Meridian Mail
System Installation and Modification Guide

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System Installation and Modification Guide

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Publication history

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This is the Standard 1.0 release of the *System Installation and Modification Guide* for Meridian Mail Release 12 .

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Chapter 1

About this guide

In this chapter

Overview

Introduction   This chapter explains how this document is to be used.

The *System Installation and Modification Guide* is intended for service technicians who are familiar with Meridian Mail operation and maintenance procedures.

This guide is divided into chapters, each of which describes a single utility and the procedures necessary to perform the Meridian Mail system operation that the utility facilitates.

The chapter entitled "Overview: read me first" is intended to be read before beginning the system operation.

Typographic conventions

Introduction

The following conventions are used throughout this guide.

Keyboard keys
These are referred to by indicating the label of the key with angle brackets.

Example

<1>, <2>, <Return>

Screen prompts and messages
Reproductions of screen prompts and messages are in courier typeface.

Example

```
You have chosen to standardize volume size.
```

User input
When a user is required to input a response, the input will appear bolded.

Example

 Enter **yes**.

Prompt for selected values
When you are asked to select a value using the up or down arrow keys, the prompt is shown in the procedure just as it would appear on the screen, followed by any other possible values in parenthesis.

Example

```
Do you wish to continue? No (Yes)
```

References

Introduction

In this guide, where reference is made to another part of the guide or to a separate document, the following conventions are used:

- A reference to an NTP number which may differ depending on the platform or features for which your Meridian Mail system is set up will include the symbol "x" in it to indicate the variable (for instance, NTP 555-70x1-250).

- A reference to text in the same chapter appears surrounded by double quotation marks, giving the heading under which the required text is found (for example, "Overview: read me first").

- A reference to text in another section appears with double quotation marks, giving the name of the chapter and, where necessary, the heading under which the required text is found.

- A reference to text in another manual gives, in italics, the title of the manual in which the required text is found, along with any applicable reference number. For example, see *Meridian Mail Modular Option EC Installation and Maintenance Guide* (NTP 555-7061-250).

Administration and application guides

Introduction

While working with this document, you may need to consult the *System Administration Guide* that applies to your platform or feature set in order to obtain more information. The following is a brief description of these NTPs.

555-7001-301—System Administration Guide

This NTP is for single-customer Meridian Mail systems connected to the Meridian 1 or SL-1 switch. It describes how to configure and maintain the Meridian Mail system using the MMI screens. Topics include

- user administration
- general administration
- dialing translations
- voice administration (not including voice menus, voice forms, or fax on demand)
- hardware administration
- system status and maintenance
- operational measurements
- Meridian Networking administration
- AMIS networking administration
- network message service administration
- hospitality administration
- class of service administration

555-7001-302—System Administration Guide for Multi-Customer Systems

This NTP is for multi-customer Meridian Mail systems connected to the Meridian 1 or SL-1 switch. It describes the administrative activities that are carried out at the customer administration level. Topics include

- user administration
- general administration
- dialing translations

- voice administration (not including voice menus, voice forms, or fax on demand)
- hardware administration
- system status and maintenance
- operational measurements
- Meridian Networking administration
- AMIS networking administration
- network message service administration
- hospitality administration
- class of service administration

555-7051-307—System Administration Guide for Modular Option GP

This NTP is for single-customer Meridian Mail systems connected to the DMS-10, DMS-100, AT&T, or the ROLM switch. It describes the administrative tasks that are carried out at the system administration level. Topics include

- user administration
- general administration
- dialing translations
- voice administration (not including voice menus, voice forms, or fax on demand)
- hardware administration
- system status and maintenance
- operational measurements
- Meridian Networking administration
- AMIS networking administration
- network message service administration
- hospitality administration
- class of service administration

555-7051-308—System Administration for Multi-Customer Systems for Modular Option GP

This NTP is for multi-customer Meridian Mail systems connected to the DMS-10, DMS-100, AT&T, or the ROLM switch. It describes the administrative tasks that are carried out at the system administration level. Topics include

- user administration
- general administration
- dialing translations
- voice administration (not including voice menus, voice forms, or fax on demand)
- hardware administration
- system status and maintenance
- operational measurements
- Meridian Networking administration
- AMIS networking administration
- network message service administration
- hospitality administration
- class of service administration

557-7001-301—System Administration Guide for MSM

This NTP is for single customer Meridian Mail systems connected to the DMS-10 or the DMS-100 switch. It describes the administrative tasks that are carried out at the system administration level. Topics include

- user administration
- general administration
- dialing translations
- voice administration (not including voice menus, voice forms, or fax on demand)
- hardware administration
- system status and maintenance
- operational measurements
- Meridian Networking administration
- AMIS networking administration

- network message service administration
- class of service administration

557-7001-302—System Administration for Multi-Customer Systems for MSM

This NTP is for multi-customer Meridian Mail systems connected to the DMS-10 or the DMS-100 switch. It describes the administrative tasks that are carried out at the system administration level. Topics include

- user administration
- general administration
- dialing translations
- voice administration (not including voice menus, voice forms, or fax on demand)
- hardware administration
- system status and maintenance
- operational measurements
- Meridian Networking administration
- AMIS networking administration
- network message service administration
- class of service administration

Chapter 2

Overview: read me first

In this chapter

Overview

Introduction   This chapter provides a brief overview of Meridian Mail system
                          operations. It contains important information that should be
                          read thoroughly before attempting any procedure described in
                          this guide.

                          The following sections are associated with this chapter:

                          •   System operations

                          •   Keycodes and serial numbers

                          •   Hardware prerequisites

                          •   Ports, storage, and volume sizes

What changed in MM11

Changes and additions in the MM11 release

The MM11 software release was designed with the following changes and additions:

- comprehensive upgrade
- improved user interface
- conversion from Meridian Mail releases 8, 9, and 10
- a method to change serial numbers
- keycode support to the Message Services Module (MSM) platform
- flexible disk drive support for the MSM

Note: For more information on any of the above changes and additions to the MM11 software, see the MM11 release of the *System Installation and Modification Guide* (NTP 555-7001-215).

What is new for MM12

Change in the MM12 release

The MM12 software release is designed with the following change and addition:

- conversion from Meridian Mail releases 8, 9, 10, and 11
- AutoAdmin utility

Conversions from Meridian Mail releases 8, 9, 10, and 11

Releases 8, 9, 10, and 11 may be converted directly into Meridian Mail Release 12 using comprehensive upgrade as long as hardware requirements are observed and you disable disk to disk backup on your system before you start the conversion. Refer to "Disabling disk to disk backup" on page 3-10 for more information. These hardware requirements involve updating your system (if it is an MM8 or MM9) with the MMP40 card before running comprehensive upgrade. For more information on conversion, see "Procedures reference" on page 3-4.

AutoAdmin utility

The MM12 release has a new feature called the AutoAdmin utility. This feature allows a customer with a large number of Meridian Mail mailboxes to provide input data about these mailboxes to one central system and then have it propagate the appropriate database information to other systems. These other systems are administered automatically.

The AutoAdmin utility gives these customers the ability to add, add/replace, remove and update mailboxes from Meridian Mail using a PC.

In the MM12 release, the PC is acting as a client to the Meridian mail system. The PC is linked to the Meridian mail system over an RS-232 connection either directly or through modem dial-up. For More information on the Meridian Mail AutoAdmin Utility, refer to the *System Administration Guide* for your system.

Section A: **System operations**

In this section

Overview

Introduction

In this section, system operations within comprehensive upgrade will be explained through its relationship to the operations it performs.

In addition, system utilities will be described.

Before comprehensive upgrade

Previous to Release 11, Meridian Mail operations that were required to change a system configuration involved separate steps.

Operations such as language expansion, feature expansion, hardware modification, storage expansion, platform migration, and conversion needed to be run separately or in a specific combination before the new or updated system could run properly. In addition, the system had to be powered down after each operation was completed, and then rebooted from the Install/data tape.

Comprehensive upgrade explained

Comprehensive upgrade, introduced in Release 11 of Meridian Mail, improves on the previous releases by introducing a single operation for system changes. This operation is called comprehensive upgrade. In other words, comprehensive upgrade lets you carry out one or all of the system operations in a single step.

For instance, you may perform a storage expansion, feature expansion, and language expansion in a single comprehensive upgrade session, where previously, you needed to perform each enhancement individually.

Note: If you have not upgraded your system with certain new hardware configurations (for example, MMP40), you will be asked to upgrade your hardware before continuing with comprehensive upgrade.

System operations within comprehensive upgrade

Introduction

One or more of the following system operations may be contained within a comprehensive upgrade:

- Conversion
- Feature expansion
- Hardware modification
- Storage expansion
- Language expansion
- Platform migration
- Software upgrade

Note: Software upgrade is within comprehensive upgrade only in the sense that you are given the choice of a software upgrade at the beginning of a comprehensive upgrade.

Conversion

The following points apply to conversion within a comprehensive upgrade:

- Conversion changes the system from one release to another release.
- Conversion from releases of MM8, MM9, MM10, and MM11 to MM12 are supported in comprehensive upgrade.
- Meridian Mail systems previous to Release 8 must be converted to MM8 before they can be converted to MM12. See the Release 8 documentation for instructions.

Feature expansion

The following points apply to feature expansion within a comprehensive upgrade:

- A feature expansion permits you to add features.

Note: There is an exception: SMDI and HVS can only be added during a system installation.

- You can remove the AdminPlus or ACCESS features during feature expansion. No other features can be removed.
- Storage hours, languages, and hardware cannot be changed through feature expansion.

Enabling features

A keycode is required to enable the following features during a feature expansion within a comprehensive upgrade:

- Meridian ACCESS
- AdminPlus
- AMIS
- Dual Language Prompting
- Fax on Demand
- Meridian Connections
- Networking
- Multi-Admin (not on Card Option)
- Multi-Customer
- Network Message Services (NMS)
- Outcalling
- VMUIF
- Voice Forms
- Voice Menus
- AutoAdmin

Hardware modification   The following points apply to hardware modification within a comprehensive upgrade:

ATTENTION

Any hardware that will be needed in the new system should be installed before performing a comprehensive upgrade. For more information on installation of hardware, refer to the *Installation and Maintenance Guide* (NTP 555-70x1-250) for your platform.

- Hardware modification allows you to change your hardware configuration, such as adding one or more nodes to your system.
- You can use hardware modification to expand from your present system configuration to the maximum number of hardware locations.
- On MSMs, new nodes can only be added off-line as part of a comprehensive upgrade.

Storage expansion   The following points apply to storage expansion:

- Storage expansion increases the storage space on your hard disk.
- Storage hours can be increased but not decreased.
- Storage can be expanded by the addition of new nodes.

Note: On the MSMs, new nodes can only be added off-line as part of comprehensive upgrade.

- MSM systems made up entirely of 150- or 200-hour packs are supported as well as a mix of 150- and 200-hour packs. In this case, any pair of nodes must comprise matching disk packs.
- Storage expansion for the MSM is not directly controlled by a keycode.
- MSM storage may be expanded by exchanging 150- for 200-hour packs on existing nodes

Language expansion   The following points apply to language expansion within a comprehensive upgrade:

- Language expansion increases the number of languages on a system up to a maximum of four.
- A current keycode that supports more languages than are installed on your system can be used to increase the number of languages to the keycode maximum.
- If you plan to expand languages but your current system has the maximum installed, a new keycode is required.

Platform migration

The following points apply to platform migration within a comprehensive upgrade:

- A platform migration requires a new keycode.
- When the migration is complete, the target platform will have the identical serial number, storage hours, optional features, and languages as the original system.
- For the migration of mailboxes and applications to succeed during a platform migration, the target platform must have at least as many nodes, and the same size or larger disks, as the original system.

Migration within MM12

The following table provides information about the steps required for a platform migration within a comprehensive upgrade.

Starting platform	Ending platform	Required to perform
Modular Option	EC-MMP40	Backup *1 Restore *2 Comprehensive upgrade *3
Shelf Option	EC-MMP40	Backup *1 Restore *2 Comprehensive upgrade *3
Shelf Option	Modular Option	Backup *1 Restore *2 Comprehensive upgrade *3

Starting platform	Ending platform	Required to perform
Card Option	Option 11 EC	Backup *1 Restore *2 Comprehensive upgrade *3
Card Option	Modular Option EC	Backup *1 Restore *2 Comprehensive upgrade *3
Card Option	Modular Option	Backup *1 Restore *2 Comprehensive upgrade *3

Note: The following definitions of *1, *2, and *3 in the above table are provided.

*1: Full backup of the starting platform

*2: Restore backup onto the ending platform

*3: Comprehensive upgrade on the ending platform

Upgrade

The following points apply to upgrade:

- Upgrade changes the system software within a release.
- A keycode is not required for a software upgrade.
- Storage hours and language features, and hardware cannot be changed during an upgrade.

System operations within utilities

Introduction   Once you have upgraded to or installed your Meridian Mail
                                   Release 12 system, you will be required to manage it. The
                                   utilities overviewed here and described in the later chapters
                                   are the key to maintaining a healthy system.

Toggle disk to disk   The following points apply to toggle disk to disk backup:
backup
                                   •   A disk to disk backup does not require a keycode.
                                   •   Disk to disk backup is performed on systems that have
                                       one disk per node.
                                   •   Disk to disk backup is not available on single-node
                                       systems, 2-node 26-hour systems, 3-node 30-hour
                                       systems, 4-node 45-hour systems, or 5-node 60-hour
                                       systems. For more information, see "Volume sizes" on
                                       page 2-55.
                                   •   Disk to disk backup is not an option on MSM systems or
                                       card option systems.

Standardize volume   The following points apply to standardize volume sizes:
sizes
                                   •   Standardize volume sizes does not require a keycode.
                                   •   Standardize volume sizes cannot be reversed.

Restore system from   The following points apply to restore system from backup:
backup
                                   •   A keycode is not required to restore a system from
                                       backup because this is considered a maintenance
                                       procedure.
                                   •   You must have a recent copy of the system's database on
                                       a backup tape in order for this procedure to be
                                       successful.
                                   •   Performing regular and frequent (at least weekly)
                                       backups is essential.
                                   •   The restore procedures are slightly different if the system
                                       has disk shadowing. You will be restoring from the
                                       surviving disk, rather than from an external backup tape.

- If you are doing a partial restore, you will use the Install/data tape twice during the procedure; therefore, keep the tape nearby.
- If you are restoring from backup to a new system and the new system has more nodes than the original system, be sure to power down the excess nodes before booting from the Install/data tape and running the restore.

Change to default system password

The following points apply to change to default system password:

- A keycode is not required to change to default system password, because this is considered a maintenance procedure.

Move voice services cabinet

The following points apply to move voice services cabinet:

- A keycode is not required to move voice services cabinet, because this is considered a maintenance procedure.
- If your voice services have been moved prior to a conversion to MM12, you need to know in what volume these services are stored.

Modify number of HVS users

The following points apply to modify number of HVS users:

- A keycode is not required to modify the number of HVS users.
- This utility will allow a temporary measure for adding more HVS users than are recommended. Eventually, more storage will be required.
- This utility is not an option on the MSM.

Console port speed configuration

The following points apply to console port speed configuration:

- A keycode is not required to modify the console port speed configuration.

• The Console Port Speed Configuration Utility is only available on the Modular Options EC and Classic platforms.

Recreate system   The following points apply to recreate system:

• A keycode is not required for recreate system.
• No user input is required for recreate system after the initial choices.

Change system serial number   The following points are valid to change system serial number:

• A change serial number keycode is required to change the system serial number.

Exit to support level   The following points apply to exit to support level:

• A keycode is not required to use the exit to support level utility.
• Exit to support level utility accesses specialized utilities and should only be used by qualified personnel.

Back to main menu   The following points apply to back to main menu:

• A keycode is not required for this utility
• This selection returns you to the System Installation and Modification menu

Software installation

Introduction   Software installation installs the Meridian Mail software onto the system. This procedure is most often performed during a new equipment installation, but can also be performed after a disk crash, or when you do not have backup tapes.

Points to consider   The following points apply to a software installation:

- A software installation requires a keycode.
- Software installation should take approximately 45 minutes plus 20 minutes for each additional language installed.
- Software installation overwrites any data stored on the system. All previously stored data will be lost.
- You cannot perform a software installation until all of the Meridian Mail hardware has been installed.
- If you are performing a software installation on an existing system, you do *not* have to rebuild the entire database if you have backup tapes on hand. Since user data can be restored from tapes, this is one of the most important reasons why regular backups should be performed.
- Software installations are performed under the following circumstances:
  - The disk (hard drive) crashes and the entire system needs to be rebuilt.
  - You are converting a small system from a lower release (7 or prior) to Release 12. Instead of performing one conversion from 7 to 8, and then another one from 8 to 12, it may be much quicker to simply perform a Meridian Mail 12 software installation and rebuild the database.

Information needed for installation

The following is a list of information required before you perform the software installation. (For Modular Option GP and MSM systems only, obtain the information requested in numbers 1 through 3 below.) For all systems, obtain the information requested in numbers 7 through 14 below, except for the indicated platforms.

1. For Modular Option GP and MSM systems only, obtain the Meridian Mail Connections UCD DNs and other voice services DNs.

2. For Modular Option GP and MSM systems only, identify the message desk and terminal assignments to be used by UCD agents.

3. For Modular Option GP and MSM systems only, identify the DN assignment for the UCD agents.

4. Identify the Meridian Mail ACD DN (not for Modular Option GP and MSM systems).

5. Identify the TN assignments for ACD agents (not for Modular Option GP and MSM systems).

6. Identify the DN assignments for ACD queues (ACD queue number) (not for Modular Option GP and MSM systems).

7. Identify the serial number for your Meridian Mail system. See the section "Keycodes and serial numbers" on page 2-19.

8. Identify Meridian Mail's current number of ports. See the section "Ports, storage, and volume sizes" on page 2-41.

9. Identify the Meridian 1 or SL-1 customer number (not for Modular Option GP and MSM systems).

10. Identify the Key 1 designation for SCN of Meridian 1 (channel DN).

11. Identify the languages required.

12. For Meridian Mail Connections, identify the Meridian Mail UCD DN and other voice services DNs.

13. For Meridian Mail Connections, identify the message desk and terminal assignments to be used by Meridian Mail voice channels.

14. For Meridian Mail Connections, identify the DN assignment for the PBX loop-start lines associated with the Meridian Mail voice channels.

Section B: **Keycodes and serial numbers**

In this section

Overview

Introduction   This section describes what keycodes are, and how and why
                          they are used.

What is a keycode?

Introduction

Two types of keycodes are available. One contains information about the features and hardware configuration purchased by the customer. If the system needs to be changed or expanded, a new keycode can be obtained from Nortel.

The other keycode is available for security purposes where a system's serial number is required to be changed. For more information on this specific keycode, see "The serial number" on page 2-28.

Keycode composition

A keycode consists of 20 alphanumeric characters divided into five groups of four characters. Keycodes do not contain information about which languages are to be enabled, the type of cards you have installed, or whether disk-to-disk backup or disk shadowing is on or off.

Example

You may obtain a keycode that will enable you to add features, add nodes, and increase storage capacity.

What is a keycode used for?

Introduction   A keycode will permit you to do certain system operations.
                                     These system operations are

•   software installation

•   comprehensive upgrade, which can combine any one or
      more of the following:

      -    language expansion

      -    feature expansion

      -    hardware modification

      -    conversion

      -    storage expansion

      -    platform migration

Note: For more information on software installation or
comprehensive upgrade, see "System operations" on page 2-
5.

How the keycode works with the system

Process

For each system operation that requires a keycode, the software prompts you to enter each of the five groups of characters that make up a 20-character keycode.

Once the keycode is entered, the system software compares the information in the keycode with the present hardware/software configuration or the desired configuration, or both, to make sure the proposed operation is valid.

Example

This is an example of a keycode:

D2G8

ESYM

YCE6

7705

0J1U

Note: Case does not matter when entering keycodes, however, certain letters cannot be used because of their similarity to numbers. These letters are: B, I, O, and Z because they resemble the numbers: 8, 1, 0, and 2.

Defining the system with keycodes

Keycodes define the system by

- the maximum number of storage hours permitted
- the minimum number of multimedia ports permitted

The keycode defines a minimum number of multimedia ports that must be configured on your system. You can increase but you cannot decrease the number of multimedia ports during software installation and comprehensive upgrade.

Note: Each multimedia port requires two physical hardware locations whereas voice ports require only one. The ratio for the MSM platform is three to two.

For more information about configuring multimedia ports, see your platform's *Site and Installation Planning Guide* (NTP 555-70x1-200). For the MSM platform, see the *MSM Planning and Engineering Guide* (NTP 557-7001-100).

• the maximum number of full service voice ports

This is the number of full service voice ports that has been purchased with the keycode. This means, for instance, that you can only configure your system up to this number of full service voice ports without purchasing a new keycode. For more information about configuring voice ports see your platform's *Site and Installation Planning Guide* (NTP 555-70x1-200). For the MSM platform, see the *MSM Planning and Engineering Guide* (NTP 557-7001-100).

• number of physical DSP ports (= hardware locations)
    - DSPs by 3 on MSMs
    - DSPs by 2 on other platforms
• number of nodes
• number of languages permitted
• features permitted

What to do if your keycode is rejected

Process

If the keycode is rejected, either reenter the keycode (it may have been entered incorrectly), or abort the procedure and reboot the system into service.

Note: At this point, your system has not been altered because the operation was stopped when the keycode was rejected.

Errors

If an error is made during entry of a keycode, you have two opportunities to correct it.

1. If you realize you made a typing error during the entry of a particular group of four alphanumeric characters, you may simply backspace and enter the correct characters.

2. If you have already pressed <Return> following the entry of a wrong group of characters, you can start again after entering the remainder of the keycode.

Understanding the keycode label

Definition   Keycode labels identify the keycode that you purchased with
                                  your system. A set of these labels is attached to your tapes
                                  and a second set is provided as a loose item with your
                                  shipped system. Store the second set in a safe location.

Keycode label   The following illustrates a typical keycode label.

Reading the keycode   The following table provides descriptions for the label
label   headings that you will find on the keycode label.

Label Heading	Description
MM Serial NBR	This is the serial number for the platform you have purchased.
PBX Serial NBR	This is the serial number for your PBX.
NTI Number	Customer order number.

Label Heading	Description
Languages	The number of languages that can be added to the system.
Features	The types of features supported.
Hours	The number of hours of storage the system can have.
MMxx.x Universal Keycode	The keycode. Note the five blocks of alphanumeric code.

Note: Also available on the keycode label is a count of how many physical ports, and voice ports (multimedia, full, basic) are available with the keycode, and the type of system with which the keycode will be used.

Using the keycode   The keycode on the keycode label can be used to perform either a software installation or a comprehensive upgrade, which includes any one or combination of conversion, feature expansion, hardware modification, language expansion, platform migration, and storage expansion. For the procedure on comprehensive upgrade, see Chapter 3, "Comprehensive upgrade". For the procedure on software installation, see Chapter 14, "Software installation".

The serial number

Introduction

The implementation of changing serial numbers through keycode was introduced in MM11. Besides the added security it provides, this feature allows operators to change their serial number to match the 11-digit serial number of switches. This means you are now only required to maintain one serial number for your Nortel products.

Changing serial numbers through the menu

There are two ways to change serial numbers from the System Installation and Modification menus:

- through comprehensive upgrade by entering a new serial number keycode when prompted.
- from the System Operation Utility menu, through the selection of the Change System Serial Number option. (For the procedure, see Chapter 12, "Change system serial number".)

Note: The serial number keycode is provided by Nortel on request.

