P0907859

Modular Option EC

Meridian Mail

Installation Quick Reference Guide

Product Release 13 | Standard 1.0 | November 1999

NORTEL NETWORKS™

How the world shares ideas.

P0907859

Modular Option EC

Meridian Mail
Installation Quick Reference Guide

Publication number:	P0907859
Product release:	13
Document release:	Standard 1.0
Date:	November 1999

Publication history

November 1999

The *Modular Option EC Installation Quick Reference Guide* is released as Standard 1.0.

This guide documents Release 13 of Meridian Mail for the Modular Option EC platform. This release makes all previous editions obsolete.

January 1998

The *Modular Option EC Installation Quick Reference Guide* is released as Standard 1.0. This Guide documents Release 12 of Meridian Mail for the Modular Option EC platform. This release makes all earlier editions obsolete.

August 1995

The *Modular Option EC Installation Quick Reference Guide* is released as Standard 1.0. This Guide documents Release 10 of Meridian Mail for the Modular Option EC platform. This release makes all earlier editions obsolete.

Contents

About this guide

In this section

Introduction

This document outlines installation procedures to be followed by an experienced technician installing Meridian Mail.

It is assumed that

- you have a functioning Meridian 1/SL-1 switch
- you do not yet have Meridian Mail
- you are installing a one- or two-node Meridian Mail system

Note: This document provides an overview only. For more detailed information, consult the *Modular Option EC Installation and Maintenance Guide* (NTP 555-7061-250).

This document shows you how to

- install and configure a Meridian Mail system
- connect cables between the switch and Meridian Mail
- program the switch to communicate with Meridian Mail
- verify that your Meridian Mail system is working properly

References

Most of the content of this guide is based on the *Modular Option EC Installation and Maintenance Guide* (NTP 555-7061-250).

For references to your system administration guide, refer to the document that applies to your system:

- *System Administration Guide* (NTP 555-7001-301)
- *System Administration Guide for Multi-Customer System* (NTP 555-7001-302)

Warnings and cautions

This chapter summarizes the main warnings and cautions to be observed when working with Meridian Mail.

DANGER
Risk of electrocution

Nortel Networks requires that a licensed electrician make all connections needed at an electrical service panel.

DANGER
Risk of electrocution

Before installing power supplies, cards, disk drives, or tape drives in an AC module, ensure that shelf breakers are *OFF*.

Before installing power supplies, cards, disk drives, or tape drives in a DC module, ensure that the module power supply switches are *OFF*.

CAUTION
Risk of equipment damage

Jumpers connected to the backplane shrouds S4, S5, and S7 have high-density connectors and must be installed very carefully to avoid damaging the pins. Line up the jumper at right angles to the backplane, and press gently until fully seated.

CAUTION
Risk of equipment damage

Wear an antistatic wrist strap when handling components or cables, or when working on the backplane. As an additional safety measure, handle components by the edges and, whenever possible, with the loosened packing material still around the component.

CAUTION
Risk of equipment damage

Ensure that power to the module you are working on is off before you install or remove components.

CAUTION
Risk of equipment damage

Components, especially disk drives, are susceptible to damage from rough or improper handling.

CAUTION
Risk of equipment damage

Do not use a pencil to change switch settings on the backplane or on PCPs. The graphite dust may damage and short the switches. Use an appropriate nonconducting tool.

Chapter 1

Switch software requirements

In this chapter

Introduction

Switch software required

The packages listed in the table below must be present in the X11 software.

Package name	Abbreviation	Number
Recorded Announcement	RAN	7
Time and Data	TAD	8
End-to-end signalling	EES	10
Make Set Busy	MSB	17
Integrated Messaging System	IMS	35
Basic Automatic Call Distribution	BACD	40
ACD Package A	ACDA	45
Message Centre	MWC	46
Command and Status Link	CSL	77
Auxiliary Processor Link	APL	109

Network Message Services

Introduction

The Meridian 1 software must be release X11R 16.55 or later.

Additional requirements for each Network Message Services (NMS) site are listed in the table below.

Network Message Services software required

Package name	Abbreviation	Number
AML/CSL Primary Rate Access or AML/CSL Signalling Link	PRA/ISL	145/6 or 145/7
Advanced AML features	NTWK	148
Network Message Services	NMS	175

Hospitality Voice Services

Introduction

The Meridian 1 software must be X11 Release 16 or later.

Additional requirements for Hospitality Voice Services (HVS) are listed in the table below.

Hospitality Voice Services software required

Package name	Abbreviation	Number
Do-Not-Disturb, Individual	DNDI	9
End-To-End Signalling	EES	10
Intercept Treatment	INTR	11
Digit Display	DDSP	19
ACD CDR Queue Record	CDRQ	83
Hospitality Voice Services	HVS	179
Digit Key Signalling. This feature may also be referred to as “Automatic End to End Signalling.”	DKS	180

Property Management System

Introduction

The basic packages that are required to support a Property Management System are listed in the following table.

Property Management System software required

Package name	Abbreviation	Number
Controlled Class of Service	CCOS	81
Background Terminal Facility	BGD	99
Property Management System Interface	PMSI	103
Room Status	RMS	100

Optional packages for the Property Management System Interface (PMSI) are listed in the following table.

Optional software packages for the Property Management System Interface

Package name	Abbreviation	Number
Message Registration	MR	101
Automatic Wake Up	AWU	102

Note: PMSI is not compatible with the following packages: AUTOVON (DSN) (Option 68), Centralized Attendant Services (CAS) (Options 26 and 27), and Coordinated Dialing Plans (CDP) (Option 59).

Chapter 2

Site survey checklist

1. General information

( ) End user

Name: _____

Address: _____

City, State/Province: _____

Country, Zip/Postal code: _____

Telephone number: _____

Primary contact: _____

Secondary contact: _____

( ) Distributor

Name: _____

Address: _____

City, State/Province: _____

Country, Zip/Postal code: _____

Telephone number: _____

Primary contact: _____

Secondary contact: _____

( ) Serial number

Switch: _____

Meridian Mail: _____

( ) Meridian Mail remote admin #( ) _____

( ) Phone in equipment room ( ) _____

( ) NTPs available in equipment room Yes ( ) No ( )

2. Delivery information

( ) Address: _____

City, State/Province: _____

Country, Zip/Postal code: _____

Telephone number: _____

Primary contact: _____

Secondary contact: _____

Vehicle restrictions: _____

Permits required: _____

Hours of delivery: _____

( ) Security clearance: _____

( ) Freight company: _____

( ) Pre-delivery notification: _____

Hours for delivery: _____

Contact person: _____ Telephone number: _____

( ) Unloading/Unpacking

Equipment required: _____

Responsible party: _____

( ) Equipment route: _____

( ) Delivery constraints: _____

( ) Elevator: ___ Capacity: _____

3. Software considerations

( ) Current switch software release:_____

( ) Switch software release needed:_____

( ) Current Meridian Mail software release:_____

( ) Current system size:

voice ports: _____

multimedia ports: _____

nodes: _____

storage hours: _____

( ) Current system size in terms of storage hours:_____

4. Meridian Mail model considerations

Number of Meridian Mail basic-service voice ports required: _____

Number of Meridian Mail full-service voice ports required: _____

Number of Meridian Mail multimedia ports required: _____

Hours of voice storage (for messages) required: _____

Hours of voice storage (for menus/services) required:_____

Number of voice users: _____

Note: See the chapter "Determining system size" in the *Site and Installation Planning* (NTP 555-7061-200).

5. Meridian Mail optional services desired

Default language (1): _____

Extra/alternate language (2): _____

Extra/alternate language (3): _____

Extra/alternate language (4): _____

(See your Nortel Networks representative for a list of available languages.)

Voice menus	Yes ( ) No ( )
Networking	Yes ( ) No ( )
Meridian Mail ICL	Yes ( ) No ( )
Meridian Mail ICL	Yes ( ) No ( )
AutoAdmin utility	Yes ( ) No ( )
SNMP for SEERS	Yes ( ) No ( )
Meridian Text Messaging	Yes ( ) No ( )
Personal Mailbox Administration	Yes ( ) No ( )
Network Message Services	Yes ( ) No ( )
Outcalling	Yes ( ) No ( )
Fax outcalling	Yes ( ) No ( )
AMIS	Yes ( ) No ( )
Voice forms	Yes ( ) No ( )
HVS	Yes ( ) No ( )
Multiple administration	Yes ( ) No ( )
Multi-customer	Yes ( ) No ( )
Bilingual prompting	Yes ( ) No ( )
Integrated mailbox admin	Yes ( ) No ( )
Single terminal access	Yes ( ) No ( )

6. Hardware

PBX equipment cabinets

Quantity _____

Type _____

7. Equipment room information

( ) Existing floor plan: Yes ( ) No ( )

8. Power and ground considerations

Separately grounded 110 V AC outlet for Meridian Mail: Yes ( ) No ( )

( ) Calculate maximum cable distance

PBX to Meridian Mail (AML cable):_____

RS-232 (< 15.38 m [50 ft.]) Yes ( )

LDM (15.38-1231 m [50-4000 ft.]) Yes ( )

*Meridian Mail to A/B switchbox: _____ 7.69 m (25 ft.) maximum

*A/B switchbox to admin terminal:_____ 7.69 m (25 ft.) maximum

*A/B switchbox to modem: _____ 7.69 m (25 ft.) maximum

Modem to phone jack: _____

Printer to admin terminal: _____ 15.38 m (50 ft.) maximum

*If you are using Meridian Mail Reporter on the PC, or the internal modem, these cables are not used. Check for the applicable cables in the *Meridian Mail Reporter User Guide* (P0847870)

9. Current environmental conditions

( ) Equipment room cooling

Type: _____ Ambient temperature: _____

( ) Humidifier/air conditioner: _____

( ) Customer restrictions: _____

Notes on current environmental conditions:_____

_____

10. Additional considerations

Does the existing PBX installation conform to NTP and Product Bulletins? Yes ( ) No ( )
Don't know ( )

Does the end user have any complaints with existing PBX? Yes ( ) No ( )

If yes, what is the complaint?

_____

_____

_____

_____

_____

Does the end user have any complaints with existing Meridian Mail system? Yes ( ) No ( )

If yes, what is the complaint?

_____

_____

_____

_____

_____

Current Install/Data tape available Yes ( ) No ( )

Backup tapes available Yes ( ) No ( )

Keycode available Yes ( ) No ( )

11. Comments and recommendations

Chapter 3

Assembly overview

In this chapter

Overview of installation

Introduction

Before starting the installation make sure the site meets the requirements listed in *Site and Installation Planning* (NTP 555–7061–200).

Whenever possible, install external power equipment before installing a Meridian Mail column.

Important: System installation is to be performed by qualified personnel only.

DANGER
Risk of electrocution

Nortel Networks requires that a licensed electrician make all connections needed at an electrical service panel.

Installation task list

Note: I&M refers to the *Modular Option EC Installation and Maintenance Guide* (NTP 555–7061–250).

Procedure	Reference
Unpack and inspect equipment.	I&M, Chapter 4
If necessary, install Meridian Mail columns, including power and grounding, and earthquake protection. Install Meridian Mail modules.	I&M, Chapter 5
Install power supplies.	I&M, Chapter 6
Install disk drives and the tape drive.	I&M, Chapter 7
Configure the backplane and install printed circuit packs.	I&M, Chapter 8
Install intra– and inter–module cables.	I&M, Chapter 9
Install and configure peripheral devices.	I&M, Chapter 10
Install the Meridian Mail to PBX interface.	I&M, Chapter 11
Configure the Meridian 1.	I&M, Chapter 12
Start up, configure, and acceptance test Meridian Mail.	I&M, Chapter 13

Tools required

Have the following tools on hand before beginning the installation:

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

Chapter 4

Configuring the mass storage units

In this chapter

Overview

This chapter explains how to configure the mass storage units and verify the disk and tape drive jumpers and terminators.

CAUTION

Risk of equipment damage

Wear an antistatic wrist strap when handling disk and tape drives. As an additional safety measure, handle drives by the edges and, whenever possible, with the loosened packing material still around the component.

Ensure that power to the module you are working on is *OFF* before you install or remove drives.

Disk and tape drives are susceptible to damage from rough or improper handling.

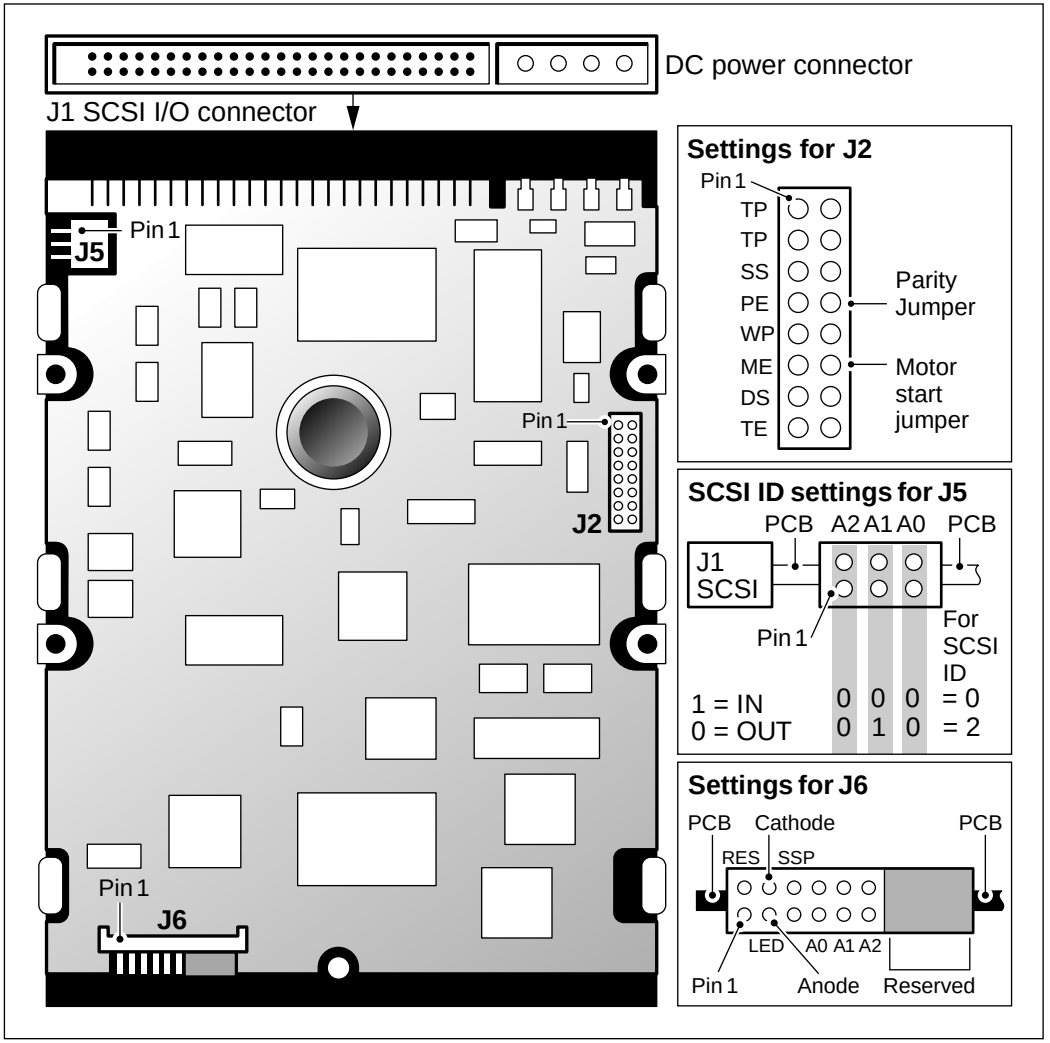
Verify disk and tape drive jumpers and terminators

Verifying disk drive jumpers and terminators

Refer to the disk drive illustrations on the following pages, for the drive appropriate to your system.

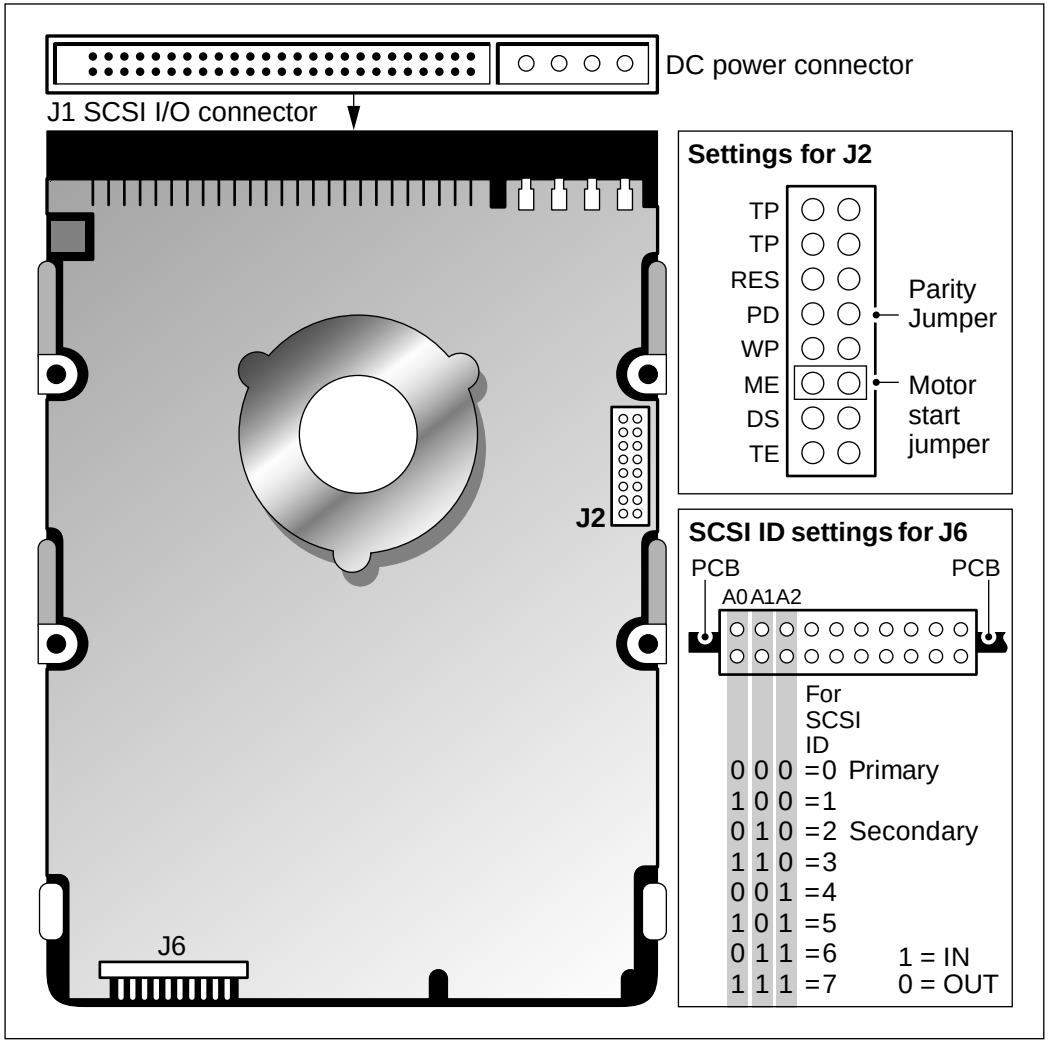
Step	Action
1	Set the SCSI ID on each primary drive (without a power pack) to 0.
2	Set the SCSI ID on each secondary drive (with a power pack) to 2.
3	Verify the other jumpers are set as shown in the appropriate figure.
4	Remove all terminators from each disk.
5	Store drive(s) in their anti-static bags until they are required to install into the Meridian Mail Module, as per the later chapters of this guide.

1.2 Gbyte and 2.0 Gbyte Seagate ST31230N disk drive and jumper setting



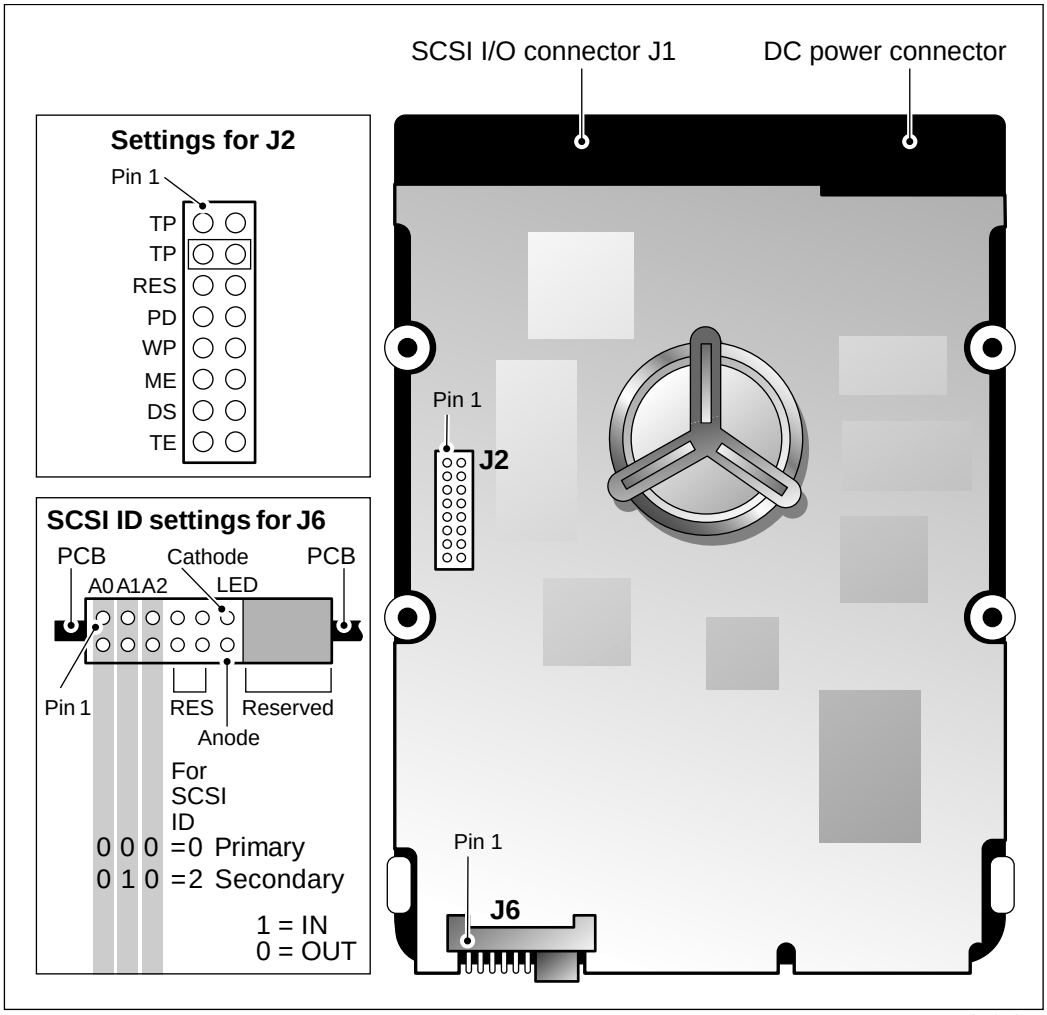
G101343

2.1 Gbyte Seagate ST32151N disk drive and jumper settings



G100589A

4.0 Gbyte Seagate ST34573N disk drive connectors and jumpers



G101341

Tape drives

Introduction

Tape drives supported for Release 13.0 of the Modular Option EC system are listed in the following table.

