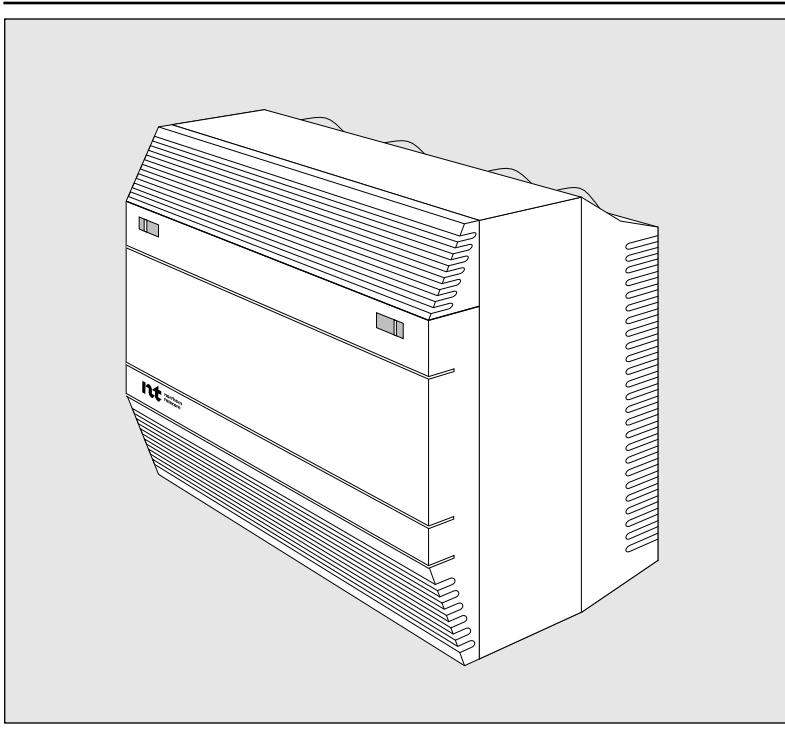Meridian 1 Option 11

Meridian Mail Card Option

Installation and Maintenance

Release 9.0   Standard 3.0   March 1994

Meridian 1 Option 11
Meridian Mail Card Option
Installation and Maintenance

NTP number: 555-7071-210
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Standard version 3.0 released for Meridian Mail Release 9.

Changes since MM-8:

- Greater flexibility during software installation which allows you to easily customize your system for improved security.
- Configuration of voice ports for basic service, full service, and multimedia.
- Changes to the channel expansion procedure.

February 1994

Standard version 2.1 released for the up-issue of Meridian Mail Release 8.

April 1993

Standard version 2.0 released for Meridian Mail Release 8.

August 1991

Standard version 1.1 released for system 1.10.

May 1991

Standard version 1.0 released.

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About this guide

The Meridian Mail card option adds voice messaging capabilities to a Meridian 1 Option 11 system. This guide describes the installation and maintenance procedures for Meridian Mail hardware and software.

Assumptions

This guide assumes that the Meridian 1 system hardware and software have already been correctly installed; that all environmental conditions and electrical requirements have been met; that the system has been correctly configured as a basic, networked, or hospitality system; and that a Meridian Mail compatible video display terminal has been installed on the Meridian 1 PBX and correctly configured.

Most of the hardware installation and maintenance procedures require no special knowledge or equipment. You should be familiar with basic electronic assembly and safety procedures. The procedures for installing a networked system or a hospitality system require you to know how to wire a BIX in-building cross-connect system or similar modular distribution frame (MDF).

The software installation and maintenance procedures require no special knowledge. Some of the basic software procedures, however, require you to know how to use the Meridian Mail System Administrator terminal.

Inside this guide

"Hardware installation" (Chapter 1) describes the installation of a basic Meridian Mail card option system.

"System installation and modification" (Chapter 2) describes how to use the System Installation and Modification Utility that comes on the Meridian Mail

software tape. This utility is used to install software on new systems, modify the software on existing systems, and perform routine system maintenance.

"Software installation" (Chapter 3) describes how to install the software on a new Meridian Mail system.

"Basic system procedures" (Chapter 4) describes the basic software procedures you need to know in order to set the time and date on the Meridian 1 PBX, to stop and start the Meridian Mail system, to backup and restore a customer's Meridian Mail data, to add and delete blocks of users, and to customize a customer's service DNs.

"Troubleshooting and maintenance" (Chapter 5) describes the procedures you can follow should anything go wrong with Meridian Mail, and the procedures you should follow to make these problems less likely.

"Software upgrades and conversions" (Chapter 6) describes the procedures to follow when updating to the most current release of the Meridian Mail software.

"System expansion" (Chapter 7) describes the procedures to follow when adding new hardware locations or modifying the existing hardware locations, expanding the system's disk storage, adding new languages, or enabling option features.

"Hospitality systems" (Chapter 8) describes the additional hardware installation and software procedures required in order to take advantage of Meridian Mail's Hospitality Voice Services (HVS) capabilities.

"Networked systems" (Chapter 9) describes the additional hardware installation and software procedures required in order to take advantage of Meridian Mail's networking capabilities.

"Meridian Mail defaults" (Chapter 10) lists the default passwords and system parameters on a Meridian Mail Card Option system.

"Terminal configuration" (Chapter 11) describes how to set up the video display terminals supported by Northern Telecom.

"Disk drive configuration" (Chapter 12) contains configuration instructions for the disk drives supported by Northern Telecom.

Conventions

The conventions on the following page are used throughout the software procedures in this guide.

`Return`   This form is used to represent a single key you must press on your keyboard.

`Control ]`   When entering commands like this, hold down the `Control` key while you press the character that follows (in this case "]") in the same way you hold down the shift key to enter capital letters.

TOOLS   Letters in bold type are used to represent text you must enter at the keyboard.

`Exit`   This form is used to represent a "soft" key you must press on the keyboard when using the Meridian Mail System Administrator's terminal. This will be one of the keys on the keyboard labelled `F6`, `F7`, and so on. The current configuration of soft keys is always displayed at the bottom of your screen.

`More Above`   Words in this type represent messages that you see on the terminal's screen.

"Enabled"   Words in quotation marks are used to represent a selection you must make from a list of choices. An instruction in the following form is used to guide you quickly through a series of menus:

1   From the Main Menu, choose
"1 User Administration" → "1 Local Voice User".

This example means choose "User Administration" from the first menu and "Local Voice User" from the next menu that appears.

System Status   Words in italic type are used to represent the name of a field. For example:

1   For *First Name,* enter the user's first name and press `Return`.

System administration—The Basics: "Finding your users"
Italicized titles indicate a reference to another document associated with the Meridian Mail system. Sections within a document are enclosed in quotation marks. References to sections within this document do not include the document title.

Recommended reading

The following is a list of other documents associated with the Meridian Mail card option.

- *Meridian Mail Card Option—System Administration, The Basics* (NTP 555-7071-300)

- *How to Use Meridian Mail* (P0746553)

- *Meridian Mail—System Administration Guide* (NTP 555-7001-301)

- *Meridian Mail— System Administration Tools* (NTP-555-7001-302)

- *Meridian Mail—System Event and Error Reports* (NTP 555-7001-510)

Hospitality and networked systems

- *Meridian Mail—System Administration Guide (Hospitality)* (NTP 555-7001-302)

- *Meridian Mail Modular Option—Installation Procedures* (NTP 555-7041-210)

- *Meridian Mail—Networking Installation Guide* (NTP 555-7001-213)

- *BIX In-building Cross-connect System—Material Description* (NTP 631-4511-100)

The Meridian 1 PBX

- *Meridian 1 Option 11—Technical Reference Guide* (NTP 553-3011-100)

- *Meridian 1 Option 11—General Installation and Planning Guide* (NTP 553-3011-200)

- *Meridian 1 Option 11—Installation Guide* (NTP 553-3011-210)

- *Meridian 1 Option 11—Administration Guide* (NTP 553-3011-300)

- *Meridian 1 Option 11—Fault Clearing Guide* (NTP 553-3011-500)

- *X11 Software Guide Including Supplementary Features* (P0730610)

Hardware installation

This chapter describes the installation of a basic Meridian Mail card option system. Later chapters describe the special hardware you have to install for networked systems and hospitality systems.

The basic Meridian Mail hardware consists of the following:

1   68k Card (NTAK14BA)

1-2 DVP Cards (NTAK15AB)

0-4 C25 Cards (NTAK16AB)

1   Disk/Power Supply Card and SCSI terminator (NTAK13AA)

1   Disk drive for five-hour systems (A0377786) or
Disk drive for ten-hour systems (A0378251) or
Disk drive for twenty-four-hour systems (A0351371, A0602257)

1   Disk shield kit for mounting the disk drive to the Disk/Power Supply Card (P0743928)

1   Connector Board and Meridian Mail faceplate for three-slot systems (NTAK17AA) or
Connector Board and Meridian Mail faceplate for four-slot systems (NTAK17BA)

Three slots in the Meridian 1 cabinet are reserved for the 68k Card, the DVP Card and the Disk/Power Supply Card. They are labelled 10/MM1, MM2, MM3 respectively. (Refer to Figure 1-1 on page 1-2.) In four-slot systems, an additional DVP Card is placed in slot 9. You can attach up to two C25 Cards to each DVP Card.

Figure 1-1
An overview of hardware installation (a three-slot system)
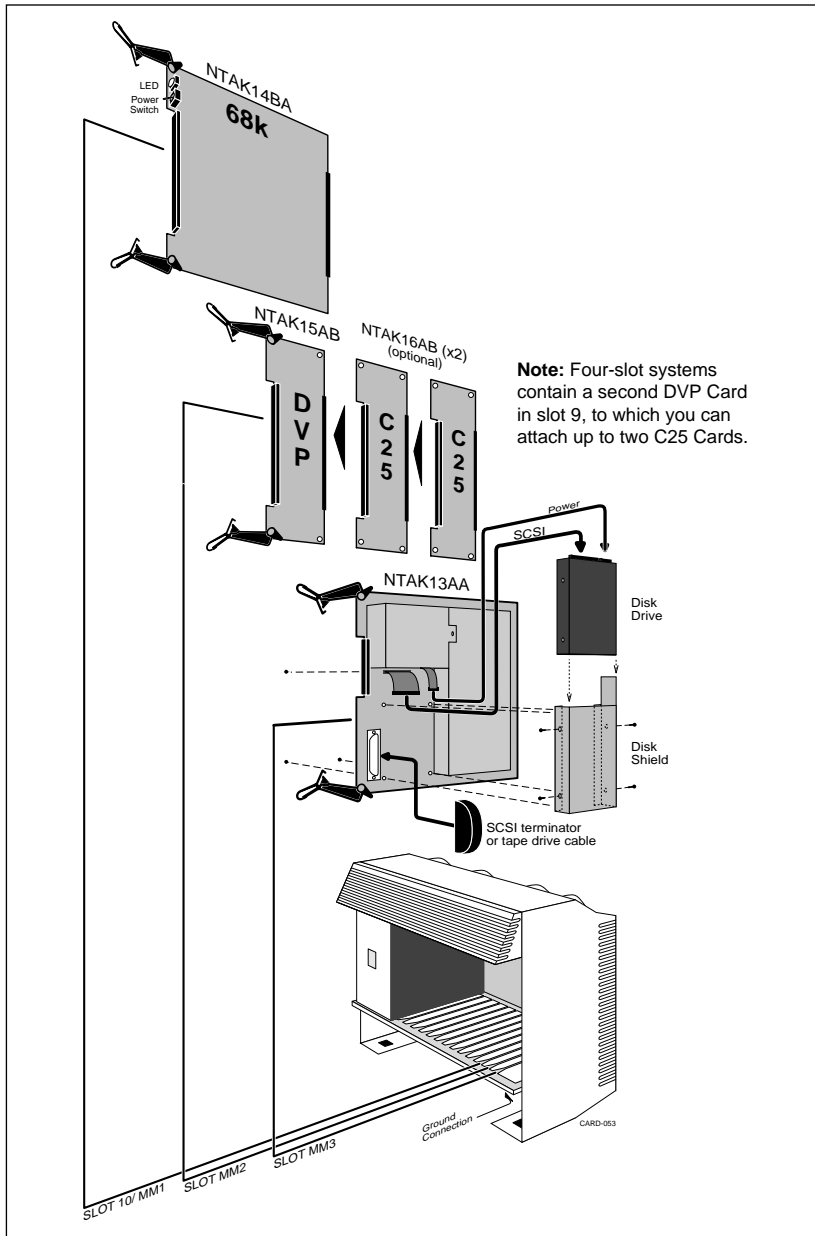
The following are optional:

• External tape drive kit and SCSI cable, North America (NTAK30CA)

• External tape drive kit and SCSI cable, United Kingdom (NTAK30BA)

• External tape drive kit and SCSI cable, European Mainland (NTAK30AA)

Note: These tape drive kits each come with a power cord appropriate to their location.

• Tape Drive Wall Mounting Kit (NTAK39AA)

• 3M brand DC6250 tapes (A0368760) for system backups

• Northern Telecom Personal Printer (C2501287)

• RSM Breakout Assembly (NTAK18AA)

• RSM Breakout Assembly, with enhanced EMI protection (NTAK18BA)

• Hospitality Voice Services (HVS) Hardware Kit, including RSM Breakout Assembly (NTAK35AA)

• Networking Hardware Kit, including RSM Breakout Assembly (NTAK40AA)

The HVS and Networking Hardware Kits each contain the RSM Breakout Assembly which fits under the Meridian 1 card cage and plugs into the right-most 25-pair connector, J10.

Precautions

If you are installing an HVS or Networking system, you must install the RSM Breakout Assembly first.

You can install the Meridian Mail hardware while the Meridian 1 PBX is running, but you must ensure that the switch on the 68k Card is in the off (down) position. Failing to do so can result in damage to the components or injury to yourself.

DANGER
Shock hazard
Before removing any cards, ensure that the power switch on the 68k Card is in the off (down) position.

Before touching any components, ensure that you are properly grounded by putting on the wrist strap connected to the Meridian 1 cabinet. Static electricity can irreparably damage sensitive electronic components.

CAUTION
Static electricity
The printed circuit boards are susceptible to static damage. Before handling the PCBs take the appropriate precautions.

Removing the cover

Use a screwdriver to unlock the latches on the front of the Meridian 1 cabinet. The latches slide inwards, the cabinet cover swings down and detaches at the base. Remove the cover and put it safely aside.

Figure 1-2
Removing the cover

CARD-030
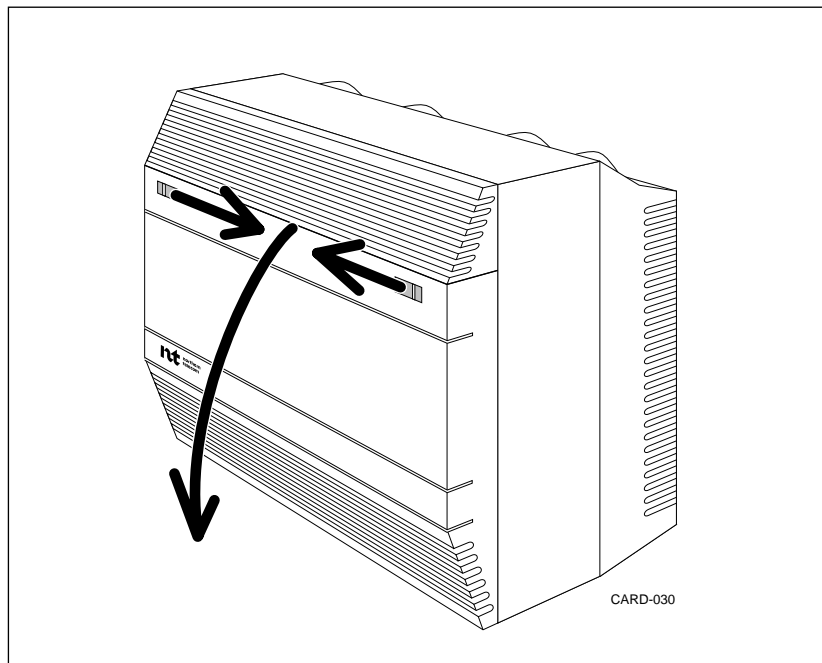
Installing the RSM Breakout Assembly (NTAK18AA/BA)

The RSM Breakout Assembly is a small circuit board that sits in the cavity beneath the three Meridian Mail cards and is connected to connector J10, the rightmost of the 25-pair connectors that run the length of the Meridian 1 cabinet. An MDF cable is attached to this assembly and allows the customer to connect other RS-232 devices to Meridian Mail, most notably for the Meridian Mail Hospitality Voice Services system and for networking.

The RSM Breakout Assembly is available in two varieties: NTAK18BA should be installed in areas requiring enhanced protection from electromagnetic interference, NTAK18AA can be used in all other situations. Apart from this difference, the two cards are installed in exactly the same way and function identically.

> **DANGER**
> **Shock hazard**
> Before installing the RSM Breakout Assembly, ensure that the 68k Card is not plugged into the back of the Meridian 1 cabinet. Turning off Meridian Mail is not enough.

If you are installing a new Meridian Mail system, install the RSM Breakout Assembly before any of the other cards.

1   If you are adding an RSM Breakout Assembly to an existing system:

   a.   Courtesy down Meridian Mail and turn it off. (Refer to page 4-5.)

   b.   Grasping the top three lock latches with one hand and the bottom three latches with the other, unlock all three cards simultaneously and pull the assembly out slowly until the 68k Card comes unplugged from the back of the cabinet. There is no need to remove it completely.

2   Remove the cable restraining bar.

3   Plug the end of the MDF cable equipped with a cubic ferrite ring into the RSM Breakout Assembly.

4   Move the small switch on the RSM Breakout Assembly to the "Normal" position as indicated on the Assembly.

5 Fit the RSM Breakout Assembly over the plastic extrusion that holds the right end of the cable restraining bar in place, plug it into the rightmost 25-pair connector, and secure it in place with the screw provided.

6 Run the MDF cable down through the Meridian 1 cabinet as shown in Figure 1-3.

7 Replace the cable restraining bar.

You can now install or reinstall the remaining Meridian Mail cards and turn on the Meridian Mail system.

Figure 1-3
The RSM Breakout Assembly
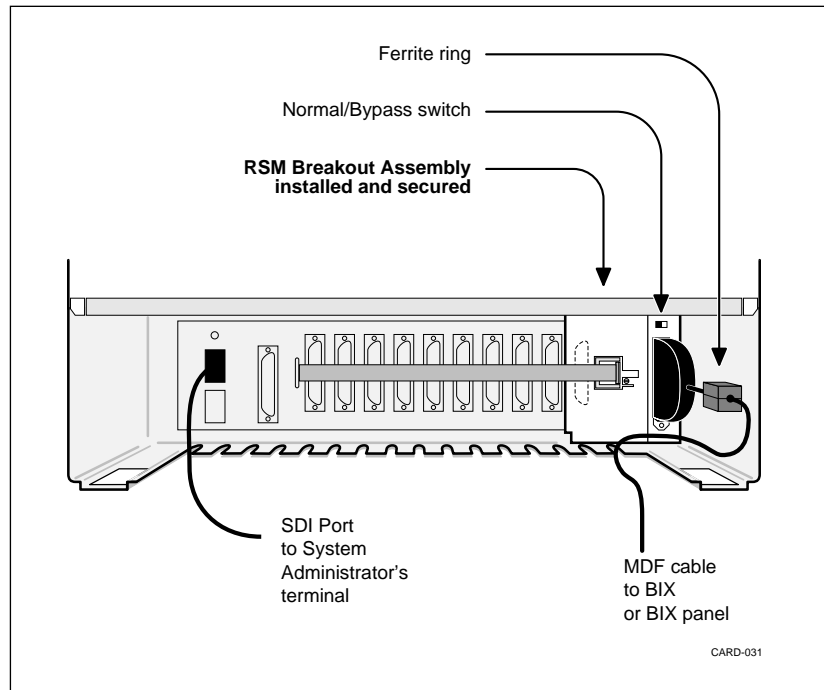
You can work with the RSM cable while the RSM Breakout Assembly is installed and Meridian Mail is on. For information on connecting peripheral devices to the RSM cable, refer to "Hospitality systems" (Chapter 8) or "Networked systems" (Chapter 9).

Installing the Meridian Mail cards

The 68k Card connects to the Meridian 1 PBX through the connector at the back of the Meridian 1 cabinet. One or two DVP Card assemblies and the Disk/Power Supply Card are connected to the 68k Card through the Connector Board which plugs in at the front edge of each of these cards.

Due to the force required to install the Connector Board, you should first assemble and insert the Meridian Mail cards into the card cage. The card cage keeps the cards securely in place while you plug in the Connector Board.

Inserting the 68k Card (NTAK14BA)

1   Ensure that the switch on the 68k Card is in the off (down) position.

2   Insert the card into slot 10/MM1 with the solder side to the left and the components to the right. Do not push it all the way to the back of the cabinet and do not lock the latch levers. (Refer to Figure 1-4.)

Figure 1-4
Inserting the 68k Card

LED

Power
Switch

NTAK14BA

SLOT 10/ MM1

CARD-026
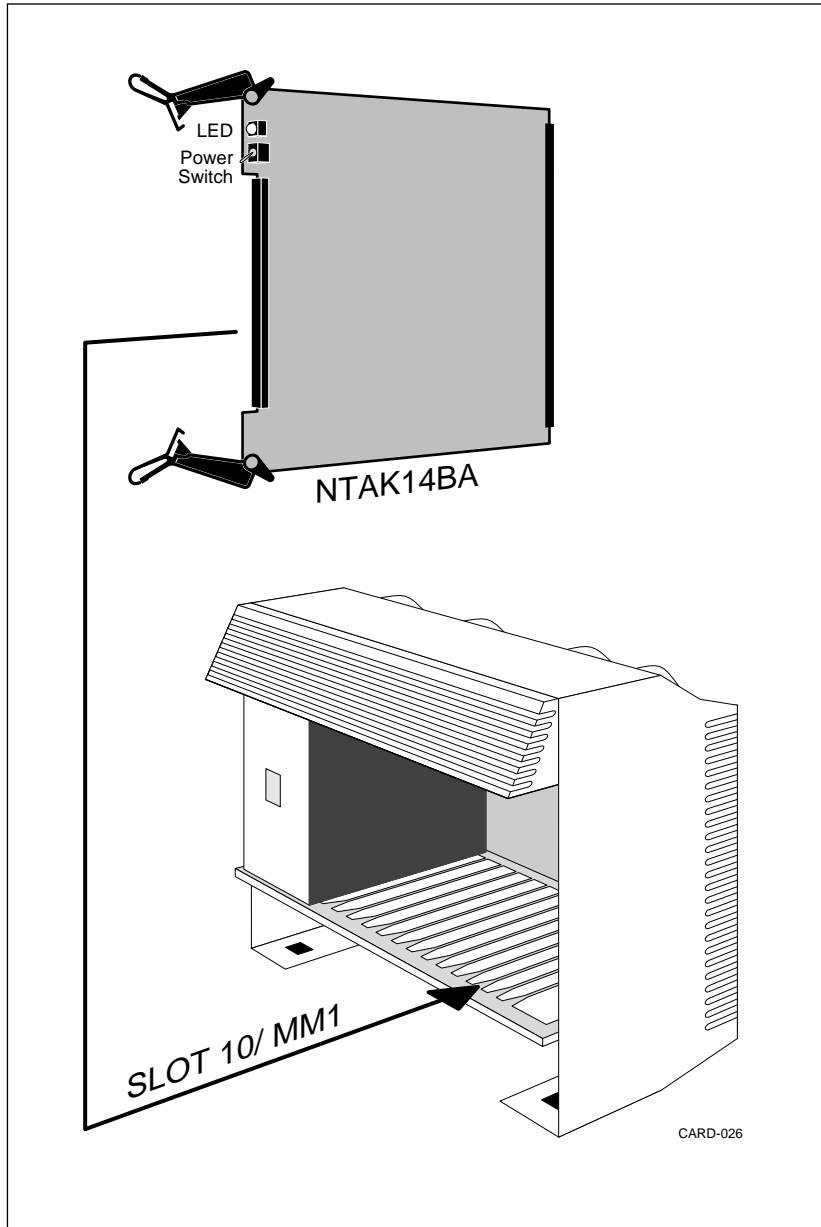
Assembling and inserting the DVP Card (NTAK15AB)

A Meridian Mail card option system can have from two to twelve hardware locations according to the configurations in the following table. The number of hardware locations dictates how many people can use Meridian Mail at the same time. This includes both people leaving messages and faxes and people logged on to Meridian Mail.

Table 1-1
Hardware location configurations

Hardware Locations	Configuration
2	First DVP Card in slot MM2 with no C25 cards attached.
4	One C25 Card attached to first DVP Card in slot MM2.
6	Two C25 Cards attached to first DVP Card in slot MM2.
8	Second DVP Card in slot 9 with no C25 cards attached. Two C25 Cards attached to first DVP Card in slot MM2.
10	One C25 Card attached to second DVP Card in slot 9. Two C25 Cards attached to first DVP Card in slot MM2.
12	Two C25 Cards attached to second DVP Card in slot 9. Two C25 Cards attached to first DVP Card in slot MM2.

