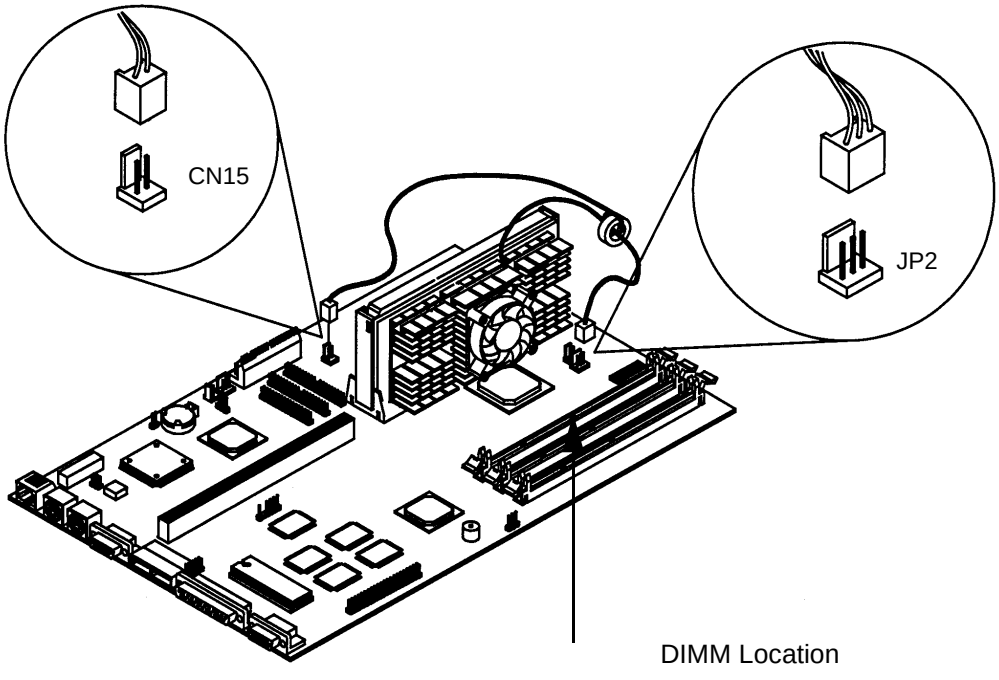


Figure 6-5. MAP/5PV3 CPU Connectors and DIMM Location

Installing a New MAP/5PV3 Motherboard

This procedure lists the steps for replacing an existing motherboard with a new motherboard in a MAP/5PV3 system. The motherboards from new and older systems are not interchangeable. Do not attempt to install an older motherboard in a MAP/5PV3 or install a MAP/5PV3 motherboard in an older system.

To install the new MAP/5PV3 motherboard:

WARNING:
Use ESD protection at all times when working with hardware.

1. Remove the replacement motherboard from its protective packaging.

   CAUTION:
   Do not interchange motherboards from current and older systems. Install MAP/5PV3 motherboards in a MAP/5PV3 system only.

2. Check that the motherboard was not damaged in shipment.

   NOTE:
   The MAP/5PV3 motherboard does not ship with a processor or DIMM installed.

3. If the system is operating, shut down the system.
4. Remove all incoming power to the system.
5. Remove the system's dress covers. See Chapter 4, ''Getting Inside the Computer'', of your platform maintenance book for the procedure.
6. Remove any cables that are connected to the system's circuit cards.
7. Remove all circuit cards that are installed in the riser card.

   NOTE:
   Store the circuit and riser cards in static-free bags until they are reinstalled.

8. Remove the riser card.
9. Remove the CPU from the old motherboard (Figure 6-6 on page 6-9). Unsnap the retaining clips from each end of the CPU assembly. Slide the CPU up and out of the slot.

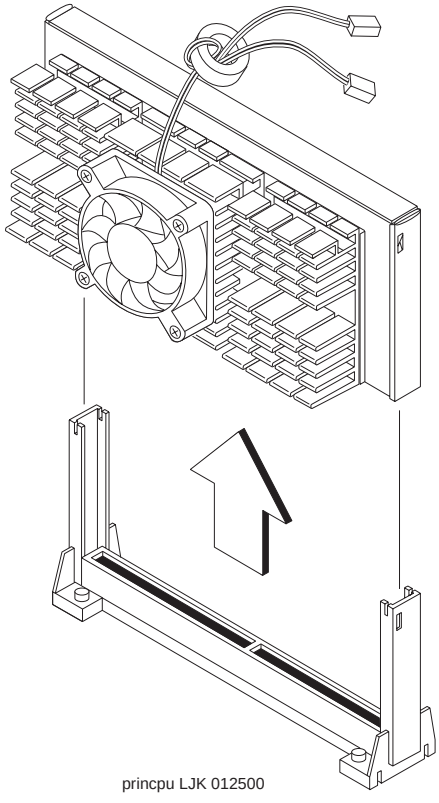


Figure 6-6. Removing the MAP/5PV3 CPU

10. Remove all cables and connectors attached to the old motherboard.
11. Remove the old motherboard from the chassis.
12. Remove the DIMM from the old motherboard. Unsnap the retaining clip on each end. Firmly, but gently lift the DIMM on each end of the card. See Figure 6-7 on page 6-10.

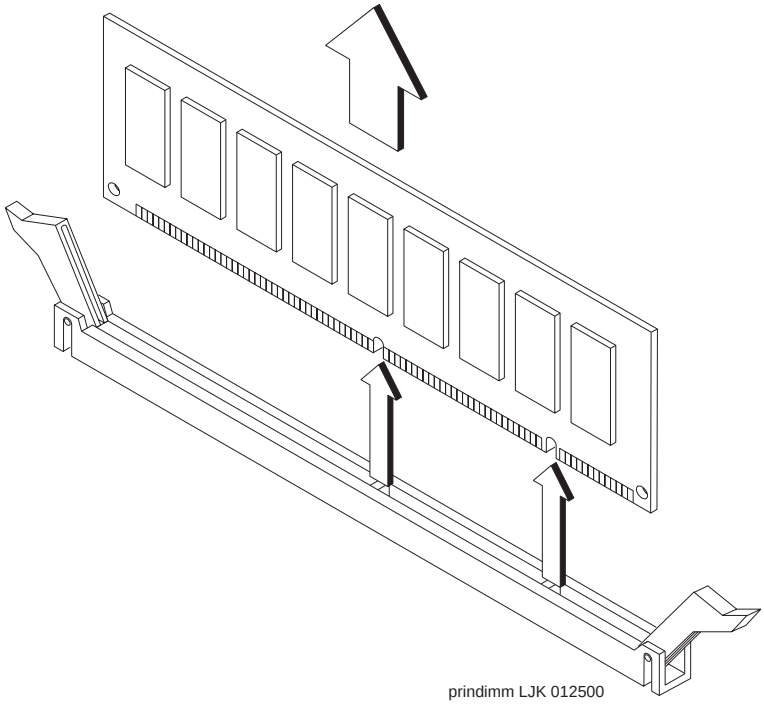
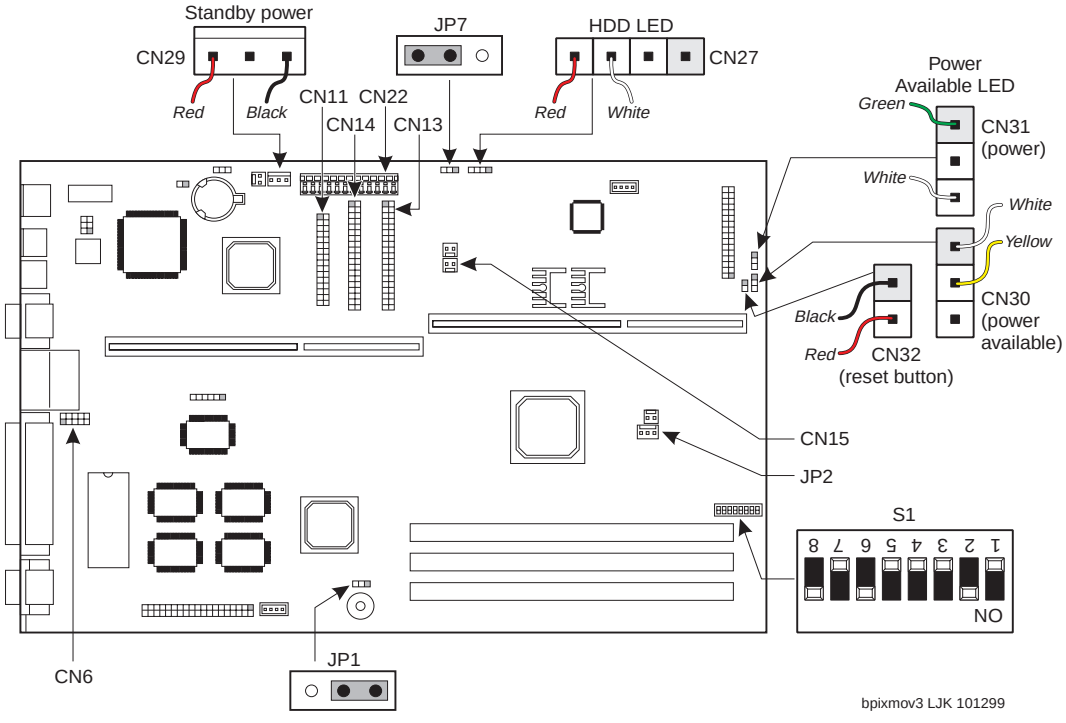


Figure 6-7. Removing the MAP/5PV3 DIMM

13. Install the DIMM on the new motherboard. Align the DIMM properly in the slot. Press firmly, yet gently on the top of the card until it seated completely in the slot. Snap the retaining clips closed.
14. Set the jumpers and switches on the new motherboard (Figure 6-8 on page 6-11).



CN6–Serial2 (COM2) connector

CN11–FDD (diskette) connector

CN13–IDE #1 connector (hard disk drive)

CN14–IDE #2 connector (CD-ROM drive)

CN15–CPU Temperature sensor connector

CN22–Power connector

CN27–HDD (hard drive) LED connector

CN29–Standby Power Connector (keyed)

CN30–Power available LED connector

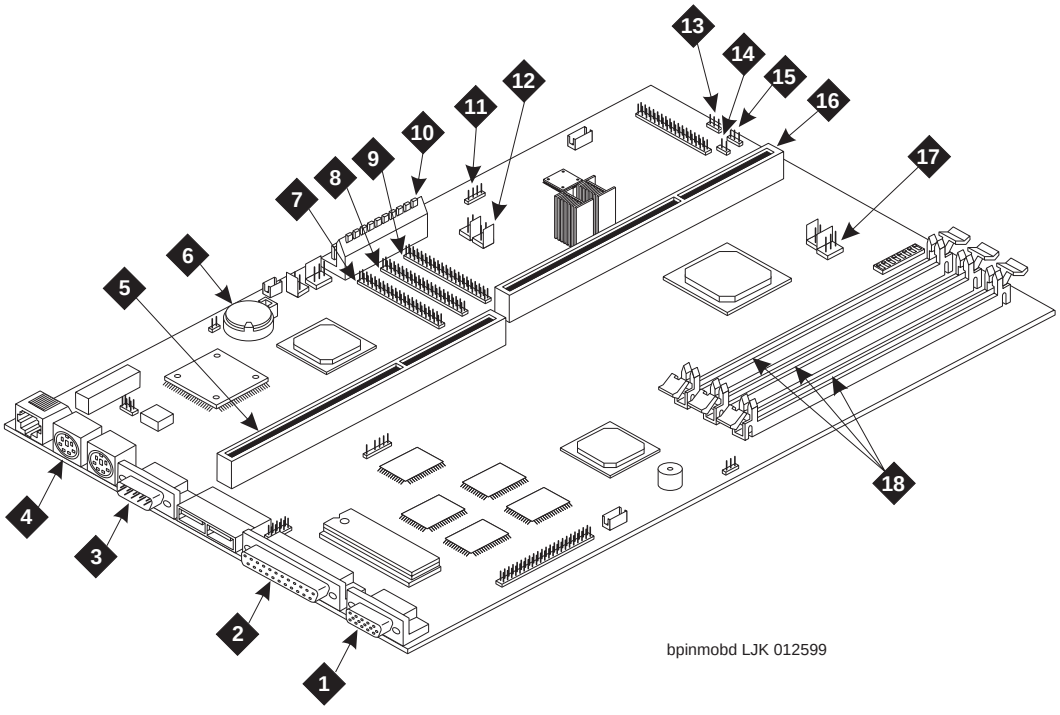
CN31–Power LED connector

CN32–Reset key connector

JP2–3-pin CPU fan connector

Figure 6-8. MAP/5PV3 Motherboard Jumpers and Connectors

15. Install the new motherboard into the chassis.
16. Install the CPU on the new motherboard. Slide the CPU gently, but firmly into the CPU mount. Snap the retaining clips closed.
17. Attach all cables and connectors to the new motherboard (Figure 6-9 on page 6-12).
18. Install the riser card. Align the contacts with the slot orientation. Press firmly on the upper corners of the card until it clicks in place.
19. Install any feature cards that were connected to the riser card. Reconnect any cables that were connected to the feature cards.



1 Monitor (VGA) connector
2 Parallel port
3 COM1
4 Keyboard connector
5 Riser slot
6 CMOS battery
7 FDD (diskette) connector
8 IDE #2 connector
9 IDE #1 connector
10 Power connector
11 HDD (hard drive) LED connector
12 CPU temperature connector
13 Power LED connector
14 Reset key connector
15 Power Ready LED connector
16 CPU slot
17 3-pin fan connector
18 DIMM sockets

Figure 6-9. MAP/5PV3 Motherboard Jumpers and Connectors

20. Replace the system's dress covers. See Chapter 4, ''Getting Inside the Computer'', of your platform maintenance book for the procedure.
21. Continue with ''Checking the MAP/5PV3 CMOS Settings'' on page 6-13.

Checking the MAP/5PV3 CMOS Settings

The MAP/5PV3 uses CMOS settings that are different than the other MAP/5P system settings. This section includes instructions on how to check the settings, then a list of the settings.

Displaying the MAP/5PV3 CMOS Settings

After the new motherboard is installed, check the CMOS settings to confirm that they were set correctly.

1. Apply power to the system, or if the system is operating, shutdown and reboot the system.

   When prompted during the boot, you will need to enter the Setup Utility.

2. After the memory check, press CONTROL ALT ESC.

   The system displays the Setup Utility Screen.

3. Press F8 at the setup main menu.

   F8 sets the system display for advanced options under each menu selection.

4. Make any necessary changes.

   Use Table 6-2 under "MAP/5PV3 CMOS Settings" on page 6-14 for the correct settings.

   Use the up and down arrow keys to move the cursor between fields. Use the left and right arrow keys to change the value of the field. Use the ESC key to return to the previous menu.

5. When you have completed changing the CMOS parameter settings, press ESC.

6. Place the cursor on YES to change the CMOS settings.

7. Press ENTER.

8. Allow the system to boot.

9. Place a test call to the Lucent Intuity system to verify system operation.

MAP/5PV3 CMOS Settings

These settings are used during the CMOS setup of a new motherboard.

Table 6-2. MAP/5PV3 CMOS Setup Utility Values

Option	Setting
System Information	
Processor	Pentium III
Processor Speed	450 MHz
Internal Cache	32 KB, Enabled
External Cache	512 KB, Enabled
Floppy Drive A	1.44MB 3.5-inch
Floppy Drive B	None
IDE Primary Channel Master	For IDE systems: Hard Disk, 13030 M.B. For SCSI systems: None
IDE Primary Channel Slave	**None**
IDE Secondary Channel Master	For IDE systems: CD-RW For SCSI systems: None
IDE Secondary Channel Slave	For IDE Systems: IDE CD-ROM For SCSI Systems: None
Total Memory	128 MB
1st Bank	SDRAM, 128 MB
2nd Bank	None
3rd Bank	None
(System Information—Page Down)	
Serial Port 1	3F8h, IRQ 4
Serial Port 2	Disabled
Parallel Port	378h, IRQ 7
PS/2 Mouse	None
Product Information	
Product Name	V66LA
System S/N	00000000000000 or the system's serial number
Main Board ID	V66LA

Table 6-2. MAP/5PV3 CMOS Setup Utility Values

Option	Setting
Main Board S/N	00000000000000 or the system's motherboard serial number
System BIOS Version	V3.2
SMBIOS Version	2.1
Disk Drives	
Floppy Drive A	1.44MB 3.5-inch
Floppy Drive B	None
LS-120 drive as	Normal
Disk Drives: IDE Primary Channel Master	
Type	Auto
Cylinder	------
Head	------
Sector	------
Size	For IDE systems: 13030 MB For SCSI systems: 0 MB
Hard Disk Size > 504MB	Auto
Hard Disk Block Mode	Auto
Advanced PIO Mode	Auto
Hard Disk 32 Bit Access	Disabled
DMA Transfer Mode	Auto
Disk Drives: IDE Primary Channel Slave	
Type	Auto
Cylinder	0
Head	0
Sector	0
Size	0 MB
Hard Disk Size > 504MB	Auto
Hard Disk Block Mode	Auto
Advanced PIO Mode	Auto
Hard Disk 32 Bit Access	Disabled
DMA Transfer Mode	Auto

Table 6-2. MAP/5PV3 CMOS Setup Utility Values

Option	Setting
Disk Drives: IDE Secondary Channel Master	
Type	Auto
Cylinder	0
Head	0
Sector	0
Size	0 MB
Hard Disk Size > 504MB	Auto
Hard Disk Block Mode	Auto
Advanced PIO Mode	Auto
Hard Disk 32 Bit Access	Disabled
DMA Transfer Mode	Auto
Disk Drives: IDE Secondary Channel Slave	
Type	Auto
Cylinder	0
Head	0
Sector	0
Size	0 MB
Hard Disk Size > 504MB	Auto
Hard Disk Block Mode	Auto
Advanced PIO Mode	Auto
Hard Disk 32 Bit Access	Disabled
DMA Transfer Mode	Auto
Onboard Peripherals	
Serial Port 1	Enabled
Base Address	3F8h
IRQ	4
Serial port 2	Disabled
Base Address	----
IRQ	--
Parallel Port	Enabled
Base Address	378h
IRQ	7

Table 6-2. MAP/5PV3 CMOS Setup Utility Values

Option	Setting
Operation Mode	Standard
ECP DMA Channel	-
Onboard Peripherals: Onboard Device Settings	
Floppy Disk Controller	Enabled
IDE Controller	For IDE systems: Both For SCSI systems: Disabled
PS/2 Mouse Controller	Disabled
USB Host Controller	Disabled
USB Legacy Mode	-----
Power Management	
Power Management Mode	Disabled
IDE Hard Disk Standby Timer	---
System Sleep Timer	-----
Sleep Mode	-------
Power Switch < 4 sec.	Power Off
System wake-up event Modem Ring Indicator	Disabled
Boot Options	
Boot Sequence: 1st.	Floppy Disk
2nd.	Hard Disk
3rd.	IDE CD-ROM
First Hard Disk Drive	For IDE systems: IDE For SCSI systems: SCSI
Primary Display Adapter	Onboard
Fast Boot	Disabled
Silent Boot	Disabled
Num Lock After Boot	Enabled
Memory Test	Enabled
Configuration Table	Enabled
Date and Time	
Date	month day, year as required)
Time	hour:minutes:seconds (as required)

Table 6-2. MAP/5PV3 CMOS Setup Utility Values

Option	Setting
System Security	
Setup Password	None
Power-on Password	None
Operation Mode	Normal
Disk Drive Control: Floppy Drive	Normal
Hard Disk Drive	Normal
Processor Serial Number	Enabled
Advanced Options: Memory/Cache Options	
Internal Cache (CPU Cache)	Enabled
External Cache	Enabled
Cache Scheme	Write Through (Fixed field)
Memory at 15MB-16MB Reserved for	System
Memory Parity Mode	ECC
C8000h - DFFFFh Shadow	Disabled
Advanced Options: PnP/PCI Options (Press F8 to display.)	
PCI IRQ Setting	Manual
PCI Slot 1	For IDE systems: INTA 11, INTB 10, INTC --, INTD -- For SCSI systems: INTA 14, INTB --, INTC --, INTD --
PCI Slot 2	For IDE systems: INTA 10, INTB --, INTC --, INTD 11 For SCSI systems: INTA --, INTB --, INTC --, INTD 14
PCI Slot 3	For IDE systems: INTA --, INTB --, INTC 11, INTD 10 For SCSI systems: INTA --, INTB --, INTC 14, INTD --
PCI IRQ Sharing	No
VGA Palette Snoop	Disabled

Table 6-2. MAP/5PV3 CMOS Setup Utility Values

Option	Setting
Graphics Aperture Size	64 MB
Plug and Play OS	No
Reset Resource Assignments	No

(6 of 6)

Installing Base System Software

7

Overview

This chapter describes installation procedures for:

- Unixware software
- Platform software
- AUDIX software
- Switch integration software
- Announcements software
- Remote Maintenance circuit card software (if the system is equipped)
- RFU software (if necessary)

CAUTION:
The procedures in this chapter must be followed completely and in the order given. Failure to do so will result in a nonoperative system, requiring re-cleaning the hard drives and starting the reload procedure over from the beginning.