When to use your serial number keycode

The following conditions apply to the serial number keycode:

- The serial number keycode cannot be used to perform a comprehensive upgrade or software installation (that is, to add features, languages, hardware, or storage capacity; to convert; or do a platform migration).
- The keycode can only be used on the system for which it is intended.

System identification

System operations (software installation, comprehensive upgrade) that require keycode information check to see if the serial number on the system is the same as the one defined in the keycode. In these cases, the user is not prompted for the serial number.

Note: In the case of MSMs, the serial number is always prompted for.

Keycodes are matched to serial numbers. The system software will compare the parameters that the keycode defines with the new configuration and serial number during a system operation. If an exact match is not found, the keycode will be rejected.

Locating your serial number

The keycode label shows the serial number. A set of these labels is attached to your tapes and a second set is provided as a loose item with the shipped system. Store the second set in a safe place.

Note: Card Option systems do not prompt for a serial number. The serial number is read automatically from the switch.

Section C: Required hardware

In this section

Overview

Introduction   Although a large part of the content in this guide concerns
                          itself with system installation and modification through the
                          Meridian Mail software, certain aspects of hardware in terms
                          of disk drives, tape drives, and voice cards are covered in this
                          section. General restore information is also addressed.

Disk drive failures

Introduction

When a disk drive fails it is most likely due to media errors. The result of media errors can be unrecoverable loss of important data. The following information describes how media errors are reported by the system and what can be done to retrieve the data by reformatting and restoring.

Media error

When media errors occur, the disk drive automatically retries the read operation many times and attempts to recover the data using error correcting codes. If attempts at error correction fail, the data is lost and an error is reported. Depending on which data block is lost, the system may or may not be seriously affected.

SEERs problem solving

System Error and Event Reports (SEERs) are generated when higher-level software components report that they encountered disk errors. The SEERs code returned for these types of errors is 1130. From the SEERs, it is usually possible to determine what is being affected by the lost data and, therefore, how serious the impact will be.

Disk drive replacement

Since system reliability is impaired by an unreliable disk drive, it is normally recommended that if a disk drive in a non-shadowed system generates errors, it should be replaced immediately.

Disk drive reformatting

A disk drive which generates media errors can often be repaired by reformatting. Reformatting is a built-in task of the restore operation.

Data block checking

Part of the reformatting operation (which may take up to 60 minutes) involves the disk drive checking each block on the disk and substituting good blocks for defective blocks by drawing on a pool of spare blocks. This does not reduce the capacity of the disk since spare blocks have already been set aside.

Note: All data is erased from the disk, and a restore must be done using the most recent backup disk or tape.

Tape drives

Tape drive operation   Meridian Mail systems use industry standard 1/4 inch data
                               cartridges. Data is recorded on multiple tracks on the tape.
                               Each track runs from one end of the tape to the other. At the
                               end of the tape, the tape head moves to the next track and the
                               tape direction is reversed.

Tape heads   The tape drive has a tape head assembly with multiple heads.
                               For each direction of tape movement, there are two write
                               heads and two read heads.

Error checking   All data blocks have an associated error checking code so
                               that errors can be detected. After a data block is written on
                               the tape, it is automatically checked by reading it back with
                               the read head. If a block cannot be read correctly, it is written
                               again. This allows a proper backup to be made even if the
                               tape has media defects. A block will be rewritten up to 16
                               times before the user is informed of an error.

Optical detection   The tape drive determines the beginning and end of tape
                               optically by detecting holes in the tape. The drive can identify
                               the exact type of tape by the positions of the holes. Use only
                               the tapes recommended for the tape drive.

Write protection   Tapes can be write-protected by turning the knob on the tape
                               cartridge until the arrow points to SAFE. Any attempt to
                               write on a write-protected tape will generate an error.

Cleaning   The tape drive manufacturers recommend cleaning the tape
recommendations   heads after a brand new tape has been used for the first time,
                               and after every eight hours of tape drive operation. If media
                               (parity) errors occur when reading or writing tapes, it is an
                               indication of either a faulty tape or dirty tape heads.

Retensioning tape cartridges

Tape cartridge manufacturers recommend that their tapes be retensioned when first inserted into the drive. This is done by winding the tape from one end to the other and back to increase tape reliability. Meridian Mail software automatically retensions tapes before writing or reading them. The retensioning takes about two minutes for a 6150 tape (137.16 m/450 ft) and about five minutes for a 6250 tape (304.8 m/993 ft).

Tape drive formats

The following text provides a brief description of the types of tape drives used in Meridian Mail 12 systems. The three tape drives used are

- Tandberg 2500DSE
- Tandberg TDC4220
- Archive Viper

Meridian Mail systems installed during the releases of MM10 and MM11 use the Tandberg TDC4220 tape drive. Meridian Mail 12 systems are supplied with the Tandberg 2500DSE tape drive. Both Tandberg drives can read and write tapes with a capacity up to 2.5 Gbyte and are backward compatible with all existing Meridain Mail tapes.

The internal version of the Tandberg 2500DSE tape drives used on the MM12 Modular Option, Modular EC, and the Modular GP platforms will show no apparent changes. The external version used with Card Option and EC11changed in height, width, and shape for the MM11 release. Both versions are teminated internally. This is noted by a label on the back of the tape drive.

The Tandberg 2500DSE is shipped with all new MM12 systems. However, the Tandberg is not necessary to convert to the new release. Prior to Release 10, Meridian Mail systems used a Viper tape drive manufactured by the Archive Corporation.

Existing tapes written by Archive drives which the Tandberg can read include voice prompts written by the voice prompt transfer tool (VPTT), and full and partial backups.

It is possible an older system may have a tape drive that cannot read the Install/data tape. In this case, the drive will have to be replaced before using the MM12 Install/data tape.

Tandberg and Viper tape formats

The Tandberg and Viper drives can read and write on a number of tape formats. These tape formats are listed below.

Tape drives	Tape formats	Tape media	Tape capacities
Tandberg 4220 and Tandberg 2500DSE	QIC-24 (Read)	DC300XL	40 Mbytes
	QIC-120	DC600	60 Mbytes
	QIC-150/QIC-150	DC6150/DC6250	155 Mb/250 Mbytes
	QIC-525	DC6525	525 Mbytes
	QIC-1000	DC9100	1 Gbytes
	QIC-2GB/QIC-2GB	Magnus 2.0/Magnus 2.5	2 Gbytes/2.5 Gbytes
Archive 2150	QIC-24 (Read)	DC300XL	40 Mbytes
	QIC-150	DC6150/DC6250	155 Mbytes/250 Mbytes

Notes:

1. Both Tandberg drives and the Archive drive can read the old QIC-24 format tapes, but none of the drives can write on QIC-24 format.

2. The amount of data which can be written on a tape depends on the condition of the cartridge. If a cartridge has many media imperfections, it will store less data since blocks will have to be rewritten.

General restore information

Introduction

The purpose of this section is to provide background information about the disk and tape devices used to back up and restore Meridian Mail systems.

Note: High-capacity magnetic disks are a central part of a voice messaging system. These disks can fail; therefore, backups are essential.

Backups

Backup copies of the system data are fundamental to restoring the system with as little disruption and data loss as possible. For this reason, it is important that the system administrator back up the system on a regular basis.

Meridian Mail backup devices for non-shadowed systems

The following backup devices are used for non-shadowed systems.

Streaming tape drive
Meridian Mail systems feature a streaming tape drive to allow system and user information to be copied from disk to one or more quarter-inch tape cartridges. If a disk drive fails, the system can be restored to a working state by copying the data back from the tape to a replacement disk. It is also possible to copy data onto another Meridian Mail system, if necessary, as in platform migration.

Hard disks
Larger Meridian Mail systems have multiple nodes, each node having its own disk drive. On these systems, a disk to disk backup feature is available (when it is enabled). Rather than copying to tape, the data is copied to one of the other disks in order to minimize data loss in the event of single disk failure. This is not a full system backup. For more information on disk to disk backup, see Chapter 4, "Toggle disk to disk backup".

Note: A disk to disk backup reduces the voice message storage space available. Tape backup copies are used to restore the system after multiple disk failures.

Meridian Mail backup devices for shadowed systems

The following backup device is used on shadowed systems.

Dual hard disks

Meridian Mail systems that have the disk shadowing option have two disk drives per node. On these systems, all data is written to both disks. In the event that one disk fails, the system automatically writes data to and reads from the functioning disk until the faulty disk is replaced. The result is that there is no data loss.

Voice processing cards

Feature support   The following voice processing cards support certain features:

VP4 (NT6T04AA) and VP8 (NT6P08AA) in the Modular Option EC (MMP40 and 68K) support all MM 9.6 and higher features.

Modular Option systems must have at least one 32-kbyte NVP card (NT4R01AC) to support Outcalling, AMIS Networking, Meridian Mail (proprietary) Networking, and Multimedia.

VP12 (NTGX12AB) in the MSM platform supports all MM 9.6 and higher features.

Note: If you are not certain that a 32-kbyte NVP card is in the system, examine the outer edge of the card, noting the release number. The number will be REL. 04 or higher for a 32-kbyte card. The 32K NVP card does not apply to the Card Option platform.

Section D: Ports, storage, and volume sizes

In this section

Overview

Introduction   This section provides information on port and node limits by
                             platform and storage capacities as well as by volume sizes.
                             Dataport rules, including error messages, for all supported
                             platforms for MM12 are also listed.

Voice port configurations

Introduction   In the MM12 release, voice ports are supported on the primary node of 1- and 2-node EC-MMP40 systems. Twenty-four voice ports are also allowed on the voice nodes of EC-MMP40 systems.

On Card Option systems, up to 12 voice ports are supported. Option EC-11 systems support up to 48 ports on two nodes.

On MSMs, up to 24 voice ports per node are supported. For all other platforms, only 16 voice ports are available on each voice node.

Voice port limits   The following table lists voice port limits for the following platforms:

- EC-MMP40
- Modular Option GP
- Modular Option
- Option EC-11
- Card Option

System type	1 node	2 nodes	3 nodes	4 nodes	5 nodes
EC-MMP40	24	24+24	0+24+24	0+24+24+24	0+24+24+24+24
Total voice ports	24	48		72	96
Modular GP	12	8+16	0+16+16	0+16+16+16	0+16+16+16+16
Total voice ports	12	24	32	48	64
Modular Option	12	8+16	0+16+16	0+16+16+16	0+16+16+16+16
Total voice ports	12	24	32	48	64
Option EC-11	24	24+24			
Total voice ports	24	48			
Card Option	12				
Total voice ports	12				

MSM-supported channels

The following table lists supported channel configurations for the MSM.

Channels	Node 3	Node 4	Node 5	Node 6	Node 7	Node 8	Node 9	Node10
48	24	24						
72	24	24	12	12				
96	24	24	24	24				
120	24	24	24	24	12	12		
144	24	24	24	24	24	24		
168	24	24	24	24	24	24	12	12
192	24	24	24	24	24	24	24	24

Dataport rules

ACCESS, AdminPlus and AutoAdmin

The following is a list of rules for the features ACCESS, AdminPlus, and AutoAdmin and includes rules concerning baud rates:

- If ACCESS is installed, there must be at least one ACCESS dataport. You are warned if you do not install an ACCESS dataport.
- If AdminPlus is installed, there must be one AdminPlus dataport. You are warned if you install more than one AdminPlus dataport.
- If AutoAdmin is installed, there must be one AutoAdmin dataport. You are warned if you install more than one AutoAdmin dataport.
- On systems with MMP40 cards, ACCESS, AdminPlus, and AutoAdmin dataports will only be allowed on Node 1 RSM and Utility cards, and the MMP40 cards of the voice nodes.
- The available baud rates for AdminPlus dataports are 2400 bps, 4800 bps and 9600 bps
- The available baud rates for AutoAdmin are 2400 bps, 4800 bps, 9600 bps, 19200 bps, and 38400 bps.
- The minimum baud rate for ACCESS is 4800 bps; the maximum is 38 400 bps. The maximum baud rate is 9600 bps for Card Option, Utility or RSM cards, or 38 400 bps for MMP40 cards.
- On Card Option, ACCESS, AdminPlus, and AutoAdmin dataports are only allowed on the RSM card.
- On MSM platforms, ACCESS, AdminPlus, and AutoAdmin dataports are only allowed on transition modules on SPN or MSP nodes.

Cumulative baud rate

There are also restrictions on the cumulative baud rate for ACCESS, AdminPlus, and AutoAdmin dataports:

- On Card Option, the maximum cumulative baud rate cannot exceed 9600 bps.

- The maximum cumulative baud rate for the node 1 RSM or Utility card cannot exceed 19 200 bps.

- The maximum cumulative baud rate for MMP40 cards cannot exceed 38 400 bps per node.

| **Installation and conversion of dataports** | These rules govern the installation or conversion of ACCESS, AdminPlus, and AutoAdmin dataports: |

- The maximum total of combined ACCESS, AdminPlus, and AutoAdmin dataports on a system is eight.
- During conversion from MM8 or MM9, the system drops the AdminPlus feature and the AdminPlus dataport changes to CONSOLE—you will be warned. A new AdminPlus feature must be configured.
- The AutoAdmin feature cannot be dropped during conversion.
- During conversion from MM8 or MM9, if there is an ACCESS dataport on either an RSM or Utility card on a voice node, the port will be reset to its default dataport settings and you will be warned.
- There is no relationship between number of voice ports and the minimum number of ACCESS dataports.

| **MSM-specific rules** | The following dataport rules are specific to the MSM: |

- Because the Multi-admin feature is enabled automatically, you are warned if you do not assign a UAT dataport.
- The maximum cumulative baud rate for ACCESS, AutoAdmin, and AdminPlus dataports is 9600 bps per node.
- Depending on the type of dataport, you may be required to provide more information such as link ID, baud rate, and link redundancy.
- If you designate a dataport as SMDI, you are prompted to enter the link ID before the baud rate.
- Available baud rates for an SMDI designated dataport are 1200 and 2400 bps.

Dataport error messages

If the dataports have not been set up properly, an error message will be displayed that tells you what ports may still need to be assigned or what port assignment error have been made. Some of the error messages you may encounter will indicate the following:

- There are too many or too few dataports of a particular type on a node.
- The cumulative baud rate for a dataport on a specific node exceeds the allowable baud rate.

MSM-specific error messages

The following error messages are specific to the MSM:

- Not all SMDI ports are redundant.
- Multiadmin without a UAT port.
- Networking without two modem ports.
- Modem ports only with SMDI dataports.

Note: If an error has been committed, you will be asked to go back and make changes.

Correcting dataport assignments

In general, note the error messages and choose Yes to return to the Select Operation prompt. Select Change using the up and down arrow keys and alter the port assignments where applicable.

If you wish to do the complete dataport assignment again, select Reset. The changes you made previously are deleted and you start again with the default dataport assignments.

Storage capacity

Introduction   Storage in the form of disk drives contains text and voice data
                            (stored voice prompts and voice messages) which is
                            necessary for your system to run and service clients properly.
                            If your system has difficulty because of demands put on it,
                            then it may be time to look at your storage capacity.

                            For more information on storage

                            • see "Storage expansion" on page 2-9
                            • see "Volume sizes" on page 2-55
                            • see "Procedures reference" on page 3-4, and see
                              "Procedures reference for MSM systems" on page 3-7
                            • for MSMs, see information on selecting the storage
                              expansion option in the *System Administration Tools*
                              (NTP 555-7001-305)

Storage tables   The following tables list storage capacities for the following
                            systems:

                            • Modular Option EC
                            • Modular Option
                            • Modular Option GP
                            • Card Option
                            • Option EC-11
                            • MSM

Modular Option EC storage capacity

The following table lists storage hours by disk size and number of nodes for the Modular Option and Modular Option EC systems.

Hard disk sizes	2.0 Gbyte disk						
	1.0 Gbyte disk						
	300 Mbyte disk						
Nodes	**Available storage hours**						
1	5	11	24	36	54	100	200
2	26	26	54	84	114*	200*	400**
3	30	30	60	90	120	200	400
4	45	45	90	120	180	300	600
5	60	60	120	180	240	400	800

Notes:

1. For a multi-node system, disk on Node 1 must be 300 Mbyte or larger.

2. *Requires two 1.0-Gbyte disks.

3. **Requires a 2.0-Gbyte disk on node 1.

Modular Option and Modular Option GP storage capacities

The following table lists storage hours by disk size and number of nodes for the modular option and modular option GP systems.

Hard disk sizes	2.0 Gbyte disk						
	1.0 Gbyte disk						
	600 Mbyte disk						
	300 Mbyte disk						
Nodes	**Available Storage hours**						
1	5	11	24	36	54	100	200
2	26	26	54	84	114*	200**	400***
3	30	30	60	90	120	200	400
4	45	45	90	120	180	300	600
5	60	60	120	180	240	400	800

Notes:

1. For a multi-node system, disk on Node 1 = 300 Mbyte or larger.

2. *114 hours requires the disk on Node 1 to be 600 Mbyte or larger.

3. ** 200 hours requires two 1.0-Gbyte disks.

4. ***Requires a 2.0-Gbyte disk on node 1.

Card Option storage capacity

The following table lists storage hours by disk size and number of nodes for the Card Option system.

Hard disk sizes	1.0 Gbyte disk					
	240 Mbyte					
	120 Mb					
	80 Mbyte					
	40 Mbyte					
Nodes	**Available storage hours**					
1	2	5	10	24	54	100

Option EC 11 storage capacity

The following table lists storage hours by disk size and number of nodes for the Option EC-11 system.

Hard disk sizes	2.0 Gbyte disk						
	1.0 Gbyte disk						
	300 Mbyte disk						
Nodes	**Available Storage hours**						
1	5	11	24	36	54	100	200
2	26	26	54	84	114*	200*	400**

Notes:

1. For a multi-node system, disk on Node 1 = 300 Mbyte or larger.

2. *114 hours and 200 hours require two 1.0-Gbyte disks.

3. **400 hours requires a 2.0-Gbyte disk on node 1.

MSM storage options

The following points are listed:

- A mixture of node pairs with single and double packs is supported.
- Either 150- or 200-hours storage capacity per disk is supported and is controlled by keycode. However, 150- and 200-hour packs cannot be mixed on a system.
- To enable a 200-hour storage size, a system must have 2-Gbyte disk drives on its SPN nodes.
- For both 150- and 200-hour packs, an MSM system may be expanded from single to double packs by an online storage expansion through the TOOLs level by selecting the storage expansion option. For more information see *System Administration Tools Guide* (NTP 555-7001-305).

MSM storage tables

The following tables list storage hours by 150-hour disk pack size and 200-hour disk pack size according to the number of SPN nodes.

	150-hour disk pack				
SPNs	**All single packs**	**One double**	**Two doubles**	**Three doubles**	**All doubles**
2	150	300	--	--	300
4	300	450	600	--	600
6	450	600	750	900	900
8	600	750	1000	1050	1200

	200-hour disk pack				
SPNs	**All single packs**	**One double**	**Two doubles**	**Three doubles**	**All doubles**
2	200	400	--	--	400
4	400	600	800	--	800
6	600	800	1000	1200	1200
8	800	1000	1200	1400	1600

Volume sizes

Specifications

The following tables list all volume sizes for the various Meridian Mail models available. The following points apply to the tables:

- All sizes are in blocks (1 kbyte for text volumes, 8 kbyte for voice volumes).
- The Hours value is voice message storage, assuming nominal user-recorded prompt size.

MI_Server disk configuration values
- 300-Mbyte: 319 130 kbytes (when a 300-Mbyte disk is specified, it must format to a minimum of 319 130 kbyte).
- 600-Mbyte: 585 945 kbytes (when a 600-Mbyte disk is specified, it must format to a minimum of 585 945 kbyte).
- 1.0-Gbyte: 1,018 600 kbytes (when a 1.0-Gbyte disk is specified, it must format to a minimum of 1 018 600 kbyte).

Card Option system volume sizes

The following table lists volume sizes for the Card Option system.

Hours	VS1T	VS1V
2	20896	3856
5	20896	7392
10	20896	12432
24	23744	12432
54	50304	504832
100	84144	921856

1-node system volume sizes

The following table lists volume sizes for a single-node system.

Hours	VS1T	VS1V	VS2T	VS2V
5	27120	2125	7000	8500
11	27120	2125	7000	12912
24	30512	3712	8160	27472
36	30512	3712	14208	40128
54	30512	3712	19792	59392
100	37040	5792	47104	109440
200	42048	86272	92224	1725568

2-node system volume sizes (no disk to disk backup)

The following table lists volume sizes for a 2-node system with no disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T	VS202T	VS202V	VS902T
26	32480	2125	7000	12912	7360	7000	17888	7360
54	35904	3712	8160	27472	7360	9856	33920	7360
84	35904	3712	8160	27472	7360	21488	65760	7360
114	35904	3712	19792	59392	7360	21488	65760	7360
200	37040	5792	47104	109440	11488	47104	109440	11488
400	42048	86272	92224	1725568	15936	--	--	15936

2-node system volume sizes (with disk to disk backup)

The following table lists volume sizes for a 2-node system with disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T	VS202T	VS202V	VS902T	B102
26									N/A
46.2	32480	3712	8160	27472	7360	9856	25594	7360	66604
76.2	35904	3712	8160	27472	7360	21488	57434	7360	66604
106.2	35904	3712	19792	59392	7360	21488	57434	7360	66604
190.1	37040	5792	47104	109440	11488	47104	98892	11488	84380

Note: Disk to disk backup cannot be performed on 2-node 26-hour systems unless you first increase the storage capacity.

3-node system volume sizes (no disk to disk backup)

The following table lists volume sizes for a 3-node system with no disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T
30	44720	19440	1024	6256	15360
60	44720	19440	1024	6256	15360
90	44720	19440	1024	6256	15360
120	44720	19440	1024	6256	15360
200	44720	19440	1024	6256	15360
400	49168	439296	1024	50048	24224
Hours	**VS202T**	**VS202V**	**VS203T**	**VS203V**	
30	7000	17888	7000	17888	
60	9856	33920	9856	33920	
90	21488	65760	9856	33920	
120	21488	65760	21488	65760	
200	47104	109440	47104	109440	
400	--	--	--	--	

3-node system volume sizes (with disk to disk backup)

The following table lists volume sizes for a 3-node system with disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T
30					N/A
36.3	44720	19440	1024	6256	15360
66.3	44720	19440	1024	6256	15360
96.3	44720	19440	1024	6256	15360
176.3	44720	19440	1024	6256	15360
Hours	**VS202T**	**VS202V**	**B102**	**VS203T**	**VS203V**
30					N/A
36.3	9856	9764	201244	9856	33920
66.3	21488	40604	201244	9856	33920
96.3	21488	40604	201244	21488	65760
176.3	47104	84284	201244	47104	109440

Note: Disk to disk backup cannot be performed on 3-node 30-hour systems unless you first increase the storage capacity.

4-node system volume sizes (no disk to disk backup)

The following table lists volume sizes for a 4-node system with no disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T	VS202T
45	52720	19440	1024	6256	15360	7000
90	52720	19440	1024	6256	15360	9856
120	52720	19440	1024	6256	15360	21488
180	52720	19440	1024	6256	15360	21488
300	52720	19440	1024	6256	15360	47104
600	59376	581248	1024	50048	28656	--
Hours	**VS202V**	**VS203T**	**VS203V**	**VS204T**	**VS204V**	
45	17888	7000	17888	7000	17888	
90	33920	9856	33920	9856	33920	
120	65760	9856	33920	9856	33920	
180	65760	21488	65760	21488	65760	
300	109440	47104	109440	47104	109440	
600	--	--	--	--	--	

4-node system volume sizes (with disk to disk backup)

The following table lists volume sizes for a 4-node system with disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T	VS202T
45						N/A
65.4	52720	19440	1024	6256	15360	9856
95.4	52720	19440	1024	6256	15360	21488
155.4	52720	19440	1024	6256	15360	21488
275.4	52720	19440	1024	6256	15360	47104
Hours	**VS202V**	**B102**	**VS203T**	**VS203V**	**VS204T**	**VS204V**
45						N/A
65.4	7764	209244	9856	33920	9856	33920
95.4	39604	209244	9856	33920	9856	33920
155.4	39604	209244	21488	65760	21488	65760
275.4	83284	209244	47104	109440	47104	109440

Note: Disk to disk backup cannot be performed on four-node 45-hour systems unless you first increase the storage capacity.