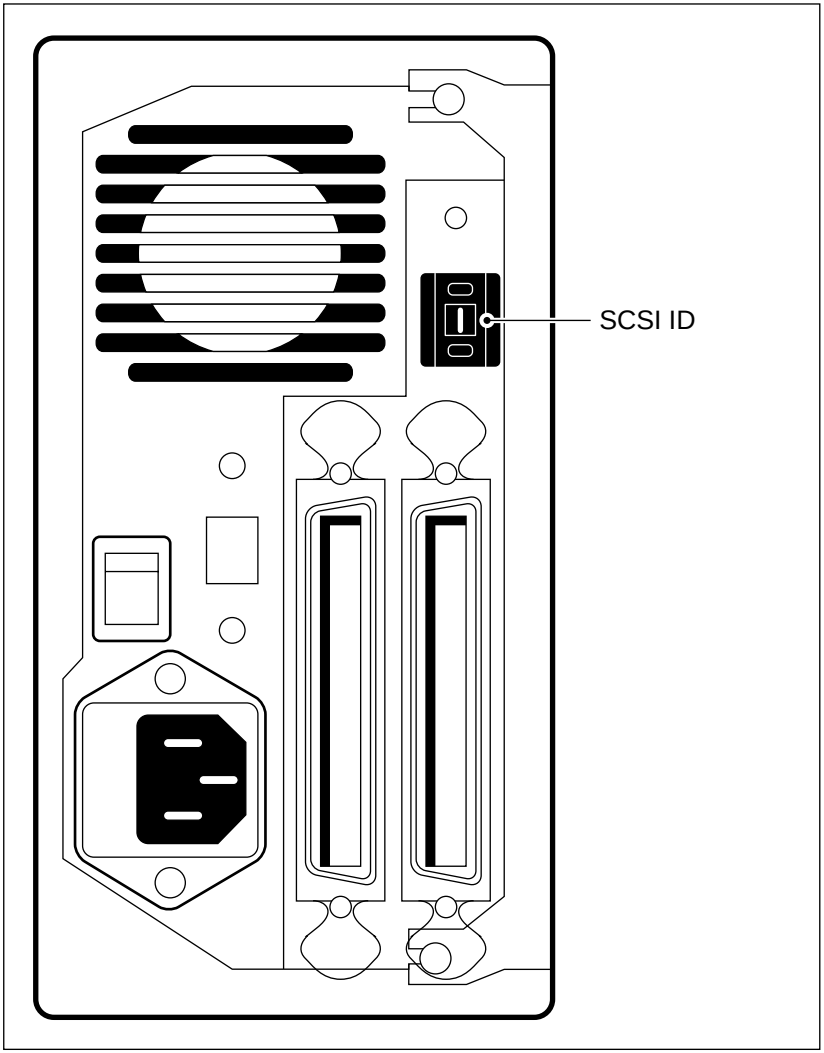
Supported tape drives

Tape Drive	PEC Code	Storage Capacity
Tandberg TDC 4220	NT6P05BA (A0630014)	2.5 Gbytes
Archive Viper 2150	NT6P05AA (A0391974)	250 Mbytes

Verifying tape drive jumpers and terminators

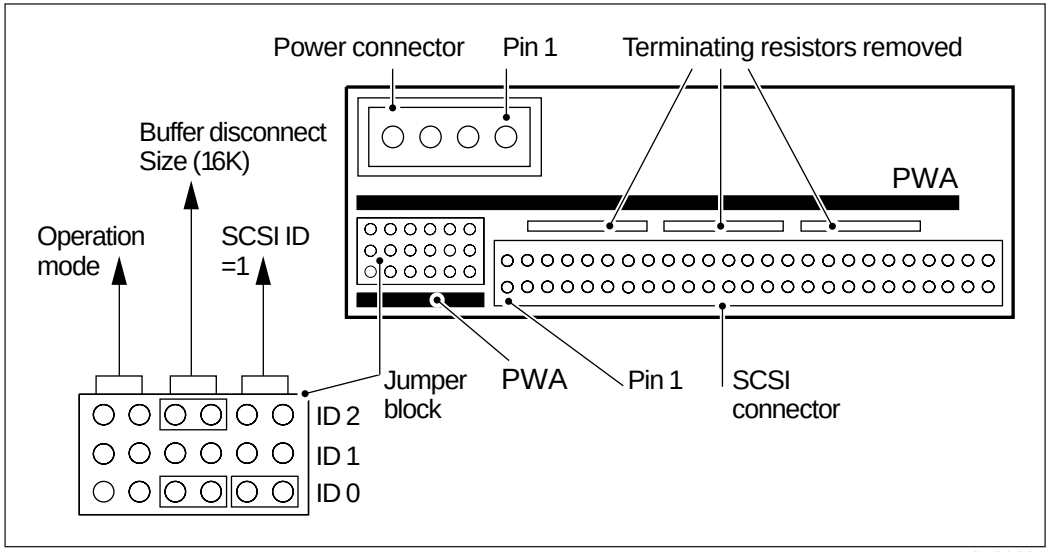
Step	Action
1	Ensure that the SCSI ID on the tape drive is set to 1.
2	Verify the other jumpers as shown in the following illustrations. Refer to either the Archive or the Tandberg tape drive illustrations, as appropriate for your system.
3	Ensure that the tape drive terminator resistor packs are all removed.

Rear of Archive tape drive showing location of SCSI ID



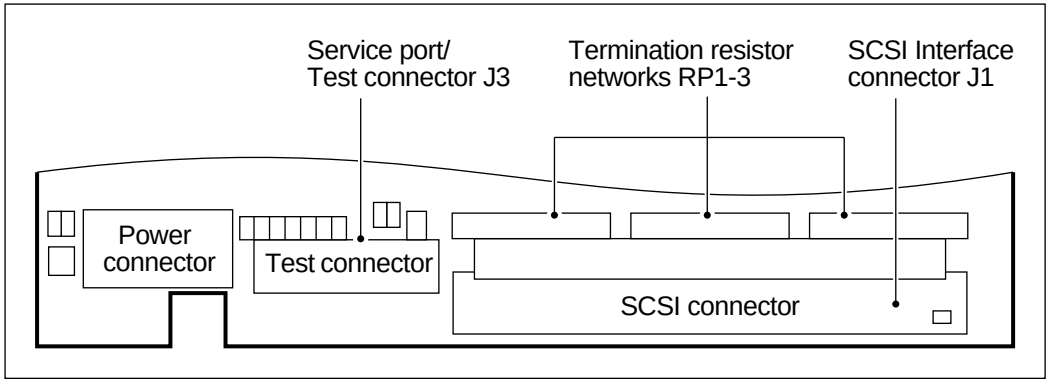
g100019

Archive tape drive connectors and jumper settings



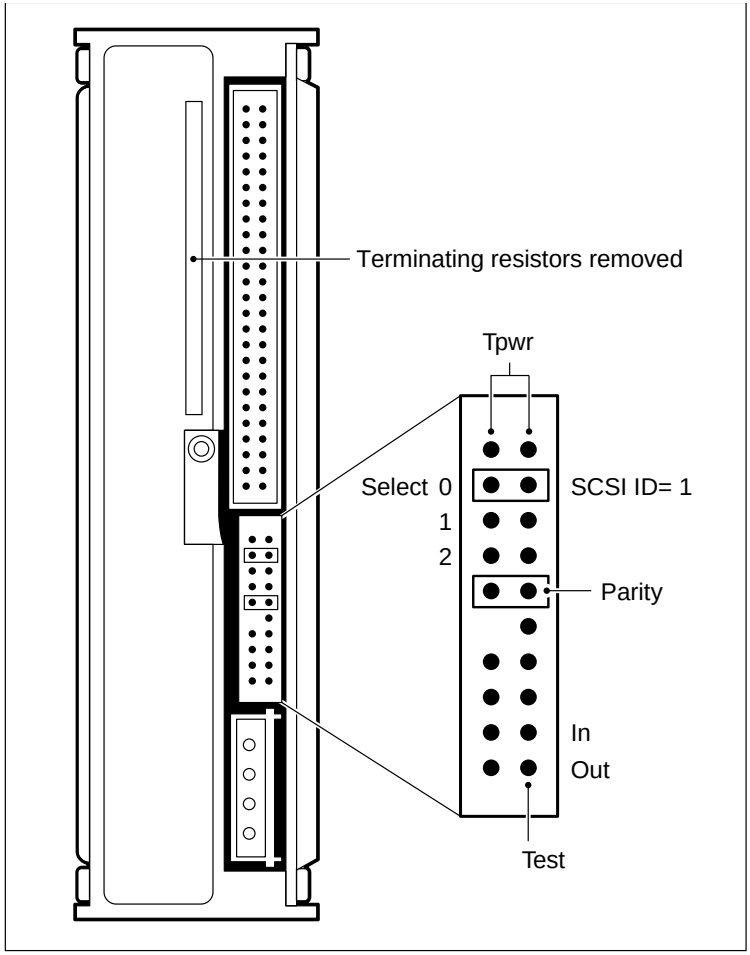
G100025

Tandberg tape drive connectors (front view)



G100022

Tandberg tape drive connectors and jumper settings (rear view)



Chapter 5

Installing a one-node system

In this chapter

Overview

Introduction

Where applicable, information is given separately for shadowed and unshadowed systems.

Verify backplane switches, EVB terminator, and address shroud jumper

CAUTION
Risk of damage to equipment

The address shroud jumper must be installed *very* carefully to avoid damaging the backplane pins.

"Location of backplane switches, shrouds, and terminators" on page 5-5 shows the location of the backplane switches, the EVB terminator, and the address shroud jumper.

Verifying the backplane switches

CAUTION
Potential damage to equipment

Do not use a lead pencil to change the switch settings. The graphite dust may damage and short the switches. Use an appropriate nonconducting tool.

Step	Action
1	Verify that the backplane switches on the module are set as follows.

Switch	Settings for a shadowed system	Settings for an unshadowed system
SW1 & SW3	all OFF (0)	all ON (1)
SW2 & SW4	all ON (1)	all OFF (0)
SW5	all ON	ON ON OFF ON

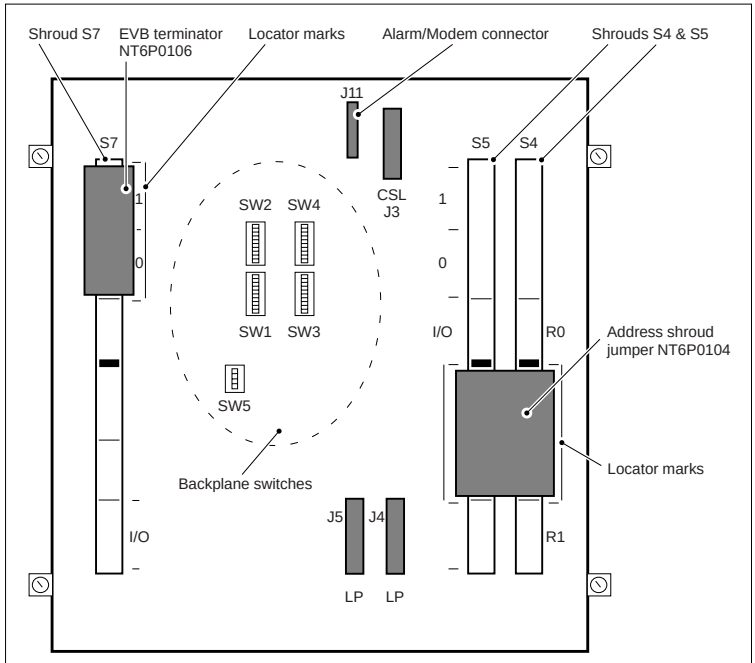
Verifying the EVB terminator

Step	Action
1	Verify that there is an EVB terminator on shroud S7 of the module. **Note:** Locator marks at the right of shroud S7 mark the terminator location. See “Location of backplane switches, shrouds, and terminators” on page 5-5.

Verifying the address shroud jumper

Step	Action
1	Verify that the module has an address shroud jumper installed near the bottom of shrouds S4 and S5. **Note:** Locator lines at the left of shroud S5 and the right of shroud S4 mark its location. See “Location of backplane switches, shrouds, and terminators” on page 5-5.

Location of backplane switches, shrouds, and terminators



Note: S7 is visible when the backplane is viewed at a slight angle. It is normally hidden by the left I/O panel when you look straight into the backplane.

G101340

Location of components in the module

DANGER
Risk of electrocution

Before installing power supplies in an AC module, ensure that shelf breakers are OFF.

Before installing power supplies in a DC module, ensure that the module power supply switches are OFF.

Location of the power supply

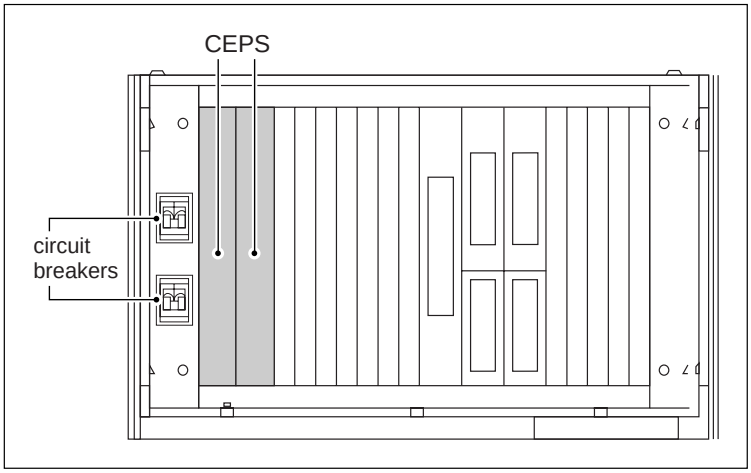
Follow the procedure for an AC or DC power supply, as appropriate, to install the power supply in the left CEPS slot.

Installing the AC power supply

See the illustration that follows this procedure.

Step	Action
1	Verify that the power to the Meridian Mail module is off. Use the circuit breakers shown in the illustration. **Note:** Wait five minutes after the power has been turned off.
2	Install the power supply.
3	Briefly turn on the power at the circuit breakers and verify that the LED at the top of the CEPS lights up. a. If the LED does light up, turn the power off again. b. If the LED does *not* light up, follow the procedures in I&M, Chapter 16.

Location of CEPS on an AC system

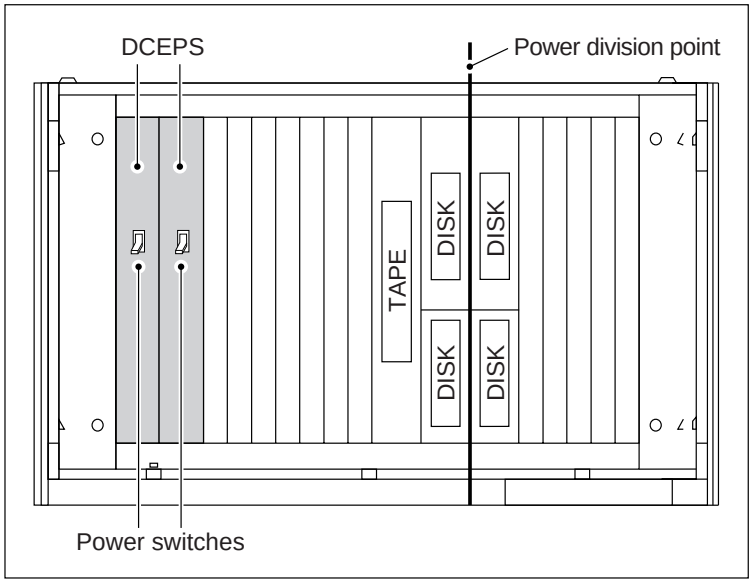


Installing the DC power supply

See the illustration that follows this procedure.

Step	Action
1	Verify that the DCEPS switch shown in the illustration is off.
2	Install the power supply.
3	Briefly turn on the switch and verify that the LED at the top of the DCEPS lights up. a. If the LED does light up, turn the power off again. b. If the LED does *not* light up, follow the procedures in I&M, Chapter 16.

Location of DCEPS on a DC system



Location of the printed circuit packs (PCPs)

CAUTION
Risk of equipment damage

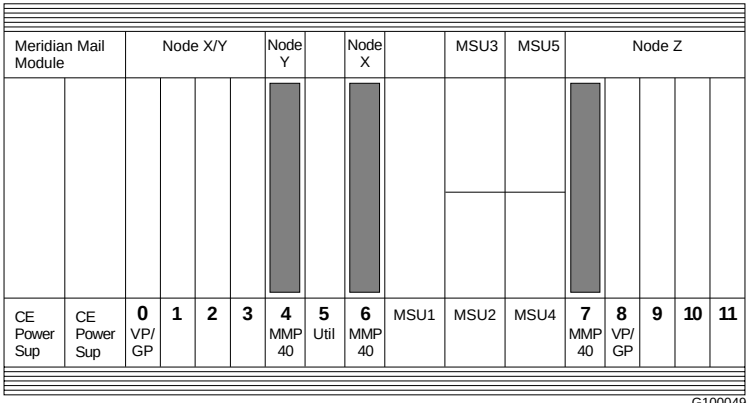
Wear an antistatic wrist strap when handling PCPs. As an additional safety measure, handle the PCP by the edges and, whenever possible, with the loosened packing material still around it.

PCPs are shipped in the module. The following sections are provided to give you a complete reference to PCP location and to help you to replace PCPs you have removed for any reason.

Location of the Enhanced MMP40 or MMP40 card

See the illustration that follows this procedure.

Step	Action
1	Verify that the Enhanced MMP40 or MMP40 card is installed in slot 6.



Note: An MMP40 card would go into slot 4 in node 3 of an unshadowed system only. Otherwise, slots 6 and 7 house the MMP40 card in any given module, as shown.

Description of the Enhanced MMP40 card

The Enhanced MMP40 (or MMP40) card contains an MC68040 microprocessor, 16 Mbytes of memory, a SCSI interface, two programmable serial ports, and a BootROM that includes system diagnostics.

Note: In a multi-node system, the Enhanced MMP40 (or MMP40) pack in the last node needs a terminator, NT4R11AA. The terminator is installed on the largest (middle) connector at the front of the pack. The bus cable runs from the HABC in node 1 to the Enhanced MMP40 (or MMP40) card in each node, and ends on the terminator daughterboard on the Enhanced MMP40 (or MMP40) in the last node.

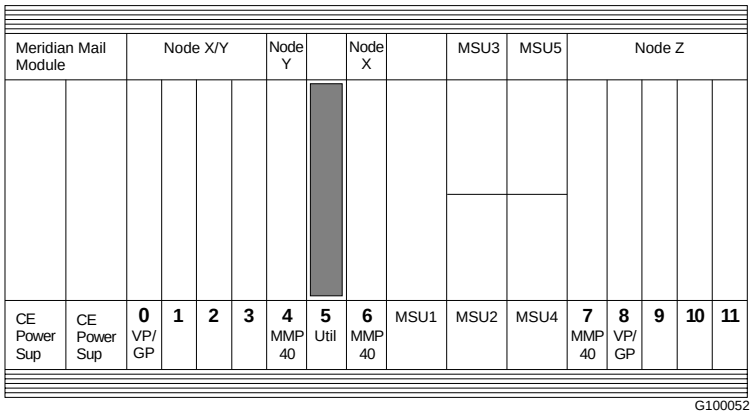
Switch settings for the Enhanced MMP40 card

Switch settings—S1								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Single-node systems								
Node 1	On	On	On	On	On	On	On	On
Multiple-node systems								
Node 1	On	On	Off	On	On	On	On	On
Node 2	Off	Off	Off	On	On	On	On	On
Node 3	On	Off	Off	On	Off	On	On	On
Node 4	Off	Off	Off	On	Off	On	On	On
Node 5	On	Off	Off	On	On	Off	On	On

Location of the utility card

See the illustration that follows this procedure.

Step	Action
1	Verify that the Utility card is installed in slot 5.
2	If you have HVS, set all positions of the onboard DIP switch to ON.
3	Set the faceplate switch to NORM.



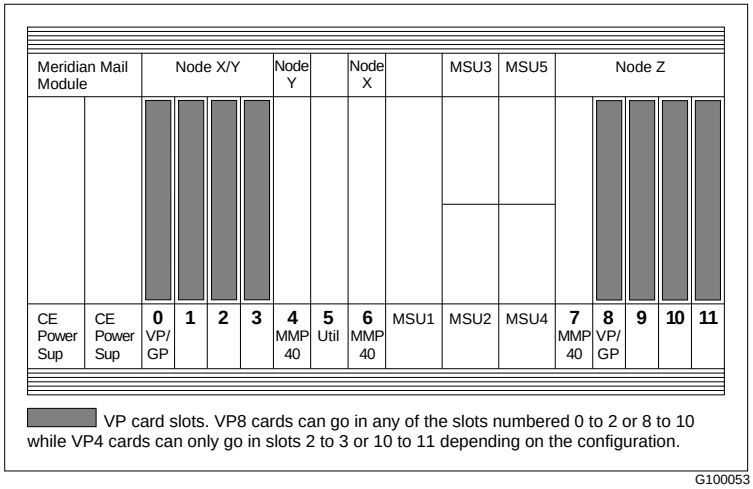
G100052

Location of the VP cards

The Enhanced MMP40 or MMP40 system supports up to 24 voice ports in slots 0 to 3.