Purpose

This purpose of this chapter is to provide the information necessary to reload the operating system and application software to a computer that has experienced a Disk 0 failure. This chapter should be used in conjunction with Appendix D, “Disaster Recovery Checklists”, in your platform maintenance book.

NOTE:
The installer must have the root password to complete this procedure.

Before You Begin

Confirm that you have all software required to reload the system:

- 3 boot diskettes
- 1 HBA diskette
- UNIXWARE tape
- Intuity system platform tape
- INTUNIX tape
- Intuity AUDIX tape
- Announcement tape
- Switch Integration tape
- Remote Maintenance Board tape
- Any RFU tapes that may be necessary

Installing UnixWare

Installing the UnixWare operating system unmounts file systems. The maintenance module in the Lucent™ INTUITY™ software has been designed to detect unmounted file systems and attempt to recover them. If the MTCE module does not detect any unmounted file systems, all of the software will load.

If this software is being loaded onto a system that has clean hard disks that have not been previously loaded, the system will not detect file systems.

If this is a recovery installation, the system will detect previously loaded file systems.

Preparing the System

To prepare the system, do the following:

1. Verify the CMOS settings. Use one of these procedures:
   - MAP/40P or MAP/100: "CMOS Parameter Settings" on page 5-10
   - MAP/5P: "Checking the MAP/5P CMOS Settings" on page 5-17
   - MAP/5PV3: "Checking the MAP/5PV3 CMOS Settings" on page 6-13

2. Verify the SCSI adapter settings. See "Host Adapter Parameter Settings" on page 5-6 for the procedure.
3. Reboot the system.
4. Press CONTROL A when prompted.

   The system displays the `Host Adapter Configuration` screen.
5. Move the cursor to SCSI Disk Utilities using the ▲ or ▼ keys.
6. Press ENTER.

   The system displays the `SCSI Disk Utilities` screen.
7. Move the cursor to the SCSI disk to be formatted using the ▲ or ▼ keys.
8. Press ENTER.

   The system displays the Configure/Format Disk screen.
9. Move the cursor to `Format Disk` using the ▲ or ▼ keys.
10. Press ENTER.

    The system asks you to confirm the disk format.
11. Enter **y**
12. Continue with the next procedure, "Starting the Unixware Installation."

Starting the Unixware Installation

CAUTION:
If you use the DELETE key to stop the UnixWare installation at any time during this process, you will have to restart the software installation process at Step 1.

To start the Unixware installation, do the following:

1. Insert the diskette labeled "Lucent INTUITY UNIX Boot Floppy 1 of 3" into the diskette drive.

   CAUTION:
   You must watch for the system processor speed after turning on the system. Read both Step 2 and Step 3 before proceeding.

2. If the system is off, turn on the system power switch.

   If the system is on, reboot the system. See "Rebooting the System" in Chapter 3, "Common System Procedures", in your platform maintenance book for the procedure.
3. Watch for the system processor speed, which displays very briefly.

The system speed is used later during the system configuration.

The system displays the UnixWare introduction screen as it begins to load the base system software. When the system is done with the first boot floppy it displays the following message:

```
Remove the diskette labeled 'Boot Floppy 1 of 3'.

If you have a diskette labeled 'Host Bus Adapter
Drivers', insert that diskette now.

For more information on Host Bus Adapter diskettes, see
the UnixWare Installation Handbook.

Otherwise, if you do not have (or do not need to use) a
Host Bus Adapter diskette, insert the diskette labeled
'Boot Floppy 2 of 3' now.

Press 'ENTER' to continue.
```

4. Remove Lucent INTUITY UNIX Boot Floppy 1 of 3 from the diskette drive.
5. Continue with the next procedure, "Loading the Host Bus Adapter."

Loading the Host Bus Adapter

To load the host bus adapter, do the following:

1. Insert the diskette labeled "Pentium HBA Floppy" into the diskette drive.
2. Press ENTER.

   The system displays the following message:

```
Loading the Host Bus Adapter drivers. This will take a
few moments...

The Host Bus Adapter driver(s) on the Host Bus Adapter
diskette have been loaded and you can now remove the
diskette.

If you have another Host Bus Adapter diskette (for
different adapters) insert that disk now.

For more information, see the UnixWare Installation
Handbook.

Otherwise, if you do not have (or do not need to use)
another Host Bus Adapter diskette, insert the diskette
labeled 'Boot Floppy 2 of 3' now.
```

3. Remove the diskette labeled "Pentium HBA Floppy" from the diskette drive.
4. Continue with the next procedure, "Continuing the UnixWare Installation."

Continuing the UnixWare Installation

To continue the UnixWare installation, do the following:

1. Insert the diskette labeled “Unixware for INTUITY Boot Floppy 2 of 3” into the diskette drive.
2. Press ENTER.

   The system displays the Introduction screen (Figure 7-1).

   NOTE:
   If the system displays a message that the system must have at least 60 MBytes of space in the hard disk drive to install UNIX, the hard disk drive is experiencing problems. The cable may not be connected, or the hard disk drive may be damaged. Power down the system and check the hard disk drive cables. See “Removing Power from the Computer” in Chapter 4, “Getting Inside the Computer”, in your platform maintenance book for the procedure.

```
Unixware Installation                                  Introduction

        Welcome to the UnixWare installation process!

        If you have never installed UnixWare before, it is
        recommended that you press the 'F1' (or '?') key now to
        learn more about the installation process and the hardware
        requirements of UnixWare.

        -Pressing the 'F1' (or '?') key at any time during
         installation will display more information or help.

        -Pressing the 'Del' key at any time cancels the
         installation.




Press the 'F1' (or '?') key for more information or 'ENTER' to
continue.
```

Figure 7-1. Introduction Screen

3. Press ENTER.
4. Do one of the following:
   - If Hard Disk Drive 0 has been replaced with a new hard disk drive, the system displays the UnixWare Installation Files Detected Warning screen (Figure 7-2). Continue with Step 5 on page 7-6.

- If the system does not display the UnixWare Installation Files Detected Warning, continue with the next procedure, "Setting Up the Keyboard" on page 7-6.

```
WARNING: Files have been detected in the active partition(s) of
your hard disk(s).

In order to install the operating system, you must have an active
UNIX partition occupying 100% of your hard disk. No other
partitions may share the disk.

You have the option of removing the existing partitions at this
point and creating a new UNIX partition. You should only remove the
existing partitions if you don't want to save any files on your
disk.


If you elect to abort the installation, the existing partitions
will not be removed and installation will be halted.

    1. Destroy existing partitions and create a new UNIX partition.

    2. Abort the installation, leaving existing partitions
       untouched.


Type '1' or '2' followed by 'ENTER':1
```

Figure 7-2. UnixWare Installation Files Detected Warning Screen

5. Press ENTER.

   The system removes existing partitions and creates a new UNIX partition.

Setting Up the Keyboard

To setup the keyboard, do the following:

1. Starting at the UnixWare Installation Files Deleted Warning screen (Figure 7-2), press ENTER.

   The system displays the Keyboard Setup screen (Figure 7-3 on page 7-7).

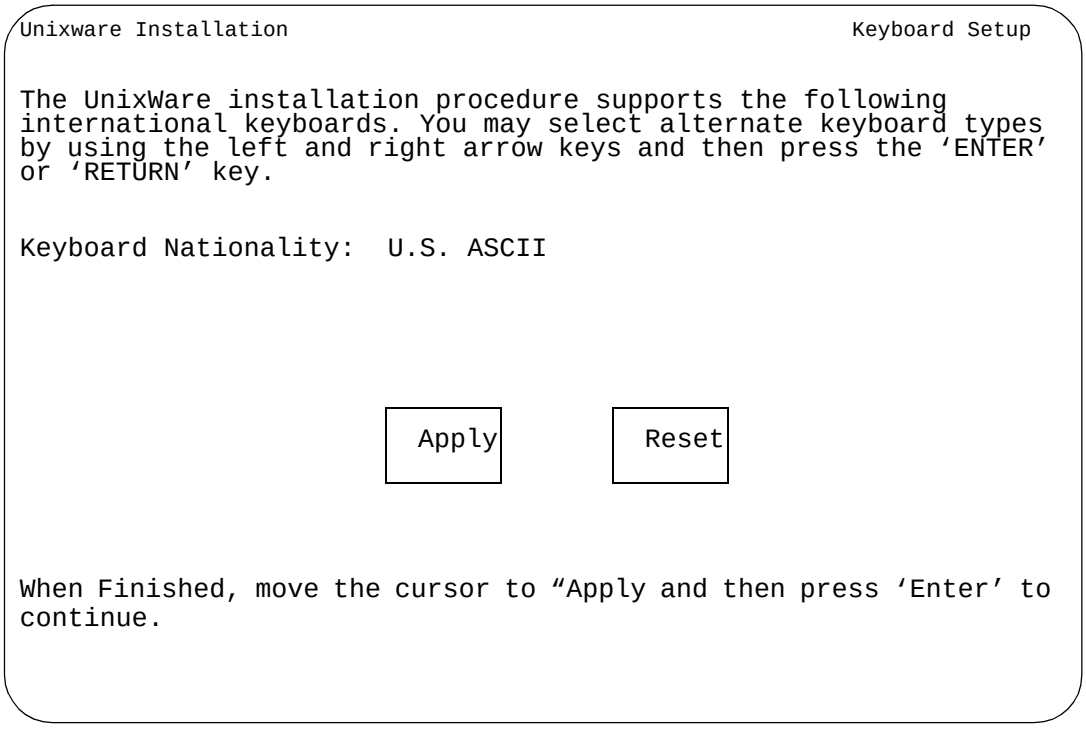


Figure 7-3. Keyboard Setup Screen

2. Use the left ◄ and right ► arrows on your keyboard to move through the field selections.
3. Select `U.S. ASCII`.
4. Press the down ▼ arrow to move to the `Apply` field and press ENTER.

   The system displays the Configure Date and Time screen (Figure 7-4 on page 7-8).
5. Continue with the next procedure, "Configuring the System Date and Time" on page 7-8.

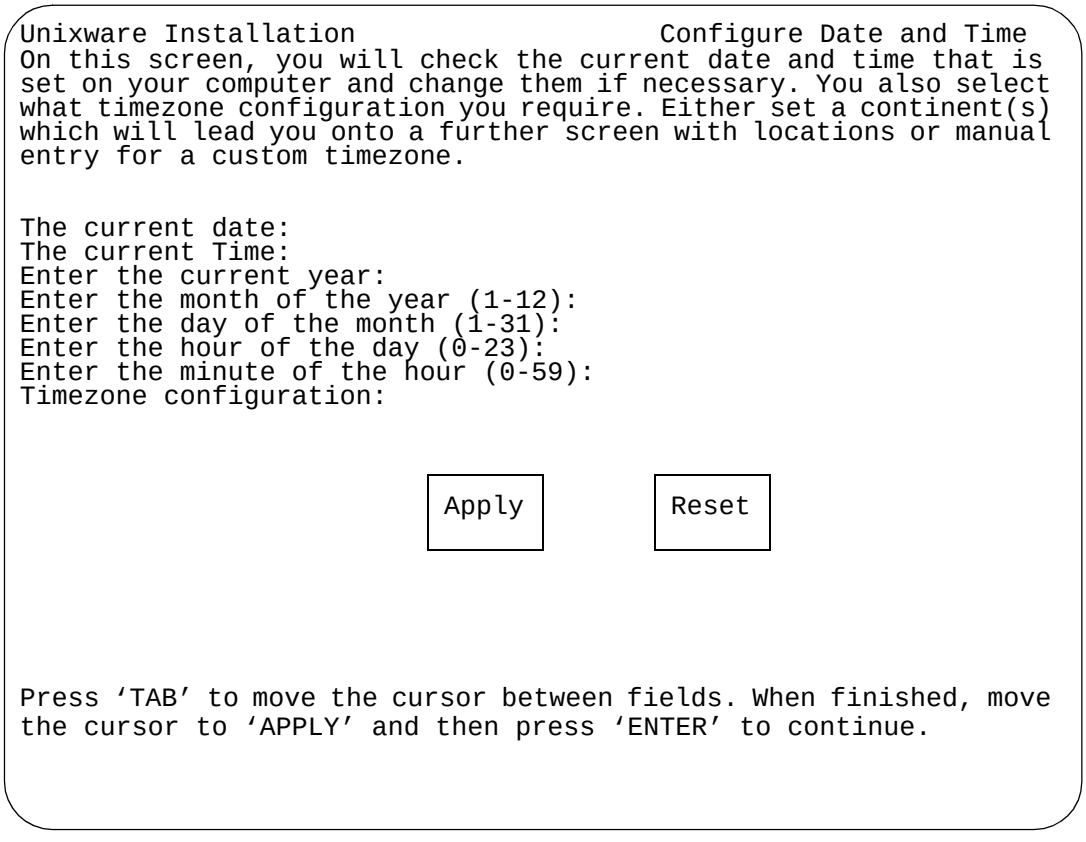


Figure 7-4. Configure Date and Time Screen

Configuring the System Date and Time

To configure the system date and time, do the following:

1. Starting at the Configure Date and Time screen (Figure 7-4), use the left ◄ and right ► arrows on your keyboard to move through the field selections. Use the down ▼ arrow to move to the next field.
2. Select the appropriate data for each field.
3. Press the down ▼ arrow to move to the `Apply` field and press ENTER.

   The system displays the Continent Location Choice screen (Figure 7-5 on page 7-9).
4. Continue with the next procedure, "Choosing the Continent Location" on page 7-9.

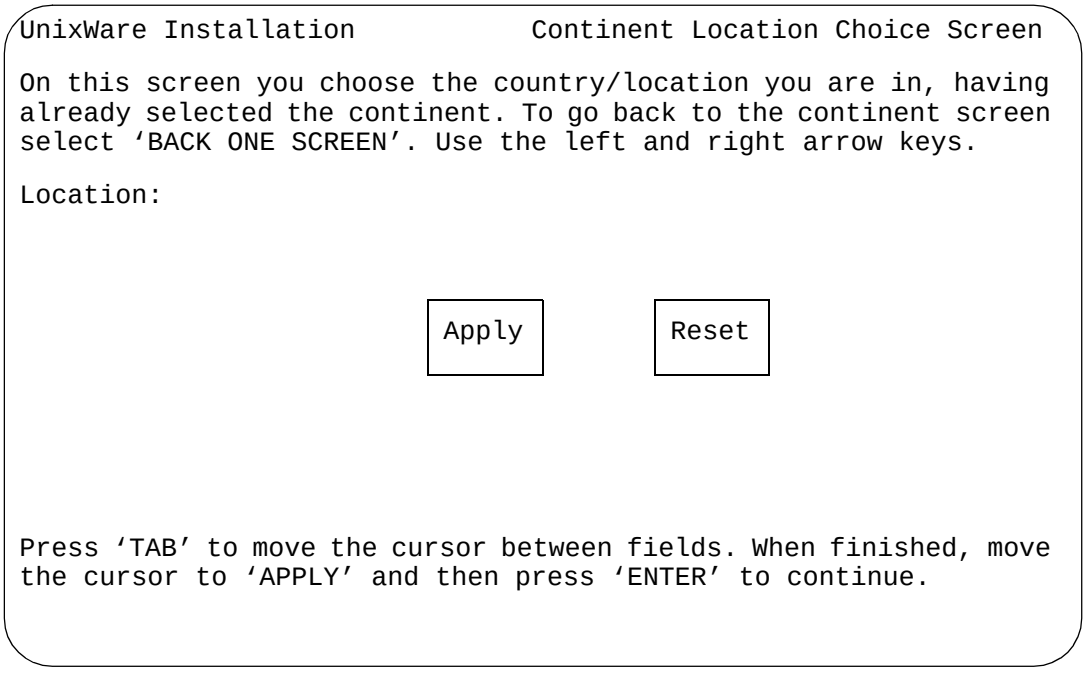


Figure 7-5. Continent Location Choice Screen

Choosing the Continent Location

To choose the continent location, do the following:

1. Starting at the Continent Location Choice screen (Figure 7-5), use the left ◄ and right ► arrows on your keyboard to move through the field selections.

   CAUTION:
   If you are outside the United States, choose `US/Eastern` *for this field.*

2. Select the appropriate data for each field.
3. Press the down ▼ arrow to move to the `Apply` field and press ENTER.

   The system displays the Primary Hard Disk Partitioning screen (Figure 7-6 on page 7-10).
4. Continue with the next procedure, "Partitioning Hard Disk Drive 0" on page 7-10.

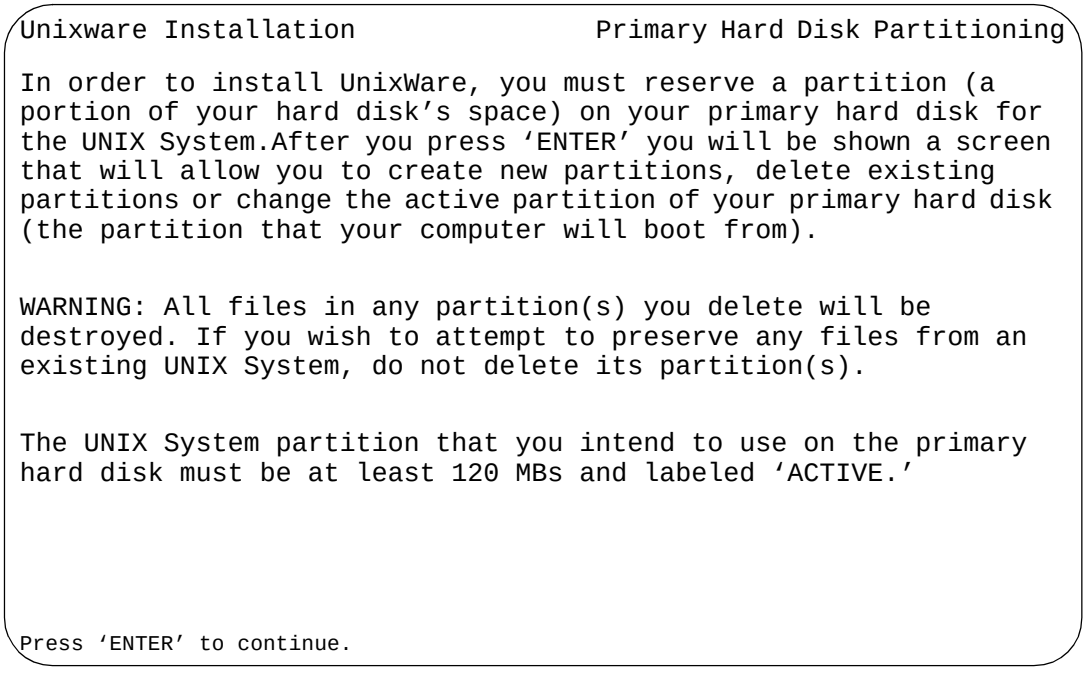


Figure 7-6. Primary Hard Disk Partitioning Screen

Partitioning Hard Disk Drive 0

To partition Hard Disk Drive 0, do the following:

1. Starting at the Primary Hard Disk Partitioning screen (Figure 7-6), press ENTER.

   The system displays the Partition Creation screen (Figure 7-7 on page 7-11).

```
Unixware Installation           Hard Disk Partitioning - Disk 1

Total disk size is 2063 cylinders (2063.0MB)


                                                              Approx
Partition   Status  Type     Start  End    Length  %         MB
---------------------------------------------------------------------




1. Overwrite system master boot code
2. Create a partition
3. Change Active (Boot from) partition
4. Cancel (Exit without updating disk configuration)

Enter Selection
```

Figure 7-7. Partition Creation Screen

2. Enter **2**

   The system displays the Partition Configuration screen (Figure 7-8 on page 7-12).