1   Attach the supplied C25 Cards to the DVP Cards. Ensure that the DVP Card to be installed in slot MM2 has two C25 Cards before adding a C25 Card to the second DVP card. (Refer to Figure 1-5.)

To avoid damaging the cards, lay them on a firm, flat, and static-free surface as you push them together.

Note: Some systems may be equipped with an older DVP Card (NTAK15AA) or older C25 Cards (NTAK16AA). Do not install any of these older cards in slot 9. You can, however, attach new C25 Cards (NTAK16AB) to an old DVP Card, provided you insert the assembled cards in slot MM2 only.

2   Insert the assembled cards into their correct slots as described in Table 1-1 with the solder side to the left and the components to the right. Do not push them all the way to the back of the cabinet and do not lock the latch levers.

Figure 1-5
Assembling and inserting the primary DVP Card
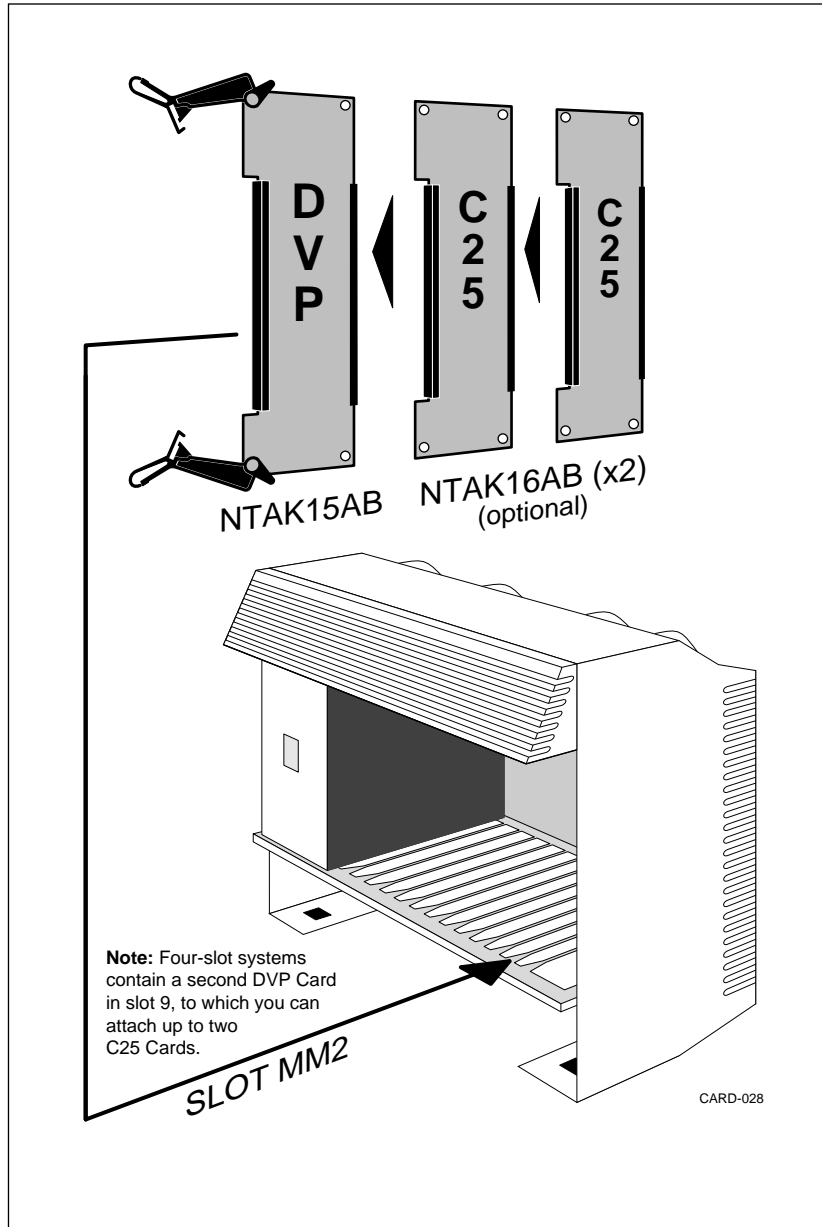
Assembling and inserting the Disk/Power Supply Card (NTAK13AA)

The Disk/Power Supply Card contains the power supply for Meridian Mail and a place to mount the Meridian Mail disk drive.

1   Remove all terminators from the disk drive. Install the correct jumpers required for the model of disk drive you're installing and remove all other jumpers. (Refer to Chapter 12.)

2   Slide the disk shield over the disk drive and screw it into place on both sides of the drive with the four screws provided.

3   Connect the power cable from the Disk/Power Supply Card to the power connector on the disk drive. (Refer to Figure 1-6.)

⚠️ **CAUTION**
Potential disk drive failure
Before installing the SCSI cable that connects the disk drive to the Disk/Power Supply Card, inspect the plugs at each end. A bent pin on one of the plugs can cause a disk drive failure.

When installing the SCSI cable, ensure that the plugs are seated properly and pushed down securely.

---

4   Connect the SCSI cable from the Disk/Power Supply Card to the SCSI connector on the disk drive.

5   Secure the disk shield/disk drive assembly to the card using the screws and insulating washers provided. Place the washers between the heads of the screws and the Disk/Power Supply Card.

6   If you have already installed the Meridian Mail software on this disk, plug the supplied SCSI terminator into the SCSI connector on the Disk/Power Supply Card.

Note: If this is a new system, you will be attaching an external tape drive to this connector and installing the software after you have finished installing the remaining Meridian Mail hardware.

7   Insert the assembled card into slot MM3 with the solder side to the left and the components to the right. Do not push it all the way to the back of the cabinet and do not lock the latch levers.

Figure 1-6
Assembling and inserting the Disk/Power Supply Card

NTAK13AA

Power

SCSI

Disk
Drive

Disk
Shield

SCSI terminator
or tape drive cable

SLOT MM3

Ground
Connection

CARD-027
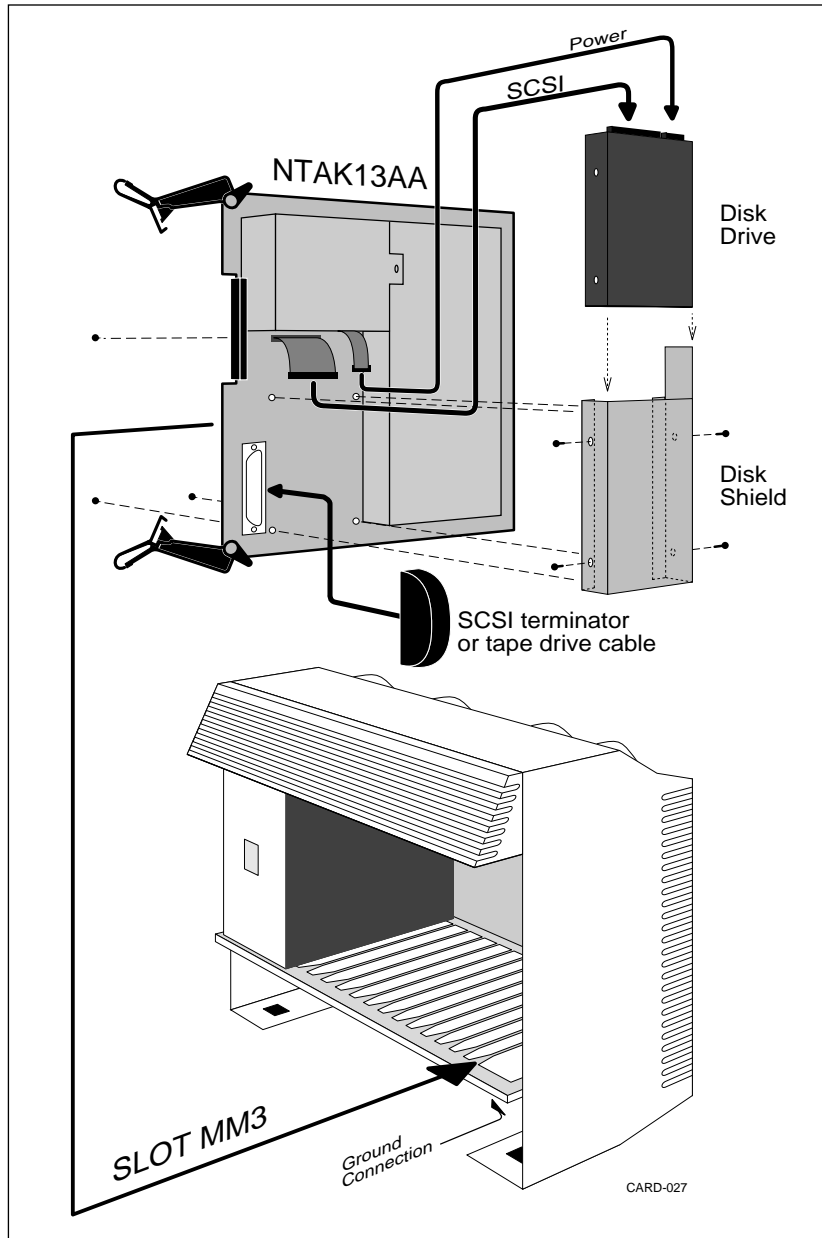
The final installation

Figure 1-7 shows how to install a three-card Meridian Mail card option system into a three-plug Connector Board (NTAK17AA). If the system you are installing is equipped with a second DVP Card, you will require a four-plug Connector Board (NTAK17BA).

Note: A four-plug Connector Board can be used with a three-card system, but the fourth plug will block slot 9 so that it can't be used for any other Option 11 cards.

1   Ensure that the switch on the 68k Card is in the off (down) position.

2   Moving from left to right, plug the edge of each card into the appropriate plug on the Connector Board.

Figure 1-7
Installing the Connector Board

CARD-029
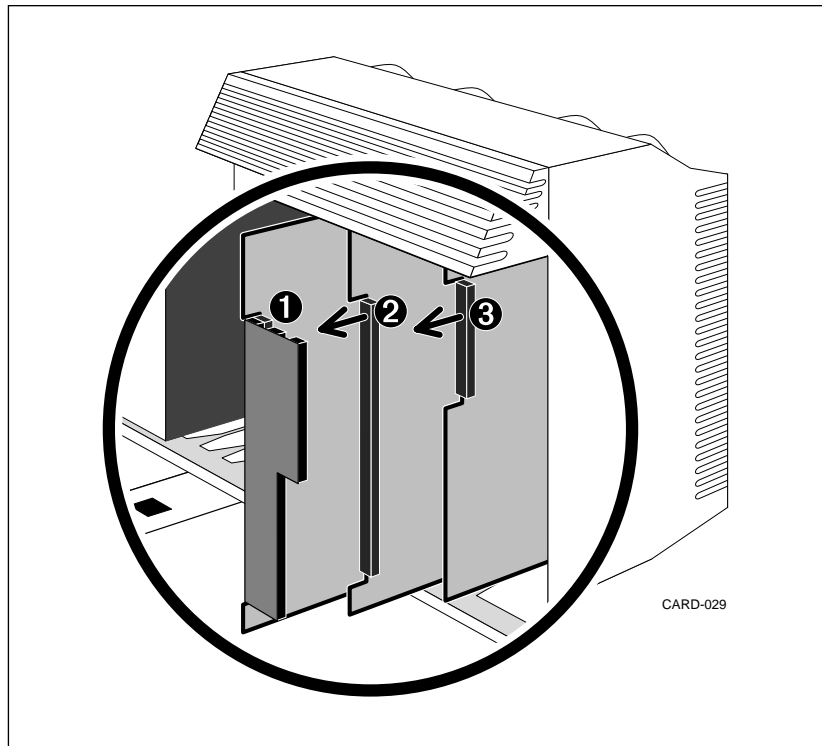
3   Slowly and carefully push the connected cards into the cabinet, until the 68k Card plugs firmly into the connector at the back of the cabinet. (The other cards do not have connections at the back of the cabinet.)

4   Grasping the top lock latches with one hand and the bottom latches with the other, lock all cards simultaneously into the cabinet.

5   If this system is to have a permanently connected external tape drive, install it now, following the procedure below.

6   If this is a new system and you have yet to install the Meridian Mail software, install it now, following the procedures described in Chapter 3.

7   Fit the Meridian Mail face plate into place so that the power switch and the LED line up with the appropriate holes. Be careful not to knock the power switch or bend the leads on the LED.

Installing the external tape drive

The external tape drive is used to install and upgrade software, and to make backups of Meridian Mail data. It can be attached permanently to the SCSI connector on the Disk/Power Supply Card or installed only when needed.

1   Unless you are installing Meridian Mail for the first time, courtesy down Meridian Mail and turn it off. (Refer to page 4-5.)

2   Set the power selector switch at the back of the tape drive to the correct voltage for your area.

3   Plug the tape drive's power cord into the same circuit used by the Meridian 1 cabinet.

4   At the back of the external tape drive, use the buttons above and below the small window to set the SCSI address to "1".

5   Plug the provided SCSI cable into either SCSI connector on the back of the tape drive and plug the provided SCSI terminator (A0379544) into the other connector.

6   Run the cable up through the bottom of the card cage, and plug the other end into the SCSI port of the Disk/ Power Supply Card. (Refer to Figure 1-6 on page 1-12.)

7   Run the grounding wire back down through the bottom of the cage and affix it behind the bar that runs the width of the cabinet, using one of the screws holding the bar to the front of the card cage.

8   If desired, mount the external tape drive below and to the right of the cabinet, following the instructions in Figure 1-8. It should be positioned so that it does not interfere with the cables that run out of the bottom of the Meridian 1 cabinet. Avoid mounting the tape drive where it will be subjected to continuous shock or vibration.

9   Start Meridian Mail. (Refer to page 4-6.)

Note: If you are installing Meridian Mail for the first time refer instead to the installation procedures in Chapter 3.

Figure 1-8
Mounting the external tape drive

① Affix the first bracket to the wall with its lips to the left.

③ Affix the second bracket to the wall with its lips overlapping the front of the tape drive.

② With the top of the tape drive facing the wall, slide it into the bracket.

CARD-017
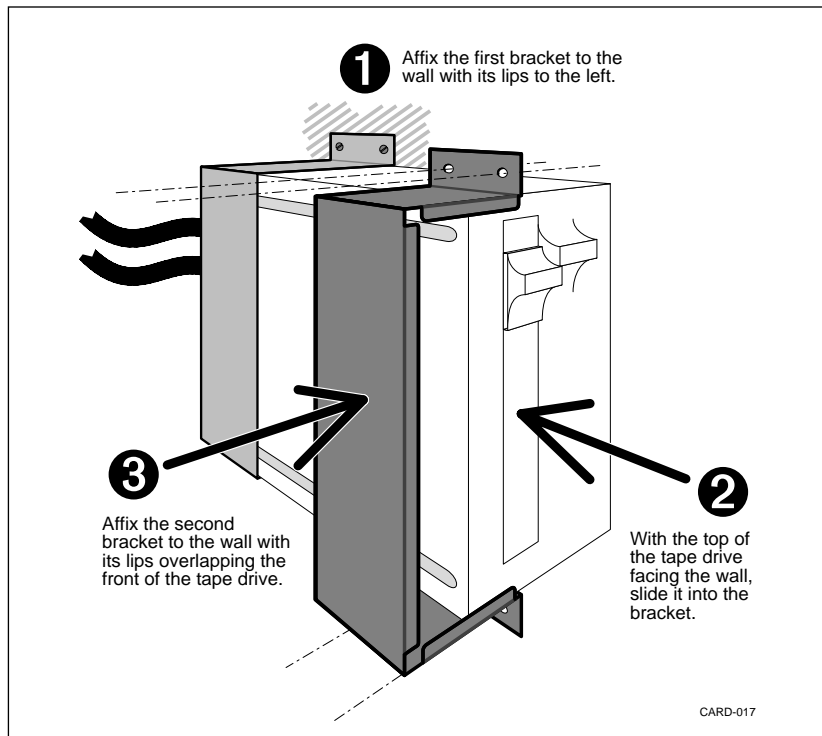
Inserting a tape

Insert tapes with the label side to the top of the tape drive and the opening towards the handle on the front of the drive. Push the tape all the way into the drive and slide the handle to the right until it locks into place

If the tape drive has been correctly mounted on the wall, insert tapes with the label facing the wall and the opening facing upwards.

The tapes you receive from Northern Telecom are 3M brand DC6250 tapes. Be sure to use this tape format for your backups.

Removing a tape

Slide the handle on the front of the drive to the left until it the tape is ejected from the drive. Do not attempt to remove a tape when the drive is running.

Removing the external tape drive

For systems not equipped with a permanently installed external tape drive, the Meridian 1 representative is responsible for all software procedures that require a tape drive and should therefore include a tape drive as part of his or her standard equipment.

To remove the external tape drive:

1   Courtesy Down Meridian Mail and turn it off. (Refer to page 4-5.)

2   Turn off the power to the tape drive and unplug it.

3   Detach the grounding wire from the Meridian 1 cabinet.

4   Unplug the SCSI cable from the Disk/Power Supply Card and install an SCSI terminator in its place.

5   Start Meridian Mail. (Refer to page 4-6.)

CAUTION
Potential data loss
Whenever an external tape drive is not attached to the Disk/Power Supply Card, install the SCSI terminator in its place.

Installing a printer

Connecting a printer to the System Administrator's terminal allows the administrator to print reports using Meridian Mail's Operational Measurements function.

You can also configure Meridian Mail to print System Error and Event Reports on the same printer as they are generated. System events and error reports contain information about every system event and error that occurs on the Meridian Mail system. For more information on the content of SEERs, refer to *Meridian Mail—System Event and Error Reports.*

Meridian Mail supports two types of printer: the LA75 Plus Companion Printer; and the HP ThinkJet Printer (NT Personal Printer). If the printer you are installing is a different model, match its settings with those described in Table 1-2 on page 1-19 and Figure 1-10 on page 1-20 and use the set-up procedures described in the printer's owner's manual.

Connecting and configuring the LA75 Plus Companion printer

1   Connect the printer to the appropriate port at the rear of the System Administrator's terminal using the following cables:

For VT220 terminals, connect the printer to the H87575-A adapter using a BC16E-10 cable, and connect the adapter to the port labelled "PR" using an A0369499 cable.

For VT320 and VT420 terminals, connect the printer to the port labelled "Printer Port" using a BC16E-10 cable.

For NT220 terminals, connect the printer to the H87575-A adapter using a BC16E-10 cable, and connect the adapter to the port labelled "Auxiliary" using an NTND82AA/AB cable.

For HP700/22 terminals, connect the printer to the port labelled "Printer" using an A0369499 cable.

For HP700/32 terminals, connect the printer to the H87575-A adapter using a BC16E-10 cable, and connect the adapter to the port labelled "Port 2" using an A0369499 cable.

2   Plug the printer's AC power cord into an appropriate outlet, and turn on the power. There is no need for it to be on the same circuit as the Meridian 1 cabinet.

3   Ensure that the printer is turned off.

4   Press and hold the Set-up button on the front control panel of the printer and at the same time power on the printer.

Figure 1-9
The LA75 Plus Companion printer control panel
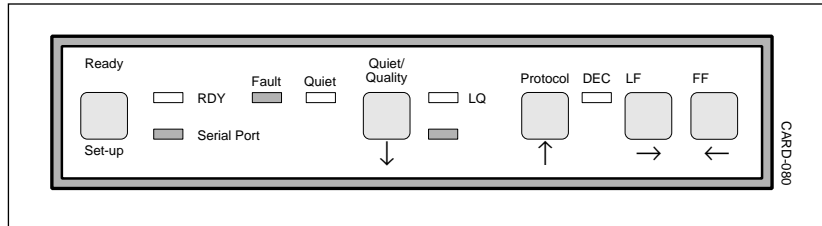
5   Release the Set-up button one to two seconds after powering on.
*The printer prints a list of the default settings. When the list is complete,
it goes back to the beginning of the list, reprints the first setting, and
stops. Refer to Table 1-2 on page 1-19.*

6   If you want to change the current setting, press the left arrow key on the
control panel.
The current feature number is printed again with the new setting.

7   If this is not the setting you require, press the left arrow button again and
the next setting for that feature number is printed. Refer to the printer's
user manual for the list of options available for each feature.

8   Repeat step 7 until the option you want for this feature is printed.

9   Press the down arrow to move to the next feature.

10 Repeat step 6 to step 9 until you have changed all the settings to your
satisfaction.

11 Press the Set-up button on the control panel to save the settings.

For more information, consult the printer's owner's manual.

Connecting and configuring the HP ThinkJet printer

1   Connect the printer to the appropriate port at the rear of the System Ad-
ministrator's terminal using the following cables:

For VT220 terminals, connect the printer to the port labelled "PR" using
an A0369499 cable.

For VT320 and VT420 terminals, connect the printer to the port la-
belled "Printer Port" using an A0376171 cable.

Table 1-2
LA75 Plus Companion printer default settings

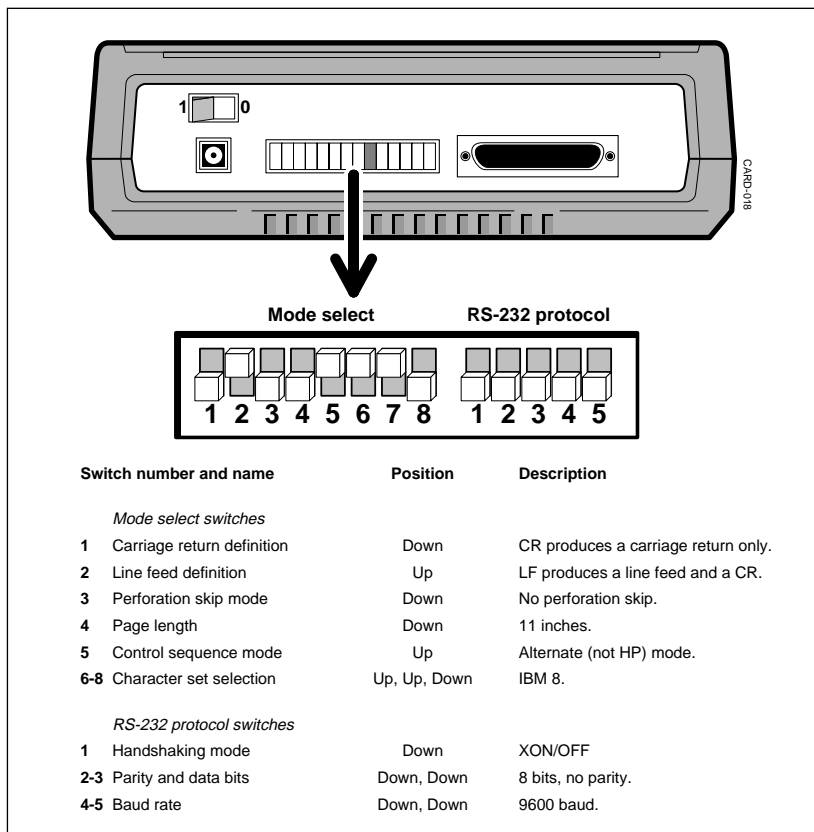| Feature Number	Name	Value Number	Name
Generic 1	Protocol at Power-up	3	Port Dependent
Generic 2	Form length	9	11 inches (A)
Generic 3	Vertical pitch	4	6 lines per inch
Generic 4	Automatic advance	1	Selected
Generic 5	Print quality control	1	Software control
Generic 6	Port selection	1	Serial port
Generic 7	Baud rate	7	9600
Generic 8	Data bits and parity	7	8-none
Generic 9	Buffer control	1	XON/XOFF
Generic 10	Error beep	1	One beep
Generic 11	Typestyle	1	Internal
Generic 12	Input buffer size	1	8K
Generic 13	Disconnect on fault	1	Not selected
DEC 1	Horizontal pitch	7	10 Char. per in. (80 Col)
DEC 2	GO character pitch	1	US ASCII
DEC 3	User pref. char. set	1	DEC Supplemental
DEC 4	Printer ID	4	Conf. Level 2 (LA75 Plus)
DEC 5	Text mode right margin	2	Wrap

For NT220 terminals, connect the printer to the port labelled "Auxiliary" using an NT0M96DC/DD cable. Some NT220 terminals require an In-mac 328 adaptor (A0351509).

For HP700/22 terminals, connect the printer to the port labelled "Printer" using an A0369499 cable.

For HP700/32 terminals, connect the printer to the port labelled "Port 2" using an A0376171 cable.

2 Set the switches at the back of the printer so that they match those in the Figure 1-10.

Figure 1-10
Configuring the HP ThinkJet printer

Switch number and name	Position	Description
Mode select switches		
1 Carriage return definition	Down	CR produces a carriage return only.
2 Line feed definition	Up	LF produces a line feed and a CR.
3 Perforation skip mode	Down	No perforation skip.
4 Page length	Down	11 inches.
5 Control sequence mode	Up	Alternate (not HP) mode.
6-8 Character set selection	Up, Up, Down	IBM 8.
RS-232 protocol switches		
1 Handshaking mode	Down	XON/OFF
2-3 Parity and data bits	Down, Down	8 bits, no parity.
4-5 Baud rate	Down, Down	9600 baud.