5-node system volume sizes (no disk to disk backup)

The following table lists volume sizes for a 5-node system with no disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T	VS202T	VS202V
60	67760	20704	1024	6256	20352	7000	17888
120	67760	20704	1024	6256	20352	9856	33920
180	67760	20704	1024	6256	20352	21488	65760
240	67760	20704	1024	6256	20352	21488	65760
400	67760	20704	1024	6256	20352	47104	109440
800	75472	733184	1024	50048	38096	--	--
Hours	**VS203T**	**VS203V**	**VS204T**	**VS204V**	**VS205T**	**VS205V**	
60	7000	17888	7000	17888	7000	17888	
120	9856	33920	9856	33920	9856	33920	
180	9856	33920	9856	33920	21488	65760	
240	21488	65760	21488	65760	21488	65760	
400	47104	109440	47104	109440	47104	109440	
800	--	--	--	--	--	--	

5-node system volume sizes (with disk to disk backup)

The following table lists volume sizes for a 5-node system with disk to disk backup.

Hours	VS1T	VS1V	VS2T	VS2V	VS901T	VS202T	VS202V
60							N/A
92.4	67760	20704	1024	6256	20352	9856	4260
152.4	67760	20704	1024	6256	20352	21488	36460
212.4	67760	20740	1024	6256	20352	21488	36460
372.4	67760	20740	1024	6256	20352	47104	80140
Hours	**B102**	**VS203T**	**VS203V**	**VS204T**	**VS204V**	**VS205T**	**VS205V**
60							N/A
92.4	218364	9856	33920	9856	33920	9856	33920
152.4	218364	9856	33920	9856	33920	21488	65760
212.4	218364	21488	65760	21488	65760	21488	65760
372.4	218364	47104	109440	47104	109440	47104	109440

Note: Disk to disk backup cannot be performed on 5-node 60-hour systems unless you first increase the storage capacity.

Volume sizes for MSMs

The following table lists the volume sizes of 150- and 200-hour disk packs for the MSM.

Hours in increments of	VS1T	VS1V	VS1V hours	VS2T	VS2V	VS901T	VS2mn
150	216912	106256	100.4	2048	100096	120000	150 hrs
200	216912	106256	100.4	2048	100096	120000	200 hrs

Chapter 3

Comprehensive upgrade

In this chapter

Overview

Introduction   This chapter explains how to perform a comprehensive
                        upgrade on your Meridian Mail system. This operation is
                        performed when a Meridian Mail system requires upgrading
                        because of features, hardware, or storage during a new
                        equipment installation.

What to do before you begin

Checklist

Review the following points before installation of the software:

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.

- Determine the port capacity of your Meridian Mail system.

- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)

- Enable your terminal's autoprint mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.

- Have your Meridian Mail Release 12 Install/data tape available.

- Have the keycode available. For information on keycodes, see "Keycodes and serial numbers" on page 2-19.

- Verify that all the appropriate hardware is installed, particularly the hardware associated with the features defined in your keycode. If additional hardware needs to be added, obtain the hardware. Refer to your platform's *Installation and Maintenance Guide* (NTP 555-70x1-250) for more information; for Card Option, refer to NTP 555-7071-210; for Option EC-11, refer to (NTP 555-7081-250); for the Message Services Module (MSM), refer to *MSM Planning and Engineering Guide* (NTP 557-7001-100) or, contact your Nortel representative.

- All platforms except Modular Option EC, MSM, and Option EC-11 require an RSM card for the features listed below.

The following is a brief summary of requirements.

- Modem networking requires a modem port.
- HVS requires an RSM/utility card.
- Modular Option EC and Option EC-11 require a utility card.
- Multi-Admin requires ports for UATs.
- Outcalling and AMIS require NVP 32-kbyte cards for Modular Option.
- Fax on Demand requires a minimum of one multimedia port and an NVP 32-kbyte card for Modular Option. (This will be a full-service port.)
- For ACCESS, AutoAdmin, and AdminPlus, see "Dataport rules" on page 2-45.

Procedures reference   This table references procedures in comprehensive upgrade.

If your comprehensive upgrade involves	Then see
Conversion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	Note: From this point, and depending on what is specified in your keycode, various comprehensive upgrades can occur.
	Example: You may have a keycode that contains a comprehensive upgrade/ conversion with feature, language, and storage expansions.
Feature expansion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Assigning the dataport locations" on page 3-50.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).

If your comprehensive upgrade involves	Then see
Hardware modification	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Confirming hardware configuration" on page 3-18.
	"Selecting call progress tone detection" on page 3-22.
	"Entering DSP parameters" on page 3-23.
	"Defining links for Mod Op GP and MSM" on page 3-29.
	Note: For defining links, do Mod Op GP only.
	Note: For defining VP locations, choose your platform:
	"Defining voice port hardware locations for Modular Option and Modular Option EC" on page 3-32
	"Defining voice port hardware locations for Card Option" on page 3-36.
	"Defining voice port hardware locations for the Option EC-11" on page 3-39.
	"Defining voice port hardware locations for Modular Option GP" on page 3-42.
	"Assigning the dataport locations" on page 3-50.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).
Storage expansion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).

If your comprehensive upgrade involves	Then see
Language expansion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Adding languages" on page 3-59.
	"Continuing the comprehensive upgrade" on page 3-61.
Platform migration	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Confirming hardware configuration" on page 3-18.
	"Selecting call progress tone detection" on page 3-22.
	"Entering DSP parameters" on page 3-23.
	"Defining links for Mod Op GP and MSM" on page 3-29.
	Note: For defining links, do Mod Op GP only.
	Note: For defining VP locations, choose your platform:
	"Defining voice port hardware locations for Modular Option and Modular Option EC" on page 3-32.
	"Defining voice port hardware locations for the Option EC-11" on page 3-39.
	"Defining voice port hardware locations for Modular Option GP" on page 3-42.
	"Assigning the dataport locations" on page 3-50.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).

Procedures reference for MSM systems   This table references procedures in comprehensive upgrade for the MSM.

If your comprehensive upgrade involves	Then see
Conversion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	Note: From this point, and depending on what is specified in your keycode, various comprehensive upgrades can occur.
	Example: You may have a keycode that contains a comprehensive upgrade/ conversion with feature, language, and storage expansions.
Feature expansion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Assigning the dataport locations for the MSM" on page 3-55.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).

If your comprehensive upgrade involves	Then see
Hardware modification	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Confirming hardware configuration" on page 3-18.
	"Selecting call progress tone detection" on page 3-22.
	"Entering DSP parameters" on page 3-23.
	"Defining T1 spans for the MSM" on page 3-27.
	"Defining links for Mod Op GP and MSM" on page 3-29.
	Note: For defining links, do MSM only.
	"Assigning the dataport locations for the MSM" on page 3-55.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).
Storage expansion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).
Language expansion	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Adding languages" on page 3-59.
	"Continuing the comprehensive upgrade" on page 3-61.

If your comprehensive upgrade involves	Then see
Platform migration	"Setting up for a comprehensive upgrade" on page 3-11.
	"Serial number and keycode procedure" on page 3-15.
	"Confirming hardware configuration" on page 3-18.
	"Selecting call progress tone detection" on page 3-22.
	"Entering DSP parameters" on page 3-23.
	"Defining T1 spans for the MSM" on page 3-27.
	"Defining links for Mod Op GP and MSM" on page 3-29.
	"Assigning the dataport locations for the MSM" on page 3-55.
	"Continuing the comprehensive upgrade" on page 3-61 (no languages).

Performing a comprehensive upgrade

Introduction

The procedures that follow provide information about performing a comprehensive upgrade on the Meridian Mail system.

Note : The procedures described for comprehensive upgrade are general and intended only to guide the administrator. Although all required platforms are covered, this guide is not intended to reflect specific platform configurations.

The procedure has several parts. The first part is common to all platforms and must be performed for all comprehensive upgrades.

Following the common procedure are procedures broken into tasks that, in general, all platforms use. Where there are deviations because of platform specifics, these are remarked on within the procedure or broken out and given their own procedure.

The intent of the procedures is to provide a general look at the comprehensive upgrade on each platform and, therefore, may not cover your specific configuration.

When to use the procedures

Use the setup procedure when

• you are planning to do a comprehensive upgrade

Use the main upgrade procedures when

• you are comprehensively upgrading your specific platform

Note : If you are planning to do a simple upgrade, see "Setting up for a comprehensive upgrade" on page 3-11, and perform steps 1 through 12.

Disabling disk to disk backup

If your system is a multinode Mod Op, EC, or EC-11 and has disk to disk backup enabled, it must be disabled before you begin a comprehensive upgrade. Use your old Install/ data tape for disabling. For more information, see your

previous *System Installation and Modification Guide* (NTP 555-7001-215) and refer to the chapter, "Toggle Disk to Disk Backup." When this has been done, go to step 3 of the following procedure to begin your comprehensive upgrade.

Setting up for a comprehensive upgrade

When beginning a comprehensive upgrade, follow these steps for all platforms.

Starting Point: Meridian Mail System Status and Maintenance Menu.

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.

Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, refer to the section "Disabling/Activating the system" in the chapter "System Status and Maintenance" in the *System Administration Guide.*

ATTENTION

On Card Option systems, disable the AML link before turning off the power to Meridian Mail.

---

2   Insert the MM12 Install/data tape into the tape drive.

Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions. For MSM systems, contact your Nortel representative.

3   Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.

Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250). For MSM systems, contact your Nortel representative.

Note: Card Option systems using external tape drives must have the tape drive turned on before booting up.

Step	Action
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.
	Result: Diagnostic routines are shown followed by a pause of approximately five minutes while the tape is automatically retensioned.

ATTENTION

On Card Option systems, reenable the AML link after turning on the power to Meridian Mail.

Step	Action
5	When retensioning begins, the following message is displayed.

```
Tape retension
```

Note: Tape retension takes about 5 minutes, and it takes between 5 and 10 minutes to load the software.

Result: Once loaded, the System Installation and Modification Menu is displayed.

```
   System Installation & Modification Menu
   ---------------------------------------


            1   Install an MM12 system
            2   Comprehensive Upgrade
            3   More Utilities









Please enter the operation number: █
```

Note: This menu is the same for all platforms**.**

Step	Action

6	To choose comprehensive upgrade, press the up or down arrow keys until a 2 appears beside the following prompt:
	
	```Please enter the operation number:```
	
	or type 2, then press <Return>. The following message appears:
	
	```You have chosen to run comprehensive upgrade (SW/HW).```
	
	```Do you wish to continue? No (Yes)```
	
	Note: To reenable auto-print mode, use the <Control><W> and then <P>. See "Checklist" on page 3-3 for more information on using this command.

7	Do you wish to continue? If No, go to step 8. If Yes, go to step 9.
8	Press the up or down arrow key to select No, then press <Return>. ***Result:*** You are returned to the main menu.
9	Press the up or down arrow key to select Yes, then press <Return>. ***Result:*** Various system messages appear on screen. If you are doing a conversion from a previous release of Meridian Mail the procedure is complete. Go to "Serial number and keycode procedure" on page 3-15. Otherwise, go to step 10.

Step	Action

10   The following text is displayed.

```
Your MM11.11.1 system will be comprehensively upgraded to the MM11.11.1 release.

Comprehensive Upgrade provides you with the means to simultaneously upgrade
the software on a system while also adding new hardware, storage hours,
features, or converting the system from a previous release.

If you only want to upgrade the sofware to MM11.11.1 select Software Upgrade.
This operation does not require a keycode or any user input.

Otherwise select Comprehensive to perform any other combination of operations.

Select operation : Comprehensive
```

IF the Select Operation prompt is	THEN go to
Comprehensive	step 11
Upgrade	step 12

11   Select "Comprehensive," then press <Return>.

    Result: Various system operation messages scroll on the screen.

    Go to "Serial number and keycode procedure" on page 3-15

12   Select "Upgrade," then press <Return>.

    Result: Various system messages are displayed and the system is upgraded to the latest MM12 release with no further user intervention. For more information on upgrade, see "System operations" on page 2-5.

**Serial number and
keycode procedure**

To enter the system serial number and keycode, follow these steps. This procedure also indicates your system configuration and features.

Step	Action
1	At the prompt

```
Enter the Serial Number:
```

type in the serial number, then press <Return>.

Note: The Card Option system gets its serial number automatically from its switch; therefore, the prompt is not displayed.

2   Now start entering the 20-character keycode, four letters at a time, as prompted, pressing <Return> after each four-character entry.

Example: The following shows the style of character block prompts:

```
Enter 4 character Block 1:XXXX

Enter 4 character Block 2:YYYY
```

and so on.

The following cases are considered:

IF you enter	THEN the system responds with
the wrong number of characters	Please enter 4 characters
	Enter 4 Character Block 1:
invalid characters	That Block contains invalid Characters - Please Enter Again
the wrong keycode	That Keycode was invalid.
	Would you like to try again? Yes (No)

3   Once the keycode is entered, the system displays the first keycode screen listing your system configuration.

Result: The following screen is displayed:

Step Action

```
        System Configuration
                                  Old System          New System
              Software Release :  11.19.3             12.07.0
              Serial Number    :  48                  48
              Platform         :  EC-MMP40            EC-MMP40
              Nodes            :  2                   4
              Storage Hours    :  26                  120
              Max Languages    :  1                   2

              CHANNELS:
              Max Full Service :  16                  50
              Min Multimedia   :  0                   16
              Max Voice        :  16                  40
              Total Physical   :  16                  72
              Basic Service    :  0                   6
              NMS Locations    :  0                   0
--------------------------------------------------------------------------------
Enter the Keycode for the serial number 48 :
Enter 4 Character Block 1 : wlej
Enter 4 Character Block 2 : 5mh1
Enter 4 Character Block 3 : wq7q
Enter 4 Character Block 4 : k2cn
Enter 4 Character Block 5 : y969
Is this correct ?  Yes
```

> ***Note:*** The display above is intended only as an example of this screen. Your keycode screen may differ in platform type, hardware and software specifications.

4   Is this correct?

If Yes, go to step 5.

If No, go to step 8.

5   Press the up or down arrow keys to select Yes and press <Return>.

Result: A second keycode screen listing the system features is displayed.

```
     Feature           Old  New        Feature            Old  New
     SMDI              :               Voiceforms         :     X
     Meridian Access   :               VMUIF              :
     AdminPlus         :  X            Multiple Admin     :
     AMIS              :               Meridian Connections :

     HVS               :               Fax On Demand      :     X
     Networking        :  X   X        Multiple Customer  :
     NMS               :               Bilingual Prompting :    X
     Outcalling        :  X   X        Voice Menus        :  X  X

     Multi SMDI        :               Client Mailbox Admin :   X
--------------------------------------------------------------------------------
Is this correct ?  Yes
```

> ***Note:*** The display above is intended only as an example of this screen. Your keycode screen may differ in feature specifications.

Step	Action
6	Is this correct?
	If Yes, go to step 7.
	If No, go to step 8.
7	Press the up or down arrow keys to select Yes and press <Return>.
	Go to the next procedure.
8	If the system configuration is not correct, contact your Nortel representative to obtain another keycode.

Confirming hardware configuration

Use the following procedure to:

- confirm the hardware configuration
- enter loop numbers (Modular Option EC MMP40 only)
- enter NPI numbers (Option EC-11 only)

Step	Action
1	When you confirm that your system features are correct, the system begins a rules check.

Result: The following screen is displayed.

```
Comprehensive Upgrade
--------------------------------------------------------------------------------
Checking node rules
Checking storage hours rules
Checking language rules
Checking feature rules

Press RETURN to continue:
```

Note: If the rules check fails, the procedure is aborted. Check your keycode. If the rules check continues to fail even after checking your keycode, contact your Nortel representative.

2   Press <Return>.

Result: The following system messages are displayed.

```
Reading Hardware Database for
Miscellaneous Info

Reading Hardware Database for a Component
Type
```

and the following hardware configuration screen is displayed:

Note: The numbers to the left in the display below are the node numbers 1 to 2; the card slots are numbered from 1 to 8 starting at the left. Your display may differ in the number of nodes and placement of cards.

```
Node  Card1  Card2  Card3  Card4  Card5  Card6  Card7  Card8
 1    EMPTY  BUS    MMP40  EMPTY  NVP32  NVP32  EMPTY  RSM
 2    EMPTY  EMPTY  MMP40  EMPTY  NVP32  NVP32  NVP32  RSM

Is the configuration correct : Yes
```

Step	Action
3	Use the following table as a guide on where to access information in this procedure.

IF your system is a	THEN go to
Modular Option, Modular Option GP, Card Option, MSM	steps 4, 5, and 9
Modular Option EC MMP40 or an Option EC-11	steps 4, 5, 7, 8, and 9

Step	Action
4	Is the configuration correct? If Yes, go to step 5. If No, go to step 6.

5	Press the up or down arrow keys to select Yes, and press <Return>. The following prompt appears:
	
	`Do you wish to enable disk to disk backup?`
	`No (Yes)`
	
	Note: The above prompt will be displayed depending on the number of hours on your system. For more information on systems where disk to disk backup is not available, see "Toggle disk to disk backup" on page 2-12.

IF you select No or Yes with a	THEN go to
Modular Option, Mod Op GP, Card Option, MSM	step 9
Modular Option EC MMP40 or an Option EC-11	step 7

Step	Action
6	Press the up or down arrow keys to select No, then press <Return>. At this point, the installation procedure aborts. Then do the following: a. Power down the system. b. Correct the hardware fault. c. Start the comprehensive upgrade again. See "When to use the procedures" on page 3-10.

Step	Action

7   A Modular Option EC system prompts:

```
Your system requires "n" J4/J5 loops.
```

```
Please make sure you define enough loop(s)
for your system.
```

An Option EC-11 system prompts:

```
Your system requires "n" NLI loops.
```

```
Please make sure you define enough loop(s)
for your system.
```

Note: The following examples show displays for the Mod Op EC MMP40 and the Option EC-11 respectively. Also, in the examples below, "255" is a special number only to be employed if the loop is unused. For the Mod Op EC MMP40 example enter: 12, 13, 14, and 15. For the Option EC-11 example enter: 20, 24, 28, and 255.

Example: The screen immediately below shows a Mod Op EC MMP40 system with 2 utility cards installed in the number 6 card slot of nodes 1 and 5 respectively. In this case, four loop numbers are required.

```
Customer Name : MeridianMail

Please enter the following system information.

Link Type : CSL
Switch Customer Number : 0


  1    EMPTY   EMPTY   EMPTY   EMPTY   EMPTY   UTIL    MMP40   EMPTY
  2    MMP40   NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   EMPTY
  3    NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   MMP40   EMPTY
  4    MMP40   NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   EMPTY
  5    NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   UTIL    MMP40   EMPTY

Is the configuration correct : Yes
Your system requires 4 J4/J5 loops.
Please make sure you define enough loop(s) for your system.

Please Enter the loop number associated with J4 on Node 1's Utility Card : 255
Please Enter the loop number associated with J5 on Node 1's Utility Card : 255
Please Enter the loop number associated with J4 on Node 5's Utility Card : 255
Please Enter the loop number associated with J5 on Node 5's Utility Card : 255
```

Step Action

Example: For an Option EC-11 your display may look similar to the screen below.

```
  1    UTIL   MMP40  NVP8p  NVP8p  NVP8p
  2    NVP8p  NVP8p  NVP8p  MMP40  UTIL

Is the configuration correct : Yes

Do you wish to enable disk to disk backup ? No

Your system requires 3 NLI loops.
Please make sure you define enough loop(s) for your system.

Please Enter the loop number associated with NLI1 : 255
Please Enter the loop number associated with NLI2 : 255
Please Enter the loop number associated with NLI3 : 255
Please Enter the loop number associated with NLI4 : 255
```

Note: For more information, refer to your *Modular Option EC Installation and Maintenance Guide* (NTP 555-7061-250) or the *(EC-11) Installation and Maintenance Guide* (NTP 555-7081-250).

8   Press <Return> to accept the default loop number. If your system requires more than one loop, you will be prompted again as in the above example.

Note: If necessary, use the backspace key to delete each default number and enter the new loop number (between 0 and 255).

Result: When the operation is completed, the system displays the Call Progress Tone Detection screen.

9   Go to "Selecting call progress tone detection" on page 3-22.

Selecting call progress tone detection

To select the Call Progress Tone Detection (CPTD) number for your country, follow these steps.

Step	Action
1	You are provided with the current CPTD selection and the following prompt: `Select operation: Done (Change)`
2	Select operation: If you select Done, go to step 4. If you select Change, go to step 3.
3	Select Change, then press <Return>. ***Result:*** The following CPTD screen is displayed:

```
    The current CPTD Selection is :  Generic - Ver. Fe94
----------------------------------------------------------------------------
Select operation : Change
  1 : Generic - Ver. Fe94     2 : Australia          3 : Austria
  4 : Belgium                 5 : Canada             6 : Denmark
  7 : Finland                 8 : France             9 : Germany
 10 : Hong Kong              11 : India             12 : Ireland
 13 : Italy                  14 : Japan             15 : Korea
 16 : Malaysia              17 : Netherlands       18 : New Zealand
 19 : Norway                20 : Portugal          21 : Russia
 22 : Saudi Arabia          23 : Singapore         24 : Sweden
 25 : Switzerland           26 : Taiwan            27 : Turkey
 28 : United Kingdom        29 : United States     30 : China
Please enter the CPTD country index number : 1█
```

Press the up or down arrow key until the desired country number is displayed on the screen (or press backspace and enter the number), then press <Return>.

| 4 | Go to "Entering DSP parameters" on page 3-23. |

Entering DSP parameters

To review or change the DSP parameters on your system, follow these steps.

Step	Action
1	From the previous procedure, press <Return>.

Result: The following DSP parameters screen is displayed.

```
   DSP Encoding Type          : MuLaw
   Disable Silence Compression : No

   Transmit Level        : 0        Disable AGC        : No
   Receive  Level        : 0        AGC Center         : -20
   DTR Reject Level      : -36      Hook Flash Pulse   : 320
   DTR Max Accept Level  : 1        TeleScan Debounce  : 128
                                    TeleScan Ring Time : 1024
--------------------------------------------------------------------------------
Select operation : Change
```

Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "Done" if you are satisfied with the default values or after you have completed all the parameter changes.
- "Change" if any of the parameters require changing. You will be stepped through each parameter.
- "Redraw" if your screen becomes overwritten with errant characters and you need to clear them from your DSP screen.
- "Reset" if you decide to go back to the default settings after you have changed them.

2	At the "Select operation: " prompt,

if Done, go to step 9.

If Change, go to step 3.

Step	Action
3	Select Change and press <Return>. The following prompts are displayed.

```
DSP Encoding Type: MuLaw (Alaw)
```

ATTENTION

If the above DSP encoding parameter is set incorrectly, severely degraded voice quality may result.

Note: Do not change DSP parameters unless you are instructed to do so by Nortel.

Example: The following screen is provided as an example of how your display may look.