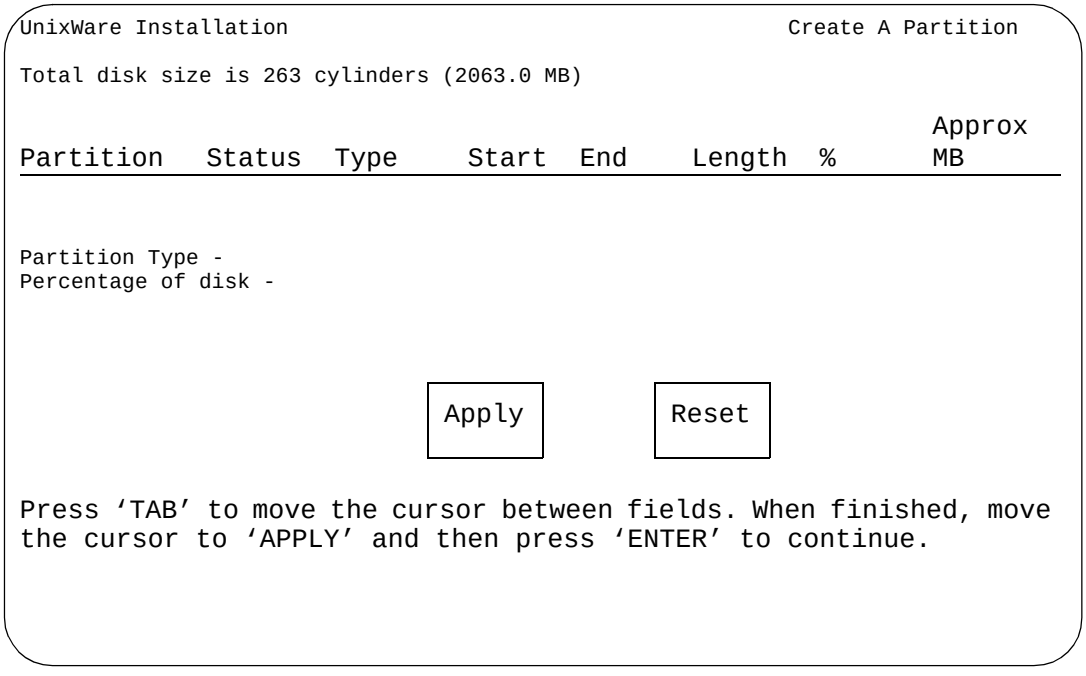


Figure 7-8. Partition Configuration Screen

3. Use the left ◄ and right ► arrows on your keyboard to move through the field selections.
4. Select `UNIX system` for the `Partition Type` field.
5. Enter **100** in the `Percentage of disk` field.
6. Press the down ▼ arrow to move to the `Apply` field and press ENTER.

   The system displays the Partition Confirmation screen (Figure 7-9 on page 7-13).

```
Total disk size is 2048 cylinders (2048.0MB)

                                                          Approx
Partition   Status   Type      Start   End     Length   %      MB
-------------------------------------------------------------------
1           Active   UNIX      0       2047    2048     100    2048.0
                     System



1. Overwrite system master code
2. Delete a partition
3. Exit (Update disk configuration and exit)
4. Cancel (Exit without updating disk configuration)

Enter Selection:
```

Figure 7-9. Partition Confirmation Screen

7. Enter **3**

   The system does one of the following:

   - If you have one hard disk drive, the system displays the Installation Type Selection screen (Figure 7-11 on page 7-15).
   - If you have two hard disk drives, the system displays the Secondary Hard Drive Partitioning screen (Figure 7-10 on page 7-14).

8. Do one of the following:

   - If you have one hard disk drive, continue with the procedure, "Choosing the Installation Type" on page 7-15
   - If you have two hard disk drives, continue with the next procedure, "Partitioning Hard Disk Drive 1" on page 7-14.

```
You may use a partition of your secondary hard disk. If you choose
to use a partition of your secondary hard disk you will be shown a
screen that will allow you to partition your secondary hard disk.


WARNING: All files in any partition(s) you delete will be
destroyed.


If you choose to create a UNIX System partition on your secondary
hard disk, it must be at least 40 MBs.

Your Options are:

1.  Do not use a partition of the secondary hard disk for
    the UNIX System.

2.  Use a partition of the secondary hard disk for the
    UNIX System.

Press '1' or '2' followed by 'ENTER'.
```

Figure 7-10. Secondary Hard Disk Partitioning Screen

Partitioning Hard Disk Drive 1

NOTE:
This screen will not appear if you do not have a second hard disk drive. Continue with the next procedure, "Choosing the Installation Type" on page 7-15.

To partition Hard Disk Drive 1, do the following:

1. Starting at the Secondary Hard Disk Partitioning screen (Figure 7-10), select "1".
2. Press ENTER.

   The system displays the Installation Type Selection screen (Figure 7-11 on page 7-15).
3. Continue with the next procedure, "Choosing the Installation Type" on page 7-15.

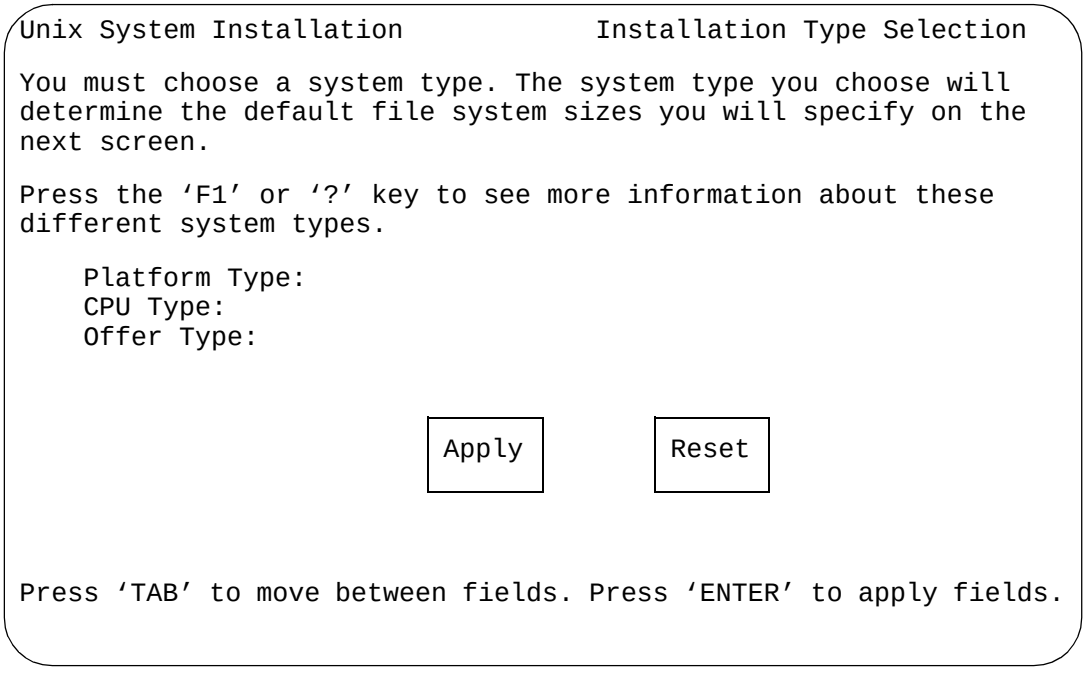


Figure 7-11. Installation Type Selection Screen

Choosing the Installation Type

To choose the installation type, do the following:

1. Starting at the Installation Type Selection screen (Figure 7-11), use the left ◄ and right ► arrows on your keyboard to move through the field selections. Use the down ▼ arrow to move to the next field.

   CAUTION:
   If the system is a MAP/100P, select MAP/100P in the Platform Type field, not MAP/100. Otherwise the system must be reloaded again.

2. Select the correct platform in the `Platform Type` field.
3. Select the correct processor in the `CPU Type` field.

   NOTE:
   If the CPU is faster than all listed types, select `Pentium-200`.

4. Select `INTUITY AUDIX` for the `Offer Type` field.
5. Press the down ▼ arrow to move to the `Apply` field.

6. Press ENTER.

   The system displays the UnixWare Installation Set Slice Sizes screen (Figure 7-12).

7. Continue with the next procedure, "Setting the Slice Sizes".

```
UNIX System Installation                          Set Slice Sizes

You have selected the MAP/100P system. Now you must specify the
sizes of the filesystem slices. The recommended sizes for a
MAP/100P system are provided as defaults on this screen. Press the
'F1' or '?' key to see more information about these different system
types.


         Size of /stand in MB: xx
       Size of /dev/dump in MB: xx
       Size of /dev/swap in MB: xx
               Size of / in MB: xx


                          Apply          Reset

Press 'TAB' to move the cursor between fields. When finished, move
the cursor to 'Apply' and then press 'ENTER' to continue.
```

Figure 7-12. UnixWare Installation Set Slice Sizes Screen

Setting the Slice Sizes

To set the slice sizes, do the following:

1. Starting at the UnixWare Installation Set Slice Sizes screen (Figure 7-12), use the down ▼ arrow to move to the `Apply` field.

   NOTE:
   If the correct platform was selected, the defaults on this screen are correct. Accept the defaults without changes.

2. Press ENTER.

   The system displays the Hard Disk Surface Analysis screen (Figure 7-13 on page 7-17).

3. Continue with the next procedure, "Performing a Hard Disk Drive Surface Analysis" on page 7-17.

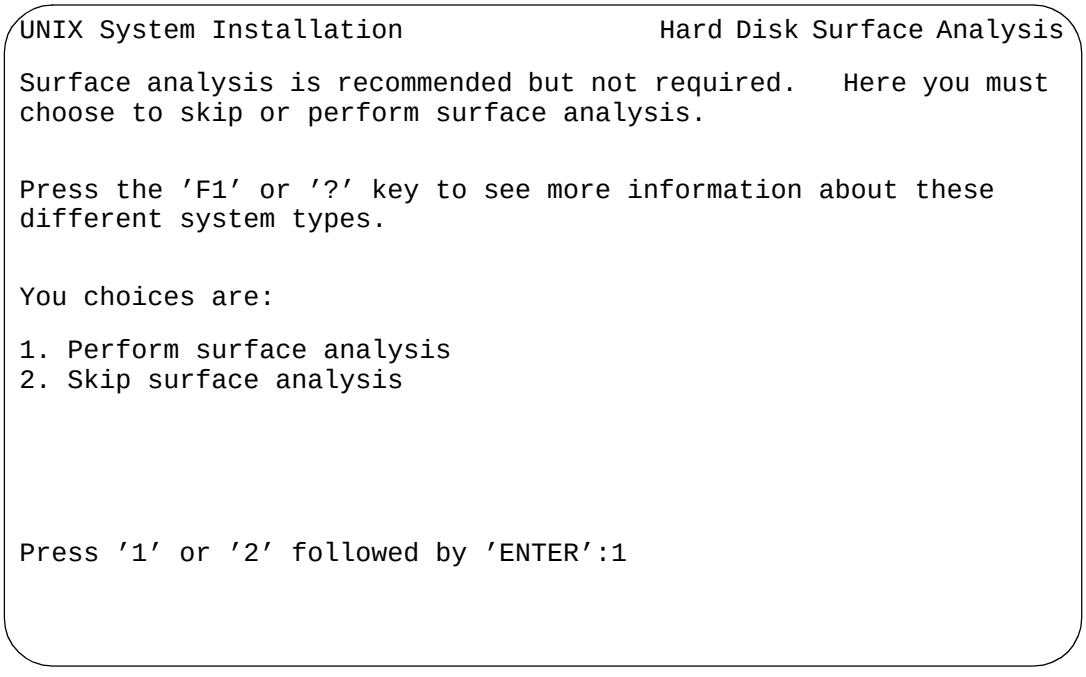


Figure 7-13. Hard Disk Surface Analysis Screen

Performing a Hard Disk Drive Surface Analysis

CAUTION:
Surface analysis is required for all systems because it makes a configuration change to the disk. Failure to perform surface analysis may cause the Lucent INTUITY system to fail.

To perform a hard disk drive surface analysis, do the following:

1. Starting at the Hard Disk Surface Analysis screen (Figure 7-13), press ENTER.

   This accepts the default of 1 and performs the surface analysis. The system displays the following message:

   ```
   Checking the hard disk for defects and creating file
   systems. This will take a few minutes. Please wait.
   ```

   The system displays the UnixWare Installation screen (Figure 7-14 on page 7-18).

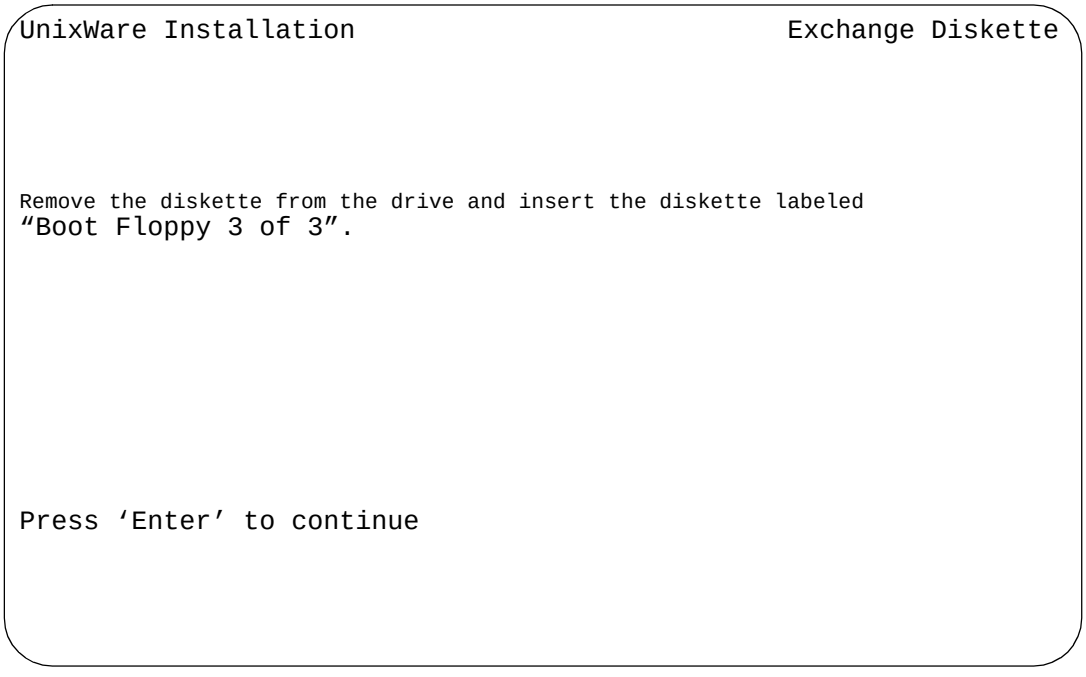


Figure 7-14. Third Boot Diskette Screen

2. Remove the Lucent INTUITY UNIX Boot Floppy 2 of 3 from the diskette drive.
3. Continue with the next procedure, “Copying the Unix System Files”.

Copying the Unix System Files

To copy the Unix system files, do the following:

1. Insert the diskette labeled “Lucent INTUITY UNIX Boot Floppy 3 of 3” into the diskette drive.
2. Press ENTER.

   The system displays the following message:

   ```
   Copying Unix System files from the diskette onto your
   hard drive. This will take a few minutes. Please wait.
   ```

   The system then displays the following message:

   ```
   Making file systems on your hard disk. This will take a
   few minutes. Please wait.
   ```

   The system displays the Remove Diskette screen (Figure 7-15 on page 7-19).

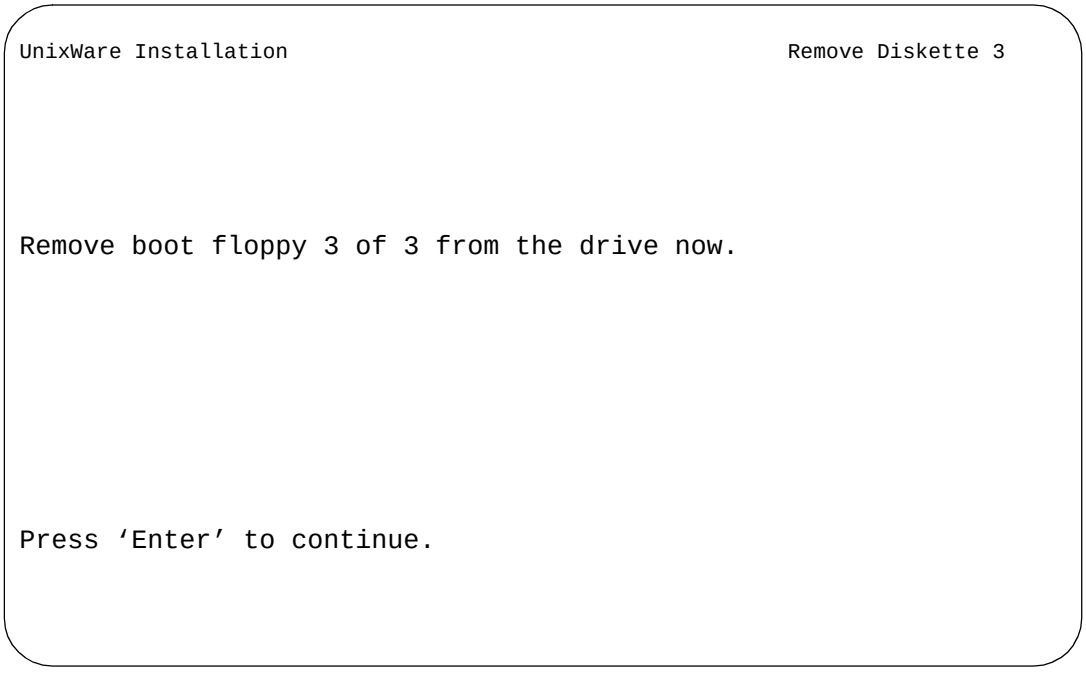


Figure 7-15. Remove Diskette Screen

3. Remove the “Lucent INTUITY UNIX Boot Floppy 3 of 3” from the diskette drive.
4. Press ENTER.

   The system displays the Application Server Media Type screen (Figure 7-16 on page 7-20).
5. Continue with the next procedure, “Loading the Application Server Software” on page 7-20.

```
UnixWare Installation                Application Server Media Type

The Application Server software is available on diskette or tape
or network server. You must select the source you will use to
install the software.

Your choices are:

1. Diskette Drive 1
2. Cartridge Tape Drive
3. Network Install Server
4. INTUITY Image/Snap Tape



Press a number between ‘1’ and ‘4’
followed by 'ENTER':
```

Figure 7-16. Application Server Media Type Screen

Loading the Application Server Software

To load the application server software, do the following:

1. Insert the cartridge tape labeled “Intuity R4 UnixWare Image Tape” into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Enter **4**

   The system displays the Insert Lucent INTUITY Tape screen (Figure 7-17 on page 7-21).

```
UnixWare Installation                Insert Intuity Image Tape


Please insert the INTUITY Image cartridge tape into the tape drive
and press 'ENTER'.




    Your choices are:

    1. The tape has been inserted in the tape drive.
    2. Go back to previous menu.

Press '1' or '2' followed by 'ENTER':
```

Figure 7-17. Insert Lucent INTUITY Tape Screen

3. Press ENTER.

   This accepts the default of 1 to indicate the tape has been inserted and is ready for access.