3 Plug the printer's AC adaptor into an appropriate outlet. There is no need for it to be on the same circuit as the Meridian 1 cabinet.

4 Plug the adaptor's power cord into the socket at the back of the printer, and turn on the power

5 To enable the printer, press the button immediately below the power indicator lamp as shown in Figure 1-11.

For more information, consult the printer's owner's manual.

Figure 1-11
Enabling the HP ThinkJet printer

Power indicator lamp

On line indicator lamp

PWR

Aa

LF

FF

CARD-052
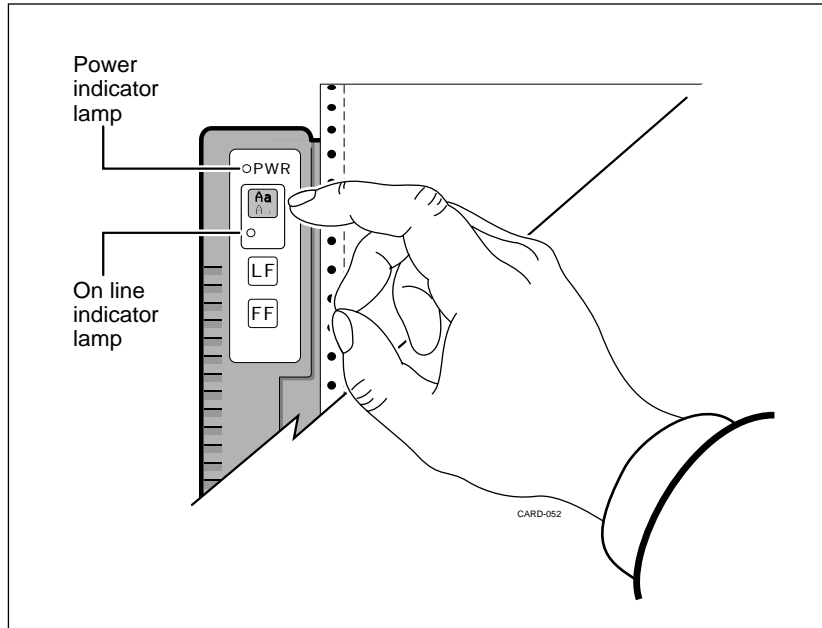
Configuring Meridian Mail

Meridian Mail is automatically configured to allow the printing of operational measurement reports. If, however you also want the printer to print system event and error reports as they occur, you must configure the printer as follows:

1   After you have loaded the Meridian Mail software (Chapter 3), log on to the Meridian Mail system at the System Administrator's terminal.

2   From the Main Menu, choose "2 General Administration"→ "1 General Options"

3   Set the field *SEER Printing* to "Enabled"

4   Press Save .

System installation and modification

This chapter describes how to use the System Installation and Modification Utility that comes on the Meridian Mail software tape. This utility is used to install software on new systems, modify the software on existing systems, restore systems from a backup tape, and perform routine system maintenance.

The software tape

The software tape you receive depends on the languages you order, as seen in Table 2-1 on page 2-2. If the languages you order are not contained on a single tape, you will receive more than one tape. If, for instance, you order German and Russian, you will receive the North American tape and the Europe 2 tape.

Keycodes and labels

Many of the functions available through the System Installation and Modification Utility require you to enter a special access code. This keycode is provided by your Meridian 1 representative and unlocks the capabilities you've purchased for your system, including:

- The amount of disk storage the system can use

- The number of channels and their attributes

- The number of languages

- Special Meridian Mail features, such as Networking and Hospitality Voice Services

The keycode for a system is printed on the label on the box containing the Meridian Mail software tape. Figure 2-1 is an example of a typical label for a Card Option system. You should also receive a second, duplicate label. Affix

this label to the inside of the door on the Option 11 cabinet; that way, should you misplace the software tape, you will still have the keycode you need.

Table 2-1
Software tapes and languages

Tape	Order Number	Languages
North America	NTAK72AE	North American English Canadian French American Spanish German Japanese Italian Brazilian Portuguese
Europe 1	NTAK72BE	North American English European English—Female European French European Spanish German Italian Dutch
Europe 2	NTAK72CE	North American English Swedish Norwegian Danish Finnish Russian
Europe 3	NTAK72EE	North American English European English—Male Arabic Portuguese Turkish
Asia-Pacific	NTAK72DE	North American English New Zealand (Australasian) English Japanese Intec Japanese Mandarin Taiwanese Mandarin Korean

Serial numbers

The serial number on this label—*MM Serial Number*—identifies which system the keycode is for. This keycode will not work on any other Meridian

Mail system. If you are responsible for more than one Meridian Mail system, ensure that you are always using the correct keycode for each.

Figure 2-1
A typical Card Option label

MM SERIAL NBR
926199

PBX Serial Nbr
926199

Bell Quebec
Montreal Central
07 JUN 94

FEATURE(S)

NTI Number
3044912299

LANGUAGE(S) 2

HOURS 0024

Out Calling   Voice Forms   Dual Lang Prompting
Voice Menus

TYPE   PORTS
Physical   12
Multimedia   2   MM9 UNIVERSAL KEYCODE
Full Serv   10   C9DD BFE5 2CF4 AB63 1FF2
Basic Serv   0

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Modifying your system

Should you wish to modify your system, your Meridian 1 representative will provide you with a new keycode to unlock any new capabilities you purchase.

For example you may want to take advantage of the latest release of the software, increase your channels, and add some new features. A single new keycode will unlock all these modifications.

Precautions

This single keycode enables each of the system modification procedures you will have to perform. It is important, however, that you perform the procedures in the following order:

- Software upgrade or conversion (Refer to Chapter 6.)

- Hardware modification (Refer to page 7-2.)

- Storage expansion (Refer to page 7-3.)
- Language expansion (Refer to page 7-5.)
- Feature expansion (Refer to page 7-6.)

Failure to follow this order may cause problems with the system.

Of course, not all systems will require each of these steps—simply skip the ones you don't have to perform, but maintain the order. Don't, for instance, attempt a feature expansion before a language expansion.

Using the System Installation and Modification Utility

The System Installation and Modification Utility is run directly from the Meridian Mail software tape, as follows:

1   Courtesy down Meridian Mail and turn it off. (Refer to page 4-5.)

Note: There is, of course, no need to turn Meridian Mail off if you have just installed or reinstalled the Meridian Mail hardware and have yet to turn it on.

2   If one is not already connected, connect an external tape drive to the Meridian Mail Disk/Power Card and turn on the power switch at the back of the drive. (Refer to page 1-14.)

3   Insert the Meridian Mail software tape into the tape drive. (Refer to page 1-15.)

Note: If you ordered additional languages for your system, you may have received more than one software tape. Each software tape you receive contains the complete Meridian Mail system software, so it doesn't matter which you use to run the System Installation and Modification Utility. Only when you wish to load languages not contained on this tape will you need to insert another software tape.

4   Start Meridian Mail. (Refer to page 4-6.)
Just above the power switch on the 68k Card is a small LED. When the system is first turned on, the LED lights briefly and Meridian Mail proceeds with its internal diagnostics and start-up procedures.
The LED should remain unlit during the entire process—which takes approximately four minutes—and then come back on and remain lit. At this point the tape drive starts reading the tape, and—after approximately three minutes—Meridian Mail displays the following menu:

```
System Installation & Modification Menu
---------------------------------------
        1  Install an MM9 system
        2  Upgrade to the latest MM9 release
        3  Convert to the latest MM9 release
        4  Feature Expansion
        5  Hardware Modification
        6  Storage Expansion
        7  Language Expansion
        8  More Utilities

Please enter the operation number:
```

5 *If this does not happen, refer t*o "Troubleshooting and maintenance" (Chapter 5).

Responding to the prompts

Many of prompts you see while using the System Installation and Modification Utility contain the standard default for the prompt. To accept the default:

1 Press [Return].

To choose an alternative:

1 Press [↑] and [↓] to move through the list of alternatives.

2 Press [Return] to accept your choice.

To enter custom data:

1 Press [Remove] to delete the default.

2 Enter your data.

3 Press [Return].

Assigning hardware location attributes

Several of the functions available through the System Installation and Modification Utility utility require you to assign specific attributes to the hardware locations.

A Meridian Mail Card Option system can be equipped with up to twelve hardware locations. You must define these hardware locations as either voice ports or multimedia ports. A voice port requires a single hardware location, a multimedia port requires two consecutive hardware locations.

Each of the ports must also be defined as a basic-service or full-service port.

Basic-service voice ports can perform the two basic voice functions: Voice Menus and Interactive Voice Response (IVR).

Full-service voice ports can perform all the Meridian Mail voice functions available on Card Option systems, including Voice Menus and Interactive Voice Response.

Basic multimedia ports are not supported. All multimedia ports are full-service ports by default and use a *single* full-service port in your allocation.

Full-service multimedia ports can perform all the functions of a full-service voice port in addition to such multimedia functions as Fax on Demand.

When configuring the hardware location attributes, the system displays a list of the available hardware locations similar to the following:

```
Node  -------- Voice Hardware Location --------
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
  1   M --  M --  V  V Vb Vb
```

In this example hardware locations 1 to 4 are defined as two multimedia ports. Hardware locations 5 and 6 are defined as full-service voice ports. And hardware locations 7 and 8 are defined as basic voice ports.

When assigning ports on a Meridian Mail Card Option system, remember the following:

- Card Option systems have only one node and a maximum of twelve hardware locations.

- Multimedia ports require two consecutive hardware locations.

- You cannot assign more multimedia ports or full-service voice ports than you have purchased, nor can the total number of ports exceed the number determined by the keycode, whether or not you have the hardware you need.

- Each multimedia port uses a *single* full-service port in your allocation.

The following procedure allows you to change the attributes of a range of hardware locations:

1   At the `Select operation:` prompt, choose "Change"

2   For *Port Type,* choose the attributes you want for the range of hardware locations: Basic Voice, Full-service Voice, or Full-service Multimedia.

3   For *First Node,* choose "1".

4   For *First Location*, choose the first hardware location in the range.

5   For *Last Node,* choose "1".

6   For *Last Location*, choose the last hardware location in the range.
The list of hardware locations is displayed again to reflect the changes.

7   At the prompt, `Is this correct?:`

    a.   Choose "Yes" to implement the changes.
If you have exceeded any of the limits to the number or type of ports, you are prompted to change the allocation.

       or

    b.   Choose "No" to enter more changes.

Software installation

This chapter describes how to install the software on a new Meridian Mail system and set up the system for the System Administrator. Once the software has been installed on a system, it will only ever need to be re-installed in the event of a disk drive failure.

After the initial installation, software can be upgraded or converted to a later release (Chapter 6), restored from backup (page 4-9), or the system can be expanded (Chapter 7).

What you need

- The Meridian Mail software tape, NTAK72*x*E. (Refer to Table 2-1 on page 2-2 for the exact part number).
- The keycode for your system. (Refer to Chapter 2.)

The keycode you need is printed on the label on the box containing the Meridian Mail software tape, together with the serial number of the system. If you are responsible for more than one Meridian Mail system, ensure that you are using the correct keycode for each. If the serial number of the system does not match that on the label, the keycode will be rejected.

Before installing the software

The Meridian 1 Option 11 PBX comes with several ACD queues predefined to process calls to Meridian Mail. These correspond to the default Meridian Mail DNs described in Chapter 10. If you are installing Meridian Mail on a newly-installed PBX, there is little chance that someone has changed these defaults. If, however, you are installing Meridian Mail on a PBX which has been operating for some time, you must ensure that these DNs have not been assigned to some other purpose:

1 Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2 Print a hardware location report by following the prompts in Table 4-4 on page 4-17; and, using the hardware location table on page 10-2, verify that the default hardware location DNs have not been reassigned or altered.

3 Print an ACD queue report by following the prompts in Table 4-3 on page 4-17; and, referring to the parameters listed in Table 4-5, "Creating a new Voice Messaging DN," on page 4-18 and Table 4-10, "Creating a new service DN," on page 4-21, ensure that the default service DNs have not been reassigned or altered.

4 If the values in these reports are different from those in the appropriate tables, you can do one of two things:

a. Reassign the services that are currently using the DNs. (Refer to *Meridian 1 option 11—Administration Guide.)*

b. Change the DNs to DNs which are not in use, by following the procedures in "Changing the default Meridian Mail DNs" on page 4-12.

Automatic and manual configuration

Depending on the options you choose, auto configuration can set up a series of default users, the default services listed in Chapter 10, and the automated attendant described in *Meridian Mail Card Option—System Administration, The Basics.*

It has, however, come to the attention of Northern Telecom that the standard default numbers are being circulated among a growing population of telephone "hackers" who log on to voice mail systems and use them to cause trouble or make long distance telephone calls.

With this in mind, you have the option of manually configuring your own values for these features, after installing the software.

Default data fill
During software installation you are prompted as follows:

```
Do you want default data fill?
```

To automatically configure your system, choose "yes." If you choose "no" you must manually configure the system after the software installation is complete. If you choose "yes," you still have the option of later changing some or all of the default data fill values.

Default users

If you request default data fill, you are prompted as follows:

```
Do you want default users created?
```

If you choose "yes," you are prompted further for the number of users you want the system to create and the extension number of the first user in the list. The number of users you can add is restricted by the size of your disk drive. The extension numbers are restricted to those defaults defined on the Meridian 1 PBX.

Default voice services

If you request default data fill, you are prompted as follows:

```
Do you want default voice services?
```

The default voice services are:

- 100 Voice Menu defined as "Auto Attendant"

- 101 Thru-dialer defined as "Dial by Extension"

- 102 Thru-dialer defined as "Dial by Name"

Default voice service DNs

If you request default data fill, you are prompted as follows:

```
Do you want default voice service DNs created?
```

The default voice service DNs depend on the type of system you're installing is a hospitality system, and on whether or not you requested default voice services:

	Hospitality Systems	Other Systems
Without Default Voice Services	7000 Guest Messaging	7000 Voice Messaging
With Default Voice Services	7000 Guest Messaging 7001 Express Messaging 7002 Hotel Menu 7003 Published Numbers 7004 Post Check-out 7005 Staff Messaging	7000 Guest Messaging 7001 Auto Attendant 7002 Express Messaging 7003 Prompt Maintenance

Installing the software

Installing the software for a Meridian Mail card option system takes about 45 minutes from start to finish, plus an extra 20 minutes for each additional language.

1 Run the System Installation and Modification Utility from the Meridian Mail software tape. (Refer to Chapter 2.)

2 From the System Installation and Modification Menu, choose "1 Install an MM9 system".

3 Respond to the prompts as they appear. You should be prepared to supply the following values for the system:

— The keycode from the system's label.

— The customer's name.
This is the name that appears on Meridian Mail screens and reports.

— The languages to install on the system.

— The country in which the system will be operating.

— The DSP parameters for the system.
These parameters are determined by the country you choose for the system. You should not have to change the default values.

— The desired assignment of hardware locations.

— The DNs for the users on this system.

— The data port locations.
Card option systems can have up to six data ports: the first two are reserved for the system administration terminal and the link to the Meridian 1 switch, the remaining four are the four ports available on the RSM card, if one is installed. The following are the recommended settings for these ports:

Location	Basic System	Hospitality System	Networked Systems	Networked Hospitality System
Node 1, Card 1, Port 1	Console	Console	Console	Console
Node 1, Card 1, Port 2	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)
Node 1, Card 3 (RSM), Port 1	Modem	GAC	Modem	GAC
Node 1, Card 3 (RSM), Port 2	Printer	GAC (optional)	Printer	Modem
Node 1, Card 3 (RSM), Port 3	Printer	PMS	Printer	PMS
Node 1, Card 3 (RSM), Port 4	Printer	PMS	Printer	PMS

The port locations you define here must match the connections you make to the RSM Breakout Assembly. The wiring diagrams for hospitality systems (Figure 8-1 on page 8-3) and networked systems (Figure 9-1 on page 9-2) are based on these recommended values. If you customize the port locations, ensure that you change the wiring accordingly.

Don't worry if you respond to a prompt incorrectly. Before the final installation begins you are given another opportunity to re-enter the information.

The final installation takes about 45 minutes from start to finish, plus an extra 20 minutes for each additional language. Be prepared to insert any additional language tapes as the system requests them. After the final language has been loaded, you are prompted as follows:

```
The operation successfully completed.
Remove the tape when it finishes rewinding and boot into service.
```

4   When the tape has finished rewinding, and the light on the front of the tape drive goes out:

   a.   Remove the tape from the drive. (Refer to page 1-16.)

   b.   Turn off the power to Meridian Mail.

   c.   Wait ten seconds.

5   Start Meridian Mail. (Refer to page 4-6.)

6   If, when you start Meridian Mail, the terminal displays the Meridian Mail logon screen but the keyboard does not respond:

   a.   Press $\boxed{\text{Control}}$]

   b.   Enter **AX** $\boxed{\text{Return}}$ to return to Meridian Mail.

   If the keyboard still does not respond, refer to "Terminal problems" on page 5-10.

7   If the terminal is incorrectly displaying the lines on the Meridian Mail logon screen as a string of "q"s:

   a.   Press $\boxed{\text{Control}}$ **W**.
        You are presented with a small pop-up menu.

   b.   Enter **IF** $\boxed{\text{Return}}$.
        The screen redraws correctly.

Setting up the system

Before anyone can use Meridian Mail, you must ensure that the following items have been defined. After this is done, the System Administrator can customize the system by following the procedures in *System Administration—The Basics*:

- the time and date
- the Meridian Mail capabilities of each telephone set
- the Meridian Mail on-switch dialing restrictions
- a System Administrator
- the Automated Attendant
- the Voice Services DN table
- a block of voice mailboxes

Using default values

The final three items may have already been automatically configured during software installation. You may leave them as they are or reconfigure them to your requirements. The procedures in this chapter use the suggested values defined in Chapter 10. Please note, if you choose not to use these default values, you must also change the values defined on the Meridian 1 PBX by following the procedures in "Changing the default Meridian Mail DNs" on page 4-12.

Passwords

If you do choose to use the default values, ensure that the passwords you choose are not the same as those listed. To prevent unauthorized people from accessing your system you should follow these guidelines:

- Change passwords every three to four weeks
- Choose passwords that are easy to remember and do not write them down anywhere someone might find them
- The longer the password the better
- Do not choose things related to your organization, such as its telephone number

Setting the time and date

The time and date must be set on the Meridian 1 PBX and on Meridian Mail:

1   Log on to the Meridian 1 PBX and set the PBX's time and date. (Refer to page 4-2.)

2   Log on to Meridian Mail.
You are prompted to enter the time and date.

3   Enter the time and date in the indicated format and press ⎡**Return**⎤.

Configuring the telephone sets

You must configure each of the telephone sets which are to have access to Meridian Mail so that FDN, HUNT, or a KEY value points to the Voice Messaging DN.

You can configure each telephone individually or assign them to one of the models which are predefined on every Option 11 PBX. Refer to *Option 11 Administration Guide*: "How to activate telephones."

Setting the on-switch dialing restrictions

After the initial software installation, Meridian Mail starts up with on-switch dialing completely restricted. This means that none of your users can dial Meridian Mail, nor will Meridian Mail answer their phone.

Log on to Meridian Mail

1   From the Main Menu, choose
"3 Voice Administration"→
"2 Voice Security Options"
The Voice Security Options form appears

Figure 3-1
The voice security options form

```
                        Voice Administration              MORE ABOVE
Voice Security Options

Maximum Invalid Logon Attempts Permitted per session:  3_

Maximum Invalid Logon Attempts Permitted per mailbox:  9_

Maximum Days Permitted Between Password Changes:        0_

Minimum Password Length:                               4_

External Logon:                               Enabled

Call Answering.Express Messaging Thru-dial    Unrestricted On_switch Local
restriction/permission codes:                 Long_distance_1 Long_distance_2

List Name:       On switch____
Restriction Codes: 0___ 1___ ___ 3___ 4___ 5___ 6___ 7___ 8___ 9___
Permission  Codes: ____ ____ ____ ____ ____ ____ ____ ____ ____
                                                          MORE BELOW

        Save          Cancel
```

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2   Scroll down until the first *List Name* appears.
     The name should be "On_switch." (Refer to Figure 3-1.)

3   Move the cursor to the restriction code corresponding to the first digit in
     your dialing plan. Normally this will be "2."

4   Press [Remove].

5   Press [Save].

Assigning a System Administrator

Following the procedures in Chapter 4 of *System Administration—The Basics*, select the user you wish to make System Administrator and set the *Administrator Capability* field to "Yes". Ensure that the password for this mailbox is changed immediately from the default, and that it is changed on a regular basis.

Setting up the Automated Attendant/Hotel Menu

The following instructions assign an Automated Attendant that functions as described on page 3-9 of *System Administration—the Basics*. An Automated Attendant is not normally part of a default Hospitality system, although you can configure the Hotel Menus DN to function as one.

It is important that you set up the Thru-Dial Definition and the Voice Menu Service before you set up the entry in the Voice Services DN table for the Automated Attendant.

Setting up the Thru-Dial Definition

1   From the Main Menu, choose
"3 Voice Administration"→
"3 Voice Services Administration"→
"5 Thru-Dial Definitions"
You are presented with a list of thru-dial definitions. On a newly installed system, this list should be blank.

2   Press `Add`.
The Add a Thru-Dial Definition form appears. (Refer to Figure 3-2.)

Figure 3-2
The Thru-Dial Definition form

```
┌─────────────────────────────────────────────────────────────────┐
│ ╭─────────────────────────────────────────────────────────────╮ │
│ │           VS Config/Menu Applications Admin                  │ │
│ │  Add a Thru-Dial Definition                                  │ │
│ │                                                              │ │
│ │  Thru-Dial ID:    101          Title:  Dial by Extension     │ │
│ │                                                              │ │
│ │  Revert DN:       0                                          │ │
│ │                                                              │ │
│ │  Access Password:  _____   Update Password:  12345     │ │
│ │                                                              │ │
│ │  Greeting Recorded (Voice):  No                              │ │
│ │                                                              │ │
│ │  Language for Prompts:     American_English                  │ │
│ │                            Canadian_French                   │ │
│ │                                                              │ │
│ │  Dial by:                  Number Name Both                  │ │
│ │                                                              │ │
│ │  DN Length                 Variable Fixed                    │ │
│ │                                                              │ │
│ │  Restriction/Permission Set: Custom On_switch Local Long_distance_1 │
│ │ ───────────────────────────────────────────────── MORE BELOW│ │
│ │  Select a softkey ›                                          │ │
│ │  ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐      │ │
│ │  │  Save  │ │ Cancel │ │        │ │ Voice  │ │        │      │ │
│ │  └────────┘ └────────┘ └────────┘ └────────┘ └────────┘      │ │
│ ╰─────────────────────────────────────────────────────────────╯ │
└─────────────────────────────────────────────────────────────────┘
                                                        CARD-059
```

3   For *Thru-Dial ID,* enter **101**.

4   For *Revert DN,* enter **0**.

5   For *Access Password,* enter **12345**.

6   For *Update Password,* enter **12345**.

7   For *Dial by,* choose "Number".

8   For *Restriction/Permission Set,* choose "On_switch".

9   Press ⌷Save⌷.

Setting up the Voice Menu Service

1   From the Main Menu, choose
       "3 Voice Administration"→

"3 Voice Services Administration"→
"7 Voice Menu Definitions"
You are presented with a list of voice menu definitions. On a newly in-stalled system, this list should be blank.

2   Press Add .
The Add a Voice Menu Definition form appears. (Refer to Figure 3-3.)

Figure 3-3
The Add a Voice Menu Definition form

```
                      VS Config/Menu Applications Admin
Add a Voice Menu Definition

Choice of Menu Actions:
AS  Announcement Service  CL  Call                RV  Call Revert DN
DS  Disconnect            EM  Express Messaging   PP  Play Prompt
RP  Repeat Menu Choices   MM  Return to Main Menu TS  Thru-Dial Service
TD  Time-of-Day Control   MS  Voice Menu Service  VM  Voice Messaging

Voice Menu ID:    100____        Title: _____

Revert DN:        0_____

Access Password: 12345_____   Update Password:  12345_____

Greeting Recorded (Voice):  No    Menu Choices Recorded (Voice):  No

Silent Disconnect:      No Yes
                                                       ┌──────────┐
_____  │MORE BELOW│
                                                       └──────────┘
Select a softkey >
   ┌─────────┐   ┌─────────┐   ┌─────────┐   ┌─────────┐   ┌─────────┐
   │  Save   │   │ Cancel  │   │         │   │  Voice  │   │         │
   └─────────┘   └─────────┘   └─────────┘   └─────────┘   └─────────┘
```

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3   For *Voice Menu ID,* enter **100**.

