555-7071-210

Meridian Mail Mini and Enhanced Card Option

Installation and Maintenance Guide

Product release 13 Standard 2.0 May 2000

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Meridian Mail Mini and Enhanced Card Option
Installation and Maintenance Guide

Publication number:	555-7071-210
Product release:	13
Document release:	Standard 2.0
Date:	May 2000

Publication history

May 2000

The Standard 2.0 version of the *Meridian Mail Mini and Enhanced Card Option Installation and Maintenance Guide* is released. The guide, formerly the *Enhanced Card Option Installation and Maintenance Guide*, has been up-issued with Meridian Mail Mini platform information.

November 1999

The *Enhanced Card Option Installation and Maintenance Guide* is released as Standard 1.0 for Meridian Mail Release 13 to incorporate changes arising from the introduction of the Enhanced MMP40 card. This edition makes all previous editions obsolete.

January 1998

The *Meridian Mail Card Option Installation and Maintenance Guide* is released as Standard 1.0 for Release 12 of Meridian Mail. No technical changes were necessary for Release 12.

September 1996

The *Meridian Mail Card Option Installation and Maintenance Guide* is released as Standard 1.0 for Meridian Mail Release 11.

August 1995

The *Meridian Mail Card Option Installation and Maintenance Guide* is released as Standard 1.0 for Meridian Mail Release 10.0.

August 1994

The *Meridian Mail Card Option Installation and Maintenance Guide* is released as Standard 1.0 for Meridian Mail Release 9.4 to incorporate changes from the addition of Meridian ACCESS to the features supported by the Meridian Mail Card Option platform.

Contents

About this guide

In this chapter

Overview

Introduction

This guide provides hardware and software installation and maintenance procedures for the Meridian Mail Mini and the Meridian Mail Enhanced Card Option.

The Meridian Mail Enhanced Card Option adds voice messaging capabilities to a Meridian 1 Option 11 system.

The Meridian Mail Mini is a small communications system based on Option 11C technology. The system provides full Meridian 1 feature functionality and supports up to four languages.

Note: The Meridian Mail Mini requires three hours of voice storage for each additional language.

Assumptions

Introduction

This guide assumes the following:

- The Meridian 1 system hardware and software have already been correctly installed.
- All environmental conditions and electrical requirements have been met.
- The system has been correctly configured as a basic, networked, or hospitality system.
- A Meridian Mail-compatible video display terminal has been installed on the Meridian 1 PBX and has been correctly configured.

Required knowledge

The basic hardware installation and maintenance procedures require no special knowledge or equipment. You should be familiar with basic electronic assembly and safety procedures.

To install a networked system or a hospitality system, you must 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 administration terminal.

In this guide

Introduction

Chapter 1, “Hardware installation,” provides an overview of safety precautions and required knowledge and tools.

Chapter 2, “System installation and modification,” describes how to access and use the System Installation and Modification menu that comes on the Meridian Mail software tape. This menu is used when installing software on new systems, modifying the software on existing systems, and performing routine system maintenance.

Chapter 3, “Software installation,” describes how to install the software on a new Meridian Mail system. The procedures are the same for the Meridian Mail Enhanced Card Option system and for the Meridian Mail Mini system.

Chapter 4, “Basic system procedures,” 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 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.

Chapter 5, “Troubleshooting and maintenance,” describes the procedures you can follow to prevent and resolve problems with Meridian Mail.

Chapter 6, “Software upgrades and conversions and system expansion,” describes the procedures to follow when updating to the most current release of the Meridian Mail software and 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.

Chapter 7, “Hospitality systems,” describes the additional hardware installation and software procedures required in order to take advantage of Meridian Mail’s Hospitality Voice Services (HVS) capabilities.

Chapter 8, “Networked systems,” describes the additional hardware installation and software procedures required in order to take advantage of Meridian Mail’s networking capabilities.

Chapter 9, “ACCESS systems,” describes the additional hardware installation and software procedures required in order to take advantage of Meridian Mail’s ACCESS capabilities.

Chapter 10, “Meridian Mail defaults,” lists the default passwords and system parameters on a Meridian Mail Enhanced Card Option system.

Chapter 11, “Terminal configuration,” describes how to set up the video display terminals supported by Nortel Networks.

Typographic conventions

Introduction

This guides uses the following conventions:

- ***Softkeys*** Softkeys are displayed on the various administration menus and indicate which keyboard function keys carry out specific Meridian Mail tasks. These are referred to in the document by using the label of the softkey (as displayed on the given menu), delimited by square brackets (for example, [Exit], [OK to Delete]).
- ***Keyboard keys*** Keyboard keys appear as the key's label, delimited by angle brackets (for example, <1>, <2>, <Return>).
- ***Text input*** Where you are required to input specific text, the characters appear in bold print (for example, **abcd**, as opposed to <a><b><c><d>).
- ***Fields in a menu*** Field names appear in italics and in a different typeface than the body of the document (for example, *Last Name, Invalid Logon Attempts*).
- ***Screen text*** When a sample screen output is shown in the text, the screen typeface is used. For example:

```
disk pair 0
boot region:     32-2031
file region:     2032-665153
disk 0:   RW
disk 2:    RW
```

  The following typeface can also be used to represent screen text or prompts where necessary to improve the presentation of the material:

  Specify User Mailbox (Blank for all):
  Network Billing Start: 00/00/00 00:00:00
  Network Billing End: 00/00/00 00:00:00

- ***Values in Fields*** Where a field displays a set of values from which you must select, these values have the first letter capitalized (for example, Yes, No, Enable, Disable).

- ***Spoken words*** Where you are required to speak into the telephone, such as in the recording of greetings and announcements, any suggested words appear in quoted italics (for example, say *"Please wait on the line, an attendant will be with you shortly.")*

Related documents

Introduction

You might refer to the following guides when you install your system:

- *Meridian Mail 13 General Release Bulletin* (required for LED jumper settings)
- *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)
- *Option 11C and 11C Mini Upgrade Procedures Guide* (553-3021-250)
- *Option 11C and 11C Mini Technical Reference Guide* (553-3011-100)
- *Option 11C and 11C Mini Fault Clearing Guide* (553-3011-500)

Hospitality, networked, and ACCESS 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)
- *Meridian ACCESS Configuration Guide* (NTP 555-7001-315)
- *Meridian ACCESS Developer's Guide* (NTP 555-7001-316)
- *Meridian ACCESS Application Programming Interface (API) Reference Manual* (NTP 555-7001-317)
- *Meridian ACCESS Voice Prompt Editor User's Guide* (NTP 555-7001-318)

- *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)

Chapter 1

Hardware installation

In this chapter

Overview

Introduction

This chapter describes the installation of a Meridian Mail Enhanced Card Option system or a Meridian Mail Mini system.

Later chapters describe the special hardware required for hospitality, networked, and ACCESS systems.

Precautions

Introduction

If you are installing a hospitality, networked, or ACCESS system, you must install the RSM breakout assembly first.

You can install the Meridian Mail hardware while the Meridian 1 PBX is running.

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
Risk of equipment damage

Use extreme care and wear a grounding strap when handling the PCBs. They are susceptible to electrostatic damage and to damage from rough or improper handling.

Tools required

Introduction

You require the following installation tools:

Tool	Description
Antistatic wrist strap	
BIX connector tool (or another supplier's connecting tool)	NT product number GYBIX16
Carpenter's level	
Extraction tool	P0741489
Phillips screwdriver	small, medium
Slotted screwdriver	small, large
Socket wrenches	1/4, 5/16, and 9/16-inch
Volt meter	
Wire cutters	
Wire strippers	

Section A: Enhanced Card Option 11C hardware installation

In this section

Enhanced Card Option 11C installation overview

Installation steps

Installing the Enhanced Card Option 11C requires these steps:

- removing the cover
- installing the RSM breakout assembly
- installing the Meridian Mail cards
- configuring the disk drive
- replacing the disk drive
- attaching the DSP daughterboards
- installing the external tape drive
- installing a printer
- configuring Meridian Mail to print SEERs

Required and optional hardware for the Enhanced Card Option 11C

Required hardware

The basic Meridian Mail hardware for Enhanced Card Option 11C consists of the following:

1	Meridian Mail Enhanced Processor Card (NT6R16AA)
up to 2	DSP daughterboards
1	Seagate ST34520N 4.5 Gbyte disk drive (mounted on the CPU card)

The Meridian Mail Enhanced Processor Card is in slot MM1.

Optional hardware

The following hardware is optional:

- External Archive tape drive kit and SCSI cable, North America (NT6P05BA)
- External Tandberg tape drive kit and SCSI cable, North America (NTAK30DA/A0639203)
- External tape drive kit and SCSI cable, United Kingdom (NTAK30EA/A0639205)
- External tape drive kit and SCSI cable, European Mainland (NTAK30AA)

  Note: Each tape drive kit comes with a power cord appropriate to its location.
- Tape drive wall mounting kit for either Archive or Tandberg drives (NTAK39AA)
- 3M brand DC6250 tapes (A0368760) for system backups
- Nortel Networks Personal Printer (C2501287)
- 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)
- ACCESS hardware, including RSM breakout assembly (Refer to “The RSM breakout assembly” on page 9-6.)

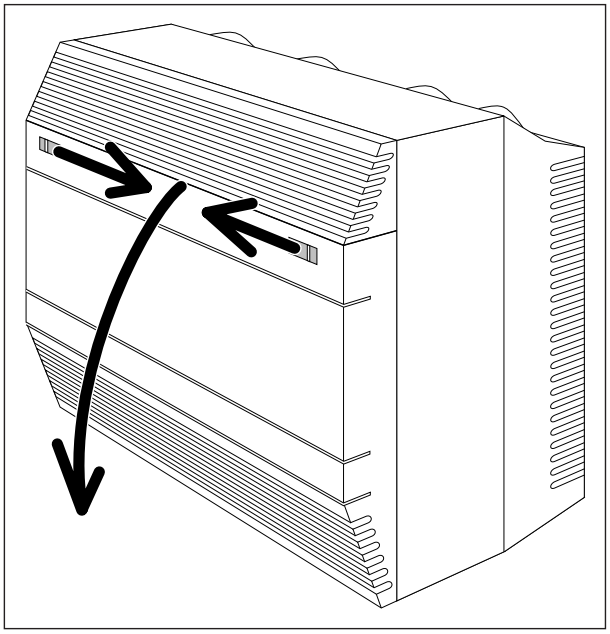
- RSM four-port breakout cable (NTDK58AA)

The HVS, Networking, and ACCESS Hardware Kits each contain the RSM breakout assembly, which fits under the Meridian 1 card cage and plugs into the far right 25-pair connector, J10.

Removing the cover

Introduction

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



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Installing the RSM breakout assembly

Introduction

The RSM breakout assembly (NTAK18BA) is a small circuit board with enhanced protection from electromagnetic interferance that sits in the cavity beneath the three Meridian Mail cards and is connected to connector J10, the right-most 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 those devices required for hospitality, networked, and ACCESS systems.

DANGER
Risk of shock

Before installing the RSM breakout assembly, verify that the Enhanced Card Option Processor Board is not plugged into the back of the Meridian 1 cabinet. Turning off Meridian Mail is not a sufficient safeguard.

CAUTION
Risk of equipment damage

Use extreme care and wear a grounding strap when handling the PCBs. They are susceptible to electrostatic damage, and to damage from rough or improper handling.

Installing the RSM breakout assembly

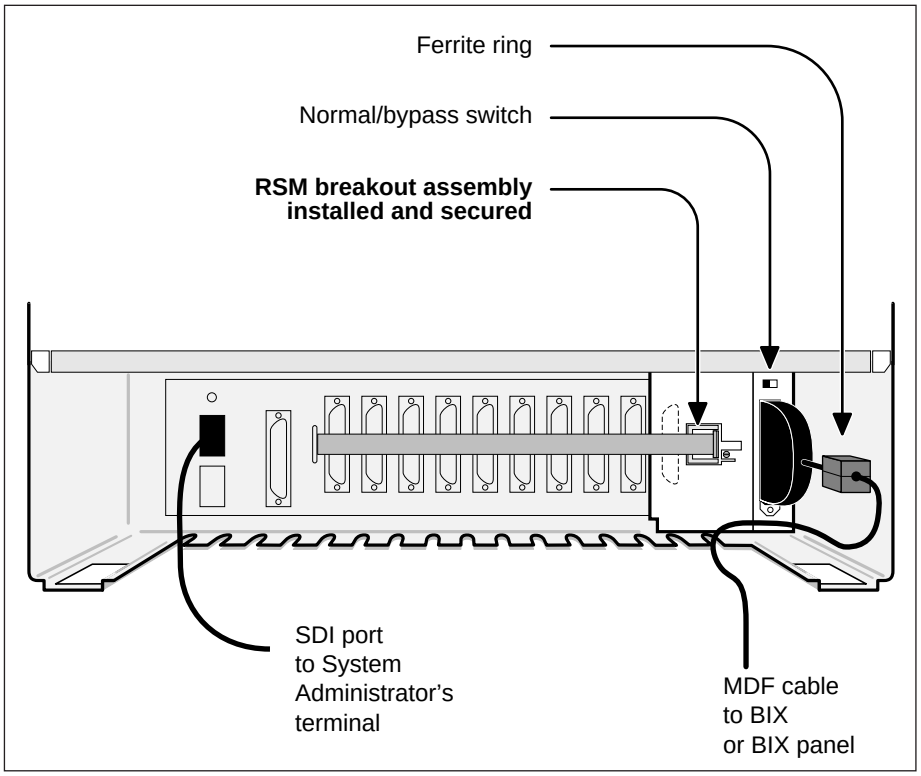
If you are installing a new Meridian Mail system, install the RSM breakout assembly before any other card.

To install the RSM breakout assembly, follow these steps.

Step	Action
1	When adding an RSM breakout assembly to an existing system, courtesy down Meridian Mail and power it down. See “Stopping Meridian Mail” on page 4-8.
2	Grasp the top lock latch with one hand and the bottom latch with the other. Then unlock both latches simultaneously, and pull the Meridian Mail Enhanced Processor Card until it is unplugged from the back of the cabinet. There is no need to remove it completely.
3	Remove the cable restraining bar.
4	Plug the end of the MDF cable equipped with a cubic ferrite ring into the RSM breakout assembly.
5	Move the small switch on the RSM breakout assembly to the “Normal” position, as indicated on the assembly.
6	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.
7	Run the MDF cable down through the Meridian 1 cabinet as shown in “The RSM breakout assembly” on page 1-12.
8	Replace the cable restraining bar.

You can now install or reinstall the Meridian Mail Enhanced Processor Card and turn on the Meridian Mail system.

The RSM breakout assembly



Note: You can also use a four-port break-out cable (NTDK58AA) instead of the MDF cable.

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 Chapter 7, "Hospitality systems," or Chapter 8, "Networked systems."

Installing the Meridian Mail cards

Introduction

The Meridian Mail Enhanced Processor Card connects to the Meridian 1 PBX through the connector at the back of the Meridian 1 cabinet. One or two DSP daughterboards are attached to the Meridian Mail Enhanced Processor Card.

CAUTION
Risk of equipment damage

Use extreme care and wear a grounding strap when handling the PCBs. They are susceptible to electrostatic damage, and to damage from rough or improper handling.

Switch settings

The Meridian Mail Enhanced Processor Card (NT6R16AA) has a JTAG/XChecker switch which needs to be set to ensure correct loading. Verify that this switch is set according to the following table.

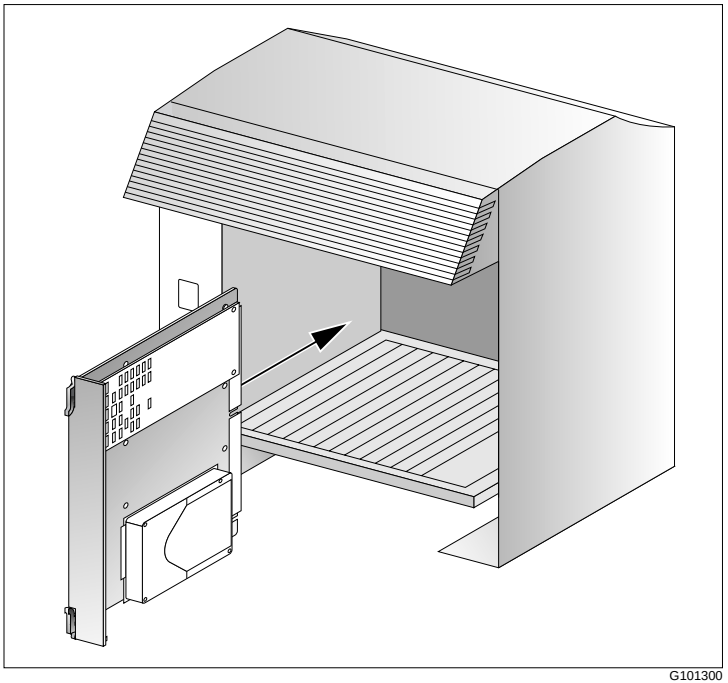
Card	Switch location	S1	S2
NT6R16AA	S2	ON	OFF

Inserting the Meridian Mail Enhanced Processor Card (NT6R16AA)

To insert the Meridian Mail Enhanced Processor Card, follow this step.

Step	Action
1	Insert the card into slot 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 “Inserting the Meridian Mail Enhanced Processor Card” on page 1-14.)

Inserting the Meridian Mail Enhanced Processor Card



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Configuring the disk drive

Introduction

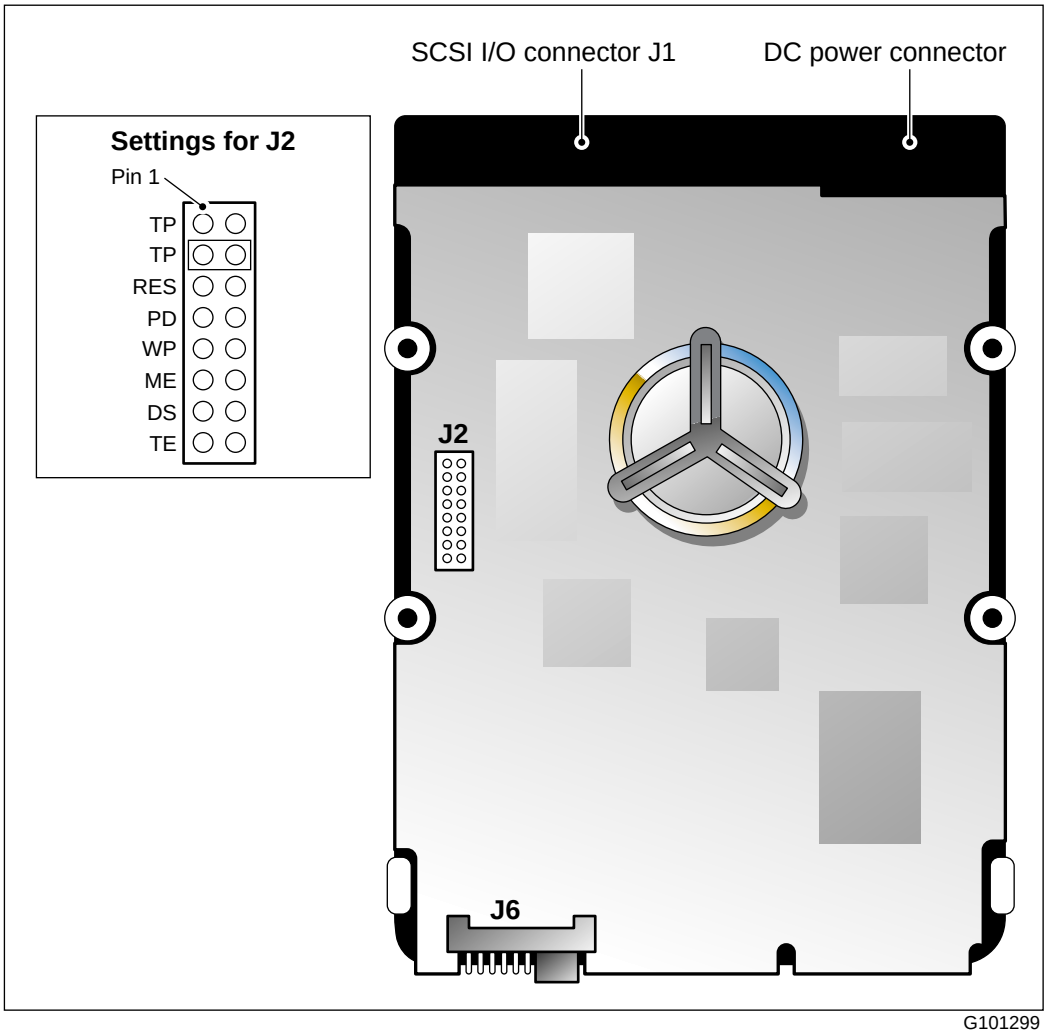
The Enhanced Card Option Processor Board is supplied with a Seagate ST34520N 4.5 Gbyte drive. Jumper configuration is shown in “Seagate ST34520N (4.5 Gbyte) disk drive configuration” on page 1-16.

Disk drive requirements for Enhanced Card Option

For a disk drive to function correctly with the Meridian Mail Enhanced card option, the following conditions must be in place:

- The disk drive must have no terminators.
- Its SCSI address must be set to 0.
- Its parity must be enabled.
- Its motor must be set to start up when the power is turned on.

Seagate ST34520N (4.5 Gbyte) disk drive configuration



Replacing the disk drive

Introduction

If the disk drive fails and needs to be replaced, use this procedure.

Installing the disk drive (NTDK74AB)

To install the disk drive, follow these steps.

Step	Action
1	Connect one end of the LED Jumper supplied to the J12 connector on the board, (the black wire is connected to the side marked with a dot (negative) of the J12 connector).
2	Connect the other end to the hard disk drive remote LED connection. For example, on ST34520N, the red wire (positive) goes to pin 11, and the black wire (negative or cathode) goes to pin 12.

At startup, the green LED lights up for about a half-second and then goes off. After the internal hardware diagnostics are complete, this green LED stays on if all of the Mail CPU Card hardware passes its test. A flashing green LED indicates that some hardware is in faulty condition. Typically, this fault can be cleared away by tightening the connection of the SCSI drive and/or the hard disk drive, or by replacing the hard disk drive, if necessary. The amber LED (HDD) lights whenever the hard disk drive is being accessed.