   The system displays the following message:

   ```
   Installation in progress. This will take several
   minutes. Please do not remove the tape.
   ```

   The system displays a series of informational messages.

   When all files are loaded, the system reboots and then displays the following message:

   ```
   The system is ready.

   The system's name is Lucent Intuity.

   Welcome to USL UnixWare System V Release 4.2 Version 1
   Console Login:
   ```

   NOTE:
   Ignore the following message, if it is displayed:

   ```
   Error: IRQ chosen for driver does not match adapter
   configuration XXXXXX Equinox Megaport STREAMS
   Device Driver.
   ```

4. Remove the cartridge tape labeled “Intuity R4 UnixWare Image Tape” from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
5. Continue with the next procedure, “Installing the INTUNIX Software”.

Installing the INTUNIX Software

NOTE:
Make sure you are installing the INTUNIX+p or later version of the software.

To install the INTUNIX software, do the following:

1. Verify that the diskette drive is empty.

   CAUTION:
   If the diskette drive contains a diskette, the system reboot will fail. If this happens, remove the floppy from the diskette drive and press Ctrl-Alt-Del.

   NOTE:
   If you are installing the operating system onto a machine that is not equipped with a LAN circuit card, the system may display a message that states that an invalid check sum occurred. Ignore this message.

2. Log in to the system as root.
3. Press ENTER at the password prompt.

   NOTE:
   If the current password has expired, enter **Intuity1** for the password. Use this password instead of pressing ENTER for the remainder of the procedure. As soon as the Lucent INTUITY system tape is reloaded, you will change this password.

   The system displays the UNIX prompt (#).

4. Enter **pkgadd -d ctape1**

   The system displays the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

5. Insert the Lucent INTUITY INTUNIX+p cartridge tape into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
6. Press ENTER.

The system displays the following message:

```
The following sets are available:
  1. INTUNIX+p  INTUITY UnixWare 1.1.2 Enhancement Set
                - Update N
                (i486) i.2.4

Select package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q]:
```

7. Press ENTER.

   The system displays the following message:

```
PROCESSING:
Set: INTUITY UnixWare 1.1.2 Enhancement Set - Update N
(INTUNIX+p) from (ctape1)

INTUITY UnixWare 1.1.2 Enhancement Set - Update N
(486) i.2.4
Using </> as the package base directory

The following packages are available:
  1. year2000   Year 2000 updates for UnixWare
  2. ezsetup    SMC LAN Adapter Setup Program
  3. smcUW11    SMC Ethernet Device Driver for ISA
  4. audfs      AUDIX File System
  5. rpcfix     Remote Procedure Calls fix
  6. installit  Installit utility for INTUITY
  7. adslodvr   Adslo driver from Microport
  8. lboltfix   lbolt Roll-over Patch
  9. memfix1    CONNLD driver from Microport
  8. svcmod1    SVC driver from Microport

... 2 more menu chioces to follow;

<RETURN> for more choices, <CTRL-D> to stop display:
```

8. Press ENTER.

   The system displays the following message:

```
  9. ADpatch+e  Timeout-enabled adlso & sd01 drivers
  8. y2k-lt     Year 2000 Patch Subset

Select package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q]:
```

9. Press ENTER.

   The system displays a series of messages and then the following message:

```
A version of the LAN driver is already installed.
Do you want to overlay that driver and re-use the kernel
options for the driver? The overlay option, which is
often used during field upgrades, will preserve the
```

```
network environment.
y) to overlay
q) to quit (default: quit)

Do you want to overlay the driver?
```

10. Enter **y**

    The system displays the following message:

```
The board currently installed in the system is the 8416
LAN adapter.

1) 8216 LAN adapter
2) 8416 LAN adapter
q) to abort installation

Please enter the board type you wish to use:
```

11. Read the LAN adapter displayed in the message and enter the number for that circuit card.

    NOTE:
    Ignore any warning messages displayed by the system.

    The system displays the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready,
        or [q] to quit:  (default:  go)
```

12. Enter **q**

    The system displays the following message:

```
*** IMPORTANT NOTICE ***

     If installation of all desired packages is
     complete the machine should be rebooted in order
     to ensure sane operation. Execute the shutdown
     command with the appropriate options and wait for
     the "Console Login:" prompt.
```

13. Remove the Lucent INTUITY INTUNIX cartridge tape from the tape drive.
14. Reboot the system. See "Rebooting the System" in Chapter 3, "Common System Procedures", in your platform maintenance book for the procedure.
15. Continue with the next procedure, "Clearing the Remaining Drives1" on page 7-25.

Clearing the Remaining Drives1

If this system has more than one hard disk drive, remove all data from the remaining drives before proceeding. If the platform has only one hard disk drive, continue to "Running installit" on page 7-26.

CAUTION:
Do not use this procedure on Disk 0. If Disk 0 is cleared, the reload procedure must be started over from the beginning.

1. Enter the commands from Table 7-1 for each drive:

Table 7-1. FDISK Commands For Each Platform

Platform	Drive #	Command
MAP/5P[1]	1	`fdisk /dev/rdsk/c0t1d0s0`
MAP/40, MAP/40P	1	`fdisk /dev/rdsk/c0t1d0s0`
MAP/100	1	`fdisk /dev/rdsk/c0t1d0s0`
	2	`fdisk /dev/rdsk/c0t2d0s0`
	4	`fdisk /dev/rdsk/c0t4d0s0`
	5	`fdisk /dev/rdsk/c0t5d0s0`
	6	`fdisk /dev/rdsk/c0t6d0s0`
MAP/100P	1	`fdisk /dev/rdsk/c0t1d0s0`
	2	`fdisk /dev/rdsk/c0t2d0s0`
	3	`fdisk /dev/rdsk/c0t3d0s0`
	4	`fdisk /dev/rdsk/c0t4d0s0`
	5	`fdisk /dev/rdsk/c0t5d0s0`

1. Only applies to an early MAP/5P SCSI system that has a second hard disk drive, not to single-disk systems, including the MAP/5PV3.

2. On the next form, enter **3**
3. Enter **1**
4. Enter **y**
5. Enter **0**

6. Enter **4**
7. Continue with the next procedure, “Running installit” on page 7-26.

Running installit

To run installit, do the following:

1. Enter **installit**

   CAUTION:
   *Make sure the **installit** command and the associated reboots have been completed prior to continuing with any other procedure.*

   The system displays the following message:

   ```
   Installit execution started: <date>

   The system will attempt to perform a new installation

   Press <ENTER> to continue the Volume Manager
   installation
   ```

2. Press ENTER.

   The system is rebooted and then displays the following message:

   ```
   The UNIX Operating system kernel will be rebuilt now.

   The system must now be rebooted.

   Hit RETURN to continue.
   ```

3. Press ENTER.

   The system is rebooted and then displays the following message:

   ```
   The system must now be rebooted.

   Hit RETURN to continue.
   ```

4. Press ENTER.

   The system is rebooted and then displays the following message:

   ```
   Console Login:
   ```

5. Continue with the next procedure, “Installing the Platform Software.”

Installing the Platform Software

WARNING:
Do not load the 4.4-5 version on a MAP/5PV3 system. The installation will fail. The 4.4-7 or higher version of the software is required.

To install the platform software, do the following:

1. Log in to the system as root.
2. Enter **pkgadd -d ctape1**

   The system displays the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

3. Insert the Lucent INTUITY Platform AUDIX Set cartridge tape into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
4. Press ENTER.

   NOTE:
   Ignore any messages which indicate that the base ORACLE package has not been loaded and gives installation procedures.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following sets are available:
       1    AUDIXset     INTUITY Platform AUDIX Set
                         (i486) i.2.x

   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??,q]
   ```

   Where *x* is the current version of the AUDIXset.

5. Press ENTER.

   The system displays the following message:

   ```
   Processing:

   Set: Lucent Intuity Platform AUDIX Set (AUDIXset) from
   <ctape1>.

   Lucent Intuity Platform AUDIX Set
   (i486) i.2.x
   Using </> as the package base directory.

   Do you want to run default set installation? (default:
   y)
   ```

   Where *x* is the current version of the AUDIXset.

6. Press ENTER.

   The system displays the following message:

   ```
   Enter password for craft:
   ```

   NOTE:
   Write down the entries you make for each of these passwords. The Remote Support Center will need your entries when they reset the passwords.

7. Enter the password that you want to set for the craft login.

   The system displays the following message:

   ```
   Re-enter new password:
   ```

8. Enter the password a second time that you want to set for the craft login.

   The system displays the following message:

   ```
   Enter password for tsc:
   ```

9. Enter the password that you want to set for the tsc login.

   The system displays the following message:

   ```
   Re-enter new password:
   ```

10. Enter the password a second time that you want to set for the tsc login.

    NOTE:
    If you see “ABSTRACT” and a description of the PECK diagnostic utility, press and hold the ENTER key until you see this prompt:

    ```
    Read text again (default: n) [y,n,?]
    ```

    and then press ENTER again. The system continues the platform installation.

After the system has loaded the platform package, the system displays the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready
    or [q] to quit: (default: go)
```

11. Remove the Lucent INTUITY Platform AUDIX Set cartridge tape from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.

Installing the Switch Integration Software Packages

There are four switch interface software packages available with the Lucent INTUITY system. Only one is required. Select the appropriate switch integration for your system:

- DCIU Switch Integration set, page 7-29
- Serial-Inband Switch Integration set, page 7-31
- Digital Station Interface Switch Integration set, page 7-32
- C-LAN Switch Integration, page 7-33

Installing the DCIU Switch Integration Set

To install the DCIU Switch Integration set:

1. Insert the Lucent Intuity DCIU Switch Integration Set cartridge tape into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following sets are available:
       1    DCIUset     INTUITY Platform DCIU set (V2)
                        (i486)

   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??,q]
   ```

3. Press ENTER.

   The system displays the following message:

```
Processing:

Set: INTUITY Platform DCIU set (DCIUset) from <ctape1>.

INTUITY Platform DCIU set
(i486)
Using </> as the package base directory.

Select your Intuity DCIU card type:
        1) DCIU (Eicon) card [this card has a green LED
                              on the faceplate]
        2) GPSynch card


Enter 1 or 2: [1]
```

4. Use Figure 7-18 on page 7-30 to determine which card is installed.

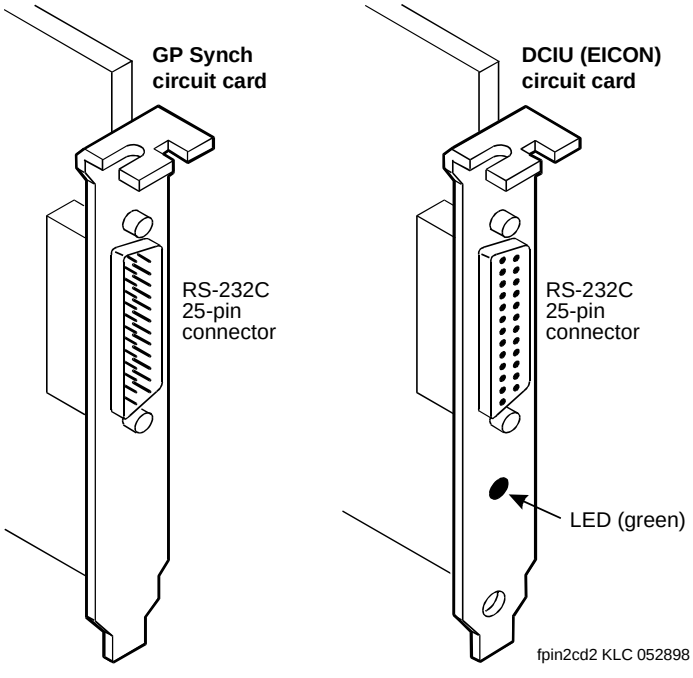


Figure 7-18. GP Synch and DCIU (EICON) Faceplates

5. Type the number for the card that is installed.
6. Press ENTER.

   The system displays several status messages, then the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

7. Remove the Lucent INTUITY DCIU Switch Integration Set cartridge tape from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
8. Continue with “Installing the Intuity AUDIX Voice Messaging System” on page 7-34.

Installing the Serial-Inband Switch Integration Set

To install the Serial-Inband Switch Integration set:

1. Insert the Lucent INTUITY Serial-Inband Switch Integration Set cartridge tape into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following sets are available:
       1    SWINset     Serial-Inband Switch Integration
                        Set
                        (i486) i.2.3

   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??,q]
   ```

3. Press ENTER.

   The system displays the following message:

   ```
   Processing:

   Set: Serial-Inband Switch Integration Set (SWINset)
   from <ctape1>.

   Serial-Inband Switch Integration Set
   (i486)
   Using </> as the package base directory.
   ```

```
The following types of host switches are available.
They are:

1)  NEC NEAX
2)  Siemans HICOM
3)  Ericsson MD110
4)  Merlin Legend
5)  DMS100
6)  Intecom
7)  Norstar
8)  System 25
9)  5ESS
10) Definity Mode Code
```

The system displays several status messages, then the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready
    or [q] to quit: (default: go)
```

4. Remove the Lucent INTUITY Serial-Inband Switch Integration Set cartridge tape from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
5. Continue with “Installing the Intuity AUDIX Voice Messaging System” on page 7-34.

Installing the Digital Station Interface Switch Integration Set

To install the Digital Station Interface Switch Integration set:

1. Insert the Lucent Intuity Digital Station Interface Switch Integration Set cartridge tape into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following sets are available:
       1    VBPCset     VB-PC Switch Integration Set
                        (i486)

   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??,q]
   ```

3. Press ENTER.

   The system displays the following message:

   ```
   Processing:

   Set: VB-PC Switch Integration Set (VBPCset) from
   <ctape1>.

   VB-PC Switch Integration Set
   (i486)
   Using </> as the package base directory.

   The following types of host switches are available.
   They are:

   1)  NORTEL MERIDIAN 1
   ```

   The system displays several status messages, then the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

4. Remove the Lucent Intuity Digital Station Interface Switch Integration Set cartridge tape from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.

5. Continue with “Installing the Intuity AUDIX Voice Messaging System” on page 7-34.

Installing the C-LAN Switch Integration Set

To install the C-LAN Switch Integration set:

1. Insert the Lucent Intuity C-LAN Switch Integration Set cartridge tape into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.

2. Press ENTER when the tape drive is idle.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following sets are available:
       1    CLANset     C-LAN Switch Integration Set
                        (i486)

   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??,q]
   ```

3. Press ENTER.

   The `LANset` package is installed. The files being installed display on the screen.

The system displays several status messages, then the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready
    or [q] to quit: (default: go)
```

4. Remove the Lucent Intuity C-LAN Switch Integration Set cartridge tape from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
5. Continue with “Installing the Intuity AUDIX Voice Messaging System”.

Installing the INTUITY AUDIX Voice Messaging System

The INTUITY AUDIX Voice Messaging System software includes:

- Disk mirroring
- Lucent INTUITY Message Manager (IMAPI)
- Lucent INTUITY FAX messaging
- AMIS analog networking
- Digital networking

NOTE:
These features may or may not be activated after the system is reloaded. However, the restore should activate any features the customer owns. If the feature is still not activated after the restore, contact the Remote Support Center.

To load the INTUITY AUDIX Voice Messaging System software:

1. Insert the cartridge tape labeled “Intuity AUDIX Voice Messaging System” into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following sets are available:
       1    APPLset      AUDIX (R) Application Set
                         (AUDIX) 4.4-6

   Select package(s) you wish to process (or ‘all’ to
   process
        all packages). (default: all) [?,??,q]
   ```

3. Press ENTER.

The system displays a series of messages, then the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready
    or [q] to quit: (default: go)
```

4. Remove the cartridge tape labeled “Intuity AUDIX Voice Messaging System” from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.

Installing the Lucent INTUITY System Default Announcement Set and/or Optional Language Package Announcement Sets

To install both the system default announcement set and any optional language (announcement set) packages:

CAUTION:
Do not install optional language announcement sets from earlier or later Lucent INTUITY releases. Language tapes are labeled similar to “J1P321TE”. The last character, “E”, denotes R4 language tapes. All optional language tapes for the Lucent INTUITY system R4 must end with “E”.

1. Insert the cartridge tape labeled “System Announcements” into the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following sets are available:
       1   language x   Language Name System Announcements
                            (AUDIX) R4.x

   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??,q]
   ```

3. Press ENTER.

   The system displays following message:

   ```
   Processing:
   (Language Name) System Announcements
   (AUDIX) R4.x
   Using</> as the package base directory.
   Lucent Bell Laboratories
   ```

```
Is this to be the default language set?
(default: y) [y,n,?,q]
```

4. If you are installing the default language set, enter **y**

   NOTE:
   If you are installing an optional or secondary language set, enter **n**

   The system displays the following message:

   ```
   Installation of <optional language name> System
   Announcements (VM-<optional language abbreviation>) was
   successful.

   Insert a cartridge into Tape Drive 1.
   Type [go] when ready,
       or [q] to quit: (default:go)
   ```

5. Remove the cartridge tape labeled “System Announcements” from the tape drive. See “Inserting Cartridge Tapes” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.

6. Do one of the following:

   - Return to Step 1 if there are additional announcement sets to install.
   - If there are no additional announcement sets to install, continue with “Installing the RMB Software”.

Installing the RMB Software

This section is only used if the system already has a Remote Maintenance Circuit card (RMB).

1. Check whether the system has an RMB, by looking at the top ISA slot on the back of the system for a faceplate that looks like one of the circuit cards in Figure 7-19 on page 7-37.