4   For *Revert DN,* enter **0**.

5   For *Access Password*, enter **12345**.

6   For *Update Password*, enter **12345**.

7   Move downwards until the table of keys and their associated actions ap-pears. (Refer to Figure 3-4.)

Figure 3-4
The Voice Menu Definition form (continued)

```
                    VS Config/Menu Applications Admin
Add a Voice Menu Definition

Choice of Menu Actions:
AS  Announcement Service  CL  Call                RV  Call Revert DN
DS  Disconnect            EM  Express Messaging    PP  Play Prompt
RP  Repeat Menu Choices   MM  Return to Main Menu  TS  Thru-Dial Service
TD  Time-of-Day Control   MS  Voice Menu Service   VM  Voice Messaging


Access Password:  12345_____     Update Password:  12345_____

Greeting Recorded (Voice):  No      Menu Choices Recorded (Voice):  No

Silent Disconnect:         No Yes

     Key        Action                             Comments
      1            TS    Thru-Dial ID:    101____   _____
      2            __                     _____    _____
                                                              MORE BELOW
Select a softkey >

     Save         Cancel                   Voice

```

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8   Under the *Action* for Key 1, enter **TS**.
        The Thru-Dial ID *field appears.*

9   For *Thru-Dial ID,* enter **101** (the number you entered in step 3 of "Setting
        up the Thru-Dial Definition" on page 3-9).

10   Move down to the end of the form. (*Refer to Figure 3-5*.)

Figure 3-5
The Voice Menu Definition form (continued)

```
                    VS Config/Menu Applications Admin
Add a Voice Menu Definition

Choice of Menu Actions:
AS  Announcement Service  CL  Call            RV  Call Revert DN
DS  Disconnect            EM  Express Messaging PP  Play Prompt
RP  Repeat Menu Choices   MM  Return to Main Menu TS  Thru-Dial Service
TD  Time-of-Day Control   MS  Voice Menu Service  VM  Voice Messaging

        2       _            _____  _____
        3       _            _____  _____
        4       _            _____  _____
        5       _            _____  _____
        6       _            _____  _____
        7       _            _____  _____
        8       _            _____  _____
        9       _            _____  _____
Initial No Response RV
Delayed Response    PP

Select a softkey >

   Save         Cancel                   Voice
```

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11   For *Initial No Response,* enter **RV**.

12   For *Delayed Response,* enter **PP**.

13   Press Save .

Setting up the Voice Services DN Table (basic systems)

The Voice Services DN Table defines the DNs for Voice Messaging, Express
Messaging, Voice Prompt Maintenance, and the automated attendant. If you
are setting up a Hospitality system, refer to "Setting up the Voice Services
DN Table (Hospitality systems)" on page 3-15.

1   From the Main Menu, choose
   "3 Voice Administration"→
   "3 Voice Services Administration"→
   "1 Voice Service DN Table"
   *You are presented with a list of defined DNs. On a newly installed sys-
   tem, this list should be blank.*

2 Press Add .
The Add DN Information form appears. (Refer to Figure 3-6.)

Figure 3-6
The Add DN Information form (basic systems)

```
┌──────────────────────────────────────────────────────────┐
│         VS Config/Menu Applications Admin                 │
│  Add DN Information                                        │
│                                                           │
│  Choice of Services:                                      │
│  AS  Announcement Service  EM  Express Messaging    PM  Prompt Maintenance │
│  RA  Remote Activation     TS  Thru-Dial Service    TD  Time-of-Day Control │
│  MS  Voice Menu Service    VM  Voice Messaging           │
│                                                           │
│  Access DN:       _____                    │
│                                                           │
│  Service:         __                                      │
│                                                           │
│  Comment:         _____                          │
│                                                           │
│                                                           │
│                                                           │
│  ─────────────────────────────────────────────────       │
│  Select a softkey >                                       │
│  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐│
│  │  Save  │  │ Cancel │  │        │  │        │  │        ││
│  └────────┘  └────────┘  └────────┘  └────────┘  └────────┘│
└──────────────────────────────────────────────────────────┘
```

CARD-055

Automated attendant.

3 For *Access DN,* enter **7001**.

4 For *Service,* enter **MS**.
The Voice Menu ID *field appears.*

5 For *Voice Menu ID,* enter **100** (the number you entered in step 3 of "Setting up the Voice Menu Service" on page 3-10).

6 Press Save .

Voice Messaging

7 From the Voice Service DN Table, press Add .

8   For *Access DN,* enter **7000**.

9   For *Service,* enter **VM**.

10   Press Save .

Express Messaging

11   From the Voice Service DN Table, press Add .

12   For *Access DN,* enter **7002**.

13   For *Service,* enter **EM**.
         The Mailbox ID *field appears, leave it blank.*

14   Press Save .

Voice Prompt Maintenance

15   From the Voice Service DN Table, press Add .

16   For *Access DN,* enter **7003**.

17   For *Service,* enter **PM**.

18   Press Save .

> **Note:** The default password for this service is the same as the DN. To change the password, log on to Meridian Mail using this mailbox number and press 8 4 .

Setting up the Voice Services DN Table (Hospitality systems)

The Voice Services DN Table defines the DNs for three varieties of voice messaging (Guest Messaging, Published Numbers, and Staff Messaging), Hotel Menu, Express Messaging, and Post Check-out. If you are setting up a basic system, refer to "Setting up the Voice Services DN Table (basic systems)" on page 3-13.

1   From the Main Menu, choose
         "3 Voice Administration"→
         "3 Voice Services Administration"→
         "1 Voice Service DN Table"
         You are presented with a list of defined DNs. On a newly installed system, this list should be blank.

2   Press Add .
         The Add DN Information screen appears. (Refer to Figure 3-7.)

Figure 3-7
The Add DN Information form (Hospitality systems)

```
┌─────────────────────────────────────────────────────────────┐
│            VS Config/Menu Applications Admin                 │
│  Add DN Information                                          │
│                                                             │
│  Choice of Services:                                        │
│  AS  Announcement Service  EM  Express Messaging    HM  Hospitality Messaging │
│  CO  Post Checkout Mailbox PM  Prompt Maintenance   RA  Remote Activation     │
│  TS  Thru-Dial Service     TD  Time-of-Day Control  MS  Voice Menu Service    │
│                                                             │
│  Access DN:         _____                   │
│                                                             │
│  Service:           __                                      │
│                                                             │
│  Comment:           _____                         │
│                                                             │
│                                                             │
│  _____  │
│  Select a softkey >                                         │
│   ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐  ┌────────┐ │
│   │  Save  │  │ Cancel │  │        │  │        │  │        │ │
│   └────────┘  └────────┘  └────────┘  └────────┘  └────────┘ │
└─────────────────────────────────────────────────────────────┘
```

CARD-054

Guest Messaging

3   For *Access DN,* enter **7000**.

4   For *Service,* enter **HM**.
The Auto-Login *field appears.*

5   For *Auto-Login,* choose "Enabled".

6   Press Save .

Hotel Menu

7   From Voice Service DN Table, press Add .

8   For *Access DN,* enter **7002**.

9   For *Service,* enter **MS**.
The Voice Menu ID *field appears.*

---

    a.   If you wish to have this DN function as an automated attendant, enter **100** (the number you entered in step 3 of "Setting up the Voice Menu Service" on page 3-10).

    b.   Otherwise, leave this field blank.

10   Press ⌷Save⌷.

Express Messaging

11   From Voice Service DN Table, press ⌷Add⌷.

12   For *Access DN,* enter **7001**.

13   For *Service,* enter **EM**.
     The Mailbox ID *field appears, leave it blank.*

14   Press ⌷Save⌷.

Published numbers

15   From Voice Service DN Table, press ⌷Add⌷.

16   For *Access DN,* enter **7003**.

17   For *Service,* enter **HM**.
    The Auto-Login *field appears.*

18   For *Auto-Login,* choose "Disabled".

19   Press ⌷Save⌷.

Post check-out

20   From Voice Service DN Table, press ⌷Add⌷.

21   For *Access DN,* enter **7004**.

22   For *Service,* enter **CO**.

23   Press ⌷Save⌷.

Staff messaging

24   From Voice Service DN Table, press ⌷Add⌷.

25   For *Access DN,* enter **7005**.

26   For *Service,* enter **HM**.
     The Auto-Login *field appears.*

27   For *Auto-Login,* choose "Enabled".

28   Press `Save`.

Adding a block of voice mailboxes

You may choose to set up your users all at once in a single block, or the System Administrator can add one user at a time. The instructions for adding a block of users can be found on page 4-10 of this guide. The instructions for adding one user at a time can be found on page 4-8 of *System Administration—The Basics.*

Which ever method you choose, you should be aware of the following potential security problems:

•   Adding a large block of mailboxes may mean that some mailboxes are not assigned to users. Once everyone has a mailbox, ensure that the extra mailboxes are deleted.

•   The passwords for all new mailboxes are set to the mailbox number. Remind your users that they should change their password when they first log on, and that they should also change it on a regular basis.

•   When you add a block of users, you can assign them all to a particular Class of Service. If you are concerned about unauthorized long distance calls, you should set the following fields in the Class of Service to "Local":

— *Custom Revert Restriction/Permission Codes*

— *Extension Dialing Restriction/Permission Codes*

— *External Call Sender Restriction/Permission Codes*

Hospitality systems automatically restrict calls when a room is vacant.

Basic system procedures

This chapter describes the software procedures you need to know in order to set the time and date on the Meridian 1 PBX, to stop and start the Meridian Mail system, to back up and restore a customer's Meridian Mail data, to add and delete blocks of users, and to customize a customer's service DNs.

Meridian Mail system administration is described in *Meridian Mail Card Option—System Administration, The Basics.*

Switching between Meridian Mail and the Meridian 1 PBX

You use the same terminal to access both Meridian Mail and the Meridian 1 PBX. To switch to the Meridian PBX display from Meridian Mail:

1   Press `Control ]`

To return to the Meridian Mail display:

1   Enter **AX** `Return`.
You are returned to the System Administrator screen you were using when you accessed the PBX.

If you have any problems accessing the Meridian 1 PBX, refer to the appropriate chapters of *Meridian 1 option 11—Administration guide.*

Logging on to the Meridian 1 PBX

To log on to the Meridian 1 PBX:

1   If you are in Meridian Mail, press `Control ]`

2   Press `Return`.

3 If the response is `OVL111 nn TTY` or `OVL111 nn SL1` (where `nn` is a two-digit number), then someone else is logged on to the system. Wait until he or she logs off and start again at step 2.

If the response is `OVL000>` then you are already logged on.

If the response is `OVL111 nn IDLE` or `OVL111 nn BKGD`, then you are ready to log on.

4 If you don't get any of these responses, enter ******** [Return] and start again at step 2.

If the system does not allow you to enter these four asterisks all in a row, simply enter them on one line at a time; the system will automatically move the cursor to the next line.

5 Enter **LOGI** [Return].

Note: For this, and all other Meridian 1 commands, use uppercase letters only. You may want to press Caps Lock.

Depending on the status of the system, you may or may not be prompted for the Meridian 1 password.

6 At the prompt, enter the Meridian 1 password.
You are presented with the > prompt.

Setting the time and date

It is crucial to the integrity of Meridian Mail that the Meridian 1 PBX's time and date be set correctly. Occasionally the System Administrator is prompted for the time and date, but this does not set the Meridian 1 PBX's time and date.

1 Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2 At the > prompt, enter **LD 2** [Return]

3 At the **.** prompt, enter **TTAD**
The system displays the day of the week together with the current date and time in the following format: DD MM YYYY HH MM SS.

4 If the time and date are not correct, enter **STAD**, followed by a space, followed by the correct date and time in the above format, followed by [Return].

Note: Enter the date and time exactly as shown in the format, with a space after each number. You must enter four digits for the year, and you must enter a value for the seconds.

If you make a mistake while entering these numbers, press ⌐Return⌐and start entering the date and time again from the beginning.

5   Enter **TTAD** again to verify your entry.

6   Enter ********

7   Enter **AX** ⌐Return⌐ to return to Meridian Mail.

Note: It may take as long as three minutes for your changes to take effect on Meridian Mail.

Enabling and disabling the console and AML data ports

Meridian Mail uses two data ports on the Meridian 1 switch: port 8 is used by the system administration terminal, and port 9 is used as an Application Module Link (AML).

You must enable these ports before turning Meridian Mail on, and disable them before turning Meridian Mail off. The procedures you follow depend on the release number of the Meridian 1 software running on your switch.

Determining the Meridian 1 software release number

To determine the release number of the Meridian 1 software running on your switch:

1   Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2   At the > prompt, enter **LD 22** ⌐Return⌐.

3   At the REQ prompt, enter **ISS** ⌐Return⌐.
The system responds with a display which includes the system release number.

4   Enter ********

For Release 17 systems and earlier

Use these procedures if the software running on your Meridian 1 switch is Release 17 or earlier.

To enable the console and the AML data ports

1 Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2 At the > prompt, enter the following:

LD 48 `Return`

ENL ESDI 8 `Return` to enable the console's data port

ACMS 9 `Return` to establish the link on port 9

3 Enter ********

To disable the console and the AML data ports

1 Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2 At the > prompt, enter the following:

LD 48 `Return`

DIS ESDI 8 `Return` to disable the console's data port

DIS ESDI 9 `Return` to disable the link on port 9

3 At the prompt, enter **Y** to confirm the disable.

4 Enter ********

For Release 18 systems and later

Use these procedures if the software running on your Meridian 1 switch is Release 18 or later.

To enable the console and the AML data ports

1 Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2 At the > prompt, enter the following:

LD 48 `Return`

ENL AML 8 LYR2 `Return` to enable the console's data port

ENL AML ACMS 9 LYR2 `Return` to establish the link on port 9

3 Enter ********

To disable the console and the AML data ports

1   Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2   At the > prompt, enter the following:

LD 48 `Return`

DIS AML 8 LYR2 `Return` to disable the console's data port

DIS AML 9 LYR2 `Return`   to disable the link on port 9

3   At the prompt, enter **Y** to confirm the disable.

4   Enter ********

Stopping Meridian Mail

Before turning the power off to the Meridian Mail cards, you should courtesy down the system. This allows anyone using Meridian Mail to finish their session before the system is brought down. During this time, no further users are allowed to log on to Meridian Mail, and calls are directed to the Meridian Mail attendant.

Courtesying down the system

1   Log on to Meridian Mail at the System Administrator's terminal.

2   From the Main Menu, choose
"5 System Status and Maintenance."→"1 System Status."

3   Press `Courtesy Down System`.

4   At the prompt, Do you want to courtesy down the system?,
use ⬆ or ⬇ to choose "Yes," and press `Return`.
The display charts the progress of the courtesy down. Hardware locations are put out of service as users finish their sessions. System Status displays "CourtesyDown" when the process is complete.

Turning Meridian Mail off

Turning off Meridian Mail while the Meridian 1 PBX is running can cause a system error. Perform the following procedure whenever you have to turn off Meridian Mail for software upgrades, system restores, or hardware maintenance.

1   Disable the data ports for the console and the AML. (Refer to page 4-3.)

2   Turn off the power to Meridian Mail.

       Note: The power switch is on the 68k card installed in slot 10/MM1, the off position is down and is labelled on the Meridian Mail face plate.

Starting Meridian Mail

Meridian Mail does not start automatically, you must start it manually under the following circumstances:

- Whenever you turn off Meridian Mail to use the System Installation and Modification utility or to perform troubleshooting and maintenance procedures

- Whenever you have courtesied the system down to perform system procedures

- Whenever the Meridian 1 PBX is turned off, as in the event of a power failure.

After turning Meridian Mail off

1   Enable the data ports for the console and the AML. (Refer to page 4-3.)

2   Enter **AX** `Return` to view the Meridian Mail screen.

3   Turn on the power to Meridian Mail.
       The power switch is on the 68k card installed in slot 10/MM1, the on position is up and is labelled on the Meridian Mail face plate.

4   Wait until the system has loaded and the logon screen is displayed. (Approximately four minutes.)
       If this does not happen, refer to "Troubleshooting and maintenance" (Chapter 5).

After courtesying down the system

1   Log on to Meridian Mail at the System Administrator's terminal.

2   From the Main Menu, choose
       "5 System Status and Maintenance."→"1 System Status."

3   Press the Activate System soft key.

After turning off the Meridian 1 PBX

Meridian Mail loads automatically when the Meridian 1 PBX is turned on, but you must manually log on to Meridian Mail at the System Administrator's

terminal and enter the correct time and date when prompted. Meridian Mail cannot start until these values are entered.

Backing up the system

Before you perform any significant hardware or software procedures, you should back up the Meridian Mail system from disk to tape so that, in the event that something goes wrong, the customer's data will not be lost.

If an external tape drive is already installed, there is no need to courtesy down. The Meridian Mail system can remain active during a backup. Any changes to the system's data that occur during the backup are recorded at the very end of the backup process. However, since the backup procedure may slow down the system, we recommend you only perform backups when your system isn't busy.

The tapes you receive from Northern Telecom are 3M brand DC6250 tapes. Be sure to use this tape format for your backups.

If you encounter any problems with the following procedure, refer to "Tape drive problems" on page 5-8.

1   If one is not already connected, connect an external tape drive to the Meridian Mail Disk/Power Card and turn on the power switch at the back of the drive. (Refer to page 1-14.)

2   Log on to the Meridian Mail system at the System Administrator's terminal.

3   From the Main Menu, choose "2 General Administration."→ "2 Volume Administration."

4   Choose the disk volume you wish to backup. (The Meridian Mail card option has only one disk volume, but you still must select it by pressing [**Space Bar**].)

5   Press [Backup To Tape].
The Disk to Tape Backup screen appears.

6   Press [Immediate Backup].

7   At the prompt, insert an appropriate tape into the tape drive. (Refer to page 1-15.)

8   Press OK To Start Backup .
*The Backup Status screen appears. From here you can follow the
progress of the backup. You have the option of aborting the backup or
exiting to the Volume Administration screen.*
*The backup should take about 30-60 minutes, and requires only a single
tape of the appropriate size for your system.*

9   When the backup is complete, remove the tape and label it clearly. In-
clude the date and time of the backup.

10   Press Exit to return to the Volume Administration screen.

11   Remove the external tape drive, if required. (Refer to page 1-16.)

Scheduling system backups

Permanently installing an external tape drive allows regular backups to be
scheduled. In this way, should anything go wrong with the system, there will
always be a recent backup on hand.

1   Log on to the Meridian Mail system at the System Administrator's termi-
nal.

2   From the Main Menu, choose "2 General Administration."→
"2 Volume Administration."

3   Choose the disk volume you wish to schedule for backup. (The Meridian
Mail card option has only one disk volume, but you still must select it by
pressing Space Bar .)

4   Press Backup To Tape .
The Disk to Tape Backup screen appears.

5   Press Schedule Backup .
The Schedule Backup screen appears.

6   Fill out the appropriate fields.

7   Press Save Schedule .
*You are returned to the Volume Administration screen. From here you
can press View Backup Schedule to display the schedule you just entered. To
edit the schedule, you must begin again at step 3.*

8   Turn on the power to the external tape drive and ensure that it is never
turned off.

Once you have entered a schedule, backups proceed automatically. You may choose to leave the same tape in the drive at all times. New backup data will overwrite the old backup data.

> *Note:* A backup tape will wear out over time. Please ensure that you replace it regularly with a new tape, according to the manufacturer's recommendations.

Scheduled backups are useful in the event of emergencies, but you should still perform an immediate full system backup before proceeding with any significant hardware or software procedures to ensure that no data is lost.

Restoring the system

Should the system fail, a recent backup tape allows you to restore the system to the point at which the backup was made.

1 Run the System Installation and Modification Utility from the Meridian Mail software tape. (Refer to Chapter 2.)

> **Note:** Always use the same software release that was used to create the backup. Do not, for example, attempt to restore an MM8 system using an MM9 software tape.

2 From the System Installation and Modification Menu, choose "8 More Utilities" → "2 Restore System from Backup".

3 At the prompt, insert the most recent full system backup tape you have into the tape drive and press ⎡**Return**⎤.

> **Note:** The restore process takes approximately 40-80 minutes to complete.

4 At the prompt:

```
The operation successfully completed.
Please remove the tape and boot into service.
```

  a. Remove the tape from the drive. (Refer to page 1-16.)

  b. Turn off the power to Meridian Mail.

  c. Wait ten seconds.

5 Start Meridian Mail. (Refer to page 4-6**.**)
The system starts up in full service as it was when the backup was created.

---

6   Remove the external tape drive, if required. (Refer to page 1-16.)

The Tools Menu

The Meridian Mail Tools Menu contains several useful functions which are not used as frequently as those contained in the System Administrator's Main Menu. To access the Tools Menu:

1   From the Meridian Mail logon screen, press ⌈Logon⌋.

2   At the password prompt, enter **TOOLS** ⌈Return⌋.

3   At the password prompt, enter the System Administrator's password and press ⌈Return⌋.
You are presented with the Tools Menu.

> ⚠ **CAUTION**
> **To avoid service interruptions**
> Do not attempt to use any function in the Tools Menu unless it is covered in this guide.

The following are brief descriptions of two of the functions available through this menu. For full descriptions of every function, refer to *System Administration Tools*.

Adding a block of users

This function allows you to bypass the standard System Administrator's procedures and quickly add a large number of consecutive user mailboxes. To use this function:

1   From the Tools Menu, choose "13 Other"→"1 Add/Delete Many Users"

2   At the prompt, Please Specify Command?, use ⌈↑⌋ and ⌈↓⌋ to choose "Set Parameters".

3   At the appropriate prompts, enter:

—   The customer number, if this is a multicustomer system

—   The Class of Service number you wish to assign to the block of users. To define a Class of Service, refer to *Meridian Mail Card Option—System Administration, the Basics.*

— The voice messaging interface for these users: the Meridian Mail user interface (MMUI), or the standard defined by the voice messaging user interface forum (VMUIF). The MMUI is the interface described in *Meridian Mail Card Option—System Administration, The Basics.*

4   At the prompt, `Please Specify Command?`, choose "Add User".

5   At the appropriate prompts, enter:

— The mailbox number of the first user in the block of users

— The total number of users in the block.

> *Note:* You can choose to be prompted before each user is added. This allows you to skip certain mailbox numbers in the block. These mailboxes will not be added.

6   At the prompt, `Please Specify Command?`, choose "Quit".

Deleting a block of users

This function allows you to bypass the standard System Administrator's procedures and quickly add a large number of consecutive user mailboxes. To use this function:

1   From the Tools Menu, choose "Other"→"Add/Delete Many Users"

2   At the prompt, `Please Specify Command?`, use ⬆ and ⬇ to choose "Set Parameters".

3   At the appropriate prompts, enter:

— The customer number, if this is a multicustomer system.

4   At the prompt, `Please Specify Command?`, choose "Delete User".

5   At the appropriate prompts, enter:

— The mailbox number of the first user in the block of users

— The total number of users in the block.

> *Note:* You can choose to be prompted before each user is deleted. This allows you to skip certain mailbox numbers in the block. These mailboxes will not be deleted.

6   At the prompt, `Please Specify Command?`, choose "Quit".

Changing the default Meridian Mail DNs

Each Meridian Mail DN is defined in two places: on the Meridian 1 PBX as an ACD-DN and on Meridian Mail as a voice services DN. The DNs on the PBX come predefined according to the defaults described in Chapter 10, but you must ensure that you define these DNs on Meridian Mail, automatically during software installation or manually by following the procedures beginning on page 3-6.

The following procedures allow you to change the ACD-DNs defined on the Meridian 1 PBX.

Using Meridian 1 overlays

Overlays are utilities that run on the Meridian 1 PBX. The overlays described in this chapter deal primarily with printing reports of the current switch settings, and changing those settings.

Although Meridian 1 overlays can be quite versatile and may offer you a number of options for very specialized operations, we have restricted the following procedures to exactly those steps you should perform:

- Use uppercase letters only. You may want to press Caps Lock.

- Respond only to the overlay prompts listed in the procedures.

- After each response, press ⏎ Return .

- After any prompt not listed, press ⏎ Return to proceed to the next prompt.

- After the final prompt listed in the procedure, enter ******** to exit the overlay.

For more information on the Meridian 1 overlays used in these procedures, refer to *X11 software guide including supplementary features.*

Changing the Voice Messaging DN

Changing the Voice Messaging DN is not as straightforward as changing one of the other service DNs, since so many other entities within the Meridian 1 PBX refer to this DN, and each of these must be changed to refer to the new Voice Messaging DN.

This procedure assumes that the Voice Messaging DN is the DN assigned to the virtual ACD agents which answer calls to Meridian Mail.

1   Courtesy down Meridian Mail. (Refer to page 4-5.)

2   Disable the console and AML data ports. (Refer to page 4-3.)

3   Print a report for each type of telephone set on the switch, following the prompts in Table 4-1 on page 4-16.

4   Print a report for each telephone model on the switch, following the prompts in Table 4-2 on page 4-16.

5   Print an ACD queue report, following the prompts in Table 4-3 on page 4-17.

6   Print a hardware location report for card 10, following the prompts in Table 4-4 on page 4-17. The devices on this card are the virtual ACD agents which answer calls to Meridian Mail.