```
    DSP Encoding Type           : MuLaw
    Disable Silence Compression : No

    Transmit Level          : 0          Disable AGC          : No
    Receive  Level          : 0          AGC Center           : -20
    DTR Reject Level        : -36        Hook Flash Pulse     : 320
    DTR Max Accept Level    : 1          TeleScan Debounce    : 128
                                         TeleScan Ring Time   : 1024
--------------------------------------------------------------------------------
Select operation : Change
DSP Encoding Type           : MuLaw
Disable Silence Compression : No
Do you wish to change other DSP parameters ? Yes
Transmit Level                    : 0
Receive  Level                    : 0
DTR Reject Level                  : (-36)
DTR Max Accept Level              : (1)
Disable AGC                       : No
AGC   Center                      : -20
Hook Flash Pulse                  : 320
TeleScan Debounce                 : (128)
TeleScan Ring Time                : 1024
Select operation : Change
```

Note: For a list of DSP parameters, see "DSP parameters" on page A-3.

Step Action

4   At the prompt "Select operation:"

IF you select	THEN go to
Done and have Fax on Demand	step 5.
Done and do not have Fax on Demand	step 9.
Change or Reset	step 3.

5   The following Fax specific parameter screen is displayed.

```
 Fax Transmit Level (dB)     : -13      Handshake Timeout (sec)       : 7
 CNG/CED Gain (dB)           : -6       Switchover Time (msec)        : 75
 Equalizer                   : None     Response Timeout (100 ms)     : 35
 Poor Quality Page Threshold : 10       Training Length               : 200
 Rx CDET Threshold           : -47dBm   V29/V27 CDET timeout (100 ms) : 20
 Call Connect Timeout (sec)  : 35
-------------------------------------------------------------------------------
Select operation : Change
```

6   At the "Select operation:" prompt,

if Change, go to step 7.

If Done, go to step 9.

7   Select Change, then press <Return>.

Result: You are stepped through the Fax specific parameters (see the display below).

Example: The following screen is provided as an example of how your display may look.

Step Action

```
   Fax Transmit Level (dB)     : -13      Handshake Timeout (sec)        : 7
   CNG/CED Gain (dB)           : -6       Switchover Time (msec)         : 75
   Equalizer                   : None     Response Timeout (100 ms)      : 35
   Poor Quality Page Threshold : 10       Training Length                : 100
   Rx CDET Threshold           : -47dBm   V29/V27 CDET timeout (100 ms)  : 20
   Call Connect Timeout (sec)  : 35
--------------------------------------------------------------------------------
Select operation : Change
Fax Transmit Level (dB)     : (-13)
CNG/CED Gain (dB)           : (-6)
Equalizer                   : None
Enter Poor Quality Page Threshold : 10
Enter Rx CDET Threshold : -47dBm
Call Connect Timeout (sec) : 35
Handshake Timeout (sec) : 7
Switch Over Time (msec) : 75
Response Timeout (100 ms) : 35
Training Length : 200
V29/V27 CDET timeout (100 ms) : 20
Select operation : Change
```

> ***Note:*** For a list of Fax specific DSP parameters, see "Fax-specific DSP parameters" on page A-3.

8   At the "Select operation:" prompt,

> If Change or Reset, go to step 5.

> If Done, go to step 9.

9   When you select Done, use the following table to find the next procedure associated with your platform.

IF your system is	THEN go to
a Mod Op, Mod Op EC	page 3-32.
a Card Option	page 3-36.
an Option EC-11	page 3-39.
Mod Op GP	page 3-29.
MSM	page 3-27.

Defining T1 spans for the MSM

To define T1 spans on your Message Services Module (MSM) system, follow these steps.

Step	Action
1	When you select Done to complete the DSP configuration on your MSM system, the T1 span configuration is displayed.

Example: The following screen is an example of a 48-channel system.

```
                    Line    Line interface   Start       Trunk      Frame
Span  Sync Mode     Signal     type          Type        Type       Format   OOFD
 A    ExternalT1Timing  DTMF   FXOGrdStart   WinkStart   NonDIDTrunk  D4       0
 B    ExternalT1Timing  DTMF   FXOGrdStart   WinkStart   NonDIDTrunk  D4       0

      Line Code   Line      T1        T1      T1 Guard                Ring   Hook Flash
Span  Format      Length    Alarm     Debounce Time     ESFD BVCR   Pulse     Pulse
 A    B8ZS        0to133    Bit_two   130      130       0    0      130       320
 B    B8ZS        0to133    Bit_two   130      130       0    0      130       320
--------------------------------------------------------------------------------


Select operation : Display


```

Note: For a 72-channel system the display includes spans A to C. For a 192-channel system, span A to span H will be displayed.

Note: For a list of T1 span parameters, see "T1 span parameters" on page A-4.

| 2 | To change any settings, press the up or down arrow keys until Change appears, then press <Return>. |

Example: The following screen is displayed. Your display may be different.

```
                    Line    Line interface   Start       Trunk      Frame
Span  Sync Mode     Signal     type          Type        Type       Format   OOFD
 A    ExternalT1Timing  DTMF   FXOGrdStart   WinkStart   NonDIDTrunk  D4       0
 B    ExternalT1Timing  DTMF   FXOGrdStart   WinkStart   NonDIDTrunk  D4       0

      Line Code   Line      T1        T1      T1 Guard                Ring   Hook Flash
Span  Format      Length    Alarm     Debounce Time     ESFD BVCR   Pulse     Pulse
 A    B8ZS        0to133    Bit_two   130      130       0    0      130       320
 B    B8ZS        0to133    Bit_two   130      130       0    0      130       320
--------------------------------------------------------------------------------

Select operation : Change
From: SpanA
To:   SpanA


```

Step	Action
3	Using the example above, you are prompted to enter the start range:

Note: In this case, Span A.

```
From: SpanA
```

Press <Return>.

Enter the end range by pressing the up or down arrow keys to select the range you require.

Note: In this case, Span B.

```
To: SpanB
```

Press <Return>.

| 4 | To enter a different setting from the default, press the up or down arrow keys until the required setting is displayed. |

Press <Return> after each entry whether you change the default or not. The following is an example of what your display may look like after you have completed your changes.

```
                     Line    Line interface   Start      Trunk      Frame
Span  Sync Mode      Signal     type          Type       Type       Format  OOFD
 A    ExternalT1Timing DTMF   FXOGrdStart     WinkStart  NonDIDTrunk D4       0
 B    ExternalT1Timing DTMF   FXOGrdStart     WinkStart  NonDIDTrunk D4       0

      Line Code      Line     T1        T1      T1 Guard                Ring  Hook Flash
Span  Format         Length   Alarm   Debounce   Time    ESFD BVCR Pulse     Pulse
 A    B8ZS           0to133   Bit_two  1000      130      0    0   130       320
 B    B8ZS           0to133   Bit_two  130       130      0    0   130       320
---------------------------------------------------------------------------------
Trunk Type        : NonDIDTrunk
Frame Format      : D4
OOFD              : 0
Line Code Format  : B8ZS
Line Length       : 0to133
T1 Alarm          : Bit_Two
T1_Debounce       : 1000
T1_GuardTime      : 130
ESFD              : 0
BVCR              : 0
Ring Pulse        : 130
Hook Flash Pulse  : 320

Select operation : Display
```

Note: At the last entry, the upper part of the display (above the dotted line) will reflect any changes you have made.

5	Select Display, then press <Return> to see the spans.
6	Select Done, then press <Return> when you have finished.
7	Go to "Defining links for Mod Op GP and MSM" on page 3-29.

Defining links for Mod Op GP and MSM

To define the links of a platform that is a Modular Option GP or an MSM, follow these steps.

Step	Action
1	For the Mod Op GP, the following prompt is displayed.

```
Please enter the information to create or
redefine a Link
```

Result: After a short time, the following screen is displayed. Your display may differ.

```
Link Link-ID       Red. NRRDDCode  AgtPos  Switch     Login   Logout  AgentID
1                  NO *88          9999    DMS100_Cent|*85     *86     *87
--------------------------------------------------------------------------------
Select operation : Change
```

Note: For Mod Op GP: using Meridian Connections installations, Login code, Logout code, Agent Position ID, and NRDD code are not used.

| 2 | For the MSM, the following prompt is displayed. |

```
Please define the T1 Channels
```

Result: After a short time, the following screen is displayed. Your display may differ.

```
Link Link-ID       Red. NRRDDCode  AgtPos  Switch     Login   Logout  AgentID
1                  NO *99          2800    DMS100_Cent|*88     *89     *98
2                  NO *99          2800    DMS100_Cent|*88     *89     *98
--------------------------------------------------------------------------------
Select operation : Reset
```

Requirement: You have five selections at the "Select operation" prompt which are revealed each time you press the up or down arrow keys. Select

- "Done" if you are satisfied with the default values or after you have completed all the parameter changes.
- "Change" if any of the parameters require changing. You will be stepped through each parameter.
- "Redraw" if your screen becomes overwritten with errant characters and you need to clear them from your link screen.
- "Reset" if you decide to go back to the default settings after you have changed them.
- "Add" if you require another link.

Step	Action
3	Select operation.
	If Done, go to "Defining voice port hardware locations for Modular Option GP" on page 3-42, or "Defining T1 hardware locations for the MSM" on page 3-45.
	If Change, go to step 4.
4	Select Change, then press <Return>.
	Result: The following prompt is displayed.
	`Enter the Link ID:`
	Note: If the system has or requires more than 1 SMDI Link, you must enter the unique SMDI Link ID.

ATTENTION

It is recommended that you use a meaningful name instead of a number, so that the link is easily identified.

Step	Action
5	Enter your link number, then press <Return>.
	Result: Other prompts are displayed as you enter values and press <Return> until the following screen is displayed.
	Note: Select your switch type using the up and down arrow keys, then press <Return>.
	Note: The software scans through all the T1 channels with the selected Link ID and updates the T1 channels to the new Link ID, Login Code, Logout Code, etc.

Step Action

Example: The example below is for a Mod Op GP system.

```
Link Link-ID        Red. NRRDDCode  AgtPos  Switch      Login   Logout  AgentID
 1                   NO *88        9999    DMS100_Cent|*85     *86     *87
--------------------------------------------------------------------------------
Select operation : Change
        Enter the Link ID   : 1
New Link ID       : 1
Login Code        : *85
Logout Code       : *86
NRDD Code         : *88
Switch Type       : DMS100_Centrex
DSP Telescan Ring : 1024
Agent Position ID : 9999
Select operation : Change
```

Requirement: For Mod Op GP: Login Code, Logout Code, and NRDD Code should be changed to blank unless otherwise specified by the system administrator. For Login and Logout Code, see also the *MSMTranslations Guide* (NTP 557-7001-310). For the MSM, blank out the Login and Logout Codes if the channel is connecting to a PBX.

For the DSP Telescan Ring value:

ATTENTION

The DSP Telescan Ring parameters should be compatible with the switch type. Do not change the default values unless informed by Nortel. In those cases, the administrator may change the DSP Telescan Ring parameters to match the type of switch.

---

6   Select Done, and press <Return>.

7   Use the following table to locate your next procedure.

IF your platform is the	THEN go to
Modular Option GP	page 3-42.
MSM	page 3-45.

Defining voice port hardware locations for Modular Option and Modular Option EC

To define your voice channels entries for the Voice Port Hardware Location table for Modular Option and Modular Option EC, follow these steps.

Step	Action
1	Select Done on the DSP parameters.

Result: The following voice port hardware location screen is displayed.

Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   2   M -- M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   3   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   4   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   5   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
-------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

Step	Action
2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>.

Example: Select Change, then press <Return>.

Result: The following screen is displayed showing results after all choices have been made (your display may differ).

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   2  M -- M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   3  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   4  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   5  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
--------------------------------------------------------------------------------
Select operation : Change
Port Type     : MultiMedia
First Node    : 2
First Location :  21
Last Node     : 2
Last Location :  24
ACDDN         : 3650
SECDN         : 2820
Port Density : Double
Loop  Number : 2
Shelf Number : 0
Card  Number : 2
Unit  Number : 4
Switch Type  : Meridian_1

```

Note: In this display and in the display in step 3, Port Type required is MultiMedia. Other choices are Voice_Full and Voice_Basic. All entries are changed by pressing the up or down arrow keys and then pressing <Return> which moves you on to the next value.

| 3 | When you select your Switch Type and press <Return>, the table will change to display your changes, as in the following example. |

Result: Notice that two more multimedia ports have been added at ports 21 and 23 on node 2.

Step Action

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  2   M -- M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf M -- M --
  3   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  4   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  5   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
-------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Node    : 2
First Location :  21
Last Node     : 2
Last Location  :  24
ACDDN        : 3650
SECDN        : 2820
Port Density : Double
Loop  Number : 2
Shelf Number : 0
Card  Number : 2
Unit  Number : 4
Switch Type  : Meridian_1
Select operation : DetailedDisplay
```

4   Select DetailedDisplay, then press <Return>.

Note: You are asked to provide node ranges and location ranges to view the hardware locations on a particular node or range of nodes.

Result: The following example shows that node 2 and locations 1 to 23 have been specified.

```
Num  VP Locn  Type   ACD     SECDN  Loop Shlf Crd Unit Density   Switch
----- -------- ----- -------- ------- ---- ---- --- ---- ------- --------------
2- 1  2-2-1-1   M    3658     2800    1    0    2   0   Double   Meridian_1
2- 3  2-2-2-1   M    3658     2802    1    0    2   2   Double   Meridian_1
2- 5  2-2-3-1   M    3650     2804    1    0    2   4   Double   Meridian_1
2- 7  2-2-4-1   M    3650     2806    1    0    2   6   Double   Meridian_1
2- 9  2-3-1-1   M    3650     2808    1    0    3   0   Double   Meridian_1
2-11  2-3-2-1   Vf   3650     2810    1    0    3   2   Double   Meridian_1
2-12  2-3-2-2   Vf   3650     2811    1    0    3   3   Double   Meridian_1
2-13  2-3-3-1   Vf   3650     2812    1    0    3   4   Double   Meridian_1
2-14  2-3-3-2   Vf   3650     2813    1    0    3   5   Double   Meridian_1
2-15  2-3-4-1   Vf   3650     2814    1    0    3   6   Double   Meridian_1
2-16  2-3-4-2   Vf   3650     2815    1    0    3   7   Double   Meridian_1
2-17  2-4-1-1   Vf   3650     2816    2    0    2   0   Double   Meridian_1
2-18  2-4-1-2   Vf   3650     2817    2    0    2   1   Double   Meridian_1
2-19  2-4-2-1   Vf   3650     2818    2    0    2   2   Double   Meridian_1
2-20  2-4-2-2   Vf   3650     2819    2    0    2   3   Double   Meridian_1
2-21  2-4-3-1   M    3650     2820    2    0    2   4   Double   Meridian_1
2-23  2-4-4-1   M    3650     2822    2    0    2   6   Double   Meridian_1
Press RETURN to continue:
```

Note: For multimedia entries, the table displays only the odd-numbered hardware locations because multimedia ports take up two hardware locations.

Step	Action
5	Press <Return>. ***Result:*** The Voice Port Hardware Location table (see below) is displayed again.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   2   M -- M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf  M --  M --
   3   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   4   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   5   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
------------------------------------------------------------------------------
Select operation : Done
Is this correct?  No
```

	If you are satisfied with the changes, select Done. The following prompt is displayed. `Is this correct? No (Yes)` ***Note:*** At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.
6	Is this correct? If No, go to step 7. If Yes, go to step 8.
7	Selecting No returns you to the Select Operation mode. In this case, go to step 1.
8	See "Assigning the dataport locations" on page 3-50.

Defining voice port hardware locations for Card Option

To define your voice channels entries for the Voice Port Hardware Location table for Card Option, follow these steps.

Step	Action
1	Select Done on the DSP parameters.
	Result: The following voice port screen is displayed.
	Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  -------- Voice Port Hardware Location ---------
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
   1  M -- M -- Vf Vf Vf Vf Vf Vf Vb Vb
--------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the Select operations prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>.
	Example: Select Change, then press <Return>.
	Note: In the display in step 3, Port Type required is MultiMedia. Other choices are Voice_Full and Voice_Basic. All entries are changed by pressing the up or down arrow keys, and then pressing <Return> which moves you on to the next value.
	Note: Card Option systems have only one node, so enter 1 after the First and Last Node in the screen in step 3.

Step	Action

3   When you select your ACDDN and press <Return>, the table will change to display your changes, as in the following example.

```
Node  -------- Voice Port Hardware Location ---------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
   1   M --  M --  M -- Vf Vf Vf Vf Vb Vb
-------------------------------------------------------------------------------
Select operation : Change
Port Type   : MultiMedia
First Node     : 1
First Location : 5
Last Node      : 1
Last Location  : 6
ACDDN          : 7000
Select operation : DetailedDisplay
```

Result: Notice that one more multimedia port has been added at port 5.

4   Select DetailedDisplay, then press <Return>.

Note: You are asked to provide node ranges and location ranges to view the hardware locations on a particular node or range of nodes.

Result: The following example shows that node1 (only one node can be specified for card option) and locations 1 to 12 have been specified.

```
Num   VP Locn  Type   ACD      SECDN   Loop Shlf Crd Unit Density    Switch
-----  --------  ----  --------  --------  ----  ----  ---  ----  -------  --------------
1- 1  1-4-1-1   M      7000      7800                    2    0  Octal      Meridian_1
1- 3  1-5-1-1   M      7000      7802                    2    1  Octal      Meridian_1
1- 5  1-6-1-1   M      7000      7804                    2    2  Octal      Meridian_1
1- 7  1-7-1-1  Vf      7000      7806                    2    3  Octal      Meridian_1
1- 8  1-7-1-2  Vf      7000      7807                    2   11  Octal      Meridian_1
1- 9  1-8-1-1  Vf      7000      7808                    2    4  Octal      Meridian_1
1-10  1-8-1-2  Vf      7000      7809                    2   12  Octal      Meridian_1
1-11  1-9-1-1  Vb      7000      7810                    2    5  Octal      Meridian_1
1-12  1-9-1-2  Vb      7000      7811                    2   13  Octal      Meridian_1
Press RETURN to continue:
```

Note: For multimedia entries, the table displays only the odd-numbered hardware locations because multimedia ports take up two hardware locations.

Step	Action
5	Press <Return>.

Result: The Voice Port Hardware Location table (see below) is displayed again.

```
Node  -------- Voice Port Hardware Location ---------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
   1   M --  M --  M -- Vf Vf Vf Vf Vb Vb
-----------------------------------------------------------------------------
Select operation : Done
Is this correct?  Yes
```

If you are satisfied with the changes, select Done. The following prompt is displayed:

```
Is this correct? No (Yes)
```

Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

6	Is this correct?

If No, go to step 7.

If Yes, go to step 8.

7	Select No, then press <Return>

Result: You are returned to the Select Operation mode at step 1.

8	Go to "Assigning the dataport locations" on page 3-50.

Defining voice port hardware locations for the Option EC-11

To define your voice channel entries for the Voice Port Hardware Location table for the Option EC-11, follow these steps.

Step	Action
1	Select Done on the DSP parameters.

    Result: The following voice port hardware location screen is displayed.

    Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1   M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   2   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb
------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

    Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

Step	Action
2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>.

    Example: Select Change, then press <Return>.

    Note: In the display in step 3, Port Type required is MultiMedia. Other choices are Voice_Full and Voice_Basic. All entries are changed by pressing the up or down arrow keys and then pressing <Return> which moves you on to the next value.

Step	Action
3	When you select your Switch Type and press <Return>, the table will change to display your changes, as in the following example.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
    1  M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
    2  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb
--------------------------------------------------------------------------------
Select operation : Change
Port Type      : MultiMedia
First Node     : 1
First Location : 5
Last Node      : 1
Last Location  : 8
ACDDN          : 3650
SECDN          : 2804
Port Density : Octal
Loop  Number : 0
Shelf Number : 0
Card  Number : 2
Unit  Number : 4
Switch Type  : Meridian_1
Select operation : DetailedDisplay
```

> **Result:** Two more multimedia ports have been added at ports 5 and 7.

| 4 | Select DetailedDisplay, then press <Return>. |

> **Note:** You are asked to provide node ranges and location ranges to view the hardware locations on a particular node or range of nodes.

> **Result:** The following example shows that node1 and locations 1 to 12 have been specified.

```
Num   VP Locn  Type   ACD      SECDN   Loop Shlf Crd Unit Density   Switch
-----  --------  ----  --------  --------  ---- ---- --- ---- -------  --------------
 1- 1  1-3-1-1   M      3658     2800              2    0   Octal    Meridian_1
 1- 3  1-3-2-1   M      3658     2802              2    2   Octal    Meridian_1
 1- 5  1-3-3-1   M      3650     2804              2    4   Octal    Meridian_1
 1- 7  1-3-4-1   M      3650     2806              2    6   Octal    Meridian_1
 1- 9  1-4-1-1   Vf     3650     2808              2    8   Octal    Meridian_1
 1-10  1-4-1-2   Vf     3650     2809              2    9   Octal    Meridian_1
 1-11  1-4-2-1   Vf     3650     2810              2   10   Octal    Meridian_1
 1-12  1-4-2-2   Vf     3650     2811              2   11   Octal    Meridian_1
Press RETURN to continue:
```

> **Note:** For multimedia entries, the table displays only the odd-numbered hardware locations because multimedia ports take up two hardware locations.

Step	Action
5	Press <Return>.
	Result: The Voice Port Hardware Location table (see below) is displayed again.

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
        1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
    1   M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
    2  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb
-----------------------------------------------------------------------------
Select operation : Done
Is this correct?  Yes
```

	If you are satisfied with the changes, select Done. The following prompt is displayed:
	`Is this correct? No (Yes)`
	Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.
6	Is this correct?
	If No, go to step 7.
	If Yes, go to step 8.
7	Selecting No returns you to the Select Operation mode. In this case, go to step 1.
8	Go to "Assigning the dataport locations" on page 3-50.

Defining voice port hardware locations for Modular Option GP

To define your voice channels entries for the Voice Port Hardware Location table for Modular Option GP, follow these steps.

Step	Action
1	Select Done on the Links parameters.

        Result: The following voice port hardware location screen is displayed:

        Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
         1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
     1   M -- M -- Vf Vf Vf Vf Vf Vf Vb Vb
---------------------------------------------------------------------------
Select operation : DetailedDisplay
```

        Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

| 2 | Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>. |

        Example: Select Change, then press <Return>.

        Note: In the display in step 3, Port Type required is MultiMedia. Other choices are Voice_Full and Voice_Basic. All entries are changed by pressing the up or down arrow keys and then pressing <Return> which moves you on to the next value.

Step	Action
3	When you select your Message Terminal and press <Return>, the table will change to display your changes, as in the following example.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
        1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
    1   M -- M -- M -- Vf Vf Vf Vf Vb Vb
-------------------------------------------------------------------------------
Select operation : Change
Port Type     : MultiMedia
First Node    : 1
First Location : 5
Last Node     : 1
Last Location : 6
DN            : 2804
Link Type     : SMDI
UCDDN         : 3650
Link ID       : 1
Message Desk  : 63
Message Terminal : 5
Select operation : DetailedDisplay
```

Result: Notice that one more multimedia port has been added at port 5 on node 1.

| 4 | Select DetailedDisplay, then press <Return>. |

Note: You are asked to provide node ranges and location ranges to view the hardware locations on a particular node or range of nodes.