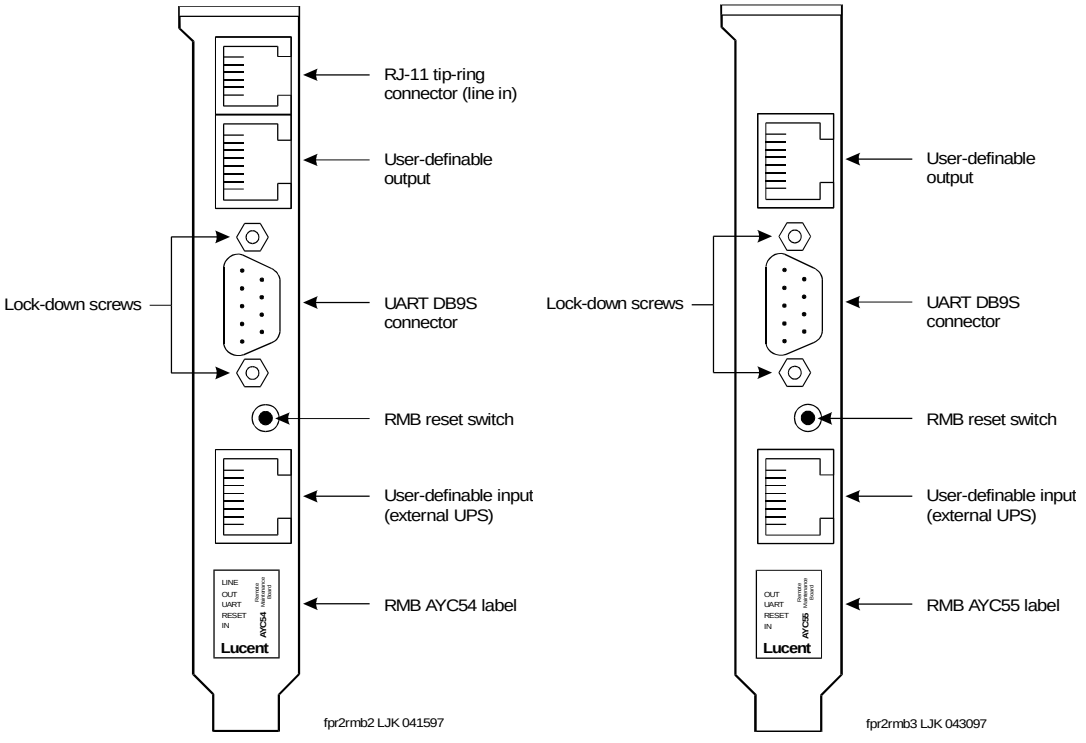


Figure 7-19. RMB Rear Faceplates (AYC54 and AYC55)

2. Determine your next action:
   - If the system does not have an RMB, continue with "Installing a New RFU" on page 7-38.
   - If the system has an RMB, continue with Step 3.
3. Insert the cartridge tape labeled "R4.4 RMBset" into the tape drive. See "Inserting Cartridge Tapes" in Chapter 3, "Common System Procedures", in your platform maintenance book for the procedure.
4. Press ENTER.

   The system displays the following message:

```
Installation in progress. Do not remove the cartridge
tape.

The following sets are available:
    1    RMBset   INTUITY RMB V2 set
                  (i486) i.2.3

Select package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q]
```

5. Press ENTER.

   The system displays the following message:

   ```
   Processing:

   Set: RMB Software Set R2.0 (RMBset) from <ctape1>.

   Intuity RMB Software Set R2.0
   (i486)
   Using </> as the package base directory.

   Please select the country code:

       01 - United States
       02 - International


   Country code [01]:
   ```

6. Enter the appropriate code.

   The system displays the following message:

   ```
   Please select the location of the UPS:

       0 - MAP/100C with -48V central office power
       1 - Only MAP/100 with old internal supply
       2 - Any other configuration

   UPS Location [2]:
   ```

7. Enter **2**
8. When the installation is complete, remove the cartridge tape.
9. Continue with "Installing a New RFU" on page 7-38.

Installing a New RFU

RFUs apply to a particular software load and individual software applications, such as the Lucent Intuity platform, AUDIX, Aria, and Lodging applications. RFU naming follows this scheme:

[uppercase letter][version]rfu+[lowercase letter]

Examples in this book use X, Y, and Z to denote each part of the RFU numbering. Uppercase letters ("X") include "A"UDIX or "C"ornerstone (the platform's name). Version ("Y") is the package number such as 44 for AUDIX Release 4.4 or 23 for Cornerstone 2.3. Lowercase letter ("z") refers to the RFU version. For example, "A44rfu+c" would be an Intuity AUDIX Release 4.4 RFU, version c.

If the RFU release does not match the software release on the Lucent INTUITY system, do not remove or load the RFU. Contact the remote maintenance center for assistance if there is a question about whether or not the tape you have matches the system's software load.

To install the latest RFU:

1. Insert the tape labeled “Lucent Intuity RFU Software” into the tape drive. See “Inserting Cartridge Tapes”, in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.

   The following pkgs are available:
          1      X4YYrfu+z  Remote Field Update X for Y.Y-Y
                            (486) Y.Y-Y

   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??, q]
   ```

   Where x, y, and z follow the RFU numbering scheme described on page 7-38.
3. Press ENTER.

   The system displays:

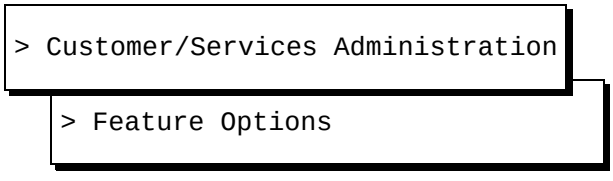
   ```
   Processing of <Remote Field Update z for Y.Y> is
   completed.

   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```
4. Enter **q**
5. Remove the tape labeled “Lucent Intuity RFU Software Update” from the tape drive.
6. Do one of the following:
   - If there are additional RFUs to load, return to Step 1.
   - If there are no more RFUs to load, continue with Step 7.
7. Reboot the system. See “Shutting Down and Rebooting the Lucent INTUITY System” in Chapter 3, “Common System Procedures,” of your platform maintenance book for the procedure.

   CAUTION:
   The system must be rebooted twice before the system recognizes the remote maintenance circuit card.
8. Reboot the system a second time.

Completing the Reload

After the software is loaded and the system appears to be operating properly, complete the following tasks:

1. Stop the voice system. See “Stopping the Voice System” in Chapter 3, “Common System Procedures,” of your platform maintenance book for the procedure.
2. Restore the customer’s database. Follow the procedures in Intuity Messaging Solutions Release 4 Administration.
3. Reboot the system. See “Shutting Down and Rebooting the Lucent INTUITY System” in Chapter 3, “Common System Procedures,” of your platform maintenance book for the procedure.
4. Test the switch link channels. See the appropriate switch administration book for your system.
5. Verify that the features the customer has purchased are still enabled. Starting at the Lucent INTUITY system main menu, select:



6. If any feature should be enabled but is not, call the Multimedia Implementation Service Center (MMISC, formerly the AUCC) at 1-800-562-8349 to re-enable the feature.
7. Contact the Remote Support Center to request that the craft and remote maintenance login passwords be reset.
8. If problems occur, use the “Troubleshooting the System Reload” section to resolve the issue.
9. If the system has additional features to install, continue with Chapter 8, “Installing the Optional Feature Software”.

Troubleshooting the System Reload

Several problems may occur during or after the system reload. Check to see whether problems you may be having are covered under the situations in Table 7-2.

Table 7-2. System Reload Troubleshooting Steps

Problem	Possible Issue	Resolution
installit fails	Disks other than 0 are not formatted	Format disks 1 through 6. Follow ''Clearing the Remaining Drives1'' on page 7-25, then continue with ''Running installit'' on page 7-26.
	No reboot after INTUNIX and before starting installit	Reboot system and continue with ''Running installit'' on page 7-26.
	Wrong version of Unix	Install only the latest version of Unix. See ''Installing UnixWare'' on page 7-2.
	Wrong platform selected	Follow ''Installing UnixWare'' on page 7-2 again. When the system is restarted, watch for the processor speed and system type. Enter the correct platform when asked.
Voice does not start after the reload	installit has not been run	Restart at ''Installing UnixWare'' on page 7-2.
	Wrong tapes loaded for platform and voice systems.	Restart at ''Installing UnixWare'' on page 7-2. Confirm that you have only the latest version of the platform and voice tapes, then follow the rest of the reload procedures.

(1 of 3)

Table 7-2. System Reload Troubleshooting Steps

Problem	Possible Issue	Resolution
Switch link will not come up	Wrong switch type selected	Complete all of these steps, in this order: 1. Stop the voice system. 2. Remove the switch integration. 3. Reboot the system. 4. Stop the voice system. 5. Reinstall switch software using the correct tape. See "Installing the Switch Integration Software Packages" on page 7-29. 6. Reboot the system.
	Wrong board type selected	Follow "Installing the Switch Integration Software Packages" on page 7-29 again and then select the switch integration board that is installed on your system.

Table 7-2. System Reload Troubleshooting Steps

Problem	Possible Issue	Resolution
RMB will not answer	Need two reboots to completely activate RMB software	Reboot system again.
	COM2 not disabled in CMOS settings	1. Reboot the system. 2. Use one of these procedures: ■ MAP/40P or MAP/100: "CMOS Parameter Settings" on page 5-10 ■ MAP/5P: "Checking the MAP/5P CMOS Settings" on page 5-17 ■ MAP/5PV3: "Checking the MAP/5PV3 CMOS Settings" on page 6-13 3. Set Serial Port 2 to "disabled".
	Other issues with the RMB.	See the Tier 3 Support Lotus Notes database for more information.
Message Manager does not work	TCP/IP networking may not be recognized	1. Check whether TCP/IP Networking is administered correctly. From the Intuity AUDIX main menu select: Networking Administration TCP/IP Administration 2. If these fields seem correct, contact Tier 3 for the next step.
	Wrong LAN card is selected.	Reinstall INTUNIX and select the correct LAN card, either 8216 or 8416. See "Installing the INTUNIX Software" on page 7-22.

(3 of 3)

Installing the Optional Feature Software

8

Overview

This chapter provides installation procedures for the:

- INTUITY Lodging software
- Enhanced List Administration software
- Aria User Interface on Intuity

Purpose

This purpose of this chapter is to provide the information necessary to reload the optional feature software to a computer which has experienced a disk failure.

Installing INTUITY Lodging Software Packages

To install the INTUITY Lodging Software packages, you must install the:

- INTUITY Lodging Software Set
- INTUITY Lodging Languages, including US English and any additional languages

Installing INTUITY Lodging Software Set

To install the INTUITY Lodging Software set, do the following:

1. Stop the voice system. See “Stopping the Voice System” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
2. Start at the Lucent INTUITY Main menu (Figure 8-1).

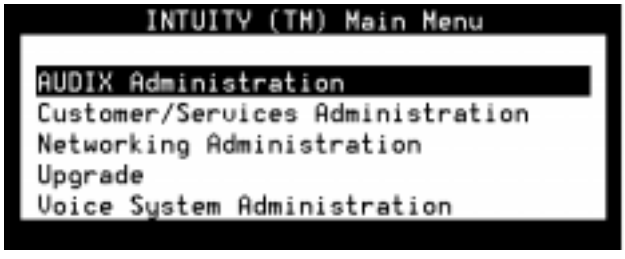
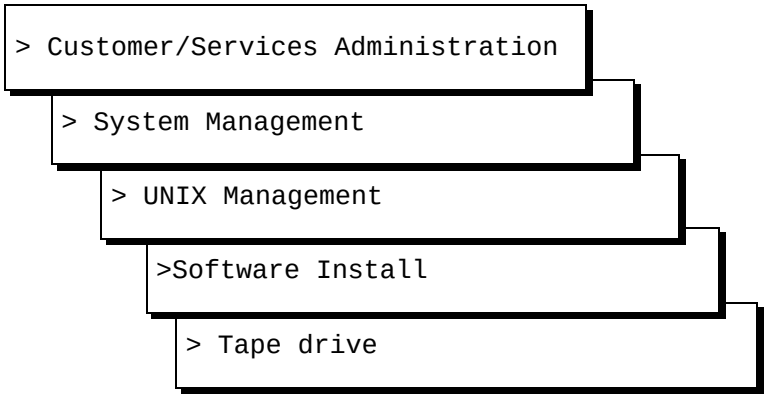


Figure 8-1. Lucent INTUITY Main Menu

3. Select



The system displays the following message:

```
Insert a cartridge into Tape Drive 1.
Type [go] when ready,
    or [q] to quit: (default:go)
```

4. Insert the tape labeled “INTUITY Lodging Software Set” into the tape drive.

5. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remote the cartridge
   tape.

   The following sets are available:
       1    LODGING   Intuity Lodging Software Set R2.0
                       (586) 2.0-1

   Select package(s) you wish to process (or 'all' to
   process all packages). (default: all) [?,??,q]
   ```

6. Press ENTER.

   The system displays the following message:

   ```
   Processing:

   Set: Intuity Lodging Software Set R2.0 (LODGING) from
   <ctape1>.

   Intuity Lodging Software Set R2.0
   (i486)
   Using </> as the package base directory.
   ```

   The following types of installations are available. They are:

   ```
   1 - All Lodging software with GuestWorks Server PMS
           interface

   2 - All Lodging software with stand-alone PMS interface

   3 - Custom - Installs one or more packages selected by
           the installer

   Select type of installation:

       1)  Software with GuestWorks Server PMS interface
       2)  Software with stand-alone PMS interface
       3)  Custom installation


   Enter Selection
   ```

7. Follow one of these sets of installation steps:

   - "Guestworks Server PMS"
   - "Stand-Alone PMS" on page 8-4
   - "Custom Installation" on page 8-4

Guestworks Server PMS

To install all Lodging software with GuestWorks Server PMS:

1. Enter **1**

   The system displays the following message:

   ```
   Confirm: You selected option 1. (y/n)
   ```

2. Enter **y**

   The system installs the package and displays the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

3. Enter **q**
4. Remove the cartridge tape.
5. Continue with "Installing the Lodging Language Package" on page 8-6.

Stand-Alone PMS

To install all Lodging software with stand-alone PMS:

1. Enter **2**

   The system displays the following message:

   ```
   Confirm: You selected option 2. (y/n)
   ```

2. Enter **y**

   The system installs the package and displays the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

3. Enter **q**
4. Remove the cartridge tape.
5. Continue with "Installing the Lodging Language Package" on page 8-6.

Custom Installation

To perform a custom installation:

1. Enter **3**

   The system displays the following message:

   ```
   Confirm: You selected option 3. (y/n)
   ```

2. Enter **y**

   The system displays the following message:

   ```
   Install vlodg? (default:n)
   ```

3. Do one of the following:

   - If you want to install Lodging, enter **y**
   - If you do not want to install Lodging, enter **n**

   The system displays the following message:

   ```
   Install vfax? (default:n)
   ```

4. Do one of the following:

   - If you want to install fax, enter **y**
   - If you do not want to install fax, enter **n**

   The system displays the following message:

   ```
   Install vpms? (default:n)
   ```

5. Do one of the following:

   - If you want to install PMS, enter **y**
   - If you do not want to install PMS or want to install Guest Works PMS, enter **n**

   NOTE:
   You can not install both Guest Works PMS and PMS on the same system.

   The system displays the following message:

   ```
   Install gwpms? (default:n)
   ```

6. Do one of the following:

   - If you want to install Guest Works PMS, enter **y**
   - If you do not want to install Guest Works PMS, enter **n**

   NOTE:
   You can not install both Guest Works PMS and PMS on the same system.

   The system displays the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

7. Enter **q**

8. Remove the cartridge tape.
9. Continue with "Installing the Lodging Language Package".

Installing the Lodging Language Package

To install the Lodging Language package, do the following:

1. Start at the Software Install menu (Figure 8-2 on page 8-6).

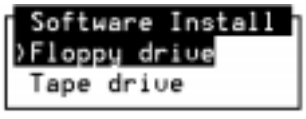


Figure 8-2. Software Install Menu

2. Select

```
> Floppy drive
```

   The system displays the following message:

```
Insert a floppy disk into the diskette drive
Type [go] when ready
    or [q] to quit: (default: go)
```

3. Insert the Intuity Lodging Language US English diskette in the diskette drive.
4. Press ENTER.

   The system displays the following message:

```
Installation in progress. Do not remote the diskette.

The following sets are available:
    1    useng   Intuity Lodging Language Package
                    (586) 2.0-1

Select package(s) you wish to process (or 'all' to
process all packages). (default: all) [?,??,q]
```

5. Press ENTER.

   The system displays the following message:

   ```
   Processing:

   Set: Intuity Lodging Language Package (useng) from
   <ctape1>.

   Intuity Lodging Language Package
   (i486)
   Using </> as the package base directory.
   ```

   When the process is finished, the system displays the following message:

   ```
   Installation of <useng> is completed.

        Insert a into Floppy Drive 1.
        Type [go] when ready,
            or [q] to quit: (default:go)
   ```

6. Enter **q**
7. Do one of the following:
   - If you are installing only US English, continue with Step 11.
   - If you are installing additional languages, select from the Software Install menu (Figure 8-2 on page 8-6)

   ```
   > Tape drive
   ```

   The system displays the following message:

   ```
   Insert a tape into the tape drive
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

8. Insert the additional language tape in the tape drive.
9. Press ENTER.

   The system installs the additional language.

10. Do one of the following:
    - If you have additional languages to install, continue with Step 7.
    - If there are no more languages to install, continue with Step 11.
11. Start the voice system. See “Starting the Voice System” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
12. The Fax for Lodging feature option must be activated. Contact your remote maintenance service center.

Installing the Enhanced List Administration Package

To install the Enhanced List Administration (ELA) package, do the following:

1. Log in to the Lucent INTUITY system using craft or tsc.
2. Stop the voice system. See “Stopping the Voice System” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.
3. Starting at the Lucent INTUITY Main menu (Figure 8-1), select

```
> Customer/Services Administration
    > System Management
        > UNIX Management
            >Software Install
```

   The system displays the Software Install menu (Figure 8-2 on page 8-6).
4. Insert the tape labeled “Enhanced-List Application” into the tape drive.
5. Select

```
> Tape drive
```

   The system displays the following message:

```
Insert a diskette into Floppy Drive 1.
Type [go] when ready,
    or [q] to quit: (default:go)
```

6. Press ENTER.

   The system displays the following message:

```
Installation in progress. Do not remove the tape.

     The following packages are available:
         1 ELA       Enhanced List Application Package

     Select package(s) you wish to process (or ‘all’ to
     process all packages). (default: all) [?,??,q].
```

7. Press ENTER.

   The system installs the software and displays several status messages. When the software installation is complete, the system displays the following message:

   ```
   Installation of Enhanced List Application Package
   was successful.

   Insert a tape into the Tape Drive.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

8. Remove the tape from the cartridge tape drive.
9. Enter **q**
10. Reboot the system. See “Rebooting the System” in Chapter 3, “Common System Procedures”, in your platform maintenance book for the procedure.

Installing the Aria User Interface on Intuity Feature

To install the Aria User Interface on Intuity packages, use these resources:

- Intuity Messaging Solutions Release 4 Administration CD-ROM, 585-310-803, issue 6
- Intuity Messaging Solutions Release 4 Reference CD-ROM, 585-810-804, issue 6

These books can be found on either CD-ROM:

- Aria User Interface on Intuity Messaging Solutions Administration, issue 6
- Aria User Interface on Intuity Messaging Solutions Installation, issue 6

Installing an RFU

9

Overview

This chapter describes the procedures for installing an Remote Field Update (RFU) at the customer's site. If you loaded RFUs as part of Chapter 7, ''Installing Base System Software'', skip this chapter.

Purpose

The purpose of this chapter is to ensure that if the RFU needs to be loaded on site, it is done correctly.

RFU Numbering

RFUs apply to a particular software load and individual software applications, such as the Lucent Intuity platform, AUDIX, Aria, and Lodging applications. RFU naming follows this scheme:

[uppercase letter][version]rfu+[lowercase letter]

Examples in this book use X, Y, and Z to denote each part of the RFU numbering. Uppercase letters ("X") include "A"UDIX or "C"ornerstone (the platform's name). Version ("Y") is the package number such as 44 for AUDIX Release 4.4 or 23 for Cornerstone 2.3. Lowercase letter ("z") refers to the RFU version. For example, "A44rfu+c" would be an Intuity AUDIX Release 4.4 RFU, version c.

If the RFU release does not match the software release on the Lucent INTUITY system, do not remove or load the RFU. Contact the remote maintenance center

for assistance if there is a question about whether or not the tape you have matches the system's software load.

Installing an RFU

The Lucent™ INTUITY™ system uses two procedures for loading a RFU:

1. On-site installation
2. Remote download

Remote downloads of an RFU are done by your remote maintenance center. If the remote maintenance center downloads an RFU, it will not be necessary to install the RFU on-site. RFUs contain updates to the basic system software.

NOTE:
If Lucent INTUITY system software (operating system and base software) is being installed, see "Installing UnixWare" on page 7-2, in Chapter 7, "Installing Base System Software".

CAUTION:
Always verify with the remote maintenance center that the RFU is the most recent RFU available before loading.

The following procedures are to be used for installing an RFU to an existing system that requires a new RFU. Do not use these procedures to load an RFU to an ALT (assembled, loaded, and tested) system which already has the RFU installed. Contact the remote maintenance center with questions about RFU identity and procedures.

Removing an Existing RFU

1. Stop the voice system. See "Stopping the Voice System", in Chapter 3, "Common System Procedures", in your platform maintenance book for the procedure.
2. Start at the Lucent INTUITY Main menu (Figure 9-1).

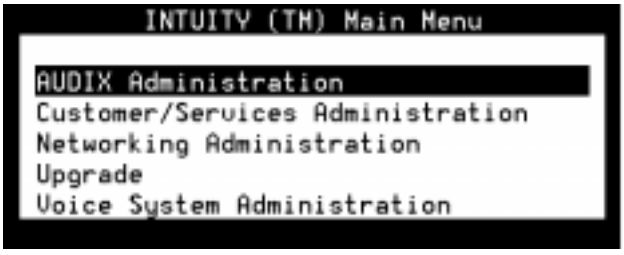
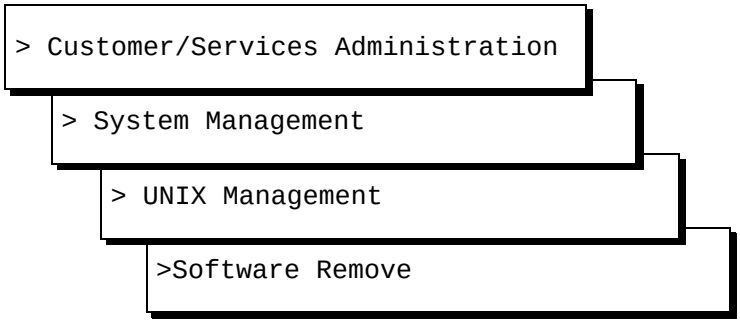


Figure 9-1. Lucent INTUITY Main Menu

3. Select



The system displays the Software Remove screen (Figure 9-2 on page 9-4). which lists the software installed on the system.