Attaching the DSP daughterboards

Introduction

A Meridian Mail Enhanced Card Option system can have from 4 to 12 ports, according to the number of DSP daughterboards plugged into the CPU board (Meridian Mail Enhanced Processor Card). The DSPs on the CPU board provide four ports and each daughterboard (maximum of two) provides four ports. The number of ports 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.

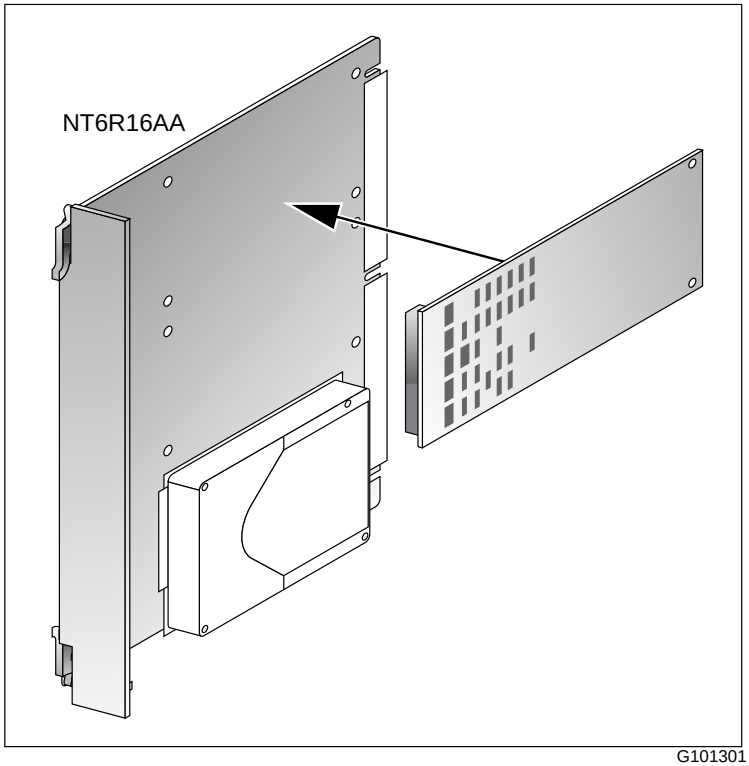
Attaching the DSP daughterboards

To attach the DSP daughterboards, follow these steps.

Step	Action
1	Position the locator holes on the end of the daughterboard on the locator pins on the Meridian Mail Enhanced Processor Card (CPU board). Press the connector on the daughterboard firmly into place on the CPU board. Then press the daughterboard firmly onto the locator pins.
2	Insert the assembled Meridian Mail Enhanced Processor Card into slot MM1, with the solder side to the left and the components to the right.

Note: If you are installing only one daughterboard, install it in the top position on the processor board.

Attaching the daughterboard to the Meridian Mail Enhanced Processor Card



Installing the external tape drive

Introduction

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.

Installing the external tape drive

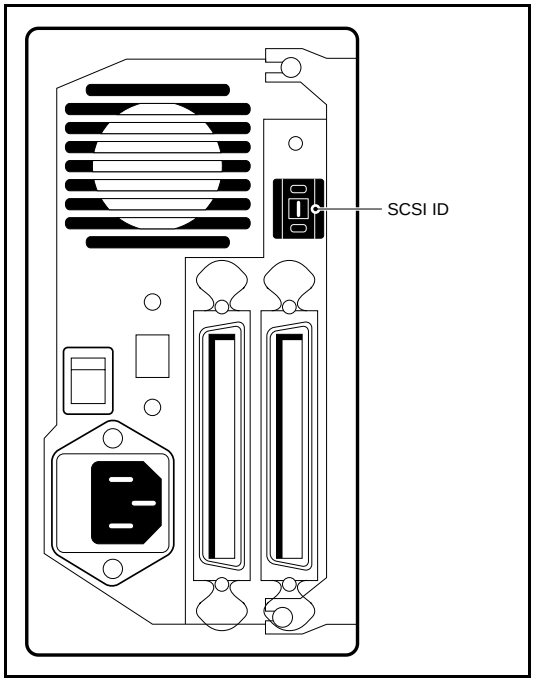
To install the external tape drive, follow these steps.

Step	Action
1	Unless you are installing Meridian Mail for the first time, courtesy down Meridian Mail and turn it off. (See "Stopping Meridian Mail" on page 4-8.)
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	Set the SCSI address for the appropriate tape drive to 1 as described in the table below.

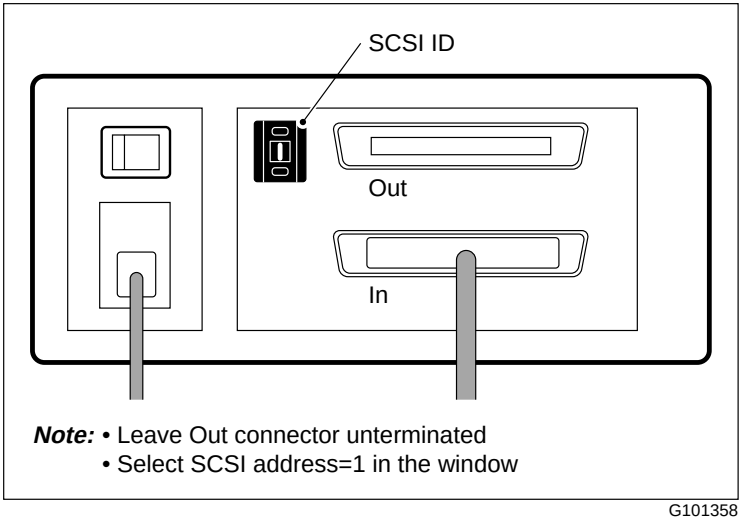
Setting the tape drive SCSI ID

Tape drive	To set SCSI ID
Archive Viper or 2150 ES	Press the up and down buttons until 1 appears in the SCSI ID window. (See "SCSI setting for the Archive tape drive" on page 1-21.)

SCSI setting for the Archive tape drive



SCSI setting for the Tandberg TDC 4220 tape drive—Rear view



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5 Plug the SCSI cable into the SCSI connector marked IN on the back of the tape drive. Because the Tandberg tape drive has internal terminating resistors, you *must not* connect an external SCSI terminator to the SCSI connector marked OUT on the back of the tape drive. Leave the OUT connector unused.

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.

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 "Mounting the external tape drive." 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.

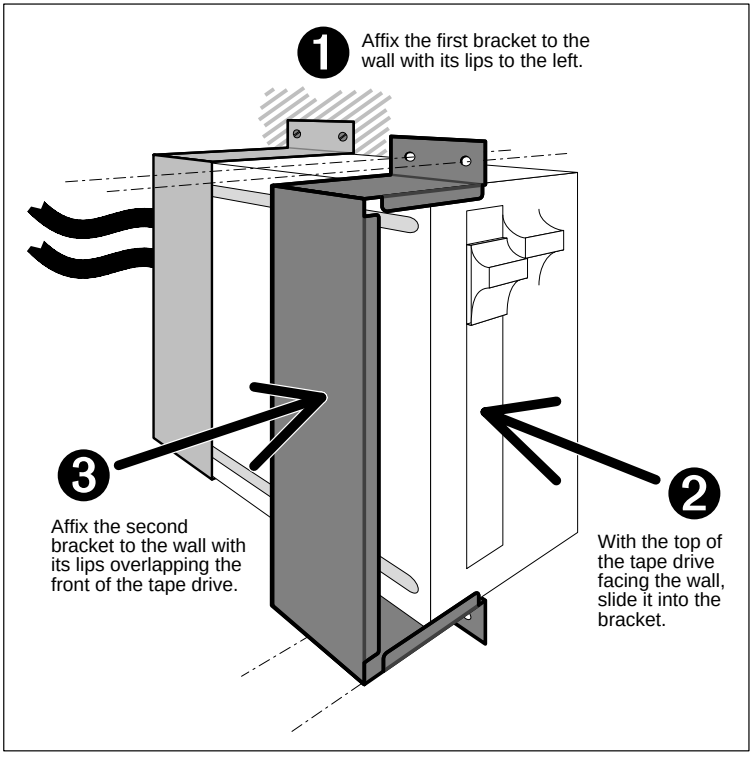
9 Do you have a Tandberg tape drive?

- If yes, verify that the tape drive's power is on.
- If no, continue.

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

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

Mounting the external tape drive



CARD-017

Inserting a tape

To insert a tape into the tape drive, follow these steps.

Step	Action
1	Position tapes with the label side to the top of the tape drive and the opening towards the front of the drive. ***Note:*** This applies to Viper tape drives only. If the tape drive has been mounted correctly on the wall, insert tapes with the label facing the wall and the opening facing upwards.
2	Insert the tape in the appropriate tape drive as described in the table that follows.

Tape drive	Directions
Archive tape drive	Push the tape all the way into the drive and slide the handle until the tape cartridge locks into place.
Tandberg tape drive	Press the Release button to open the door on the tape drive, and insert the tape. A diagram on the inside of the tape drive door indicates how to orient the tape.

3 Gently close the tape drive door.

Note: The tapes you receive from Nortel Networks are 3M brand DC6250 tapes (part number A0368760). Be sure
to use this tape format for your backups.

Removing a tape

To remove a tape, follow this step.

Step	Action
1	Remove the tape from the appropriate tape drive as described in the table below.

CAUTION
Risk of damage

Do not attempt to remove a tape when the drive is running, or the tape drive could be damaged.

IF you have	THEN
an Archive Viper tape drive	slide the handle on the front of the drive until the tape is ejected from the drive.
a Tandberg tape drive	press the Release button to open the door, and the tape will be ejected from the drive.

Tandberg Panther SE2000 tape drive status

Light status	Description
Steady	The tape is in and idle.
Flashing	The tape is in and spinning.
Off	The tape is out or the power is off.

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. Therefore, a tape drive should be included as part of the standard equipment.

To remove the external tape drive, follow these steps.

Step	Action
1	Refer to page 4-8 to courtesy down Meridian Mail and power down.
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 a SCSI terminator in its place.
5	Start Meridian Mail. (Refer to page 4-9.)

CAUTION
Risk of 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

Introduction

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 (SEERs) on the same printer as they are generated. SEERs 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 *Maintenance Messages* (NTP 555-7001-510).

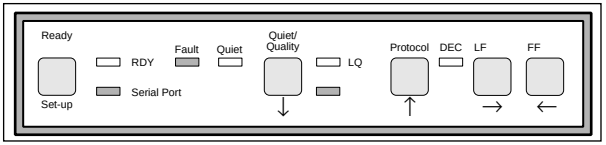
Meridian Mail supports two types of printer: the LA75 Plus Companion Printer, and the HP ThinkJet Printer (NT Personal Printer). If the printer you are installing is a different model, match its settings with those described in "LA75 Plus Companion printer default settings" on page 1-28, and "The LA75 Plus Companion printer control panel" on page 1-28, and use the setup procedures described in the printer's owner's manual.

Connecting and configuring the LA75 Plus Companion printer

To connect and configure the LA75 Plus Companion printer, follow these steps.

Step	Action
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 labeled PR using an A0369499 cable. ***For VT320, VT420, and VT520 terminals*** Connect the printer to the port labeled 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 labeled Auxiliary using an NTND82AA/AB cable. ***For HP700/22 terminals*** Connect the printer to the port labeled 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 labeled 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	Verify that the printer is turned off.
4	Press and hold the setup button on the front control panel of the printer and, at the same time, power on the printer.

The LA75 Plus Companion printer control panel



CARD-080

5 Release the setup 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 “LA75 Plus Companion printer default settings” on page 1-28. Additional settings are all defaults.)

LA75 Plus Companion printer default settings

Feature number	Name	Value number	Name
Generic 1	Protocol at powerup	3	Port dependent
Generic 2	Form length	9	27.94 cm (11 inches) (A)
Generic 3	Vertical pitch	4	6 lines per 2.54 cm (inch)
Generic 4	Automatic advances	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 2.54 cm (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

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 setup button on the control panel to save the settings.

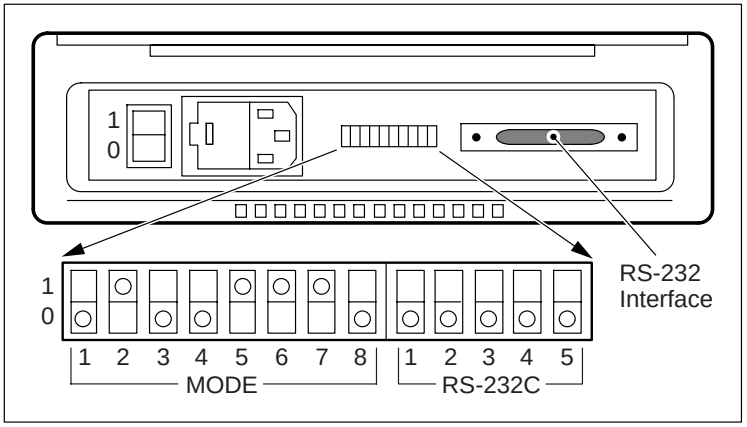
12 For more information, consult the owner's manual for the printer.

Connecting and configuring the HP ThinkJet printer

To connect and configure the HP ThinkJet printer, follow these steps.

Step	Action
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 port labeled PR using an A0369499 cable. ***For VT320, VT420, and VT520 terminals*** Connect the printer to the port labeled Printer Port using an A0376171 cable. ***For NT220 terminals*** Connect the printer to the port labeled Auxiliary using an NT0M96DC/DD cable. Some NT220 terminals require an Inmac 328 adapter (A0351509). ***For HP700/22 terminals*** Connect the printer to the port labeled Printer using an A0369499 cable. ***For HP700/32 terminals*** Connect the printer to the port labeled Port 2 using an A0376171 cable.
2	Set the switches at the back of the printer so that they match those in "The LA75 Plus Companion printer control panel" on page 1-28.

Configuring the HP ThinkJet printer



G100079

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	27.94 cm (11 inches)
5	Control sequence mode	Up	Alternate (not HP) mode
6–8	Character set selection	U, U, D	IBM 8
(RS-232 protocol switches)			
1	Handshaking mode	Down	XON/OFF
2–3	Parity and data bits	D, D	8 bits, no parity
4–5	Baud rate	D, D	9600 baud

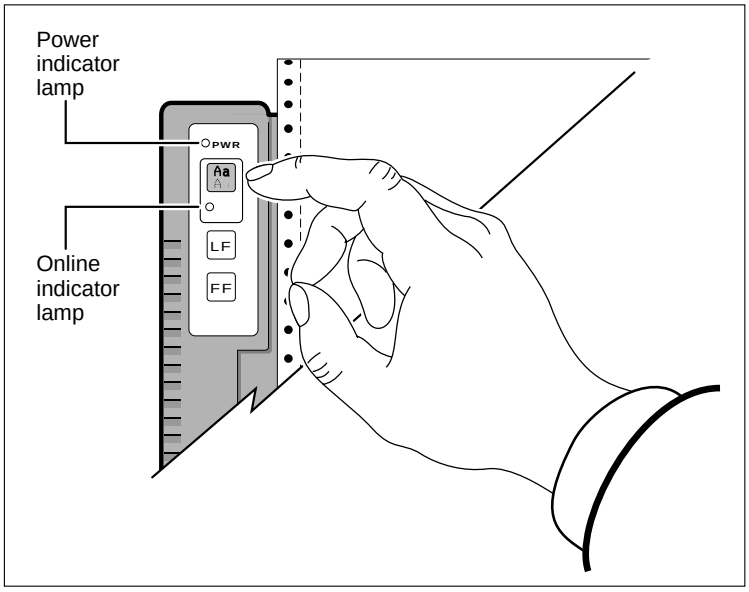
3	Plug the printer's AC adapter into an appropriate outlet. There is no need for it to be on the same circuit as the Meridian 1 cabinet.
4	Plug the adapter's power cord into the socket at the back of the printer.
5	Turn the power on.
6	To enable the printer, press the button immediately below the power indicator lamp as shown in "Enabling the HP ThinkJet printer" on page 1-33.
7	For more information, consult the printer's owner's manual.

Setting the printer to auto print mode

To set the printer to auto print mode, follow these steps.

Step	Action
1	Select Setup on the administration terminal to display the Setup screen.
2	Press <Return> to display the Printer Communication Setup screen.
3	Use the down arrow cursor key to move to the *Printer Speed* field.
4	Press <Return> to change the speed field to 9600.
5	Use the down arrow cursor key to move to the *Print mode* field.
6	Press <Return> to change to *Auto print mode*. This selection sets the printer to print everything automatically; otherwise, messages only appear on the terminal.
7	Press Setup to exit.

Enabling the HP ThinkJet printer



CARD-052

Configuring Meridian Mail to print SEERs

Introduction

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

Configuring the printer to print SEERs reports

To configure the printer to print SEERs, follow these steps.

Step	Action
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 *SEER Printing* field to Enabled.
4	Select [Save].

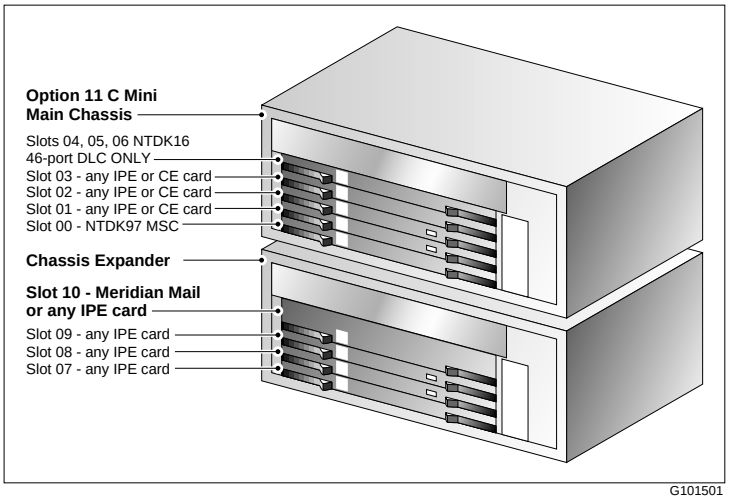
Section B: Meridian Mail Mini hardware installation

In this section

Meridian Mail Mini installation overview

Introduction

Meridian Mail Mini is compatible with the Meridian 1 Option 11C Mini PBX. It is integrated with the Option 11C Mini Chassis Expander.



Installation steps

Installing the Option 11C Mini requires these steps:

- removing the cover
- attaching the hard disk drive
- connecting the LED jumper wires
- adding daughterboards
- installing the Meridian Mail Enhanced Processor Card
- connecting the SCSI tape drive cable
- installing the RSM package
- installing the external tape drive
- installing a printer

Required and optional hardware for the Meridian Mail Mini

Overview

The Option 11C Mini system provides from 2 to 12 ports of voice mail, supporting a maximum of four system languages. The maximum storage capacity is 54 hours.

The amount of storage enabled depends on the Meridian Mail Release 13 features installed and the number of languages you enable. For example, Nortel Networks recommends that you enable at least five hours of storage if you enable two languages.

Basic hardware requirements

The basic hardware consists of the following:

1	Meridian Mail Enhanced Processor Card (NT6R16AA)
up to 2	DSP daughterboards (NTMW03AA Release 04 or above)
1	Seagate ST34520N 4.5 Gbyte disk drive
1	SCSI tape drive cable (NTTK12AA)

The hardware includes (as above) an Meridian Mail Enhanced Processor Card into which one or two DSP daughterboards can be plugged, providing a maximum of 8 ports (4 per daughterboard). The Meridian Mail Enhanced Processor Card plugs into the Option 11C Mini backplane.

Meridian Mail Enhanced Processor Card (NT6R16AA)

The Meridian Mail Enhanced Processor Card is the main board for the Meridian Mail Mini. It has a M68040 processor, four physical ports onboard, and a faceplate. This card is powered from the backplane of the Option 11C Mini.

Expansion daughterboards (NTMW03AA)

You can mount two additional 4-port digital signal processor (DSP) expansion daughterboards (NTMW03AA) directly on the processor card, for a maximum of 12 ports.

Port expansion is enabled by software keycode in 2-port increments.

Note: To be compatible with the Meridian Mail Enhanced Processor Card, the daughterboard must be a minimum of

Release 04. Check the release number of the pack, which is printed next to the product code NTMW03AA.

Other optional equipment

The following are optional:

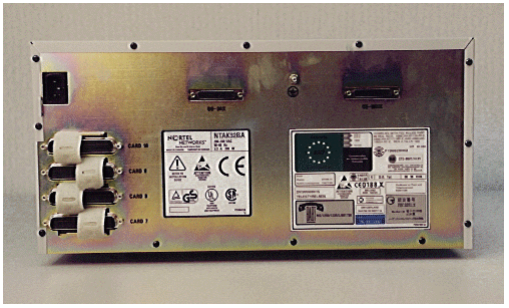
- Tandberg tape drive (NTAK30DB/QCA7015C)
- RS-232 service pack module (NTTK40AA), which includes a 4-port RS-232 breakout board (NTTK39AA) mounted within; an RSM cable (NTTK44AA)
- DEC520 terminal (A0383526)
- Citizen GSX-1901F serial printer (A0654974)

Removing the cover

Introduction

The following photograph shows the front of a rack-mounted chassis and chassis expander with covers in place:

The following photograph shows the back of the chassis expander:



Removing the cover

To remove the cover of the chassis expander, follow this step.

Step	Action
1	Use a screwdriver to unscrew the screws on the cover as shown below.

Attaching the hard disk drive

Introduction

The hard disk drive (NTDK74AB) is packaged separately to protect its parts from damage during shipment from the warehouse to the site.

Attaching the disk drive

To attach the hard disk drive, follow this step.

Step	Action
1	Connect the disk drive (NTDK74AB) to the Meridian Mail Enhanced Processor Card (NT6R16AA) before you load the software. ***Note:*** Use the four screws provided in the package.

Connecting the LED jumper wires

Introduction

The faceplate has two LEDs:

- a green LED, which indicates system status
- an amber LED (HDD), which lights whenever the hard disk drive is being accessed

The system is shipped with one end of the 5 cm (2-inch) LED jumper wire already attached to the J12 connector on the Meridian Mail Enhanced Processor Card (NT6R16AA). (That is, the black wire is connected to the side of the J12 connector marked with a dot "." (negative) .