Result: The following example shows that node 1 and locations 1 to 12 have been specified.

```
                   Msg.   Msg.          Login  Logout            Agent
Number   DN   Type Term   Desk   UCDDN  Code   Code   Link ID    Posn
------ ------- ---- ------ ------ ------- ------ ------ ------------- -------
 1-  1  2800   M      1     63    3658    *85    *86         1      9999
 1-  3  2802   M      3     63    3658    *85    *86         1      9999
 1-  5  2804   M      5     63    3650    *85    *86         1      9999
 1-  7  2806   Vf     7     63    3650    *85    *86         1      9999
 1-  8  2807   Vf     8     63    3650    *85    *86         1      9999
 1-  9  2808   Vf     9     63    3650    *85    *86         1      9999
 1- 10  2809   Vf    10     63    3650    *85    *86         1      9999
 1- 11  2810   Vb    11     63    3659    *85    *86         1      9999
 1- 12  2811   Vb    12     63    3659    *85    *86         1      9999
Press RETURN to continue:
```

Note: For multimedia entries, the table displays only the odd-numbered hardware locations because multimedia ports take up two hardware locations.

Step	Action

5   Press <Return>.

Result: The Voice Port Hardware Location table (see below) is displayed again.

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1   M --  M --  M -- Vf Vf Vf Vf Vb Vb
--------------------------------------------------------------------------------
Select operation : Done
Is this correct?  No
```

If you are satisfied with the changes, select Done. The following prompt is displayed:

```
Is this correct? No (Yes)
```

Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

> ### ATTENTION
>
> If after selecting Change again, or Done you receive an error, there may be an incorrect assignment of the voice ports to the link. The error must be corrected before the user may proceed.

6   Is this correct?

If No, go to step 7.

If Yes, go to step 8.

7   Selecting No returns you to the Select Operation mode. In this case, go to step 1.

8   Go to "Assigning the dataport locations" on page 3-50.

Defining T1 hardware locations for the MSM   To define your T1 hardware locations for the MSM, follow these steps.

Step	Action
1	Select Done on the Link parameters.

Result: The following T1 hardware location table screen is displayed.

Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Span ----------- T 1  H a r d w a r e  L o c a t i o n -----------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   2  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
--------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the "Select operations" prompt. When making selections, press the up or down arrow keys until the desired response is displayed on the screen, then press <Return>. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes, and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>.

Example: Select Change, then press <Return>.

Result: The following screen is displayed showing results after all choices have been made (your display may differ).

Step	Action

Note: If you are required to make changes, the T1 hardware location table will change to display your changes. In the following display, notice that 6 multimedia ports have been added at locations five through 10 on Span 1.

Note: For the MSM, a multimedia port requires one and a half hardware locations. An easier way to look at this is that two multimedia ports require three hardware locations. This is seen in the following display with six ports requiring nine locations. The locations marked "--" are part of the total multimedia ports.

```
Span  ----------- T 1  H a r d w a r e  L o c a t i o n ------------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1  Vf Vf Vf Vf  M  M  M  M  M  M Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   2  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf -- -- --
--------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Span    : 1
First Location : 5
Last Span     : 1
Last Location  : 10
DN             : 2804
Link Type      : SMDI
UCDDN          : 3650
Link ID        : 1
Message Desk    : 63
Message Terminal : 5
Select operation : DetailedDisplay
```

3   Select DetailedDisplay, and press <Return>.

Note: Selecting DetailedDisplay requires you to provide span ranges and location ranges to view the hardware locations on a particular node or range of nodes.

Result: The following example shows that Span 1 and locations one to 10 have been specified.

```
                              Login  Logout Msg.
Number    DN   Type  UCDDN    Code   Code   Term      Link ID        AgtPosn
------  ------- ----  -------  ------- ------- -----  -------------------  -------
    1    2800   Vf    3650     *88     *89    1                      1     2800
    2    2801   Vf    3650     *88     *89    2                      1     2800
    3    2802   Vf    3650     *88     *89    3                      1     2800
    4    2803   Vf    3650     *88     *89    4                      1     2800
    5    2804   M     3650     *88     *89    5                      1     2800
    6    2805   M     3650     *88     *89    6                      1     2800
    7    2806   M     3650     *88     *89    7                      1     2800
    8    2807   M     3650     *88     *89    8                      1     2800
    9    2808   M     3650     *88     *89    9                      1     2800
   10    2809   M     3650     *88     *89   10                      1     2800
Press RETURN to continue:
```

Step	Action

4   Press <Return>.

      Result: The T1 Hardware Location table (see below) is displayed again.

```
Span ----------- T 1   H a r d w a r e   L o c a t i o n -----------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
    1  Vf Vf Vf Vf  M  M  M  M  M  M Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
    2  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf -- -- --
------------------------------------------------------------------------------
Select operation : DetailedDisplay
First Span     : 1
First Location : 1
Last Span      : 1
Last Location  : 10
```

      If you are satisfied with the changes, use the up or down arrow keys to select Done, and then press <Return>. The following prompt is displayed.

```
Is this correct? No (Yes)
```

      Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

ATTENTION

If after selecting Change again, or Done you receive an error, there may be an incorrect assignment of the voice ports to the link. The error must be corrected before the user may proceed.

---

5   Is this correct?

      If No, go to step 6.

      If Yes, go to step 7.

6   Select No, then press <Return>.

      Result: This choice returns you to the Select Operation mode. In this case, go to step 1.

7   Select Yes, then press <Return>.

8   Go to "Defining voice hardware locations for the MSM" on page 3-48.

Defining voice hardware locations for the MSM

To define your voice hardware locations for the MSM, follow these steps.

Step	Action
1	Select Done on the T1 Hardware Location screen.

Result: The following voice port hardware location screen is displayed.

Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node --------- V o i c e   H a r d w a r e   L o c a t i o n ---------
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  3  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  4  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
--------------------------------------------------------------------------------
Select operation : Change
```

Requirement: You have three selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

| 2 | Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>. |

Example: Select Change, then press <Return>.

Note: In the display in step 3, all entries are changed by pressing the up or down arrow keys and then pressing <Return> which moves you on to the next value.

Step	Action

3   When you select your Last Location, and press <Return>, the table will change to display your changes, as in the following example.

```
Node  --------- V o i c e   H a r d w a r e   L o c a t i o n ---------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   3   M  M --  M  M --  M  M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   4  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
-------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Node    : 3
First Location :  1
Last Node     : 3
Last Location :  9
Select operation : Reset
```

Result: Notice that 9 multimedia ports have been added at ports1 through 9 on node 3.

4   If you are satisfied with the changes, select Done, then press <Return>.

Result: The following prompt is displayed.

```
Is this correct? No (Yes)
```

Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

5   Is this correct?

If No, go to step 6.

If Yes, go to step 7.

6   Selecting No returns you to the Select Operation mode. In this case, go to step 1.

7   Go to "Assigning the dataport locations for the MSM" on page 3-55.

Assigning the dataport locations

To assign dataport locations to your system, follow these steps.

Step	Action
1	From the previous procedure: Select Yes, then press <Return>. ***Result:*** The following dataport configuration table is displayed: ***Note:*** The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  Card  Type      Port 1      Port 2      Port 3      Port 4
 1     6    UTIL      MODEMCON    PRINTER     MODEM       MODEM
 1     7    MMP40     CONSOLE     CSL1
 2     1    MMP40     PRINTER     PRINTER
 3     7    MMP40     PRINTER     PRINTER
 4     1    MMP40     PRINTER     PRINTER
 5     6    UTIL      MODEMCON    PRINTER     MODEM       MODEM
 5     7    MMP40     PRINTER     PRINTER
----------------------------------------------------------------------------

Please assign the data port locations.


Select operation : Display
```

Requirement: You have four selections at the Select operation prompt. When making selections, press the up or down arrow keys until the desired response is displayed on the screen, then press <Return>. Select

- "Display" if you wish to see a detailed display of all the dataport locations on a particular node or range of nodes.
- "Change" if you want to change the dataport definition on a range of dataport locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

Step	Action
2	Select operation:
	If Display, go to steps 3 and 4.
	If Change, go to step 5.
	If Done, go to step 11.
3	Select Display, then press <Return>.
	Result: The following detailed dataport configuration table with your default settings is displayed:

```
The following dataports are on this system :

Node  1, Type  UTIL, Port 1: Dataport Name = MODEMCON
Node  1, Type  UTIL, Port 2: Dataport Name = PRINTER
Node  1, Type  UTIL, Port 3: Dataport Name = MODEM
Node  1, Type  UTIL, Port 4: Dataport Name = MODEM
Node  1, Type MMP40, Port 1: Dataport Name = CONSOLE
Node  1, Type MMP40, Port 2: Dataport Name = CSL1

Node  2, Type MMP40, Port 1: Dataport Name = PRINTER
Node  2, Type MMP40, Port 2: Dataport Name = PRINTER

Node  3, Type MMP40, Port 1: Dataport Name = PRINTER
Node  3, Type MMP40, Port 2: Dataport Name = PRINTER

Node  4, Type MMP40, Port 1: Dataport Name = PRINTER
Node  4, Type MMP40, Port 2: Dataport Name = PRINTER

Node  5, Type  UTIL, Port 1: Dataport Name = MODEMCON
Node  5, Type  UTIL, Port 2: Dataport Name = PRINTER

Press RETURN to continue:
```

Step	Action
4	Press <Return>.
	Result: The display continues to scroll if there are more dataports to display, or you are returned to the dataport locations table.
5	Select Change, then press <Return>.
	Result: The following prompt is displayed:

```
Specify a range of nodes for which to
configure dataports

Starting node number: 1
```

Step	Action
6	Select the starting node number by using the up and down arrow keys, then press <Return>.
	Result: The following prompt is displayed:

```
Ending node number: 3
```

Step	Action
7	Select the ending node number by using the up and down arrow keys, then press <Return>.

Note: In this case, node 3 has been chosen.

Result: You are stepped through each dataport location and given the opportunity to either change it or go on to the next dataport. After a number of inputs, the following screen is displayed.

Note: For information on assigning specific features to dataports, see "Dataport rules" on page 2-45.

```
Node  Card  Type        Port 1      Port 2      Port 3      Port 4
 1     6    UTIL        ACCESS      MODEM       CON         MODEM
 1     7    MMP40       CONSOLE     CSL1
 2     1    MMP40       ACCESS      MODEM
 3     7    MMP40       PRINTER     CON
 4     1    MMP40       PRINTER     PRINTER
 5     6    UTIL        MODEMCON    PRINTER     MODEM       MODEM
 5     7    MMP40       PRINTER     PRINTER
--------------------------------------------------------------------

Starting node number: 1
Ending node number:   3
Node 1 UTIL card Port 1 : ACCESS
       Select the Baud Rate : 9600
Node 1 UTIL card Port 2 : MODEM
Node 1 UTIL card Port 3 : CON
Node 1 UTIL card Port 4 : MODEM
Node 2 MMP40     Port 1 : ACCESS
       Select the Baud Rate : 19200
Node 2 MMP40     Port 2 : MODEM
Node 3 MMP40     Port 1 : PRINTER
Node 3 MMP40     Port 2 : CON

Select operation : Display
```

Note: To select a different value for a dataport location, use the up and down arrow keys, and then press <Return>. If a dataport location does not need to be changed, simply press <Return>, and the next dataport is displayed.

Step	Action

8   Press <Return>

Result: The following screen of the dataport selections is displayed.

```
The following dataports are on this system :

Node  1, Type  UTIL, Port 1: Dataport Name = ACCESS
                                Baud Rate = 9600
Node  1, Type  UTIL, Port 2: Dataport Name = MODEM
Node  1, Type  UTIL, Port 3: Dataport Name = CON
Node  1, Type  UTIL, Port 4: Dataport Name = MODEM
Node  1, Type MMP40, Port 1: Dataport Name = CONSOLE
Node  1, Type MMP40, Port 2: Dataport Name = CSL1

Node  2, Type MMP40, Port 1: Dataport Name = ACCESS
                                Baud Rate = 19200
Node  2, Type MMP40, Port 2: Dataport Name = MODEM

Node  3, Type MMP40, Port 1: Dataport Name = PRINTER
Node  3, Type MMP40, Port 2: Dataport Name = CON

Node  4, Type MMP40, Port 1: Dataport Name = PRINTER
Node  4, Type MMP40, Port 2: Dataport Name = PRINTER

Node  5, Type  UTIL, Port 1: Dataport Name = MODEMCON

Press RETURN to continue:
```

9   Press <Return>.

Result: If there are more dataports to display, the screen scrolls to display them otherwise, the following screen is displayed.

```
Node  Card  Type      Port 1      Port 2      Port 3      Port 4
 1     6    UTIL      ACCESS      MODEM       CON         MODEM
 1     7    MMP40     CONSOLE     CSL1
 2     1    MMP40     ACCESS      MODEM
 3     7    MMP40     PRINTER     CON
 4     1    MMP40     PRINTER     PRINTER
 5     6    UTIL      MODEMCON    PRINTER     MODEM       MODEM
 5     7    MMP40     PRINTER     PRINTER
--------------------------------------------------------------------------------

Select operation : Done
```

Step	Action
10	Select operation:
	If Done, go to step 11 and proceed.
	If Change, go to step 5 and proceed.
	If Reset, go to step 1 at the screen display and proceed.
	If Display, go to step 8 and proceed.
11	Select Done, then press <Return>.
12	Go to "Adding languages" on page 3-59.

Assigning the dataport locations for the MSM

To assign dataport locations to your MSM system, follow these steps.

Step	Action
1	Select Yes, and press <Return>.

Result: The following dataport configuration table is displayed.

Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  Card  Type      Port 1        Port 2        Port 3        Port 4
  1    2    SBC      CONSOLE       CON0122       PRT0123       PRT0124
  2    3    SBC      CONSOLE       CON0232       CON0233       PRT0234
  3    1    SBC      CON0311       CON0312       CON0313       CON0314
  4    3    SBC      CON0431       CON0432       CON0433       CON0434
 13    3    SBC      SMDI1331      MOD1332       MOD1333       MOD1334
 14    1    SBC      MOD1411       MOD1412       MOD1413       MOD1414
------------------------------------------------------------------------------

Please assign the data port locations.


Select operation : Display
```

Requirement: You have four selections at the Select operation prompt. When making selections, press the up or down arrow keys until the desired response is displayed on the screen, then press <Return>. Select.

- "Display" if you wish to see a detailed display of all the dataport locations on a particular node or range of nodes.
- "Change" if you want to change the dataport definition on a range of dataport locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you need to go back to the default settings after you have changed them.

2	Select operation:

If Display, go to steps 3 and 4.

If Change, go to step 5.

If Done, go to step 11.

Step	Action
3	Select Display, then press <Return>.

Result: The following detailed dataport configuration table with your default settings is displayed.

```
The following dataports are on this system :

Node  1, Type   SBC, Port 1: Dataport Name = CONSOLE
Node  1, Type   SBC, Port 2: Dataport Name = CONO122
Node  1, Type   SBC, Port 3: Dataport Name = PRTO123
Node  1, Type   SBC, Port 4: Dataport Name = PRTO124

Node  2, Type   SBC, Port 1: Dataport Name = CONSOLE
Node  2, Type   SBC, Port 2: Dataport Name = CONO232
Node  2, Type   SBC, Port 3: Dataport Name = CONO233
Node  2, Type   SBC, Port 4: Dataport Name = PRTO234

Node  3, Type   SBC, Port 1: Dataport Name = CONO311
Node  3, Type   SBC, Port 2: Dataport Name = CONO312
Node  3, Type   SBC, Port 3: Dataport Name = CONO313
Node  3, Type   SBC, Port 4: Dataport Name = CONO314

Node  4, Type   SBC, Port 1: Dataport Name = CONO431
Node  4, Type   SBC, Port 2: Dataport Name = CONO432
Node  4, Type   SBC, Port 3: Dataport Name = CONO433

Press RETURN to continue:
```

| 4 | Press <Return>. |

Result: The display continues to scroll if there are more dataports to display, or you are returned to the dataport locations table.

| 5 | Select Change, then press <Return>. |

Result: The following prompt is displayed:

```
Specify a range of nodes for which to
configure dataports

Starting node number: 1
```

| 6 | Select the starting node number by using the up and down arrow keys, then press <Return>. |

Result: The following prompt is displayed

```
Ending node number: 14
```

Step	Action
7	Select the ending node number by using the up and down arrow keys, then press <Return>.

Note: In this case, node 14 has been chosen.

Result: You are stepped through each dataport location and given the opportunity to either change it or go on to the next dataport. After all the necessary inputs have been made, the system window indicates your changes.

Note: For information on assigning specific features to dataports, see "Dataport rules" on page 2-45.

Example: A screen similar to the following is displayed.

```
Node  Card  Type       Port 1        Port 2        Port 3        Port 4
 1     2    SBC       CONSOLE        MODEM         MODEM         MODEM
 2     3    SBC       CONSOLE        PRINTER       CON0233       MODEM
 3     1    SBC       CON0311        CON0312       ADMIN         MODEM
 4     3    SBC       CON0431        ACCESS        CON0433       CON0434
13     3    SBC     M SMDI1331       MOD1332       MOD1333       MOD1334
14     1    SBC     S SMDI1411       MOD1412       MOD1413       MOD1414
--------------------------------------------------------------------------------
        Select the Baud Rate : 4800
Node 4 Card 3 Port 3 : CON0433
Node 4 Card 3 Port 4 : CON0434
Node 13 Card 3 Port 1 : SMDI
        Enter the Link ID   : 1
        Select the Baud Rate : 2400
        Is this link redundant?  Yes
        Partnered locations : Node 13 Port 1 and : Node 14 Port 1
Node 13 Card 3 Port 2 : MOD1332
Node 13 Card 3 Port 3 : MOD1333
Node 13 Card 3 Port 4 : MOD1334
Node 14 Card 1 Port 2 : MOD1412
Node 14 Card 1 Port 3 : MOD1413
Node 14 Card 1 Port 4 : MOD1414

Select operation : Display
```

Note: To select a different value for a dataport, use the up and down arrow keys, and then press <Return>. If a dataport does not need to be changed, simply press <Return>, and the next dataport is displayed.

Step	Action

8   Select Display, then press <Return>.

Result: The following screen of the dataport selections is displayed:

```
The following dataports are on this system :

Node  1, Type    SBC, Port 1: Dataport Name = CONSOLE
Node  1, Type    SBC, Port 2: Dataport Name = MODEM
Node  1, Type    SBC, Port 3: Dataport Name = MODEM
Node  1, Type    SBC, Port 4: Dataport Name = MODEM

Node  2, Type    SBC, Port 1: Dataport Name = CONSOLE
Node  2, Type    SBC, Port 2: Dataport Name = PRINTER
Node  2, Type    SBC, Port 3: Dataport Name = CON0233
Node  2, Type    SBC, Port 4: Dataport Name = MODEM

Node  3, Type    SBC, Port 1: Dataport Name = CON0311
Node  3, Type    SBC, Port 2: Dataport Name = CON0312
Node  3, Type    SBC, Port 3: Dataport Name = ADMIN
                            Baud Rate = 2400
Node  3, Type    SBC, Port 4: Dataport Name = MODEM

Node  4, Type    SBC, Port 1: Dataport Name = CON0431
Node  4, Type    SBC, Port 2: Dataport Name = ACCESS
                            Baud Rate = 4800

Press RETURN to continue:
```

9   Press <Return>.

Result: Either the display scrolls to the next dataport display, or returns to the dataport configuration table. The following prompt is displayed:

```
Select operation:
```

10   Select operation:

If Done, go to step 11 and proceed.

If Change, go to step 5 and proceed.

If Reset, go to step 1 at the dataport configuration table and proceed.

If Display, go to step 8 and proceed.

11   Select Done, then press <Return>.

12   Go to "Adding languages" on page 3-59.

Adding languages

To select more languages in a comprehensive upgrade/ conversion, follow these steps.

Step	Action
1	From the previous procedure,
	select Done then press <Return>.
	Result: The following screen is displayed (your display may differ):

```
         Installed Languages              Selected Languages
         American English
         Canadian French


                  You may include 0 more languages
--------------------------------------------------------------------------------
Select operation : AddLanguage
```

Note: In the screen example above, the limit is only 2 installed languages. However, if, for example, the keycode stipulates 2 more languages, the instruction would read

```
You may include 2 more languages
```

2	Select operation:
	If AddLanguage, go to step 3.
	If Done go to step 8.
3	Select AddLanguage, then press <Return>.
	Result: The following screen is displayed:

```
         Installed Languages              Selected Languages



                  You may include 1 more languages
--------------------------------------------------------------------------------
Select operation : AddLanguage

Languages Available from this tape are:
1 - American English
2 - Canadian French
3 - Latin American Spanish
4 - Brazilian Portuguese
5 - German
6 - Japanese
7 - From Another Tape

Enter the number of the language you require: 1

You have chosen American English
Is this Correct? Yes
```

Step	Action

4	Press the up or down arrow key until the desired number of the language you require is displayed on the screen (or press backspace and type a number), then press <Return>.
	
	The following prompt is displayed:
	
	`You have chosen (language name).`
	
	Note: At this point, if you choose either 0 or the number for the **From Another Tape** option without selecting a language, you are advised that you must choose at least one language from this menu and the selection prompt is repeated. If you choose **From Another Tape**, you will be prompted to insert the other tape (see "Continuing the comprehensive upgrade" on page 3-61) at the end of the comprehensive upgrade/conversion.
	
	`Is this correct? No (Yes)`

5	Is this correct? If No, go to step 6. If Yes, go to step 7 .
6	If you select No, the language prompt is repeated.
7	When you have finished your language selections, select Done and press <Return>.
8	Go to "Continuing the comprehensive upgrade" on page 3-61.

Continuing the comprehensive upgrade

To continue the comprehensive upgrade, to re-enter information, or to abort, follow these steps.

Step	Action

1	Select Done, then press <Return>.
	Result: The following prompt is displayed:
	
	`All required information has been input.`
	
	`Do you wish to continue, re-enter`
	`information, or abort? Continue`

2	Do you wish to continue, re-enter information, or abort? If Continue, go to steps 3 to 8. If Re-enter, go to step 9. If Abort, go to step 10.

3	Select Continue, then press <Return>.
	Note: If you selected From Another Tape for your languages, you are prompted to remove the current tape and insert the other tape. See "Adding languages" on page 3-59 for the procedure.
	Result: Whether you are required to use another tape or, the add languages screen does not appear because you did not require another tape, the system runs various routines. When these routines are completed, the following message is displayed:
	
	`The operation successfully completed.`
	
	`Remove the tape when it finishes rewinding`
	`and boot into Service.`

IF your platform is	THEN see
a Modular Option, Modular Option EC ,or an Option EC-11	steps 4 to 8.
a Modular Option GP, an MSM, or a Card Option	steps 6 to 8.

Step	Action
4	The system loads the console port configuration utility.

Result: The following messages are displayed.

```
Loading console port speed utility...

Console Port Speed Configuration Utility

This utility displays the current setting
for the console port and allows the
setting to be reset to 2400 or 9600 bps.

Node 1 Console Port Speed: 2400 bps

Do you want to change the console port
speed? Yes
```

5   Select Yes, then press <Return>.

Result: The following prompts and messages are displayed:

```
Enter new console port speed (bps): 9600

MMP40 Console Port speed reset to 9600.
Adjust Terminal speed to requested port
speed (within 45 seconds).
```

Note: See the appropriate *Installation and Maintenance* NTP for your platform to find the Setup screen for the terminal.

6   The system finally responds with

```
Shutting down tape server

#TAPE:MMTAPE1>
```

Note: Prior to booting, ensure that the BPS for the AML link has been updated from 4800 to 9600. (For Modular Option EC-MMP40 systems, set the baud rate to 9600.) See the chapter entitled "Configuring your Meridian 1" in the *Installation and Maintenance Guide* (NTP 555-70x1-250).