See the illustration that follows this procedure.

Step	Action
1	Populate the voice card slots, starting from slot 0, beginning with any VP8 cards. Do not skip a voice card slot. For example, do not put a VP in slot 0, skip slot 1, and put a VP in slot 2.



Installing the disk drives

DANGER
Risk of electrocution

Before installing disk drives in an AC module, ensure that shelf breakers are OFF.

Before installing disk drives in a DC module, ensure that the module power supply switches are OFF.

CAUTION
Risk of equipment damage

Wear an antistatic wrist strap when handling disk drives. As an additional safety measure, handle drives by the edges and, whenever possible, with the loosened packing material still around the drive.

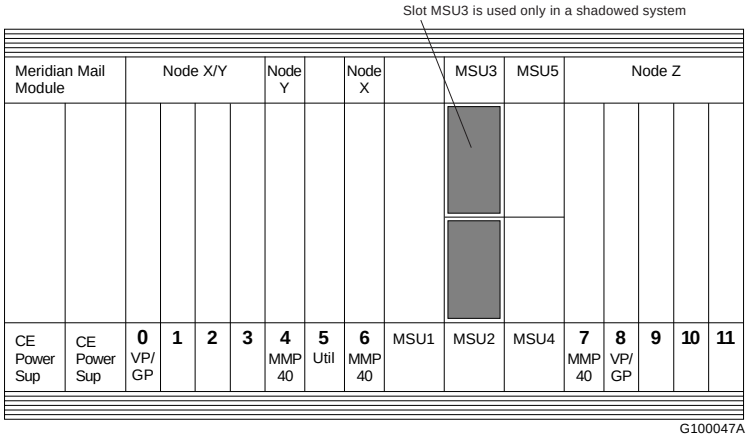
Disk drives are susceptible to damage from rough or improper handling.

See the illustration that follows this procedure.

Step	Action
1	Turn off the shelf breakers (on an AC module) or module power supply switches (on a DC module).
2	Ensure that the SCSI ID has been set properly on each disk drive. See Chapter 4.
3	Install the primary disk drive in slot MSU2.
4	If the system is shadowed, install the secondary disk drive (the drive with the power supply on the drive plate) in slot MSU3.

Location of the disk drives

MSU Slot for primary disk	MSU Slot for secondary disk
MSU2	MSU3



Installing the tape drive

DANGER
Risk of electrocution

Before installing the tape drive in an AC module, ensure that shelf breakers are *OFF*.

Before installing the tape drive in a DC module, ensure that the module power supply switches are *OFF*.

CAUTION
Risk of equipment damage

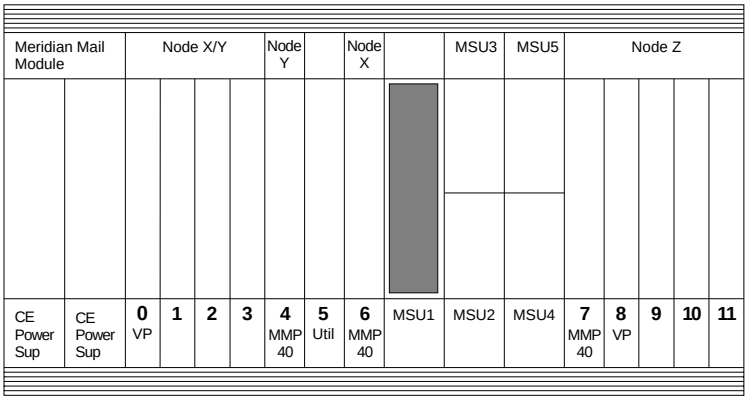
Wear an antistatic wrist strap when handling tape drives. As an additional safety measure, handle drives by the edges and, whenever possible, with the loosened packing material still around the drive.

Tape drives are susceptible to damage from rough or improper handling.

See the illustration that follows this procedure.

Step	Action
1	Turn off the shelf breakers (on an AC module) or module power supply switches (on a DC module).
2	Set the SCSI ID properly on the tape drive. See Chapter 4.
3	Install the tape drive in slot MSU1.

Location of components in the module



Chapter 6

Installing a two-node system

In this chapter

Overview

Introduction

Where applicable, information is given separately for shadowed and unshadowed systems.

Verify backplane switches, EVB terminator, and address shroud jumper

CAUTION
Risk of damage to equipment

The address shroud jumper must be installed *very* carefully to avoid damaging the backplane pins.

"Location of backplane switches, shrouds, and terminators" on page 6-5 shows the location of the backplane switches, the EVB terminator, and the address shroud jumper.

Verifying the backplane switches

CAUTION
Risk of damage to equipment

Do not use a lead pencil to change the switch settings. The graphite dust may damage and short the switches. Use an appropriate nonconducting tool.

Step	Action
1	Verify that the backplane switches on the module are set as follows.

Switch	Settings for a shadowed system	Settings for an unshadowed system

SW1 & SW3	all OFF (0)	all ON (1)
SW2 & SW4	all ON (1)	all OFF (0)
SW5	all ON	ON ON OFF ON

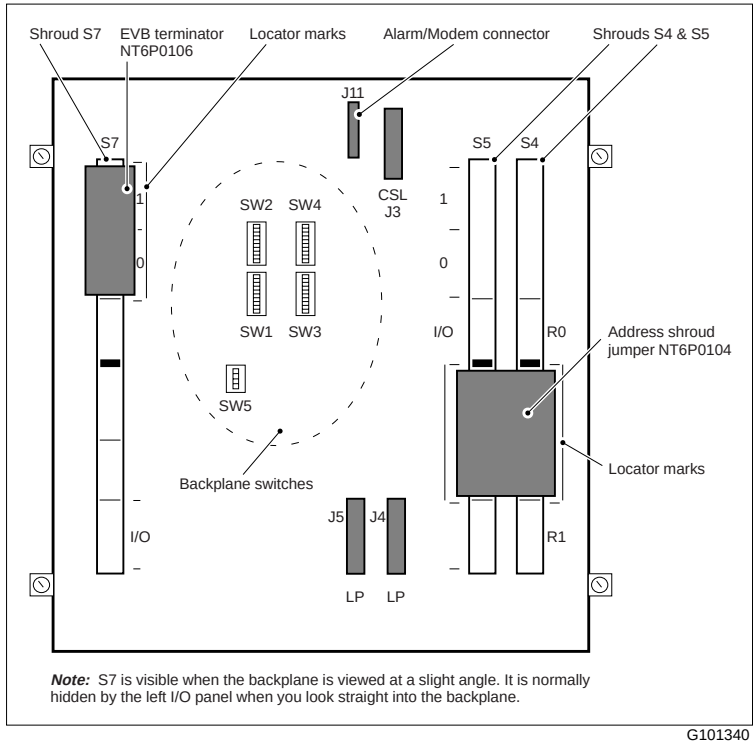
Verifying the EVB terminator

Step	Action
1	Verify that there is an EVB terminator on shroud S7 of the module. **Note:** Locator marks at the right of shroud S7 mark the terminator location. See “Location of backplane switches, shrouds, and terminators” on page 6-5.

Verifying the address shroud jumper

Step	Action
1	Verify that the module has an address shroud jumper installed near the bottom of shrouds S4 and S5. **Note:** Locator lines at the left of shroud S5 and the right of shroud S4 mark its location. See “Location of backplane switches, shrouds, and terminators” on page 6-5.

Location of backplane switches, shrouds, and terminators



Note: S7 is visible when the backplane is viewed at a slight angle. It is normally hidden by the left I/O panel when you look straight into the backplane.

G101340

Location of components in a module

DANGER
Risk of electrocution

Before installing power supplies in an AC module, ensure that shelf breakers are OFF.

Before installing power supplies in a DC module, ensure that the module power supply switches are OFF.

Location of the power supplies

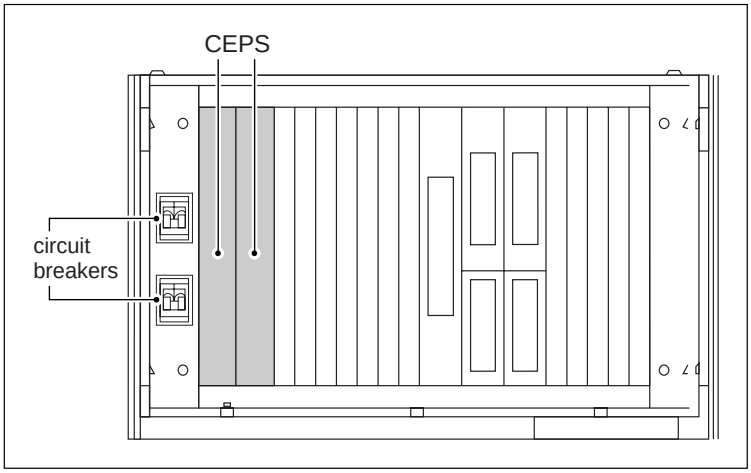
Follow the procedure for an AC or DC power supply, as appropriate, to install the power supply in the left and right CEPS slots.

Installing AC power supplies

See the illustration that follows this procedure.

Step	Action
1	Verify that the power to the Meridian Mail module is off. Use the circuit breakers shown in the illustration on the next page.
2	Install the power supplies.
3	Briefly turn on the power at the circuit breakers and verify that the LED at the top of each CEPS lights up. a. If the LED does light up, turn the power off again. b. If the LED does *not* light up, follow the procedures in I&M, Chapter 16.

Location of CEPS on an AC system

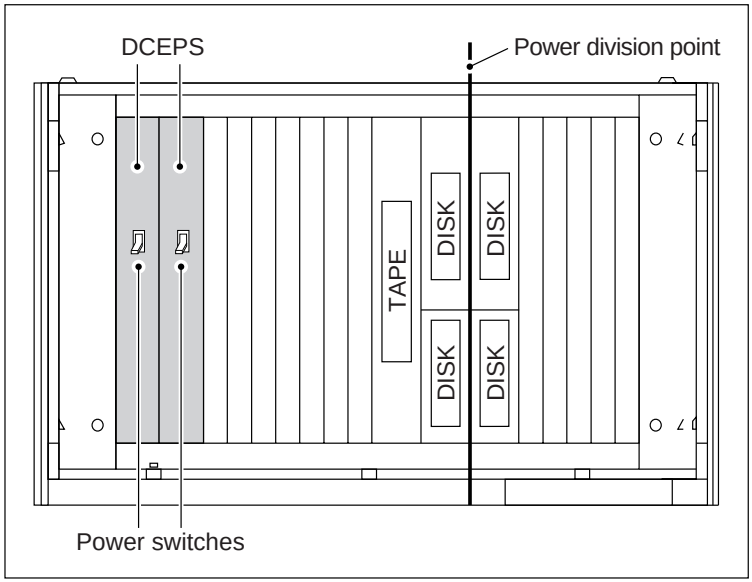


Installing the DC power supplies

See the illustration that follows this procedure.

Step	Action
1	Verify that the DCEPS switches shown in the illustration on the next page is OFF.
2	Install the power supplies.
3	Briefly turn on the switches and verify that each LED at the top of the DCEPS lights up. a. If the LED does light up, turn the power off again. b. If the LED does *not* light up, follow the procedures in I&M, Chapter 16.

Location of DCEPS on a DC system



Location of the printed circuit packs

CAUTION
Risk of equipment damage

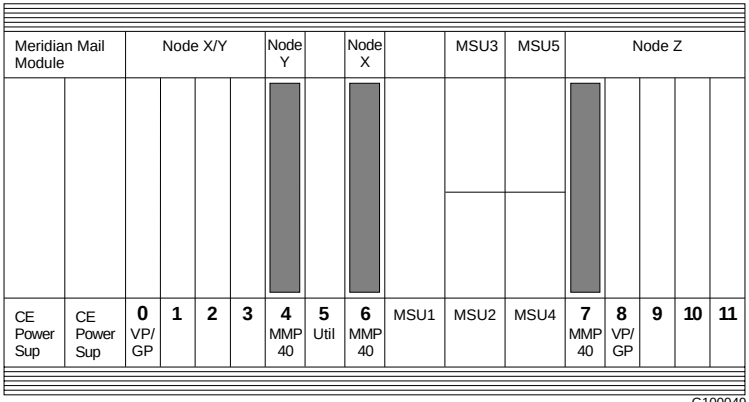
Wear an antistatic wrist strap when handling PCPs. As an additional safety measure, handle the PCP by the edges and, whenever possible, with the loosened packing material still around it.

PCPs are shipped in the module. The following sections are provided to give you a complete reference to PCP location and to help you to replace PCPs you have removed for any reason.

Location of the Enhanced MMP40 or MMP40 card

See the illustration that follows this procedure.

Step	Action
1	Verify that the Enhanced MMP40 or MMP40 cards are installed in slot 6 (node 1) and slot 7 (node 2).



Note: An MMP40 card would go into slot 4 in node 3 of an unshadowed system only. Otherwise, slots 6 and 7 house the MMP40 card in any given module, as shown.

Description of the Enhanced MMP40 card

The Enhanced MMP40 (or MMP40) card contains an MC68040 microprocessor, 16 Mbytes of memory, a SCSI interface, two programmable serial ports, and a BootROM that includes system diagnostics.

Note: In a multi-node system, the Enhanced MMP40 (or MMP40) pack in the last node needs a terminator, NT4R11AA. The terminator is installed on the largest (middle) connector at the front of the pack. The bus cable runs from the HABC in node 1 to the Enhanced MMP40 (or MMP40) card in each node, and ends on the terminator daughterboard on the Enhanced MMP40 (or MMP40) in the last node.

Switch settings for the Enhanced MMP40 card

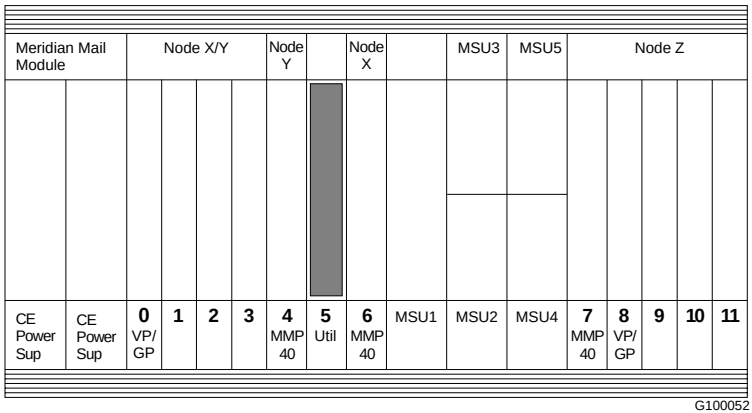
Switch settings—S1

	1	2	3	4	5	6	7	8
Single–node systems								
Node 1	On	On	On	On	On	On	On	On
Multiple–node systems								
Node 1	On	On	Off	On	On	On	On	On
Node 2	Off	Off	Off	On	On	On	On	On
Node 3	On	Off	Off	On	Off	On	On	On
Node 4	Off	Off	Off	On	Off	On	On	On
Node 5	On	Off	Off	On	On	Off	On	On

Location of the utility card

See the illustration that follows this procedure.

Step	Action
1	Verify that the utility card is installed in slot 5.
2	If you have HVS, set all positions of the onboard DIP switch to ON.
3	Set the faceplate switch to NORM.

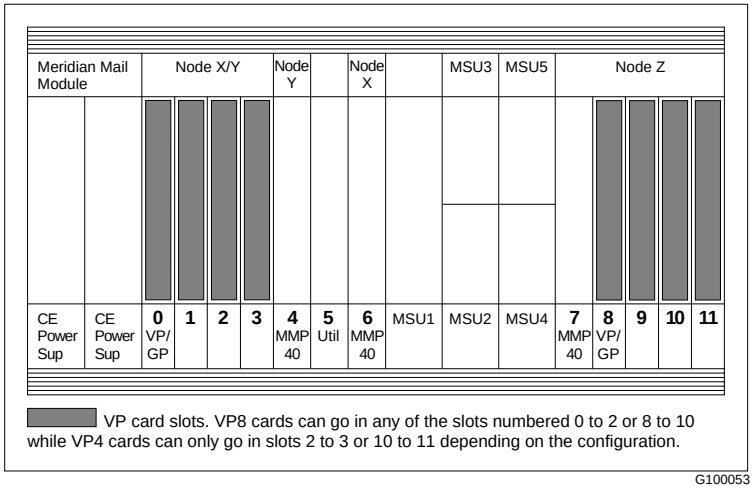


Location of the VP cards

The Enhanced MMP40 or MMP40 system supports up to 24 voice ports in node 1, slots 0 to 3, and up to 24 voice ports in node 2, slots 8 to 11.

See the illustration that follows this procedure.

Step	Action
1	Verify that the voice card slots for node 1 have been populated, starting from slot 0, beginning with any VP8 cards designated for that node. Do not skip a voice card slot. For example, do not put a VP in slot 0, skip slot 1, and put a VP in slot 2.
2	Verify that the voice card slots in node 2 have been populated, starting from slot 8, beginning with any VP8 cards designated for that node. Do not skip a voice card slot. For example, do not put a VP in slot 0, skip slot 1, and put a VP in slot 2.



G100053

Installing the disk drives

DANGER
Risk of electrocution

Before installing disk drives in an AC module, ensure that shelf breakers are *OFF*.

Before installing disk drives in a DC module, ensure that the module power supply switches are *OFF*.

CAUTION
Risk of equipment damage

Wear an antistatic wrist strap when handling disk drives. As an additional safety measure, handle drives by the edges and, whenever possible, with the loosened packing material still around the drive.

Disk drives are susceptible to damage from rough or improper handling.

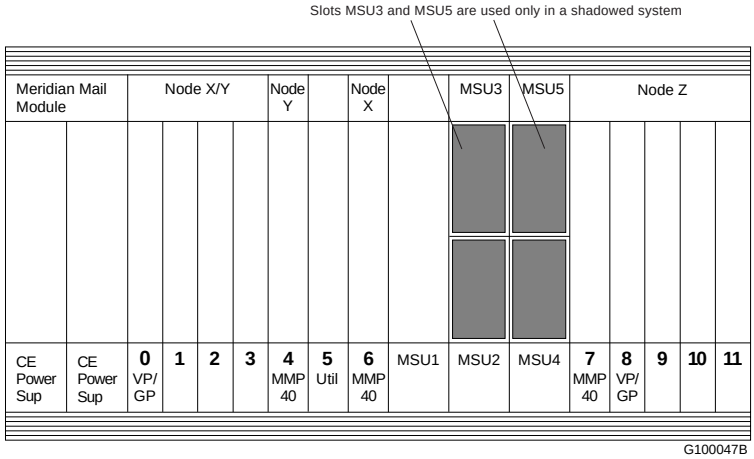
Note: The disk units are labeled to show the node number for which they are configured. Be sure to install each disk in the correct node.

See the illustration that follows this procedure.

Step	Action
1	Turn off the shelf breakers (on an AC module) or module power supply switches (on a DC module).
2	Ensure that the SCSI ID has been set properly on each disk drive. See Chapter 4.
3	Install the primary disk drives in slots MSU2 and MSU4.
4	If the system is shadowed, install the secondary disk drives (the drives with the power supply on the drive plate) in slots MSU3 and MSU5.

Location of the disk drives

Node	MSU Slot for primary disk	MSU Slot for secondary disk
1	MSU2	MSU3
2	MSU4	MSU5



Installing the tape drive

DANGER
Risk of electrocution

Before installing the tape drive in an AC module, ensure that shelf breakers are *OFF*.

Before installing the tape drive in a DC module, ensure that the module power supply switches are *OFF*.

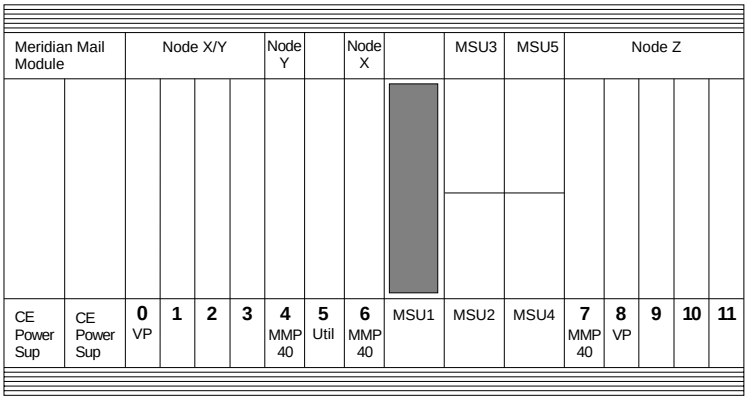
CAUTION
Risk of equipment damage

Wear an antistatic wrist strap when handling tape drives. As an additional safety measure, handle drives by the edges and, whenever possible, with the loosened packing material still around the drive.

Tape drives are susceptible to damage from rough or improper handling.

Step	Action
1	Turn off the shelf breakers (on an AC module) or module power supply switches (on a DC module).
2	Set the SCSI ID properly on the tape drive. See Chapter 4.
3	Install the tape drive in slot MSU1. See the illustration that follows this procedure.

Location of the printed circuit packs



G100575

Chapter 7

Installing the Meridian Mail to Meridian 1 interface

In this chapter

Overview

Introduction

This chapter covers the installation of

- the network loop card (QPC414) in the switch and the cables between the switch and Meridian Mail
- the AML interface card (QPC513H ESDI or NT6D80 MSDL) in the switch and the cables between the switch and Meridian Mail

The programming of the network loop and the AML are covered in Chapter 12, “Meridian 1 configuration.”

Install the network loop hardware

Determining the number of loops and loop cards needed

The number of loop cards needed in the switch depends on the number of *physical* channels on your system, regardless of whether the channels are configured for voice or multimedia use.