```
The following packages are available:
  1  A44rfu+a       Remote Field Update A for 4.4-5
                    (AUDIX) 4.4-5
  2  APPLset        AUDIX(R) Application Set
                    (AUDIX) 4.4-5
  3  AUDIXset       INTUITY Platform AUDIX Set
                    (i486) i.2.3
  4  AUDIXtune      INTUITY Platform AUDIX Tuning
                    (i486) i.2.3
  5  C23rfu+b       Cornerstone Remote Field Update B for i.2.3
                    (i486) i.2.3+b
  6  DCIUset        INTUITY Platform DCIU set (V2)
                    (i486) i.2.2
  7  INTUNIX        INTUITY UnixWare 1.1.2 Enhancement Set
                    (486) i.1.0
  8  INTUNIX+e      INTUITY UnixWare 1.1.2 Enhancement Set - Update E
                    (486) i.1.3
  9  IVC6DI         INTUITY IVC6 Device Interface for softFAX
                    (x86sur4_cs13) i.2.3
 10  IVC6DI+a       INTUITY IVC6 Device Interface for softFAX - Update A
                    (i486) i.2.3+a

... 103 more menu choices to follow;
(RETURN) for more choices, (CTRL-D) to stop display:
```

Figure 9-2. Software Remove Screen

4. Locate the existing RFUs.

   See “RFU Numbering” on page 9-1 for more information.

5. Note the number of the RFU given in the first column.

   If there is no RFU listed, enter **q** to quit and see “Installing an RFU” on page 9-2 to install the new RFU.

6. Press CONTROL D.

   The system displays the following message:

   ```
   Select package(s) you wish to process (or ‘all’ to
   process all packages). (default: all) [?,??,q]
   ```

7. Enter the number of the RFU package.

   The system displays the name and version number for the package selected as shown below for the sample screen in Figure 9-2:

   ```
   Remote Field Update X (486) 4.Y-Y
   ```

   Where X, Y, and Z follow the numbering scheme as described in “RFU Numbering” on page 9-1.

8. Enter **y**

   The system removes the existing RFU.

   NOTE:
   If the system displays any messages warning of dependencies, enter **y** again to continue with the software removal.

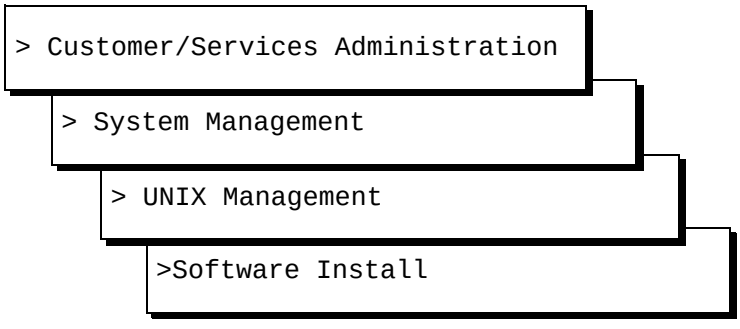
9. Press ENTER.
10. Continue with the next procedure, "Installing a New RFU".

Installing a New RFU

RFUs numbering in this document uses X, Y, and Z, which follow the numbering scheme described in "RFU Numbering" on page 9-1.

To install a new RFU:

1. Starting at the Lucent INTUITY Main menu (Figure 9-1) select



   The system displays the Software Install menu (Figure 9-3).

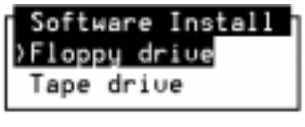


Figure 9-3. Software Install Menu

2. Insert the tape labeled "Lucent Intuity RFU Software" into the tape drive. See "Inserting Cartridge Tapes", in Chapter 3, "Common System Procedures", in your platform maintenance book for the procedure.

3. Select `Tape drive`.

   The system displays the following message:

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

4. Press ENTER.

   The system displays the following message:

   ```
   Installation in progress. Do not remove the cartridge.
   ```

   ```
   The following pkgs are available:
          1      XYYrfu+z   Remote Field Update X for YY-Y
                            (486) Y.Y-Y
   ```

   ```
   Select package(s) you wish to process (or 'all' to
   process all packages). (default: all) [?,??, q]
   ```

   CAUTION:
   If the RFU version does not match that of the software loaded onto the Lucent INTUITY system, do not load the RFU. Contact the remote maintenance center for assistance if there is a question about whether the RFU matches the system's software load.

5. Press ENTER.

   The system displays:

   ```
   Processing of <Remote Field Update X for YY> is
   completed.
   ```

   ```
   Insert a cartridge into Tape Drive 1.
   Type [go] when ready
       or [q] to quit: (default: go)
   ```

6. Enter **q**
7. Remove the tape labeled "Lucent Intuity RFU Software Update" from the tape drive. See "Inserting Cartridge Tapes", in Chapter 3, "Common System Procedures", in your platform maintenance book for the procedure.
8. Shut down and reboot the system. See "Rebooting the System" in Chapter 3, "Common System Procedures", in your platform maintenance book for the procedure.

Verifying the RFU Installation

1. Starting at the Lucent INTUITY Main menu (Figure 9-1), select

```
> Customer/Services Administration
    > System Verification
        > View Installed Software
```

The system displays the View Installed Software window (Figure 9-4 and Figure 9-5).

```
                    View Installed Software

Displaying pkginfo (long version) for only the application
packages...