Step	Action
7	Remove the tape and turn the power off. After approximately 10 seconds, boot the system by turning the power on again.
	Note: This takes from 10 to 15 minutes per node.
	Result: Various system routines are displayed and the Meridian Mail logon screen appears. Normal system administration operations may begin.

> ### ATTENTION
>
> Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Step	Action
8	Log onto the system.
9	Select Re-enter, then press <Return>.
	Result: You are returned to the beginning of the comprehensive upgrade procedure.
	Note: All the data you have entered is lost and must be entered again.
10	Select Abort, then press <Return>.
	Result: The comprehensive upgrade is terminated.
	Note: Reboot the system from the Install/data tape and try the comprehensive upgrade again (see "Setting up for a comprehensive upgrade" on page 3-11), or call your Nortel representative.

System recovery from failed comprehensive upgrade/conversion

Introduction   Use the following instructions if your system fails to convert to the new Meridian Mail release.

Failure due to keycode   The comprehensive upgrade/conversion failed before entering the keycode or because of a bad keycode.

Remove the Install/data tape from the tape drive, restore the original hardware configuration, and reboot the system into service. A software restore is not needed.

Failure in early phase after keycode   If the system reports

```
The operation has failed.
The system can be booted into service
without performing the restore
operation.
```

the conversion failed in an early phase after entering the keycode.

Remove the Install/data tape from the tape drive, restore the original hardware configuration, and reboot the system into service. A software restore is not needed.

Failure at point of no return   If the system reports

```
Operation has failed.
Restore operation from backup (tape or
disk) is required if you want to bring
the system back to the previous working
state.
```

the operation failed after some of the system was converted beyond a point of return. You must restore the system from shadow disk (see "System recovery from shadow disk" on page 3-65), or follow the restore procedure documentation for your previous release (MM8, MM9, MM10, or MM11).

System recovery from shadow disk

Introduction   The following procedures are provided for system recovery
                          from shadow disk:

- Recovering from shadow disk (1-node)
- Recovering from shadow disk (multi-node)
- Recovering from shadow disk for an MSM system

Recovering from   For systems with disk shadowing, you can recover your
shadow disk (1-node) MM8, MM9, MM10, or MM11 system from shadow disks
                          that are disabled automatically.

                          Note: Shadow disk is not available on Card Option
                          platforms.

Step	Action
1	Power the system down.
2	Replace all original hardware including shadow disks, 68K cards (which had been replaced by MMP40 cards), and SCSI and memory cards, if applicable.
3	Insert the MM8, MM9, MM10, or MM11 Install/data tape and power the system up.
4	Select More Utilities from the System Installation and Modification menu, then press <Return>. *Result:* The System Operation Utility Menu is displayed.
5	Select Exit to support level, then press <Return>. *Result:* The following prompt is displayed: `#TAPE:MMTAPE1>`
6	At the above prompt type the following: **Load #tape:mmtape1:software:m1.mirror_pkg** Press <Return>, then type **Fenable 2 0** then press <Return>.

Step	Action

7   At the following prompt, press <Return> in order to accept the
       default buffer size value of 64.

```
Buffer size (k) :64
```

8   Wait until the node has generated the following SEER
       indicating that the disks are synced:

```
INF 6601 ADMIN
```

9   Remove your Install/data tape and reboot to full service.

ATTENTION

Store the Install/data tape in a safe place. This will
ensure that if you need to reinstall or modify the system,
you will have quick access to the tape.

Recovering from shadow disk (multi-node)

To perform a system recovery from shadow disk on systems with two or more nodes, follow these steps.

Starting Point: After step 5 of the previous procedure

Step	Action
1	Type the following at the prompt:

fork #tape:mmtape1:prm_tape

then press <Return>.

Note: Wait for all nodes to load operating system. Check SEERs to insure that all nodes have loaded.

2	For a 2-node system, type the following at the prompt:

fork ci[2] <<:CONSOLE:N2 >>:CONSOLE:N2

then press <Return>.

3	If the system has three or more nodes, enter the following at the prompt:

fork ci[n] <<:CONSOLE:Nn >>:CONSOLE:Nn

where

n = 3, 4, or 5

then press <Return>.

Note: In order to recover the fifth node, you may close the window of a previous node. However, you must wait until the restore of the previous node is complete.

4	Next, type the following:

Load #tape:mmtape1:software:m1.mirror_pkg <Return>

Fenable 2 0

then press <Return>.

5	At the following prompt, press <Return> in order to accept the default buffer size value of 64:

```
Buffer size (k) :64
```

6	Press <Control><W> to get the CobraVT window displayed.
7	Move the cursor using the up or down arrow keys to **N2,** and press <Return>.

Step	Action

8   At the prompt, type in the following:

Load #tape:mmtape1:software:m1.mirror_pkg

then press <Return>.

Fenable 2 0

then press <Return>.

9   At the following prompt, press <Return> in order to accept the default buffer size value of 64:

```
Buffer size (k) :64
```

10   Repeat steps 6 to 9 for **N3**, **N4**, and **N5,** according to the number of nodes in your system**.**

11   Wait until all nodes have generated the following SEER indicating that the disks are synced:

```
INF 6601 ADMIN
```

12   Remove your Install/data tape and reboot to full service.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Recovering from shadow disk for an MSM system

To perform a system recovery from shadow disk on MSM systems, follow these steps.

Step	Action
1	Power the system down.
2	Insert the previous release of the Install/data tape and power the system up.
3	Select More Utilities from the System Installation and Modification menu, then press <Return>. ***Result:*** The System Operation Utility Menu is displayed.
4	Select Exit to support level, then press <Return>. ***Result:*** The following prompt is displayed: `#TAPE:MMTAPE1>`
5	Type the following at the prompt: **fork #tape:mmtape1:prm_tape** then press <Return>. ***Note:*** Wait for all nodes to load operating system.
6	Type the following at the prompt: **fork ci[n] <<:CONSOLE:Nn >>:CONSOLE:Nn** **Requirement:** Where n is replaced by the odd numbered node, starting with node 3. Repeat this step for each odd node on the system and for each even node where you have enabled disk packs. Then press <Return>.
7	Type the following at the prompt: **Load #tape:mmtape1:software:spm.mirror_pkg** Press <Return>, then type **Fenable 1** and press <Return>.
8	At the following prompt, press <Return> in order to accept the default buffer size value of 64: **Buffer size (k) :64**
9	Press <Control><W> to display the CobraVT window.

Step	Action
10	Move the cursor using the up and down arrow keys to **N3** and press <Return>.
11	At the prompt, type in the following:

Load #tape:mmtape1:software:spm.mirror_pkg

and press <Return>.

| 12 | To start synchronizing the disks, type the following at the prompt: |

Fenable 1

and press <Return>.

| 13 | When prompted for the buffer size, press <Return> to accept the default size (64 K). |

Buffer size (k) :64

| 14 | Repeat steps 9 through 13 for each remaining odd voice node (SPN) in the range N5 . . . N9, and for each paired node (N3,N4.... N5, N6 ... N7, N8 ... N9, N10) where you have enabled double disk packs. |
| | *Note:* Wait until all nodes have generated the following SEER indicating that the disks are synced: |

```
INF 6601 ADMIN
```

| 15 | Remove your Install/data tape and reboot to full service. |

ATTENTION

Store the Install/data tape in a safe place. This will
ensure that if you need to reinstall or modify the system,
you will have quick access to the tape.

Chapter 4

Toggle disk to disk backup

In this chapter

Overview

Introduction   This chapter explains disk to disk backup for your system.

Note: Disk to disk backup is not available on Card Option and MSM systems.

What is toggle disk to disk backup?

Introduction   Disk to disk backup is a utility that allows the administrator to schedule the periodic backup of the system volumes, VS1T and VS1V on node 1, onto B102 on node 2. Other nodes (2, 3, and the rest) are backed up onto node 1.

Systems that allow   Disk to disk backup can only be performed on multi-node
disk to disk backup   systems with storage hours greater than the minimum for the number of nodes.

If the disk to disk backup option is turned on, the feature reduces the available storage space on VS202 (located on node two) but allows you to do a partial backup without the use of tapes.

Systems that do not   The following systems do not allow disk to disk backup.
allow disk to disk
backup
- a 2-node system with 26 hours storage
- a 3-node system with 30 hours storage
- a 4-node system with 45 hours storage
- a 5-node system with 60 hours storage

What to do before you begin

Checklist   This list of points should be followed before proceeding with a disk to disk backup.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.

- In particular, review information on volume sizes.

- Perform a full backup of the database (a partial backup is acceptable, but a full backup is recommended).

- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)

- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.

- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.

- Obtain the Meridian Mail Release12 Install/data tape.

Reference information   See the following for more information.

- For a description of the disk volumes, see Chapter 6, "Restore system from backup".

- See the *Site and Installation Planning Guide* (NTP 555-70x1-200) for your platform for more information on message storage and voice services storage hours available per system size.

Performing a disk to disk backup

When to use these procedures

Use the common procedure

- to display the System Installation and Modification Menu and the System Operation Utility Menu

Use the disk to disk backup procedure

- to schedule the periodic backup of the system volumes, VS1T and VS1V on node 1

ATTENTION

You must turn disk to disk backup off for most system installation and modification procedures. However, be sure to turn it back on after completing the procedures.

Common procedure

To display the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps. ***Note:*** Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, see the *System Administration Guide* (NTP 555-70x1-30x) for your system.
2	Insert the Install/data tape into the tape drive. ***Note:*** Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions.
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.

Step	Action
	Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250).
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.
	A series of diagnostic routines are displayed followed by the message:
	`Tape Retension`
	Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.
	Result: Once loaded, the following System Installation and Modification Menu is displayed.

```
    System Installation & Modification Menu
    ---------------------------------------


            1   Install an MM12 system
            2   Comprehensive Upgrade
            3   More Utilities










Please enter the operation number: █
```

Step	Action
5	Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>.
	Result: The System Operation Utility Menu is displayed.
	Note: Depending on your platform and features, the System Operation Utility Menu may not appear the same as the one shown below.

```
    System Operation Utility Menu
    -----------------------------


           1  Toggle Disk to Disk backup
           2  Standardize Volume sizes
           3  Restore System from Backup
           4  Change to Default System Password
           5  Move Voice Services Cabinet
           6  Modify Number of HVS Users
           7  Console Port Speed Configuration
           8  Recreate system
           9  Change System Serial Number
          10  Exit to Support Level
          11  Back to Main Menu




Please enter the operation number:
```

Step	Action
6	Go to the next procedure in this chapter.

Disk to disk backup   To perform a disk to disk backup, follow these steps.

Starting Point: The System Operation Utility Menu.

Step	Action

1	Press the up or down arrow key until the number corresponding to Toggle Disk to Disk Backup is displayed on the screen (or enter the desired selection number), then press <Return>.
	
	Result: The following prompt is displayed.
	
	```You have chosen to toggle disk to disk backup```
	
	```Do you wish to continue? Yes (No)```

2	Press the up or down arrow key to display Yes, then press <Return>.
	
	Result: The following message is displayed depending on the status of your system:
	
	```Turn disk to disk backup on? Yes (No)```
	
	or
	
	```Turn disk to disk backup off? Yes (No)```

> **CAUTION**
> **Risk of volume size reduction**
>
> Volume sizes may be reduced if disk to disk backup is turned on.

Step	Action
3	Use the up or down arrow keys to choose Yes or No as required. When you are done, press <Return>.

Step Action

IF	THEN go to
no changes to system records have occurred since installation or the last backup	steps 4 and 5.
changes to system records have occurred since installation or the last backup	step 5.

4   The following message is displayed:

```
Disk to disk backup has been turned on
(off)
```

5   Perform the disk to disk backups have been performed.

Result: The following prompts are displayed:

```
The operation successfully completed.

Remove the tape when it finishes rewinding
and boot into service.

#TAPE:MMTAPE1>
```

6   Remove the Install/data tape and turn the power off. After 10
seconds turn the power on.

Note: Booting the system takes from 10 to 15 minutes per
node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will
ensure that if you need to reinstall or modify the system,
you will have quick access to the tape.

Chapter 5

Standardize volume sizes

In this chapter

Overview

Introduction   This chapter explains how to standardize volume sizes on your
                        system.

What is standardize volume sizes?

Introduction

Standardizing volume sizes involves the optimization of the various text volume sizes on a Meridian Mail system.

A text volume stores information entered into the system as part of the database configuration. Text volumes do not contain any type of voice storage (prompts, greetings, messages, and so on) which is more memory intensive.

What standardize volume sizes does

Standardizing volume sizes cleans up and organizes the volumes to create more free space.

What to do before you begin

Checklist   This list of points should be followed before you proceed to
                            standardize volume sizes.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.

- Perform a full system backup (partial backup is acceptable, but a full backup is recommended).

- Disable disk to disk backup.

- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)

- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.

- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.

- Obtain the Meridian Mail Release 12 Install/data tape.

Standardizing volume sizes

When to use these procedures

Use the common procedure

- to display the System Installation and Modification Menu and the System Operation Utility Menu

Use the standardize volume sizes procedure

- to standardize the volume sizes on your system
- if you are attempting to run any other utility from the System Installation and Modification Menu and you get a "Volume too full" message
- when a volume has been manually created in an emergency situation

Common procedure

To bring up the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.

Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, refer to the section "Disabling/Activating the system" in the chapter "System Status and Maintenance" in the *System Administration Guide* for your platform.

ATTENTION

On Card Option systems, disable the AML link before turning off the power to Meridian Mail.

Step	Action
2	Insert the MM12 Install/data tape into the tape drive.

Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions. For MSM systems, contact your Nortel representative.

Step	Action
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.

Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250). For MSM systems, contact your Nortel representative.

Note: Card Option systems using external tape drives must have the tape drive turned on before booting up.

4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.

ATTENTION

On Card Option systems, reenable the AML link after turning on the power to Meridian Mail.

A series of diagnostic routines are displayed followed by the message:

```
Tape Retension
```

Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.

Step Action

Note: Once loaded, the following System Installation and Modification Menu is displayed.

```
   System Installation & Modification Menu
   ---------------------------------------


           1   Install an MM12 system
           2   Comprehensive Upgrade
           3   More Utilities








Please enter the operation number: █
```

5　　Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>.

Result: The System Operation Utility Menu is displayed.

Note: Depending on your platform and features, the System Operation Utility Menu may not appear the same as the one shown below.

```
   System Operation Utility Menu
   -----------------------------


           1   Toggle Disk to Disk backup
           2   Standardize Volume sizes
           3   Restore System from Backup
           4   Change to Default System Password
           5   Move Voice Services Cabinet
           6   Modify Number of HVS Users
           7   Console Port Speed Configuration
           8   Recreate system
           9   Change System Serial Number
          10   Exit to Support Level
          11   Back to Main Menu



Please enter the operation number:
```

6　　Go to the next procedure in this chapter.

Standardizing volume sizes   To standardize volume sizes, follow these steps.

Step	Action

1	Press the up or down arrow keys until the number corresponding to Standardize Volume Sizes is displayed on the screen (or enter the desired selection number), then press <Return>.
	
	Result: The following prompt is displayed:
	
	`You have chosen to standardize volume size`
	
	`Do you wish to continue? No (Yes)`

2	Use the up or down arrow key to select Yes, and press <Return>.
	
	Result: If the system has multiple drives, it then runs a series of routines, which could take up to 45 minutes, ending with the following message:
	
	`Disk shadowing has been disabled.`
	
	`Please re-enable disk shadowing manually in the MMI after the operation has completed and the system has passed sanity test.`
	
	Note: The above message will be displayed on shadowed systems only.

Step	Action
3	After a while, the following messages are displayed.

```
The operation successfully completed.

Remove the tape when it finishes rewinding
and boot into Service.

Shutting down tape server

#TAPE:MMTAPE1>
```

Step	Action
4	Remove the Install/data tape and turn the power off. After 10 seconds turn the power on.

Note: Booting the system takes from 10 to 15 minutes per node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Step	Action
5	If your system has disk shadowing, do the following.

a. go to the System Status and Maintenance screen in the MMI and verify that the system is working correctly.

b. go to the Disk Maintenance screen and then to the Disk Pair Status screen, and enable disk syncing for each pair of disks on your system.

Note: For more information, see the chapter entitled "System Status and Maintenance" in the *System Administration Guide* (NTP 555-70x1-301).

Chapter 6

Restore system from backup

In this chapter

Overview

Introduction   This chapter explains how to restore your system from a
                          backup.

What is restoring a system from backup?

Introduction   Restoring a system from backup involves reloading the system configuration and users from a tape that contains a partial or full system backup.

Note: A selective backup cannot be used for this purpose.

Purpose of restoring from backup

Primary
The primary purpose of this utility is to restore a failed system to the same operational state (or as close as possible) that it had before the problem occurred.

Secondary
The secondary purpose is to allow platform migrations of the Meridian Mail system.

When to use   Use the restore system from backup utility when

- there has been a major disk failure
- a system has been reinstalled
- a system has encountered significant problems from a conversion to a new release
- both migrating software and applications from one platform to another

---

ATTENTION

In systems with disk shadowing, it may be possible to restore from the disk that shadows the defective disk rather than restoring from tape. Refer to your *System Administration Guide* (NTP 555-70x1-30x) for details.

Volume and backup information

Overview
A Meridian Mail system may consist of one to five nodes with one or two disks per node. (Systems with disk shadowing have two disks per node.) Each physical disk drive is divided into multiple volumes.

MSM systems consist of from four to 12 nodes with single or double disk packs on node pairs.

Different types of data are stored in different volumes according to access and backup requirements.

Volume types
If a volume name ends in "T", it is a text volume having a 1-kbyte block size. If it ends in "V", it is a voice volume having an 8-kbyte block size.

Except for VS1 and VS2 which are both on node 1, the last two digits of a volume name are the node number on which it is stored.

Disk volume descriptions
The following table describes various disk volumes.

Volume	Description
Boot tracks	The operating system of all Meridian Mail systems is stored in the first part of the disk on node 1. These are not disk volumes in the normal sense. The boot tracks are rewritten as part of the node 1 disk initialization procedure.

Volume	Description
VS1T	This volume is on Node 1. It is the system volume where program software, system profile, hardware database, network database, user directory, system distribution lists, organization profile, operational measurements, SEERs, languages, and other system information is stored. This volume may also include the voice menus and other multimedia services. Three and four language systems only have the third and fourth language on VS1.
VS1V	This is a voice volume associated with VS1T. It stores the voice portion of user personal verifications and may also store the voice menus, announcements, and other multimedia services. VS1V is on node 1.
VS2T	This is a user volume on node 1 (1- and 2-node systems only). It contains user cabinets, profiles, personal distribution lists and message handlers. It stores languages one and two for all systems except Meridian Mail card option. (Meridian Mail card option languages are on VS1T.)
VS2V	This is the voice volume associated with VS2T on 1- and 2-node systems only. It stores the voice portion of user messages for users whose cabinets reside on VS2T. It also stores their greetings and may contain voice menus and announcements. It is on node 1. It also contains languages one and two.
VS2xxT	This is a user volume. It stores the cabinets, profiles, personal distribution lists and message headers of users added to volume 2xx. One of the user volumes can also be set up to contain menus and other multimedia services. 'xx' is the node number. For example, VS205T is on node 5.

Volume	Description
VS2xxV	The voice part of VS2xx holds the voice part of messages and greetings on node xx. It may also contain voice menus and announcements. 'xx' is the node number. For example, VS205V is on node 5.
VSxB	Volumes ending in the letter 'B' are temporary volumes created during an on-line backup of the VSx volume. They are deleted after being copied to tape and after a restore completes.
VS901T	This exists on node 1 of multi-node systems. It stores a copy of all the user profiles on user volumes VS202T, VS203T, VS204T, and VS205T. This includes personal distribution lists but not internal, external, or temporary greetings. The profiles are copied to VS901T by a partial backup. In the case of a disk to tape backup, VS901T is then copied to tape.
VS902T	This is present on node 2 of 2-node systems only. It holds copies of all user profiles on volume VS2. The profiles are copied to VS902 by a partial backup. In the case of a disk to tape backup, VS902T is then copied to tape.
B102	This is the backup of VS1 on node 2 of multi-node systems having disk to disk backup enabled. It contains copies of VS1T, VS1V and VS1B created during the last disk to disk backup.

Main types of backup   There are two main types of backup: partial and full. The following information blocks describe these types of backup.

Full backup

A full backup copies all system and user data to tape. This includes the following:

- system configuration information (databases, setup, and profiles)
- all user voice messages
- all user greetings
- all voice menus

When you are running the Restore System from Backup utility, the options that are used for a full backup are

- Voice&Data____fromThisTape
- Voice&Data____fromOtherTape

These options are toggled using the up and down arrow keys.

Due to the large amount of data, full backups can require many tapes and a considerable length of time to perform. Full backup can only be done to tape.

Partial backup

The purpose of a partial backup is to save the administrative configuration of the system. It does not save user voice messages and greetings. Partial backup saves reentering the user database and parameters should a disk drive fail. A partial backup saves the following

- user directory
- user profiles (without greetings)
- personal distribution lists
- system distribution lists
- personal verifications (spoken names)
- user passwords
- operational measurements
- network configuration
- other system configuration information

Note: All of the above features saved in a partial backup are also saved in a full backup.

When you are running the Restore System from Backup utility, the options that are used for a partial backup are

• DataOnly____fromThisTape

• DataOnly____fromOtherTape

• DataOnly____fromDisk

These options are toggled using the up and down arrow keys.

If a system is restored from a partial backup (a partial restore), the user mailboxes on the volumes restored will be empty and greetings will be lost. This is usually acceptable since voice messages are so transient that it is of little value to restore old voice messages.

Backup processes   On the card option, only VS1 exists. The only backup of VS1T and VS1V is a full backup to tape.

On a single-node system, partial backup is done by backing up VS1T, VS1V, and VS2T to tape.

Partial backups to tape on multi-node systems are done by backing up VS1T, VS1V to tape. VS901T and VS902T. VS1T, VS1V, VS901T, and VS902T (if it is a two-node system) are then backed up to tape. The user profiles are then copied (staged) onto VS901T and VS902T. Staging progress is shown by the MMI as the "T" volumes completing, although only the profiles are copied and not the entire text volumes.

Partial backups on multi-node systems   The following figure illustrates how partial backups are done for multi-node systems.