7   Delete all the ACD agents listed in this report, following the prompts in Table 4-14 on page 4-22.

8   Delete the old Voice Messaging DN, following the prompts in Table 4-9 on page 4-20.

9   Delete each of the other voice service DNs, following the prompts in Table 4-9 on page 4-20.

10   Using the ACD queue report you printed in step 5, delete only those queues which have night call forward (NCFW) set to the old Voice Messaging DN. Follow the prompts in Table 4-9 on page 4-20.

11   Create a new Voice Messaging DN, following the prompts in Table 4-5 on page 4-18.

12   Create new DNs for the other voice services, following the prompts in Table 4-10 on page 4-21.

13   Create new ACD agents to replace those you deleted in step 7, following the prompts in Table 4-15 on page 4-23.

14   Change each of the telephone sets on the switch and each of the telephone models so that they refer to the new Voice Messaging DN. For analog sets follow the prompts in Table 4-7 on page 4-19. For digital sets follow Table 4-8 on page 4-20.

Note: Analog telephone sets (type 500) can refer to the Voice Messaging DN in two different ways: using FTR FDN or using HUNT. Digital phones can refer to the Voice Messaging DN in three different way: using FDN, HUNT, or KEY. Using the reports you printed in step 3 and step 4, you must look for every occurrence

of these features that refers to the old Voice Messaging DN and change it to refer to the new Voice Messaging DN.

15   Nite call forward (NIT1) in the Customer Data Block may have been previously set to forward to Meridian Mail. If it was set to the old Voice Messaging DN, change it so that it refers to the new DN. Refer to *Option 11 Technical Reference Guide.*

16   Log on to Meridian Mail.

17   From the Main Menu, choose
"3 Voice Administration"→
"3 Voice Services Administration"→
"1 Voice Service DN Table."

18   Select the Voice Messaging DN and press $\boxed{\text{View/Modify}}$.

19   Change the value of *Access DN* to the new Voice Messaging DN and press $\boxed{\text{Save}}$.

20   Return to the Meridian 1 PBX and enable the console and AML data ports. (Refer to page 4-3.)

21   Start Meridian Mail. (Refer to page 4-6.)

Changing a hardware location DN

1   Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2   Disable the hardware location following the prompts in Table 4-11 on page 4-21.

3   Change the hardware location's DN following the prompts in Table 4-13 on page 4-22.

4   Return to Meridian Mail and log on.

5   From the Main Menu, choose
"5 System Status and Maintenance"→
"3 DSP Port Status."

6   Press $\boxed{\text{Disable Port}}$ and at the prompt enter the number of the DSP port you want to change.

7   Return to the System Status and Maintenance Menu and choose
"4 Channel Allocation Table."

8 Change the SCN on the port you just disabled to the DN you just assigned on the PBX.

9 Return to the System Status and Maintenance Menu and choose "3 DSP Port Status."

10 Press Enable Port and at the prompt enter the number of the DSP port you want to change.

11 Return to the Meridian 1 PBX and enable the hardware location, following the prompts in Table 4-12 on page 4-21.

Changing the other Meridian Mail DNs

The following procedure allows you to change the other service DNs defined during software installation. It should not be used to change the Voice Messaging DN.

For new DNs to function correctly you must define them in two places: on the Meridian 1 PBX and on the Meridian Mail System Administrator's terminal.

1 Courtesy down Meridian Mail. (Refer to page 4-5.)

2 Disable the console and AML data ports. (Refer to page 4-3.)

3 Log on to the Meridian 1 PBX. (Refer to page 4-1.)

4 On the Meridian 1 PBX, create a new service DN following the prompts in Table 4-10 on page 4-21.

5 From the System Administrator's terminal, choose
"3 Voice Administration"→
"3 Voice Services Administration"→
"1 Voice Service DN Table."

6 Select the DN you want to change and press View/Modify.

7 Change the value of *Access DN* to the new DN you defined in step 4 and press Save.

8 Return to the Meridian 1 PBX and delete the old service DN following the prompts in Table 4-9 on page 4-20.

9 Enable the console and AML data ports. (Refer to page 4-3.)

10 Start Meridian Mail. (Refer to page 4-6.)

Table 4-1
Printing a telephone set report

Prompt	Response	Comments
>	LD 20	Load overlay 20.
REQ	PRT	
TYPE	_____	Enter the type of telephone set.
TN	*c u*	Enter a specific location, or press Return for all sets of this type.
CUST	_____	Enter the customer number.

Table 4-2
Printing a telephone model report

Prompt	Response	Comments
>	LD 20	Load overlay 20.
REQ	PRT	
TYPE	_____ M	Enter the type of telephone set, followed by a space, followed by **M**.
MODEL	_____	Enter a specific model, or press Return for all models for this telephone set.
CUST	_____	Enter the customer number.

Table 4-3
Printing an ACD queue report

Prompt	Response	Comments
>	LD 23	Load overlay 23.
REQ	PRT	
TYPE	ACD	
CUST	_____	Enter the customer number.

Table 4-4
Printing a hardware location report

Prompt	Response	Comments
>	LD 20	Load overlay 20.
REQ	PRT	
TYPE	TNB	
TN	10	To print all devices on card 10.

Table 4-5
Creating a new Voice Messaging DN

Prompt	Response	Comments
>	LD 23	Load overlay 23.
REQ	NEW	
TYPE	ACD	
CUST	_____	Enter the customer number.
ACDN	_____	Enter the new service DN.
MWC	YES	
IMS	YES	
CMS	YES	
IMA	YES	
IVMS	YES	
VSID	9	Enter the number of the Meridian Mail card option ESDI link.
MAXP	12	Enter the maximum number of Meridian Mail ports on the system.
ALOG	YES	
NCFW	0	Enter the attendant DN. (As defined using Overlay 15.)

Table 4-6
Changing a hardware location

Prompt	Response	Comment
>	LD 11	Load overlay 11.
REQ	CHG	
TYPE	2008	
TN	*c u*	Enter the Option 11 routing address for the hardware location. (Refer to "Hardware locations" on page 10-2.)
KEY	0 ACD *xxxx yyyy*	*xxxx* is the new Voice Messaging DN and *yyyy* is the position ID for the hardware location.

Table 4-7
Changing an analog telephone set

Prompt	Response	Comment
>	LD 10	Load overlay 10.
REQ	CHG	
TYPE	500	To change the analog telephone model, enter **500 M**.
TN	*c u*	The location of the set.
ECHG	Yes	Easy change.
ITEM	HUNT *xxxx* FTR FDN *xxxx*	Set the appropriate ITEM to the new Voice Messaging DN (*xxxx*).

Table 4-8
Changing a digital telephone set

Prompt	Response	Comment
>	LD 11	Load overlay 11.
REQ	CHG	
TYPE	*aaaa*	Enter the type of telephone set. To change a telephone model, enter *aaaa* **M**.
TN	*c u*	Enter the location of the set.
ECHG	Yes	Easy change.
ITEM	HUNT *xxxx* FDN *xxxx* KEY *nn fff xxxx*	Set the appropriate ITEM(s) to the new Voice Messaging DN (*xxxx*).

Table 4-9
Deleting a service DN

Prompt	Response	Comment
>	LD 23	Load overlay 23.
REQ	OUT	
TYPE	ACD	
CUST	_____	Enter the customer number.
ACDN	_____	Enter the old service DN.

Table 4-10
Creating a new service DN

Prompt	Response	Comment
>	LD 23	Load overlay 23.
REQ	NEW	
TYPE	ACD	
CUST	_____	Enter the customer number.
ACDN	_____	Enter the new service DN.
MWC	NO	
MAXP	1	
NCFW	_____	Enter the Voice Messaging DN.

Table 4-11
Disabling a hardware location

Prompt	Response	Comments
>	LD 32	Load overlay 32.
.	DISU *c u*	*c u* is the Option 11 routing address for the hardware location. (Refer to "Hardware locations" on page 10-2.)

Table 4-12
Enabling a hardware location

Prompt	Response	Comments
>	LD 32	Load overlay 32.
.	ENLU *c u*	Enter the Option 11 routing address for the hardware location. (Refer to "Hardware locations" on page 10-2.)

Table 4-13
Changing a hardware location's DN

Prompt	Response	Comments
>	LD 11	Load overlay 11.
REQ	CHG	
TYPE	2008	
TN	*c u*	Enter the Option 11 routing address for the hardware location. (Refer to "Hardware locations" on page 10-2.)
ECHG	YES	For easy change.
ITEM	KEY 1 SCN *xxxx*	*xxxx* is the new channel DN for the hardware location.

Table 4-14
Deleting a hardware location's DN

Prompt	Response	Comments
>	LD 11	Load overlay 11.
REQ	OUT	
TYPE	2008	
TN	*c u*	Enter the Option 11 routing address for the hardware location. (Refer to "Hardware locations" on page 10-2.)

Table 4-15
Creating a hardware location DN

Prompt	Response	Comments
>	LD 11	Load overlay 11.
REQ	OUT	
TYPE	2008	
TN	*c u*	Enter the Option 11 routing address for the hardware location. (Refer to "Hardware locations" on page 10-2.)
REQ	****	
KEY	0 ACD *xxxx yyyy*	*xxxx* is the new Voice Messaging DN and *yyyy* is the position ID for the hardware location.
KEY	1 SCN *zzzz*	*zzzz* is the channel DN for the hardware location.
KEY	2 MSB	
KEY	3 NRD	
KEY	6 TRN	
KEY	7 AO3	O is the letter O.
KEY	9 RLS	

Troubleshooting and maintenance

This chapter describes the procedures you can follow should anything go wrong with Meridian Mail, and the procedures you should follow to make these problems less likely.

The troubleshooting procedures assume that you are completely familiar with the Meridian Mail hardware and software installation procedures described in Chapter 1 and Chapter 3.

Troubleshooting

For any problems with Meridian Mail you should first consult *Meridian Mail—System Event and Error Reports.* This book contains a comprehensive list of the events and errors recorded on the SEER printer. (Refer to page 5-14.)

Troubleshooting Meridian Mail hardware is a simple process of determining the component that is causing the problem and replacing it. The components cannot be repaired in the field; return them to your Northern Telecom distributor for repair.

If you are unable to isolate a problem with Meridian Mail software or hardware consult *Meridian 1 Option 11—Fault Clearing Guide.* Problems with the PBX often cause problems with Meridian Mail.

The following procedures document the problems you might encounter, and the steps you should take to solve them. The steps in each procedure are arranged from the most likely cause to the least likely cause. Eliminate each possibility, until the problem is solved.

Suppose a portion of a procedure reads as follows:

1 Ensure that the main Meridian 1 power supply is on.

2 Ensure that the Meridian Mail power switch on the 68k Card is on.

3 Turn off the Meridian Mail power switch on the 68k Card, and ensure that the Connector Board is properly seated.

The first three steps do not—as it first might appear—instruct you to ensure that the power is on and then to turn it off. Rather you should first ensure that the main Meridian 1 power is on. If turning it on does not clear the problem, then ensure that the Meridian Mail power switch is on. If this still does not clear the problem, only then should you proceed to step 3. In this case, it instructs you to turn off the power before touching the Connector Board.

Unless otherwise stated, an instruction that tells you to replace a component implies that you should then reinstall and restart Meridian Mail to see if the problem has cleared. If replacing the component does not clear the problem, you should reinstall the old component and proceed to the next step in the troubleshooting procedure. For example, the following procedure:

1 Replace the 68k Card.

2 Replace the DVP Card in slot MM2.

3 Replace the DVP Card in slot 9.

4 Replace the Disk/Power Supply Card.

does not instruct you to replace all of the Meridian Mail cards. Rather, you should first try replacing the 68k Card, reinstalling the rest of Meridian Mail and restarting the system. If this does not solve the problem, you should reinstall the old 68k Card and try replacing the DVP Card. If this still does not solve the problem, you should reinstall the old DVP Card and try replacing the Disk/Power Supply Card.

Precautions

You must not remove or handle any of the Meridian Mail hardware while Meridian Mail is on and running. If the switch on the 68k Card is on, follow the procedure for stopping Meridian Mail on page 4-5. Failing to do so can result in damage to the components or injury to yourself.

DANGER
Shock hazard
Before removing or handling any Meridian Mail hardware, ensure that the power switch on the 68k Card is in the off (down) position.

Note: You need not, however, turn off the power to the Meridian 1 PBX. You can safely handle Meridian Mail hardware while the switch is running, so long as the power to Meridian Mail is off.

Before touching any components, ensure that you are properly grounded by putting on the wrist strap connected to the Meridian 1 cabinet. Static electricity can irreparably damage sensitive electronic components.

CAUTION
Static electricity
The printed circuit boards are susceptible to static damage. Before handling the PCBs take the appropriate precautions.

Replacing components

Meridian Mail components are replaced in the opposite way to which they are installed. (Refer to the appropriate sections in Chapter 1.) The only exception to this is the removal of the Connector Board.

Removing the Connector Board

The connections between the Connector Board and the Meridian Mail cards are too tight for you to remove the Connector Board in one step. It must, instead, be removed one card at a time.

1   Courtesy down Meridian Mail and turn it off. (Refer to page 4-5.)

2   Grasping the top lock latches with one hand and the bottom latches with the other, unlock all cards simultaneously and pull the assembly slightly out of the cabinet.

3   Move all the lock latches so that they are at right angles to the cards.

4 Push the cards back into the cabinet until stopped by the edge of the lock latches.

5 On the DVP Card in slot MM2, grasp the top and bottom lock latches and slowly lock it back into the cabinet.
The latches on the other cards prevent them from moving farther into the cabinet, and the DVP Card is pulled from the Connector Board.

6 If there is a DVP card installed in slot 9, repeat step 5 on the card installed in slot 10.

7 Remove the leftmost card from the Connector Board.

8 Remove the Connector Board from the rightmost card.

Problems at start-up

Just above the power switch on the 68k Card is a small LED. When the system is first turned on, the LED lights briefly and Meridian Mail proceeds with its internal diagnostics and start-up procedures. The LED should remain unlit during the entire process which takes approximately four minutes.

When start-up is complete, the LED lights and stays lit. A flashing LED indicates a problem with the start-up procedure.

The following procedures correspond to the different possible LED indications:

- LED does not light at start up, page 5-4.
- LED lights at start-up but does not go out, page 5-6.
- LED flashes rapidly or does not come back on after four minutes, page 5-6.
- LED flashes slowly, page 5-7.

LED does not light at start-up

1 Ensure that the main Meridian 1 power supply is on.

2 Ensure that the Meridian Mail power switch on the 68k Card is on.

3 Check the card connections, as follows:

a. Ensure that the Connector Board is properly seated.

b.   Ensure that the 68k Card is firmly pushed into the connector at the back of the Meridian 1 cabinet.

c.   Ensure that none of the pins on the back connector or on the front connectors of the Meridian Mail cards are bent.

4   If the LED still does not light:

a.   Remove all the Meridian Mail cards.

b.   Reinstall the 68k Card. Push it all the way to the back of the cabinet and lock the latch levers.

c.   Plug the appropriate connector on the Connector Board into the 68k Card.

d.   Turn on the Meridian Mail power switch on the 68k Card.

e.   Using a voltmeter, place the positive terminal on Pin 2 of P2. Place the negative terminal on Pin 10 of P2 on the Connector Board. (Refer to Figure 5-1.) The meter should read approximately -52 volts. If it does not, the 68k Card is defective; replace it.

Note: On both *three-card and four-card systems, P2 is the connector that plugs into the primary DVP Card. Refer to Figure 5-1.*

Figure 5-1
Testing voltage and resistance on the Connector Board
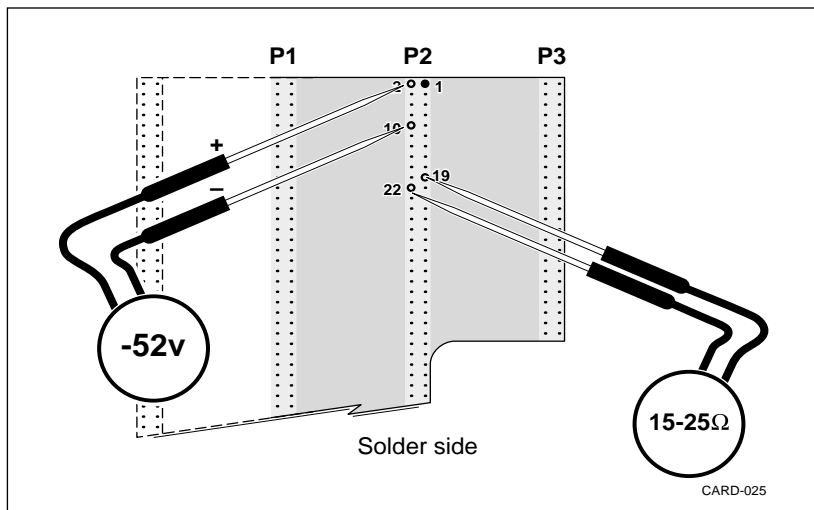
5 If the LED still does not light:

a. Remove the 68k Card with the Connector Board attached.

b. Using an ohmmeter, measure the resistance between Pin 19 of P2 and Pin 22 of P2 on the Connector Board. On a functional 68k Card the meter should read between 15 and 25 ohms. If it does not, then the card is defective. Replace it.

6 Replace the Disk/Power Supply Card but retain the disk drive; it contains the customer's Meridian Mail data.

7 The Connector Board is defective. Replace it.

LED lights at start-up but does not go out

1 Ensure that you have not installed an older DVP Card (NTAK15AA) or an older C25 Card (NTAK16AA) in slot 9. These older cards only function in slot MM2.

2 Remove the DVP Card assemblies and reinstall Meridian Mail without them. If the LED goes out, one of the DVP Cards is defective.

a. Replace each DVP Card assembly individually to determine which is defective.

b. Replace the defective card. Retain any C25 Cards and attach them to the new DVP Card.

3 Replace the 68k Card.

4 Replace the Connector Board.

LED flashes rapidly or does not come back on after four minutes

The LED flashes rapidly (approximately one second on and one second off) or does not come back on after four minutes when either the 68k Card or the SCSI diagnostics have failed.

1 Test the 68k Card, as follows:

a. Disconnect the SCSI cable to the disk drive and the SCSI cable to the tape drive, if one is connected. Remove the DVP Card assemblies and reinstall the remaining Meridian Mail hardware without them. *The LED should flash slowly.*

b. If the LED still flashes rapidly, replace the 68k Card.

2 Test the DVP and C25 Cards, as follows:

   a. Reconnect the SCSI cables that were disconnected in step 1 but do not reinstall the DVP Card assemblies.

   b. If Meridian Mail now starts correctly, one of the DVP Cards or one of the C25 Cards is defective. Reinstall each card, one at a time, until the problem reappears. Replace the defective card.

3 Replace the Disk/Power Supply Card but retain the disk drive; it contains the customer's Meridian Mail data.

LED flashes slowly

The LED flashes slowly (approximately five seconds on and five seconds off) when the software fails to load.

1 If a tape drive is connected, ensure that it is turned on and that its SCSI address is set to 1.

2 Turn the tape drive off and then on again.

3 Check that the power and SCSI connections from the Disk/Power Supply Card to the disk drive are properly secured and correctly oriented.

4 Check the Connector Board, as follows:

   a. Remove the Connector Board and ensure that there are no bent pins on the front connectors of the Meridian Mail cards.

   b. Reinstall the Connector Board, ensuring that it is firmly seated on all cards.

5 Ensure that all terminators have been removed from the disk drive, that the correct jumpers required for the model of disk drive have been installed, and that all other jumpers have been removed. Refer to Chapter 12.

6 If a tape drive is not connected, ensure that the external terminator on the Disk/Power Supply Card is firmly in place.

7 Replace the Connector Board.

8 Reload the Meridian Mail software from tape. (Refer to Chapter 3.)

9 Replace the 68k Card.

10   Replace the disk on the Disk/Power Supply Card and restore the system from the most recent backup tape. (Refer to page 4-9.)

Problems during system expansion or software upgrade

Problems can occur while reading from the software tape and writing to the disk during storage expansion, software expansion, or software upgrade. They may be the result of a defective tape, a defective disk, or a problem with the SCSI link between the tape drive and the disk drive.

1   Restore the system to its original state, as follows:

a.   If you added a new DVP Card or any new C25 Cards, remove them.

b.   If you installed a new disk drive, replace it with the old disk drive.

c.   Ensure that all cable connections are secure, that the Connector Board is firmly seated, and that the Meridian Mail cards are locked firmly in place in the cabinet.

d.   Restore the system from the back-up tape (refer to page 4-9) and attempt to start Meridian Mail. (Refer to page 4-6.)

2   If Meridian Mail starts, attempt the expansion or upgrade procedure again. If it fails a second time, restore the system and attempt the procedure again but with a different software tape.

or

If Meridian Mail does not start correctly, follow the trouble-shooting procedures beginning on page 5-4.

3   Replace the disk drive on the Disk/Power Supply Card, restore the system, and attempt the expansion or upgrade procedure again.

Tape drive problems
A tape is not recognized by the system

1   If you are performing a restore, ensure that you have inserted the correct tape.

2   Ensure that you have inserted the tape correctly. (Refer to page 1-15.)

3   Ensure that the tape is of the correct format. (Refer to page 1-3.)

4   Ensure that the write protection on the tape is not set.

5 Turn the tape drive off and then on again.

6 Clean the tape drive. (Refer to page 5-15.)

7 Ensure that the tape drive has been correctly installed. (Refer to page 1-14.)

The tape drive does not correctly retension a tape

1 Turn the tape drive off and then on again.

Starting a backup before inserting a tape

If, while attempting to manually back up the system, you inadvertently press
OK To Start Backup *before* inserting a tape:

1 Insert a tape into the tape drive.
An error message is displayed indicating that the backup has failed.

2 Press Exit .

3 Retry the backup procedure.

Defective tape during backup

If, while attempting to manually backup the system, you insert a defective tape:

1 Retry the backup procedure with a different tape. If the backup is successful, discard the defective tape.

2 Clean the tape drive (refer to page 5-15) and attempt the backup again.

3 Restart the system and retry the backup procedure.

Defective tape during restore

If, while attempting to restore the system, you are informed that the tape is defective:

1 Clean the tape drive (refer to page 5-15) and attempt the restore again.

2 If the second attempt is not successful, the tape is unusable. Do one of the following:

— Restore from an earlier backup tape, if one is available.

Note: Use the most recent backup you can find. Any changes that you've made to the system since that backup will have to be recreated.

— Install a new system and redefine your users.

> **Note:** *This should be your last resort; and should never have to be done if you make sure to make frequent backups.*

Once you have successfully restored the system:

a. Perform a new system backup with a different tape.

b. Discard the tape that caused the error.

Terminal problems

Under most circumstances the Meridian Mail system should start up automatically and display the Meridian Mail logon screen on the System Administrator's terminal. You may notice problems at start-up or the terminal may become disabled during normal operation.

Auxiliary terminals (such as those used with Hospitality systems) are susceptible also to problems with the RSM Breakout Assembly and the 68k Card. First, try to clear the problem as you would with the System Administrator's terminal, then follow the steps for auxiliary terminals.

The terminal does not display Meridian Mail screens

1 The System Administrator may have inadvertently switched to the Meridian 1 PBX software. If you see the > prompt, enter **AX** [Return].

2 Press [Control] **]** to switch to Meridian 1 PBX software and, at the > prompt, enter **AX** [Return].

3 Reset the console port (port 8) by disabling it and re-enabling it, as follows:

a. Follow the procedures described on page 4-3. Reset the console port only; do not reset the AML (port 9).

b. Enter **AX** [Return] to return to Meridian Mail.

The terminal displays the Meridian Mail screens incorrectly

Occasionally the connection between Meridian Mail and the System Administrator's terminal may generate extraneous characters that cause the terminal to display the Meridian Mail screens incorrectly.

To redraw the screen:

1   Press `Control` **R**.

If the screen is incorrectly displaying the lines on the Meridian Mail screens as a string of "q"s:

1   Press `Control` **W**.
You are presented with a small pop-up menu.

2   Enter IF `Return`.
The screen redraws correctly.

The keyboard does not respond

1   If there is a printer attached to your system, ensure that the printer is ready and on line. (Refer to page 1-20, 5.)

2   Press `Control` **]** to switch to Meridian 1 PBX software. At the
          〉 prompt, enter **AX** `Return`.

3   Reset the console port (port 8) by disabling it and re-enabling it, as follows:

    a.   Follow the procedures described on page 4-3. Reset the console port only; do not reset the AML (port 9).

    b.   Enter **AX** `Return` to return to Meridian Mail.

4   Turn the terminal off and on again.

5   Check the connection between the keyboard and the terminal.

6   Check the terminal's connection to the SDI port. (See Figure 1-3 on page 1-6.)

7   Ensure that the terminal settings are correct as described in "Terminal configuration" (Chapter 11).

Auxiliary terminal problems

1   Ensure the switch on the RSM Breakout Assembly is in the Normal (left) position.

2   Ensure that the terminal settings are correct as described in "Terminal configuration" (Chapter 11).

3   Check all cable connections. (Refer to Table 8-3 on page 8-6.)

4   Check for any special null modem requirements.

5   Try the terminal on another, functioning RSM port.

6   Replace the RSM Breakout Assembly.

7   Replace the 68k Card.

Modem problems

Handle modem problems in the same way as problems with auxiliary terminals.