Displaying pkginfo for package Vex

   PKGINST:  Vex
      NAME:  Intuity Application Software Set
  CATEGORY:  set
      ARCH:  486
   VERSION:  3.0-38
    PSTAMP:  3.38.0 R3.0 IP38 Tue Jul 11 10:22:32 EDT 1995
```

Figure 9-4. Sample View Installed Software Window (Detailed Version)

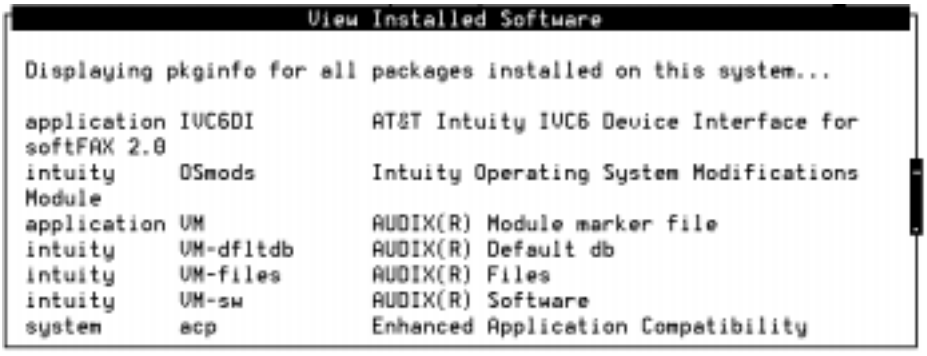


Figure 9-5. Sample View Installed Software Window (Abbreviated Version)

2. Locate the RFU title.

Glossary

5ESS Switch
A central office switch manufactured by Lucent Technologies that can be integrated with the Lucent INTUITY system.

A

accessed message
A message that was received and scanned (either the entire message or just the header).

ACA
See *automatic circuit assurance*.

ACD
See *automatic call distribution*.

activity menu
The list of options spoken to users when they first access a messaging system. Selecting an activity is the starting point for all user operations.

ADAP
See *administration and data acquisition package*.

address
INTUITY AUDIX user identification, containing the user's extension and machine, that indicates where the system needs to deliver a message. An address may include several users or mailing lists. Name or number addressing can be selected with the * A (Address) command.

adjunct
A separate system closely integrated with a switch, such as a Lucent INTUITY system or a call management system (CMS).

administration
The process of setting up a system (such as a switch or a messaging system) to function as desired. Options and defaults are normally set up (translated) by the system administrator or service personnel.

administration and data acquisition package (ADAP)
A software package that allows the system administrator to transfer system user, maintenance, or traffic data from an INTUITY AUDIX system to a personal computer (PC).

ADU
See *asynchronous data unit*.

alarm log
A list of alarms that represent all of the active or resolved problems on a Lucent INTUITY system. The alarm log is stored in a software file on disk and can be accessed either locally or remotely on a terminal connected to the system.

alarms
Hardware, software, or environmental problems that may affect system operation. Alarms are classified as *major*, *minor*, or *warning*.

alphanumeric
Consisting of alphabetic and numeric symbols or punctuation marks.

ALT
See *assemble, load, and test.*

American wire gauge (AWG)
A standard measuring gauge for nonferrous conductors.

AMIS
See *Audio Messaging Interchange Specification*.

AMIS prefix
A number added to the destination number to indicate that it is an AMIS analog networking number.

analog networking
A method of transferring a message from one messaging system to another whereby the message is played back (voiced) during the transfer.

analog signal
In teleprocessing usage, a communications path that usually refers to a voice-grade telephone line.

announcement
A placeholder within the Lucent INTUITY system for playing fragments. Each event that may occur within AUDIX has one or more announcement numbers permanently assigned to it. Fragment numbers are then assigned to the announcement numbers.

announcement fragment
A numbered piece of spoken information that makes up a system message or prompt.

antistatic
A treatment for material to prevent the build-up of static electricity.

API
See *application programming interface.*

application
A computer software program.

application identifier
A two-letter code used in the administrator's log to identify the application or subsystem for which an alarm is being generated. There are eight application identifiers as follows: CA (Call Accounting), ML (MERLIN LEGEND), MT (Maintenance), NW (Digital Networking), SW (Switch Integration), VM (Voice Messaging), VP (Voice Processing), and VR (Voice Response).

application programming interface (API)
A set of formalized software calls and routines that an application program can reference to access underlying network services.

assemble, load, and test (ALT)
The Lucent factory process that preloads software, installs hardware, and tests the system prior to shipping.

ASP
advanced signal processor

asynchronous communication
A method of data transmission in which bits or characters are sent at irregular intervals and spaced by start and stop bits rather than time. See also *synchronous communication*.

asynchronous data unit (ADU)
An electronic communications device that can extend data transmission over asynchronous lines more than 50 feet in length. Recommended ADUs for use with the Lucent INTUITY system include Z3A1 or Z3A4.

asynchronous transmission
A form of serial communications where each transmitted character is bracketed with a start bit and one or two stop bits. The Lucent INTUITY system provides asynchronous EIA-232 capabilities for INTUITY AUDIX Digital Networking, if required.

attendant console
A special-purpose telephone with numerous lines and features usually located at the front desk of a business or other organization. The front desk attendant uses this telephone to answer and transfer calls.

Audio Messaging Interchange Specification (AMIS)
An analog networking protocol that allows users to exchange messages with any messaging system that also has AMIS Analog Networking capabilities. Messages can be exchanged with users on Lucent INTUITY systems as well as with users on remote messaging systems made by vendors other than Lucent.

Audio Information Exchange (AUDIX)
A complete messaging system accessed and operated by touch-tone telephones and integrated with a switch.

audit
A software program that resolves filesystem incompatibilities and updates restored filesystems to a workable level of service. Audits are done automatically on a periodic basis, or can be performed on demand.

AUDIX
See *Audio Information Exchange*.

autodelete
An INTUITY AUDIX feature that allows users to designate that faxes be automatically deleted from their mailboxes after they are printed.

automated attendant
A Lucent INTUITY system feature that allows users to set up a main extension number with a menu of options that routes callers to an appropriate department at the touch of a button.

automatic call distribution (ACD)
The System 85, Generic 2, or Generic 3 call-distribution group of analog ports that connects Lucent INTUITY users to the system. See also *call-distribution group*.

automatic circuit assurance (ACA)
A feature of the switch that keeps records of both very long and very short calls and notifies the attendant when these calls exceed a certain parameter. The logic is that many very short calls or

one very long one may suggest a trunk that is hung, broken, or out of order. The attendant can then physically dial into the trunk to check it.

automatic message scan
An INTUITY AUDIX feature that allows users to scan all message headers and messages at the touch of two buttons. With Lucent INTUITY FAX Messaging, this feature allows all new faxes to be bundled and transmitted over a single fax call delivery call. Also called *autoscan*.

autoprint
An INTUITY AUDIX feature that allows users to designate that faxes be automatically sent to a specified print destination.

autoscan
See *automatic message scan*.

AWG
See *American wire gauge.*

B

background testing
Testing that runs continuously when the system is not busy doing other tasks.

backplane
A centrally located device within a computer to which individual circuit cards are plugged for communication across an internal bus.

backup
A duplicate copy of files and directories saved on a removable medium such as floppy diskette or tape. The back-up filesystem can be copied back (restored) if the active version is damaged (corrupted) or lost.

basic input/output system (BIOS)
A system that contains the buffers for sending information from a program to the actual hardware device for which the information is intended.

basic call transfer
The switch-hook flash method used to send the INTUITY AUDIX transfer command over analog voice ports.

basic rate access
See *basic rate interface*.

basic rate interface (BRI)
International standard protocol for connecting a station terminal to an integrated systems digital network (ISDN) switch. ISDN BRI supports two 64-Kbps information-bearer channels (B1 and B2), and one 16-Kbps call status and control (D) channel (a 2B + D format). Also called b*asic rate access*.

binary synchronous communications (BSC)
A character-oriented synchronous link protocol.

BIOS
See *basic input/output system*.

body
The part of a Lucent INTUITY voice mail that contains the actual spoken message. For a leave word calling (LWC) message, it is a standard system announcement.

boot
The operation to start a computer system by loading programs from disk to main memory (part of system initialization). Booting is typically accomplished by physically turning on or restarting the system. Also called *reboot*.

boot filesystem
The filesystem from which the system loads its initial programs.

BRI
See *basic rate interface*.

broadcast messaging
An INTUITY AUDIX feature that enables the system administrator and other designated users to send a message to all users automatically.

BSC
See *binary synchronous communications*.

buffer
A temporary storage area used to equalize or balance different operating speeds. A buffer can be used between a slow input device, such as a terminal keyboard, and the main computer, which operates at a very high speed.

bulletin board
An INTUITY AUDIX feature that allows a message to be played to callers who dial the bulletin board extension. Callers cannot leave a message since it is a listen-only service. Also called *information service*.

bundling
Combining several calls and handling them as a single call. See also *automatic message scan*.

bus
An electrical connection/cable allowing two or more wires, lines, or peripherals to be connected together.

busy-out/release
To remove a Lucent INTUITY device from service (make it appear busy or in use), and later restore it to service (release it). The Lucent INTUITY switch data link, voice ports, or networking ports can be busied out if they appear faulty or when maintenance tests are run.

C

CA
Call accounting system application identifier. See *application identifier*.

call accounting system (CAS)
A software device that monitors and records information about a calling system.

call-answer
An INTUITY AUDIX feature that allows the system to answer a call and record a message when the user is unavailable. Callers can be redirected to the system through the call coverage or call forwarding switch features. INTUITY AUDIX users can record a personal greeting for these callers.

call-answer language choice
The capability of user mailboxes to accept messages in different languages. For the INTUITY AUDIX application, this capability exists when the multilingual feature is turned on.

callback number
In AMIS analog networking, the telephone number transmitted to the recipient machine to be used in returning messages that cannot be delivered.

call classification analysis (CCA)
A process that enables application designers to use information available within the system to classify the disposition of originated and transferred calls.

call coverage
A switch feature that defines a preselected path for calls to follow if the first (or second) coverage points are not answered. The Lucent INTUITY system can be placed at the end of a coverage path to handle redirected calls through call coverage, send all calls, go to cover, etc.

call data handler process (CDH)
A software process that accumulates generic call statistics and application events.

call detail recording (CDR)
A switch feature that uses software and hardware to record call data. See also *call detail recording utility*.

call detail recording utility (CDRU)
Applications software that collects, stores, optionally filters, and outputs call detail records for direct or polled output to peripheral devices. See also *call detail recording*.

call delivery
See *message delivery*.

call-distribution group
The set of analog port cards on the switch that connects switch users to the Lucent INTUITY system by distributing new calls to idle ports. This group (or split) is called automatic call distribution (ACD) on System 85, Generic 2, and Generic 3 and uniform call distribution (UCD) on System 75, Generic 1, and Generic 3. See also *automatic call distribution* and *uniform call distribution*.

call management system (CMS)
An inbound call distribution and management reporting package.

called tone (CED tone)
The distinctive tone generated by a fax endpoint when it answers a call (a constant 2100-Hz tone).

called subscriber information (CSI)
The identifier for the answering fax endpoint. This identifier is sent in the T.30 protocol and is generally the telephone number of the fax endpoint.

calling tone (CNG tone)
The distinctive tone generated by a fax endpoint when placing a call (a constant 1100-Hz tone that is on for 1/2 second, off for 3 seconds).

call vectoring
A System 85 R2V4, Generic 2, and Generic 3 feature that uses a vector (switch program) to allow a switch administrator to customize the behavior of calls sent to an automatic call distribution (ACD) group.

card cage
An area within the Lucent INTUITY hardware platform that contains and secures all of the standard and optional circuit cards used in the system.

cartridge tape drive
A high-capacity data storage/retrieval device that can be used to transfer large amounts of information onto high-density magnetic cartridge tape based on a predetermined format. This tape is to be removed from the system and stored as a backup.

CAS
See *call accouting system*.

CCA
See *call classification analysis.*

CDH
See *call data handler process*.

CDR
See *call detail recording*.

CDRU
See *call detail recording utility (CDRU).*

CED tone
See *called tone*.

CELP
See *code excited linear prediction*.

central office (CO)
An office or location in which large telecommunication equipment such as telephone switches and network access facilities are maintained. In a CO, private customer lines are terminated and connected to the public network through common carriers.

central processing unit (CPU)
The component of the computer that manipulates data and processes instructions coming from software.

channel
A telecommunications transmission path for voice and/or data.

channel capacity
A measure of the maximum bit rate through a channel.

class of restriction (COR)
A feature that allows up to 64 classes of call-origination and call-termination restrictions for telephones, telephone groups, data modules, and trunk groups. See also *class of service*.

class of service (COS)
The standard set of INTUITY AUDIX features given to users when they are first administered (set up with a voice mailbox). See also *class of restriction*.

clear to send (CTS)
Located on Pin 5 of the 25-conductor RS-232 interface, CTS is used in the transfer of data between the computer and a serial device.

client
A computer that sends, receives and uses data, but that also shares a larger resource whose function is to do most data storage and processing. For Lucent INTUITY Message Manager, the user's PC running Message Manager is the client. See also *server*.

CMS
See *call management system*.

CNG tone
See *calling tone*.

CO
See *central office*.

COR
See *class of restriction*.

COS
See *class of service*.

code excited linear prediction (CELP)
An analog-to-digital voice coding scheme.

collocated
A Lucent INTUITY system installed in the same physical location as the host switch. See also *local installation*.

collocated adjunct
Two or more adjuncts that are serving the same switch (that is, each has voice port connections to the switch) or that are serving different switches but can be networked through a direct RS-232 connection due to their proximity.

comcode
A numbering system for telecommunications equipment used by Lucent Technologies. Each comcode is a 9-digit number that represents a specific piece of hardware, software, or documentation.

command
An instruction or request given by the user to the software to perform a particular function. An entire command consists of the command name and options. Also, one- or two-key touch tones that control a mailbox activity or function.

community
A group of telephone users administered with special send and receive messaging capabilities. A community is typically comprised of people who need full access to each other by telephone on a frequent basis. See also *default community*.

compound message
A message that combines a voice message and a fax message into one unit, which INTUITY AUDIX then
handles as a single message.

configuration
The particular combination of hardware and software components selected for a system, including external connections, internal options, and peripheral equipment.

controller circuit card
A circuit card used on a computer system that controls its basic functionality and makes the system operational. These cards are used to control magnetic peripherals, video monitors, and basic system communications.

COS
See *class of service*.

coverage path
The sequence of alternate destinations to which a call to a user on a Lucent INTUITY system is automatically sent when it is not answered by the user. This sequence is set up on the switch, normally with the Lucent INTUITY system as the last or only destination.

CPU
See *central processing unit*.

cross connect
Distribution-system equipment used to terminate and administer communication circuits.

cross connection
The connection of one wire to another, usually by anchoring each wire to a connecting block and then placing a third wire between them so that an electrical connection is made.

CSI
See *called subscriber information*.

CTS
See *clear to send*.

D

DAC
See *dial access code*.

database
A structured set of files, records, or tables. Also, a collection of filesystems and files in disk memory that store the voice and nonvoice (program data) necessary for Lucent INTUITY system operation.

data communications equipment (DCE)
Standard type of data interface normally used to connect to data terminal equipment (DTE) devices. DCE devices include the data service unit (DSU), the isolating data interface (IDI), and the modular processor data module (MPDM).

data communications interface unit (DCIU)
A switch device that allows nonvoice (data) communication between a Lucent INTUITY system and a Lucent switch. The DCIU is a high-speed synchronous data link that communicates with the common control switch processor over a direct memory access (DMA) channel that reads data directly from FP memory.

data link
A term used to describe the communications link used for data transmission from a source to a destination, for example, a telephone line for data transmission.

data service unit (DSU)
A device used to access digital data channels. DATAPHONE II 2500 DSUs are synchronous data communications equipment (DCE) devices used for extended-local Lucent INTUITY system connections. The 2600 or 2700 series may also be used; these support diagnostic testing and the DATAPHONE II Service network system.

data set
Another term for a modem, although a data set usually includes the telephone. See also *modem*.

data terminal equipment (DTE)
Standard type of data interface normally used for the endpoints in a connection. Normally the Lucent INTUITY system, most terminals, and the switch data link are DTE devices.

DBP
See *data base processor*.

DCE
See *data communications equipment*.

DCIU
See *data communications interface unit*.

DCP
See *digital communications protocol*.

DCS
See *distributed communications system*.

debug
See *troubleshooting*.

dedicated line
A communications path that does not go through a switch. A dedicated (hard-wired) path can be formed with directly connected cables. MPDMs, DSUs, or other devices can also be used to extend the distance that signals can travel directly through the building wiring.

default
A value that is automatically supplied by the system if no other value is specified.

default community
A group of telephone users administered with restrictions to prevent them from sending messages to or receiving messages from other communities. If a system is administered to use communities, the default community is comprised of all the AUDIX users defined on that system.

default print number
The user-administered extension to which autoprinted faxes are redirected upon their receipt into the user's mailbox. This default print destination is also provided as a print option when the user is manually retrieving and printing faxes from the mailbox.

delivered message
A message that has been successfully transmitted to a recipient's incoming mailbox.

demand testing
Testing performed on request (usually by service personnel).

diagnostic testing
A program run for testing and determining faults in the system.

dial-ahead/dial-through
The act of interrupting or preceding INTUITY AUDIX system announcements by typing (buffering) touch-tone commands in the order the system would normally prompt for them.

dial string
A series of numbers used to initiate a call to a remote AMIS machine. A dial string tells the switch what type of call is coming (local or long distance) and gives the switch time to obtain an outgoing port, if applicable

dialed number identification service (*DNIS_SVC)
An available channel service assignment on the Lucent INTUITY system. Assigning this service to a channel permits the Lucent INTUITY system to interpret information from the switch and operate the appropriate application for the incoming telephone call.

DID
See *direct inward dialing*.

digital communications protocol (DCP)
A 64-Kbps digital data transmission code with a 160-Kbps bipolar bit stream divided into two information (I) channels and one signaling (S) channel.

digital networking
A method of transferring messages between messaging systems in a digital format. See also *INTUITY AUDIX Digital Networking*.

digital signal processor (DSP)
A specialized digital microprocessor that performs calculations on digitized signals that were originally analog and then sends the results on.

DIP switch
See *dual in-line package switch*.

direct inward dialing (DID)
The ability for an outside caller to call an internal extension without having to pass through an operator or attendant.

direct memory access (DMA)
A quick method of moving data from a storage device directly to RAM, which speeds processing.

directory
1. A Lucent INTUITY AUDIX feature that allows you to hear a user's name and extension after pressing * * N at the activity menu. 2. A group of related files accessed by a common name in software.

display terminal
A data terminal with a screen and keyboard used for displaying Lucent INTUITY screens and performing maintenance or administration activities.

distributed communications system (DCS)
A network of two or more switches that uses logical and physical data links to provide full or partial feature transparency. Voice links are made using tie trunks.

distribution list
See *mailing list*.

DMA
See *direct memory access*.

DNIS
See *dialed number identification service*.

domain
An area where data processing resources are under common control. The INTUITY AUDIX system is one domain and an e-mail system is another domain.

DSP
See *digital signal processor*.

DSU
See *data service unit*.

DTE
See *data terminal equipment*.

DTMF
See *dual tone multifrequency*.

dual in-line package (DIP) switch
A small switch, usually attached to a printed circuit card, in which there are only two settings: on or off (or 0 or 1). DIP switches are used to configure the card in a semipermanent way.

dual language greetings
The capability of INTUITY AUDIX users to create personal greetings in two different languages— one in a primary language and one in a secondary language. This capability exists when the multilingual feature is turned on and the prompts for user mailboxes can be in either of the two languages.

dual tone multifrequency (DTMF)
A way of signaling consisting of a pushbutton or touch-tone dial that sends out a sound consisting of two discrete tones that can be picked up and interpreted by telephone switches.

E

EIA interface
A set of standards developed by the Electrical Industries Association (EIA) that specifies various electrical and mechanical characteristics for interfaces between electronic devices such as computers, terminals, and modems. Also known as *RS-232*.

ELA
Enhanced-List Application

electrostatic discharge (ESD)
Discharge of a static charge on a surface or body through a conductive path to ground. ESD can be damaging to integrated circuits.

electronic mail
See *e-mail*.

electrostatic discharge (ESD)
The discharge of a static charge on a surface or body through a conductive path to ground, ESD can damage integrated circuits.

e-mail
The transfer of a wide variety of message types across a computer network (LAN or WAN). E-mail messages may be text messages containing only ASCII or may be complex multimedia messages containing embedded voice messages, software files, and images.

enabled/disabled
The state of a hardware device that indicates whether it is available for use by the Lucent INTUITY system. Devices must be equipped before they can be enabled (made active). See also *equipped/unequipped*.

endpoint
See *fax endpoint*.

enhanced call transfer
An INTUITY AUDIX feature that allows compatible switches to transmit messages digitally over the BX.25 (data) link. This feature is used for quick call transfers and requires a fully integrated digital switch. Callers can only transfer to other extensions in the switch dial plan.

enhanced serial data interface (ESDI)
A software- and hardware-controlled method used to store data on magnetic peripherals.

equipped/unequipped
The state of a networking channel that indicates whether Lucent INTUITY software has recognized it. Devices must be equipped before they can be enabled (made active). See also *enabled/disabled*.

error message
A message on the screen indicating that something is wrong and possibly suggesting how to correct it.

errors
Problems detected by the system during operation and recorded in the maintenance log. Errors can produce an alarm if they exceed a threshold.

escape from reply
The ability to quickly return to getting messages for a user who encounters a problem trying to respond to a message. To escape, the user presses #.

escape to attendant
An INTUITY AUDIX feature that allows users with the call answer feature to have a personal attendant or operator administered to pick up their unanswered calls. A system-wide extension could also be used to send callers to a live agent.

ESD
See *electrostatic discharge*.

ESDI
See *enhanced serial data interface*.

event
An informational messages about the system's activities. For example, an event is logged when the system is rebooted. Events may or may not be related to errors and alarms.

F

facilities restriction level (FRL)
A value that determines which types of calls the users of a switch are allowed to make.

facility out-of-service (FOOS)
State of operation during which the current channel is not receiving a dial tone and is not functioning.

facsimile
1. A digitized version of written, typed, or drawn material transmitted over telephone lines and printed out elsewhere. 2. Computer-generated text or graphics transmitted over computer networks. A computer-generated fax is typically printed to a fax machine, but can remain stored electronically.

fax
See *facsimile*.

fax addressing prefix
Uniquely identifies a particular fax nodepoint to the Lucent INTUITY system. Used by the system as a "template" to differentiate all call-delivery machines on the network from each other.

fax endpoint
Any device capable of receiving fax calls. Fax endpoints include fax machines, individual PC fax modems, fax ports on LAN fax servers, and ports on fax-enabled messaging systems.

fax print destination prefix
A dial string that the Lucent INTUITY system adds to the fax telephone number the user enters to print a fax. The system takes the full number (fax print destination prefix + fax telephone extension) and hunts through the machine translation numbers until it finds the specific fax endpoint.

field
An area on a screen, menu, or report where information can be typed or displayed.

FIFO
See *first-in/first-out*.

file
A collection of data treated as a basic unit of storage.

filename
Alphanumeric characters used to identify a particular file.

file redundancy
See *mirroring*.

file system
A collection of related files (programs or data) stored on disk that are required to initialize a Lucent INTUITY system.

first-in/first-out (FIFO)
A method of processing telephone calls or data in which the first call or data to be received is the first call or data to be processed.

F key
See *function key*.

FNPAC
See *foreign numbering-plan area code*.

FOOS
See *facility out-of-service*.

foreign exchange (FX)
A central office (CO) other than the one providing local access to the public telephone network.

foreign numbering-plan area code (FNPAC)
An area code other than the local area code that must be dialed to call outside the local geographical area.

format
To set up a disk, floppy diskette, or tape with a predetermined arrangement of characters so that the system can read the information on it.

FRL
See *facilities restriction level*.

function
Individual steps or procedures within a mailbox activity.

function key (F key)
A key on a computer keyboard programmed to perform a defined function when pressed. The user interface for the Lucent INTUITY system defines keys F1 through F8.

FX
See *foreign exchange*.

G

Generic 1, 2, or 3
Lucent switch system software releases, designed for serving large communities of System 75 and System 85 users.

generic tape
A copy of the standard software and stand-alone tape utilities that is shipped with a new Lucent INTUITY system.

GOS
See *grade of service*.

grade of service (GOS)
A parameter that describes the delays in accessing a port on the Lucent INTUITY system. For example, if the GOS is P05, 95% of the callers hear the system answer and 5% hear ringing until a port becomes available to answer the call.

guaranteed fax
A feature of Lucent INTUITY FAX Messaging that temporarily stores faxes sent to a fax machine. In cases where the fax machine is busy or does not answer a call, the call is sent to an INTUITY AUDIX mailbox.

guest password
A feature that allows callers who are not INTUITY AUDIX users to leave messages on the system by dialing a user's extension and entering a system-wide guest password.

H

hard disk drive
A high-capacity data-storage and -retrieval device that is located inside a computer. A hard disk drive stores data on nonremovable high-density magnetic media based on a predetermined format for retrieval by the system at a later date.

hardware
The physical components of a computer system. The central processing unit, disks, tape, and floppy drives are all hardware.

header
Information that the system creates to identify a message. A message header includes the originator or recipient, type of message, creation time, and delivery time.

help
A command run by pressing HELP or CTRL ? on a Lucent INTUITY display terminal to show the options available at your current screen position. In the INTUITY AUDIX system, press * H on the telephone keypad to get a list of options. See also *on-line help*.

host switch
The switch directly connected to the Lucent INTUITY system over the data link. Also, the physical link connecting a Lucent INTUITY system to a distributed communications system (DCS) network.

hunt group
A group of analog ports on a switch usually administered to search for available ports in a circular pattern.

I

I/O
Input/output.

IDI
See *isolating data interface*.

IMAPI
See *INTUITY messaging application programming interface*.