After you install the hard disk on the NT6R16AA board, you connect the other end of the LED jumper wire to the hard disk drive.

Connecting the LED jumper wires

To connect the LED jumper wires, follow these steps.

Step	Action
1	Connect the red wire (positive) to the anode.
2	Connect the black wire (negative) to the cathode of the remote LED.

Note: Refer to the *Meridian Mail Release 13 General Release Bulletin* for the disk jumper settings.

Testing the faceplate LEDs

To test the faceplate LEDs, follow this step.

Step	Action
1	Plug in the circuit pack in its chassis location. ***Note:*** After Meridian Mail is reset, it takes approximately five minutes for the hard disk to be accessed and the HDD faceplate LED to light.

Note: At startup, the green LED lights for about a half-second and then goes off. After the internal hardware diagnostics are complete, this green LED stays on if all the Meridian Mail Enhanced Processor Card hardware passes its test. A flashing green LED indicates that some hardware is in faulty condition. Typically, this fault can be cleared by tightening the connection of the SCSI drive, or the hard disk drive, or both, or by replacing the hard disk drive, if necessary.

Adding daughterboards

Introduction

Note: This step is optional.

The Meridian Mail Enhanced Processor Card has four physical ports onboard.

If your system requires more than four ports, you can add one or two 4-port DSP expansion daughterboards (NTMW03AA), for a maximum of 12 ports.

The number of ports 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.

Before you begin

Confirm that the daughterboard is a minimum of Release 04. The release number is printed next to the product code NTMW03AA.

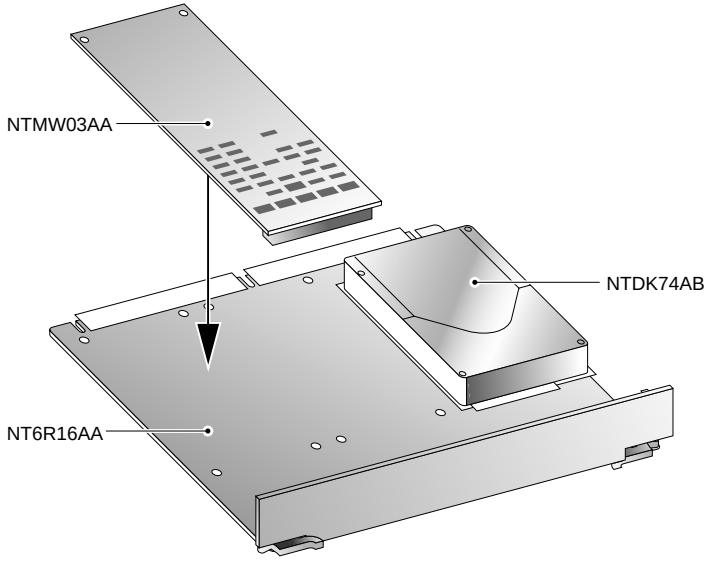
Attaching a daughterboard

To attach a daughterboard, follow these steps.

Step	Action
1	Start from the top connector.
2	Position the locator holes on the end of the daughterboard over the locator pins on the Meridian Mail Enhanced Processor Card.

3 Press the connector on the daughterboard firmly into place on the Meridian Mail Enhanced Processor Card.

4 Press the daughterboard firmly onto the locator pins.



5 To add a second daughterboard (and 4 additional ports, for a total of 12), repeat step 2 to step 4.

Note: If you are installing only one daughterboard, install it in the top position on the processor board.

Installing the Meridian Mail Enhanced Processor Card

Introduction

Next, attach the assembled Meridian Mail Enhanced Processor Card to the Option 11C Mini Chassis Expander.

CAUTION
Risk of equipment damage

Use extreme care and wear a grounding strap when handling the PCBs. They are susceptible to electrostatic damage, and to damage from rough or improper handling.

Installing the Meridian Mail Enhanced Processor Card

To install the Meridian Mail Enhanced Processor Card, follow these steps.

Step	Action
1	Unlock the latch lock on the Meridian Mail Enhanced Processor Card (NT6R16AA).
2	For a rackmount Option 11C Mini Chassis Expander, insert the assembled Meridian Mail Enhanced Processor Card into the Mail slot with the components on the top.
3	Slide the board halfway into slot 10 of the Option 11C Mini Chassis Expander.

Connecting the SCSI tape drive cable

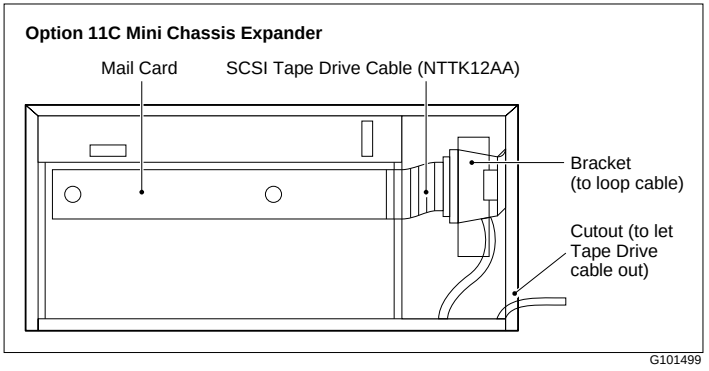
Introduction

Next, connect the SCSI tape drive cable (NTTK12AA) to the Meridian Mail Enhanced Processor Card (NT6R16AA).

The SCSI connector is located behind the faceplate of the Meridian Mail Enhanced Processor Card and is not visible from the front. In this procedure, you set up an easy access for Meridian Mail Mini to a tape drive.

The Mail mounting bracket (P0903798) has a 4.4 cm (1.75 inch) cutout in its bend radius area, behind where the SCSI cable mounts to the bracket. This cutout neatly contains the excess ribbon cable as it passes through.

Note: This loop of ribbon cable provides a service loop for the Meridian Mail Enhanced Processor Card. Because of this cable, you can extract the card whenever necessary without disturbing the cable assemblies associated with the mounting bracket.



Note: You can install the Meridian Mail hardware while the Meridian 1 PBX is running.

Connecting the SCSI tape drive cable

To connect the SCSI tape drive cable, follow these steps.

Step	Action
1	Attach one end of the SCSI tape drive cable (NTTK12AA) to the SCSI connector on the Meridian Mail Enhanced Processor Card (NT6R16AA).
2	Dress the ribbon cable along the back of the faceplate, and exit at the end of the faceplate.
3	Insert the Meridian Mail Enhanced Processor Card back into the chassis.
4	Remove the Mail bracket (P0903798) from the fan baffle of the Option 11C Mini chassis assembly by removing the two mounting screws.
5	Attach the remaining end of the SCSI tape drive cable to the Mail bracket using the two mounting screws provided. ***Note:*** Orient the connector so that the cable of the mating external tape drive cable travels down and to the right, to exit from the Option 11C Mini chassis through the bottom cutout in the chassis.
6	Attach the mating tape drive cable to the SCSI cable and Mail bracket assembly.
7	Mount the Mail bracket back in the chassis assembly.
8	Dress the excess ribbon cable of the SCSI cable to the right and back toward the bracket.
9	Push the Meridian Mail Enhanced Processor Card all the way to the back of the chassis, and use the latch levers to insert the card into the backplane.

Installing the RSM package

Introduction

Note: This step is optional.

The RS-232C service module (RSM) assembly (NTTK40AA) is an externally mounted module, which provides four RS-232C port connections for

- ACCESS Enable, AutoAdmin, or hospitality

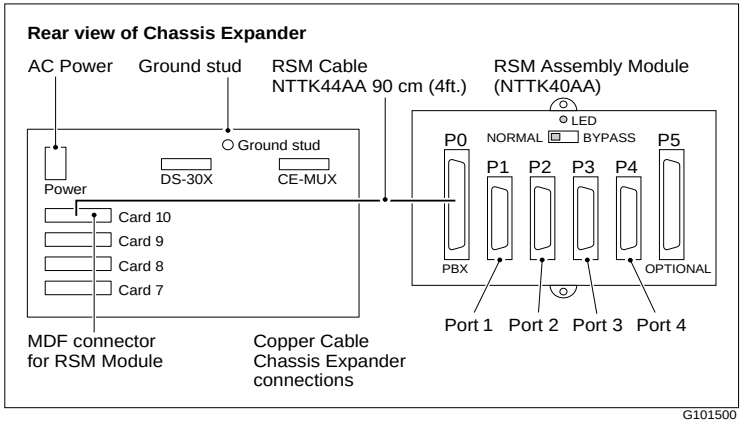
  or

- connection to a modem, terminal, or printer

The 4-port RSM assembly module package (NTTS36AA) consists of

- the RSM assembly module (NTTK40AA)
  - a mechanical enclosure containing an RS-232C service module break-out board (NTTK39AA)
- a 90 cm (4 ft) shielded RSM cable (NTTK44AA)

The RSM cable connects the RSM module assembly to the card 10 MDF connector at the rear of the Option 11C Mini chassis.



DANGER
Risk of electric shock

Before installing the RSM breakout assembly, verify that the Enhanced Card Option Processor Board is not plugged into the back of the Meridian 1 chassis. Turning off Meridian Mail is not a sufficient safeguard.

CAUTION
Risk of equipment damage

Use extreme care and wear a grounding strap when handling the PCBs. They are susceptible to electrostatic damage, and to damage from rough or improper handling.

Installing the RSM breakout assembly

To install the RSM breakout assembly, follow these steps.

Step	Action
1	If you are adding an RSM breakout assembly to an existing system, courtesy down Meridian Mail and power it down. See “Stopping Meridian Mail” on page 4-8.
2	Connect one end of the RSM cable (NTTK44AA) to the MDF connector at the back of the Mail slot (slot 10) of the Option 11C Mini Chassis Expander.
3	Connect the other end of the RSM cable to the P0 connector on the RSM assembly (NTTK40AA).

Installing the external tape drive

Introduction

Note: This step is optional.

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.

This procedure is identical to the procedure for the Enhanced Card Option 11C. See page 1-20.

Installing a printer

Introduction

Note: This step is optional.

A printer connected to the system administrator's terminal enables the administrator to print reports using Meridian Mail's Operational Measurements function.

This procedure is identical to the procedure for the Enhanced Card Option 11C. See page 1-26.

Chapter 2

System installation and modification

In this chapter

Overview

Introduction

This chapter describes how to access and use the System Installation and Modification menu that comes on the Meridian Mail software tape. This utility is used when installing software on new systems, modifying the software on existing systems, restoring systems from a backup tape, and performing routine system maintenance.

Note: Software installation is identical for an Enhanced Card Option 11C system and for an Option 11C Mini system. The software installation record shows that the Enhanced Card Option has been installed.

For more detail on system installation and modification, refer to the *System Installation and Modification Guide* (NTP 555-7001-215.)

The software tape

Introduction

The software tape you receive depends on the languages you order, as seen in the table below. You receive more than one tape if the languages you order are not all on the same tape. For instance, if you order German and Russian, you receive the North American tape and the Europe 2 tape.

Software tapes and languages

Tape	Order number	Languages
North America	NT6R47AC	North American English Canadian French American Spanish German Japanese Italian Brazilian Portuguese
Europe 1	NT6R47BC	North American English European English—Female European French European Spanish German Italian Dutch
Europe 2	NT6R47CC	North American English Swedish Norwegian Danish Finnish Russian
Europe 3	NT6R47EC	North American English European English—Male Arabic Portuguese Turkish

Asia-Pacific	NT6R47DC	North American English New Zealand (Australasian) English Japanese Intec Japanese Mandarin Taiwanese Mandarin Korean

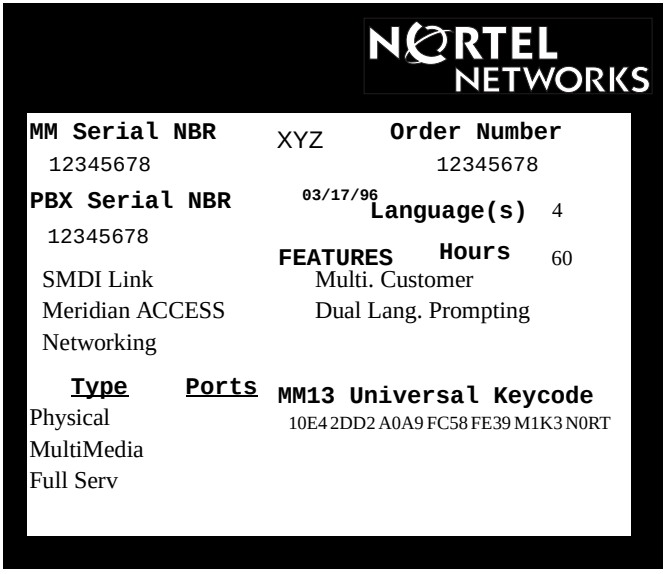
Keycodes and labels

Introduction

Many of the functions available through the PC Applications require you to enter a special access code. This keycode is provided by your Meridian 1 representative and unlocks the capabilities you have purchased for your system.

The keycode for a system is printed on the label on the box containing the Meridian Mail software tape. "A typical Enhanced Card Option label," as shown below, is an example of a label with a keycode. 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 still have the keycode you need. If you are responsible for more than one Meridian Mail system, use the correct keycode for each system.

A typical Enhanced Card Option label



Serial numbers

A serial number appears on the label—*MM Serial Number*—which is matched to the keycode. The system software compares the parameters defined by the keycode with the new

configuration and serial number during a system operation. If an exact match is not found, the keycode is rejected.

Modifying your system

If you want to modify your system, your Meridian 1 representative can provide you with a new keycode to unlock any new capabilities you purchase.

For example, you might want to take advantage of the latest release of the software, increase your ports, and add some new features. A single new keycode unlocks all these modifications.

Using the System Installation and Modification menu

Introduction

The System Installation and Modification Menu is obtained from the Meridian Mail software tape. The procedure to install the tape follows.

Installing the Meridian Mail software tape

To install the Meridian Mail software tape, follow these steps.

Step	Action
1	Refer to “Stopping Meridian Mail” on page 4-8 to follow the courtesy down procedure for Meridian Mail. ***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. The green light on the Archive drive indicates that the tape drive is on. The Tandberg drive light is green when the tape is in or unlit if it is empty. (Refer to “Hardware Installation” for additional instructions.)
3	Insert the Meridian Mail software tape into the tape drive. (Refer to “Inserting a tape” on page 1-23.) ***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 does not matter which one you use to run the System Installation and Modification Utility. Only when you want to load languages not contained on this tape do you need to insert another software tape.

Step	Action
4	Start Meridian Mail. (Refer to “Starting Meridian Mail” on page 4-9.) Just above the reset switch on the Meridian Mail Enhanced Processor Card are two LEDs (the left one is green, the right one is amber). When the system is first turned on, the green 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 almost the same time that the LED lights up, the PBX prompts similar to the following appear: ESDA002 9 <time and date> CSA003 9 <time and date> a. While Meridian Mail is starting up, toggle to the PBX terminal and verify the following: •Time and date are correctly set. •The AML is in auto setup mode. (See “For Release 17 systems and earlier” on page 4-5 or “For Release 18 systems and later” on page 4-6.) •The voice ports (hardware locations) are not disabled. (See “Enabling a hardware location” on page 4-28.) b. Type **AX** and press <Return> to toggle to the Meridian Mail terminal. 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 MM13 system
        2  Comprehensive Upgrade
        3  More Utilities