Loops and loop cards in an Enhanced MMP40 or MMP40 system

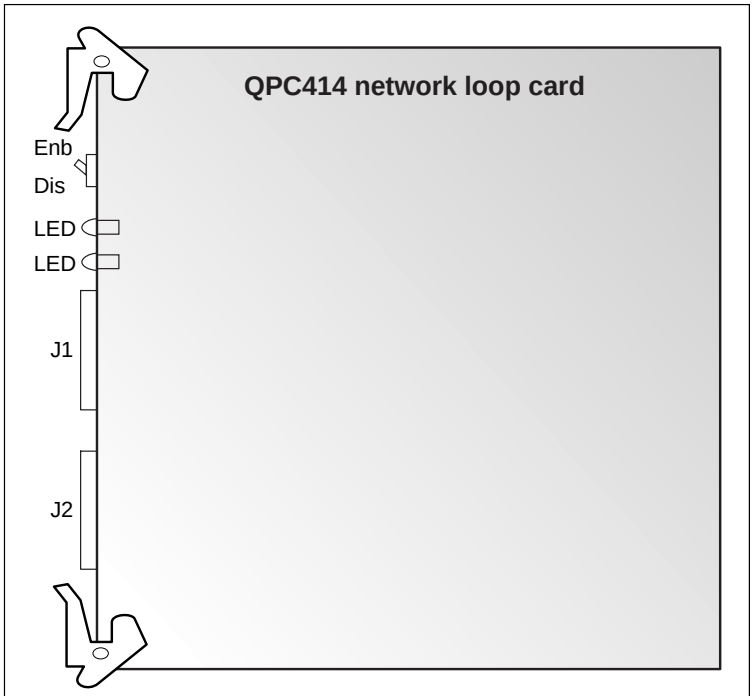
# of nodes	max # of physical channels	# of loops needed	# of loop cards needed
1	24	1	1
2	48	2	1

Installing the network loop card

See “Network loop card (QPC414)” on page 7-4.

Step	Action
1	Select an available slot to install the network card in the Meridian 1.
2	Note the slot number and its corresponding loop number for the card. See *Circuit Card Installation* (NTP 553–3001–211).
3	Enter the loop number(s) in the Meridian Mail configuration. Refer to the chapter on hardware administration in the *Meridian Mail System Administration Guide* (NTP 555–7001–301).
4	Set the enable/disable switch on the faceplate to Dis.
5	Install the card. *Once installed, both LEDs on the card will light.*

Network loop card (QPC414)



Note: If the system has more than 48 channels, you will need to install a second network card.

G100186

Installing the network loop cables

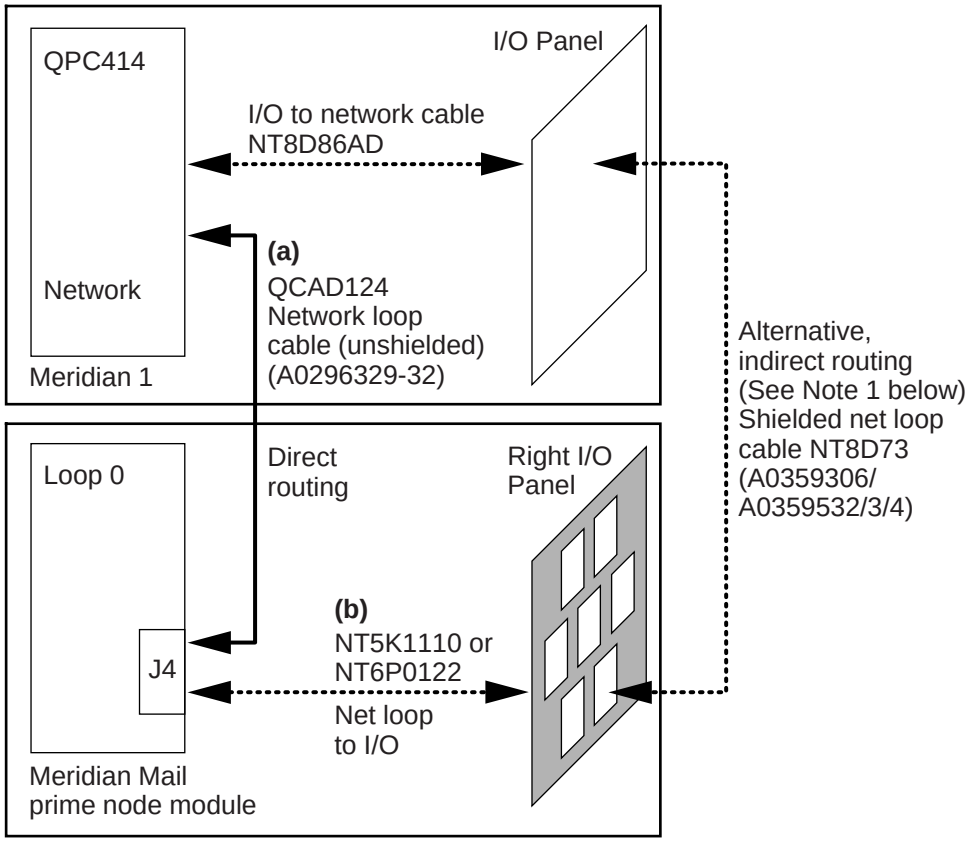
Choose either direct or indirect cabling between the Meridian 1 and Meridian Mail.

Direct cabling

See “Network loop cabling” on page 7-6.

Step	Action
1	If cables are installed from LP0 and LP1 on the Meridian Mail I/O panel to J4 and J5 on the Meridian Mail backplane, remove them.
2	Install cables as shown in the illustration on the following page.
3	Set the enable/disable switch on the faceplate of the network card to Enb. *The LEDs remain on.*

Network loop cabling



Notes:

1. To minimize EMI, cables should stay within the module. Therefore, avoid the use of the alternative, indirect routing wherever possible.
2. This diagram depicts the alternative cabling through the right I/O panel to Loop 0, J4. The cabling could also be directed through the left I/O panel to Loop 1, J5.

G100062

Indirect cabling

See the illustration on the previous page.

Step	Action
1	If the NT5K1110 or NT6P0122 cables are not already installed from the I/O panel of the Meridian Mail module to the Meridian Mail backplane, install them.
2	Install the other cables as shown in “Network loop cabling” on page 7-6.
3	Set the enable/disable switch on the faceplate of the network card to Enb. *The LEDs remain on.*

Install the AML interface card

Make sure you have the card that is supported by your switch software:

- for Meridian 1 software Release 18 or higher, an MSDL card (NT6D80)
- for any Meridian 1 software release, an ESDI card (QPC513, version H or later)

Installing the MSDL card

See “MSDL card switches” on page 7-10.

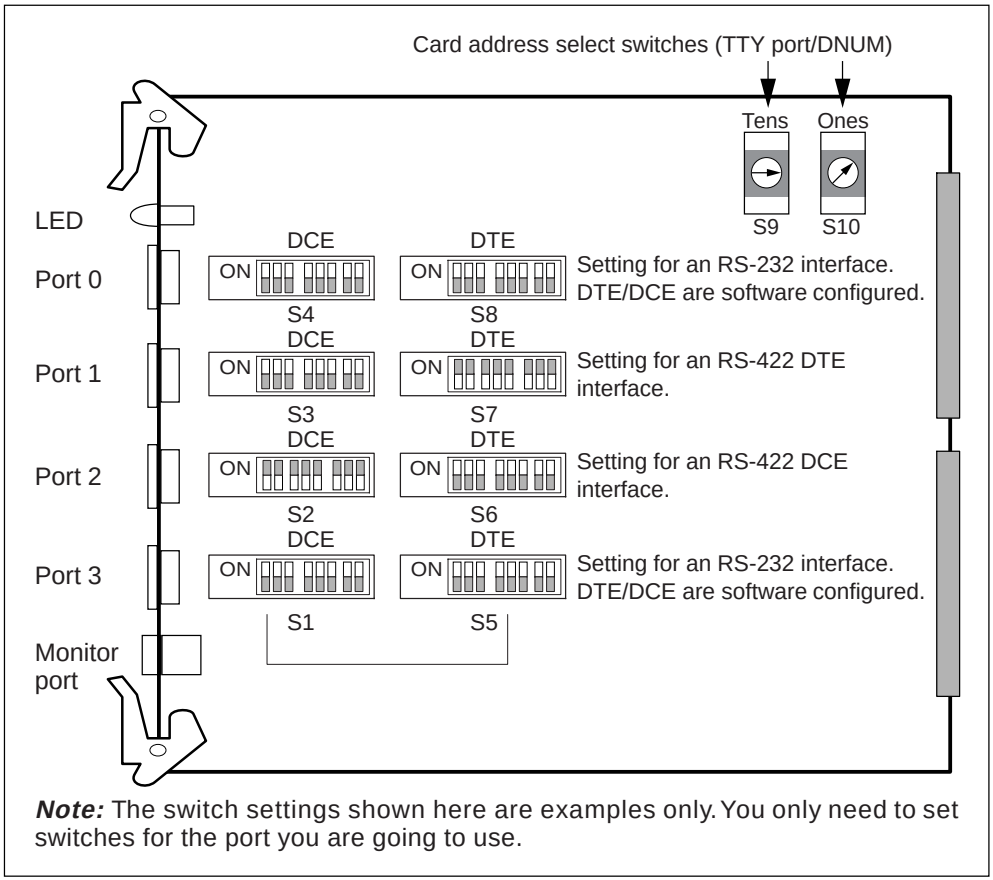
All four ports on the MSDL card are associated with one *device number* or DNUM. The port number and the DNUM that allow the Meridian 1 to recognize the card are programmed in Overlay 17.

Step	Action
1	Print out the configuration record from Overlay 22.
2	Select any unused TTY in the range 0–15 as the DNUM. Preferably select a number that has not already been assigned to an AML link or a VSID.
3	Unpack and inspect the MSDL card.
4	Set the switches on the card for the port you are going to use for the AML link according to the settings shown in the following table.

Port	Switch	Switch
Port 0	S4 = OFF	S8 = OFF
Port 1	S3 = OFF	S7 = OFF
Port 2	S2 = OFF	S6 = OFF
Port 3	S1 = OFF	S5 = OFF

Step	Action
5	Set switches S9 and S10 to the DNUM you chose in step 2. **Note:** Meridian 1 cards are hot–pluggable. To remove or install a card, you must ensure that the card is disabled in the software.
6	Install the card in the Meridian 1, in a loop (LP) slot on a common equipment (CE) shelf. *The LED on the MSDL faceplate should flash three times, and then stay on until the card is configured and enabled in the software. If it does not do so, replace the card.*
7	Enable the card.

MSDL card switches



Note: The switch settings shown here are examples only. You only need to set switches for the port you are going to use.

G100080

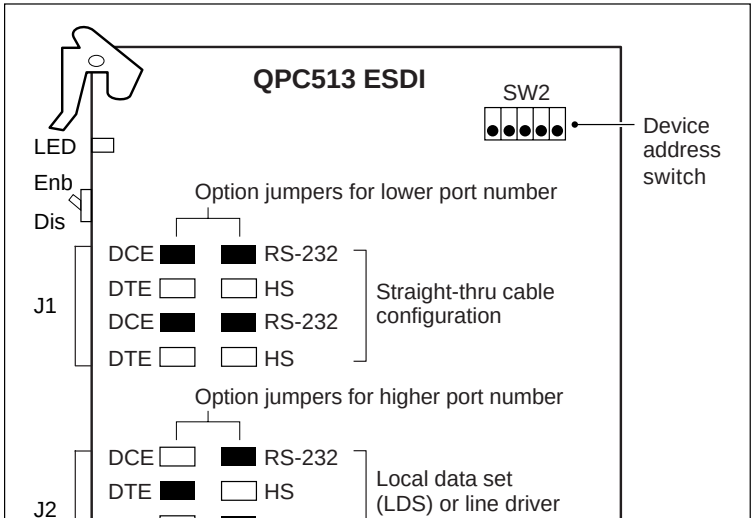
Installing the ESDI card

See “ESDI card jumpers and address switch” on page 7-12.

The ESDI card has two ports, J1 and J2, each of which is assigned a *device number* or DNUM. J1 is associated with an even DNUM, and J2 with the next higher odd DNUM. The DNUM is used in Meridian 1 load 17 to establish the software link with Meridian Mail.

Step	Action
1	Print out the configuration record from Overlay 22.
2	Select any unused TTY in the range 0–15 as the DNUM. Preferably select a number that has not already been assigned to an AML link or a VSID.
3	Unpack and inspect the card.
4	Set the enable/disable switch on the faceplate to “Dis.” **Note:** Meridian 1 cards are hot–pluggable. To remove or install a card, you must ensure that the card is disabled in the software.
5	Set the device address switches on the card to the selected DNUM. See “ESDI card jumpers and address switch” on page 7-12 for the location of the switch, and “ESDI card device address switch (SW2) settings” on page 7-12 for the relationship between the DNUM and the switch settings. You will use the DNUM in overlay 17.
6	Set the option jumpers for the port you are going to use according to the illustration.
7	Install the card.
8	Set the enable/disable switch on the faceplate to “Enb.”

ESDI card jumpers and address switch



The following illustration shows the relationship between the DNUM and the switch settings.

ESDI card device address switch (SW2) settings

QPC513H or later

DNUM	Device address 1	2	3	Synchronous mode 4
0-1	0	0	0	1
2-3	0	0	1	1
4-5	0	1	0	1
6-7	0	1	1	1
8-9	1	0	0	1
10-11	1	0	1	1
12-13	1	1	0	1
14-15	1	1	1	1

1= switch on, 0 = switch off

G100077

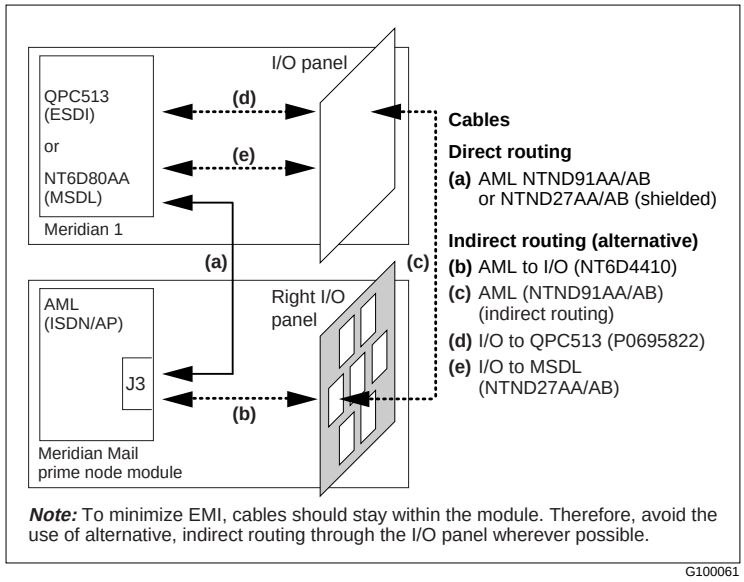
Install the AML cabling

Choose either direct or indirect cabling between the Meridian 1 and Meridian Mail.

Direct routing

Step	Action
1	If there is a cable from J3 on the Meridian Mail backplane to the right I/O panel, CSL port, remove it.
2	Connect the AML cable as shown in the following illustration.

AML cabling



Note: To minimize EMI, cables should stay within the module. Therefore, avoid the use of alternative, indirect routing through the I/O panel wherever possible.

G100061

Indirect routing

Step	Action
1	Connect the cables as shown in the preceding illustration.

Chapter 8

Installing peripheral devices and cabling

In this chapter

Overview

Introduction

This chapter describes the initial communication requirements for Meridian Mail.

Note: Information is provided for configuring a Guest Administration Terminal and a Multiple Administration Terminal. However, these terminals will not function until the software installation is performed on Meridian Mail and the dataports are configured for their usage. Ensure that the following software packages are available for each feature:

- Multiple Administration Feature
- Hospitality Feature

Overview of installation

Steps for installing peripheral devices

Step	Action
1	Install the A/B switchbox.
2	Install and configure the administration terminal. **Note:** If you are using AdminPlus, refer to *System Administration–AdminPlus* (NTP 555–7001–310) for installation instructions for the administration PC.
3	If you have the multiple user administration feature, install the MATs.
4	Install and configure the administration printer and connect it to the administration terminal.
5	Install the local modem.
6	Install the remote terminal and modem if used.
7	If you have the hospitality feature, install the GACs.
8	Install networking modems if used.

The cabling described here is for peripherals connected to the 4- and 5-port RS-232 fanout cables from the rear I/O panels. Alternative cabling, using a BIX block at the MDF, is described later in this chapter.

If you are using the Meridian Mail Reporter (MMR) package, refer to the *Meridian Mail Reporter User Guide* for installation instructions for MMR.

Data port usage

The recommended data port usage is shown in " ICL recommended data port use" on page 8-4.

Note: A port should have been configured at software installation time for each MAT, GAC, and networking modem. If this was not done, you will need to reconfigure ports after the system is rebooted. See the "Modify hardware" section in *System Administration Tools* (NTP 555–7001–305).

ICL recommended data port use

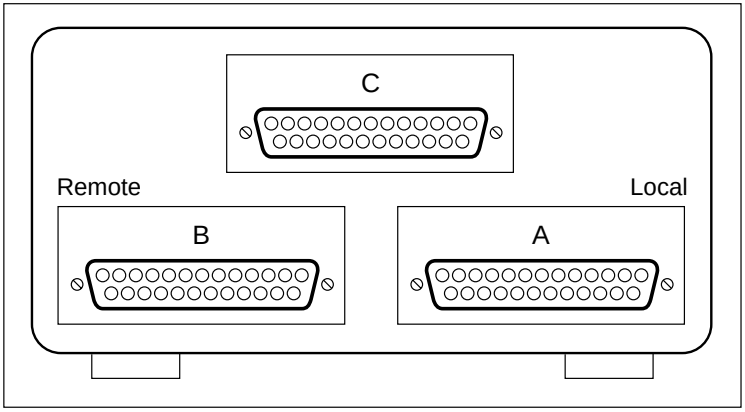
Port	Allowable uses
Node 1 Enhanced MMP40 or MMP40 port 1	System Console or AdminPlus
Node 1 Enhanced MMP40 or MMP40 port 2	AML
Node 1 Utility Card port 1	Remote Access
Node 1 Utility Card port 2	GAC, MAT, Network Modem, Printer, ICL
Node 1 Utility Card port 3	GAC, MAT, Network Modem, Printer, ICL, PMSI Link
Node 1 Utility Card port 4	GAC, MAT, Network Modem, Printer, ICL, PMSI Link
Node 2 Enhanced MMP40 or MMP40 port 1	GAC, MAT, Printer
Node 2 Enhanced MMP40 or MMP40 port 2	GAC, MAT, Printer

Installing the A/B switchbox

The A/B switchbox is required for remote administration and maintenance by Nortel Networks personnel.

Step	Action
1	Place the A/B switchbox in a suitable location close to Meridian Mail.
2	Set the switch on the front of the A/B switchbox to the A position. Label this switch position and the A connector Local. Label the other position and the B connector Remote.
3	Connect the cable from the A/B box to the SLT6–PB connector on the 5–port fanout cable on the Meridian Mail right I/O panel. See “ A/B switchbox (rear view)” on page 8-5.

A/B switchbox (rear view)

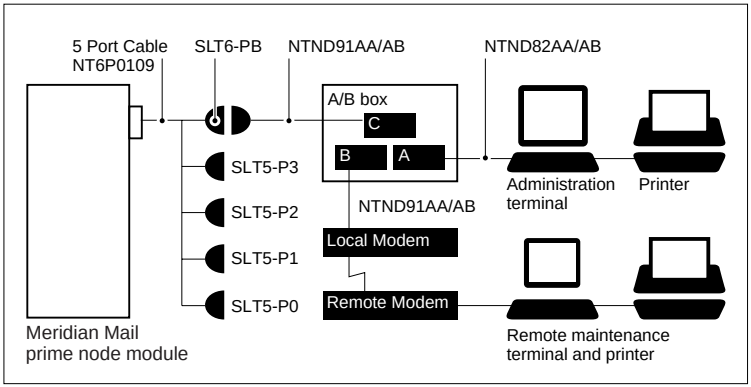


Installing the primary administration terminal

See “ A/B switchbox for remote administration and maintenance” on page 8-6.

Step	Action
1	Place the administration terminal in a suitable location. If it is not within 15.24 m (50 ft) of the Meridian Mail system, use an asynchronous Limited Distance Modem (LDM).
2	Connect Meridian Mail, the local modem, and the administration terminal to the A/B box as shown in the illustration. Use an INMAC 328 adaptor and/or a 6–pin to 25–pin adaptor as needed.
3	Configure the terminal as described in "Configuring the administration terminal" later in this chapter.

A/B switchbox for remote administration and maintenance



Installing a MAT

See the preceding illustration.

Only one MAT per node may be installed. If node 1 has two GACs, it cannot also have a MAT installed.

Note: You must have the Multiple Administration Feature installed.