INADS
See *initialization and administration system*.

information service
See *bulletin board*.

initialization
The process of bringing a system to a predetermined operational state. The start-up procedure tests hardware; loads the boot filesystem programs; locates, mounts, and opens other required file-systems; and starts normal service.

initialization and administration system (INADS)
A computer-aided maintenance system used by remote technicians to track alarms.

initialize
To start up the system for the first time.

input
A signal fed into a circuit or channel.

integrated services digital network (ISDN)
A network that provides end-to-end digital connectivity to support a wide range of voice and data services.

integrated voice processing CELP (IVC6) card
A computer circuit card that supports both fax processing and voice processing capabilities. It provides two analog ports to support six analog channels. All telephone calls to and from the Lucent INTUITY system are processed through the IVC6 card.

interface
The device or software that forms the boundary between two devices or parts of a system, allowing them to work together. See also *user interface*.

internal e-mail
Software on a PC that provides messaging capability between users on the same AUDIX system, or to administered remote AUDIX systems and users. Users can create, send, and receive a message that contains multiple media types; specifically, voice, fax, text, or file attachments (software files, such as a word processing or spreadsheet file).

interrupt request (IRQ)
Within a PC, a signal sent from a device to the CPU to temporarily suspend normal processing and transfer control to an interrupt handling routine.

INTUITY AUDIX Digital Networking
A Lucent INTUITY feature that allows customers to link together up to 500 remote Lucent INTUITY machines for a total of up to 500,000 remote users. See also *digital networking*.

INTUITY Message Manager
A Windows-based software product that allows INTUITY AUDIX users to receive, store, and send their voice/FAX messages from a PC. The software also enables users to create and send multimedia messages that include voice, fax, file attachments, and text.

INTUITY messaging application programming interface (IMAPI)
A software function-call interface that allows INTUITY AUDIX to interact with Lucent INTUITY Message Manager.

IRQ
See *interrupt request*.

ISDN
See *integrated services digital network*.

isolating data interface (IDI)
A synchronous, full duplex data device used for cable connections between a Lucent INTUITY GPSC-AT/E card and the switch data communications interface unit (DCIU).

IVC6
See *integrated voice processing CELP (IVC6) card.*

J

jumper
Pairs or sets of small prongs or pins on circuit cards and mother boards the placement of which determines the particular operation the computer selects. When two pins are covered, an electrical circuit is completed. When the jumper is uncovered, the connection is not made. The computer interprets these electrical connections as configuration information.

K

L

label
The name assigned to a disk device (either a removable tape cartridge or permanent drive) through software. Cartridge labels may have a generic name (such as 3.3) to show the software release, or a descriptive name if for back-up copies (such as back01). Disk drive labels usually indicate the disk position (such as disk00 or disk02).

LAN
See *local area network*.

last-in/first-out (LIFO)
A method of processing telephone calls or data in which the last call (or data) received is the first call (or data) to be processed.

LCD
See *liquid crystal display*.

leave word calling (LWC)
A switch feature that allows the calling party to leave a standard (nonvoice) message for the called party using a feature button or dial access code.

LED
See *light emitting diode*.

LIFO
See *last-in/first-out*.

light emitting diode (LED)
A light on the hardware platform that shows the status of operations.

liquid crystal display (LCD)
The 10-character alphanumeric display that shows the status of the system, including alarms.

load
The process of reading software from external storage (such as disk) and placing a copy in system memory.

local area network (LAN)
A network of PCs that communicate with each other and that normally share the resources of one or more servers. Operation of Lucent INTUITY Message Manager requires that the INTUITY AUDIX system and the users' PCs be on a LAN.

local AUDIX machine
The Lucent INTUITY system where a user's INTUITY AUDIX mailbox is located. All users on this home machine are called *local users*.

local installation
A switch, adjunct, or peripheral device installed physically near the host switch or system. See also *collocated*.

local network
An INTUITY AUDIX Digital Network in which all Lucent INTUITY systems are connected to the same switch.

login
A unique code a user must enter to gain approved access to the Lucent INTUITY system. See also *password*.

login announcement
A feature enabling the system administrator and other designated users to create a mail message that is automatically played to all INTUITY AUDIX users every time they log in to the system.

Lotus Notes
Information management software for work groups that allows individuals to share and manipulate information over a local or wide area network

LWC
See *leave word calling*.

M

magnetic peripherals
Data storage devices that use magnetic media to store information. Such devices include hard disk drives, floppy disk drives, and cartridge tape drives.

mailbox
A portion of disk memory allotted to each Lucent INTUITY system user for creating and storing outgoing and incoming messages.

mailing list
A group of user addresses assigned a list ID# and public or private status. A mailing list may be used to simplify the sending of messages to several users.

maintenance
The process of identifying system errors and correcting them, or taking steps to prevent problems from occurring.

major alarm
An alarm detected by Lucent INTUITY software that affects at least one fourth of the Lucent INTUITY ports in service. Often a major alarm indicates that service is affected.

MANOOS
See *manually out-of-service*.

manually out-of-service
State of operation during which a unit has been intentionally taken out of service.

MAP
See *multi-application platform*.

mean time between failures
The average time a manufacturer estimates will elapse before a failure occurs in a component or system.

media type
The form a message takes. The media types supported by the Lucent INTUITY system are voice, text, file attachments, and fax.

memory
A device that stores logic states such that data can be accessed and retrieved. Memory may be temporary (such as system RAM) or permanent (such as disk).

menu
A list of options displayed on a computer terminal screen or spoken by a voice processing system. Users choose the option that reflects what action they want the system to take.

menu tree
The way in which nested automated attendants are set up.

message categories
Groups of messages in INTUITY AUDIX users' mailboxes. Categories include *new*, *unopened*, and *old* for the incoming mailbox and *delivered*, *accessed*, *undelivered*, *undeliverable* (not deliverable), and *file cabinet* for the outgoing mailbox.

message component
A media type included in a multimedia message. These types include voice, text, file attachments, and fax messages.

message delivery
An optional Lucent INTUITY feature that permits users to send messages to any touch-tone telephone, as long as the telephone number is in the range of allowable numbers. This feature is an extension of the AMIS analog networking feature and is automatically available when the AMIS feature is activated.

Message Manager
See *INTUITY Message Manager*.

message waiting indicator (MWI)
An indicator that alerts Lucent INTUITY users that they have received new mail messages. An MWI can be an LED or neon lamp, or an audio tone (stutter dial tone).

message waiting lamp (MWL)
See *message-waiting indicator*.

migration
An installation that moves data to the Lucent INTUITY system from another type of Lucent messaging system, for example, from AUDIX R1, DEFINITY AUDIX, or AUDIX Voice Power.

minor alarm
An alarm detected by maintenance software that affects less than one fourth of the Lucent INTUITY ports in service, but has exceeded error thresholds or may impact service.

mirroring
A Lucent INTUITY system feature that allows data from crucial filesystems to be continuously copied to back-up (mirror) filesystems while the system is running. If the system has some problem where an original filesystem cannot be used, the backup filesystem is placed in service automatically.

ML
MERLIN LEGEND application identifier. See *application identifier*.

mode code
A string of touch-tones from a MERLIN LEGEND switch. A mode code may send the INTUITY AUDIX system information such as call type, calling party, called party, and on/off signals for message waiting indicators.

modem
A device that converts data from a form that is compatible with data processing equipment (digital) to a form compatible with transmission facilities (analog), and vice-vera.

modular
A term that describes equipment made of plug-in units that can be added together to make the system larger, improve its capabilities, or expand its size.

modular processor data module (MPDM)
A data device that converts RS-232C or RS-449 protocol signals to digital communications protocol (DCP) used by System 75/85, Generic1, and Generic 3 switches. MPDMs can connect the Lucent INTUITY system to a switch DCIU or SCI link or connect terminals to a switch port card.

MPDM
See *modular processor data module*.

MT
Maintenance application identifier. See *application identifier*.

MTBF
See *mean time between failures*.

multi-application platform (MAP)
The computer hardware platform used by the Lucent INTUITY system.

multilingual feature
A feature that allows announcement sets to be active simultaneously in more than one language on the system. Mailboxes can be administered so that users can hear prompts in the language of their choice.

MWI
See *message waiting indicator*.

N

networking
See *INTUITY AUDIX Digital Networking*.

networking prefix
A set of digits that identifies a Lucent INTUITY machine.

night attendant
The automated attendant created on a MERLIN LEGEND switch that automatically becomes active during off-hours. The night attendant substitutes for one or more daytime attendants.

not deliverable message
A message that could not be delivered after a specified number of attempts. This usually means that the user's mailbox is full.

NPA
See *numbering plan area*.

NT
Networking application identifier. See *application identifier*.

MWL
See *message waiting lamp*.

Numbering plan area
Formal name for 3-digit telephone area codes in North America. Within an area code, no two telephone lines may have the same 7-digit phone number. The code is often designated as NXX, to indicate the three digits.

O

off-hook
See *switch hook*.

on-hook
See *switch hook*.

on-line help
A Lucent INTUITY system feature that provides information about user interface windows, screens, and menus by pressing a predetermined key. See also *help*.

open systems interconnection (OSI)
An internationally accepted framework of standards for communication between systems made by different vendors.

operating system (OS)
The set of software programs that runs the hardware and interprets software commands.

option
A choice selected from a menu, or an argument used in a command line to specify program output by modifying the execution of a command. When you do not specify any options, the command executes according to its default options.

OS
See *operating system*.

OSI
See *open systems interconnection*.

outcalling
A Lucent INTUITY system feature that allows the system to dial users' numbers to inform them they have new messages.

outgoing mailbox
A storage area on the Lucent INTUITY system where users can keep copies of messages for future reference or action.

P

parallel transmission
The transmission of several bits of data at the same time over different wires. Parallel transmission of data is usually faster than serial transmission.

password
1. A word or character string recognized automatically by the Lucent INTUITY system that allows a user access to his/her mailbox or a system administrator access to the system data base. 2. An alphanumeric string assigned to local and remote networked machines to identify the machines or the network. See also *login.*

password aging
An INTUITY AUDIX feature that allows administrators to set a length of time after which a user's AUDIX password or the administrator's system password expires. The user or administrator must then change the password.

PBX
See *private branch exchange*.

PC
See *power converter*.

PDM (processor data module)
See *modular processor data module (MPDM)*.

peripheral device
Equipment such as a printer or terminal that is external to the Lucent INTUITY cabinet but necessary for full operation and maintenance of the system. Also called a *peripheral*.

personal directory
An INTUITY AUDIX feature that allows each user to create a private list of customized names.

personal fax extension
See *secondary extension*.

PI
See *processor interface*.

PIB
See *processor interface*.

pinouts
The signal description per pin number for a particular connector.

PMS
See *property management system*.

port
A connection or link between two devices that allows information to travel to a desired location. For example, a switch port connects to a Lucent INTUITY voice port to allow a caller to leave a message.

POST
See *power-on self test*.

power on self test (POST)
A set of diagnostics stored in ROM that tests components such as disk drives, keyboard, and memory each time the system is booted. If problems are identified, a message is sent to the screen.

priority call answer
An INTUITY AUDIX feature that allows users to designate a call answer message as a priority message. To make a message a priority message, the caller presses 2 after recording.

priority messaging
An INTUITY AUDIX feature that allows some users to send messages that are specially marked and preferentially presented to recipients. See also *priority outcalling*.

priority outcalling
An INTUITY AUDIX feature that works with the priority messaging feature by allowing the message recipient to elect to be notified by outcalling only when a priority message has been received. See also *priority messaging*.

private branch exchange (PBX)
An analog, digital, or electronic telephone switching system where data and voice transmissions are not confined to fixed communications paths, but are routed among available ports or channels. See also *switch*.

private mailing list
A list of addresses that only the Lucent INTUITY system user who owns it can access.

private messaging
A feature of INTUITY AUDIX that allows a user to send a message that cannot be forwarded by the recipient.

processor data module (PDM)
See *modular processor data module (MPDM)*.

processor interface (PI)
A System 75, Generic 1, Generic 3i, Generic 3s, and Generic 3vs switch data link. Also called *processor interface board (PIB)*.

programmed function key
See *function key*.

property management system (PMS)
A product used by lodging establishments to automate the management of guest records, reservations, room assignments, and billing. In an integrated PMS environment, special software links the PMS to the Lucent INTUITY Lodging system so that both systems share a common set of messages and commands.

protocol
A set of conventions or rules governing the format and timing of message exchanges (signals) to control data movement and the detection and possible correction of errors.

public mailing list
A list of addresses that any INTUITY AUDIX user can use if that user knows the owner's list ID number and extension number. Only the owner can modify a public mailing list.

pulse-to-tone converter
A device connected to the switch that converts signals from a rotary pulses to touch tones. This device allows callers to use rotary telephones to access options in a Lucent INTUITY user's mailbox or in an automated attendant.

R

RAM
See *random access memory*.

random access memory (RAM)
The memory used in most computers to store the results of ongoing work and to provide space to store the operating system and applications that are actually running at any given moment.

read-only memory (ROM)
A form of computer memory that allows values to be stored only once; after the data is initially recorded, the computer can only read the contents. ROM is used to supply constant code elements such as bootstrap loaders, network addresses, and other more or less unvarying programs or instructions.

reboot
See *boot*.

remote access
Sending and receiving data to and from a computer or controlling a computer with terminals or PCs connected through communications (that is, telephone) links.

remote installation
A system, site, or piece of peripheral equipment that is installed in a different location from the host switch or system.

remote maintenance
The ability of Lucent personnel to interact with a remote computer through a telephone line or LAN connection to perform diagnostics and some system repairs. See also *remote service center.*

remote network
A network in which the systems are integrated with more than one switch.

remote service center
A Lucent or Lucent-certified organization that provides remote support to Lucent INTUITY customers. Depending upon the terms of the maintenance contract, your remote service center may be notified of all major and minor alarms and have the ability to remotely log in to your system and remedy problems. See also *remote maintenance.*

remote terminal
A terminal connected to a computer over a telephone line.

remote users
INTUITY AUDIX users whose mailboxes reside on a remote INTUITY AUDIX Digital Networking machine.

REN
See *ringer equivalence number.*

reply loop escape
An INTUITY AUDIX feature that allows a user the option of continuing to respond to a message after trying to reply to a nonuser message.

reply to sender
An INTUITY AUDIX feature that allows users to immediately place a call to the originator of an incoming message if that person is in the switch's dial plan.

request to send (RTS)
One of the control signals on an EIA-232 connector that places the modem in the originate mode so that it can begin to send.

restart
1. A Lucent INTUITY feature that allows INTUITY AUDIX users who have reached the system through the call answer feature to access their own mailboxes by entering the * R (Restart) command. This feature is especially useful for long-distance calls or for users who want to access the Lucent INTUITY system when all the ports are busy. 2. The reinitialization of certain software, for example, *restarting* the messaging system.

restore
The process of recovering lost or damaged files by retrieving them from available back-up tapes, floppy diskette, or another disk device.

retention time
The amount of time messages are saved on disk before being automatically deleted from a user's mailbox.

reusable upgrade kit (RUK)
A package shipped to the customer's site prior to an upgrade that contains materials the technician needs to complete the installation. This package includes an A/B switch box, a keyboard, a 25-foot coaxial cable, two T adapters, and terminations to a LAN circuit card. It remains the property of Lucent once the installation is finished.

right-to-use (RTU) fee
A charge to the customer to access certain functions or capacities that are otherwise restricted, for example, additional voice or networking ports or hours of speech storage. Lucent personnel can update RTU parameters either at the customer's site or remotely via a modem.

ringer equivalence number (REN)
A number required in the United States for registering your telephone equipment with a service provider.

ROM
See *read-only memory*.

RS-232
See *EIA interface.*

RTS
See *request to send*.

RUK
See *reusable upgrade kit*.

S

SCA
See *switch communications adapter*.

scan
To automatically play mail messages, headers, or both.

scheduled delivery time
A time and/or date that an INTUITY AUDIX user can assign to a message that tells the system when to deliver it. If a delivery time is omitted, the system sends the message immediately.

screen
That portion of the Lucent INTUITY user interface through which most administrative tasks are performed. Lucent INTUITY screens request user input in the form of a command from the `enter command:` prompt.

SCSI
See *small computer system interface*.

secondary extension
A second, fax-dedicated extension that directs incoming faxes directly into a user's mailbox without ringing the telephone. The secondary extension shares the same mailbox as the voice extension, but acts like a fax machine. Also called *personal fax extension*.

serial transmission
The transmission of one bit at a time over a single wire.

server
A computer that processes and stores data that is used by other smaller computers. For Lucent INTUITY Message Manager, INTUITY AUDIX is the server. See also *client*.

shielded cables
Cables that are protected from interference with metallic braid or foil.

SID
See *switch integration device*.

SIMM
See *single in-line memory module*.

simplified message service interface (SMSI)
Type of data link connection to an integrated 1A ESS or 5ESS switch in the Lucent INTUITY system.

simplified message desk interface (SMDI)
Also known as station message desk interface. Type of data link from the central office that contains information and instructions for the Lucent INTUITY system. With SMDI, the caller need not re-enter the called number once the call terminates to the Lucent INTUITY system. See also *simplified message service interface*.

single in-line memory module (SIMM)
A method of containing random access memory (RAM) chips on narrow strips that attach directly to sockets on the CPU circuit card. Multiple SIMMs are sometimes installed on a single CPU circuit card.

small computer systems interface (SCSI)
An interface standard defining the physical, logical, and electrical connections to computer system peripherals such as tape and disk drives.

SMDI
See *station message desk interface*.

SMDR
See *station message detail recording*.

SMSI
See *simplified message service interface*.

SP
signal processor

SSP
scaleable signal processor

station message desk interface (SMDI
See *simplified message desk interface*.

station message detail recording
See *call detail recording (CDR)*.

subscriber
A Lucent INTUITY user who has been assigned the ability to access the INTUITY AUDIX Voice Messaging system.

surge
A sudden rise and fall of voltage in an electrical circuit.

surge protector
A device that plugs into the telephone system and the commercial AC power outlet to protect the telephone system from damaging high-voltage surges.

SW
Switch integration application identifier. See *application identifier*.

switch
An automatic telephone exchange that allows the transmission of calls to and from the public telephone network. See also *private branch exchange (PBX)*.

switched access
A connection made from one endpoint to another through switch port cards. This allows the endpoint (such as a terminal) to be used for several applications.

switch hook
The device at the top of most telephones which is depressed when the handset is resting in the cradle (that is, when the telephone is *on hook*). This device is raised when the handset is picked up (that is, when the telephone is *off hook*).

switch-hook flash
A signaling technique in which the signal is originated by momentarily depressing the switch hook.

switch integration
Sharing of information between a messaging system and a switch to provide a seamless interface to callers and system users. A fully integrated INTUITY AUDIX system, for example, answers each incoming telephone call with information taken directly from the switch. Such information includes the number being called and the circumstances under which the call was sent to it, for example, covered from a busy or unanswered extension.

switch integration device (SID)
A combination of hardware and software that passes information from the switch to the Lucent INTUITY system thus allowing it to share information with non-Lucent switches. The operation of a SID is unique to the particular switch with which it interfaces.

switch network
Two or more interconnected switching systems.

synchronized mailbox
A mailbox that is paired with a corresponding mailbox in another domain and linked via software that keeps track of changes to either mailbox. When the contents of one mailbox change, the software replicates that change in the other mailbox.

synchronizer
The name given to the trusted server by the e-mail vendor, Lotus Notes.

synchronous communication
A method of data transmission in which bits or characters are sent at regular time intervals, rather than being spaced by start and stop bits. See also *asynchronous communication*.

synchronous transmission
A type of data transmission where the data characters and bits are exchanged at a fixed rate with the transmitter and receiver synchronized. This allows greater efficiency and supports more powerful protocols.

System 75
An advanced digital switch manufactured by Lucent Technologies that supports up to 800 lines for voice and data communications.

System 75
An advanced digital switch manufactured by Lucent Technologies that supports up to 3000 lines for voice and data communications.

system configuration
See *configuration*.

T

T.30
The standard for Group III fax machines that covers the protocol used to manage a fax session and negotiate the capabilities supported by each fax endpoint.

tape cartridge
One or more spare removable cartridges required to back up system information.

tape drive
The physical unit that holds, reads, and writes to magnetic tape.

TCP/IP
See *transmission control protocol/internet protocol*.

TDD
See *telecommunications device for the deaf*.

TDM
See *time division multiplexing*.

telecommunications device for the deaf (TDD)
A device with a keyboard and display unit that connects to or substitutes for a telephone. The TDD allows a deaf or hearing-impaired person to communicate over the telephone lines with other people who have TDDs. It also allows a deaf person to communicate with the INTUITY AUDIX system.

terminal
See *display terminal*.

terminal type
A number indicating the type of terminal from which a user is logging in to the Lucent INTUITY system. Terminal type is the last required entry before gaining access to the Lucent INTUITY display screens.

terminating resistor
A grounding resistor placed at the end of a bus, line, or cable to prevent signals from being reflected or echoed.

time division multiplexing (TDM)
A method of serving multiple channels simultaneously over a common transmission path by assigning the transmission path sequentially to the channels, with each assignment being for a discrete time interval.

tip/ring
A term used to denote the analog telecommunications interface.

tone generator
A device acoustically coupled to a rotary telephone used to produce touch-tone sounds.

traffic
The flow of attempts, calls, and messages across a telecommunications network.

translations
Software assignments that tell a system what to expect on a certain voice port or the data link, or how to handle incoming data. Translations customize the Lucent INTUITY system and switch features for users.

transmission control protocol/internet protocol (TCP/IP)
A suite of protocols that allow disparate hosts to connect over a network. Transmission control protocol (TCP) organizes data on both ends of a connection and ensures that the data that arrives matches that which was sent. Internet protocol (IP) ensures that a message passes through all the necessary routers to the proper destination.

T/R
See *tip/ring*.

troubleshooting
The process of locating and correcting errors in computer programs (also called *debugging)* or systems.

trusted server
A server that uses IMAPI to access an INTUITY AUDIX mailbox on behalf of a user and is empowered to do everything to a user message that INTUITY AUDIX can do.

TTS
Text-to-Speech

U

UCD
See *uniform call distribution*.

Undelete
An INTUITY AUDIX feature that allows users to restore the last message deleted by pressing * U.

undelivered message
A message that has not yet been sent to an INTUITY AUDIX user's incoming mailbox. The message resides in the sender's outgoing mailbox and may be modified or redirected by the sender.

unequipped
See *equipped/unequipped*.

unfinished message
A message that was recorded but not approved or addressed, usually as the result of an interrupted INTUITY AUDIX session. Also called *working message*.

uniform call distribution (UCD)
The type of call-distribution group (or hunt group) of analog port cards on some switches that connects users to the INTUITY AUDIX system. System 75, Generic 1, Generic 3, and some central office switches use UCD groups. See also *call-distribution group*.

uninterruptable power supply (UPS)
An auxiliary power unit that provides continuous power in cases where commercial power is lost.

UNIX operating system
A multi-user, multi-tasking computer operating system.

upgrade
An installation that moves a Lucent INTUITY system to a newer release.

untouched message
An INTUITY AUDIX feature that allows a user to keep a message in its current category by using the * * H (Hold) command. If the message is in the new category, message-waiting indication remains active (for example, the message-waiting lamp remains lit).

UPS
See *uninterruptable power supply.*

U. S. 123
An alternate announcement set in U. S. English whose prompts use numbers, not letters, to identify telephone keypad presses. For example, a prompt might say, "*Press star three,"* instead of, *"Press star D.*"

user interface
The devices by which users access their mailboxes, manage mailing lists, administer personal greetings, and use other messaging capabilities. Types of user interfaces include a touch-tone telephone keypad and a PC equipped with Lucent INTUITY Message Manager.

user population
A combination of different types of users on which Lucent INTUITY configuration guidelines are based.

V

vector
A customized program in the switch for processing incoming calls.

VM
Voice messaging application identifier. See *application identifier.*

voice link
The Lucent INTUITY analog connection(s) to a call-distribution group (or hunt group) of analog ports on the switch.

voice mail
See *voice message.*

voice mailbox
See *mailbox.*

voice message
Digitized information stored by the Lucent INTUITY system on disk memory. Also called *voice mail.*

voice port
The IVC6 port that provides the interface between the Lucent INTUITY system and the analog ports on the switch.

voice terminal
A telephone used for spoken communications with the Lucent INTUITY system. A touch-tone telephone with a message-waiting indicator is recommended for INTUITY AUDIX users.

voicing
1. Speaking a message into the Lucent INTUITY system during recording. 2. Having the system play back a message or prompt to a user.

VP
Voice platform application identifier. See *application identifier*.

VR
Voice response application identifier. See *application identifier*.

W

WAN
See *wide area network*.

wide area network (WAN)
A data network typically extending a local area network (LAN) over telephone lines to link with LANS in other buildings and/or geographic locations.

window
That portion of the Lucent INTUITY user interface through which you can view system information or status.

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