Please enter the operation number:
```

SI&M Menu

If this does not happen, refer to Chapter 5.

Responding to the prompts

Many of the prompts you see while using the System Installation and Modification Menu contain the standard default for the prompt. To accept the default, proceed as follows:

To respond to the prompts, follow this step.

Step	Action
1	Press <Return>.

To choose an alternative follow these steps:

Step	Action
1	Press the up and down arrow keys to move through the list of alternatives.
2	Press <Return> to accept your choice.

To enter custom data follow these steps:

Step	Action
1	Press <Remove> to delete the default.
2	Enter your data.
3	Press <Return>.

Assigning hardware location attributes

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

A Meridian Mail Enhanced Card Option system can be equipped with up to 12 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 Enhanced 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. Hardware locations 7 and 8 are defined as basic voice ports.

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

- Enhanced Card Option systems have only one node and a maximum of 12 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:

Changing attributes of hardware locations

To change the attributes of hardware locations, follow these steps.

Step	Action
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 appears again to reflect the changes.
7	At the prompt, `Is this correct?` proceed as follows: 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.

Chapter 3

Software installation

In this chapter

Overview

Introduction

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 only needs to be reinstalled in the event of a disk drive failure.

Note: Software installation is identical for an Enhanced Card Option 11C system and for an Option 11C Mini system. The software installation record shows that the Enhanced Card Option has been installed.

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

For more detail on software installation, refer to the Enhanced Card Option sections of the *System Installation and Modification Guide* (NTP 555-7001-215).

ATTENTION

During installation of Enhanced Card Option TN software, default values must be programmed. If the routing address is redefined with values other than the default, a problem occurs resulting in the absence of voice prompts. For routing values, see the table “Hardware locations” on page 10-6.

What you need

Introduction

For software installation, you need

- the Meridian Mail software tape, NTAK72*x*E (Refer to Chapter 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, verify 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 is rejected.

Before installing the software

Introduction

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 that has been operating for some time, you must ensure that these DNs have not been assigned to some other purpose.

Printing existing configuration before installation

To print existing configuration before installation, follow these steps.

Step	Action
1	Log on to the Meridian 1 PBX. (Refer to “Logging on to the Meridian 1 PBX” on page 4-3.)
2	Print a hardware location report by following the prompts in “Printing a hardware location report” on page 4-25 and, using the hardware location table on page 10-7, verify that the default hardware location DNs have not been reassigned or altered.
3	Print an ACD queue report by following the prompts in “Printing an ACD queue report” on page 4-25 and, referring to the parameters listed in “Creating a new Voice Messaging DN” on page 4-26 and “Creating a new service DN” on page 4-28, 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 that are not in use by following the procedures in “Changing the default Meridian Mail DNs” on page 4-19.

Automatic and manual configuration

Introduction

Based on the options you choose, auto configuration can set up a series of default users, the default services listed in "Meridian Mail defaults," and the automated attendant described in *Meridian Mail System Administration* (NTP 555-7001-301).

It has, however, come to the attention of Nortel Networks 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 whether the type of system you are installing is a hospitality system, and on whether you requested default voice services.

Default service DNs

	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

Introduction

Installation of the software for a Meridian Mail Enhanced Card Option system takes about 45 minutes from start to finish, plus an extra 20 minutes for each additional language.

Installing the software

To install the software, follow these steps.

Step	Action
1	Obtain the System Installation and Modification menu by running the Meridian Mail software tape. (Refer to Chapter 2.) ***Note:*** For details on this procedure, refer to *System Installation and Modification Guide* (NTP 555-7001-215).
2	From the System Installation and Modification menu, choose 1 Install an MM13 system.
3	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 (Enhanced Card Option systems have 4 data ports for connecting various peripherals. The following are the recommended settings for these ports.)

Recommended data port settings for Enhanced Card Option

Location	Basic system	Hospitality system	Networked system	Networked hospitality system	ACCESS system
Node 1 Card 1					
Port 1	Console	Console	Console	Console	Console
Port 2	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)
Node 1 Card 2(RSM)					
Port 1	Modem	GAC (optional)	Modem	Modem	Modem
Port 2	Printer	GAC	Printer	GAC	ICL
Port 3	Printer	PMS	Printer	PMS	Printer
Port 4	Printer	PMS	Printer	PMS	Printer

The port locations you define here must match the connections you make to the RSM breakout assembly. The wiring diagrams for hospitality systems (“Hospitality system cables” on page 7-6), networked systems (“Networked system cables—Meridian Mail Mini” on page 8-6), and ACCESS systems (“ACCESS system cables—Meridian Mail Mini” on page 9-9) are based on these recommended values. If you customize the port locations, ensure that you change the wiring accordingly.

4 Respond to the prompts as they appear. You might choose to auto-configure your system with default values, or you may manually configure your own values for these features after installing the software. See “Automatic and manual configuration” on page 3-5 for additional information.

Do not worry if you respond to a prompt incorrectly. Before the final installation begins, you are given another opportunity to reenter the information.

The final installation can take up to 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.

5 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.
#TAPE:MMTAPE/>

6 When the tape has finished rewinding and the light on the front of the tape drive goes out, follow these steps:

a. Remove the tape from the drive. (Refer to “Removing a tape” on page 1-24.)
b. Power Meridian Mail down, as outlined in “Stopping Meridian Mail” on page 4-8.
c. Wait 10 seconds.

7 Start Meridian Mail. (Refer to “Starting Meridian Mail” on page 4-9.)

8 If, when you start Meridian Mail, the terminal displays the Meridian Mail logon screen 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 5-11.

9 If the terminal is incorrectly displaying the lines on the Meridian Mail logon screen as a string of “q”s, follow these steps:

a. Press <Control> **W**.

You are presented with a small pop-up menu.

b. Enter **IF** <Return>.

The screen redraws correctly.

Setting up the system

Introduction

Before anyone can use Meridian Mail, you must ensure that the following items have been defined:

- 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

After this is done, the system administrator can customize the system by following the procedures in *Meridian Mail System Administration* (NTP 555-7001-301).

Using default values

The final three items in the preceding list may have already been automatically configured during software installation. You can leave them as they are or reconfigure them to your requirements. The procedures in this chapter use the suggested values defined in Chapter 10, “Meridian Mail defaults.” 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 4-19.

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, follow these guidelines:

- Change passwords every three to four weeks.
- Choose passwords that are easy to remember, and do not write them down anywhere that someone might find them.
- Choose a long password (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.

To set the time and date, follow these steps.

Step	Action
1	Log on to the Meridian 1 PBX and set the PBX's time and date. (Refer to "Setting the time and date on the switch" on page 4-3.)
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 that 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 that are predefined on every Option 11 PBX. Refer to the *Option 11 Administration Guide*, "How to activate telephones."

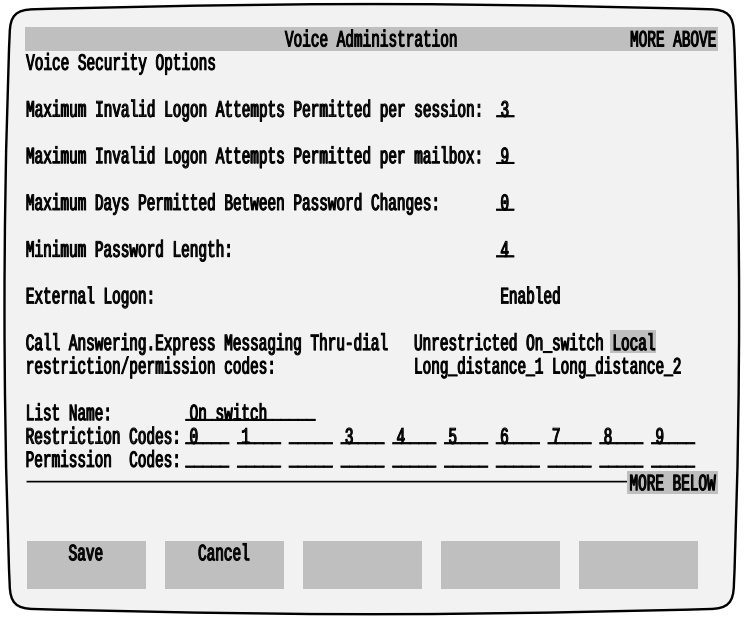
Setting the on-switch dialing restrictions

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.

To set the on-switch dialing restrictions, follow these steps.

Step	Action
1	Log on to the Meridian Mail Main menu.
2	Select the following options to access the Voice Security Options form: 3 Voice Administration 2 Voice Security Options The Voice Security Options form appears

The Voice Security Options form



CARD-088

3	Scroll down until the first *List Name* appears. The name should be On_switch. (Refer to the screen illustration above.)
4	Move the cursor to the restriction code corresponding to the first digit in your dialing plan. Normally, this is 2.
5	Select Remove.
6	Select the [Save] softkey.

Assigning a system administrator

Following the procedures in the chapter entitled "Day to day business" in the *System Installation and Modification Guide* (NTP 555-7001-215), 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 in the chapter, "Customizing your system" in the *System Installation and Modification Guide* (NTP 555-7001-215). An Automated Attendant is not normally part of a default Hospitality system although you can configure the Hotel Menus DN to function as one.

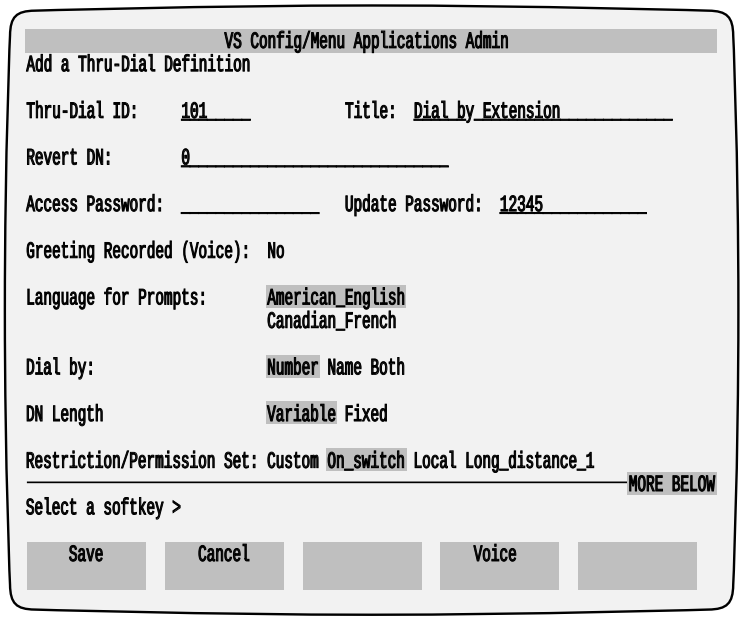
It is important that you set up the Thru-dial Definition and the Voice Menu Service before you set up the entry in the Voice Services DN table for the Automated Attendant.

Setting up the Thru-dial Definition

To set up the Thru-dial Definition, follow these steps.

Step	Action
1	From the Meridian Mail 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	Select [Add]. The Add a Thru-dial Definition form appears. (Refer to "The Add a Thru-dial Definition form" on page 3-14.)

The Add a Thru-dial Definition form



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.”

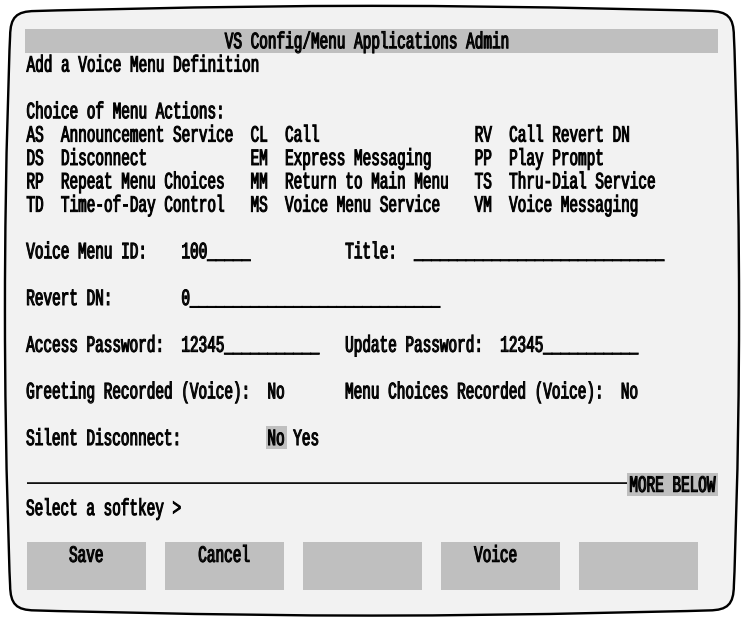
9 Select [Save] .

Setting up the Voice Menu Service

To set up the Voice Menu service, follow these steps.

Step	Action
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 installed system, this list should be blank.
2	Select Add. The Add a Voice Menu Definition form appears. (Refer to the following illustration.)

The Add a Voice Menu Definition form (one)



CARD-056

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

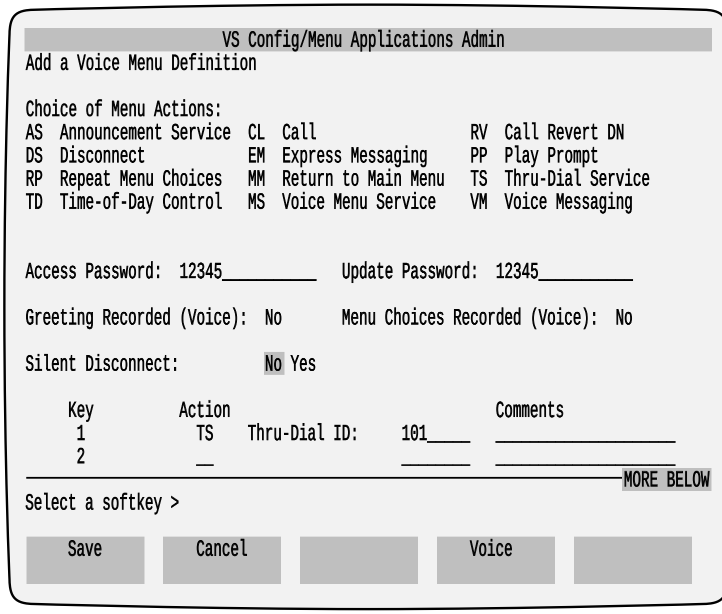
4 For Revert DN, enter **0**.

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

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

7 Move downwards until the table of keys and their associated actions appears. (Refer to the following illustration.)

The Add a Voice Menu Definition form (two)



```
                     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
```

CARD-057

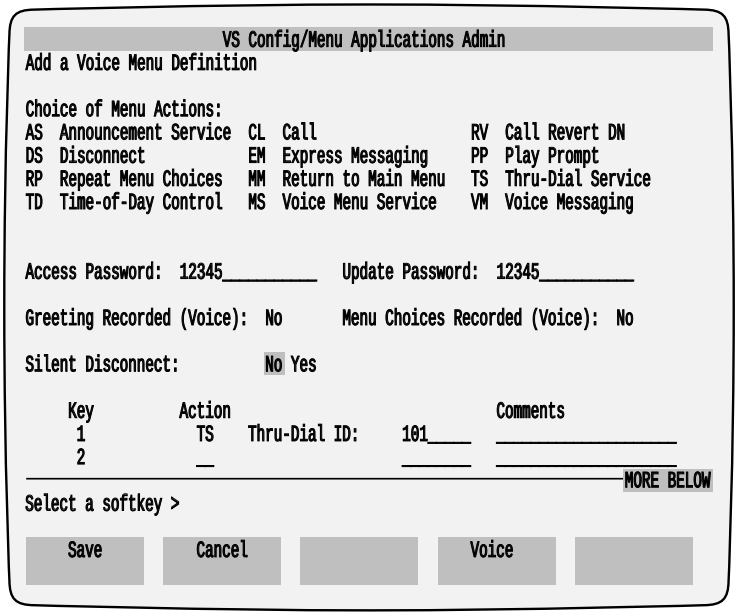
8 Under the Action for Key 1, enter **TS**.

The Thru-dial ID field appears.

9 For Thru-dial ID, enter **101** (the number you entered in Step 3).

10 Move down to the end of the form. (Refer to “The Add a Voice Menu Definition form (three)” on page 3-17.)

The Add a Voice Menu Definition form (three)



CARD-057

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

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

13 Select [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 3-20.

To set up the Voice Services DN table for basic systems, follow these steps.

Step	Action
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	Select [Add]. The Add DN Information form appears. (Refer to the following illustration.)