Voice mail problems

The majority of problems with voice mail are often the result of faults in one of the DVP or C25 Cards, particularly with one or more of the hardware locations. The most obvious problem you might encounter is where Meridian Mail answers the telephone properly but the caller does not hear any voice prompts. Depending on the number of defective hardware locations, this problem may occur intermittently or on all calls to Meridian Mail.

A more subtle problem occurs when a hardware location is defective in such a way that it does not even answer calls to Meridian Mail. Providing the system has other, functional hardware locations, callers may not notice this degradation in service unless they encounter a significant increase in the number of busy signals when they dial Meridian Mail.

You have access to voice card diagnostics through the System Administrator's terminal. These tests allow you to isolate the hardware location that is causing the problem.

1   Ensure that you have not installed an older DVP Card (NTAK15AA) or an older C25 Card (NTAK16AA) in slot 9. These older cards only function in slot MM2.

2   Check the card connections, as follows:

a.   Remove the Connector Board and ensure that there are no bent pins on the front connectors of the Meridian Mail cards.

b.   Reinstall the Connector Board, ensuring it is firmly seated on all cards.

    c.   Ensure that the DVP Cards and the C25 Cards are firmly connected.

3   Test the DVP and C25 Cards as follows:

    a.   From the Meridian Mail login screen, press `Control` **W**.
You are presented with a small pop-up menu.

    b.   If you can't see the cursor on this menu, press **I**.

    c.   Press ⬆ and ⬇ to move the cursor to "Console" and **S** to select it.
The terminal displays the results of the Meridian Mail diagnostics.

    Note:
Card 4 is the DVP Card in slot MM2.
Card 5 is the first C25 Card attached to the DVP Card in slot MM2.
Card 6 is the second C25 Card attached to the DVP Card in slot MM2.
Card 7 is the DVP Card in slot 9.
Card 8 is the first C25 Card attached to the DVP Card in slot 9.
Card 9 is the second C25 Card attached to the DVP Card in slot 9.

    d.   Press `Control` **W** and select "MMI" to return to the Meridian Mail logon screen.

    e.   Replace any cards that have not passed the diagnostics.

    f.   In order to bring them back into service, you must run Out of Service Diagnostics on each of the cards you replace, as follows:

        i.   Log on to Meridian Mail.

        ii.   From the Main Menu, choose
"5 System Status and Maintenance"→ "2 Card Status".

        iii.   Press `Disable Card` and at the prompt enter the number of each card that you replaced.

        iv.   Press `Out Of Service Diagnostics` and enter the card numbers.

        v.   Press `Enable Card` and enter the card numbers.

    g.   You must also enable the new hardware locations, as follows:

        i.   From the Card Status form, press `Exit`.

        ii.   From the System Status and Maintenance Menu, choose "3 Channel Status".

iii. For each "Out of Service" channel, press `Enable Port` and enter the channel number.

h. Restart Meridian Mail and repeat steps 3a through 3d to verify any new cards you've installed.

4 Replace the DVP Card in slot MM2.

5 Replace the DVP Card in slot 9.

6 Replace the 68k Card.

7 Replace the Meridian 1 CPU/Conf Pack. (Refer to *Meridian 1 Option 11—Installation Guide.*)

System event and error reports (SEERs)

System event and error reports contain information about every system event and error that occurs on the Meridian Mail system. To configure Meridian Mail to print SEERs as they occur, refer to page 1-21.

To view the SEERs for a given period:

1 From the Main Menu on the System Administrator's terminal, choose "5 System Status and Maintenance"→ "5 System Event and Error Reports".

2 On the System Event and Error Reports form, enter the appropriate dates and times in *Report Period Start* and *Report Period End.*

3 Press `View Reports`.

The reports provide you with a brief description of the system event or error and when it occurred. For a more detailed description consult *Meridian Mail—System Event and Error Reports*.

Spares planning

Table 5-1 lists the field-replaceable components of the Meridian Mail card option, the mean time between failures (MTBF), the predicted failures per million hours, and the number of spares of each item your location should stock, should you decide to stock spares.

Table 5-1
Spares planning

Component	Code	MTBF (years)	Failures/ 1M hrs	Units serviced by location 1	<5	<10	<20	<30
Tape Drive	(See page 1-3)	1.7	67.0	1	3	4	5	5
80 Mb disk	A0377786	8.0	14.3	1	2	3	4	4
170 Mb disk	A0378251	8.0	14.3	1	2	3	4	4
300 Mb disk	A0351371 A0602257	8.0	14.3	1	2	3	4	4
68k Card	NTAK14BA	18.0	6.4	1	2	3	4	4
DVP Card*	NTAK15AA/AB	58.0	2.0	1	2	2	3	3
C25 Card*	NTAK16AA/AB	60.0	2.0	1	2	2	3	3
RSM Assembly	NTAK18AA/BA	240.0	0.5	1	2	2	3	3
Disk/Power Card	NTAK13AA	299.0	0.4	1	2	2	3	3
Connector Board	NTAK17AA/BA			1	2	2	3	3
Total system		**4.3**						

Some systems have more than one of these cards. When planning for spares, consider the number of hardware locations on the systems you service.

Maintaining the external tape drive

To ensure reliable tape drive performance, you should establish a regular cleaning schedule and observe the following precautions:

- Avoid mounting the tape drive where it is subjected to continuous shocks or vibrations.

- Maintain a clean, dust-free environment within the temperature and humidity limits listed in the specifications of the Meridian 1 option 11 system.

- Keep all liquids away from the drive and tapes to prevent spills into the equipment.

- Exercise reasonable care when using and storing tape cartridges. Do not place cartridges on the Meridian 1 cabinet or the monitor of the System Administrator's terminal.

- When a stored tape is moved to an environment with a greatly different temperature, allow the tape to slowly reach room temperature before using it.

- Do not open the cartridge access door or touch the tape.

- Keep the tape drive turned on when it is connected to Meridian Mail.

Cleaning the tape drive

To clean the tape drive, you need the following supplies:

- Low pressure aerosol air.

- Tape head cleaning fluid or reagent grade chemically-pure isopropyl alcohol.

- Tape head cleaning pads, lint-free cotton swabs, or any industry-acceptable head-cleaning swabs, six inches or longer.

You should clean the head assembly after an initial pass with a new tape cartridge and after eight hours of normal use. You should clean the sensor hole and tape cartridge cavity whenever dust is visible.

1 If there is a tape cartridge in the tape drive, remove it.

2 If the power to the tape drive is on, turn it off.

3 Push the head loading lever to the load position.

4 Carefully blow out dust from the sensor hole and tape cartridge cavity with aerosol air.

5 Moisten a pad or swab with the head-cleaning fluid until it is saturated but not dripping.

6 Carefully wipe the head in the direction that the tape travels. (Refer to Figure 5-2.) Do not wipe perpendicularly or use a circular scrubbing motion.

7 Discard the used swab and repeat steps 5 and 6 with new swabs until the swab shows no signs of dirt.

8 Use a new, dry swab to remove any remaining cleaning fluid from the head.

9 Push the head loading lever away from the load position.

10 If there was a tape cartridge in the tape drive, replace it.

11 If the power to the tape drive was on at the start of this procedure, turn it back on.

Figure 5-2
Cleaning the tape head
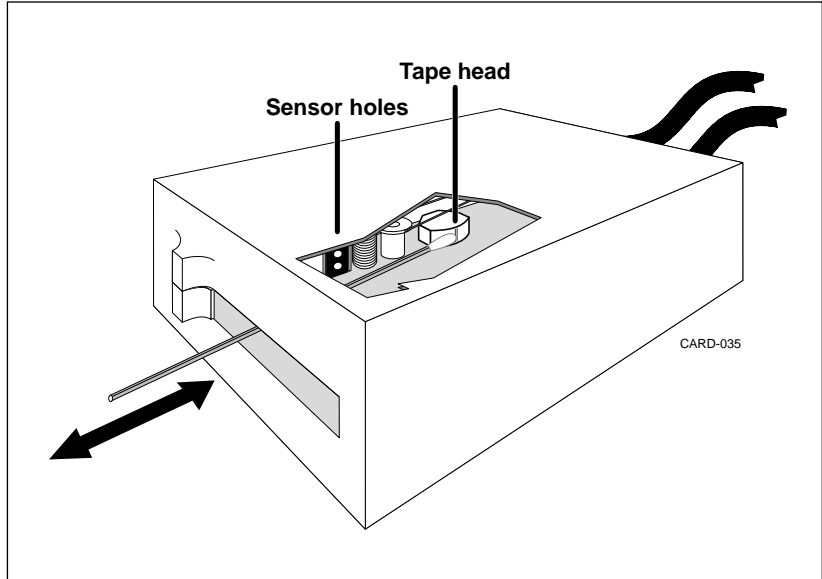
Software upgrades and conversions

Software upgrades and conversions allow you to install new versions of the Meridian Mail software without losing the data currently stored on the disk. If, for instance, any of the DNs on the system you are upgrading have been changed from the defaults, they will not be altered by the upgrade or conversion process.

Software upgrades occur within the same release of Meridian Mail. For example, if you are running Meridian Mail release 8, you might upgrade from version 8.0 to version 8.1 and later to version 8.2. Such incremental updates are released periodically by Northern Telecom to correct problems and improve service, but they all share the same features and capabilities as the initial release of the product.

Software conversion is performed when Northern Telecom introduces a new release of Meridian Mail, with new features and new capabilities. For example, you must convert from Meridian Mail release 8 to Meridian Mail release 9, if you wish to take advantage of any of the new features available in that new release.

What you need

- The new Meridian Mail software tape, NTAK72*x*E. (Refer to Table 2-1 on page 2-2 for the exact part number).
- The new keycode for your system, if applicable. (Refer to Chapter 2.)

The keycode you need is printed on the label on the box containing the Meridian Mail software tape, together with the serial number of the system. If you are responsible for more than one Meridian Mail system, ensure that you are using the correct keycode for each. If the serial number of the system does not match that on the label, the keycode will be rejected.

Unless you have also ordered additional capabilities for your system, you do not have to enter a keycode to upgrade the software.

Precautions

If you have ordered additional capabilities for your system, you will use the same keycode to enable them after the software upgrade or conversion. You must enable them one at a time and in the following order:

- Software upgrade or conversion

- Hardware modification (Refer to page 7-2.)

- Storage expansion (Refer to page 7-3.)

- Language expansion (Refer to page 7-5.)

- Feature expansion (Refer to page 7-6.)

Failure to follow this order may cause problems with the system.

Of course, not all systems will require each of these steps—simply skip the ones you don't have to perform, but maintain the order. Don't, for instance, attempt a feature expansion before a language expansion.

Performing a software upgrade or conversion

To perform a software upgrade or conversion:

1   Perform a full backup of the Meridian Mail system. (Refer to page 4-7.)

2   Run the System Installation and Modification Utility from the Meridian Mail software tape. (Refer to Chapter 2.)

3   From the System Installation and Modification Menu, choose "2 Upgrade to the latest MM9 release".

or

"3 Convert MM8 system to MM9 system".

Note: If your system is of an earlier release than MM-8, you must first convert from that release to MM-8 and then proceed to convert to MM-9. You can convert to MM-8 from any release labelled 1.x—1.10 or 1.12c, for example—but you must use an MM-8 software tape.

4   Respond to the prompts as they appear.

If you are converting from a pre-MM9 system each of your currently-installed hardware locations will be configured as full-service voice channels.

Don't worry if you respond to a prompt incorrectly. Before the final installation begins you are given another opportunity to re-enter the information.

The final upgrade takes about 45 minutes from start to finish, plus an extra 20 minutes for each additional language, after which you are prompted as follows:

```
Your system has been converted successfully.
Please remove the tape and boot into service.
```

5   At the prompt:

   a.   Remove the tape from the drive. (Refer to page 1-15.)

   b.   Turn off the power to Meridian Mail.

   c.   Wait ten seconds.

6   Start Meridian Mail. (Refer to page 4-6.)
   The system starts up in full service.

7   If, when you start Meridian Mail, the terminal displays Meridian Mail screens but the keyboard does not respond:

   a.   Press ⌷Control⌷ **]**

   b.   Enter **AX** ⌷Return⌷ to return to Meridian Mail.

   If the keyboard still does not respond, refer to "Terminal problems" on page 5-10.

If you have any other problems with this procedure, refer to "Problems during system expansion or software upgrade" on page 5-8.

System expansion

This chapter describes the procedures to follow when adding new hardware locations or modifying the existing hardware locations, expanding the system's disk storage, adding new languages, or enabling optional features.

What you need

- The Meridian Mail software tape, NTAK72*x*E. (Refer to Table 2-1 on page 2-2 for the exact part number).

- The new keycode for your system. (Refer to Chapter 2.)

System expansion is enabled through a security keycode purchased from your Meridian 1 representative. There is no need to purchase any new software.

When you wish to expand an existing system, you receive a pair of new labels from your Meridian 1 representative containing the keycode you need. Stick these labels on top of the old keycode labels, one on the tape and the other inside the door of the Option 11 cabinet.

> *Note:* Do not place the label on the metal plate on the back of the tape. This area must be kept clear to allow for the discharge of electrostatic buildup in the tape.

If you order your new features along with the latest software release, the label on the new software tape will contain the keycode you need.

Precautions

This single keycode enables each of the system modification procedures you have to perform. It is important, however, that you perform the procedures in the following order:

- Software upgrade or conversion (Refer to Chapter 6.)
- Hardware modification (Refer to page 7-2.)
- Storage expansion (Refer to page 7-3.)
- Language expansion (Refer to page 7-5.)
- Feature expansion (Refer to page 7-6.)

Failure to follow this order may cause problems with the system.

Of course, not all systems will require each of these steps—simply skip the ones you don't have to perform, but maintain the order. Don't, for instance, attempt a feature expansion before a language expansion.

Hardware modification

Hardware modification allows you add new hardware locations to your system or modify the attributes of the existing hardware locations. The number of hardware locations dictates how many people can use Meridian Mail at the same time. The attributes dictate which services each hardware location can provide.

Before adding any DVP or C25 cards, you must ensure that the DNs reserved for the hardware locations the cards will enable have not been reassigned to some other use.

1   Log on to the Meridian 1 PBX. (Refer to page 4-1.)

2   Print a hardware location report by following the prompts in Table 4-6 on page 4-19.

3   Using the hardware location table on page 10-2, determine the two default channel DNs for the card you're installing.

4   If the values in the report are different from those in the table, you can do one of two things:

    a.   Reassign the service that is currently using the DNs. (Refer to *Meridian 1 Option 11—Administration Guide.)*

    b.   Change the hardware location DNs to DNs which are not in use by following the procedures defined in "Changing a hardware location DN" on page 4-14.

Once any conflicts have been resolved, you can add the cards, as follows:

1   Perform a full backup of the Meridian Mail system. (Refer to page 4-7.)

2   Courtesy down Meridian Mail and turn it off. (Refer to page 4-5.)

3   Install the new voice processor cards. (Refer to "Replacing components" on page 5-3 and "Assembling and inserting the DVP Card (NTAK15AB)" on page 1-9.)

4   Run the System Installation and Modification Utility from the Meridian Mail software tape. (Refer to Chapter 2.)

5   From the System Installation and Modification Menu, choose "5 Hardware Modification".

6   Respond to the prompts as they appear. (Refer to "Assigning hardware location attributes" on page 2-5.)

Don't worry if you respond to a prompt incorrectly. Before the final installation begins you are given another opportunity to re-enter the information.

The final expansion should take 30 minutes to complete, after which you are prompted as follows:

```
The operation successfully completed.
Please remove the tape and boot into service.
```

7   At the prompt:

   a.   Remove the tape from the drive. (Refer to page 1-15.)

   b.   Turn off the power to Meridian Mail.

   c.   Wait ten seconds.

8   Start Meridian Mail. (Refer to page 4-6.)
      The system starts up in full service.

If Meridian Mail does not start correctly, follow the trouble-shooting procedures beginning on page 5-4.

Storage expansion

Storage expansion expands the hours of message storage on your system, and allows the system to support more users and more system languages.

1   Perform a full backup of the Meridian Mail system. (Refer to page 4-7.)

2   Courtesy down Meridian Mail and turn it off. (Refer to page 4-5.)

3   If you need to expand the storage capacity of the system beyond that of the current disk drive:

     a.   Replace the disk drive with a new, larger disk drive. (Refer to "Replacing components" on page 5-3 and "Assembling and inserting the Disk/Power Supply Card (NTAK13AA)" on page 1-11.)

     b.   Restore the system from the backup you created in step 1. (Refer to page 4-9.)

     c.   Courtesy down Meridian Mail and turn it off. (Refer to page 4-5.)

4   Run the System Installation and Modification Utility from the Meridian Mail software tape. (Refer to Chapter 2.)

5   From the System Installation and Modification Menu, choose "6 Storage Expansion".

6   Respond to the prompts as they appear.

     Don't worry if you respond to a prompt incorrectly. Before the final installation begins you are given another opportunity to re-enter the information.

     The final expansion should take 30 minutes to complete, after which you are prompted as follows:

```
The operation successfully completed.
Please remove the tape and boot into service.
```

7   At the prompt:

     a.   Remove the tape from the drive. (Refer to page 1-15.)

     b.   Turn off the power to Meridian Mail.

     c.   Wait ten seconds.

8   Start Meridian Mail. (Refer to page 4-6.)
The system starts up in full service.

If you have any problems with this procedure, refer to "Problems during system expansion or software upgrade" on page 5-8.

Language expansion

Software tapes are available containing the standard Meridian Mail voice prompts in many different languages. (Refer to Table 2-1 on page 2-2.) Each new language you add to a system requires approximately 1.25 hours of voice space on the Meridian Mail disk. You cannot add a language if voice space will be reduced to less than two hours.

1   Perform a full backup of the Meridian Mail system. (Refer to page 4-7.)

2   Run the System Installation and Modification Utility from the Meridian Mail software tape. (Refer to Chapter 2.)

3   From the System Installation and Modification Menu, choose "7 Language Expansion".

4   Respond to the prompts as they appear.

You should be prepared to supply the feature keycodes from the system's label and to choose the languages you require from the software tapes you received.

Don't worry if you respond to a prompt incorrectly. Before the final expansion begins you are given another opportunity to re-enter the information.

Language expansion takes approximately 30 minutes for the first language plus 20 minutes for each additional language. Be prepared to insert any additional language tapes as the system requests them. After the final language has been loaded, you are prompted as follows:

```
The operation successfully completed.
Please remove the tape and boot into service.
```

5   At the prompt:

a.   Remove the tape from the drive. (Refer to page 1-15.)

b.   Turn off the power to Meridian Mail.

c.   Wait ten seconds.

6   Start Meridian Mail. (Refer to page 4-6**.**)
The system starts up in full service with the new languages installed. The operation of multi-language systems is discussed in Meridian Mail—System Administration Guide.

7   If, when you start Meridian Mail, the terminal displays Meridian Mail screens but the keyboard does not respond:

   a.   Press `Control` **]**

   b.   Enter **AX** `Return` to return to Meridian Mail.

   If the keyboard still does not respond, refer to "Terminal problems" on page 5-10.

If you have any other problems with this procedure, refer to "Problems during system expansion or software upgrade" on page 5-8.

Feature expansion

Optional features on the Meridian Mail card option system include the following:

• AMIS Networking

• Bilingual prompting

• Fax on Demand

• Hospitality Voice Services

• Meridian Forms

• Meridian Mail Networking

• Multi-customer

• Network Message Service

• Outcalling

To enable one or more of these features:

1   Perform a full backup of the Meridian Mail system. (Refer to page 4-7.)

2   Run the System Installation and Modification Utility from the Meridian Mail software tape. (Refer to Chapter 2.)

3   From the System Installation and Modification Menu, choose "4 Feature Expansion".

4   Respond to the prompts as they appear. Depending on the optional features you're enabling, you should be prepared to supply the following values for the system:

— The feature keycode from the system's label.

— The data port locations.
Card option systems can have up to six data ports: the first two are reserved for the system administration terminal and the link to the Meridian 1 switch, the remaining four are the four ports available on the RSM card, if one is installed. The following are the recommended settings for these ports:

Location	Basic System	Hospitality System	Networked Systems	Networked Hospitality System
Node 1, Card 1, Port 1	Console	Console	Console	Console
Node 1, Card 1, Port 2	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)
Node 1, Card 3 (RSM), Port 1	Modem	GAC	Modem	GAC
Node 1, Card 3 (RSM), Port 2	Printer	GAC (optional)	Printer	Modem
Node 1, Card 3 (RSM), Port 3	Printer	PMS	Printer	PMS
Node 1, Card 3 (RSM), Port 4	Printer	PMS	Printer	PMS

The port locations you define here must match the connections you make to the RSM card. The wiring diagrams for hospitality systems (Figure 8-1 on page 8-3) and networked systems (Figure 9-1 on page 9-2) are based on these recommended values. If you customize the port locations, ensure that you change the wiring accordingly.

Don't worry if you respond to a prompt incorrectly. Before the final expansion begins you are given another opportunity to re-enter the information.

The final expansion takes about 45 minutes from start to finish, plus an extra 20 minutes for each additional language. Be prepared to insert any additional language tapes as the system requests them. After the final language has been loaded, you are prompted as follows:

```
The operation successfully completed.
Please remove the tape and boot into service.
```

5   At the prompt:

a. Remove the tape from the drive. (Refer to page 1-16.)

b. Turn off the power to Meridian Mail.

c. Wait ten seconds.

6   Start Meridian Mail. (Refer to page 4-6.)
The system starts up in full service with the defaults defined in Chapter 10.

7   If, when you start Meridian Mail, the terminal displays Meridian Mail screens but the keyboard does not respond:

a.   Press [Control] **]**

b.   Enter **AX** [Return] to return to Meridian Mail.

If the keyboard still does not respond, refer to "Terminal problems" on page 5-10.

If you have any other problems with this procedure, refer to "Problems during system expansion or software upgrade" on page 5-8.

Hospitality systems

Meridian Mail's Hospitality Voice Services (HVS) option is used by hotels to offer voice messaging services to their staff and guests. It is designed to work with a hotel's Property Management System (PMS). This chapter describes the additional hardware installation and software procedures required in order to take advantage of Meridian Mail's HVS capabilities. The Meridian 1 PBX may or may not already be connected to a PMS.

For complete instructions on installing an HVS system, refer to *Meridian Mail Modular Option—Installation Procedures.*

Hardware installation

The HVS Hardware Kit (NTAK35AA/A0388201) contains the following:

1   RSM Breakout Assembly (NTAK18AA/BA)

1   25 pair MDF Voice Cable, 10 feet, male to male (NE-B25C-FS)

1   25 pair MDF Voice Cable, 10 feet, male to bare wire (NE-A25C-FS)

1   DB25 peripheral cable, 10 feet, male to bare wire (NTAK37AA)

3   DB25 peripheral cables, 10 feet, female to bare wire (NTAK36AA)

1   DB25 Gender changer, female to female (A0351509)

The following are optional:

• VT420 Video display terminal (A0376839)

• HP700/32 Video display terminal (A0376518—amber)
  HP700/32 Video display terminal (A0376519—green)
  HP700/32 Video display terminal (A0376520—white)

Figure 8-1 on page 8-3 shows the basic cabling plan for hospitality systems.

The multiport cable

To install the multiport cable, refer to *Meridian 1 Option 11—Installation Guide.*

The RSM Breakout Assembly

Refer to page 1-5 for the RSM Breakout Assembly installation instructions.

On the RSM Breakout Assembly is an LED which, when lit, indicates that the Meridian Mail is functioning properly and communicating with the customer's PMS. When Meridian Mail is off or not functioning correctly, the RSM Breakout Assembly automatically bypasses Meridian Mail and allows the PMS and the Meridian 1 PBX to communicate directly. Below the LED is a switch that allows you to manually bypass Meridian Mail.

As seen in Figure 8-1 on page 8-3, from the RSM Breakout Assembly you can run one of two voice cables: a male to male or a male to bare wire. The male to male voice cable connects the RSM Breakout Assembly to a BIX Pack. The male to bare wire voice cable must be wired to a BIX or similar modular distribution frame according to the instructions in the tables on the following pages.

The hotel's property management system

Which instructions you use to wire the hotel's PMS to the BIX pack depends on how the PMS is configured. Refer to the documentation for the product.

For DTE configurations use Table 8-1 on page 8-4.

For DCE configurations use Table 8-2 on page 8-5.

In each table, the columns on the left are for the wires from the MDF cable, and the columns on the right are for the SDI and PMS cables.

For cables exceeding 50ft in length, short haul modems are required. Inmac asynchronous line drivers (#8125) are recommended.

The guest administration consoles (GACs)

To install the guest administration consoles, follow the wiring instructions in Table 8-3 on page 8-6. The columns on the left are for the wires from the MDF cable, and the columns on the right are for the wires to the consoles.

Configure the consoles according to the instructions in Chapter 11.