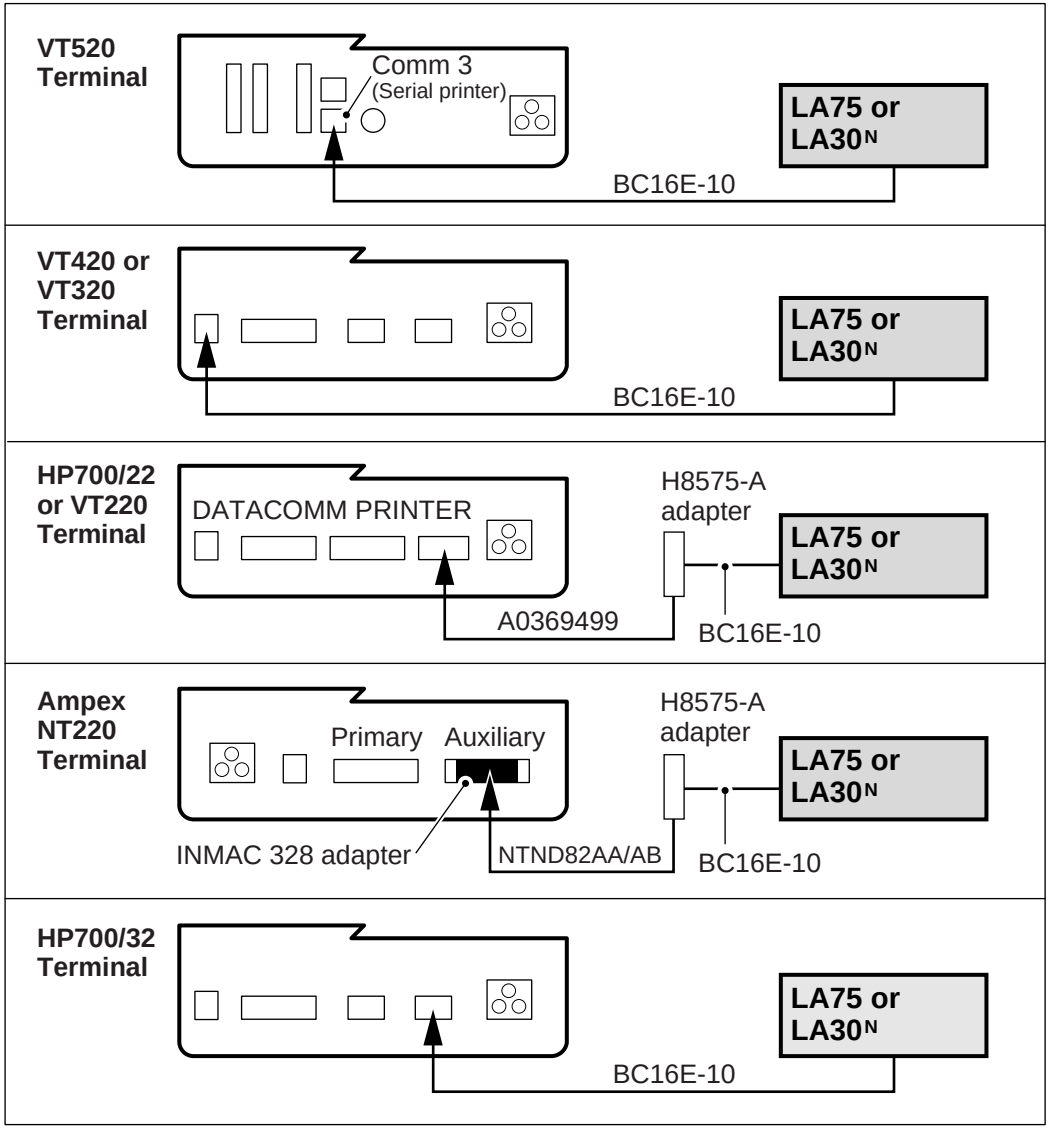
Step	Action
1	Place the administration terminal in a suitable location. If it is not within 15.24m (50 feet) of the Meridian Mail system, use an asynchronous Limited Distance Modem (LDM).
2	Connect a null modem cable from the terminal to a connector on a 5–port fanout cable or a 4–port fanout cable. This connector must correspond to a port that has been configured for a MAT. See “ Ports and connectors for peripheral devices” on page 8-22 for the correspondence between fanout cable connector labels and ports configured during system installation or modification. See “ ICL recommended data port use” on page 8-4 for recommended usage.
3	Configure the terminal as described in "Terminal configuration" later in this chapter.

Installing the LA75 Plus Companion printer

See “ LA75 Plus Companion printer connections to administration terminals” on page 8-8.

Step	Action
1	Place the printer in a suitable location near the administration terminal.
2	Connect the BC16E–10 interface cable from the back of the printer to the terminal, using adaptors and other cables as needed.
3	Leave the printer powered off.

LA75 Plus Companion printer connections to administration terminals



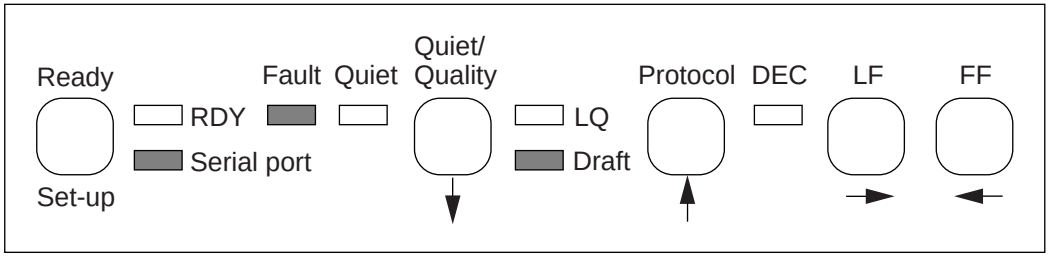
G100619

Configuring the LA75 Plus Companion printer

See “Front control panel on LA75 Plus Companion printer” below.

Step	Action
1	Ensure the printer is turned off.
2	Press and hold the Set–up button on the front control panel of the printer and, *at the same time*, power on the printer. Release the Set–up button one to two seconds after powering on. See the illustration below for the layout of the front panel. *The printer prints out a list of the default settings, goes back to the beginning of the list (that is, to Generic 1), reprints the first setting, and stops.*

Front control panel on LA75 Plus Companion printer



G100076

LA75 printer settings

Feature number	Name	Required value	Meaning
Generic 1	Protocol at power–up	3	Port dependent
Generic 2	Form length	9	27.94cm (11 inches) (A)
Generic 3	Vertical pitch	4	6 lines per 2.54cm (inch)
Generic 4	Automatic advance	1	Selected
Generic 5	Print quality control	1	Software control
Generic 6	Port selection	1	Serial port
Generic 7	Baud rate	7	9600

Feature number	Name	Required value	Meaning
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 2.54cm (in.) (80 Col)
DEC 2	GO character pitch	1	U.S. 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 marg	2	Wrap

3 To change the value of the current setting, press the left arrow key on the front of the printer. See the preceding table for the required values.

The current feature number is printed again with the new value.

4 Press the left arrow key until the value that you want for this feature is printed. Press the down arrow key to move on to the next feature.

5 Repeat step 4 until you have selected the required values for all of the features.

6 Press the Set–up button to save the settings.

Installing and configuring modems for remote support

Use the following steps to install and configure the modems for remote support:

Step	Action
1	If the modem is a UDS 224, put the front panel rotary switch in the Data position.
2	If the modem is a Ven–Tel, set the S2 DIP switches as follows:

Ven–Tel S2 DIP switches

Switch	Setting	Result
S2–1	ON	Modem assumes data terminal ready (DTR) is on
S2–2	OFF	Not used
S2–3	OFF	Not used
S2–4	OFF	Not used
S2–5	OFF	Not used
S2–6	OFF	Not used
S2–7	ON	Speaker enabled
S2–8	ON	Modem will respond to commands
S2–9	ON	NVRAM command set enabled
S2–10	OFF	Not used

Modem setup strings

Step	Action
3	Connect a straight RS–232 cable (NTND91AA/AB) from a configured terminal to the modem.
4	Enter the modem setup string on the terminal, as follows:

Terminal baud rate	Modem and usage	Setup string
9600 bps	Ven–Tel 9600 Plus/9600 Plus II	at&f *x1 &c1 3 0 %f2 0 s0=1 e0 q1 &w
	Ven–Tel 2400–33/2400 Plus II	at&f &d0 3 0 s0=1 s64=1 e0s14=12 &w
	UDS 2440	at&f3 &c1 s0=1 eos14=140 &w
	UDS V3225	at&f &c1 s0=1 e0 q1 &w

2400 bps	Ven–Tel, local	at&f &d3 1 3 s0=1 s64=1 s14=12 e0 &w
	Ven–Tel, remote	at&f 3 &c1 s14=170 &w
	UDS 2440, local or remote	at&f s14=140 &w
	UDS 224, local	at&f s14=140 &w
	UDS 224, remote	at&f &w

5 Turn off the modem for 10 seconds and then turn it back on.

Configuring the UDS modems using the front panel method

The UDS modems may be configured using buttons on the front panel, as an alternative to the administration terminal method described for the Ven–Tel and UDS modems. If you prefer to use the front panel to configure the modem, see I&M Appendix C.

Installing a guest administration console

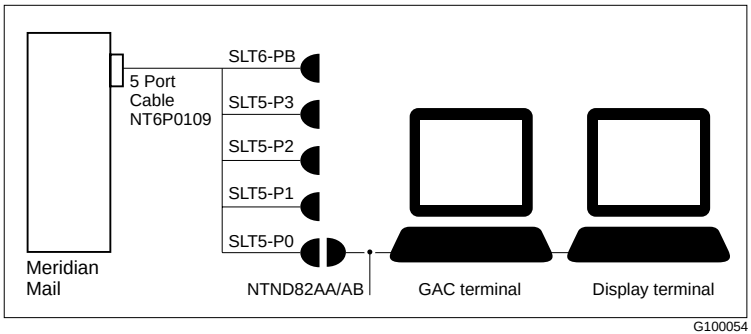
See “ GAC terminal” on page 8-13.

Note 1: You must have the hospitality feature installed.

Note 2: You may have one or two GACs on node 1, and one GAC on node 2. If node 1 has a MAT, it may have only one GAC.

Step	Action
1	Place the terminal in a suitable location. If not within 15.24m (50 feet) of the Meridian Mail system, use asynchronous Limited Distance Modems (LDMs).
2	Connect a null modem cable from the terminal to a connector on a 5–port fanout cable or a 4–port fanout cable. This connector must correspond to a port that has been configured for a GAC. See “ Ports and connectors for peripheral devices” on page 8-22 for the correspondence between fanout cable connector labels and ports configured during system installation or modification. See Table 12–1 " ICL recommended data port use" on page 8-4 for recommended usage.
3	Connect a straight–through RS–232 cable from the displays only console to the printer port of the GAC.
4	Configure the terminal as described in "Configuring the administration terminal" later in this chapter.

GAC terminal



Installing a networking modem

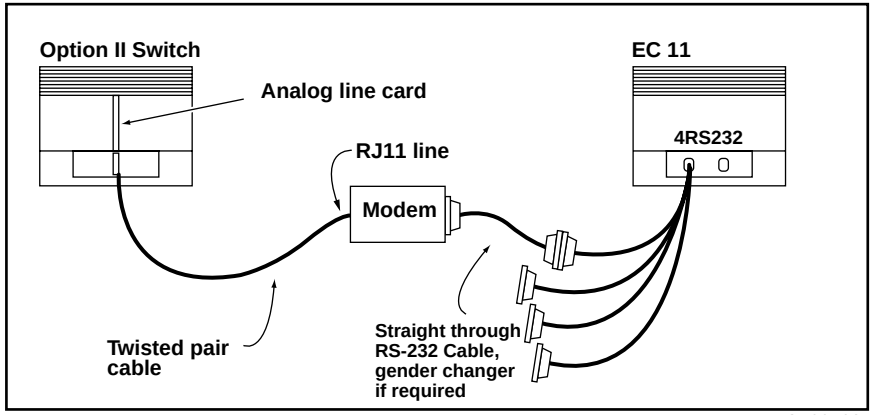
See the illustration below.

The installation instructions in the following procedure apply to Meridian Networking. No additional hardware installation is required for AMIS and Integrated AMIS Networking services.

Note: You must have the Meridian Networking feature installed.

A 500/2500 line card is required for each Meridian Networking connection to provide transmission of control data used in the Meridian Mail message transfer protocol.

Networking modem



G100793

Step	Action
1	Connect the modem's telephone port to the 500/2500 port on the Meridian 1 using a twisted pair cable.
2	Connect a null modem cable from the modem to a connector on the 5–port fanout cable. This connector must correspond to a port that has been configured for a networking modem. See " ICL recommended data port use" on page 8-4 for recommended usage. The chapter "Installing Meridian Networking hardware" in the *Networking Installation Guide* (NTP555–7001–213,) describes how to configure a port that was not configured at software installation time.

Configuring a networking modem

For details, see the *Networking Installation Guide (CPE)* (NTP 555–7011–213).

Step	Action
1	Set switch S2 as follows:

Switch	Setting	Result
S2–1	OFF	Modem follows DTR status.
S2–2	OFF	Modem generates results in English for AT commands.
S2–3	ON	Modem generates result codes for AT commands.
S2–4	ON	Modem does not echo AT commands.
S2–5	ON	Modem does not automatically answer the phone.
S2–6	OFF	Modem Carrier Detect responds to carrier.
S2–7	ON	Modem speaker is enabled.
S2–8	ON	Modem will respond to commands.
S2–9	OFF	NVRAM command set disabled.
S2–10	OFF	Modem dialer feature is disabled.

2	Temporarily connect the modem to a configured terminal and enter the modem setup string on the terminal, as follows: **at&f &d3 &w**
3	Turn off the modem for 10 seconds and then turn it back on.
4	Check the saved configuration by entering **at**. “ Configuration for the networking modem” on page 8-17 shows the configuration information as it should appear on the terminal. Repeat steps 2 and 3 if the information on the screen does not match the information in “ Configuration for the networking modem”.

Configuration for the networking modem

EC2400–33

\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

EC2400 Plus II Rev. 4.53

\A0, %A0, B0, &C1, \C0, %C1, &D3, \D0, E0, F1, &G0, \G0, \J0, &L0, M1,&M0, \N1, &P0, Q0, \Q0, &R0, \T0, &T4, V1, \V0, X4, &X0, \X0, Y0, *N0, #S0, #R0, *B0

5 At the Meridian Mail administration terminal display the Data Port Configuration screen. Refer to the "Data Port Configuration" section in the "Hardware Administration" chapter in your *System Administration Guide* (NTP 555–7001–30x.)

6 Select an NWModem data port and press the [View/Modify] softkey.

7 Enter the Modem DN.

8 Label the modem with the modem DN and the port location information.

Testing the networking DNs and modem DNs

Step	Action
1	Call the networking DN from the local site to all satellite sites. You should hear a modem tone.
2	Call the modem DN. You should receive a ring but no answer. Also, the Auto Answer light (AA) on the modem should flash intermittently. This indicates that the modem is connected to the correct line.

If the tests are unsuccessful, repeat the steps in “ Configuring a networking modem” on page 8-16.

BIX block cabling for peripheral devices

Introduction

You may cable peripherals using an NEA25B cable from the appropriate Meridian Mail I/O panel connector to the MDF as an alternative to using the 4– and 5–port fanout cables. This is the normal method of cabling the alarm connections.

The table below lists tip, ring, pin, and pair color information for the alarm/ modem cable and the equivalents of the 4– and 5–port fanout cables.

Alarm/modem and 4– and 5–port RS–232 BIX block tip, ring, pin, and pair colors

			BIX label P0736930	**BIX label P0736931**	
pair	pin	pair color	alarm & modem	4–port RS–232	5–port RS–232
1T	26	W–BL	T MDM	RXD Slot 4 Port B	RXD Slot 5 Port 0
1R	1	BL–W	R MDM	GRD	GRD
2T	27	W–O	FRM	CTS Slot 4 Port B	CTS Slot 5 Port 0
2R	2	O–W	GRD	TXD	TXD
3T	28	W–G	NC Minor	DSR Slot 4 Port B	DSR Slot 5 Port 0
3R	3	G–W	CM Minor	RTS	RTS
4T	29	W–BR	CM Crit	DCD Slot 4 Port B	DCD Slot 5 Port 0
4R	4	BR–W	NO Minor	DTR	DTR
5T	30	W–S	Power Monitor	RXC Slot 4 Port B	RXC Slot 5 Port 0
5R	5	S–W	NC Crit	TXC	TXC
6T	31	R–BL	NC Major	RXD Slot 7 Port B	RXD Slot 5 Port 2
6R	6	BL–R	CM Major	GRD	GRD

			BIX label P0736930	**BIX label P0736931**	
pair	pin	pair color	alarm & modem	4–port RS–232	5–port RS–232
7T	32	R–O	NO Crit	CTS Slot 7 Port B	CTS Slot 5 Port 2
7R	7	O–R	NO Major	TXD	TXD
8T	33	R–G	Spare	DSR Slot 7 Port B	DSR Slot 5 Port 2
8R	8	G–R	Spare	RTS	RTS
9T	34	R–BR	Spare	DCD Slot 7 Port B	DCD Slot 5 Port 2
9R	9	BR–R	Spare	DTR	DTR
10T	35	R–S	Spare	RXC Slot 7 Port B	RXC Slot 5 Port 2
10R	10	S–R	Spare	TXC	TXC
11T	36	BK–BL	Spare	RXD Slot 4 Port A	RXD Slot 5 Port 1
11R	11	BL–BK	Spare	GRD	GRD
12T	37	BL–O	Spare	CTS Slot 4 Port A	CTS Slot 5 Port 1
12R	12	O–BL	Spare	TXD	TXD
13T	38	BK–G	Spare	DSR Slot 4 Port A	DSR Slot 5 Port 1
13R	13	G–BK	Spare	RTS	RTS
14T	39	BK–BR	Spare	DCD Slot 4 Port A	DCD Slot 5 Port 1
14R	14	BR–BK	Spare	DTR	DTR
15T	40	BK–S	Spare	RXC Slot 4 Port A	RXC Slot 5 Port 1
15R	15	S–BK	Spare	TXC	TXC
16T	41	Y–BL	Spare	RXD Slot 7 Port A	RXD Slot 5 Port 3
16R	16	BL–Y	Spare	GRD	GRD
17T	42	Y–O	Spare	CTS Slot 7 Port A	CTS Slot 5 Port 3
17R	17	O–Y	Spare	TXD	TXD
18T	43	Y–G	Spare	DSR Slot 7 Port A	DSR Slot 5 Port 3
18R	18	G–Y	Spare	RTS	RTS

			BIX label P0736930	**BIX label P0736931**	
pair	pin	pair color	alarm & modem	4–port RS–232	5–port RS–232
19T 19R	44 19	Y–BR BR–Y	Spare Spare	DCD Slot 7 Port A DTR	DCD Slot 5 Port 3 DTR
20T 20R	45 20	Y–S S–Y	Spare Spare	RXC Slot 7 Port A TXC	RXC Slot 5 Port 3 TXC
21T 21R	46 21	V–BL BL–V	Spare Spare	TXCD Slot 4 Port A RI	RXD Slot 6 Port B GRD
22T 22R	47 22	V–O O–V	Spare Spare	TXCD Slot 7 Port A RI	CTS Slot 6 Port B TXD
23T 23R	48 23	V–G G–V	Spare Spare		DSR Slot 6 Port B RTS
24T 24R	49 24	V–BR BR–V	Spare Spare		DCD Slot 6 Port B DTR
25T 25R	50 25	V–S S–V	Spare Spare		RXC Slot 6 Port B TXC

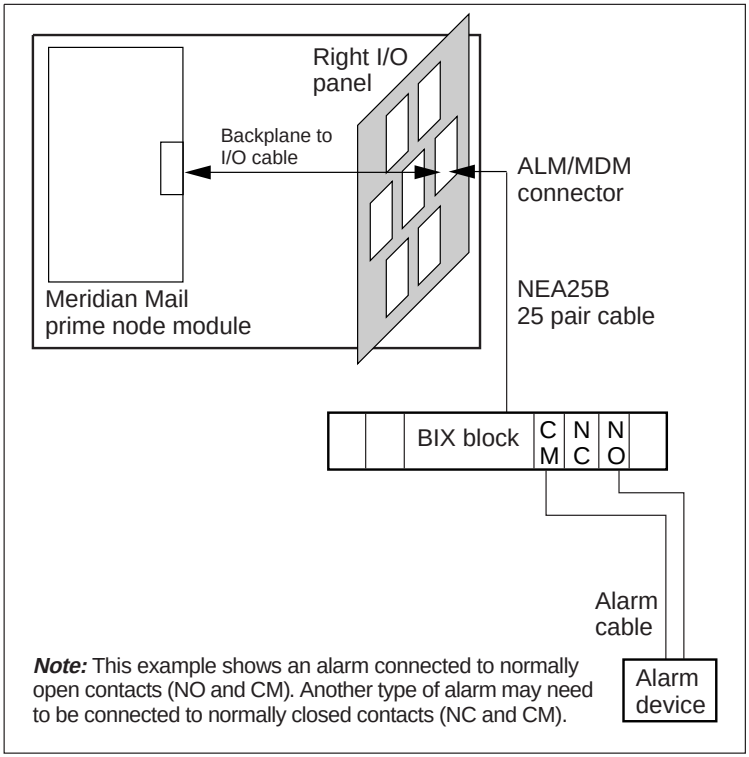
Alarms

See “ BIX block modem and alarm cabling” on this page.

Two Form–C dry contact relays are provided for connection to customer–provided alarms. Each relay contact is rated at 0.5 amps and 150 V DC. The major alarm contacts can be triggered by the Enhanced MMP40 or MMP40 processor, a board reset, power off condition, or watchdog timeout (which has a fixed 128–second timeout interval).

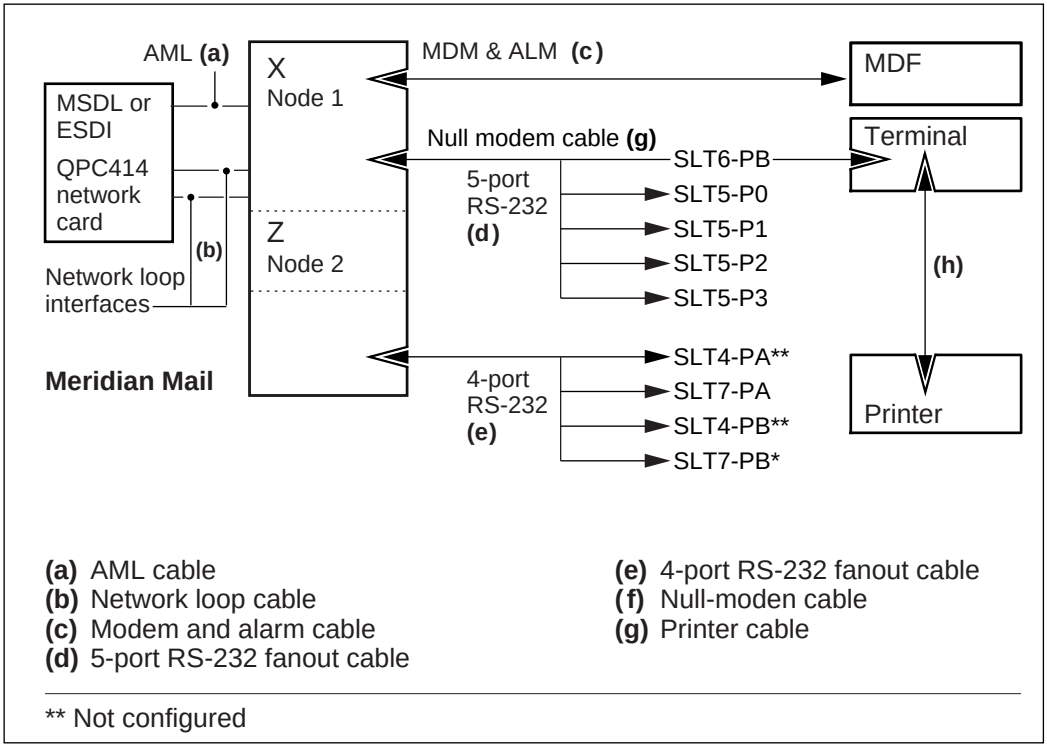
Connecting the alarm to the main distribution frame

BIX block modem and alarm cabling



Data ports and connectors

Cabling for peripheral devices



G100057A

Ports and connectors for peripheral devices

Cable	Card slot	Connector	Dataport designation in software installation procedure	Hardware administration modify node screen
CSL	6 Enhanced MMP40 or MMP40	CSL	Node 1 Enhanced MMP40 or MMP40Card Port 2	Node 1 Card 7 Port 2
5–port	6 Enhanced MMP40 or MMP40	SLT6 PB	Node 1 Enhanced MMP40 or MMP40 Card Port 1	Node 1 Card 7 Port 1
	5 Util	SLT5 P0	Node 1 UTIL Card Port 1	Node 1 Card 6 Port 1

		SLT5 P1	Node 1 UTIL Card Port 2	Node 1 Card 6 Port 2
		SLT5 P2	Node 1 UTIL Card Port 3	Node 1 Card 6 Port 3
		SLT5 P3	Node 1 UTIL Card Port 4	Node 1 Card 6 Port 4
4–port	7 (Z0) Enhanced MMP40 or MMP40	SLT7 PB	Node 2 Enhanced MMP40 or MMP40 Card Port 1	Node 2 Card 1 Port 1
		SLT7 PA	Node 2 Enhanced MMP40 or MMP40 Card Port 2	Node 2 Card 1 Port 2
	4 Enhanced MMP40 or MMP40	SLT4 PB	not configured	
		SLT4 PA	not configured	

Configure the administration terminal

Introduction

Ignore the fields indicated by underscores in the figures illustrating setup screens.