```
                    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
```

CARD-057

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 3-15).

6 Select [Save].

Voice Messaging

7 From the Voice Service DN Table, select the [Add] softkey.

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

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

10 Select [Save].

Express Messaging

11 From the Voice Service DN Table, select [Add].

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

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

14 Select [Save].

Voice Prompt Maintenance

15 From the Voice Service DN Table, select [Add].

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

17 For Service, enter **PM**.

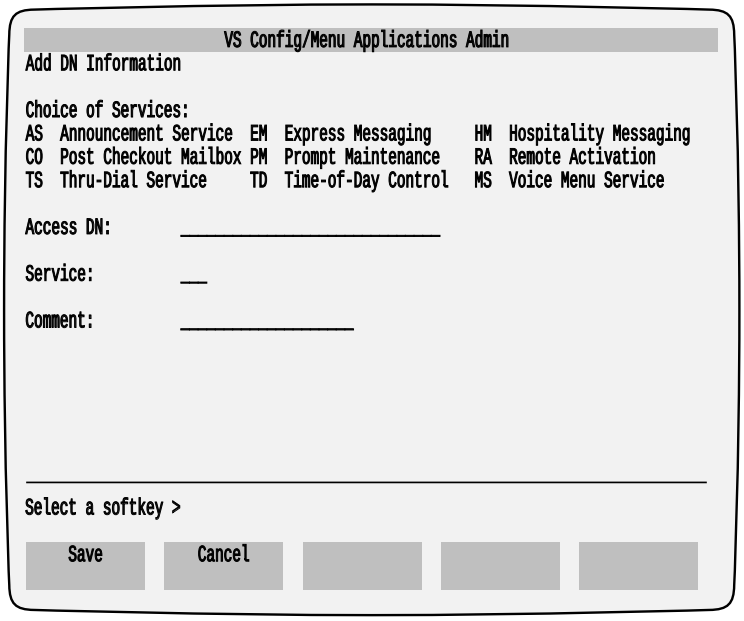
18 Select [Save].
Note: The default password for this service is the same as the DN. To change the password, log on to Meridian Mail using this mailbox number and press 84.

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. When setting up a basic system, refer to "Setting up the Voice Services DN Table (basic systems)" on page 3-17.

To set up the Voice Services DN table for Hospitality systems, follow these steps.

Step	Action
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	Select Add. The Add DN Information screen appears. (Refer to the following illustration.)



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 Select Add.

Hotel Menu

7 From Voice Service DN Table, select <Add>.

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

9 For *Service,* enter **MS**.
The Voice Menu ID field appears.
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 3-15).
Otherwise, leave this field blank.

10 Select [Save].

Express Messaging

11 From Voice Service DN Table, select [Add].

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

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

14 Select Add.

Published Numbers

15 From Voice Service DN Table, select [Add].

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

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

18 For Auto-Login, choose Disabled.

19 Select [Save].

Post Checkout

20 From Voice Service DN Table, select <Add>.

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

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

23 Select [Save].

Staff Messaging

24 From Voice Service DN Table, select <Add>.

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

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

27 For Auto-Login, choose Enabled.

28 Select [Save].

Adding a block of voice mailboxes

You can 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 "Adding a block of users" on page 4-16. The instructions for adding one user at a time can be found in the *System Installation and Modification Guide* (NTP 555-7001-215).

Whichever 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.

Chapter 4

Basic system procedures

In this chapter

Overview

Introduction

This chapter describes the following software procedures:

- setting the time and date on the Meridian 1 PBX
- stopping and starting the Meridian Mail system
- backing up and restoring a customer's Meridian Mail data
- adding or deleting blocks of users
- customizing a customer's service DNs

Meridian Mail system administration is described in *Meridian Mail System Administration* (NTP 555-7001-301).

After you complete every system operation, start your system to full service. Before starting, the following items must be checked on the Meridian Mail 11C Mini's PBX:

- The time is set properly.
- The virtual agents are in idle state.
- The corresponding link is in auto-setup.

Switching between Meridian Mail and Meridian 1 PBX

You use the same terminal to access both Meridian Mail and the Meridian 1 PBX.

To switch between Meridian Mail and the Meridian 1 PBX, follow these steps.

Step	Action
1	Press <Control> **]** to switch to the Meridian PBX display from Meridian Mail.
2	Enter **AX** <Return> to return to the Meridian Mail display. ***Note 1:*** You are returned to the system administrator screen you were using when you accessed the PBX. ***Note 2:*** On Meridian 1 Software release 22, if there is more than one link configured, enter AX n<Return>, where n is the TTY number of the link to which you are connecting. In most Meridian Mail installations, this is 8; therefore, enter AX 8<Return>.

If you have any problems accessing the Meridian 1 PBX, refer to the appropriate chapters of *Meridian 1 Option 11 Administration Guide* (NTP 553-3011-210).

Logging on to the Meridian 1 PBX

To log on to the Meridian 1 PBX, follow these steps.

Step	Action
1	If you are in Meridian Mail, press <Control> **].**
2	Press <Return>. 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.
3	If you do not 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 one line at a time; the system automatically moves the cursor to the next line.
4	Enter **LOGI** <Return>. ***Note 1:*** For this and all other Meridian 1 commands, use uppercase letters only. Based on the status of the system, you might or might not be prompted for the Meridian 1 password.
5	At the prompt, enter the Meridian 1 password. *You are presented with the > prompt.*

Setting the time and date on the switch

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.

To set the time and date on the switch, follow these steps.

Step	Action
1	Log on to the Meridian 1 PBX. (See above.)
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>. Example: 23 05 1995 15 30 30 (For May 23, 1995, 3:30 p.m.) ***Note 1:*** 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 1:*** It can take as long as three minutes for your changes to take effect on Meridian Mail.

Enabling and disabling the console and AML data ports

Introduction

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, follow these steps.

Step	Action
1	Log on to the Meridian 1 PBX. (Refer to "Logging on to the Meridian 1 PBX" on page 4-3.)
2	At the > prompt, enter **LD 22** <Return>.
3	At the **REQ** prompt, enter **ISS** <Return>. The system responds with a display that 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.

Enabling the console and the AML data ports

Step	Action
1	Log on to the Meridian 1 PBX. (Refer to "Logging on to the Meridian 1 PBX" on page 4-3.)
2	At the > prompt, enter the following: **LD 48** <Return>. **ACMS 9** <Return> to establish the link on port 9.
3	Enter * * * * .

Disabling the console and the AML data ports

Step	Action
1	Log on to the Meridian 1 PBX. (Refer to "Logging on to the Meridian 1 PBX" on page 4-3.)
2	At the > prompt, enter the following: **LD 37** <Return>. **DIS TTY 8** <Return> to disable the console's data port.
3	At the LSL TTY (Y/N) prompt, enter Y.
4	Enter * * * * **.**
5	At the > prompt, enter the following: **LD 48** <Return>. **DIS ESDI 9** <Return> to disable the link on port 9.
6	Enter * * * * **.**

For Release 18 systems and later

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

Enabling the console and the AML data ports

Step	Action
1	Log on to the Meridian 1 PBX. (Refer to "Logging on to the Meridian 1 PBX" on page 4-3.)
2	At the > prompt, enter the following: **LD 48** <Return>. **ENL AML 9 ACMS** <Return> to establish the link on port 9.
3	Enter * * * * .

Disabling the console and the AML data ports

Step	Action
1	Log on to the Meridian 1 PBX. (Refer to "Logging on to the Meridian 1 PBX" on page 4-3.)

Step	Action
2	At the > prompt, enter the following: **LD 37** <Return>. **DIS TTY 8** <Return> to disable the console's data port.
3	At the LSL TTY (Y/N) prompt, enter Y.
4	Enter * * * *.
5	At the > prompt, enter the following: **LD 48** <Return>. **DIS AML 9** <Return> to disable the link on port 9.
6	Enter * * * * **.**

Stopping Meridian Mail

Introduction

Before you perform software upgrades, system restores, or hardware maintenance, you should courtesy down the system. This allows anyone using Meridian Mail to finish their sessions 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.

Stopping the system

To courtesy down the system, follow these steps.

Step	Action
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	Select <Courtesy Down System>.
4	At the prompt, "Do you want to courtesy down the system?", press the up arrow key 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.

Before upgrades, restores, or maintenance

After stopping the system to perform software upgrades, system restores, or hardware maintenance, follow this step.

Step	Action
1	Disable the data ports for the console and the AML. (Refer to "Disabling the console and the AML data ports" on page 4-6 for Release 17 systems and earlier or "Disabling the console and the AML data ports" on page 4-6 for Release 18 systems and later.)

Starting Meridian Mail

Introduction

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

- whenever you 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

Restarting the system

To restart the system, follow these steps.

Step	Action
1	Enable the data ports for the console and the AML. (Refer to "Enabling and disabling the console and AML data ports" on page 4-5.)
2	Enter **AX** <Return> to view the Meridian Mail screen.
3	Do you have a Tandberg tape drive? • If yes, verify that the tape drive's power is on. • If no, continue.
4	Wait until the system has loaded and the logon screen is displayed (approximately four minutes). If this does not happen, refer to Chapter 5, "Troubleshooting and maintenance."

Restarting the system after stopping it

To restart the system after stopping it, follow these steps.

Step	Action
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	Select the [Activate System] softkey.

Restarting Meridian Mail after turning off the Meridian 1 PBX

Meridian Mail loads automatically when the Meridian 1 PBX is turned on, but you must complete the following steps to restore Meridian Mail.

To restart Meridian Mail after turning off the Meridian 1 PBX, follow these steps.

Step	Action
1	Log on to Meridian Mail at the system administrator's terminal.
2	Enter the correct time and date when prompted. Meridian Mail cannot start until these values are entered.

Backing up the system

Introduction

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 is not busy.

The tapes you receive from Nortel Networks 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 5-9.

Backing up the system

To back up the system, follow these steps.

Step	Action
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. ***Note 1:*** If an external tape drive is already installed, there is no need to courtesy down the system. If, however, you need to install an external tape drive before performing a backup, courtesy down the system first.
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 back up. (The Meridian Mail Enhanced Card Option has only one disk volume, but you still must select it by pressing the space bar.)

Step	Action
5	Select [Backup To Tape]. The Disk to Tape Backup screen appears.
6	Select [Immediate Backup].
7	At the prompt, insert an appropriate tape into the tape drive. ***Note 1:*** For more information about how to insert a tape, refer to “Inserting a tape” on page 1-23.
8	Select [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 to 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. Include the date and time of the backup.
10	Select [Exit] to return to the Volume Administration screen.
11	Remove the external tape drive if required.

Scheduling backups

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

To schedule a system backup, follow these steps.

Step	Action
1	Log on to the Meridian Mail system at the system administrator's terminal.
2	From the Main Menu, choose 2 General Administration.→ 2 Volume Administration and Selective Backup.
3	Choose the disk volume you want to schedule for backup. (The Meridian Mail Enhanced Card Option has only one disk volume, but you still must select it by pressing the space bar.)
4	Select [Backup To Tape]. The Disk to Tape Backup screen appears. ***Note 1:*** Complete a tape label and attach it to the tape cartridge.
5	Select [Schedule Backup]. The Schedule Backup screen appears.
6	Fill out the appropriate fields.
7	Select [Save Schedule]. You are returned to the Volume Administration screen. From here, you can select [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 can choose to leave the same tape in the drive at all times. New backup data overwrites the old backup data.

Note: A backup tape wears out over time. 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

Introduction

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

To restore the system, follow these steps.

Step	Action
1	Refer to Chapter 2, “System installation and modification” to run the System Installation and Modification Utility from the Meridian Mail software tape. ***Note 1:*** 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 MM10 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 1:*** The restore process takes approximately 40 to 80 minutes to complete.
4	At the prompt The operation successfully completed. Please remove the tape and boot into service. a. Refer to page 1-24 to remove the tape from the drive. b. At the switch, disable AML 9 in LD 48 and press <Return>. c. Turn off the power to Meridian Mail. d. Wait 10 seconds.
5	Start Meridian Mail. (Refer to page 4-9.) The system starts up in full service as it was when the backup was created.
6	At the switch, enable AML 9 ACMS and press <Return>.
7	Remove the external tape drive if required. (Refer to page 1-25.)

The Tools Menu

Introduction

The Meridian Mail Tools menu contains several useful functions that are not used as frequently as those contained in the system administrator's Main menu.

Accessing the TOOLS menu

To access the TOOLS menu, follow these steps.

Step	Action
1	From the Meridian Mail logon screen, select [Logon].
2	At the logon ID prompt, enter **TOOLS** <Return>.
3	At the password prompt, enter the Tools level password (**adminpwd**) and press <Return>. You are presented with the Tools menu. ***Note 1:*** See the section "Default passwords and system parameters" on page 10-3. for a complete list of login IDs and passwords.

CAUTION
Risk of 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* (NTP 555-7001-305).

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 follow these steps.

Step	Action
1	From the Tools Menu, choose 13 Other→4 Add/Delete Many Users.
2	At the prompt, Please Specify Command?, use the up and down arrow keys 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 want 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 System Administration* (NTP 555-7001-301).
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 1:*** You can choose to be prompted before each user is added. This allows you to skip certain mailbox numbers in the block. These mailboxes are not 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 delete a block of users, follow these steps.

Step	Action
1	From the Tools Menu, choose Other→ Add/Delete Many Users.
2	At the prompt, Please Specify Command?, use the up and down arrow keys 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 1:*** You can choose to be prompted before each user is deleted. This allows you to skip certain mailbox numbers in the block. These mailboxes are not deleted.
6	At the prompt, Please Specify Command?, choose Quit.

Changing the default Meridian Mail DNs

Introduction

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 3-10.

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

ATTENTION

During installation of Enhanced Card Option TN software, default values must be programmed. If the routing address is redefined with values other than the default, a problem occurs resulting in the absence of voice prompts. For routing values, see the table “Hardware locations” on page 10-6.

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 those steps you should perform. Here are some pointers:

- Use uppercase letters only. (You might 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 that answer calls to Meridian Mail.

To change the Voice Messaging DN, follow these steps.

Step	Action
1	Courtesy down Meridian Mail. (Refer to page 4-8.)
2	Disable the console and AML data ports. (Refer to "Enabling and disabling the console and AML data ports" on page 4-5.)
3	Print the following reports. a. Print a report for each type of telephone set on the switch, following the prompts in "Printing a telephone set report" on page 4-25. b. Print a report for each telephone model on the switch, following the prompts in "Printing a telephone model report" on page 4-25. c. Print an ACD queue report, following the prompts in "Printing an ACD queue report" on page 4-25. d. Print a hardware location report for card 10, following the prompts in "Printing a hardware location report" on page 4-25. The devices on this card are the virtual ACD agents that answer calls to Meridian Mail.

Step	Action
4	Delete the following items. a. Delete all the ACD agents listed in this report, following the prompts in “Deleting a hardware location’s DN” on page 4-29. b. Delete the old Voice Messaging DN, following the prompts in “Deleting a service DN” on page 4-27. c. Delete each of the other voice service DNs, following the prompts in “Deleting a service DN” on page 4-27.
5	Use the ACD queue report you printed in step 3 to delete only those queues that have night call forward (NCFW) set to the old Voice Messaging DN. Follow the prompts in “Deleting a service DN” on page 4-27.
6	Create the following items. a. Create a new Voice Messaging DN, following the prompts in “Creating a new Voice Messaging DN” on page 4-26. b. Create new DNs for the other voice services, following the prompts in “Creating a new service DN” on page 4-28. c. Create new ACD agents to replace those you deleted in Step a, following the prompts in “Creating a hardware location DN” on page 4-30.
7	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 “Changing an analog telephone set” on page 4-27. For digital sets, follow “Changing a digital telephone set” on page 4-27. ***Note 1:*** Analog telephone sets (type 500) can refer to the Voice Messaging DN in two ways: using FTR FDN or using HUNT. Digital phones can refer to the Voice Messaging DN in three ways: using FDN, HUNT, or KEY. Use the reports you printed in step 3 to 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.

Step	Action
8	Night call forward (NIT1) in the Customer Data Block (in LD 15 of the Option 11) 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.*
9	Log on to Meridian Mail.
10	From the Main Menu, choose 3 Voice Administration→ 3 Voice Services Administration→ 1 Voice Service DN Table
11	Select the Voice Messaging DN and select [View/ Modify].
12	Change the value of *Access DN* to the new Voice Messaging DN, and select the [Save] softkey.
13	Return to the Meridian 1 PBX and enable the console and AML data ports. (Refer to Enabling and disabling the console and AML data ports on page 4-5.)
14	Start Meridian Mail. (Refer to page 4-9.)

Changing a hardware location DN

To change a hardware location DN, follow these steps.

Step	Action
1	Log on to the Meridian 1 PBX. (Refer to “Logging on to the Meridian 1 PBX” on page 4-3.)
2	Disable the hardware location, following the prompts in “Disabling a hardware location” on page 4-28.
3	Change the hardware location’s DN, following the prompts in “Changing a hardware location’s DN” on page 4-29.
4	Return to Meridian Mail and log on.
5	From the Main Menu, choose 5 System Status and Maintenance→ 3 DSP Port Status.

Step	Action
6	Select [Disable Port] at the prompt, and 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	Select [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 “Enabling a hardware location” on page 4-28.

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.

To change the other Meridian Mail DNs, follow these steps.

Step	Action
1	Courtesy down Meridian Mail. (Refer to page 4-8.)
2	Disable the console and AML data ports. (Refer to “Enabling and disabling the console and AML data ports” on page 4-5.)
3	Log on to the Meridian 1 PBX. (Refer to “Logging on to the Meridian 1 PBX” on page 4-3.)

Step	Action
4	On the Meridian 1 PBX, create a new service DN, following the prompts in “Creating a new service DN” on page 4-28.
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 select [View Modify].
7	Change the value of *Access DN* to the new DN you defined in Step 4, and select the [Save] softkey.
8	Return to the Meridian 1 PBX and delete the old service DN, following the prompts in “Deleting a service DN” on page 4-27.
9	Enable the console and AML data ports. (Refer to “Enabling and disabling the console and AML data ports” on page 4-5.)
10	Start Meridian Mail. (Refer to page 4-9.)

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.
		Note: This is always 0 in a single customer environment.

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.

Printing an ACD queue report

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

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.

Creating a new Voice Messaging DN

Prompt	Response	Comments
>	LD 23	Load Overlay 23.
REQ	NEW	
TYPE	ACD	
CUST	_____	Enter the customer number.
MWC	YES	
IMS	YES	
CMS	YES	
IMA	YES	
IVMS	YES	
VSID	9	Enter the number of the Meridian Mail Enhanced 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).
ACDN	_____	Enter the new service DN.

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 location parameters for Overlay 11” on page 10-7.)
KEY	0 ACD *xxxx zzz yyyy*	*xxxx* is the new Voice Messaging DN, zzz is the CLID entry number (required in R22 or higher) and *yyyy* is the position ID for the hardware location.

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*).

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*).

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.

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.

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 location parameters for Overlay 11” on page 10-7.)

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 location parameters for Overlay 11” on page 10-7.)

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 location parameters for Overlay 11" on page 10-7.)
ECHG	YES	For easy change.
ITEM	KEY 1 SCN *xxxx*	*xxxx* is the new channel DN for the hardware location.

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 location parameters for Overlay 11" on page 10-7.)

Creating a hardware location DN

Prompt	Response	Comments
>	LD 11	Load Overlay 11.
REQ	NEW	
TYPE	2008	
TN	10 (0-15)	Enter the Option 11 routing address for the hardware location. (Refer to “Hardware location parameters for Overlay 11” on page 10-7.)
KEY	0 ACD *XXXX zzz nnnn*	*XXXX is the ACD DN of agents to voice mail, zzz is the CLID entry number (required on R22 or higher), and nnnn is the position ID.*
KEY	1 SCN *PPPP*	PPPP is the SCN DN of the SCN. This DN must match the channel DN on the Channel Allocation Table of the mail.
KEY	2 MSB	
KEY	3 NRD	
KEY	4 RLS	
KEY	6 TRN	
KEY	7 AO3	O is the letter O.

Default settings for the M1

Introduction

The tables that begin on page 4-32 list the default settings for your M1 switch to connect with Meridian Mail. You might want to confirm that your switch is set to the defaults.

M1 Configuration

Prompt	Response	Comments
>	LD 17	Load Overlay 17.
REQ	CHG	
TYPE	CFN	
ADAN	(NEW, CHG) TTY 8	
CARD	10	
PORT	10	
BPS	1200	
BITL	8	
STOP	1	
PARY	NONE	
FLOW	NO	
USER	LSL	
ADAN	(NEW,CHG) TTY 9	
CARD	10	
PORT	1	
BPS	4800	
IADR	003	
RADR	001	
T1	10	
T2	2	
T3	040	
N1	128	
VAS	YES	
VSID	9	
AML	8	
CLOK	EXT	

Note: TTY 8 is the link for the M1 terminal to communicate with Meridian Mail. It should show as Disable when you check the status at LD 37. It is activated when you type **AX** at the M1 terminal. You can deactivate the link by holding the <Control> key and typing **]**.

PBX customer data block

Prompt	Response	Comments
>	LD 15	Load Overlay 15.
REQ	CHG	
TYPE	CDB	
CUST	0	
OPT	DNX	
VSID	9	
FTR_DATA	YES	
OPT	MCI	
IMS_DATA	YES	
IMS	YES	
IMA	YES	

ACD DN for main voice messaging DN

Prompt	Response	Comments
>	LD 23	Load Overlay 23.
REQ	NEW	
TYPE	ACD	
CUST	0	
ACDDN	XXXX	
MWC	YES	
IMS	YES	
CMS	YES	
IMA	YES	
IVMS	YES	
VSID	9	
MAXP	x	Maximum number of agents or channels
ALOG	YES	

ACD DN for other Voice Mail functions

Prompt	Response	Comments
>	LD 23	Load Overlay 23.
REQ	NEW	
TYPE	ACD	
ACDDN	xxxx	
MWC	NO	
MAXP	1	
NCFW	XXXX	

Meridian Mail PBX/ACD agent setup

Prompt	Response	Comments
>	LD 11	Load Overlay 11.
REQ	NEW	
TYPE	2008	
TN	10 (0 – 15)	
CLS	VMA	
KEY	0 ACD xxxx K yyyy	xxxx is the new Voice Messaging DN and yyyy is the position ID for the hardware location. If your switch is RLS 22 or later, K is the single digit customer number. It is omitted in earlier releases.
KEY	1 SCN PPPP	Must match channel DN of channel allocation table.
KEY	2 MSB	
KEY	3 NRD	
KEY	4 RLS	
KEY	5 RLS	
KEY	6 TRN	
KEY	7 AO3	O is the letter O.

Key to variables

Variable	Definition
XXXX	This is the ACC DN of the agent s to Meridian Mail.
xxxx	This is the ACC DN of Meridian Mail Services
PPPP	This is the DN of the SCN (it must match the Channel DN on the CAT.)
nnnn	This is the agent ID.

Terminal number mapping for Enhanced Card Option

The DSPs on the CPU board are defined as the first voice card and map as follows:

10-4	Channel 1
10-12	Channel 2
10-5	Channel 3
10-13	Channel 4

Application Module Link (AML)

The following commands are needed to enable or disable the AML:

To enable:

- ENL AML 9 ACMS

To disable:

- DIS AML 9

Chapter 5

Troubleshooting and maintenance

In this chapter

Overview

Introduction

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 Maintenance Messages (SEERs) Reference Guide* (NTP 555-7001-510). This book contains a comprehensive list of the events and errors recorded on the SEER printer. (Refer to “System event and error reports” on page 5-16.)

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 Nortel Networks 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* (NTP 553-3011-500). 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 Enhanced Processor Card is receiving power.
3. Verify that the Meridian Mail Enhanced Processor Card 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 Enhanced Processor Card is receiving power. If this still does not clear the problem, you should proceed to Step 3. In this case, it instructs you to verify that the processor board is properly seated.

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.

Precautions

Introduction

Do not remove or handle the Meridian Mail Enhanced Processor Card while Meridian Mail is running. Always courtesy down the system first as shown in “Stopping Meridian Mail” on page 4-8.

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
Risk of equipment damage

Use extreme care and wear a grounding strap when handling the PCBs. They are susceptible to electrostatic damage and to damage from rough or improper handling.

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

Problems at startup

Introduction

Near the top of the faceplate of the Meridian Mail Enhanced Processor Card are two LEDs. One is amber, the other is green.

Amber LED

The amber LED lights to indicate hard drive activity.

Green LED

When the system is first turned on, the green LED lights briefly and Meridian Mail proceeds with its internal diagnostics and startup procedures. The LED should remain unlit during the entire process, which takes approximately four minutes.

When startup is complete, the green LED lights and stays lit. A flashing green LED indicates a problem with the startup procedure.

Refer to the following table to determine the procedure to use, based on the green LED indicator.

LED problem indicators

Green LED Indicator	Refer to
does not light at startup	page 5-6
lights at startup but does not go out	page 5-6
flashes rapidly or does not come back on after four minutes	page 5-6
flashes slowly	page 5-7

LED does not light at startup

If the LED does not light at startup, follow these steps.

Step	Action
1	Verify that the main Meridian 1 power supply is on.
2	Verify that none of the pins on the Meridian Mail Enhanced Processor Card are bent. a. Ensure that the Meridian Mail Enhanced Processor Card is firmly pushed into the connector at the back of the Meridian 1 cabinet.
3	If the LED still does not light, follow these steps: a. Remove the Meridian Mail Enhanced Processor Card. b. Reinstall the Meridian Mail Enhanced Processor Card. Push it all the way to the back of the cabinet and lock the latch levers.
4	If the LED still does not light replace the Meridian Mail Enhanced Processor Card.

Green LED lights at startup but does not go out

If the LED lights at startup but does not go out, follow this step.

Step	Action
1	Replace the Meridian Mail Enhanced Processor Card.

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 Meridian Mail Enhanced Processor Card or the SCSI diagnostics have failed.

If the LED flashes rapidly or does not come back on after four minutes, follow these steps.

Step	Action
1	Remove the Meridian Mail Enhanced Processor Card. a. Remove and retain the disk drive and daughterboards.

Step	Action
2	Obtain a new Meridian Mail Enhanced Processor Card. Install the disk drive from step 1.
3	Install the new Meridian Mail Enhanced Processor Card.

LED flashes slowly

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

When the LED flashes slowly, follow these steps.

Step	Action
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	If a tape drive is not connected, ensure that the external terminator on the disk/power supply card is firmly in place.
4	Reload the Meridian Mail software from tape. (Refer to Chapter 3.)
5	Replace the Meridian Mail Enhanced Processor Card.
6	Restore the system from the most recent backup tape. (Refer to “Restoring the system” on page 4-15.)

SEER 6124

You can ignore SEER message 6124, “Time-out waiting for node to load.” The SEER does not have a system impact, all diagnostics have completed, and the system will load without a problem.

Problems during comprehensive upgrade

Introduction

Problems can occur while reading from the software tape and writing to the disk during comprehensive upgrade (storage expansion, software expansion, or software upgrade). They might 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.

Restoring and retrying system expansion or software upgrade

To restore the system and retry system expansion or software upgrade, follow these steps.

Step	Action