Software installation

You can only enable the Meridian Mail HVS feature during software installation. You cannot add HVS to an existing system without reinstalling the software.

Figure 8-1
Hospitality system cables
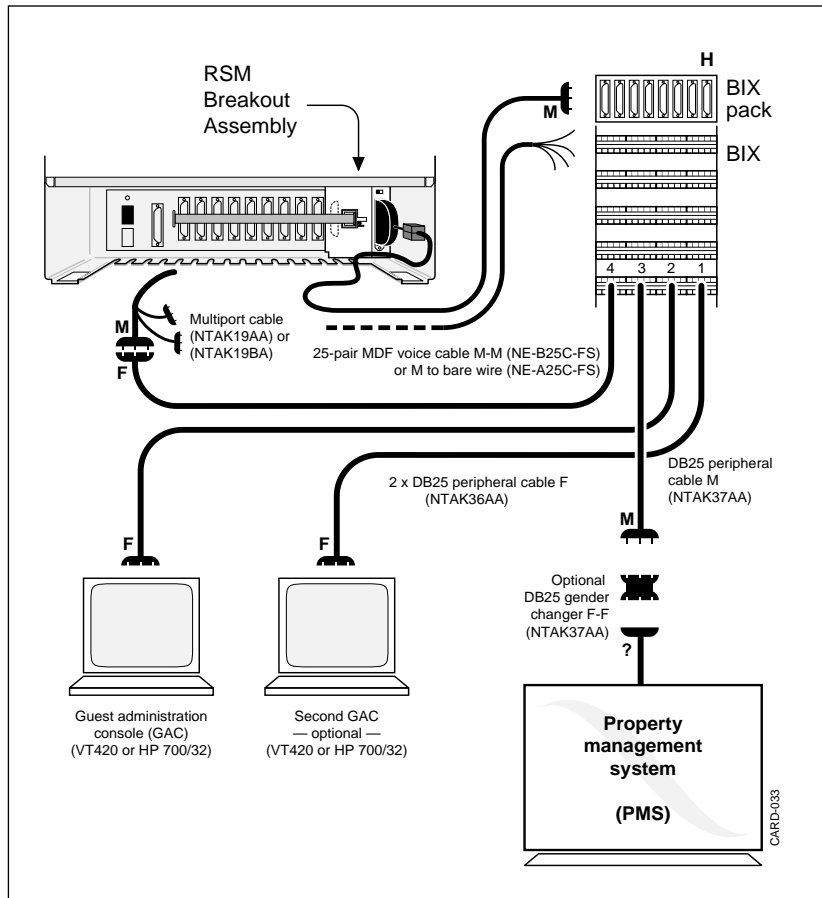
Hospitality system administration

For more information on the set up and administration of a Meridian Mail hospitality system, consult: *Meridian Mail—System Administration Guide (Hospitality)*.

Table 8-1
Wiring for DTE PMS systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB25 Pin#	Signal
1	WH/BL	1	SDI	RD/BK	8	DCD4
	BL/WH	2	-	-	-	-
2	WH/OR	3	SDI	WH/BK	6	DSR4
	OR/WH	4	SDI	BK	20	DTR4
3	WH/GR	5	SDI	BL	5	CTS4
	GR/WH	6	SDI	OR	4	RTS4
4	WH/BR	7	SDI	RD	3	RXD4
	BR/WH	8	SDI	WH	2	TXD4
5	WH/SL	9	-	-	-	-
	SL/WH	10	SDI	GR	7	SG
6	RD/BL	11	-	-	-	-
	BL/RD	12	SDI	SHLD	1	FG
7	RD/OR	13	PMS	RD/BK	8	DCD3
	OR/RD	14	-	-	-	-
8	RD/GR	15	PMS	WH/BK	6	DSR3
	GR/RD	16	PMS	BK	20	DTR3
9	RD/BR	17	PMS	BL	5	CTS3
	BR/RD	18	PMS	OR	4	RTS3
10	RD/SL	19	PMS	RD	3	RXD3
	SL/RD	20	PMS	WH	2	TXD3
11	BK/BL	21	-	-	-	-
	BL/BK	22	PMS	GR	7	SG
12	BK/OR	23	-	-	-	-
	OR/BK	24	PMS	SHLD	1	FG

Table 8-2
Wiring for DCE PMS systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB25 Pin#	Signal
1	WH/BL	1	SDI	RD/BK	8	DCD4
	BL/WH	2	-	-	-	-
2	WH/OR	3	SDI	BK	20	DSR4
	OR/WH	4	SDI	WH/BK	6	DTR4
3	WH/GR	5	SDI	OR	4	CTS4
	GR/WH	6	SDI	BL	5	RTS4
4	WH/BR	7	SDI	WH	2	RXD4
	BR/WH	8	SDI	RD	3	TXD4
5	WH/SL	9	-	-	-	-
	SL/WH	10	SDI	GR	7	SG
6	RD/BL	11	-	-	-	-
	BL/RD	12	SDI	SHLD	1	FG
7	RD/OR	13	PMS	RD/BK	8	DCD3
	OR/RD	14	-	-	-	-
8	RD/GR	15	PMS	BK	20	DSR3
	GR/RD	16	PMS	WH/BK	6	DTR3
9	RD/BR	17	PMS	OR	4	CTS3
	BR/RD	18	PMS	BL	5	RTS3
10	RD/SL	19	PMS	WH	2	RXD3
	SL/RD	20	PMS	RD	3	TXD3
11	BK/BL	21	-	-	-	-
	BL/BK	22	PMS	GR	7	SG
12	BK/OR	23	-	-	-	-
	OR/BK	24	PMS	SHLD	1	FG

Table 8-3
Wiring for guest administration terminals (GACs)

Pair No	Colors	BIX Pos#	Cable	Colors	DB25 Pin#	Signal
13	BK/GR	25	GAC2	OR/BK	17	RXC2
	GR/BK	26	GAC2	GR/BK	15	TXC2
14	BK/BR	27	GAC2	RD/BK	8	DCD2
	BR/BK	28	GAC2	BK	20	DTR2
15	BK/SL	29	GAC2	WH/BK	6	DSR2
	SL/BK	30	GAC2	OR	4	RTS2
16	YE/BL	31	GAC2	BL	5	CTS2
	BL/YE	32	GAC2	WH	2	TXD2
17	YE/OR	33	GAC2	RD	3	RXD2
	OR/YE	34	GAC2	GR	7	SG
18	YE/GR	35	GAC2	BL/BK	22	RI
	GR/YE	36	GAC2	SHLD	1	FG
19	YE/BR	37	GAC1	OR/BK	17	RXC1
	BR/YE	38	-	-	-	-
20	YE/SL	39	GAC1	RD/BK	8	DCD1
	SL/YE	40	GAC1	GR/BK	15	TXC1
21	VI/BL	41	GAC1	WH/BK	6	DSR1
	BL/VI	42	GAC1	BK	20	DTR1
22	VI/OR	43	GAC1	BL	5	CTS1
	OR/VI	44	GAC1	OR	4	RTS1
23	VI/GR	45	GAC1	RD	3	RXD1
	GR/VI	46	GAC1	WH	2	TXD1
24	VI/BR	47	-	-	-	-
	BR/VI	48	GAC1	GR	7	SG
25	VI/SL	49	-	-	-	-
	SL/VI	50	GAC1	SHLD	1	FG

Networked systems

This chapter describes the additional hardware installation and software procedures required in order to take advantage of Meridian Mail's networking capabilities.

For complete instructions on installing an Networking system, refer to *Meridian Mail Networking—Installation guide.*

Hardware installation

The Networking Hardware Kit (NTAK40AA/A0388206) contains the following:

1   RSM Breakout Assembly (NTAK18AA/BA)

1   25 pair MDF Voice Cable, 10 feet, male to male (NEA25D-DE)

1   25 pair MDF Voice Cable, 10 feet, male to bare wire (NEA25D-SE)

1   DB25 peripheral cable, 10 feet, male to bare wire (NTAK37AA)

1   Modem (NT3M50AF)

Figure 9-1 on page 9-2 shows the basic cabling plan for networked systems.

The RSM Breakout Assembly

Refer to page 1-5 for the RSM Breakout Assembly installation instructions.

As seen in Figure 9-1, from the RSM Breakout Assembly you can run one of two voice cables: a male to male or a male to bare wire. The male to male voice cable connects the RSM Breakout Assembly to a BIX Pack. The male to bare wire voice cable must be wired to a BIX or similar modular distribution frame according to the instructions in the Table 9-1 on page 9-2.

In Table 9-1, the columns on the left are for the wires from the MDF cable, and the columns on the right are for the male DB25 cable that connects to the

modem. Before you attach this cable to the modem, however, the modem must be correctly configured.

Figure 9-1
Networked system cables
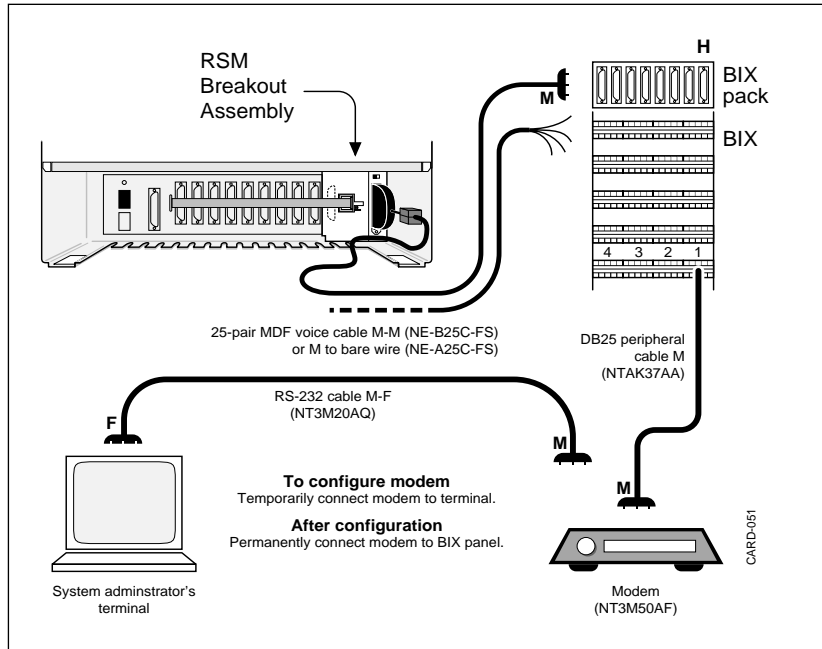
Table 9-1
Wiring for networked systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB25 Pin#	Signal
7	RD/OR	13	Modem	RD/BK	8	DCD3
	OR/RD	14	-	-	-	-
8	RD/GR	15	Modem	WH/BK	6	DSR3
	GR/RD	16	Modem	BK	20	DTR3
9	RD/BR	17	Modem	BL	5	CTS3
	BR/RD	18	Modem	OR	4	RTS3
10	RD/SL	19	Modem	RD	3	RXD3
	SL/RD	20	Modem	WH	2	TXD3
11	BK/BL	21	-	-	-	-
	BL/BK	22	Modem	GR	7	SG
12	BK/OR	23	-	-	-	-
	OR/BK	24	Modem	SHLD	1	FG

Configuring the modem

The following procedure assumes that you are configuring the Ven-Tel modem supported by Northern Telecom. If your modem is not a Ven-Tel modem, refer to the modem's manual and configure it to correspond to the following settings.

1 Connect a properly configured System Administrator's terminal directly to the modem in order to enter and verify its configuration. Use an RS-232 cable (NT3M20AQ).

2 Ensure that the switch labeled "SW2" on the circuit board is configured as follows:

Switch	Position	Description
S2-1	Off	Follows DTR status.
S2-2	Off	Enables word result codes for AT commands.
S2-3	On	Enables generation of AT command result codes.
S2-4	On	Disables AT command echo from modem.
S2-5	On	Disables modem auto answer. If not disabled, the modem will answer phone calls in receiver mode.
S2-6	Off	Carrier detect responds to carrier.
S2-7	On	Speaker control may be on or off. During installation it is recommended that the speaker be on in order to hear the operation of the modem. After verifying the operation, the speaker may be turned off.
S2-8	On	The modem will respond to AT commands.
S2-9	Off	The Ven-Tel NVRAM mode command set is disabled.
S2-10	Off	The Ven-Tel dialer feature is disabled.

Note: Older versions of the Ven-Tel modem may have another switch labelled "SW3." It should have all its switches set to the off position. See your Ven-Tel user's manual for the location of these switches.

3   Plug the modem and terminal into an appropriate AC receptacle and turn them on.

4   Enter **at&f** ⏎Return to reset the model to the factory default values.
The screen displays "OK."

5   Enter **at&d3** ⏎Return to enable DTR-initiated reset.
The screen displays "OK."

6   Enter **at&w** ⏎Return to save the configuration.
The screen displays "OK."

7   Turn the modem off, wait ten seconds, and turn the modem on again.

8   Enter **at\s** ⏎Return to verify the modem settings.
They should read as follows:

For EC2400-33 Rev. 5.2:

```
\A0, %A0, B0, &C1, \C0, %C1, &D3, \D0, E0, F1, &G0, \G0, \J0,
&L0, M1, &M0, \N1, &P0, Q0, \Q0, &R0, \T0, &T4, V1, \V0, X4,
&X0, \X0, Y0
```

For EC2400-33 Rev. 6.0:

```
\A0, %A0, B0, &C1, \C0, %C1, &D3, \D0, E0, F1, &G0, \G0, \J0,
&L0, M1, &M0, \N1, &P0, Q0, \Q0, &R0, \T0, &T4, V1, \V0, X4,
&X0, \X0, Y0, *N0
```

For EC2400 Plus II Rev.4.53:

```
\A0, %A0, B0, &C1, \C0, %C1, &D3, \D0, E0, F1, &G0, \G0, \J0,
&L0, M1, &M0, \N1, &P0, Q0, \Q0, &R0, \T0, &T4, V1, \V0, X4,
&X0, \X0, Y0, *N0, #S0, #R0, *B0
```

If there are any discrepancies, verify the switch settings from step 2 and repeat steps 4 to 8.

9   Turn off the modem and connect it to the Meridian 1 system according to the instructions starting on page 9-1.

10   Turn off the terminal and reconnect it to the Meridian 1 PBX.

Software installation

You can enable the Meridian Mail network option in one of two ways.

During initial software installation

The feature is automatically enabled by entering a valid keycode.

After initial software installation

Refer to "Feature expansion" on page 7-6.

Network system administration

For more information on the set up and administration of a networked Meridian Mail system consult: *Meridian Mail—System Administration Guide.*

Meridian Mail defaults

This chapter lists the default passwords and system parameters on a Meridian Mail Card Option system. Some of the values listed here are predefined, and some—such as the Voice Service DNs—can be defined automatically during software installation.

Should you choose to configure any of these parameters manually, use the defaults listed here as the basis for your custom values.

Basic systems

Passwords

Meridian 1 Representative's PBX password: 0000 (four zeros)

System Administrator's terminal password: adminpwd

System Administrator's Meridian 1 PBX password: MMAIL (uppercase)

The System Administrator's PBX password allows access only to overlay 2 and overlay 48. (Overlay 2 allows the Administrator to set time and date. Overlay 48 allows the Administrator to reset the console and AML data ports.)

Geographical location

United States (32k DSP package, mu-law, no AGC, no silence compression).

Primary language

American English, no secondary language.

Number of users:

The number of users you can add to a system depends on the size of the disk drive, the number of languages installed, and the size of the each user's voice

mailbox. The mailbox of the first user is defined during software installation and may be 2000, 2100, or 2200.

40Mb disk: 48 users recommended.

80Mb disk: 96 users recommended.

170Mb disk and larger: 192 users recommended.

Service DNs
Voice messaging (Meridian Mail): 7000

Automated attendant: 7001

Express messaging: 7002

Prompt Maintenance: 7003, password 7003

Table 10-1
Hardware locations

Card	Option 11 routing address (c u)	Mail port location	Routing address	Primary DN	Channel DN (SCN)	Position ID	Types of service
DVP in MM2	10 00	01–4–01	008–0–02–00	7000	7800	7830	ALL
	10 08	01–4–02	008–0–02–08	7000	7801	7831	ALL
1st C25 in MM2	10 01	01–5–01	008–0–02–01	7000	7802	7832	ALL
	10 09	01–5–02	008–0–02–09	7000	7803	7833	ALL
2nd C25 in MM2	10 02	01–6–01	008–0–02–02	7000	7804	7834	ALL
	10 10	01–6–02	008–0–02–10	7000	7805	7835	ALL
DVP in 9	10 03	01–7–01	008–0–02–03	7000	7806	7836	ALL
	10 11	01–7–02	008–0–02–11	7000	7807	7837	ALL
1st C25 in 9	10 04	01–8–01	008–0–02–04	7000	7808	7838	ALL
	10 12	01–8–02	008–0–02–12	7000	7809	7839	ALL
2nd C25 in 9	10 05	01–9–01	008–0–02–05	7000	7810	7840	ALL
	10 13	01–9–02	008–0–02–13	7000	7811	7841	ALL

Option 11 switches come with these hardware locations correctly configured. Should you ever need to completely redefine a hardware location, respond to following prompts in Overlay 11. (Refer to Table 4-6 on page 4-19.)

Table 10-2
Hardware location parameters for Overlay 11

Prompt	Response	Comment
KEY	0 ACD *xxxx yyyy*	*xxxx* is the new Voice Messaging DN and *yyyy* is the position ID for the hardware location.
KEY	1 SCN *zzzz*	*zzzz* is the channel DN for the hardware location.
KEY	2 MSB	
KEY	3 NRD	
KEY	6 TRN	
KEY	7 AO3	O is the letter O.
KEY	9 RLS	

Hospitality system service DNs

The defaults for a hospitality system are the same as those for a basic system except for the service DNs, which are defined as follows:

Guest messaging: 7000

Express messaging: 7001

Hotel menu: 7002

Published numbers: 7003

Post checkout: 7004

Staff messaging: 7005

Networked systems

The defaults for a networked system are the same as those for a basic system.

Terminal configuration

The procedures on the following pages describe how to set up the video display terminals supported by Northern Telecom.

- NT220 terminals   page 11-1
- VT220, VT320, and VT420 terminals   page 11-3
- HP700/22 terminals   page 11-8
- HP700/32 terminals   page 11-9

If the terminal you are configuring is different from these, use the most similar settings available and follow the instructions in the manual that came with the terminal.

CAUTION
Potential data loss
Set-up mode can be entered at any time, but it is recommended that you do not do so while information is being printed on the screen.

NT220 terminals

Table 11-1 on page 11-3 contains the set-up values for NT220 terminals. The set-up procedure is as follows:

1   Turn on the terminal.

2   Press ⬚**Setup** to enter set-up mode.
The current set-up values are displayed on a series of screens.

3   Using the following procedures, change the values on each screen to match the values in Table 11-1.

To move through the set-up screens:

a.   Use the arrow keys to move to *To Next Set-Up Screen* and press [**Enter**].

To change the value in a field:

a.   Use the arrow keys to move to that field.

b.   Press [**Enter**] to move through the available values for that field.

4   When you've finished, press [**Setup**] again.

Table 11-1
NT220 set-up values

General Set-up
Online
Refresh Rate=60 Hz
VT200 Mode, 7-bit Controls
User Defined Keys Unlocked
User Features Unlocked

Application Keypad
Normal Cursor Keys
No New Line
Set-Up=English
North American Keyboard

Printer Comm. Set-Up
Speed=9600
Normal Print Mode
8bits, No Parity
1 Stop bit
Print Full Page
Print National Only
No Terminator
Bidirectional Off

Host Comm. Set-Up
Transmit=1200 *(for Sys. Admin. terminal)*
=2400 *(for Auxiliary terminals)*
Receive=Transmit
Xoff at 64
8bits, No Parity
1 Stop Bit
No Local Echo
EIA Port, Data Leads Only
Disconnect, 2 s Delay
Limited Transmit

Display Set-Up
80 Columns
Interpret Controls
Auto Wrap
Jump Scroll
Light Text, Dark Screen
Cursor
Block Style Cursor
25 Lines

Keyboard Set-up
Typewriter Keys
Caps Lock
Auto Repeat
Keyclick
Margin Bell
Warning Bell
Break
Multinational
DEL=DEL; Shift/DEL=BS

Answerback/Tab Set-Up
No Auto Answerback
Not Concealed
Answerback=
Leave Tabs at the default values

Enhance/Block Mode Set-Up
Leave these fields at the default values

VT220, VT320, and VT420 terminals

Table 11-2 on page 11-5 contains the set-up values for VT220 terminals.
Table 11-3 on page 11-6 contains the set-up values for VT320 terminals.
Table 11-4 on page 11-7 contains the set-up values for VT420 terminals. The
set-up procedure is the same for all three terminals:

1   Turn on the terminal.

2   Press ⎡**Setup**⎤ to enter set-up mode.
The current set-up values are displayed on a series of screens.

3   Using the following procedures, change the values on each screen to
match the values in the appropriate table.

To move to a particular screen from the main set-up screen:

a.   Use the arrow keys to move through the menu of set-up screens and press ⟨ **Enter** ⟩.

To move to the next set-up screen:

a.   Use the arrow keys to move to *To Next Set-Up* and press ⟨ **Enter** ⟩.

To change the value in a field:

a.   Use the arrow keys to move to that field.

b.   Press ⟨ **Enter** ⟩ to move through the available values for that field.

4   When you've finished, press ⟨ **Setup** ⟩ again.

Table 11-2
VT220 set-up values

Set-Up Directory
On Line

Display Set-Up
80 Columns   Light Text, Dark Screen
Interpret Controls   Cursor
Auto Wrap   Block Style Cursor
Jump Scroll

General Set-up
VT200 Mode, 7-bit Controls   Application Keypad
User Defined Keys Unlocked   Normal Cursor Keys
User Features Unlocked   No New Line
Multinational

Communications Set-Up
Transmit=1200 *(for Sys. Admin. terminal)*   1 Stop Bit
       =2400 *(for Auxiliary terminals)*   No Local Echo
Receive=Transmit   Data Leads Only
Xoff at 64   Disconnect, 2 s Delay
8bits, No Parity   Limited Transmit

Printer Set-Up
Speed=9600   Print Full Page
Normal Print Mode   Print National Only
8bits, No Parity   No Terminator
1 Stop bit

Keyboard Set-up
Typewriter Keys   Warning Bell
Caps Lock   Break
Auto Repeat   Answerback=
Keyclick   Not Concealed
Margin Bell

Tab Set-Up
Leave this screen at the default values

Table 11-3
VT320 set-up values

Global Set-Up
On Line   Comm1=RS232
Sessions on Comm1   70Hz
CRT Saver   Printer Shared

Display Set-Up
80 Columns   Light Text, Dark Screen
Interpret Controls   Cursor
Auto Wrap   Block Style Cursor
Jump Scroll   No Status Display

General Set-up
VT200 ID Mode, 7-bit Controls   Normal Cursor Keys
User Defined Keys Unlocked   No New Line
User Features Unlocked   UPSS DEC Supplemental
Application Keypad

Communications Set-Up
Transmit=1200 *(for Sys. Admin. terminal)*   No Local Echo
            =2400 *(for Auxiliary terminals)* DEC-423, Data Leads Only
Receive=Transmit   Limited Transmit
Xoff at 64   No Auto Answerback
8bits, No Parity   Answerback=
1 Stop Bit   Not Concealed

Printer Set-Up
Speed=9600   1 Stop bit
No printer to Host   Print Full Page
Normal Print Mode   Print National Only
XOFF   No Terminator
8bits, No Parity

Keyboard Set-up
Caps Lock   Break
Auto Repeat   Compose
Keyclick   <X] Delete
Margin Bell   ,, and .. Keys Send ,< and .>
Warning Bell   <> Key
Character Mode   '~Key

Tab Set-Up Screen
Leave this screen at the default values

Table 11-4
VT420 set-up values

Global Set-Up
On Line   Comm1=RS232
Sessions on Comm1   70Hz
CRT Saver   Printer Shared

Display Set-Up
80 Columns   No Status Display
Interpret Controls   Cursor Steady
Auto Wrap   3x24 pages
Jump Scroll   24 Lines/Screen
Dark Screen   Vertical Coupling
Cursor   Page Coupling
Block Style Cursor   Auto Resize Screen

General Set-up
VT400 Mode, 7-bit Controls   Normal Cursor Keys
User Defined Keys Unlocked   No New Line
User Features Unlocked   UPSS DEC Supplemental
8-bit Characters   VT420 ID
Application Keypad   When Available Update

Communications Set-Up
Transmit=1200 *(for Sys. Admin. terminal)*   Disconnect, 2 s Delay
          =2400 *(for Auxiliary terminals)*   Limited Transmit
Receive=Transmit   No Auto Answerback
Xoff=64   Answerback=
8bits, No Parity   Not Concealed
1 Stop Bit   Modem High Speed = ignore
No Local Echo   Modem Low Speed = ignore
Data Leads Only

Printer Set-Up
Speed=9600   8bits, No Parity, 1 Stop bit
No printer to Host   Print Full Page
Normal Print Mode   Print National Only
XOFF   No Terminator

Keyboard Set-up
Typewriter Keys   Ignore Alt
Caps Lock   F1 = Hold
Auto Repeat   F2 = Print
Keyclick High   F3 = Set-Up
Margin Bell   F4 = Session
Warning Bell High   F5 = Break
Character Mode   ,< and .> Keys
<X] Delete   <> Key
Local Compose   '~Key

Tab Set-Up
Leave this screen at the default values

HP700/22 terminals

Table 11-5 on page 11-9 contains the set-up values for the HP700/22 terminal. The set-up procedure is as follows:

1 Turn on the terminal.

2 Press **Setup** to enter set-up mode.
The current set-up values are displayed on a series of screens.

3 Using the following procedures, change the values on each screen to match the values in Table 11-5.

To move through the set-up screens:

a. Press **Next Screen** and **Prev Screen**

To change the value in a field:

a. Use the arrow keys to move to that field.

b. Press **Enter** to move through the available values for that field.