Note: Ensure the baud rate set for the terminal matches the baud rate of the installed BootROM. If you need to verify the rate of the installed Enhanced MMP40 or MMP40 card, see “Verifying the MMP40 card baud rate” in the *System Installation and Modification Guide* (555–7001–215) for instructions.

Configuring an HP700/32 terminal

To configure an HP700/32 terminal, follow these steps.

Step	Action	
1	Press <SETUP>.	
2	Change the values in each parameter field to match those shown in “ HP700/22 setup screens” on page 8-42.	
	Use the following keys to view and change setup values:	
	Up and down arrow keys	*Move from field to field.*
	Left and right arrow keys	*Scroll through possible values shown at the bottom of the screen.*
	<Enter>	*Cause the action to take place in an action field.*
	<NextScreen>	*Move to next setup screen.*
	<PrevScreen>	*Move to previous setup screen.*
3	To save changes, press <F6> (SaveMenu) *on each screen*.	
4	To exit setup mode, press <SETUP>.	
	Note: ROM Revision is a read–only field.	

HP700/32 setup screens

GLOBAL | USER | EMULATION | PORT 1 | PORT 2 | KEYBRD | PROGRAM

Host Port	1
Background	Dark
Screen Saver	10 Min
Refresh Rate	72 Hz
Key Click	Yes
Keyboard	U.S.
Message Translations	English
Setup Translations	English
Clear Display	
Clear Comm	
ROM Revision	C1017-80004-2948

GLOBAL | USER | EMULATION | PORT 1 | PORT 2 | KEYBRD | PROGRAM

Smooth Scroll	Jump	Display Width	80
Curser Type	Box	Display Width Allowed	80 or 132
Curser	On	Char Cell Height	16 Dots
2nd Message Line	On	Clr on Width Change	Yes
Message Line	On	Aux Mode	Off
Status Line	On	Aux To Host	No
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		

G101087

HP700/32 setup screens (continued)

GLOBAL | USER | EMULATION | PORT 1 | PORT 2 | KEYBRD | PROGRAM

Emulation	VT320
Terminal Id	VT220
Control Codes	7-Bit
Characters Mode	8-Bit
Preferred Char Set	DEC Supplemental
Keypad Mode	Application
Curser Keys	Normal
Print Scroll Region	Off
User Features Locked	No
User Keys Locked	No
Data Processing Keys	No

GLOBAL | USER | EMULATION | PORT 1 | PORT 2 | KEYBRD | PROGRAM

Communication	Full Duplex	CD	Ignore
Data Length	8-Bits	Break Duration	170ms
Parity	None	Disconnect Delay	Never
Stop Bits	1	Aux Printer Type	National
Xmit Baud	9600		
Recv Baud	=Xmit		
Xmit Pace	Xon/Xoff		
Recv Pace	Xoff at 128		
Limited Transmit	Off		
DSRI	No		
CTS	Ignore		

G101088

HP700/32 setup screens (continued)

GLOBAL | USER | EMULATION | PORT 1 | PORT 2 | KEYBRD | PROGRAM

Communication	Full Duplex
Data Length	8-Bits
Parity	None
Stop Bits	1
Xmit Baud	9600
Recv Baud	=Xmit
Xmit Pace	DSR/Xon/Xoff
Recv Pace	Xoff at 128
Limited Transmit	Off
Break Duration	170ms
Aux Printer Type	National

GLOBAL | USER | EMULATION | PORT 1 | PORT 2 | KEYBRD | PROGRAM

Lock Key	Caps Lock	Tab setting
Kbd Lock Enable	Yes	
Save Tabs	Yes	
Auto Repeat	Yes	
Margin Bell	Yes	
Warning Bell	Yes	
Auto AnswerBack	Yes	
Answerback =		
Conceal Answerback	No	
Clear all Tabs		
Set 8 Column Tabs		

G101089

Configuring a VT420 terminal

To configure a VT420 terminal, follow these steps.

Step	Action
1	Press <SETUP>.
2	Change the values in each parameter field to match those shown in “ VT420 setup screens” on page 8-29. *Up and down arrow keys* *Move from field to field.* *<Enter>* *Scroll through possible values or cause a requested action to take place.* To move to another setup screen, select a screen from the top line of the *Setup Directory* screen. To move to the next setup screen, select *To Next Set–Up* on any other setup screen.
3	To save changes, return to the *Setup Directory* screen, move the cursor to the *Save* field, and press <Enter>.
4	To exit setup mode, press <SETUP>.

VT420 setup screens

```
Set-Up Directory
Global    Display     General    Comm     Printer    Keyboard    Tab
Clear Display    Clear Comm    Reset Session    Recall    Save
Set-up = English    Canadian (English) Keyboard    Default
Enable Sessions    Disable Sessions    Exit    Screen Align
```

```
Global Set-Up
To Next Set-Up    To Directory
0n Line    Sessions on Comm1    CRT Saver
Comm1=RS-232    70Hz    Printer shared
```

```
Display Set-Up
To Next Set-Up    To Directory    80 Columns    Interpret Controls
Auto Wrap    Jump Scroll    Dark Screen
Cursor    Block Style Cursor    Indicator Status Display
Cursor Steady    6x24 pages    24 Lines/Screen
Vertical Coupling    Page Coupling    Auto Resize Screen
```

```
General Set-Up
To Next Set-Up    To Directory    VT400 Mode,    7 Bit Controls
User Defined Keys Unlocked   User Features Unlocked   8-bit Characters
Application Keypad    Normal Cursor Keys    No New Line
UPSS DEC Supplemental    VT220 ID
When Available Update
```

```
Communications Set-Up
To Next Set-Up    To Directory    Transmit=9600    Receive=Transmit
Xoff @ 64    8 Bits, No Parity    1 Stop Bit    No Local Echo
Data Leads Only    Disconnect, 2 s Delay    Limited Transmit
No Auto Answerback    Answerback =                  Not Concealed
Modem High Speed = ignore    Modem Low Speed = ignore
```

```
Printer Set-Up
To Next Set-Up    To Directory   Speed=9600   Printer to Host
Normal Print Mode    NO XOFF    8 Bits, No Parity    1 Stop Bit
Print Full Page    Print National Only    No Terminator
```

```
Keyboard Set-Up
To Next Set-Up    To Directory    Typewriter Keys    Caps Lock
Auto Repeat    Keyclick High    Margin Bell Off    Warning Bell High
Character Mode    <X]   Delete    Local Compose    Ignore Alt
F1 = Hold    F2 = Print    F3 = Set-Up    F4 = Session    F5 = Break
, < and . >  Keys          < >  Key         `~  Key
```

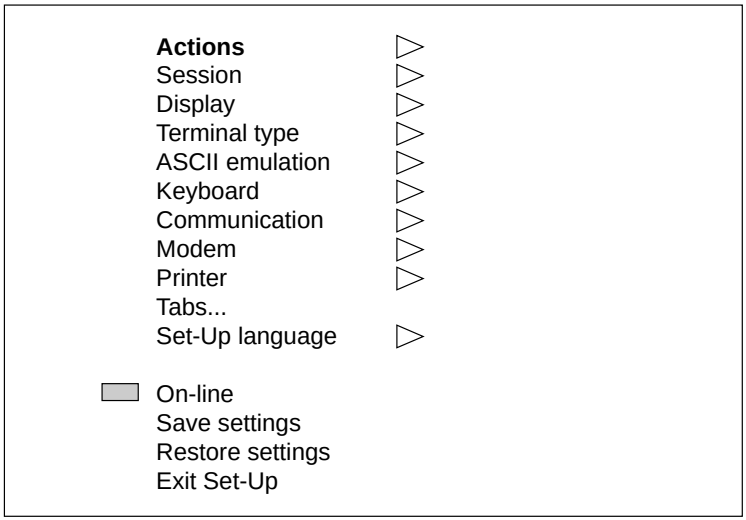
G101090

Configuring a VT520 terminal

To configure a VT520 terminal, follow these steps.

Step	Action
1	Power on the terminal.
2	Enter setup mode by pressing the <SETUP> key located on the top row of function keys. If no key is marked <SETUP>, press the third key from the left on the top row. *The Main Set–Up window is displayed.*

VT520 terminal Main Set–Up window



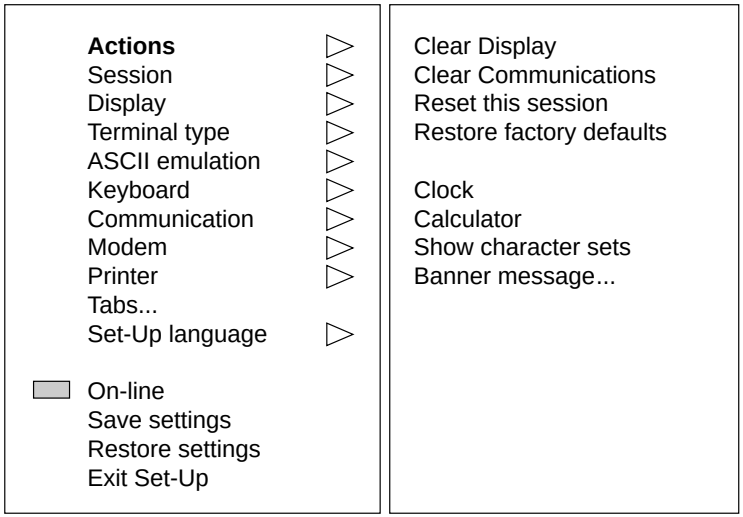
G101091

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

Navigating the setup windows

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 below for an example.
a box appears beside the setup feature	press <Enter> 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 <Enter> to display the associated pop–up window. When all fields have been completed, move the cursor to [OK] or [Cancel], and press <Enter> again to activate your choice.

VT520 terminal—sample feature pop–up window



5 Configure the terminal to match mandatory settings in " VT520 setup values" on page 8-32. If no setting is specified, select the parameter that best suits your environment.

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

6 Press <SETUP> again to exit setup mode.

VT520 setup values

Setup feature	First level	Mandatory setting or description
Actions	Clear Display	Press <Enter> to clear the display.
	Clear Communications	Press <Enter> to clear communications.
	Reset this session	Press <Enter> to reset this session.
	Restore factory defaults	Press <Enter> to restore the factory default.
	Clock	Press <Enter> to set the VT520 clock.
	Calculator	Press <Enter> to use the VT520 calculator.
	Show character sets	Press <Enter> to display character sets.
	Banner message. . .	Press <Enter> 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

Setup feature	First level	Mandatory setting or description
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, Block, Blink
	Cursor coupling	Set to Vertical and Page
	Cursor direction	Left to right
	Copy direction	Left to right
	Zero	Select 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 (Set to OFF to enable Overscan.)
	Screen alignment	

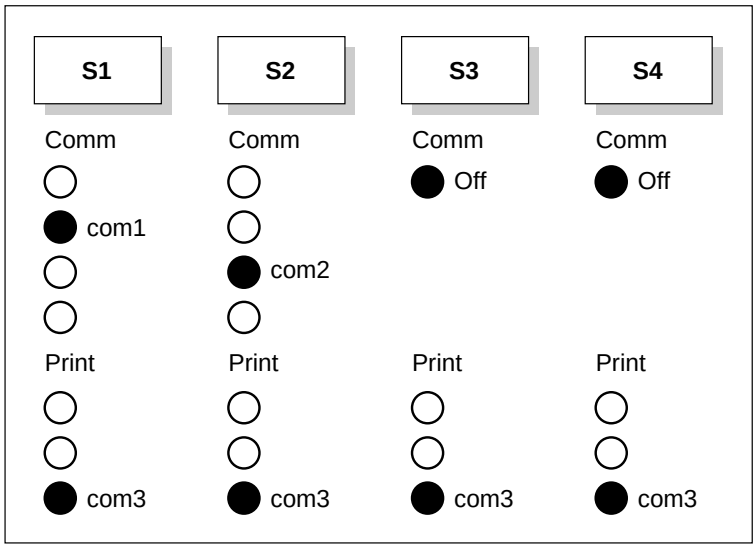
Setup feature	First level	Mandatory setting or description
Terminal type	Emulation mode	VT520
	Terminal ID to host	VT520
	VT default char set	DEC Multinational—see user documentation as well.
	PC Term character set	DEC Multinational—see user documentation as well.
	(7–bit NCRS characters)	
	Transmit 7–bit cable	ON
(ASCII emulation)		

Setup feature	First level	Mandatory setting or description
Keyboard	VT Keyboard language	Select appropriate language—Canadian English
	(PC Keyboard language)	
	Define key . . .	Use Define Key Editor screen to set the following: F1=Hold Ignore Alt F2=Print ,< and .> Keys F3=Setup <> Key F4=Session `~ Key F5=Break
	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	

Setup feature	First level	Mandatory setting or description
Communication	Port select . . .	See “A/B switchbox (rear view)” on page 8-5.
	Word size	8 bit
	Parity	None
	Stop bits	1 bit
	Transmit speed	2400 baud (9600 with Enhanced MMP40 or MMP40)
	Receive speed	Transmit speed
	Transmit flow control	XON/XOFF
	Receive 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
	Answerback message . . .	Enter the answerback message.
	Answerback concealed	
Modem	Enable modem control	
	(Disconnect delay)	
	(Modem high speed)	
	(Modem low speed)	

Setup feature	First level	Mandatory setting or description
Printer	Port select . . .	See “Port selection for VT520” on page A-15
	Print mode	Normal
	Printer type	DEC ANSI
	DEC/ISO char sets	Country dependent setting
	(PC character sets)	
	Print extent	Full page
	Print terminator	None
	Serial print speed	9600 baud
	2–way communication	XON/XOFF
	Transmit flow control	ON
	Receive flow control	XON/XOFF
	Word size	8 bits
	Parity	None
	Stop bits	1 bit
Tabs	Tabs Set–Up Screen	
Set–Up language		User dependent
On–line		ON
Save settings		When settings are complete, push <Enter> to save.
Restore settings		
Exit Set–Up		

Port selection for VT520



To configure an NT220 terminal

Follow these steps to configure an NT220 terminal.

Step	Action
1	Press <SETUP>.
2	Use the following keys to view and change setup values: *Up and down arrow keys* *Move from field to field.* *<Enter>* *Scroll through possible values or cause a requested action to take place.* To move to the next setup screen, select *To Next Set–Up Screen* on any setup screen.
3	To save changes, return to the *General Set–Up* screen, move the cursor to the *Save Current Values* field, and press <Enter>.
4	To exit setup mode, press <SETUP>.

NT220 setup screens

G101093

NT220 setup screens (continued)

G101094

To configure an HP700/22 terminal

To configure an HP700/22 terminal follow these steps.

Step	Action
1	Press <SETUP>.
2	Change the values in each parameter field to those shown in "HP700/22 setup screens" on page 8-42. Use the following keys to view and change setup values: *Arrow keys* — *Move from field to field* *<Enter>* — *Scroll through possible values, or cause requested action to take place* *<NextScreen>* — *Move to next setup screen* *<PrevScreen>* — *Move to previous setup screen*
3	To save changes, return to the *General Setup* screen, move the cursor to the *Save* field, and press <Enter>.
4	To exit setup mode, press <SETUP>.

HP700/22 setup screens

General Setup

Clear Display Clear Communications Reset Terminal
Recall Save Default Setup = English

Terminal Mode	EM200, 7 Bit Ctrls	EM100 ID	EM200
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
MultiPage	NO		
Status Line	Indicator		

Communications Setup

Host

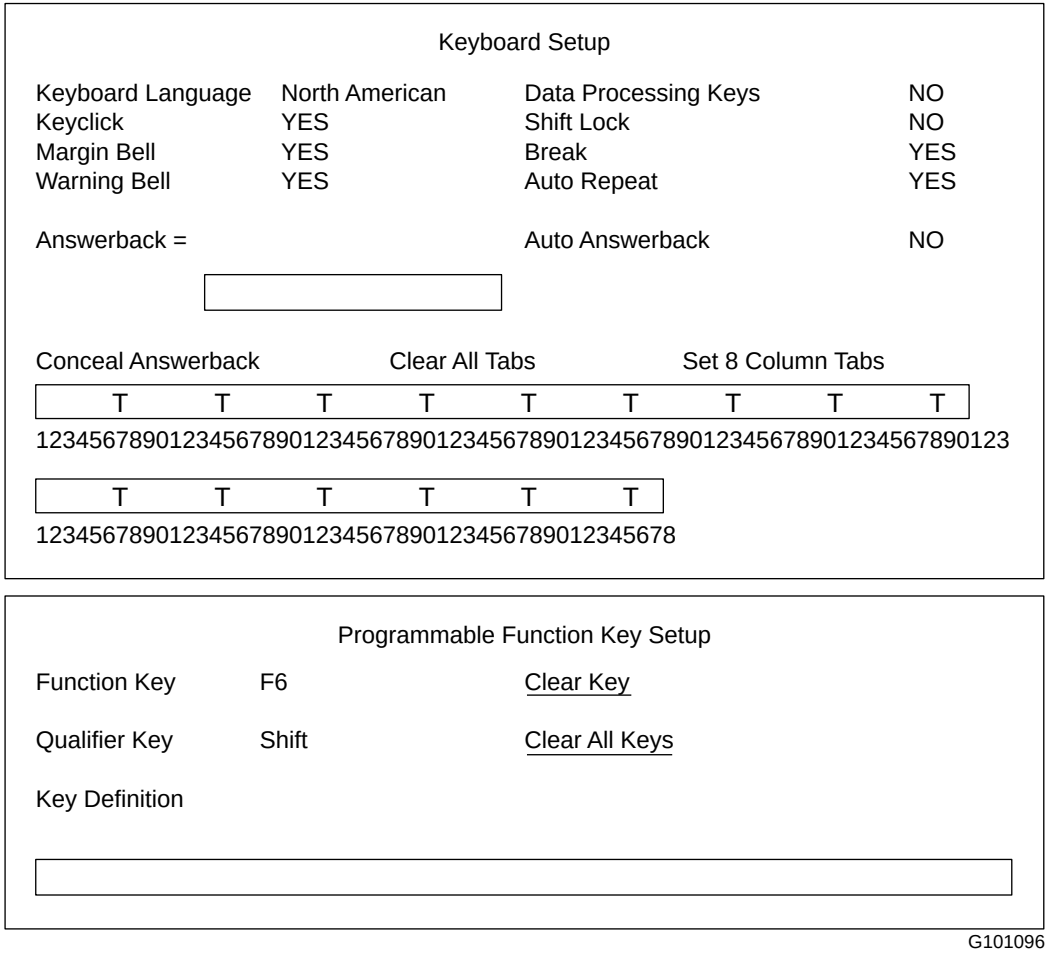
Xmit Baudrate	9600	XON/XOFF	@ 64
Recv Baudrate	=Xmit	Disconnect Delay	2 s
DataBits/Parity	8/None	Stop Bits	1
Check Parity	NO	Local Echo	NO
Port Selection	EIA, Data Leads Only	Unlimited Xmit	NO

Printer

Baudrate	9600	Print Mode	Normal
DataBits/Parity	8/None	Print Scroll Region	NO
Stop Bits	1	Terminator	None
Character Set	National Only		

G101095

HP700/22 setup screens (continued)



G101096

To configure a VT320 terminal

To configure a VT320 terminal follow these steps.

Step	Action
1	Press <SETUP>.
2	Change the values in each parameter field to match those shown in "VT320 setup screens" on page 8-45. Use the following keys to view and change setup values: *Arrow keys* — *Move from field to field* *<Enter>* — *Scroll through possible values or cause requested action to take place* To move to another setup screen, select a screen from the top line of the *Setup Directory* screen. To move to the next setup screen, select *To Next Set–Up* on any other setup screen.
3	To save changes, return to the *Setup Directory* screen, move the cursor to the *Save* field, and press <Enter>.
4	To exit setup mode, press <SETUP>.

VT320 setup screens

```
Set-Up Directory
Display     General    Comm     Printer    Keyboard    Tab
On Line   Clear Display   Clear Comm   Reset Terminal   Recall   Save
Set-up=English    North American Keyboard    Default   Exit
```

```
Display Set-Up
To Next Set-Up    To Directory    80 Columns    Interpret Controls
Auto Wrap    Jump Scroll    Light Text, Dark Screen
Cursor    Block Cursor Style    Indicator Status Display
```

```
General Set-Up
To Next Set-Up   To Directory  VT300 Mode, 7 Bit Controls   VT220 ID
User Defined Keys Unlocked   User Features Unlocked   8-bit Characters
Application Keypad    Normal Cursor Keys    No New Line
UPSS DEC Supplemental
```

```
Communications Set-Up
To Next Set-Up    To Directory    Transmit=9600    Receive=Transmit
Xoff @ 128    8 Bits, No Parity    1 Stop Bit    No Local Echo
DEC 423, Data Leads Only    Disconnect, 2 s Delay    Limited Transmit
No Auto Answerback    Answerback =                  Not Concealed
```

```
Printer Set-Up
To Next Set-Up    To Directory   Speed=9600   Printer to Host
Normal Print Mode    NO XOFF    8 Bits, No Parity    1 Stop Bit
Print Full Page    Print National Only    No Terminator
```

```
Keyboard Set-Up
To Next Set-Up    To Directory    Typewriter Keys    Caps Lock
Auto Repeat    Keyclick    Margin Bell    Warning Bell    Break
Compose    <X]   Delete
, , and . .  Keys           < >  Key         `~  Key
```

G101097

To configure a VT220 terminal

To configure a VT220 terminal follow these steps.