1	Restore the system to its original state, as follows: a. If you installed a new disk drive, replace it with the old disk drive. b. Ensure that all cable connections are secure, and that the Meridian Mail Enhanced Processor Card is locked firmly in place in the cabinet. c. Restore the system from the backup tape (refer to "Restoring the system" on page 4-15) and attempt to start Meridian Mail (refer to "Starting Meridian Mail" on page 4-9).
2	If Meridian Mail starts, attempt the comprehensive 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 troubleshooting procedures beginning on page 5-5.
3	Replace the disk drive, restore the system, and attempt the expansion or upgrade procedure again.

Tape drive problems

Introduction

If the tape does not seem to be recognized by Meridian Mail, try some or all of the following measures.

Tape is not recognized by the system

If the tape is not recognized by the system, follow these steps.

Step	Action
1	If you are performing a restore, ensure that you have inserted the correct tape.
2	Verify that you have inserted the tape correctly. (Refer to "Inserting a tape" on page 1-23.)
3	Verify that the tape is of the correct format. (Refer to page 1-24.)
4	Verify that the tape is not write-protected.
5	Turn the tape drive off and then on again.
6	Clean the tape drive. (Refer to page 5-18.)
7	Ensure that the tape drive has been correctly installed. (Refer to "Installing the external tape drive" on page 1-20.)

Tape drive failure

If the tape fails or you receive a read-write error, turn the tape drive off and then on again.

Starting a backup before inserting a tape

If you inadvertently select OK *before* you insert a tape while attempting to back up the system manually, follow these steps.

Step	Action
1	Insert a tape into the tape drive. An error message is displayed indicating that the backup has failed.
2	Select [Exit].
3	Retry the backup procedure.

Defective tape during backup

If, while attempting to manually back up the system, you insert a defective tape, follow these steps.

Step	Action
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 5-18) 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, follow these steps.

Step	Action
1	Clean the tape drive (refer to page 5-18) 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 have 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 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

Introduction

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 might notice problems at startup or the terminal might become disabled during normal operation.

Auxiliary terminals (such as those used with Hospitality systems) may experience problems with the RSM breakout assembly and the Meridian Mail Enhanced Processor Card. First, try to clear the problem as you would with the system administrator's terminal, and then follow the steps for auxiliary terminals.

If you are using a remote maintenance terminal for remote administration, you must return service to the console before you disconnect. If you do not, further access to that port is inhibited until you restart your system.

The terminal does not display Meridian Mail screens

If the terminal does not display Meridian Mail screens, follow these steps.

Step	Action
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. At the > prompt, enter **AX** <Return>.
	a. Reset the console port (port 8) by disabling it and reenabling it, as follows:
	b. Follow the procedures described in "Determining the Meridian 1 software release number" on page 4-5. Reset the console port only; do not reset the AML (port 9).
	c. Enter **AX** <Return> to return to Meridian Mail.

The terminal appears to freeze

Occasionally, a terminal does not respond to keyboard input. If this occurs, follow these steps.

Step	Action
1	Verify that the terminal's baud rate is set correctly.
2	Select Clear COMM from the terminal's Setup screen.
3	If this option is not available, reset the terminal, or power it down and up.

The terminal displays the Meridian Mail screens incorrectly

Occasionally, the connection between Meridian Mail and the system administrator's terminal can generate extraneous characters that cause the terminal to display the Meridian Mail screens incorrectly.

To redraw the screen, press <Control> **R**.

If the screen is incorrectly displaying the lines on the Meridian Mail screens as a string of "q"s, follow these steps.

Step	Action
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

If the keyboard does not respond, follow these steps.

Step	Action
1	If there is a printer attached to your system, ensure that the printer is ready and online. (Refer to page 1-32, Step 6.)
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 reenabling it, as follows: a. Follow the procedures described in "Enabling and disabling the console and AML data ports" on page 4-5. 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 "The RSM breakout assembly" on page 1-12.)
7	Verify that the terminal settings are correct as described in Chapter 11, "Terminal configuration."

Auxiliary terminal problems

To resolve auxiliary terminal problems, follow these steps.

Step	Action
1	Verify that the switch on the RSM breakout assembly is in the Normal (left) position.
2	Verify that the terminal settings are correct as described in Chapter 11, "Terminal configuration."
3	Check all cable connections. (Refer to "Wiring for guest administration terminals (GACs)" on page 7-9.)
4	Check for any special null modem requirements.
5	Try the terminal on another functioning RSM port.

Step	Action
6	Replace the RSM breakout assembly.
7	Replace the Meridian Mail Enhanced Processor Card.

Modem problems

Introduction

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

System event and error reports

Introduction

System event and error reports (SEERs) 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 "Configuring the printer to print SEERs reports" on page 1-34.

View SEERs for a given period

To view SEERs for a given period, follow these steps.

Step	Action
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	Select 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 *Maintenance Messages (SEERs) Reference Guide* (NTP 555-7001-510).

Spares planning

Introduction

The following table lists the field-replaceable components of the Meridian Mail Enhanced 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.

Spares planning table

Component	Code	MTBF (years)	Failures 1M hrs	Units serviced by location 1	<5	<10	<20	<30
Tape drive	A0721902 (Option 11C only)	1.7	67.0	1	3	4	5	5
Meridian Mail Enhanced Processor Board	NT6R16AA	70.9						
4-port DSP daughtercard	NTMW03AA	144						
Seagate ST34520N 4.5 Gbyte disk	A0763652	8						
RSM assembly (Option 11C)	NTAK18BA	240.0	0.5	1	2	2	3	3
RSM assembly (Option 11C Mini)	NTTK40AA	586						

Maintaining the external tape drive

Introduction

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—general

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, 15.24 cm (six inches) or longer

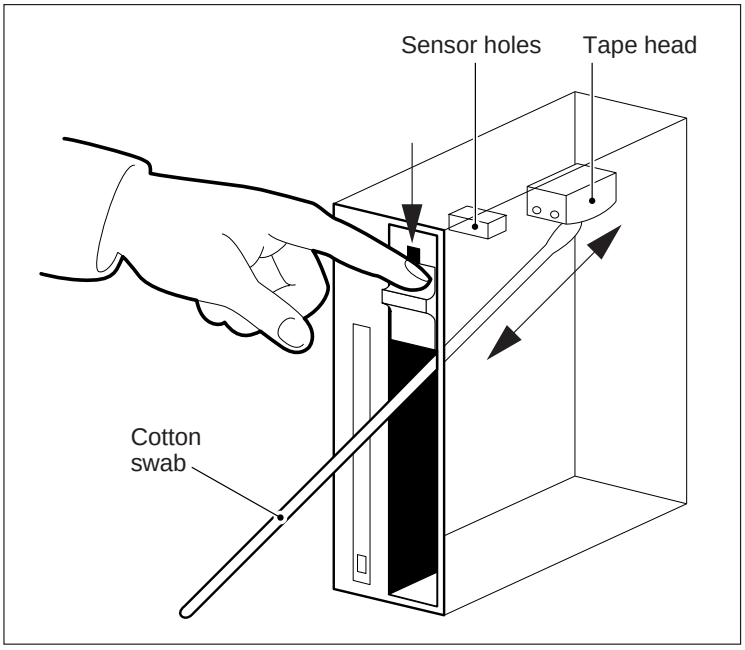
Clean the head assembly after an initial pass with a new tape cartridge and after eight hours of normal use. Clean the sensor hole and tape cartridge cavity whenever dust is visible.

Cleaning the tape drive with swabs and fluid

To clean the tape drive with swabs and fluid, follow these steps.

Step	Action
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. Do not wipe perpendicularly or use a circular scrubbing motion.
7	Carefully blow out dust from the sensor hole and tape cartridge cavity with aerosol air.

Cleaning the tape head



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

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

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

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

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

Using a tape drive cleaning kit

To use a tape drive cleaning kit, follow these steps.

Step	Action
1	If there is a tape cartridge in the tape drive, remove it.
2	Push the head loading lever down into the load position (for an Archive tape drive) or press the release button to open the tape drive (on the Tandberg tape drive).
3	Carefully blow out dust from the sensor hole and tape cartridge cavity with aerosol air.
4	Based on your tape drive, release the head loading lever or press the release button to open the tape drive.
5	Obtain the appropriate tape drive kit for your tape drive. Refer to the following table for the correct CPC code:

Type of tape drive	Cleaning kit CPC code
Archive Viper	A9378220
Tandberg TDC 4220	A0622896

Step	Action
6	Moisten the flexible pad of the cleaning cartridge with four drops of the Streaming Tape Head Cleaning Fluid.
7	Insert the cleaning cartridge into the tape drive in the same way as a normal tape cartridge and lock it into position.
8	Move the moistened pad using four strokes of the guide rod, moving the rod as far as it will go each time.
9	Remove the cleaning cartridge from the tape drive.
10	Remove the flexible pad by sliding it out of the holder, and then discard the pad.
11	Insert a new dry pad into the holder by sliding it into place.

12 Insert the cleaning cartridge into the tape drive and lock it into place.

13 Move the dry pad using four strokes of the guide rod, moving the rod as far as it will go each time.

14 Remove the cleaning cartridge. Store it with the dry pad in its original carton until next use.

Chapter 6

Software upgrades and conversions and system expansion

In this chapter

Software upgrades and conversions

Introduction

To perform a software upgrade or conversion, use the Comprehensive Upgrade utility. For information about these procedures, refer to the *System Installation and Modification Guide* (NTP 555-7001-215).

Problems

If, when you start Meridian Mail, the terminal displays Meridian Mail screens but the keyboard does not respond, follow these steps.

Step	Action
1	Press <Control> **]**
2	Enter **AX** <Return> to return to Meridian Mail. If the keyboard still does not respond, refer to "Terminal problems" on page 5-11.

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

System expansion

Introduction

System expansion refers to adding new hardware locations or modifying the existing hardware locations, expanding the system's disk storage, adding new languages, or enabling optional features.

Enhanced Card Option storage capacity

The Meridian Mail Enhanced Processor Card, which replaces the 68K card (and related cards), is supplied with a 4.0 Gbyte drive. This drive permits up to 300 hours of storage.

System expansion under Meridian Mail 13 has been greatly simplified and is performed by a utility called Comprehensive Upgrade. Refer to the *System Installation and Modification Guide* (NTP 555-7001-215) for the procedures.

During system expansion under comprehensive upgrade, you might need to refer to Enhanced Card Option dataport settings. They are shown in the following table:

Recommended dataport settings for Enhanced Card Option

Location	Basic system	Hospitality system	Networked system	Networked hospitality system	ACCESS system
Node 1 Card 1					
Port 1	Console	Console	Console	Console	Console
Port 2	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)	CSL1 (AML)
Node 1 Card 2 (RSM)					
Port 1	Modem	GAC (optional)	Modem	Modem	Modem
Port 2	Printer	GAC	Printer	GAC	ICL
Port 3	Printer	PMS	Printer	PMS	Printer
Port 4	Printer	PMS	Printer	PMS	Printer

Note: The port locations you define here must match the connections you make to the RSM breakout assembly. The wiring diagrams for hospitality systems ("Hospitality system

cables” on page 7-6), networked systems (“Networked system cables” on page 8-6), and ACCESS systems (“ACCESS system cables—Meridian Mail Mini” on page 9-9) are based on these recommended values. If you customize the port locations, change the wiring accordingly.

Chapter 7

Hospitality systems

In this chapter

Overview

Introduction

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 to take advantage of Meridian Mail's HVS capabilities. The Meridian 1 PBX might or might not already be connected to a PMS.

For complete instructions on installing an HVS system, refer to *HVS Implementation Guide* (NTP 555-7001-221).

Section A: Enhanced Card Option

In this section

HVS hardware kit

Introduction

The HVS Hardware Kit (NTAK35AA/A0388201) contains the following items:

1 RSM breakout assembly (NTAK18BA)

1 RSM four-port breakout cable (NTDK58AA), 7.6 m (25 ft)

1 25-pair MDF voice cable, 3.1 m (10 ft), male-to-male (NE-B25C-FS)

1 25-pair MDF voice cable, 3.1 m (10 ft), male-to-bare wire (NE-A25C-FS)

1 DB25 peripheral cable, 3.1 m (10 ft), male-to-bare wire (NTAK37AA)

3 DB25 peripheral cables, 3.1 m (10 ft), female-to-bare wire (NTAK36AA)

1 DB25 gender changer, female-to-female (A0351509)

The following items 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)

The illustration, "Hospitality system cables" on page 7-6, shows the basic cabling plan for hospitality systems.

The multiport cable

To install the multiport cable, refer to *Meridian 1 Option 11C Planning and Installation Guide* (NTP 553-3021-210).

The RSM breakout assembly

Refer to "Installing the RSM breakout assembly" on page 1-11 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 "Hospitality system cables" on page 7-6, you can run one of two voice cables from the RSM breakout assembly: a male-to-male or a male-to-bare wire if you have a BIX pack or a similar modular distribution frame. 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. Additionally, you can use the new fan-out cable.

The hotel's PMS

The instructions you use to wire the hotel's PMS to the BIX pack depend on how the PMS is configured. Refer to the documentation for the product.

For DTE configurations, use "Wiring for DTE PMS systems" on page 7-7.

For DCE configurations, use "Wiring for DCE PMS systems" on page 7-8.

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 17 m (50 ft) in length, short haul modems are required. Inmac asynchronous line drivers (#8125) are recommended.

The guest administration consoles (GACs)

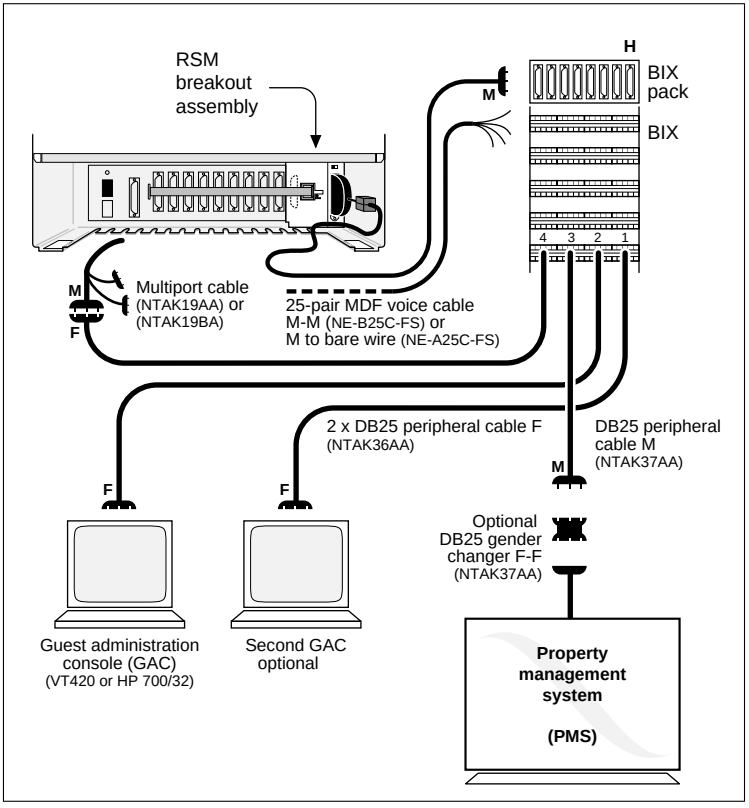
To install GACs, follow the wiring instructions in "Wiring for guest administration terminals (GACs)" on page 7-9. The columns on the left are for the wires from the MDF cable and the columns on the right are for the wires to the consoles. Configure the consoles according to the instructions in Chapter 11.

Software installation

Introduction

You can only enable the Meridian Mail HVS feature during software installation. You cannot add HVS to an existing system without reinstalling the software. (A four-port breakout cable can substitute for the MDF cable in the figure below.)

Hospitality system cables



CARD-033

Hospitality system administration

Introduction

For more information on the setup and administration of a Meridian Mail hospitality system, consult the *Meridian Mail Hospitality Voice Services Implementation Guide* (NTP 555-7001-221).

Wiring for DTE PMS systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB-25 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

Wiring for DCE PMS systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB-25 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

Wiring for guest administration terminals (GACs)

Pair No	Colors	BIX Pos#	Cable	Colors	DB-25 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

Section B: Meridian Mail Mini

In this section

HVS hardware kit

Introduction

The HVS Hardware kit (NTTS36AA/A0783266) contains the following items:

- 1 RSM module assembly (NTTK40AA)
  - a mechanical enclosure with the RSM breakout board (NTTK39AA) mounted within
- 1 RSM four-port breakout cable (NTTK44AA)

The following items 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)

The multiport cable

To install the multiport cable, refer to *Meridian 1 Option 11C Mini Planning and Installation Guide* (NTP 553-3021-209).

The RSM module assembly

Note: To install the RSM module assembly, see "Section B: Meridian Mail Mini hardware installation" on page 1-35.

RSM board—drivers and receivers

The RSM break-out board drives the RS-232C lines going in and out of the Meridian Mail Mini through the 50-pin Main Distribution Frame (MDF) connector on the backplane. Standard driver chips are used to reconstruct the signals sent between the Meridian Mail Mini breakout board and the terminals. This signal boosting is essential because the terminals can be located at distances of up to 40 feet from the wall-mounted RSM module assembly.

In addition to the four DB-25 RS-232C ports (P1–P4) present on the RSM breakout board, there is another 50-pin connector (P5) that has the same four RS-232C port signals for alternate connection to BIX applications.

The hotel's PMS

The instructions you use to wire the hotel's PMS to the BIX pack depend on how the PMS is configured. Refer to the PMS product documentation.

The guest administration consoles (GACs)

Configure the consoles according to the instructions in Chapter 11.

RSM board—modes of operation

Introduction

The RSM board has two modes of operation, NORMAL and BYPASS.

NORMAL mode

NORMAL mode enables communication between the host processor (PMS Port) and the Option 11C Mini PBX through the Meridian Mail Mini card. The Meridian Mail Mini card monitors and alters the data flowing between the processors.

BYPASS mode

BYPASS mode provides a bypass connection for Port 3 and Port 4 signals if a malfunction or power failure occurs on the Meridian Mail Mini system. BYPASS prevents the interruption of communication between the Option 11C Mini system and the host processor.

Eight bypass relays are located on the RSM board. Port 3 and 4 RS-232C lines pass through these relays. When required, the relays enable BYPASS mode. For more information on BYPASS mode, see “RSM BYPASS” on page 7-18.

Mode selection

Use the slide switch on the RSM assembly module to select NORMAL or BYPASS mode.

RSM functionality

Introduction

The RSM Module assembly NTTK40AA is a metal box, that carries the RSM printed circuit assembly (NTTK39AA). The assembly is wall-mounted close to the Option 11C Mini PBX. The connection to the PBX is made using a 4-port shielded cable (NTTK44AA).

The personal computer connections to ports 2, 3 and 4 are by the customer-provided RS-232C cables. The recommended cable for these ports is NTMW55AA.

An overview of all the major functions of the RSM board is provided in the following sections.

RSM drivers and receivers

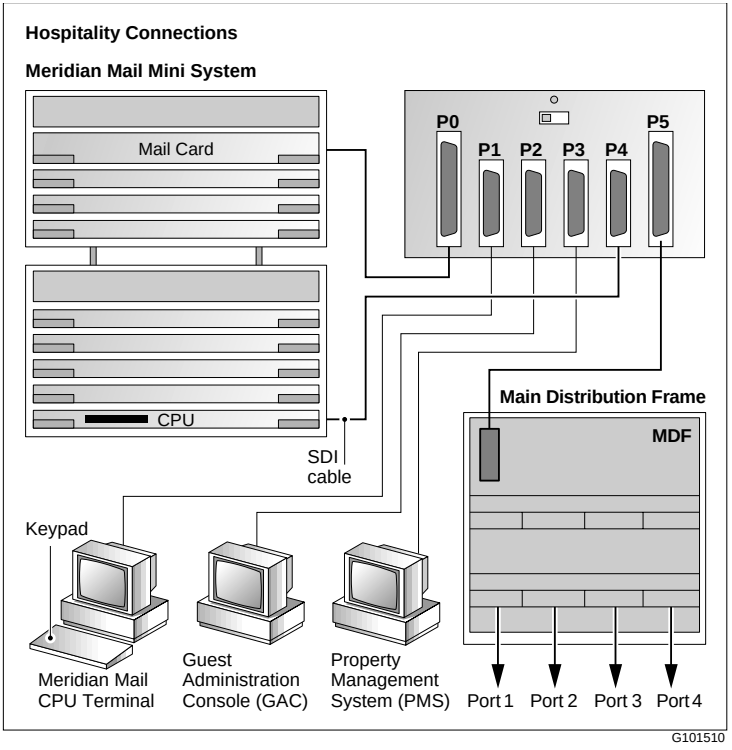
The drivers, receivers, and relays are powered through the Meridian Mail Mini. The Meridian Mail Mini card has two 85C30 Serial Communication Controllers (SCC). Both SCC controllers provide four RS-232C serial ports capable of operation at 9.6 Kbps. Ports 1 and 2 are capable of either synchronous or asynchronous operation; ports 3 and 4 are capable of asynchronous operation only. All the RS-232C drive/receive lines are routed from the Meridian Mail slot via the Option 11C Mini backplane, and terminate on a 50-pin MDF Connector.

One end of a special shielded cable, NTTK44AA, is connected to the backplane 50-pin MDF connector, and the other end is connected to the P0 connector on the RSM Module Assembly NTTK40AA.

RSM applications

Overview

The RSM is used basically for Hospitality applications. In this application, Port 1 is connected to a Meridian Mail Mini CPU (debug/administration) terminal, Port 2 is connected to a Guest Administration Console (GAC), Port 3 is connected to the Property Management System (PMS), and Port 4 is connected to Port 1 of the SDI Cable (NTBK48AA) as shown below:



Normal operation

During normal operation, the PMS communicates to the Meridian Mail Mini system through ports 3 and 4. The signals go from the RSM board to the SSC (or MSC) via the Mail card. The Mail card monitors and alters the data flowing through it. In the event of a Meridian Mail card failure, the data, instead of going through the Mail card, is automatically switched by the RSM board to flow directly from Port 3 (PMS) to Port 4 (SDI). This ensures that the connection between the PMS and the

Option 11C Mini system is not terminated in the event of a Meridian Mail Mini failure.

Note: The PMS and the GAC consoles, as well as the Meridian Mail CPU terminal, can be connected to either the Main Distribution Frame (MDF) or one of the four ports on the RSM Assembly Module, but not both.

RSM BYPASS

Overview

The RSM breakout board provides BYPASS capability for Port 3 and Port 4 signals, when running Hospitality applications. BYPASS prevents the interruption of the Option 11C Mini CPU to PMS communication in the event of a Meridian Mail Mini interruption or power down.

In BYPASS mode, Ports 3 and 4 signal lines are disconnected from their respective terminal ports by a set of relays. The eight relays cross-connect both these ports. In BYPASS mode, a built-in Null Modem connection is automatically established to enable terminals in Ports 3 and 4 to talk directly to each other.

The current mode of the RSM is determined by viewing the green LED on the face of the RSM assembly module. When the LED is unlit, the system is in BYPASS mode; when the LED is lit, the system is in NORMAL mode. The BYPASS control line is connected from the Meridian Mail Mini processor by the 50-pin MDF connector on the Option 11C Mini PBX backplane to the RSM pack.

The RSM assembly module provides for connection to four separate RS-232C ports via P1, P2, P3, and P4, or through port P5 for connecting to the MDF.

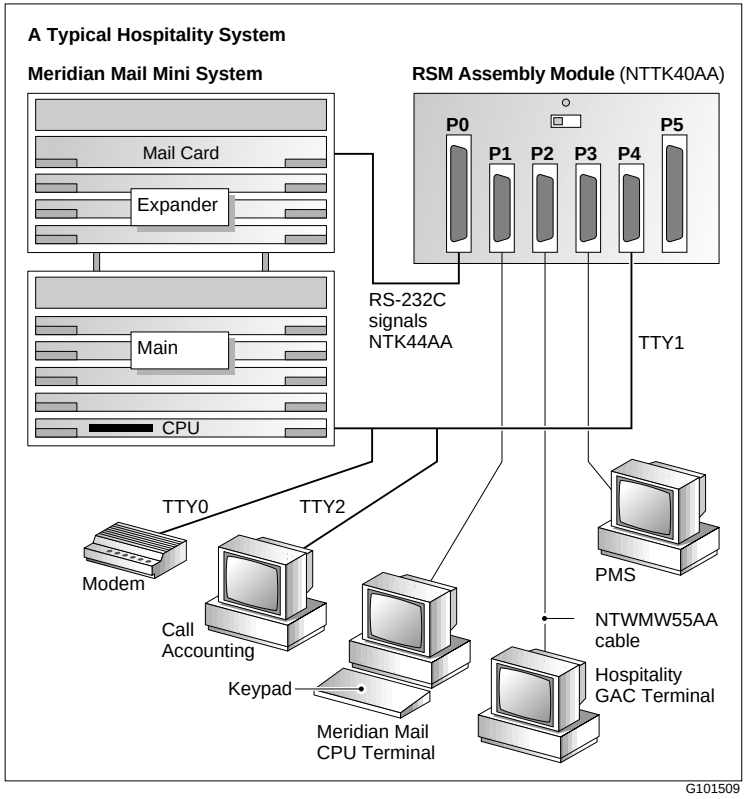
Software installation

Introduction

You can only enable the Meridian Mail HVS feature during software installation. You cannot add HVS to an existing system without reinstalling the software.

Hospitality connections

The following illustration shows cabling for a typical hospitality system:



Note: For information on pinouts, see "Wiring and pinouts" on page 7-20.

Hospitality system administration

Introduction

For more information on the setup and administration of a Meridian Mail hospitality system, consult the *Meridian Mail Hospitality Voice Services Implementation Guide* (NTP 555-7001-221).

Wiring and pinouts

The following tables provide wiring and pinout information.

Pinout for the 50-pin MDF connector on the Option 11C Mini backplane

Backplane 50-pin MDF-Pin #	SIGNAL	Backplane 50-pin MDF-Pin #	SIGNAL
1	+5V	26	+5V
2	GND	27	GND
3	BYSTAT-	28	BYPASS-
4	TXD1	29	RXD1
5	RTS1	30	CTS1
6	DTR1	31	DSR1
7	TXC1	32	DCD1
8	GND	33	RXC1
9	-15V	34	-15V
10	+15V	35	+15V
11	-	36	RI2
12	TXD2	37	RXD2
13	RTS2	38	CTS2
14	DTR2	39	DSR2
15	TXC2	40	DCD2
16	GND	41	RXC2
17	TXD3	42	RXD3
18	RTS3	43	CTS3

Pinout for the 50-pin MDF connector on the Option 11C Mini backplane

Backplane 50-pin MDF-Pin #	SIGNAL	Backplane 50-pin MDF-Pin #	SIGNAL
19	DTR3	44	DSR3
20	GND	45	DCD3
21	TXD4	46	RXD4
22	RTS4	47	CTS4
23	DTR4	48	DSR4
24	GND	49	DCD4
25	FGND	50	FGND

Pinout for the P5 connector on the RSM Module assembly

P5-pin #	SIGNAL	P5-pin #	SIGNAL
1	-	26	DCD4
2	DTR4	27	DSR4
3	RTS4	28	CTS4
4	TXD4	29	RXD4
5	GND	30	-
6	FGND	31	-
7	-	32	DCD3
8	DTR3	33	DSR3
9	RTS3	34	CTS3
10	TXD3	35	RXD3
11	GND	36	-
12	FGND	37	-
13	TXC2	38	RXC2
14	DTR2	39	DCD2

Pinout for the P5 connector on the RSM Module assembly

P5-pin #	SIGNAL	P5-pin #	SIGNAL
15	RTS2	40	DSR2
16	TXD2	41	CTS2
17	GND	42	RXD2
18	FGND	43	RI2
19	-	44	RXC1
20	TXC1	45	DCD1
21	DTR1	46	DSR1
22	RTS1	47	CTS1
23	TXD1	48	RXD1
24	GND	49	-
25	FGND	50	-

Pinout for the connections between backplane MDF and P0 connectors

Backplane 50-pin MDF - Pin #	Signal Names	P0-pin #	Backplane 50-pin MDF - Pin #	Signal Names	P0-pin #
1	+5V	26	26	+5V	1
2	GND	27	27	GND	2
3	BYSTAT	28	28	BYPASS	3
4	TXD1	29	29	RXD1	4
5	RTS1	30	30	CTS1	5
6	DTR1	31	31	DSR1	6
7	TXC1	32	32	DCD1	7
8	GND	33	33	RXC1	8
9	-15V	34	34	-15V	9
10	+15V	35	35	+15V	10

Pinout for the connections between backplane MDF and P0 connectors

Backplane 50-pin MDF - Pin #	Signal Names	P0-pin #	Backplane 50-pin MDF - Pin #	Signal Names	P0-pin #
11	-	36	36	RI2	11
12	TXD2	37	37	RXD2	12
13	RTS2	38	38	CTS2	13
14	DTR2	39	39	DSR2	14
15	TXC2	40	40	DCD2	15
16	GND	41	41	RXC2	16
17	TXD3	42	42	RXD3	17
18	RTS3	43	43	CTS3	18
19	DTR3	44	44	DSR3	19
20	GND	45	45	DCD3	20
21	TXD4	46	46	RXD4	21
22	RTS4	47	47	CTS4	22
23	DTR4	48	48	DSR4	23
24	GND	49	49	DCD4	24
25	FGND	50	50	FGND	25

RS-232C Port 1 (DTE) connection

Port P0 pin #	Port P1 pin #	Signal Names
29	2	TXD1
30	4	RTS1
31	20	DTR1
32	15	TXC1
4	3	RXD1
5	5	CTS1
6	6	DSR1
7	8	DCD1
8	17	RXC1
25,50	1	FGND
25,50	7	GND

RS-232C Port 2 (DTE) connection

Port P0 pin #	Port P2 pin #	Signal Names
37	2	TXD2
38	4	RTS2
39	20	DTR2
40	15	TXC2
11	22	RI2
12	3	RXD2
13	5	CTS2
14	6	DSR2
15	8	DCD2
16	17	RXC2
25,50	1	FGND
25,50	7	GND

RS-232C Port 3 (DTE) connection

Port P0 pin #	Port P3 pin #	Signal Names
42	2	TXD3
43	4	RTS3
44	20	DTR3
17	3	RXD3
18	5	CTS3
19	6	DSR3
20	8	DCD3
25,50	1	FGND
25,50	7	GND

RS-232C Port 4 (DTE) connection

Port P0 pin #	Port 4 pin #	Signal Names
46	2	TXD4
47	4	RTS4
48	20	DTR4
21	3	RXD4
22	5	CTS4
23	6	DSR4
24	8	DCD4
25,50	1	FGND
25,50	7	GND

Port 5 connections as DTE for GAC, PMS, SDI, and Port 1 connectors

Signal names	DB-25 Port pin #	Port 5 pin #	Signal names	DB-25 Port pin #	Port P5 pin #
TXD2	GAC -2	16	TXD4	SDI-2	4
RTS2	GAC-4	15	RTS4	SDI-4	3
TXC2	GAC-15	13	DTR4	SDI-20	2
DTR2	GAC-20	14	RXD4	SDI-3	29
RXD2	GAC-3	42	CTS4	SDI-5	28
CTS2	GAC-5	41	DCD4	SDI-8	26
RXC2	GAC-17	38	DSR4	SDI-6	27
DSR2	GAC-6	40	SGND	SDI-7	5
DCD2	GAC-8	39	FGND	SDI-1	6
RI2	GAC-22	43	TXD1	PORT1 - 2	23
SGND	GAC-7	17	RTS1	PORT1 - 4	22
FGND	GAC-1	18	TXC1	PORT1 - 15	20
TXD3	PMS-2	10	DTR1	PORT1 - 20	21
RTS3	PMS-4	9	RXD1	PORT1 - 3	48
DTR3	PMS-20	8	CTS1	PORT1 - 5	47
RXD3	PMS-3	35	RXC1	PORT1 -17	44
CTS3	PMS-5	34	DSR1	PORT1 - 6	46
DCD3	PMS-8	32	DCD1	PORT1 - 8	45
DSR3	PMS--6	33	SGND	PORT1 - 7	24
SGND	PMS-7	11	FGND	PORT1 - 1	25
FGND	PMS-1	12			

Port 5 Connections as DCE for GAC, PMS, SDI, and Port 1 connectors

Signal names	DB-25 Port pin #	Port 5 pin #	Signal names	DB-25 Port pin #	Port P5 pin #
TXD2	GAC-3	16	TXD4	SDI-3	4
RTS2	GAC-5	15	RTS4	SDI-5	3
TXC2	GAC-17	13	DTR4	SDI-6	2
DTR2	GAC-6	14	RXD4	SDI-2	29
RXD2	GAC-2	42	CTS4	SDI-4	28
CTS2	GAC-4	41	DCD4	SDI-8	26
RXC2	GAC-15	38	DSR4	SDI-20	27
DSR2	GAC-20	40	SGND	SDI-7	5
DCD2	GAC-8	39	FGND	SDI-1	6
RI2	GAC-22	43	TXD1	PORT1 - 3	23
SGND	GAC-7	17	RTS1	PORT1 - 5	22
FGND	GAC-1	18	TXC1	PORT1 - 17	20
TXD3	PMS-3	10	DTR1	PORT1 - 6	21
RTS3	PMS-5	9	RXD1	PORT1 - 2	48
DTR3	PMS-6	8	CTS1	PORT1 - 4	47
RXD3	PMS-2	35	RXC1	PORT1 - 15	44
CTS3	PMS-4	34	DSR1	PORT1 - 20	46
DCD3	PMS-8	32	DCD1	PORT1 -8	45
DSR3	PMS-20	33	SGND	PORT1 - 7	24
SGND	PMS-7	11	FGND	PORT1 - 1	25
FGND	PMS-1	12			

Chapter 8

Networked systems

In this chapter

Overview

Introduction

This chapter describes the additional hardware installation and software procedures required to take advantage of Meridian Mail's networking capabilities.

For complete instructions on installing a networking system, refer to *Meridian Networking Installation and Administration Guide* (NTP 555-7001-244).

Hardware installation

Introduction

The Option 11C Networking Hardware Kit (NTAK40AA/ A0388206) contains the following items:

1 RSM breakout assembly (NTAK18BA)

1 25-pair MDF voice cable, 3.1 m (10 ft), male-to-male (NEA25D-DE)

1 25-pair MDF voice cable, 3.1 m (10 ft), male-to-bare wire (NEA25D-SE)

1 DB-25 peripheral cable, 3.1 m (10 ft), male-to-bare wire (NTAK37AA)

1 modem (NT3M50AF)

The Option 11C Mini Networking Hardware Kit (NTTS50AA/ A0818188) contains the following items:

1 RSM breakout assembly (NTTK40AA)

1 RSM 25-pair double-ended cable (NTTK44AA)

1 Meridian Mail 33.6 Kbyte Modem Package (NTDK66AB)

1 4-headed cable (NTDK58AA)

1 Peripheral “M” cable (NTAK37AA)

“Networked system cables—Enhanced Card option” on page 8-5 and “Networked system cables—Meridian Mail Mini” on page 8-6 show the basic cabling plan for networked systems.

The RSM breakout assembly

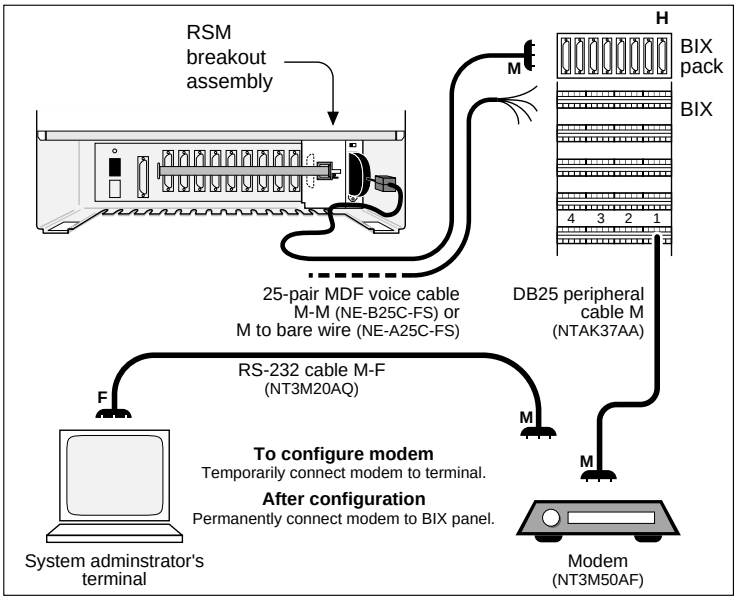
Introduction

For the Enhanced Card Option, see to “Installing the RSM breakout assembly” on page 1-11 for the RSM breakout assembly installation instructions. For the Meridian Mail Mini, see “Installing the RSM package” on page 1-49.

As seen in “Networked system cables—Enhanced Card option” on page 8-5 and “Networked system cables—Meridian Mail Mini” on page 8-6, you can run one of two voice cables from the RSM breakout assembly—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 “Wiring for networked systems” on page 8-6.

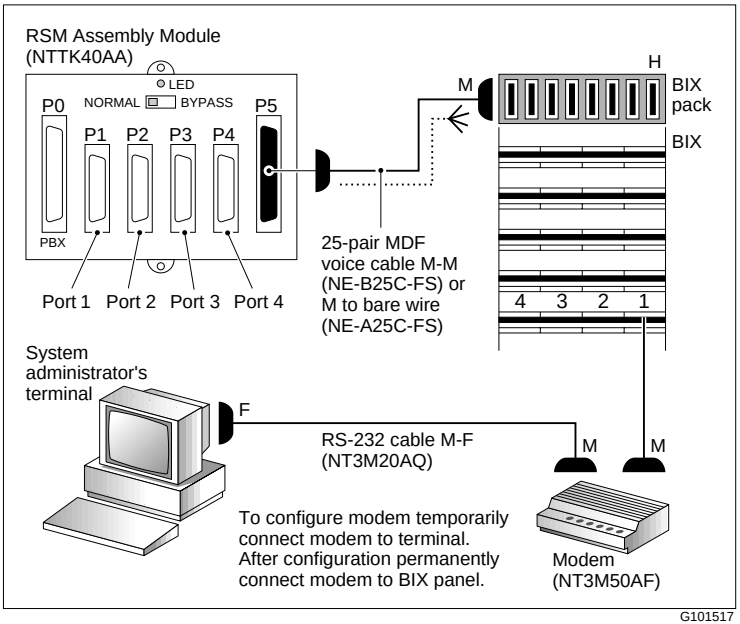
In “Wiring for networked systems” on page 8-6, the columns on the left are for the wires from the MDF cable, and the columns on the right are for the male DB-25 cable that connects to the modem. Before you attach this cable to the modem, however, the modem must be correctly configured.

Networked system cables—Enhanced Card option



CARD-051

Networked system cables—Meridian Mail Mini



Note: You can also use a four-port breakout cable (NTDK58AA) instead of the MDF cable.

Wiring for networked systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB25 Pin#	Signal
20	YE/SL	39	Modem	RD/BK	8	DCD1
	SL/YE	40	-	-	-	-
21	VI/BL	41	Modem	WH/BK	6	DSR1
	BL/VI	42	Modem	BK	20	DTR1
22	VI/OR	43	Modem	BL	5	CTS1
	OR/VI	44	Modem	OR	4	RTS1
23	VI/GR	45	Modem	RD	3	RXD1
	GR/VI	46	Modem	WH	2	TXD1
24	VI/BR	47	-	-	-	-
	BR/VI	48	Modem	GR	7	SG
25	VI/SL	49	-	-	-	-
	SL/VI	50	Modem	SHLD	1	FG

Configuring the modem

Introduction

The following procedure assumes that you are configuring the Ven-Tel modem supported by Nortel Networks. If your modem is not a Ven-Tel, refer to the modem's manual and configure it to correspond to the following settings. If you have the U.S. Robotics Sportster 14.4 modem, refer to the procedure on "Configuring the U.S. Robotics Sportster modem" on page 8-9.

Configuring the modem

To configure the modem, follow these steps.

Step	Action
1	Connect a properly configured system administrator's terminal directly to the modem to enter and verify its configuration. Use an RS-232 cable (NT3M20AQ).
2	Verify 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 answers phone calls in receiver mode.
S2-6	Off	Carrier detect responds to carrier.
S2-7	On	Speaker control can be on or off. During installation, Nortel Networks recommends that the speaker be on to hear the operation of the modem. After verifying the operation, the speaker can be turned off.
S2-8	On	The modem responds 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 might have another switch labeled 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 10 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, *B0, &C1, \C0, %C1, &D3, \D0, E0, F1,
&G0, \G0, \J0, &L0, M1, &M0, \N1,*N0, &P0, Q0, \Q0,
#R0, &R0, *S3,  \T0, &T4, V1, \V0, X4, &X0, \X0, Y0,
*A=018, 015, 001, 004
```