4 When you've finished, press **Setup** again.

Table 11-5
HP700/22 set-up values

General Set-up

Terminal Mode	EM200, 7bit Ctrls	EM100 ID	EM220
On Line	YES	Interpret Control Mode	YES
Columns	80	User Features Locked	NO
Smooth Scroll	YES	User Defined Keys Locked	NO
Block Cursor	YES	Numeric Mode Keypad	NO
Cursor OFF	NO	Normal Mode Cursor Keys	YES
Light Background	NO	National Character Set	NO
Inhibit Auto Wrap	NO	Frame Rate	72
New Line	NO	Display OFF After (min)	15
Status Line	Indicator	Multipage	NO

Communications Set-up

Host

Xmit Baudrate	1200 *(for Sys. Admin. terminal)*	XON/XOFF	@ 64
	2400 *(for Auxiliary terminals)*	Disconnect Delay	2 s
Recv Baudrate	=Xmit	Stop Bits	1
Data Bits/Parity	8/None	Local Echo	NO
Check Parity	NO	Unlimited Xmit	NO
Port Selection	EIA, Data Leads Only		

Printer

Baudrate	9600	Print Mode	Normal
Data Bits/Parity	8/None	Print Scroll Region	NO
Stop Bits	1	Terminator	None
Character Set	National Only	XON/XOFF	@ 64

Keyboard Set-up

Keyboard Language	North American	Data Processing Keys	NO
Keyclick	YES	Shift Lock	NO
Margin Bell	YES	Break	YES
Warning Bell	YES	Auto Repeat	YES
Answerback=		Auto Answerback	NO

Do not set any tabs or programmed keys.

HP700/32 terminals

Table 11-6 on page 11-11 contains the set-up values for the HP700/32 terminal. The set-up procedure is as follows:

1 Turn on the terminal.

2 Press ⌈**Setup**⌋ to enter set-up mode.
The current set-up values are displayed on a series of screens.

3 Using the following procedures, change the values on each screen to match the values in Table 11-6.

To move through the set-up screens:

a.　Press `Next Screen` and `Prev Screen`

To change the value in a field:

a.　Press ⬆ and ⬇ to move to that field.

b.　Press ⬅ and ➡ to move through the available values for that field.

4　When you've finished, press `Setup` again.

Table 11-6
HP700/32 set-up values

Global set-up

Host Port	2	Keyboard	U.S.
Background	Dark	Message Translations	English
Screen Saver	10 Min	Setup Translations	English
Refresh Rate	72 Hz	Clear Display	
Key Click	Yes	Clear Comm	

User Set-up

Smooth Scroll	Jump scroll	Display Width	80
Cursor Type	Blink Line	Display Width Allowed	80 or 132
Cursor	Off	Char Cell Height	16
2nd Message Line	On	Clr on Width Change	Yes
Message Line	On	Aux Mode	Off
Status Line	On	Aux to Host	Off
On Line	Yes	Print Terminator=FF	No
Local Echo	Off	Logical Page Size	24
Auto Wrap	Off	Number of Pages	1
Auto Linefeed	Off		
Display Ctrl Codes	Off		

Emulation Set-up

Emulation	VT320	Cursor Keys	Normal
Terminal Id	VT220	Print Scroll Region	Off
Control Codes	7-bit	User Features Locked	No
Characters Mode	8-bit	User Keys Locked	No
Preferred Char Set	DEC Supplemental	Data Procession Keys	No
Key Pad Mode	Application		

Port 1 Set-up

Communications	Full Duplex	Limited Transmit	Off
Data Length	8-bits	DSRI	No
Parity	None	CTS	Ignore
Stop Bits	1	CD	Ignore
Xmit Baud	1200 *(for Sys. Admin. terminal)*	Break Disconnect	170ms
	2400 *(for Auxiliary terminals)*	Disconnect Delay	Never
Recv Baud	=Xmit	Aux printer Type	National
Xmit pace	Xon/Xoff		
Recv Pace	Xoff at 128		

Port 2 Set-up

Communications	Full Duplex	Xmit pace	Xon/Xoff
Data Length	8-bits	Recv Pace	Xoff at 128
Parity	None	Limited Transmit	Off
Stop Bits	1	Break Duration	170ms
Xmit Baud	9600	Aux Printer Type	National
Recv Baud	=Xmit		

Keyboard Set-up

Lock Key	Caps Lock	Warning Bell	Yes
Kbd Lock Enable	Yes	Auto Answerback	Yes
Save Tabs	Yes	Answerback =	
Auto Repeat	Yes	Conceal Answerback	No
Margin Bell	Yes	*Do not set any tabs or programmed keys.*	

Disk drive configuration

The following is a list of the disk drives supported by Northern Telecom and the page containing each drive's configuration instructions.

If the drive you're installing does not appear in the following list, consult the latest version of the release bulletin for this guide. Release bulletins are released periodically as new disk drives are added to the Meridian Mail card option product list.

If the drive you're installing is not supported by Northern Telecom, refer to the disk drive's manual for the location of the terminator plugs and the jumper configurations. For a disk drive to function correctly with the Meridian Mail card option, it must have no terminators, its SCSI address must be set to zero, its parity must be enabled, and its motor must be set to start up when the power is turned on.

Maxtor drives

Quantum drives

Seagate drives

Figure 12-1
Maxtor 7080S & 7080SR disk drive configuration

CARD-016
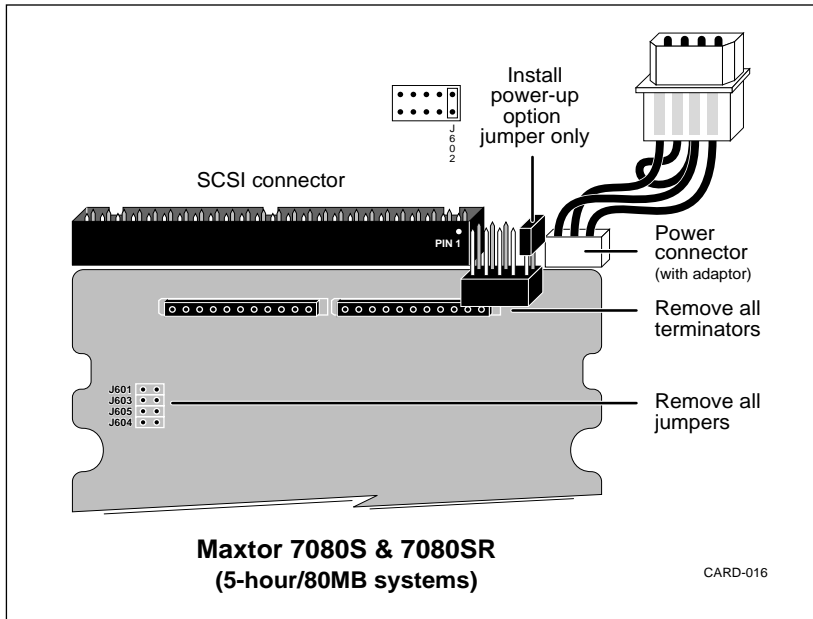
Figure 12-2
Maxtor 7080S-C disk drive configuration

CARD-022
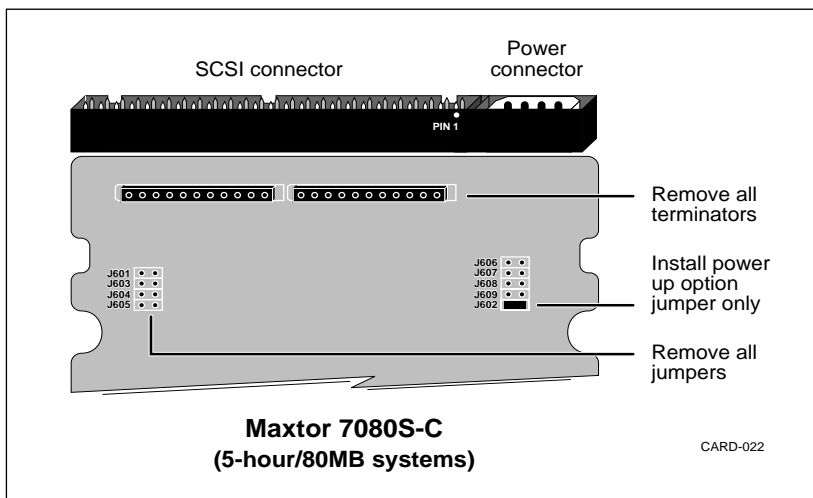
Figure 12-3
Maxtor 7120S disk drive configuration

SCSI connector

Power connector

PIN 1

Remove all terminators

J606
J607
J608
J609
J602

Install power up option jumper only

J601
J603
J604
J605

Remove all jumpers

Maxtor 7120S
(10-hour/170MB systems)

CARD-023
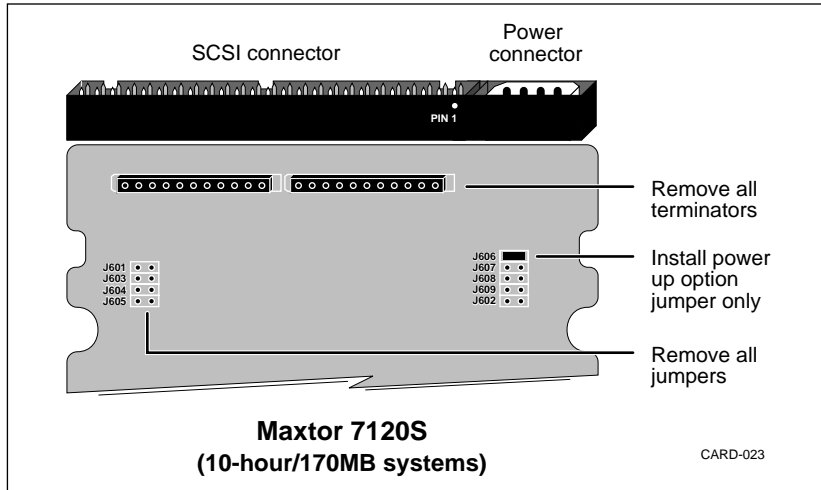
Figure 12-4
Maxtor LXT340SY disk drive configuration (option A)

SCSI connector

Power connector

PIN 1

JP6

Install motor start and parity jumpers only

Remove all terminators

Maxtor LXT340SY—Option A
(24-hour/300MB systems)

CARD-037
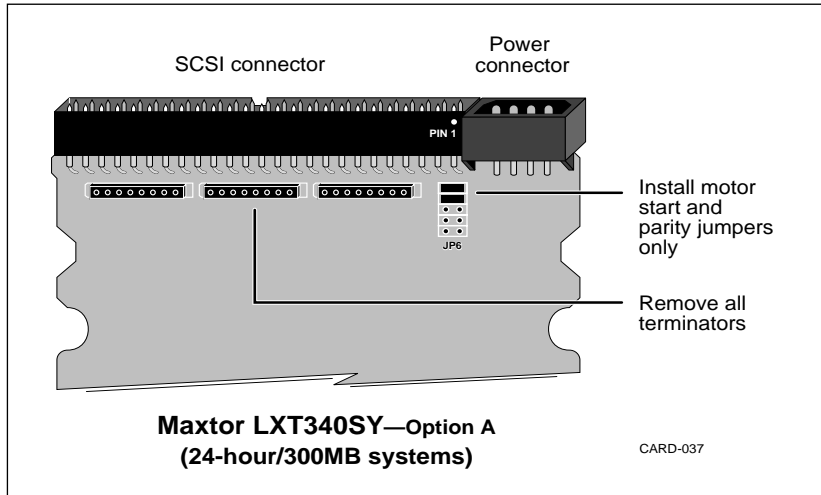
Figure 12-5
Maxtor LXT340SY disk drive configuration (option B)

SCSI connector

Power connector

PIN 1

Install motor start and parity jumpers only

JP6

Install these two jumpers to define disc for single-ended SCSI signals

JP8

JP9

Remove all terminators

Maxtor LXT340SY—Option B
(24-hour/300MB systems)

CARD-038
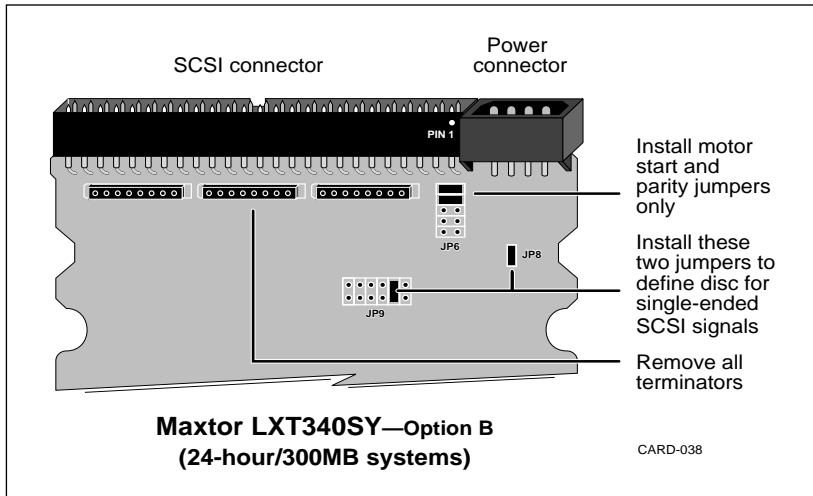
Figure 12-6
Quantum ProDrive 80S disk drive configuration

SCSI connector

Power connector

Remove all terminators

A0
A1
A2

Remove all jumpers

WS
EP
SS

Install parity enable jumper only

Quantum ProDrive 80S
(5-hour/80MB systems)

CARD-034
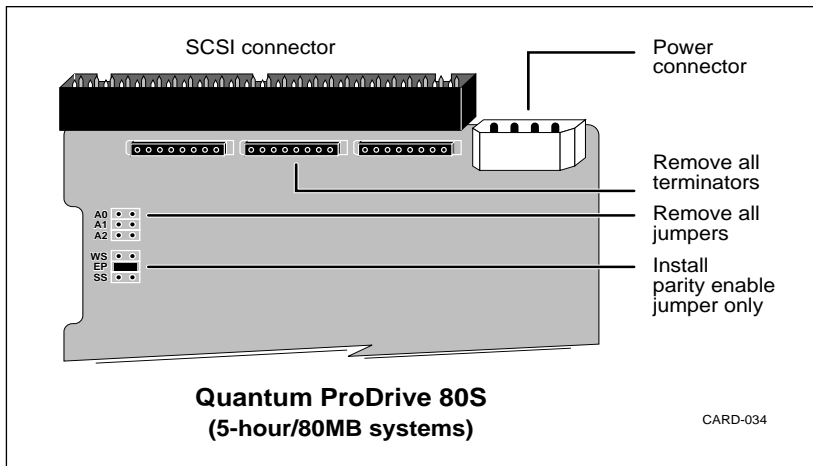
Figure 12-7
Seagate ST1096N disk drive configuration

Install parity enable jumper only

Power connector

SCSI connector

PIN 1

Remove all terminators

Seagate ST1096N
(5-hour/80MB systems)

CARD-024
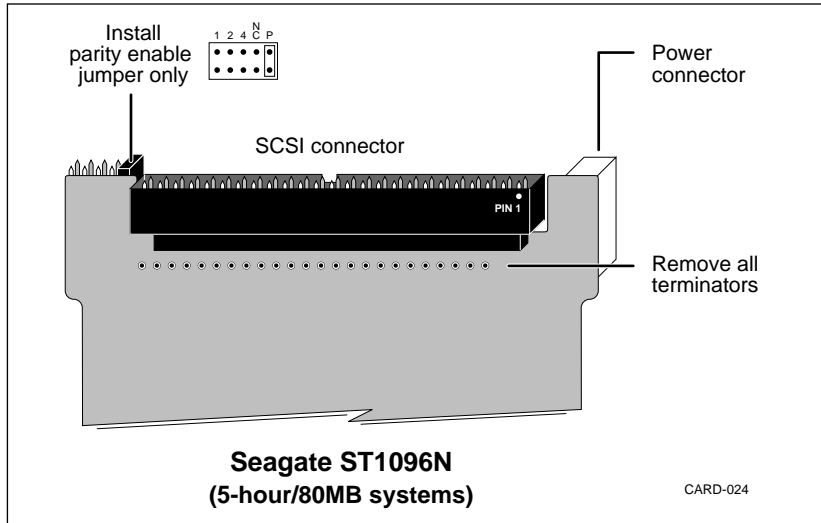
Figure 12-8
Seagate ST1201N disk drive configuration

Power connector

Install parity enable jumper only

SCSI connector

PIN 1

Remove all jumpers

Remove all terminators

Seagate ST1201N
(10-hour/170MB systems)

CARD-021
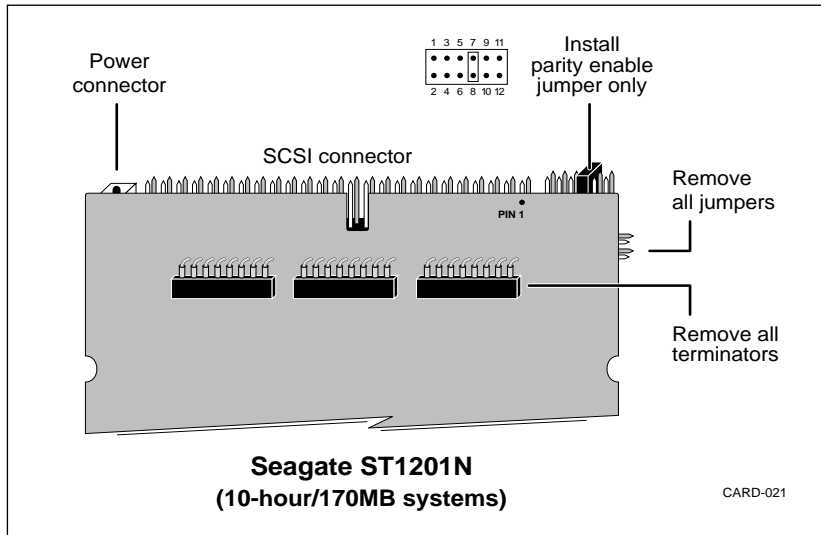
Figure 12-9
Seagate ST1480N disk drive configuration
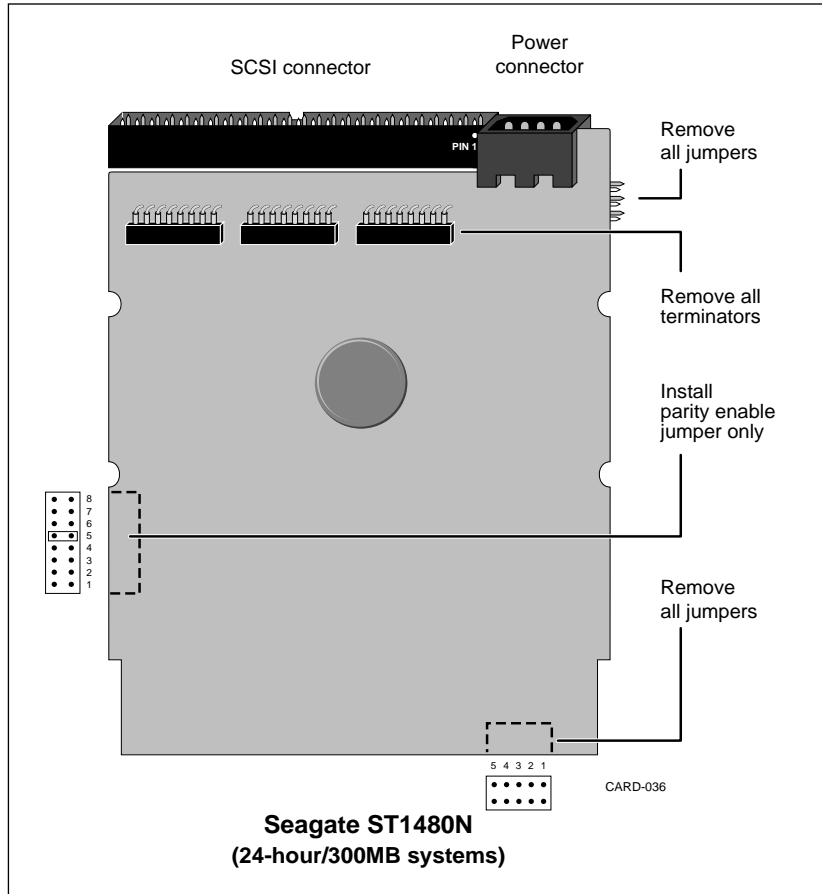
Figure 12-10
Seagate ST3390N disk drive configuration

Seagate ST3390N
(24-hour/300MB systems)
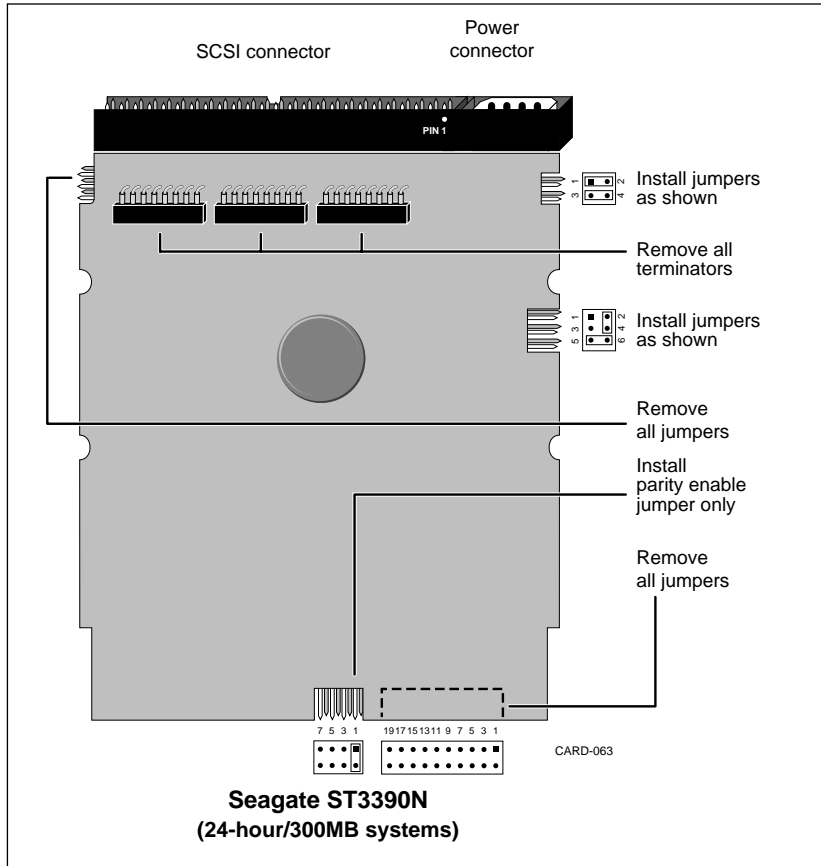
List of terms

AML

The Application Module Link is the communications link established between Meridian Mail and the Meridian 1 switch.

DCE

Data communications equipment

DN

DN or directory number is the number you dial to reach a user's extension or a Meridian Mail service. Directory numbers are also used to define virtual ACD agent positions responsible for handling Meridian Mail calls.

DTE

Data terminal equipment

Hardware location

A hardware location is the physical circuitry on the DVP and C25 cards used to process fax and voice data. Each card has two hardware locations. These hardware locations are assigned to ports. A basic or full-service voice port requires one hardware location. A multimedia port requires two hardware locations.

HVS

Hospitality Voice Services

MDF

Main Distribution Frame

PBX

Private branch exchange. The portion of the Meridian 1 system that manages the electronic switching of calls.

PMS

Property management system. A standard computer system used by many hotels which can be connected to Meridian Mail hospitality systems.

Port

There are two types of port in the Meridian Mail Card Option system. The first type of port is used to move data between Meridian Mail and the Meridian 1 PBX, using the hardware locations on the DVP and C25 cards. The second type of port is used to move data between Meridian Mail and peripheral devices such as modems and printers, using the hardware on the RSM card.

RSM

RS-232 service module

SCSI

Small Computer System Interface. An international standard for data communication.

SEERs

System error and events reports

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