Step	Action
1	Press <SETUP>.
2	Change the values in each parameter field to match those shown in “VT220 setup screens” on page 8-47. Use the following keys to view and change setup values: *Arrow keys* — *Move from field to field* *<Enter>* — *Scroll through possible values or cause a requested action to take place* To move to another setup screen, select a screen from the top line of the *Setup Directory* screen. To move to the next setup screen, select *To Next Set–Up* on any other setup screen.
3	To save changes, return to the *Setup Directory* screen, move the cursor to the *Save* field, and press <Enter>.
4	To exit setup mode, press <SETUP>.

VT220 setup screens

```
Set-Up Directory
Display     General    Comm     Printer    Keyboard    Tab
On Line   Clear Display   Clear Comm   Reset Terminal   Recall   Save
Set-up=English    North American Keyboard    Default   Exit
```

```
Display Set-Up
To Next Set-Up    To Directory    80 Columns    Interpret Controls
Auto Wrap    Jump Scroll    Light Text, Dark Screen
Cursor    Block Cursor Style
```

```
General Set-Up
To Next Set-Up   To Directory  VT200 Mode, 7 Bit Controls
User Defined Keys Unlocked   User Features Unlocked   Multinational
Application Keypad    Normal Cursor Keys    No New Line
```

```
Communications Set-Up
To Next Set-Up    To Directory    Transmit=9600    Receive=Transmit
Xoff at 128    8 Bits, No Parity    1 Stop Bit    No Local Echo
EIA Port, Data Leads Only    Disconnect, 2 s Delay    Limited Transmit
```

```
Printer Set-Up
To Next Screen    To Directory   Speed=9600
Normal Print Mode    7 Bits, Odd Parity    1 Stop Bit
Print Full Page    Print National Only    No Terminator
```

```
Keyboard Set-Up
To Next Set-Up    To Directory    Typewriter Keys    Caps Lock
Auto Repeat    Keyclick    Margin Bell    Warning Bell    Break
No Auto Answerback    Answerback =              Not Concealed
```

G101098

Chapter 9

Configuring the Meridian 1 for Meridian Mail

In this chapter

Overview

Introduction

This section describes the Meridian 1 configuration procedures needed for Meridian Mail. The following table summarizes the principal actions performed in each Meridian 1 configuration procedure.

Meridian 1 Configuration Procedures

Configuring the AML link, page 6	Configure the AML Link parameters via Overlay 17
Defining Meridian Mail in the customer data block, page 9-11	Configure the Meridian Mail Service via Overlay 15
Defining the Meridian Mail primary ACD queues, page 9-17	Configure a primary DN that will provide an agent access to the Meridian Mail service(s)
Defining the Meridian Mail secondary ACD queues, page 9-19	Configure a secondary DN for each agent that will access the Meridian Mail service via the primary DN
Programming the network loop, page 9-20	Configure the network loop via Overlay 17
Verifying the network loop operation, page 9-21	Verify that the network loop to the Meridian Mail is enabled
Adding ACD agents, page 9-20	Configure an ACD set for each agent using the primary DN, secondary DN, and network loop number
Enabling the AML, page 9-20	Enable the AML
Saving Meridian 1 changes, page 9-20	Save the configuration made in Meridian 1
Set call routing options for user telephone sets, page page 9-28	Configure the users telephone set to access Meridian Mail service(s)

Note: After the last prompt shown in each Meridian 1 overlay table, press <Return> until the first prompt appears again before exiting the overlay. If you do not do so, the information you entered will be discarded when you exit the overlay.

Enter ********, or **END,** followed by <Return>, to exit an overlay.

To perform the procedures, you need the following documentation:

- *X11 Input/Output Guide* (NTP 553–3001–400)
- *Circuit Pack Option Settings* (NTP 553–2201–211)
- *Circuit Pack Installation and Testing* (NTP 553–3001–211)

Checking the CPU ROM daughterboard

Introduction

Load Overlay 22 and enter **ROM**. Replace the ROM if the response does not match the value indicated in the table below.

Note: The ROM check and replace procedure does not apply to Systems 51C, 61C, 81, and 81C.

System ROM responses

System	ROM response
SL–1 ST (X11 Release 12–14)	QPC717
SL–1 ST (X11 Release 15 or later)	QPC940
SL–1 N	QPC782
SL–1 LE	QPC573
SL–1 XL	QPC599
SL–1 XN	QPC600
SL–1 XN (Memory Enhanced)	QPC601
SL–1 RT/NT/XT	QPC602
SL–1 MS	QPC662
System 21/21A	QPC940
System 51/61/71	QPC939

CAUTION
Risk of equipment damage

Do not touch the other components on the CPU pack. During removal and insertion, carefully line up the connector and pins of the new daughterboard with the pins and connector on the CPU.

To replace the ROM in a single-CPU Meridian 1

To replace the ROM in a single-CPU Meridian 1, follow these steps.

Step	Action
1	Power down the Meridian 1 system.
2	Remove the CPU card and replace the daughterboard.
3	Re–insert the CPU card.
4	Power up the Meridian 1 system.

To replace the ROM in a dual-CPU Meridian 1

To replace the ROM in a dual-CPU Meridian 1, follow these steps.

Step	Action
1	Place the active CPU in maintenance mode using the faceplate switch.
2	Disable the inactive CPU using the faceplate switch.
3	Remove the inactive CPU card and replace the daughterboard.
4	Re–insert the CPU card.
5	Re–enable the CPU card, using the faceplate switch.
6	Load Overlay 35.
7	Test the inactive CPU and new ROM. *If the response is anything other than OK, refer to your* Meridian Mail X11 Input/Output Guide*.*
8	Take the active CPU out of maintenance mode.
9	Switch CPUs.
10	Repeat steps 1 to 7 for the second CPU.
11	Exit Overlay 35.

Configuring the AML link

Introduction

Refer to the table on the next page for Meridian 1 X11 software Release 17 and earlier. Refer to “ Overlay 17—AML link configuration (Release 18 or later)” on page 9-8 for Meridian 1 X11 software Release 18 or later.

Overlay 17—AML link configuration (X11 Release 17 or earlier)

Prompts	Responses	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
Note: The prompts in the shaded area below are applicable to NMS only.		
ISDN	YES	NMS only–To update the ISDN records
IFC	SL1	NMS only–Interface type
RLS	16	NMS only–Minimum Meridian 1 software release at the far end is 16.
IOTB	YES	Make changes to logical units.
ADAN	NEW TTY xx CHG TTY xx OUT TTY xx	XX is the AML link number (0–15) which should be the same as the ESDI device address (DNUM).
ESDI	YES	Port is on an ESDI card.
SYNC	YES	Synchronous mode required
DUPX	LL	Full duplex required
BPS	9600	AML data rate
CLOK	EXT	External clocking arrangement
IADR	3	Data link level HDLC protocol individual address (identifies Meridian 1 at HDLC data link level)
LCTL	YES	Modify link control parameters
T1	10	Retransmission time
T2	0	Timer for no frame exchange
T3	40	Timer for initial link setup
N1	128	Maximum number of octets per HDLC information frame
N2	8	Maximum number of retransmissions
K	7	Maximum number of outstanding frames

Prompts	Responses	Description
LTHR	YES	Modify link performance thresholds. Use defaults for all prompts except USER
USER	CMS	This ESDI port is used for AML.
ADAN	<cr>	Go on to next prompt.
VAS	NEW or CHG	Define AML link configuration.
VSID	xx	Server ID. Should be the same number as the AML link number.
DLOP	<cr>	Go on to next prompt.
CMS	xx	Must be the same as the ESDI device number (DNUM)
CONF	DIR	Link configuration is DIR.
CMS	<cr>	Go on to next prompt.
CSQI	nn	Maximum number of call registers for input queues– twice the number of voice ports
CSQO	nn	Maximum number of call registers for output queues– twice the number of voice ports
	CR	Press carriage return to the end of the overlay.

Overlay 17—AML link configuration (Release 18 or later)

Prompts	Responses	Description
REQ	CHG	Change
TYPE	CFN	Configuration data block
ADAN	NEW AML#	# is the AML (link) number in the range 0–15. Should match the card address switch (DNUM).
CTYP	MSDL or ESDI	Card type
DNUM	0–15	Device number must match the physical address switch on the card.
PORT	x	(MSDL only) Port number in the range 0–3
DES	aaa...a	AML port designation

BPS	9600	AML data rate
PARM	(RS–232 DCE)	(MSDL only) Interface and transmission mode
CLOK	EXT	Source of primary clock (ESDI only)
IADR	(3)	Individual Address for the data–link HDLC protocol. The IADR and RADR prompts must be co–ordinated with the far–end. If ADR is defined as 3, then RADR must be 1. Default is 3 prior to release 18.
RADR	(1)	Remote address for the data–link level HDLC protocol IADR and RADR prompts must be co–ordinated with the far–end. If IADR is defined as 3, then RADR must be 1. Default is 3 prior.
LCTL	YES	Modify link control parameters
T1	10	Timer of retransmission range
T2	(10)	Maximum time allowed without a frame being exchanged
T3	40	Timer for initial link setup (ESDI)
N1	(128)	Maximum number of octets per HDLC information frame
N2	(8)	Maximum number of retransmissions
K	(7)	Maximum number of outstanding frames
LTHR	NO	Default link performance thresholds (ESDI)
RXMT	(5)	Percentage of transmission before out–of–service threshold
ORUR	(5)	Number of aborts before an out–of–service threshold
ABOR	(5)	Number of overrun/underruns before out–of–service thresholds
ADAN	<cr>	
VAS	NEW	Value added service
VSID	0–15	VAS identifier. Should be the same number as DNUM.
DLOP	<cr>	

AML	0–15	Application Module Link. Should be the same number as DNUM.
CONF	DIR	Direct CSL configuration
	<cr>	Press carriage return to the end of the overlay.

Defining Meridian Mail in the customer data block

Introduction

The Meridian Mail service must be defined in the Customer data block via Overlay 15. Use the filled–in data forms from the *Site and Installation Planning Guide* (NTP 555–7061–200.)

Two sets of prompts in Overlay 15 affect the routing of unanswered or busy calls:

- Flexible Call Forward (FNAD/FNAN/FNAL) is set for each customer. The call forward DN is defined in the user's telephone data.
- Call Forward No Answer/Busy (MDID/NDID/MWFB) is set on a per customer basis. All no answer/busy calls are routed to the flexible call forward DN (provided the called set has message waiting allowed [MWA] class of service).

Normally, non–DID calls are routed to Meridian Mail when a no answer or busy condition is encountered. As an option, DID calls can be routed to the attendant's or user's Hunt DN.

Overlay 15—Customer data block

Prompts	Responses	Description
REQ	NEW or CHG	
TYPE	CDB	Customer data block, 0 for single customer, 1 for multi–customer
CUST		Enter the customer number (range 0–99)
ATDN		Attendant DN. typically, this is 0 (zero).
OPT	MCI	Message center is included for the customer.
ANAT	aaaa	Attendant billing number (4–7 digits)
ANID	bbbbb	Automatic number identification (ANI) DN number (0–5 digits)
IMS	YES	Integrated Voice Messaging feature
IMA	YES	Enable Integrated Voice Messaging attendant for the customer
FNAD*	FDN	Call forward no answer DID calls are routed to the flexible CFNA DN.
FNAN* (or FNAT)	FDN	Call forward no answer non–DID calls are routed to the flexible CFNA DN.
FNAL	FDN	Call forward no answer local calls (with CFCT enabled) are routed to the flexible CFNA DN.
CFTA	YES	Number of ring cycles before the call is forwarded. Default is 4.
MDID	NO/YES	NO (recommended)—No–answer DID calls are routed to wherever the user wants (including Meridian Mail). YES—No–answer DID calls are routed to Meridian Mail.
NDID	NO/YES	NO (recommended)—No–answer DID calls are routed to wherever the user wants (including Meridian Mail). YES—No–answer DID calls are routed to Meridian Mail.
MWFB	NO/YES	NO (recommended)—No–answer DID calls are routed to wherever the user wants (including Meridian Mail). YES—No–answer DID calls are routed to Meridian Mail.

MATT	YES (NO)	Set to NO for secondary switch when using the NMS option.
EEST	NO	MF feedback. Remote Meridian 1 sites should also be set to NO.
Note: The prompts in the shaded area below are applicable to NMS only.		
ISDN	NO	(NMS only–To change ISDN options)
PNI		NMS only–Private Network Identifier. Within one network, use the same PNI value in overlays 15 and 16. When interworking with different networks, enter the PNI of this Meridian 1 in overlay 15, and the remote switch PNI in overlay 16.
HLOC		NMS only–Home Location Code (ESN) of the Meridian 1 (range 100–999).
LSC		NMS only–Local Steering Code (established in the Coordinated Dialing Plan, or CDP) of the Meridian 1. This prompt only appears for 5– or 6–digit dialing plans.
	CR	Press carriage return to the end of the overlay. (The prompt REQ appears.)
*The flexible call forward DN is the Meridian Mail DN. It is entered in the telephone set data block for each Meridian Mail user. The other options for FNAD, FNAL, and FNAN are: att–route to attendant hnt–route to the hunt attendant no–do not route unanswered calls		

Overlay 15—Customer data block Release 21 and later

As of Release 21, you can directly access a given data block by entering the first three letters of a gate opener. Below are the required tables for configuring the customer data block.

Attendant Console options

Prompts	Responses	Description
REQ	CHG	Change existing data
TYPE	ATT	Attendant Consoles
CUST	0	Customer number
OPT	MCI	Message Center Included
ATDN	(0) x...x	Attendant Directory Number

Integrated Message Service options

Prompts	Responses	Description
REQ	CHG	Change existing data
TYPE	IMS	Integrated Message Service
CUST	0	Customer number
IMS	YES	Change Integrated Message System
IMA	YES	Integrated Message System enabled

Call Redirection options

Prompts	Responses	Description
REQ	CHG	Change existing data
TYPE	RDR	Call Redirection
CUST	0	Customer number
FNAD	FDN	Call Forward No Answer Treatment for DID calls
FNAT	FDN	Call Forward No Answer Treatment for External Trunk non–DID calls
FNAL	FDN	Call Forward No Answer Treatment for all other calls including trunk calls marked as internals
CFTA	NO	Call Forward to Trunk Access code allowed

Features and options

Prompts	Responses	Description
REQ	CHG	Change existing data
TYPE	FTR	Features and options
CUST	0	Customer number
EEST	NO	Originating party does not receive DTMF feedback. Remote M1 sites also = NO.

Configuring the trunk route data block (NMS only)

Note: Ensure that Digit Manipulation (DMI in Overlay 86) is not used to insert ESN access codes at the sending switch. ESN access code insertion must be done at the receiving switch. (at the INAC prompt in Overlay 16).

Overlay 16—Route data block parameters

Prompts	Responses	Description
REQ	NEW or CHG	New or Change
TYPE	RDB	Route data block
CUST		Meridian 1 customer number
ROUTE		Route number
PNI		Customer Private Network ID of the non–local target Meridian 1
NCRD	YES	Network call redirection will provide the CLID display information
TRO	YES	Optimize trunk usage on this route
INAC	YES	Insert ESN access code to incoming private network call
	<cr>	Press carriage return to the end of the overlay. (The prompt REQ comes up.)

Defining the Meridian Mail primary ACD queues

Note: A separate primary queue must be defined for each port type: basic voice, full–service voice, and multimedia.

Overlay 23—Voice Messaging ACD parameter

Prompts	Responses	Description
REQ	NEW	
TYPE	ACD	ACD data block
CUST	x...x	Meridian 1 customer number
ACDN		Enter the main DN for the service. This number should be the same as the DN specified for the service in the VSDN table. This DN is required when configuring the Meridian Mail VSDN table.
MWC	YES	This is a Message Center DN
IMS	YES	This is an Integrated Messaging Service
CMS	YES	Use the ISDN Applications Protocol
IMA	YES	Enable IMS attendant
IVMS	YES	Integrated Voice Messaging
VSID		Enter the VAS ID (0–15). Refer to overlay 17 or 22
MAXP		Maximum number of ACD agents for this primary queue. This should be equal to or greater than the number of voice channels in the installed voice processor cards.
ALOG	YES	Provide automatic logon for the ACD agents associated with this group.
NCFW		Night Call Forward. This is the destination number for calls rerouted when Meridian Mail is down.

	CR	Press carriage return to the end of the overlay. (The prompt REQ comes up.) Go back to the top of the table to define the queue for the next port type.

Defining the Meridian Mail secondary ACD queues

Introduction

This section describes how to configure secondary ACD queues for voice services such as Express Messaging and other voice services (such as voice menus, automated attendants, and networking).

Overlay 23—Voice service and satellite site ACD parameters

Prompts	Responses	description
REQ	NEW	
TYPE	ACD	ACD data block
CUST		Meridian 1 customer number
ACDN	xxxx	Enter the DN of the voice service. **Note:** This DN is required when configuring the Meridian mail VSDN table
MWC	NO	Set to YES for NMS satellite sites and multi–tenant sites using multi–customer option; release 16 is required. For Voice Services, set to NO.
MAXP	1	Maximum number of positions
NCFW	xxxx	Enter the main DN for the primary queue for the selected service. (If this is an NMS satellite site, use network format.)
	<cr>	Press carriage return to the end of the overlay. (The prompt REQ comes up.)

Meridian Mail numbering requirements are slightly different when the Guest Voice Messaging option is installed. Refer to your *System Administration Guide* (NTP 555–7001–30x) for details.

Programming the network loop

To program the network loop operation

Step	Action
1	Load Overlay 22 and print out the Configuration Record.
2	Select a loop that is not already reserved.
3	Load Overlay 17 and configure each network loop as outlined in the *X11 Input/Output Guide* (NTP 553–3001–400). Refer to the section “Common Equipment, ‘CEQU’”.

Overlay 17—Network loop

Prompts	Responses	Description
REQ	CHG	Change
TYPE .	CFN <cr>	Configuration data block Carriage return
CEQU . .	YES <cr>	Gate–opener for common equipment parameters Carriage return
TERD	0–159	Enter the loop number you selected for Meridian Mail, according to where you installed the loop card.
	<cr>	Carriage return until all prompts are finished and your entry is updated. Repeat from the top of the table for each loop

Verifying the network loop operation

To verify the network loop operation

Step	Action
1	Initialize the switch manually by pressing the MAN INT button on the CPU card. If you have a dual CPU, press the main MAN INT button on the active CPU. *This automatically enables the loop and extinguishes the corresponding LED on the loop card.*
2	Use Overlay 30 to verify the status (STAT) and test (LOOP) the network loop following the acceptance testing procedure listed in the *Circuit Card Installation* (NTP 553–3001–211). Use Overlay 30 to verify the status (STAT) and test (LOOP) the network loop following the acceptance testing procedure listed in the *Circuit Card Installation* (NTP 553–3001–211). If you receive an “OK”, the loop connected is successfully established. *If you receive an error message, refer to your* X11 Input/Output Guide *(NTP 553–3001–411) to troubleshoot and correct the problem.*

Note: C–processors do not require initialization. Use the ENLL and STAT commands in Overlay 32 to enable and verify the specific network loop.

Adding ACD agents

Introduction

There must be one ACD agent for each Meridian Mail voice processor channel. The ACD agents are defined as Meridian 1 sets in Overlay 11.

A Terminal Number and Position ID are required for each agent. For ease of maintenance assign sequential numbers to the IDs. These can be any numbers that are not already used. For example, if the Meridian Mail main DN is 3800, the IDs for the agents could be 3801, 3802, and so on.

Note 1: It is useful to have the AML disabled when adding agents. If you leave it enabled, the service changes take much longer to perform.

To disable the link, use Overlay 48:

For Release 17 or earlier **DIS ESDI *n***

For Release 18 or later **DIS AML *m* LYR2**

where *n* is the ESDI port number and *m* is the AML number.

Note 2: If Overlay 44 (Software audit) is running, you may see VAS002 and SCH3484 error messages on the Meridian 1 console. Ignore them.

Note 3: Whenever ACD agent data is modified on the Meridian 1, you must make corresponding changes on Meridian Mail. Refer to the Channel Allocation Table section in the "System status and maintenance" chapter of your *System Administration Guide* (NTP 555–7001–30x) to change DNs. To modify TNs, refer to the "Node configuration" section in the "Modify hardware" chapter of *System Administration Tools* (NTP 555–7001–305).

Note 4: ACD agents are hard–coded to accept only shelves 0 and 1 and card slots 2 and 3 for TN assignments. The maximum number of agents per loop on Meridian Mail is 24.

Note 5: The Modular Option EC supports only double–density loops.

Program each ACD agent as shown in the following table.

Overlay 11—ACD agents

Prompts	Responses	Description
REQ	NEW	
TYPE	SL1	
TN	ll s cc u	ACD agent TN. Ranges: Loop = 0–159 Shelf = 0–1 Card = 2–3 Unit = 0–7
CDEN	DD	Double–density line card
DES	yyyyyy	ACD agent description of 1–6 characters
CUST		Customer number
KLS	1	Key loop segment
CLS	VMA	Voice messaging allowed. Use the default for all other Class–of–Service options.
KEY	0 ACD xxxxxxx 0 yyyyyyy	Define key 0 as an ACD agent key. DN xxxxxxx is the Meridian Mail DN. yyyyyyy is any unused DN in the numbering plan, and is used to identify the agent position. It is not dialed by users.
KEY	1 SCN zzzzzzz	Define key 1 as a single–call non–ringing DN (SCN–DN). This value is also used when configuring the Channel DN in the Channel Allocation Table. See “System status and maintenance” in your *System Administration Guide*. zzzzzzz = secondary DN of this agent.
KEY	2 MSB	Define key 2 as a Make Set Busy key.
KEY	3 NRD	Define key 3 as a not Ready key.
KEY	7 AO3 (letter “O”)	Define key 3 as a Conference key.