If there are any discrepancies, verify the switch settings from Step 2 and repeat Step 4 to Step 8.

9 Turn off the modem and connect it to the Meridian 1 system according to the instructions starting on page 8-4.

10 Turn off the terminal and reconnect it to the Meridian 1 PBX.

Configuring the U.S. Robotics Sportster modem

To configure the U.S. Robotics Sportster modem, follow these steps.

Step	Action
1	Power off the modem.
2	Set DIP switches 1, 3, 7, and 8 down for all programming. (All other switches should be up).
3	Power on the modem.
4	Enter the commands below from the administration terminal to configure the modem. ***Note:*** The administration terminal should be set to either 2400 bps or 9600 bps (that is, Meridian Mail console speed).

Type	Response
at&f0 <Return>	OK
ats0=1 <Return>	OK
at&b1 <Return>	OK
aty0 <Return>	OK
atq1 <Return>	no response
at&w0 <Return>	no response
at&w1 <Return>	no response

5	Power off the modem.
6	Set DIP switches 1, 4, and 8 down. (All other switches should be up.)

Software installation

Introduction

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 the comprehensive upgrade chapter in the *System Installation and Modification Guide* (NTP 555-7001-215).

Network system administration

Introduction

For more information on the setup and administration of a networked Meridian Mail system, consult the *Meridian Mail System Administration Guide* (NTP 555-7001-301).

Chapter 9

ACCESS systems

In this chapter

Overview

Introduction

Meridian ACCESS allows a workstation to access many of Meridian Mail's voice messaging features. Customers can use ACCESS to develop and maintain their own telephone-based voice applications.

Beginning with Meridian Mail Release 10.0 and continuing with Release 13, multiple Integrated Communication Links (ICLs) are supported on a single node. This allows customers to take advantage of more applications. For example, AdminPlus and ACCESS can now run concurrently on the Enhanced Card Option system.

This chapter describes the additional hardware installation and software procedures required to take advantage of Meridian Mail's ACCESS capabilities. For more information on Meridian ACCESS, refer to the following documents:

- *Meridian ACCESS—Configuration Guide* (NTP 555-7001-315)
- *Meridian ACCESS—Developer's Guide* (NTP 555-7001-316)
- *Meridian ACCESS—Application Programming Interface (API) Reference Manual* (NTP 555-7001-317)
- *Meridian ACCESS—Voice Prompt Editor User's Guide* (NTP 555-7001-318)
- *Meridian Mail—System Administration Guide* (NTP 555-7001-301)

ACCESS components

Introduction

There are three primary components on each side of the Integrated Communication Link (ICL). They are briefly discussed in the following sections. If you require a more detailed description, refer to the Overview in the *Meridian ACCESS Configuration Guide* (NTP 555-7001-315).

Meridian Mail components

Toolkit (TK)

There is a Toolkit for each voice port on the system. The Toolkit is responsible for executing API commands received across the Meridian Integrated Communication Link (ICL).

Toolkit Master (TKM)

The Toolkit Master acts as a resource manager for Toolkit tasks. There is a Toolkit Master for each node configured to have a Meridian ICL.

Toolkit Communications (TC)

The Toolkit Communications task is responsible for driving the Meridian ICL. It implements a proprietary protocol that supports variable size packets, checksum error handling, virtual channels, and retransmission on errors. Valid command packets received are passed on to the appropriate toolkit task. There is a TC for each node configured to have a Meridian ICL.

Application processor components

Integrated Communication Link (ICL)

This task provides functionality equivalent to the Toolkit Communications task for the applications processor side. The link handler is split into two tasks: one receives data and the other handles the output.

ACCESS Application Programming Interface (API) library

This is the ICL object code library containing ACCESS API procedures that are linked in with the applications. Most procedures translate into commands that are put into a data packet and passed on to the link handler.

Application

This is the ‘C’ program written by either Nortel Networks or a VAD, which uses ACCESS API procedures to answer calls when they arrive. The application controls the interactive voice response (IVR) service being provided.

Hardware installation

Introduction

The Option 11C ACCESS Hardware Kit contains the following items:

1 RSM breakout assembly (NTAK18BA)

1 25-pair MDF voice cable, 3.1 m (10 ft), male-to-male (NE-B25C-FS) *or*
25-pair MDF voice cable, 3.1 m (10 ft), male-to-bare wire (NE-A25C-FS)

1 DB-25 peripheral cable, 3.1 m (10 ft), male-to-bare wire (NTAK37AA) *or*
DB25 peripheral cables, 3.1 m (10 ft), female-to-bare wire (NTAK36AA)

The Option 11C Mini ACCESS Hardware Kit contains the following items:

1 RSM breakout assembly (NTTK40AA)

1 RSM cable (NTTK44AA)

1 25-pair MDF voice cable, 3.1 m (10 feet), male to male (NE-B25C-FS) *or*
25-pair MDF voice cable, 3.1 m (10 feet), male to bare wire (NE-A25C-FS)

1 DB25 peripheral cable, 3.1 m (10 feet), male to bare wire (NTAK37AA) *or*
DB25 peripheral cables, 3.1 m (10 feet), female to bare wire (NTAK36AA)

"ACCESS system cables—Enhanced Card Option" on page 9-8 and "ACCESS system cables—Meridian Mail Mini" on page 9-9 show the basic cabling plan for ACCESS systems. The cables you require depend on which BIX system you are using and on the interface on the workstation.

Note: If your workstation has a DB-9 interface, you require a DB-9 to DB-25 adapter. This part is not supplied by Nortel Networks.

The RSM breakout assembly

For the Enhanced Card Option, see “Installing the RSM breakout assembly” on page 1-11 for the RSM breakout assembly installation instructions. For the Meridian Mail Mini, see“Installing the RSM package” on page 1-49.

As seen in “ACCESS system cables—Enhanced Card Option” on page 9-8 and “ACCESS system cables—Meridian Mail Mini” on page 9-9, you can run one of two voice cables from the RSM breakout assembly— 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 UNIX workstation

The instructions you use to wire the UNIX workstation depend on how the workstation is configured. Refer to the product documentation.

For DTE configurations, use “Wiring for DTE UNIX systems” on page 9-9.

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 cable to the UNIX workstation.

Software installation

Introduction

You can enable the Meridian Mail ACCESS option in one of two ways.

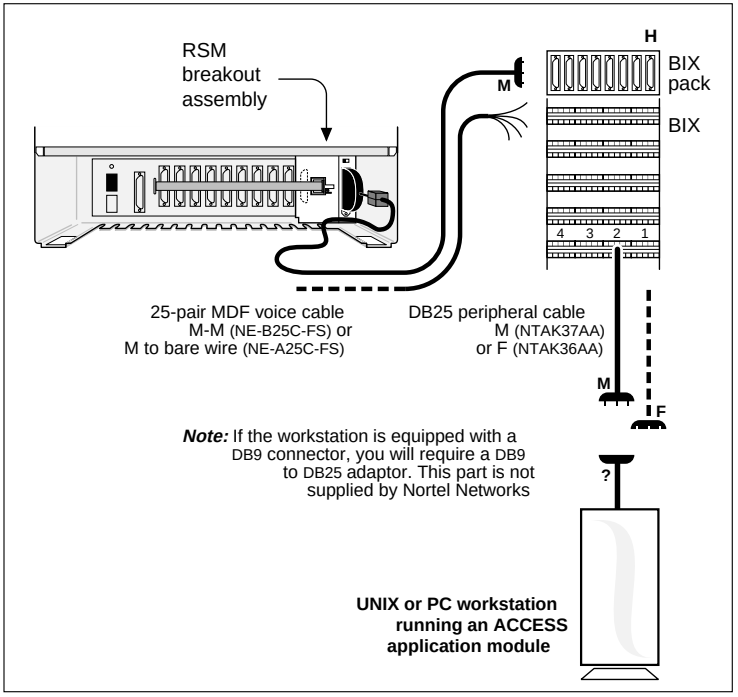
During initial software installation

The feature is automatically enabled by entering a valid keycode.

After initial software installation

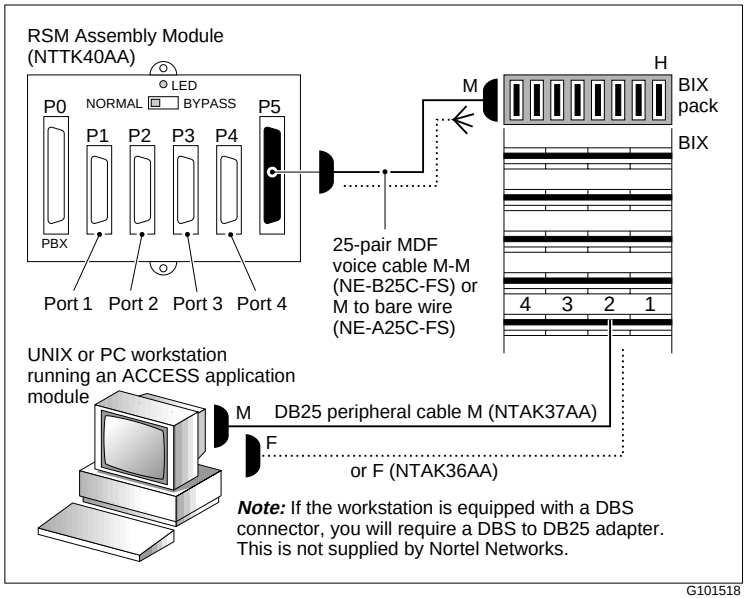
Refer to the comprehensive upgrade chapter in the *System Installation and Modification Guide* (NTP 555-7001-215).

ACCESS system cables—Enhanced Card Option



CARD-089

ACCESS system cables—Meridian Mail Mini



Note: You can also use a four-port breakout cable (NTDK58AA) instead of the MDF cable.

Wiring for DTE UNIX systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB-25 Pin#	Signal
13	BK/GR	25	UNIX	OR/BK	17	RXC2
	GR/BK	26	UNIX	GR/BK	15	TXC2
14	BK/BR	27	UNIX	RD/BK	8	DCD2
	BR/BK	28	UNIX	BK	20	DTR2
15	BK/SL	29	UNIX	WH/BK	6	DSR2
	SL/BK	30	UNIX	OR	4	RTS2
16	YE/BL	31	UNIX	BL	5	CTS2
	BL/YE	32	UNIX	WH	2	TXD2
17	YE/OR	33	UNIX	RD	3	RXD2
	OR/YE	34	UNIX	GR	7	SG
18	YE/GR	35	UNIX	BL/BK	22	RI
	GR/YE	36	UNIX	SHLD	1	FG

Wiring for DCE UNIX systems

Pair No	Colors	BIX Pos#	Cable	Colors	DB-25 Pin#	Signal
13	BK/GR	25	UNIX	OR/BK	15	RXC2
	GR/BK	26	UNIX	GR/BK	17	TXC2
14	BK/BR	27	UNIX	RD/BK	8	DCD2
	BR/BK	28	UNIX	BK	6	DTR2
15	BK/SL	29	UNIX	WH/BK	20	DSR2
	SL/BK	30	UNIX	OR	5	RTS2
16	YE/BL	31	UNIX	BL	4	CTS2
	BL/YE	32	UNIX	WH	3	TXD2
17	YE/OR	33	UNIX	RD	2	RXD2
	OR/YE	34	UNIX	GR	7	SG
18	YE/GR	35	UNIX	BL/BK	22	RI
	GR/YE	36	UNIX	SHLD	1	FG

ACCESS system administration

Introduction

Meridian Mail Installation and Maintenance Guides (NTP 555-70x1-250) contain information on configuring Meridian Mail. Refer to the guide that is written specifically for your application.