2-node systems

3-, 4-, and 5-node systems
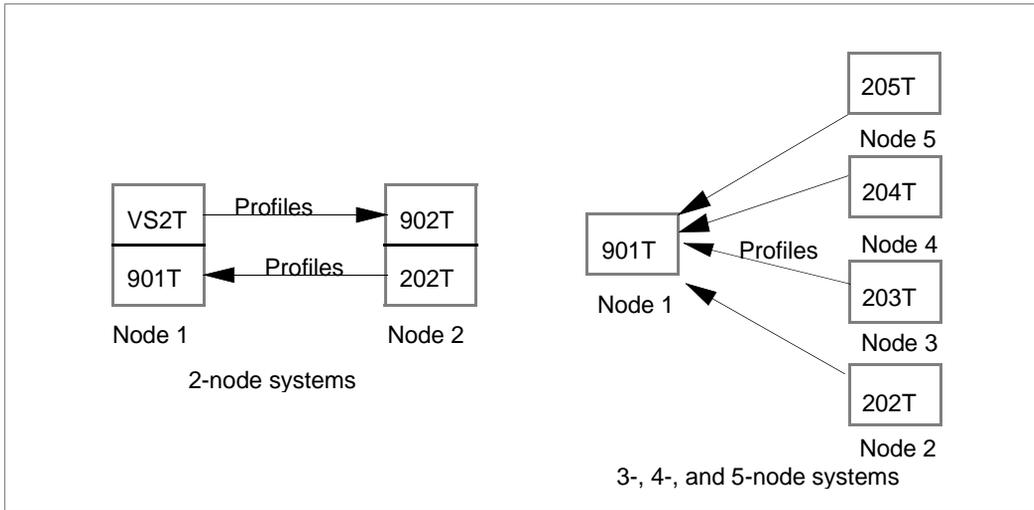
Disk to disk backup   The following figure illustrates a disk to disk backup.
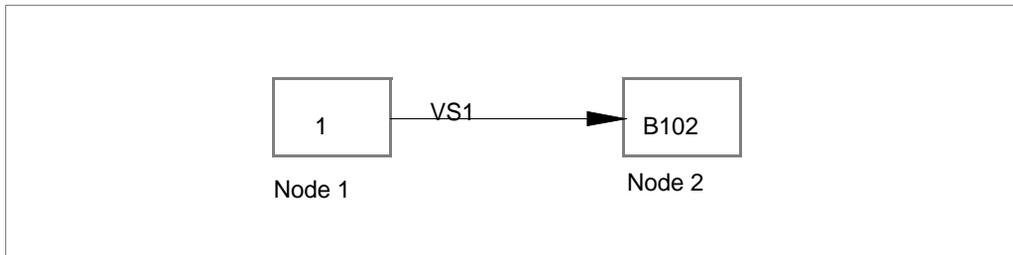
A disk to disk backup allows the administrator to backup the system volume, VS1T, and VS1V, onto B102 on node 2. The same process for a partial backup, as seen in the first figure dealing with multi-node systems, is followed to save the user profiles on disk. The staging volumes (VS901T and VS902T) are not copied to tape and are left alone to be the backup.

Disk to disk backup can only be performed on multi-node systems.

For a complete description of the disk volumes, see the disk volume description list in this chapter. For more information on message storage and voice services storage hours available per system size, see the *Site and Installation Planning Guide* (NTP 555-70x1-200) for your platform. For MSMs, see the *MSM Planning and Engineering Guide* (NTP 557-7001-100).

About online backups   All backups are online. Normally, an administrator will do an online backup while the system is still providing service. The online backup mechanism for a full backup is a "snapshot" of the state of the disk volume at the time the backup was started. This ensures that the data within a volume is consistent even though the volume may be changed during the time the backup is in progress.

Online backups should not be done when the system is at its busiest since this increases the load on the disk drives.

In most cases, a full backup can be performed overnight. It may still be possible to have backups aborted if they extend beyond the time that the system audit programs are required to run.

Note: In Release 12, the VS audit is delayed to allow the backup to complete.

Backups can be performed automatically using the scheduled backup feature. A temporary volume (VSnB) is created by an online backup.

What to do before you begin

Checklist

This list of points should be followed before proceeding with the restore system from backup utility.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.

- Obtain a tape head cleaning kit and *clean the tape heads* before doing a backup. For information, see the *Installation and Maintenance Guide* (NTP 555-70x1-250).

- Obtain the disk switch setting information found in the *Installation and Maintenance Guide* (NTP 555-70x1-250).

- If you are installing a new hard disk, obtain DIP switch settings for your new drive. For information see the *Installation and Maintenance Guide* (NTP 555-70x1-250).

- If restoring a system not equipped with disk shadowing, make sure you have the latest copy of the backup tape.

- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)

- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.

- Go to the Volume Administration screen from General Administration and check to see how many nodes you have.

- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.

- Obtain the Meridian Mail Release12 Install/data tape.

Restoring a system from backup

When to use these procedures

Use the common procedure

- to display the System Installation and Modification Menu and the System Operation Utility Menu

Use the restore from backup procedure

- to restore a failed system to the same operational state (or as close as possible) that it had before the problem occurred
- for a platform migration

Common procedure

To display the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.
	Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, see the *System Administration Guide* (NTP 555-70x1-30x) for your system.
2	Insert the Install/data tape into the tape drive.
	Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions.
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.
	Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250).

Step	Action
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system. A series of diagnostic routines are displayed followed by the message: `Tape Retension` ***Note:*** The tape is retensioned in approximately 5 minutes and the software loads in five to 10 minutes depending on your system. ***Result:*** Once loaded, the following System Installation and Modification Menu is displayed:

```
    System Installation & Modification Menu
    ---------------------------------------


            1   Install an MM12 system
            2   Comprehensive Upgrade
            3   More Utilities










Please enter the operation number: █
```

Step	Action
5	Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>.
	Result: The System Operation Utility Menu is displayed.
	Note: Depending on your platform and features, the System Operation Utility Menu shown below may appear differently.

```
     System Operation Utility Menu
     ----------------------------


             1  Toggle Disk to Disk backup
             2  Standardize Volume sizes
             3  Restore System from Backup
             4  Change to Default System Password
             5  Move Voice Services Cabinet
             6  Modify Number of HVS Users
             7  Console Port Speed Configuration
             8  Recreate system
             9  Change System Serial Number
            10  Exit to Support Level
            11  Back to Main Menu




Please enter the operation number:
```

Step	Action
6	Go to the next procedure in this chapter.

Restoring from backup

To restore your system from a backup tape, follow these steps.

Starting Point: The System Operation Utility Menu

Step	Action
1	Press the up or down arrow keys until the number corresponding to Restore System from Backup is displayed on the screen (or enter the desired selection number), then press <Return>.

Result: The following prompt is displayed:

```
You have chosen to restore from backup

Do you wish to continue? Yes (No)
```

2	Press the up or down arrow key to display Yes, then press <Return>.

Result: Various system messages are displayed on the screen along with the following messages:

```
Shutting down tape server
```

and

```
Insert backup tape. Press enter when ready
```

3	After inserting a backup tape into the tape drive and pressing <Return>, the following message is displayed.

```
Rewinding tape ...
```

Note: If it is the wrong tape, another message appears.

```
This is not a valid volume backup tape.
```

and you are asked to insert another backup tape.

Step	Action
4	If the correct tape is inserted, the following summary of the backup tape is displayed.

Example: The following example screen is displayed. Your display may differ.

```
    DES:  System Operation utilities loaded [LOCN:4/1/7800 0000 037B 4404]

INF 1600 SYSTEM **/**/**   **:**:** SC NODE=5
    DES:  System Operation utilities loaded [LOCN:5/1/7600 0000 037B 4404]



Insert backup tape. Press enter when ready.
Rewinding tape...
This is not a valid volume backup tape.

Insert backup tape. Press enter when ready.
Rewinding tape...

This backup contains:
System: MeridianMail  Label: "Test Case 3.2"
First backup volume: VS1T      Done on 09 01 12 at 00:08
Node   Volume     Data      Source
----   ------   ---------   ------
  1      VS1    Voice&Data  fromThisTape
  1      VS2     DataOnly   fromThisTape
  2     VS202    DataOnly   fromThisTape

Use this tape? Yes
```

Step	Action
5	Use this tape? If No, go to step 6. If Yes, go to step 7.
6	Select No, then press <Return>. *Result:* You are asked to insert another tape. Go to step 3.
7	Select Yes, then press <Return>. *Result:* The following messages and prompts are displayed.

```
Please wait. Scanning all nodes for disk
information.

You may now specify the nodes to restore.
```

Note: You will see the above message only on multinode, non-MSM systems if disk-to-disk backup is detected.

```
Do you wish to restore node 1? No (Yes)
```

Step	Action

Note: At this point, you are asked all the nodes you wish to restore.

Example: If you have a 5-node system, the screen display may look like the following:

```
   1      VS1 Voice&Data  fromThisTape
   1      VS2   DataOnly  fromThisTape
   2     VS202   DataOnly  fromThisTape

Use this tape? Yes

You may now specify the nodes to restore.

Do you wish to restore node 1? Yes
Restore VS1?   Voice&Data_fromThisTape
Do you wish to restore node 2? Yes
Restore VS202? DataOnly___fromThisTape
Do you wish to restore node 3? No
Do you wish to restore node 4? No
Do you wish to restore node 5? No

You have selected to restore the following:

NODE   VOLUME            TYPE   FROM
----   ------            ----   ----
  1      VS1        Voice&Data  Tape
  2     VS202        DataOnly   Tape

Do you wish to change the above information? No
```

8	Do you wish to change the above information? If Yes, go to step 9. If No, go to step 10.
9	If you select Yes, you are returned to the summary in step 4.
10	If you select No, you are asked if you wish to continue. If No, the procedure is aborted. If Yes, go to step 11.

Step	Action
11	If you select Yes, disk formatting begins.
	Example: The following screen is displayed.

```
Do you wish to restore node 3? No
Do you wish to restore node 4? No
Do you wish to restore node 5? No

You have selected to restore the following:

NODE    VOLUME              TYPE    FROM
----    ------              ----    ----
  1       VS1           Voice&Data   Tape
  2       VS202          DataOnly    Tape

Do you wish to change the above information? No
Do you wish to continue? Yes

Formatting disks to be restored: this will take approximately
45 minutes for unshadowed systems and 90 minutes for shadowed
systems.
WARNING! Do not attempt to power off the system while disks
are being formatted.
Formatting SCSI ID 0 on node 1
Formatting SCSI ID 0 on node 2
Formatting SCSI ID 2 on node 1
Formatting SCSI ID 2 on node 2
```

Result: Once formatting is completed, various system information is displayed, followed by the prompt.

Note: If you are doing a platform migration, languages are not copied to the system. In this case, go to step 13.

```
Please insert Install/Data tape

Hit <CR> to continue
```

Step	Action
12	Insert the Install/data tape and press <Return>. ***Result:*** Various system information is displayed, followed by the message: `Shutting down tape server`

13	Once the tape server shuts down and the system operation utilities are unloaded from each node, the following messages are displayed.
	
	`Restore Completed`
	
	`The operation successfully completed.`
	
	`Remove the tape when it finishes rewinding`
	`and boot into Service.`
	
	`#TAPE:MMTAPE1>`

14	Remove the Install/data tape and turn the power off.
15	After 10 seconds turn the power on. ***Note:*** Booting the system takes from 10 to 15 minutes per node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Chapter 7

Change to default system password

In this chapter

Overview

Introduction   This chapter explains how to change to the default system
                            password.

What is change to default system password?

Introduction   Passwords are an integral part of your system's security and
                          should be changed at least on a monthly basis.

Purpose   The purpose of changing the default system password is to reset
                          the password if it is forgotten.

What to do before you begin

Checklist

This list of points should be followed before proceeding with the change to default system password utility.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.
- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)
- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.
- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.
- Obtain the Meridian Mail Release12 Install/data tape.

Changing to the default system password

When to use these procedures

Use the common procedure to display the System Installation and Modification Menu

Use the changing to default system password procedure when you wish to reset your password

Common procedure

To display the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.

Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, refer to the section "Disabling/Activating the system" in the chapter "System Status and Maintenance" in the *System Administration Guide.*

ATTENTION

On Card Option systems, disable the AML link before turning off the power to Meridian Mail.

Step	Action
2	Insert the Install/data tape into the tape drive.

Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions. For MSM systems, contact your Nortel representative.

Step	Action
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.

Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250). For MSM systems, contact your Nortel representative.

Step	Action

Note: Card Option systems using external tape drives must have the tape drive turned on before booting up.

4   For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.

ATTENTION

On Card Option systems, reenable the AML link after turning on the power to Meridian Mail.

A series of diagnostic routines are displayed followed by the message:

```
Tape Retension
```

Note: The tape is retensioned in approximately 5 minutes, and the software loads in 5 to 10 minutes depending on your system.

Result: Once loaded, the following System Installation and Modification Menu is displayed.

```
    System Installation & Modification Menu
    --------------------------------------


            1  Install an MM12 system
            2  Comprehensive Upgrade
            3  More Utilities








Please enter the operation number: █
```

Step	Action

5   Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>.

Result: The System Operation Utility Menu is displayed.

Note: Depending on your platform and features, the System Operation Utility Menu shown below may appear differently.

```
      System Operation Utility Menu
      -----------------------------

              1  Toggle Disk to Disk backup
              2  Standardize Volume sizes
              3  Restore System from Backup
              4  Change to Default System Password
              5  Move Voice Services Cabinet
              6  Modify Number of HVS Users
              7  Console Port Speed Configuration
              8  Recreate system
              9  Change System Serial Number
             10  Exit to Support Level
             11  Back to Main Menu




Please enter the operation number:
```

6   Go to the next procedure in this chapter.

Changing to default system password

To change your password to the default system password, follow these steps.

Starting Point: The System Operation Utility Menu

Step	Action
1	Press the up or down arrow keys until the number corresponding to Change to Default System Password is displayed on the screen (or enter the desired selection number), then press <Return>.

Result: The following prompt is displayed.

```
You have chosen to reset system password
to default

Do you wish to continue? Yes (No)
```

2	Press the up or down arrow key until the word Yes is displayed on the screen, then press <Return>.

Result: The system displays the following messages:

```
System Administrator's Password has been
reset to the default.

Please reboot your system into full
service

Shutting down the tape server

#TAPE:MMTAPE1>
```

3	Remove the Install/data tape and turn the power off.
4	After 10 seconds turn the power on.

Note: Booting the system takes from 10 to 15 minutes per node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Chapter 8

Move voice services cabinet

In this chapter

Overview

Introduction   This chapter explains how to move the voice services cabinet from volume VS1 to another volume.

What is move the voice services cabinet?

Introduction

The voice services cabinet is used to store the following data.

- voice menu recordings
- announcement recordings
- voice services profile
- fax documents

Note: This feature is not available on Card Option.

Why the voice services cabinet should be moved

Because the voice services cabinet is kept mainly in Volume VS1 on node 1, it allows the voice services information to be saved automatically during a partial backup of the database. However, if the database is large, this volume may become too full due to the storage requirements of features such as Fax on Demand. If this occurs, it may be necessary to reassign the voice services cabinet to another volume in order to prevent the system from becoming overloaded.

For more information on voice services storage, see the *Site and Installation Planning Guide* (NTP 555-70x1-200) for your platform or the *MSM Planning and Engineering Guide* (NTP 557-7001-100).

What to do before you begin

Checklist

This list of points should be followed before proceeding with the Move Voice Services Cabinet utility.

- Make sure you have read and understood, see Chapter 2, "Overview: read me first".

- Before voice services cabinet is moved to another volume, always perform a full backup in order to save the data. The system will not remember where the voice services cabinet has been moved to and will not copy them from their new location.

ATTENTION

It is up to the administrator to identify the volume to be backed up by selecting the volume where the voice services are located when performing the full backup.

If your voice services have been moved prior to a conversion to MM12, you need to know what volume these services are stored in.

For more information, see the chapter on voice services administration in your *System Administration Guide* (NTP 555-70x1-30x).

- Disable disk to disk backup.

- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)

- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.

- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.

- Obtain the Meridian Mail Release 12 Install/data tape.

Moving the voice services cabinet

When to use these procedures

Use the common procedure

- to display the system Installation and Modification Menu and the System Operation Utility Menu

Use the move voice services cabinet procedure

- to move the voice services cabinet from Volume VS1 because of storage space considerations

Common procedure

To display the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps. ***Note:*** Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, see the *System Administration Guide* (NTP 555-70x1-30x) for your system.
2	Insert the Install/data tape into the tape drive. ***Note:*** Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions. For MSM systems, contact your Nortel representative.
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card. ***Note:*** Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250). For MSM systems, contact your Nortel representative.

Step	Action
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.
	A series of diagnostic routines are displayed followed by the message:
	`Tape Retension`
	Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.
	Result: Once loaded, the following System Installation and Modification Menu is displayed:

```
   System Installation & Modification Menu
   ---------------------------------------


           1   Install an MM12 system
           2   Comprehensive Upgrade
           3   More Utilities






Please enter the operation number: █
```

Step	Action
5	Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>.
	Result: The System Operation Utility Menu is displayed.
	Note: Depending on your platform and features, the System Operation Utility Menu shown below may appear differently.

```
    System Operation Utility Menu
    ----------------------------


            1  Toggle Disk to Disk backup
            2  Standardize Volume sizes
            3  Restore System from Backup
            4  Change to Default System Password
            5  Move Voice Services Cabinet
            6  Modify Number of HVS Users
            7  Console Port Speed Configuration
            8  Recreate system
            9  Change System Serial Number
           10  Exit to Support Level
           11  Back to Main Menu




Please enter the operation number:
```

Step	Action
6	Press the up or down arrow key until the number corresponding to Move Voice Services Cabinet is displayed on the screen (or enter the desired selection number), then press <Return>.
	Result: This will begin the utility.
7	Go to the next procedure in this chapter.

Moving voice services cabinet

To move the voice services cabinet from Volume VS1 to another destination volume, follow these steps.

Step	Action
1	Once you have selected the move voice cabinets option from the utilities menu, the following message is displayed.

```
You have chosen to move voice service
cabinet.

Do you wish to continue? Yes(No)
```

Step	Action
2	Press the up or down arrow key until Yes is displayed, then press <Return>. The following system prompt is displayed.

```
Move Voice Service Cabinet
```

Result: A number of system messages are displayed. After about three minutes, the following prompt will appear:

```
Destination Volume: 1
```

Note: If you have a one-node system, the above prompt does not appear.

Step	Action
3	Press the up or down arrow and press <Return> in order to select the destination volume.

Note: A one-node system will toggle between volumes VS1 and VS2. A multi-node system will toggle between volumes VS1 and VS202.

Requirement: Verify your choice or quit the procedure. Your display may differ depending on your destination volume.

```
The Voice Services will be moved from
volume 1 to volume 2

Do you want to continue? Yes (No)
```

Step	Action
4	Press the up or down arrow key until the word Yes is displayed on the screen, then press <Return>, and the voice service cabinet will be moved.
	Result: At this point, the software queries all possible nodes in the system and a timeout occurs for each node location that is not installed. The procedure continues without further operator intervention. The following completion message appears.

```
The operation successfully completed.

Remove the tape when it finishes rewinding
and boot into Service.

Shutting down tape server.

#TAPE:MMTAPE1>
```

Step	Action
5	Remove the Install/data tape and turn the power off. After 10 seconds, turn the power on.
	Note: Booting the system takes from 10 to 15 minutes per node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Chapter 9

Modify the number of HVS users

In this chapter

Overview

Introduction   This chapter explains how to modify the number of HVS users
                          on your system.

                          Note: This system operation is not available on the Message
                          Services Module (MSM) platform.

What does it mean to modify the number of HVS users?

Introduction   An HVS user is any guest mailbox. A system is normally equipped to support a certain number of users per node. If a hospitality institution is adding more mailboxes, it may be necessary to modify the number of users. The maximum number of users allowed is 9800.

What to do before you begin

Checklist

This list of points should be followed before modifying the number of HVS users.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.
- Perform a full backup of the database (a partial backup is acceptable, but a full backup is recommended).
- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)
- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.
- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.
- Disable disk to disk backup.
- Obtain the Meridian Mail Release 12 Install/data tape.

Modifying the number of HVS users

When to use these procedures

Use the common procedure

- to display the System Installation and Modification Menu and the System Operation Utility Menu

Use the modify procedure

- to add more mailboxes to your hospitality system

Common procedure

To bring up the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.

Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, refer to the section "Disabling/Activating the system" in the chapter "System Status and Maintenance" in the *System Administration Guide.*

ATTENTION

On Card Option systems, disable the AML link before turning off the power to Meridian Mail.

---

2   Insert the Install/data tape into the tape drive.

Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions.

3   Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.

Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250).

Step	Action
	Note: Card Option systems using external tape drives must have the tape drive turned on before booting up.
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.

ATTENTION

On Card Option systems, reenable the AML link after turning on the power to Meridian Mail.

A series of diagnostic routines are displayed followed by the message:

```
Tape Retension
```

Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.

Result: Once loaded, the following System Installation and Modification Menu is displayed:

```
    System Installation & Modification Menu
    ---------------------------------------


            1  Install an MM12 system
            2  Comprehensive Upgrade
            3  More Utilities












Please enter the operation number: █
```

Step	Action
5	Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>.
	Result: The System Operation Utility Menu is displayed.
	Note: Depending on your platform and features, the System Operation Utility Menu shown below may appear differently.

```
     System Operation Utility Menu
     -----------------------------


               1   Toggle Disk to Disk backup
               2   Standardize Volume sizes
               3   Restore System from Backup
               4   Change to Default System Password
               5   Move Voice Services Cabinet
               6   Modify Number of HVS Users
               7   Console Port Speed Configuration
               8   Recreate system
               9   Change System Serial Number
              10   Exit to Support Level
              11   Back to Main Menu




Please enter the operation number:
```

| 6 | Go to the next procedure in this chapter. |

Modifying the HVS users   To change the number of HVS users on your system, follow these steps.

Starting Point: The System Operation Utility Menu

Step	Action
1	Press the up or down arrow keys until the number corresponding to Modify number of HVS Users is displayed on the screen (or enter the desired selection number), then press <Return>.

Result: The following prompt is displayed:

```
You have chosen to modify the number of
HVS users

Do you wish to continue? Yes (No)
```

Step	Action
2	Do you wish to continue?

If No, you are returned to the System Operation Utility Menu.

If Yes, go to step 3.

Step	Action
3	If you choose Yes, and

IF you	THEN go to
have HVS enabled as a feature	steps 4, 5, and 6.
do not have HVS enabled as a feature	step 8.

Step	Action
4	The following prompt is displayed if the HVS feature is installed on your system.

```
Enter the number of HVS users on your
system:
```

Step	Action
5	Enter the required number of HVS users.

Result: The following prompts are displayed:

```
The number of HVS users on your system has
been changed to nnn
```

Note: where "nnn" is the number of users entered.

```
Please reboot into full service
```

```
#TAPE:MMTAPE1>
```

Step	Action
6	Remove the Install/data tape and turn the power off.
7	After 10 seconds turn the power on.

Note: Booting the system takes from 10 to 15 minutes per node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Step	Action
8	If HVS is not installed on your system. The following prompt is displayed:

```
HVS is not installed on your system
```

and the utility ends here.

Note: If the HVS feature is required for your system but has not been installed, a new software installation is required using a keycode which permits HVS.

Chapter 10

Console port speed configuration

In this chapter

Overview

Introduction   This chapter explains how to set the console port speed on your system.

Note: The Console Port Speed Configuration Utility is available only on the Modular Option EC, the Modular Option, and the Option EC-11 platforms.

What is console port speed configuration?

Introduction   Console Port Speed Configuration provides the administrator or installer with the means to change the default console port speed in the non-volatile RAM (NVRAM) of the MMP40 card.

Console Port Speed Configuration is used to change the baud rate on the administration terminal, multiple-administration terminals (MATs), and GACs.

What to do before you begin

Checklist
This list of points should be followed before configuring the console port speed on your Modular Option, Modular Option EC, or your Option EC-11 system.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.
- Perform a full backup of the database (a partial backup is acceptable, but a full backup is recommended).
- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)
- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.
- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.
- Disable disk to disk backup.
- Obtain the Meridian Mail Release 12 Install/data tape.

Changing the console port speed configuration

Introduction   There are three procedures described in this chapter.

When to use these procedures   Use the common procedure

- to display the System Installation and Modification Menu and the System Operation Utility Menu

Use the change console port speed procedure

- to change the console port speed in the NVRAM of the MMP40 card for proper communication with the administration terminal, MATs, and GACs

Use the verify the MMP40 card baud rate procedure

- to find the default line speed of a replacement MMP40 card

Common procedure   To display the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

    Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.
	Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, see the *System Administration Guide* (NTP 555-70x1-30x) for your system.
2	Insert the Install/data tape into the tape drive.
	Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions.
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.
	Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250).