KEY	9 RLS <cr>	Define key 9 as a release key. Press carriage return to the end of the overlay. (The prompt REQ appears.) If you are finished adding agents, exit. To add another agent, return to the top of the table.
KEY	6 TRN	Define key 6 as a Transfer key.

For example:

Agent 1 Key 0 ACD 3650 3800
Key 1 SCN 2800
Agent 2 Key 0 ACD 3650 3801
Key 1 SCN 2801

For both agents, 3650 is the primary ACD queue DN, and is put in the CAT.

3800 and 3801 are the agent position DNs, and must be unique.

2800 and 2801 are the secondary ACD queue DNs, and are put in the CAT.

Enabling the AML

Introduction

If you are using X11 Release 17 or earlier, follow the instructions in "Enabling the ESDI port for AML (X11 Release 17 or earlier)" listed below.

If you are using X11 Release 18 or later, follow the instructions in "To activate the AML link (X11 Release 18 or later)" on page 9-26.

To enable the ESDI port for AML (X11 Release 17 or earlier)

To enable the ESDI port for AML, follow these steps.

Step	Action
1	Load Overlay 48.
2	Enter **ENL ESDI *n*** to enable ESDI port *n*.
3	Ensure that the AML link port is enabled, and the other port on the ESDI port is configured (with the values IADR=1 and RADR=3) and disabled. *When the LED on the ESDI card is lit it indicates that the card is disabled. If the LED on the ESDI card is unlit then at least one port is enabled.*
4	Enter **SLFT ESDI *n*** to test ESDI port *n*. *If the system response is other than OK, see the* SL–1 Maintenance Manual *(NTP 553–3001–511) to analyze the message.*
5	Enter **DIS ESDI *n*** to disable ESDI port *n*.
6	Enter **ACMS *n*** to initiate the Auto Setup sequence and establish the link.
7	Exit from Overlay 48.

Status messages

The following messages appear on the Meridian 1 when the link is up:

- ESDA002 (ISDN Applications Protocol Link <n> Link Layer is connected)
- CSA003 (Active ISDN Applications Protocol Link <n> is up)

Meridian Mail issues the following SEER when the link is up:

- 25–05 CSL P Link is up

If other AML (Class 25) SEERs appear, refer to *Maintenance Messages (SEERs) Reference Manual* (NTP 555–7001–510.)

To activate the AML link (X11 Release 18 or later)

To activate the AML link for X11 Release 18 or later, follow these steps.

Step	Action
1	Load Overlay 48.
2	Enter **ENL AML *n* LYR2** to enable AML *n*.
3	Enter **SLFT AML *n*** to test AML *n*. *If the system response is other than OK, see the* SL–1 Maintenance Practice *(NTP 553–2301–511) to analyze the message.*
4	Enter **DIS AML *n* LYR2** to disable AML *n*.
5	Enter **ENL AML *n* ACMS** to initiate the Auto Setup sequence and establish the link.
6	Exit from Overlay program 48.

Status messages

The following messages appear on the Meridian 1 when the link is up:

- ESDA002 (ISDN Applications Protocol Link <n> Link Layer is connected)
- CSA003 (Active ISDN Applications Protocol Link <n> is up)

Meridian Mail issues the following SEER when the link is up:

- 25–05 CSL P Link is up

If other AML (Class 25) SEERs appear, see *Maintenance Messages (SEERs) Reference Manual* (NTP 555–7001–510.)

To activate the AML (MSDL card, X11 Release 18 or later)

Use the link diagnostic program, Overlay 48
(NTP 553-3001-400, Release 18), to enable the AML port on the MSDL card.

To activate the AML (MSDL card, X11 Release 18 or later), follow these steps.

Step	Action
1	Enter **LD 48** to load Overlay 48. **Note:** The bold and italicized n (***n***) in the commands below represents a variable. Substitute the appropriate information.
2	Enter **ENL MSDL *n*** (where *n* is the DNUM) to enable the card.
3	Enter **SLFT AML *n*** to test the MDSL pack for port *n*.
4	Enter **DIS AML *n* LYR2** to disable AML port *n*.
5	Enter **ENL AML *n* AUTO** (where *n* is the AML number) to initiate the Auto Setup sequence and establish the link.
6	Enter ******** to exit from Overlay program 48.

Status messages

The following messages appear on the Meridian 1 when the link is up:

- ESDA002 (ISDN Applications Protocol Link <n> Link Layer is connected)
- CSA003—Active ISDN Applications Protocol Link <n> is up

Meridian Mail issues the following SEER when the link is up:

- 25–05 CSL P Link is up

If other AML (CSL) SEERs appear, see *Meridian Mail Maintenance Messages (SEERS) Guide* (NTP 555–7001–510).

Set call routing options for user telephone sets

Introduction

Set call routing options for each user's set as shown in “Overlay 10—2500 set data” on page 9-29 for 2500 sets and “Overlay 11—Meridian 1 set data” on page 9-29.

Call routing options and features

The following call routing options and features are available:

- ***Routing of Calls to Meridian Mail.*** The method of routing calls to Meridian Mail is defined in the Customer Data Block, Overlay 15.
- ***Call Forward No Answer.*** If the Flexible Call Forward feature is used, enter the Meridian Mail DN in response to the prompts FTR (“Overlay 10—2500 set data” on page 9-29) and FDN (“Overlay 11—Meridian 1 set data” on page 9-29). Otherwise, don't respond to these prompts.
- ***Call Forward All Calls.*** If Call Forward All Calls is enabled (this is controlled at the telephone set) and there is no answer at the call forward DN, the call is routed to Meridian Mail.
- ***Call Forward Busy.*** A call to a busy number is routed to the Meridian Mail Service unless one of the following conditions exists:
  - The call is DID, and Call Forward Busy on DID calls is disabled for the customer (see Overlay 11).
  - The Call Waiting feature is enabled for the user in two forms: Call Waiting (applies to incoming trunk calls) and Station–to–Station Call Waiting (applies to internal calls).
- ***Routing to hunt DNs.*** If the user has a hunt DN defined, then the call is routed to the hunt DN. If there is a no answer/busy condition at the hunt DN, the call is routed to the Meridian Mail mailbox for the DN that was originally called.
- ***Message Waiting Indication.*** A user is notified of a new message by a lit message–waiting lamp or by an audible indication (interrupted dial tone).

For further information on the Meridian 1 feature and services, see *SL–1 Features and Services Practice* (NTP 553–2301–105).

Overlay 10—2500 set data

Prompts	Responses	Description
REQ	NEW, CHG	
TYPE	500	2500 set data block
TN	lll s cc u	Terminal number: loop, shelf, card, unit
CDEN	dd	Card is double density.
CUST		Customer number
DN		Directory number
HUNT		Hunt directory number
CLS	MWA	Message waiting is allowed.
	FNA	Call forward no answer is allowed.
	HTA	Hunting is allowed.
	XFA	3–party call conferencing feature
	FBA (FBD)	Call forward busy allowed (denied)
	LPA (LPD)	Message waiting lamp is equipped (not equipped).
	DTN	Digitone class of service – required
FTR	FDN HTA	Hunting is allowed.
FTR	CFW yy	Call forward all calls. yy is the DN length (4–23).
FTR	FDN xxxx	xxxx is the flexible call forward no answer DN (Meridian Mail DN).
	CR	Press carriage return to the end of the overlay.

Overlay 11—Meridian 1 set data

Prompts	Responses	Description
REQ	NEW, CHG	
TYPE		Type of set (e.g., SL1, 2317, 3000)
TN	lll s cc uu	Terminal number: loop, shelf, card, unit
CDEN	dd	Card is double density.
CUST		Customer number
FDN		Flexible call forward no answer DN (Meridian Mail DN)
CLS	HTA	Hunting is allowed.
	MWA	Message waiting allowed.

Prompts	Responses	Description
	FNA	Call forward no answer is allowed.
	FBA (FBD)	Call forward busy is allowed (denied).
HUNT		Hunt (internal) DN
KEY	0 SCR xxxx	Single call ringing DN, where xxxx is the user's DN.
KEY	1–9 MWK yyyy	Add a message waiting key/lamp, where yyyy is the Meridian Mail DN. For phone sets with soft keys, you may have to use a higher key number. If the key number you choose is rejected, consult the SCH code description.
KEY	1–9 AO3	Add a 3–party conference key. This is necessary for some basic Meridian Mail features.
KEY	1–9 CFW yy xxxx	Call forward all calls, where yy is the maximum DN length and xxxx is the call forward DN.
	CR	Press carriage return to the end of the overlay.

Saving Meridian 1 changes

To save Meridian 1 changes

Step	Action
1	Load Overlay 43
2	At the "." prompt, enter **EDD** to dump data to disk. *The system displays all the data being saved. The following message appears:* RECORD COUNT=xxxx DATADUMP COMPLETE
3	Make a total of three copies of the data.
4	Enter ******** to exit from Overlay 43.

Chapter 10

Starting up and configuring Meridian Mail

In this chapter

Starting up Meridian Mail

To start up Meridian Mail

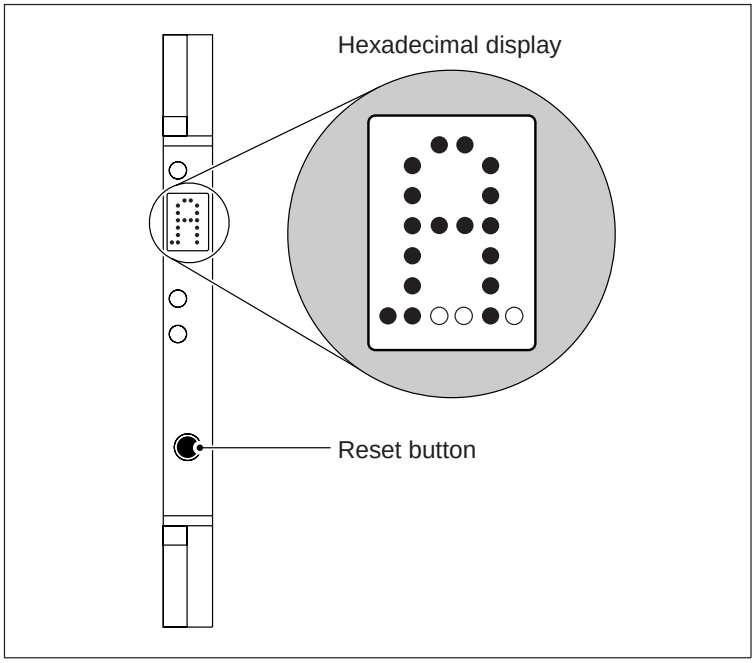
Note: If any problems occur during startup, see I&M, Chapter 16.

Step	Action
1	Power on the administration terminal, printer, and other peripheral devices.
2	On the administration terminal, press <Ctrl> and <Print Screen> to turn on automatic printing.
3	Before you power up the Meridian Mail system, look at " Behavior of LED indicators when starting up Meridian Mail on page 10-3 and be prepared to verify the proper behavior of the LEDs visible at the front of each module. Be prepared to observe the hexadecimal display on the front of the Enhanced MMP40 or MMP40 card (see " Hexadecimal display on the Enhanced MMP40 or MMP40 card" on page 10-4).
4	Power up the Meridian Mail system by setting the main breaker switch for each column to ON, and shelf breakers or DCEPS switches to ON. If your system has more than one Meridian Mail module, power on module MM0, followed by module MM1 and module MM2. In an AC system, switch on the upper breaker in each module before the lower breaker. In a DC system, switch on the left DCEPS in each module before the right one. *As part of the bootup process, the administrator's terminal displays a series of diagnostic and information messages. The bootup messages that should appear are outlined in I&M, Chapter 16.*
5	Check for power problems: *LEDs on the power units at the base of the column indicate that power is on. You should hear the fans in the base of the column.*

Behavior of LED indicators when starting up Meridian Mail

Location of LED	Color	Behavior
CEPS	Green	On while power switch (DC) or shelf breaker (AC) is on
VP	Green	On while power to node is on
Enhanced MMP40 or MMP40 (hex display)	Red	Always on while power to node is on. When bootup diagnostics are complete and the node is in service, this display should read “A.” with the dot blinking. See “ Hexadecimal display on the Enhanced MMP40 or MMP40 card” on page 10-4.
UTIL	Green	On briefly when node is powered on; off while diagnostics are running; on after diagnostics are complete

Hexadecimal display on the Enhanced MMP40 or MMP40 card



ATTENTION

To reduce stress on the system, use the RESET button on the faceplate of the Enhanced MMP40 or MMP40 card to reboot the system, instead of powering the cabinet off and on. Reset Node 1 first, then Nodes 2 through 5 in sequence, as applicable.

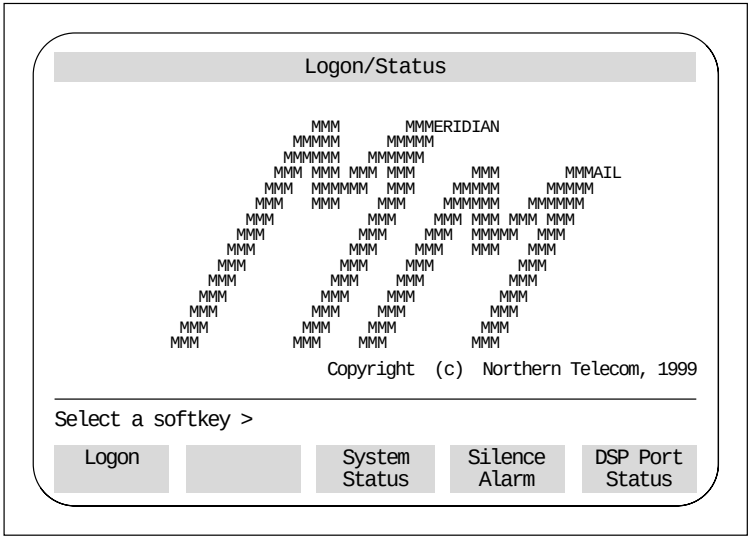
However, if there is a question regarding the state of the system after the system reset, power the system off completely, then power back on to reboot.

6 If the hexadecimal display does not read A. with the dot blinking when bootup and bootROM diagnostics are completed, refer to I&M, Chapter 16.

7 If the message FAILED has been printed beside any diagnostic message, refer to I&M, Chapter 16.

8 Verify that the Logon screen appears as shown in " The Logon screen" on page 10-6. Go to Chapter 14, "Software Installation" in the *System Installation and Modification Guide* (NTP 555–7001–215.)

The Logon screen



g101073

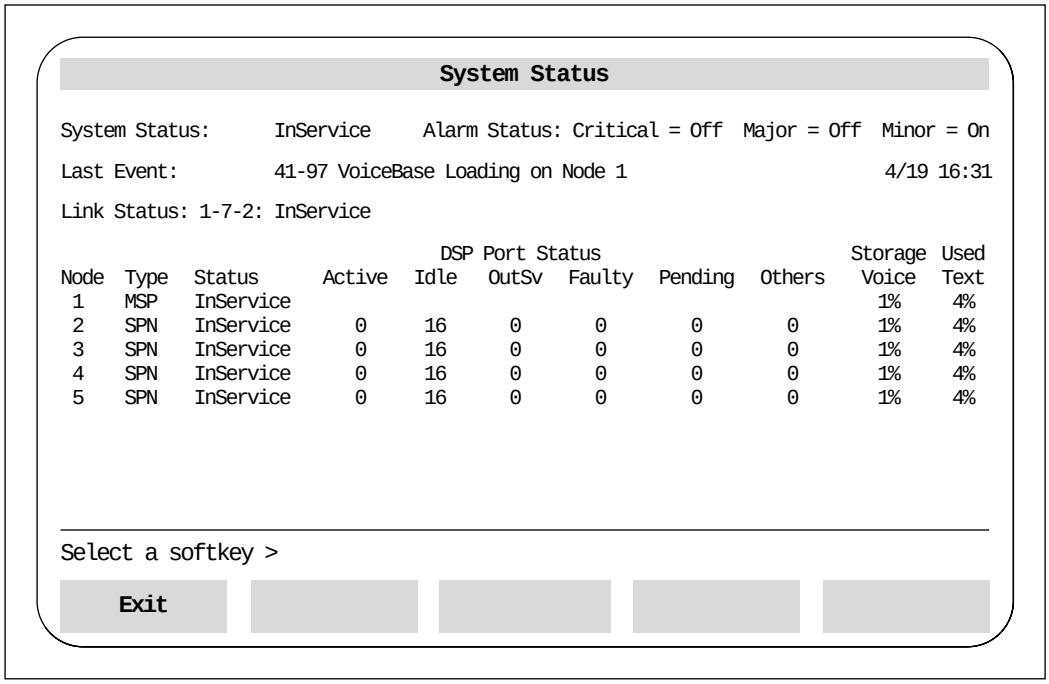
9 Press [System Status].

Node Status should be InService for all of your nodes. DSP Port Status should be idle for all voice ports. See Figure " DSP Port Status screen" on page 10-9.

Note 1: For a full description of this screen, see your *System Administration Guide*.

Note 2: If you power up the system without the network loops connected, the diagnostics will run and the software will load, but the channels will time out and fail, and error messages will appear.

System Status screen



g101074

10 If the total number of ports for each node is incorrect, refer to the chapter “Modify hardware” in *System Administration Tools* (NTP 555–7001–305).

11 If all appears to be OK, press [Exit] to return to the Logon screen.

12 Log on to the system and change the default user name and logon password.

13 Verify that remote login works by setting the A/B switch to “Remote” and dialing in. Reset the switch to Local.

14 Look at the General Options screen (selected from the General Administration menu) and verify that the customer number is correct.

15 Set up the DNs for your voice services. Use the Voice Service DN Table screen (accessed through the Voice Administration menu). You may need to use your *System Administration Guide* (NTP 555–7001–30x) for this step.

16 Check the system by adding some mailboxes and using some Meridian Mail features.

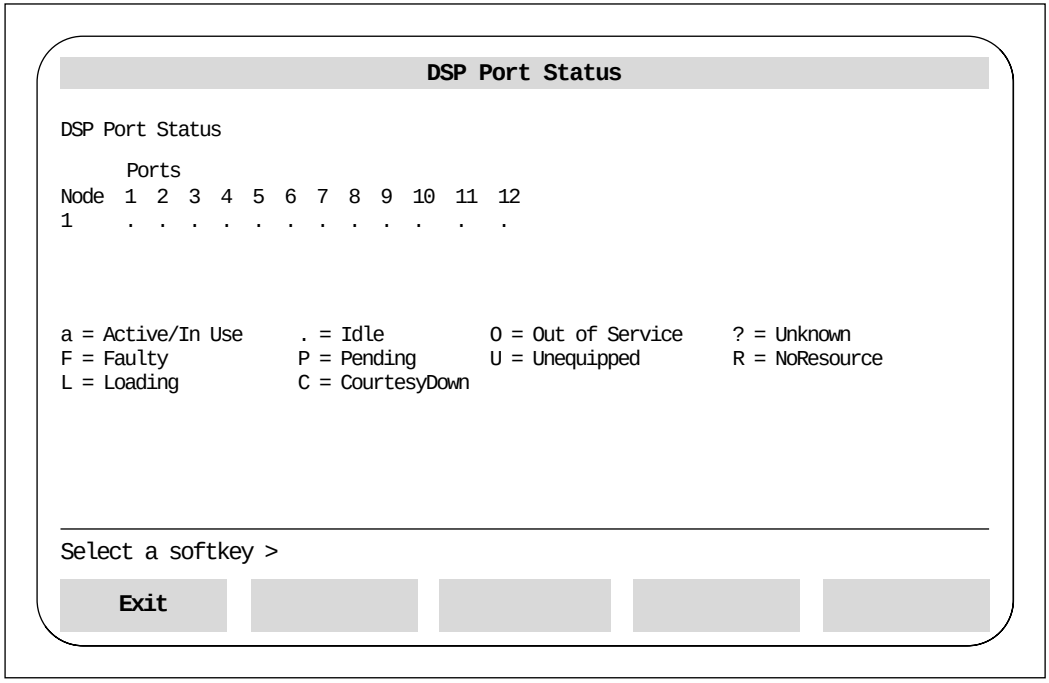
17 Logout.

18 Press [DSPPortStatus].

DSP Port Status should be Idle for all of your ports. See DSP Port Status screen on page 10-9.

Note: For a full description of this screen, see your *System Administration Guide* (NTP 555–7001–30x). This document also describes how to run out–of–service diagnostics for ports that do not come to Idle status on bootup, or to Active status during the testing described in steps 21 to 24.

DSP Port Status screen



g101075

19 While watching this screen, dial the voice messaging DN from a phone connected to the switch.

20 Note which channels become active.

21 Ensure there is no noise on the line.

22 Release. Repeat steps 21 to 23 until all ports have been tested.

23 If all appears to be OK, press <Exit> to return to the Logon screen.

24 Replace the faceplates that cover the disk/tape drive areas.

25 Install the I/O covers and the front and rear doors of the modules.

Index

N

P

R

S

T

U

V

X

NORTEL NETWORKS™
How the world shares ideas.

Reader Response Form

Modular Option EC
Installation Quick Reference Guide
P0907859

Tell us about yourself:

Name: _____

Company: _____

Address: _____

_____

Occupation: _____ **Phone:** _____

1. What is your level of experience with this product?

   ☐ New User ☐ Intermediate ☐ Experienced ☐ Programmer

2. How do you use this book?

   ☐ Learning ☐ Procedural ☐ Reference ☐ Problem solving

3. Did this book meet your needs?

   ☐ Yes ☐ No

   If you answered No to this question, please answer the following questions.

4. What chapters, sections, or procedures did you find hard to understand?

   _____

   _____

   _____

5. What information (if any) was missing from this book?

   _____

   _____

   _____

6. How could we improve this book?

   _____

   _____

   _____

Please return your comments by fax to (416) 597-7104, or mail your comments to:
Toronto Information Products, Nortel Networks, 522 University Avenue, 14th Floor, Toronto, ON, M5G 1W7, Canada.

NORTEL NETWORKS™

How the world shares ideas.

Reader Response Form

Reader Response Form

Modular Option EC

Meridian Mail
Installation Quick Reference Guide

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

Publication number	P0907859
Product release:	13
Document release:	Standard 1.0
Date:	November 1999

Printed in the United States of America