Meridian Mail System Administration Guide (NTP 555-7001-301) contains information on configuring and administering ACCESS voice services.

Chapter 10

Meridian Mail defaults

In this chapter

Overview

Introduction

This chapter lists the default passwords and system parameters on a Meridian Mail Enhanced 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.

If you choose to configure any of these parameters manually, use the defaults listed here as the basis for your custom values.

Default passwords and system parameters

Passwords

Meridian 1 representative's PBX password: 0000 (four zeros)

System administrator's terminal user ID: **system**

System administrator's terminal password: **adminpwd**

System administrator's Meridian 1 PBX password: **MMAIL** (uppercase)

Note: 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.)

Other default passwords are as follows:

Customer administrator's terminal user ID: **customer**

Customer administrator's terminal password: **custpwd**

Tools-level administrator's terminal ID: **tools**

Tools-level administrator's terminal password: **adminpwd**

Hospitality administrator's terminal user ID: **hosp**

Hospitality administrator's terminal password: **fdc**

MAT administrator's terminal user ID: **auxadmin**

MAT administrator's terminal password: **matpwd**

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 each user's voice mailbox. The mailbox of the first user is defined during software installation and can be 2000, 2100, or 2200.

4.0 Gbyte disk: 4800 users recommended

Service DNs

Voice Messaging (Meridian Mail): 7000

Automated Attendant: 7001

Express Messaging: 7002

Prompt Maintenance: 7003

Hospitality system service DNs

Introduction

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 and ACCESS systems

Introduction

The defaults for a networked or ACCESS system are the same as those for a basic system.

Hardware locations

Card	Option 11 routing address (c u)	Mail port location	Routing address	Primary DN	Channel DN (SCN)	Position ID	Types of service
Onboard Channel 1	10 04	3-1-1	10 04	7000	7808	7838	ALL
Onboard Channel 2	10 12	3-1-2	10 12	7000	7809	7839	ALL
Onboard Channel 3	10 05	3-2-1	10 05	7000	7810	7840	ALL
Onboard Channel 4	10 13	3-2-2	10 13	7000	7811	7841	ALL
First (top) daughterboard Channel 1	10 00	4-1-1	10 00	7000	7800	7830	ALL
First (top) daughterboard Channel 2	10 08	4-1-2	10 08	7000	7801	7831	ALL
First (top) daughterboard Channel 3	10 01	4-2-1	10 01	7000	7802	7832	ALL
First (top) daughterboard Channel 4	10 09	4-2-2	10 09	7000	7803	7833	ALL
Second (bottom) daughterboard Channel 1	10 02	5-1-1	10 02	7000	7804	7834	ALL
Second (bottom) daughterboard Channel 2	10 10	5-1-2	10 10	7000	7805	7835	ALL
Second (bottom) daughterboard Channel 3	10 03	5-2-1	10 03	7000	7806	7836	ALL

Card	Option 11 routing address (c u)	Mail port location	Routing address	Primary DN	Channel DN (SCN)	Position ID	Types of service
Second (bottom) daughterboard Channel 4	10 11	5-2-2	10 11	7000	7807	7837	ALL

Option 11 switches come with these hardware locations correctly configured. If you need to completely redefine a hardware location, respond to the following prompts in Overlay 11. (Refer to "Changing a hardware location" on page 4-26.)

Note: A problem may occur (no voice prompt) if you redefine a routing address to other than the default value.

Hardware location parameters for Overlay 11

Prompt	Response	Comment
KEY	0 ACD *xxxx K yyyy*	*xxxx* is the new Voice Messaging DN and *yyyy* is the position ID for the hardware location. K is only for RLS 22 and later. *K* is the CLID entry number required.
KEY	1 SCN *zzzz*	*zzzz* is the channel DN for the hardware location.
KEY	2 MSB	
KEY	3 NRD	
KEY	5 RLS	
KEY	6 TRN	
KEY	7 AO3	O is the letter O.
KEY	4 RLS	Key 4 is utilized for RLS on Option 11 because there is no key 9 on the 2008 set that is used for the Meridian Mail voice port.

Chapter 11

Terminal configuration

In this chapter

Overview

Introduction

The procedures on the following pages describe how to set up the video display terminals supported by Nortel Networks.

Supported terminals

Terminal	Refer to
NT220	"Setting up the NT220 terminals" on page 11-3
HP700/22	"Setting up the HP700/22 terminal" on page 11-5
HP700/32	"Setting up the HP700/32 terminal" on page 11-7
VT220, VT320, VT420	"Setting up the VT220, VT320, and VT420 terminals" on page 11-9
VT520	"Setting up the VT520 terminal" on page 11-13

If the terminal you are configuring is different from these terminals, use the most similar settings available and follow the instructions in the manual that came with the terminal.

CAUTION
Risk of data loss

You can enter setup mode at any time, but Nortel Networks recommendeds that you do not do so while information is being printed on the screen.

NT220 terminals

Introduction

"NT220 setup values" on page 11-4 contains the setup parameters for NT220 terminals.

Setting up the NT220 terminals

To set up an NT220 terminal, follow these steps.

Step	Action
1	Turn on the terminal.
2	Select Setup to enter setup mode. The current setup parameters appear on a series of screens.
3	Use the following procedures to change the values on each screen to match the parameters in "NT220 setup values" on page 11-4: To move through the setup screens: a. Use the arrow keys to move to *To Next Setup Screen* and press <Return>. To change the parameter in a field: a. Use the arrow keys to move to that field. b. Press <Return> to move through the available parameters for that field.
4	When you are finished, select Setup again.

NT220 setup values

General Setup
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
Setup=English
North American Keyboard

Printer Comm. Setup
Speed=9600
Normal Print Mode
8 bits, No Parity
1 Stop bit
Print Full Page
Print National Only
No Terminator
Bidirectional Off

Host Comm. Setup
Transmit=1200 *(for Sys. Admin. terminal)*
Transmit=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 Setup
80 Columns
Interpret Controls
Auto Wrap
Jump Scroll
Light Text, Dark Screen
Cursor
Block Style Cursor
25 Lines

Keyboard Setup
Typewriter Keys
Caps Lock
Auto Repeat
Keyclick
Margin Bell
Warning Bell
Break
Multinational
DEL=DEL; Shift/DEL=BS

Answerback/Tab Setup
No Auto Answerback
Not Concealed
Answerback=
Leave Tabs at the default values.

Enhance/Block Mode Setup
Leave these fields at the default values.

HP700/22 terminals

Introduction

Refer to "HP700/22 setup values" on page 11-6 for the setup values for the HP700/22 terminal. The setup procedure appears below.

Setting up the HP700/22 terminal

To set up an HP700/22 terminal, follow these steps.

Step	Action
1	Turn on the terminal.
2	Select Setup to enter setup mode. The current setup values appear on a series of screens.
3	Use the following procedures to change the values on each screen to match the values in "HP700/22 setup values" on page 11-6: To move through the setup screens: a. Select Next Screen and Previous Screen. To change the value in a field: a. Use the arrow keys to move to that field. b. Press <Return> to move through the available values for that field.
4	When you are finished, select Setup again.

HP700/22 setup values

General Setup

Terminal Mode	EM200, 7-bit 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 Setup

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 Setup

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

Introduction

Refer to "HP700/32 setup values" on page 11-8 for the setup values for the HP700/32 terminal. The setup procedure appears below.

Setting up the HP700/32 terminal

To set up the HP700/32 terminal, follow these steps.

Step	Action
1	Turn on the terminal.
2	Select Setup to enter setup mode. The current setup values appears on a series of screens.
3	Use the following procedures to change the values on each screen to match the values in "HP700/32 setup values" on page 11-8: To move through the setup screens: a. Select Next Screen and Previous Screen. To change the value in a field: a. Press the arrow keys to move to that field. b. Press left and right arrow keys to move through the available values for that field.
4	When you are finished, select Setup again.

HP700/32 setup values

Global setup			
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 Setup			
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 Setup			
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 Setup			
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)* 2400 *(for Auxiliary terminals)*	Break Disconnect Disconnect Delay	170ms Never
Recv Baud	=Xmit	Aux printer Type	National
Xmit pace	Xon/Xoff		
Recv Pace	Xoff at 128		
Port 2 Setup			
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 Setup			
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.*	

VT220, VT320, and VT420 terminals

Introduction

"VT220 setup values" on page 11-10 contains the setup values for VT220 terminals. "VT320 setup values" on page 11-11 contains the setup values for VT320 terminals. "VT420 setup values" on page 11-12 contains the setup values for VT420 terminals.

Setting up the VT220, VT320, and VT420 terminals

The setup procedure is the same for all three terminals.

Step	Action
1	Turn on the terminal.
2	Select Setup to enter setup mode. The current setup values appears on a series of screens as the user scrolls through them.
3	Use the following procedures to change the parameters on each screen to match the values in the appropriate table: To move to a particular screen from the main setup screen: a. Use the arrow keys to move through the menu of setup screens and press <Return>. To move to the next setup screen: a. Use the arrow keys to move to *To Next Setup* and press <Return>. To change the parameter in a field: a. Use the arrow keys to move to that field. b. Press <Return> to move through the available parameters for that field.
4	When you are finished, select Setup again.

VT220 setup values

Setup Directory
On Line

Display Setup

80 Columns	Light Text, Dark Screen
Interpret Controls	Cursor
Auto Wrap	Block Style Cursor
Jump Scroll	

General Setup

VT200 Mode, 7-bit Controls	Application Keypad
User Defined Keys Unlocked	Normal Cursor Keys
User Features Unlocked	No New Line
Multinational	

Communications Setup

Transmit=1200 *(for Sys. Admin. terminal)*	1 Stop Bit
Transmit=2400 *(for Auxiliary terminals)*	No Local Echo
Receive=Transmit	Data Leads Only
Xoff at 64	Disconnect, 2 s Delay
8 bits, No Parity	Limited Transmit

Printer Setup

Speed=9600	Print Full Page
Normal Print Mode	Print National Only
8 bits, No Parity	No Terminator
1 Stop bit	

Keyboard Setup

Typewriter Keys	Warning Bell
Caps Lock	Break
Auto Repeat	Answerback=
Keyclick	Not Concealed
Margin Bell	

Tab Setup
Leave this screen at the default values.

VT320 setup values

Global Setup

On Line	Comm1=RS232
Sessions on Comm1	70Hz
CRT Saver	Printer Shared

Display Setup

80 Columns	Light Text, Dark Screen
Interpret Controls	Cursor
Auto Wrap	Block Style Cursor
Jump Scroll	No Status Display

General Setup

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 Setup

Transmit=1200 *(for Sys. Admin. terminal)*	No Local Echo
Transmit=2400 *(for Auxiliary terminals)*	DEC-423, Data Leads Only
Receive=Transmit	Limited Transmit
Xoff at 64	No Auto Answerback
8 bits, No Parity	Answerback=
1 Stop Bit	Not Concealed

Printer Setup

Speed=9600	1 Stop bit
No printer to Host	Print Full Page
Normal Print Mode	Print National Only
XOFF	No Terminator
8 bits, No Parity	

Keyboard Setup

Caps Lock	Break
Auto Repeat	Compose
Keyclick	<X] Delete
Margin Bell	,, and .. Keys Send ,< and .>
Warning Bell	<> Key
Character Mode	‘~Key

Tab Setup Screen

Leave this screen at the default values.

VT420 setup values

Global Setup

On Line	Comm1=RS-232
S1=Comm1	70Hz
CRT Saver	Printer Shared

Display Setup

80 Columns	No Status Display
Interpret Controls	Cursor Steady
Auto Wrap	6x24 pages
Jump Scroll	24 Lines/Screen
Dark Screen	Vertical Coupling
Cursor	Page Coupling
Block Style Cursor	Auto Resize Screen

General Setup

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 Setup

Transmit=1200 *(for Sys. Admin. terminal)*	Disconnect, 2 s Delay
Transmit=2400 *(for Auxiliary terminals)*	Limited Transmit
Receive=Transmit	No Auto Answerback
Xoff=64	Answerback=
8 bits, No Parity	Not Concealed
1 Stop Bit	Modem High Speed = ignore
No Local Echo	Modem Low Speed = ignore
Data Leads Only	

Printer Setup

Speed=9600	8 bits, No Parity, 1 Stop bit
No printer to Host	Print Full Page
Normal Print Mode	Print National Only
XOFF	No Terminator

Keyboard Setup

Typewriter Keys	Ignore Alt
Caps Lock	F1 = Hold
Auto Repeat	F2 = Print
Keyclick High	F3 = Setup
Margin Bell	F4 = Session
Warning Bell High	F5 = Break
Character Mode	,< and .> Keys
<X] Delete	<> Key
Local Compose	‘~Key

Tab Setup

Leave this screen at the default values

VT520 terminals

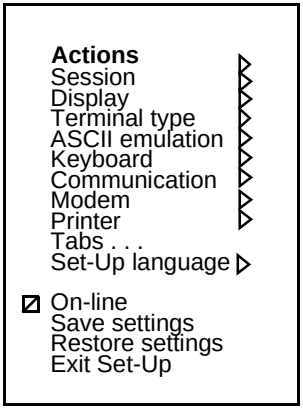
Introduction

Refer to "VT520 setup values" on page 11-15 for the setup values for VT520 terminals.

Setting up the VT520 terminal

To set up a VT520 terminal, follow these steps.

Step	Action
1	Select (press) Setup to enter setup mode. The Main Set-Up window appears as shown below.

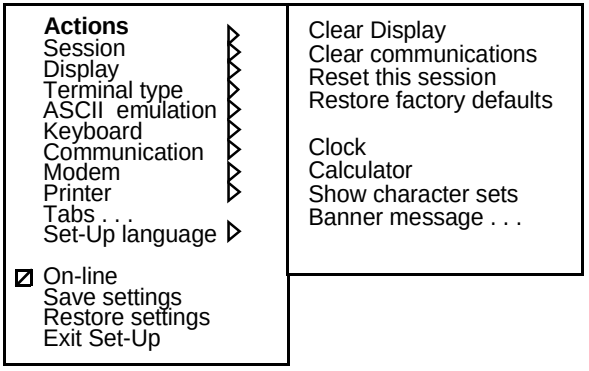


2	Use the up and down arrow keys to highlight the setup feature that is to be changed (for example, Actions).
3	When the setup feature is highlighted, use one of the following methods to select the appropriate settings:

IF	THEN
a solid triangle (▷) appears beside the setup feature	use the right arrow key to automatically display the pop-up window of associated settings. See "VT520 terminal—sample feature pop-up window" on page 11-14 for an example.

IF	THEN
a box (☒) appears beside the setup feature	press <Return> to toggle the setting for the selected feature on or off. A diagonal line appears in the box when the setting is on.
three dots (. . .) appear beside the setup feature	press <Return> to display the associated pop-up window. When all fields have been completed, move the cursor to [OK] or [Cancel], and press <Return> to activate your choice.

VT520 terminal—sample feature pop-up window



4 Configure the terminal to match mandatory settings shown in “VT520 setup values” on page 11-15. If no setting is specified, select the parameter that best suits your environment.

Note: Features shown in parentheses appear dimmed in the window.

5 When you are finished, select Setup again.

VT520 setup values

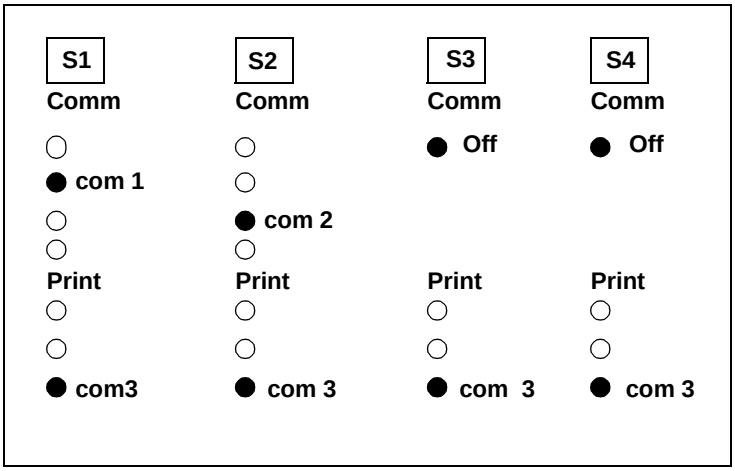
Main setup window	First level	Mandatory setting or description
Actions	Clear Display	Press <Return> to clear the display.
	Clear Communications	Press <Return> to clear communications.
	Reset this session	Press <Return> to reset this session.
	Restore factory defaults	Press <Return> to restore the factory default.
	Clock	Press <Return> to set the VT520 clock.
	Calculator	Press <Return> to use the VT520 calculator.
	Show character sets	Press <Return> to display character sets.
	Banner message...	Press <Return> to set the banner message.
Session	Select Session	Select Session 1.
	Session name . . .	Optional user text
	Pages per session . . .	04 pages maximum
	Soft char sets/session	Two each S1 and S2
	Save settings for all	
	Restore settings for all	
	Copy settings from	
	Update session	At regular intervals
Display	Lines per screen	24, 25, or 26
	Lines per page	24 lines X 01 pages
	Review previous lines	ON
	Columns per page	80 columns, Clear on change
	Status display	Local status
	Scrolling mode	Jump
	Screen background	Dark
	Cursor display	Enable cursor, Steady, Block, Blink
	Cursor coupling	Set to “Vertical” and “Page”
	Cursor direction	Left to right
	Copy direction	Left to right

Main setup window	First level	Mandatory setting or description
	Zero	Select the style of zero you want to display.
	Auto Wrap	ON
	New line mode	
	Lock user preferences	
	Show control characters	
	CRT saver	
	Energy saver	
	(Overscan)	
	Framed windows	ON/OFF (Set to OFF to enable Overscan.)
	Screen alignment	
Terminal type	Emulation mode	VT520
	Terminal ID to host	VT520
	VT default char set	DEC Multinational—See user documentation as well.
	PC Term character set	DEC Multinational—See user documentation as well.
	(7-bit NCRS characters)	
	Transmit 7-bit cable	ON
(ASCII emulation)		
Keyboard	VT Keyboard language	Select the appropriate language.
	(PC Keyboard language)	
	Define key . . .	Use Define Key Editor screen to set the following: F1=Hold F2=Print F3=Setup F4=Session F5=Break Ignore Alt ,< and .> Keys <> Key ‘~ Key

Main setup window	First level	Mandatory setting or description
	Save key definitions	
	Recall key definitions	
	Lock key definitions	
	Caps lock function	Caps lock
	Keyclick volume	High
	Warning bell volume	High
	Margin bell volume	OFF
	Keyboard encoding	Character (ASCII)
	Auto Repeat	
	Data processing keys	
	Application cursor keys	
	Application keypad mode	
	(Map PC keyboard to VT)	
	Ignore missing keyboard	
Communication	Port select . . .	See “Port selection for VT520” on page 11-19.
	Word size	8 bit
	Parity	None
	Stop bits	1 bit
	Transmit speed	2400 baud
	Receive speed	Transmit speed
	Transmit flow control	XON/XOFF
	Flow control threshold	Low
	Transmit rate limit	150 cps
	Fkey rate limit	150 cps
	Ignore Null character	ON
	Local echo	
	Half duplex	
	Auto answerback	ON

Main setup window	First level	Mandatory setting or description
	Answerback message . . .	Enter the answerback message.
	Answerback concealed	
Modem	Enable modem control	
	(Disconnect delay)	
	(Modem high speed)	
	(Modem low speed)	
Printer	Port select . . .	See “Port selection for VT520” on page 11-19.
	Print mode	Normal
	Printer type	DEC ANSI
	DEC/ISO char sets	
	DEC/ISO char sets	Country-dependent setting
	(PC character sets)	
	Print terminator	None
	Serial print speed	9600 baud
	2-way communication	ON
	Transmit flow control	XON/XOFF
	Receive flow control	XON/XOFF
	Word size	8 bits
	Parity	None
	Stop bits	1 bit
Tabs . . .	Tab Set-Up screen	
Set-Up language		User dependent
On-line		ON
Save settings		When settings are complete, press <Return> to save.
Restore settings		
Exit Set-Up		

Port selection for VT520



Glossary

A

AML The Application Module Link (AML) is the communications link established between Meridian Mail and the Meridian 1 switch.

B

BIX system The BIX system is a modular cross-connect system for in-building use only. It is designed for use in commercial, industrial, institutional, and multi-residential buildings.

D

DCE Data communications equipment

DN A 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

G

GAC Guest Administration Console

H

Hardware location A hardware location is the physical circuitry on the DVP chips on the Meridian Mail Enhanced Card Processor Card, used to process fax and voice data. 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

I

ICL Integrated Communication Link

L

LED Light emitting diode

M

MDF Main Distribution Frame

P

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 that can be connected to Meridian Mail hospitality systems.

Port There are two types of ports in the Meridian Mail Enhanced Card Option system. The first type of port is used to move data between Meridian Mail and the Meridian 1 PBX, using hardware locations on the DVP chips on the Meridian Mail Enhanced Card Processor Card. 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.

R

RSM RS-232 service module

S

SCSI Small Computer System Interface. An international standard for data communication.

SDI Serial data interface

SEERs System error and event reports

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Reader's Response Form for Meridian Mail Mini and Enhanced Card Option Installation and Maintenance Guide

NTP 555-7071-210

May 2000

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Reader Response Form

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Meridian Mail Mini and Enhanced Card Option

Installation and Maintenance Guide

Toronto Information Products
Nortel Networks
522 University Avenue, 14th Floor
Toronto, ON, Canada
M5G 1W7

Publication number: 555-7071-210
Product release: 13
Document version: Standard 2.0
Date: May 2000

Printed in the United States of America

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