Step	Action
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.
	A series of diagnostic routines are displayed followed by the message:
	`Tape Retension`
	Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.
	Result: Once loaded, the following System Installation and Modification Menu is displayed:

```
    System Installation & Modification Menu
    ---------------------------------------


            1   Install an MM12 system
            2   Comprehensive Upgrade
            3   More Utilities












Please enter the operation number: █
```

Step	Action
5	Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>.
	Result: The System Operation Utility Menu is displayed.
	Note: Depending on your platform and features, the System Operation Utility Menu may appear differently.

Step Action

```
   System Operation Utility Menu
   -----------------------------


           1   Toggle Disk to Disk backup
           2   Standardize Volume sizes
           3   Restore System from Backup
           4   Change to Default System Password
           5   Move Voice Services Cabinet
           6   Modify Number of HVS Users
           7   Console Port Speed Configuration
           8   Recreate system
           9   Change System Serial Number
          10   Exit to Support Level
          11   Back to Main Menu




Please enter the operation number:
```

6   Go to the next procedure in this chapter.

Changing the console port speed

To change the console port speed configuration on the MMP40 card, follow these steps.

Step	Action
1	Press the up or down arrow keys until the number corresponding to Console Port Speed Configuration is displayed on the screen (or enter the desired selection number), then press <Return>.
	Result: The following prompt is displayed:

```
You have chosen to configure Console Port
Speed

Do you wish to continue? Yes (No)
```

2	Do you wish to continue?
	If Yes, go to step 3.
	If No, you are returned to the System Operation Utility Menu.
3	Select Yes, and press <Return>.
	Result: As an example, the system may respond with:

```
Console Port Speed Configuration Utility

This utility displays the current setting
for the console port and allows the
setting to be reset to 2400 or 9600 bps.

Loading console port speed configuration
utility...

Node 1 Console Port Speed: 2400 bps

Do you want to change the console port
speed? Yes
```

4	Do you want to change the console port speed?
	If Yes, go to step 5.
	If No, you are returned to the System Operation Utility Menu.

Step	Action
5	Select Yes, and press <Return>.

Result: As an example, the system may respond with:

```
Enter new console port speed (bps): 9600

MMP40 Console Port speed reset to 9600.
Adjust Terminal speed to requested port
speed (within 45 seconds.)
```

Note: In order to select the Set-Up screen to modify your terminal speed, see the reference material in the appropriate *Installation and Maintenance Guide* (NTP 555-70x1-250).

In the event that you do not match the console port speed with the terminal speed, you will receive a garbled message. You must reselect the terminal speed, and <Control><R> will refresh the screen.

Result: When the terminal setup is complete, the following prompt is displayed.

```
#TAPE:MMTAPE1>
```

| 6 | Remove the Install/data tape and turn the power off. |
| 7 | After 10 seconds turn the power on. |

Note: Booting the system takes from 10 to 15 minutes per node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Verifying the MMP40 card baud rate

If you want to verify the line speed of a replacement MMP40 card, follow these steps.

Step	Action
1	Boot the system from the Install/data tape.

Note: Diagnostic and bootup messages will appear correctly on the console even if the terminal and NVRAM values are different.

Result: As an example, the operating system starts up and the following message appears:

```
Change Your Console & Modem Setup for XXXX
bps Access
```

Note: XXXX is the MMP40 NVRAM value for the port speed displayed on the terminal.

Note: If the MMP40 NVRAM value does not match the desired speed, refer to the previous procedure on changing the console port speed.

Chapter 11

Recreate system

In this chapter

Overview

Introduction   This chapter explains how to recreate your system.

What is recreate system?

Introduction   Recreate system is used to upgrade your system and requires minimal input from the user.

Recreate system does not require a keycode. Storage hours and languages features, and hardware cannot be changed when recreating a system.

What to do before you begin

Checklist   This list of points should be followed before recreating your system.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.
- Perform a full backup of the database (a partial backup is acceptable, but a full backup is recommended).
- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)
- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.
- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.
- Disable disk to disk backup.
- Obtain the Meridian Mail Release 12 Install/data tape.

Recreating a system

When to use these procedures

Use the common procedure

• to display the System Installation and Modification Menu and the System Operation Utility Menu

Use the recreating a system procedure

• to upgrade your system to the latest release
• when a recovery of your system is necessary

Note: In this case, recreate system copies all files back to the system and rebuilds the startlist and the VSS.PD.

Common procedure

To display the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps. ***Note:*** Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, refer to the section "Disabling/Activating the system" in the chapter "System Status and Maintenance" in the *System Administration Guide.*

ATTENTION

On Card Option systems, disable the AML link before turning off the power to Meridian Mail.

Step	Action
2	Insert the MM12 Install/data tape into the tape drive. ***Note:*** Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions. For MSM systems, contact your Nortel representative.

Step	Action
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.

Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250). For MSM systems, contact your Nortel representative.

Note: Card Option systems using external tape drives must have the tape drive turned on before booting up.

Step	Action
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.

ATTENTION

On Card Option systems, reenable the AML link after turning on the power to Meridian Mail.

A series of diagnostic routines are displayed followed by the message:

```
Tape Retension
```

Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.

Result: Once loaded, the following System Installation and Modification Menu is displayed:

Step Action

```
   System Installation & Modification Menu
   ---------------------------------------


          1   Install an MM12 system
          2   Comprehensive Upgrade
          3   More Utilities









Please enter the operation number: █
```

5   Use the up or down arrow keys, to select the number (or type
         the number) for More Utilities, then press <Return>.

         Result: The System Operation Utility Menu is displayed.

         Note: Depending on your platform and features, the System
         Operation Utility Menu shown below may appear differently.

```
   System Operation Utility Menu
   -----------------------------


          1   Toggle Disk to Disk backup
          2   Standardize Volume sizes
          3   Restore System from Backup
          4   Change to Default System Password
          5   Move Voice Services Cabinet
          6   Modify Number of HVS Users
          7   Console Port Speed Configuration
          8   Recreate system
          9   Change System Serial Number
         10   Exit to Support Level
         11   Back to Main Menu




Please enter the operation number:
```

6   Go to the next procedure in this chapter.

Recreating a system   To upgrade your system to the latest MM12 release, follow
these steps.

Starting Point: The System Operation Utility Menu

Step	Action

1	Press the up or down arrow keys until the number corresponding to Recreate a System is displayed on the screen (or enter the desired selection number), then press <Return>.
	Result: The following prompt is displayed:
	
	```You have chosen to upgrade to the latest MM12 software```
	
	```Do you wish to continue? Yes (No)```

2	Do you wish to continue? If Yes, go to step 3. If No, select No, then press <Return> to return to the System Installation and Modification Menu.

3	Select Yes, then press <Return>.
	Result: Various system messages are displayed. Examples of some of the messages displayed are:
	
	```Checking System version```
	
	```Writing Operating System to Prime Node Disk```
	
	```IPL successfully written to disk```
	
	```Creating required volumes```
	
	```Adjusting volume sizes```
	
	```Removing obsolete files```

Step	Action

The final screen is displayed.

```
Software Upgrade
                 Creating OFS file--------------------------------------------

INF 1600 SYSTEM 01/02/83  04:25:44 SC NODE=3
    DES:  System Operation utilities unloaded [LOCN:3/1/7A00 0000 037B 6004]

INF 1600 SYSTEM 01/02/83  04:25:54 SC NODE=4
    DES:  System Operation utilities unloaded [LOCN:4/1/7800 0000 037B 6004]

INF 1600 SYSTEM 01/02/83  04:26:04 SC NODE=5
    DES:  System Operation utilities unloaded [LOCN:5/1/7600 0000 037B 6004]

-=-=-=-=-=-=- Operation Summary -=-=-=-=-=-=-

The operation successfully completed.

The system has been upgraded from 11.11.1 to 11.11.1

Remove the tape when it finishes rewinding and boot into Service.
Timing Information:
     Total Elapsed Time in operation     : 0:26:23

Shutting down tape server
#TAPE:MMTAPE1>
```

4   Remove the Install/data tape and turn the power off. After 10 seconds turn the power on.

Note: Booting the system takes from 10 to 15 minutes per node.

Result: After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Chapter 12

Change system serial number

In this chapter

Overview

Introduction   This chapter explains how to change your system serial number.

What is change system serial number?

Introduction   The key advantage of being able to change your system serial number is that it allows you to match the 11-digit serial number of the M1 switch. This means that you are only required to maintain one serial number for your Nortel products.

Note: Serial numbers may also be changed during a comprehensive upgrade by entering the serial number keycode when prompted.

Note: This utility is not available on the Meridian Mail Card Option platform.

What to do before you begin

Checklist

This list of points should be followed before changing your system serial number.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.

- Perform a full backup of the database (a partial backup is acceptable, but a full backup is recommended).

- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)

- Enable SEER printing. Go to the General Options Screen under General Administration in order to do this.

- Enable your terminal's auto-print mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.

- Disable disk to disk backup.

- Obtain the Meridian Mail Release 12 Install/data tape.

- Obtain a new keycode for the new serial number from your Nortel representative.

Changing the system serial number

When to use these procedures

Use the common procedure

- to display the System Installation and Modification Menu and the System Operation Utility Menu

Use the change system serial number procedure:

- to change the serial number of your system

Common procedure

To display the System Installation and Modification Menu and the System Operation Utility Menu, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.
	Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, refer to the section "Disabling/Activating the system" in the chapter "System Status and Maintenance" in the *System Administration Guide* for your platform.
2	Insert the Install/data tape into the tape drive.
	Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions. For MSM systems, contact your Nortel representative.
3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.
	Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250). For MSM systems, contact your Nortel representative.
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.

Step	Action

A series of diagnostic routines are displayed followed by the message:

```
Tape Retension
```

Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.

Result: Once loaded, the following System Installation and Modification Menu is displayed.

```
System Installation & Modification Menu
---------------------------------------


        1   Install an MM12 system
        2   Comprehensive Upgrade
        3   More Utilities











Please enter the operation number: █
```

Step	Action
5	Use the up or down arrow keys, to select the number (or type the number) for More Utilities, then press <Return>. *Result:* The System Operation Utility Menu is displayed. *Note:* Depending on your platform and features, the System Operation Utility Menu shown below may appear differently.

```
    System Operation Utility Menu
    ----------------------------


            1  Toggle Disk to Disk backup
            2  Standardize Volume sizes
            3  Restore System from Backup
            4  Change to Default System Password
            5  Move Voice Services Cabinet
            6  Modify Number of HVS Users
            7  Console Port Speed Configuration
            8  Recreate system
            9  Change System Serial Number
           10  Exit to Support Level
           11  Back to Main Menu




Please enter the operation number:
```

Step	Action
6	Go to the next procedure in this chapter.

Changing the system serial number

To change the serial number on your system, follow these steps.

Starting Point: The System Operation Utility Menu

Step	Action

1	Press the up or down arrow keys until the number corresponding to Change System Serial Number is displayed on the screen (or enter the desired selection number), then press <Return>.
	
	Result: The following prompt is displayed:
	
	`You have chosen to change the system serial number`
	
	`Do you wish to continue? Yes (No)`

2	Do you wish to continue? If No, you are returned to the System Operation Utility Menu. If Yes, go to step 3.

3	Select Yes, then press <Return>
	Result: The following message is displayed:
	
	`Loading Change Serial Number Utility. Please Wait.`
	
	`Starting RW100 server`
	
	`RW100 has been started`
	
	`Please enter the Change Serial Number Keycode.`
	
	`Enter 4 Character Block 1:`

Step	Action
4	Enter the change serial number keycode that Nortel supplied to you. **Example:** Your display will be similar to the following screen.

```
Loading Change Serial Number Utility.  Please Wait.
Starting RW100 server

RW100 has been started

Please enter the Change Serial Number Keycode.

Enter 4 Character Block 1 : 6qlt

Enter 4 Character Block 2 : qg6g

Enter 4 Character Block 3 : y703

Enter 4 Character Block 4 : 42cg

Enter 4 Character Block 5 : kxec


About to change serial number from : R23X4
                              to : S24879AA3
Continue ?  Yes
```

Step	Action
5	Continue? If Yes, go to steps 6 and 7. If No, go to step 8.
6	Select Yes, then press <Return>. *Result:* The following message is displayed: `The serial number has been changed.`
7	Remove the Install/data tape and turn the power off. After 10 seconds turn the power on. *Note:* Booting the system takes from 10 to 15 minutes per node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Step	Action
8	Select No, then press <Return>.
	Result: The following message is displayed:
|  | ```
Change serial number request aborted by
user.
``` |
|  | ```
Serial number has not been changed.
``` |
| | and the utility is aborted. |

Chapter 13

Exit to support level

In this chapter

Overview

Introduction   This chapter explains how to exit so that you may use special utilities on your system.

What is exit to support level?

Introduction   Exit to support level is a utility most commonly used by support level personnel who need access to specialized utilities.

ATTENTION

The Exit to Support Level utility should only be used by qualified technicians.

What to do before you begin

Checklist   This list of points should be followed before exiting to the
                          support level.

- Before you continue, see Chapter 2, "Overview: read me
  first" and make sure you have read and understood it.
- Perform a full system backup (partial backup is acceptable,
  but a full backup is recommended).
- Disable disk to disk backup.
- Make sure that there is paper in the printer. (If your printer
  runs out of paper during the procedure, your screen will
  freeze.)
- Enable SEER printing. Go to the General Options Screen
  under General Administration in order to do this.
- Enable your terminal's auto-print mode (<Control><W>
  followed by <P>) in order to capture everything that
  appears on your screen. If you have to reboot the system
  for any reason, you will have to reenable the auto-print
  mode.
- Obtain the Meridian Mail Release 12 Install/data tape.

Exiting to support level

When to use this procedure

Use this procedure

- if you need access support level utilities

Exiting to support level

To display the System Installation and Modification Menu, the System Operation Utility Menu, and the support level prompt, follow these steps.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step	Action
1	Select the "System Status" screen and perform a courtesy-down procedure before starting on any of the following steps.

Note: Do this prior to starting any of the procedures described in this guide to prevent calls from being abruptly terminated when the operation begins. For more information, refer to the section "Disabling/Activating the system" in the chapter "System Status and Maintenance" in the *System Administration Guide* for your platform*.*

ATTENTION

On Card Option systems, disable the AML link before turning off the power to Meridian Mail.

2	Insert the Install/data tape into the tape drive.

Note: Refer to Chapter 5 of the *Installation and Maintenance Guide* (NTP 555-70x1-250) for tape insertion instructions. For MSM systems, contact your Nortel representative.

3	Turn off the power to Meridian Mail, or press the reset button on the MMP40 card.

Note: Reset node 1 first, then nodes 2 through 5 in sequence, if applicable. For more information on power up and power down procedures, refer to Chapter 14 in the *Installation and Maintenance Guide* (NTP 555-70x1-250). For MSM systems, contact your Nortel representative.

Note: Card Option systems using external tape drives must have the tape drive turned on before booting up.

Step	Action
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.

> ### ATTENTION
>
> On Card Option systems, reenable the AML link after turning on the power to Meridian Mail.

Result: A series of diagnostic routines is displayed followed by the message:

```
Tape Retension
```

Note: The tape is retensioned in approximately 5 minutes and the software loads in 5 to 10 minutes depending on your system.

Result: Once loaded, the following System Installation and Modification Menu is displayed.

```
    System Installation & Modification Menu
    ---------------------------------------


            1   Install an MM12 system
            2   Comprehensive Upgrade
            3   More Utilities













Please enter the operation number: █
```

Step	Action
5	Use the up or down arrow keys to select the number for More Utilities (or type the number), then press <Return>.

Result: The System Operation Utility Menu is displayed.

Note: Depending on your platform and features, the System Operation Utility Menu may not appear the same as the one shown below.

Step Action

```
     System Operation Utility Menu
     ----------------------------


             1   Toggle Disk to Disk backup
             2   Standardize Volume sizes
             3   Restore System from Backup
             4   Change to Default System Password
             5   Move Voice Services Cabinet
             6   Modify Number of HVS Users
             7   Console Port Speed Configuration
             8   Recreate system
             9   Change System Serial Number
            10   Exit to Support Level
            11   Back to Main Menu




Please enter the operation number:
```

6   Use the up or down arrow keys to select the number for Exit to
        Support Level (or type the number), then press <Return>.

        Result: The following support level prompt is displayed:

                #TAPE:MMTAPE>

        Note: For more information on available support levels refer to
        the following guide: *System Administration Tools Guide* (NTP
        555-7001-305).

7   Remove the Install/data tape and turn the power off. After 10
        seconds turn the power on.

        Note: Booting the system takes from 10 to 15 minutes per
        node. After booting, the Meridian Mail logon screen appears.

ATTENTION

Store the Install/data tape in a safe place. This will
ensure that if you need to reinstall or modify the system,
you will have quick access to the tape.

Chapter 14

Software installation

In this chapter

Overview

Introduction   This chapter explains how the Release 12 software is installed on the Meridian Mail system. These procedures are most often performed during a new equipment installation, but can also be performed after a disk crash, or when you do not have backup tapes.

What to do before you begin

Checklist

This list of points should be followed when you are installing the Meridian Mail Release 12 software.

- Before you continue, see Chapter 2, "Overview: read me first" and make sure you have read and understood it.
- Determine the port capacity of your Meridian Mail system.
- Make sure that there is paper in the printer. (If your printer runs out of paper during the procedure, your screen will freeze.)
- Enable your terminal's autoprint mode (<Control><W> followed by <P>) in order to capture everything that appears on your screen. If you have to reboot the system for any reason, you will have to reenable the auto-print mode.
- Obtain a Meridian Mail Release 12 Install/data tape.
- Obtain the keycode from Nortel.
- Verify that all the appropriate hardware is installed, particularly the hardware associated with the features defined in your keycode. If additional hardware needs to be added, obtain the hardware. Refer to your platform's *Installation and Maintenance Guide* (NTP 555-70x1-250) for more information; for Card Option, refer to (NTP 555-7071-210); for Option EC-11, refer to (NTP 555-7081-250); for the Message Services Module (MSM), refer to *MSM Planning and Engineering Guide* (NTP 557-7001-100) or, contact your Nortel representative.
- All platforms except Modular Option EC, MSM, and Option EC-11 require an RSM card for the features listed below.

The following is a brief summary of requirements.

- Meridian networking requires a modem port.
- HVS requires an RSM/utility card.
- Modular Option EC and Option EC-11 require a utility card.
- Multi-Admin requires ports for UATs.

- Outcalling and AMIS require NVP 32-kbyte cards for Modular Option.

- Fax on Demand requires a minimum of one multimedia port and an NVP 32-kbyte card for Modular Option. (This will be a full-service port.)

Performing a software installation

Introduction

This chapter provides information about installing Meridian Mail software. The procedure has several parts. The first part is common to all platforms and must be performed for all installations. Following the common procedure are procedures required for each hardware platform supported by Meridian Mail Release 12 software.

Note: The procedures described for software installation are general and intended only to guide the administrator. Although all required platforms are covered, this guide is not intended to reflect specific platform configurations.

When to use the procedures

Use the "Beginning the software installation" procedure and the main installation procedures when

- you are starting a software installation on any platform. These platforms include
  - Modular Option
  - Modular Option EC
  - Modular Option GP
  - Card Option
  - Option EC-11
  - Message Services Module (MSM)

Note: Where there are significant differences in installation procedures for a specific platform, these procedures are either indicated within the procedure concerned or broken out in a separate procedure. Otherwise, it is assumed that the procedures are common to all platforms.

Beginning the   To begin the software installation of Meridian Mail Release 12
software installation   on any platform, follow these steps.

Note: If this is a new system without any previous Meridian
Mail installed on it, begin at step 2.

Starting Point: Meridian Mail System Status and Maintenance Menu

Step Action

1   Select the "System Status" screen and perform a courtesy-
        down procedure before starting on any of the following steps.

        Note: Do this prior to starting any of the procedures described
        in this guide to prevent calls from being abruptly terminated
        when the operation begins. For more information, refer to the
        section "Disabling/Activating the system" in the chapter "System
        Status and Maintenance" in the *System Administration Guide*
        for your platform.

ATTENTION

On Card Option systems, disable the AML link before
turning off the power to Meridian Mail.

---

2   Insert the Install/data tape into the tape drive.

        Note: Refer to Chapter 5 of the *Installation and Maintenance
        Guide* (NTP 555-70x1-250) for tape insertion instructions. For
        MSM systems, contact your Nortel representative.

3   Turn off the power to Meridian Mail, or press the reset button
        on the MMP40 card.

        Note: Reset node 1 first, then nodes 2 through 5 in sequence,
        if applicable. For more information on power up and power
        down procedures, refer to Chapter 14 in the *Installation and
        Maintenance Guide* (NTP 555-70x1-250). For MSM systems,
        contact your Nortel representative.

        Note: Card Option systems using external tape drives must
        have the tape drive turned on before booting up.

Step	Action
4	For systems where the MMP40 reset button has not been used, wait ten seconds and then power up the system.

Result: Diagnostic routines are shown followed by a pause of approximately five minutes while the tape is automatically retensioned.

ATTENTION

On Card Option systems, reenable the AML link after turning on the power to Meridian Mail.

| 5 | When retensioning begins, the following message is displayed. |

```
Tape retension
```

Note: Tape retension takes about 5 minutes and it takes between 5 and 10 minutes to load the software.

Result: Once loaded, the System Installation and Modification Menu is displayed.

```
    System Installation & Modification Menu
    ---------------------------------------


             1  Install an MM12 system
             2  Comprehensive Upgrade
             3  More Utilities
```
```
Please enter the operation number: █
```

Note: This menu is the same for all platforms**.**

Step	Action
6	To choose installation, Press the up or down arrow keys until a 1 appears beside the following prompt.
	`Please enter the operation number:`
	Type **1**, then press <Return>. The following statement appears.
	`You have chosen to install an MM12 system`
	`Do you wish to continue? No (Yes)`
	Note: Executing this procedure erases any existing system information. All users and all messages are lost.
7	Do you wish to continue?
	If No, go to step 10.
	If Yes, go to steps 8 and 9.
8	Press the up or down arrow key to select Yes, then press <Return>. The following message appears.
	`Install an MM12 system`
9	Go to the next procedure for entry of the serial number and keycode number.
10	Press the up or down arrow key to select No, then press <Return>.
	Result: You are returned to the main menu.

Entering the serial number and keycode
To enter the system serial number and keycode, follow these steps.

Step	Action
1	At the prompt

`Enter the Serial Number:`

Type in the serial number, then press <Return>.

Note: The Card Option system gets its serial number automatically from its switch, therefore the prompt is not displayed.

Step	Action
2	Now, start entering the 20-character keycode four letters at a time, as prompted, pressing <Return> after each four-character entry.

Example: The following shows the style of character block prompts.

`Enter 4 character Block 1:XXXX`

`Enter 4 character Block 2:YYYY`

and so on.

The following cases are considered.

IF you enter	THEN the system responds with
the wrong number of characters	Please enter 4 characters
	Enter 4 Character Block 1:
invalid characters	That Block contains invalid Characters - Please Enter Again
the wrong keycode	That Keycode was invalid.
	Would you like to try again? Yes (No)

Step	Action
3	Once the keycode is entered, the system displays the first keycode screen listing your system configuration.

Result: The following screen is displayed:

Step Action

```
        System Configuration
                                     Old System        New System
                Software Release :                     12.07.0
                Serial Number    :                     24
                Platform         :                     EC-MMP40
                Nodes            :                     4
                Storage Hours    :                     90
                Max Languages    :                     1

                CHANNELS:
                Max Full Service :                     50
                Min Multimedia   :                     16
                Max Voice        :                     40
                Total Physical   :                     72
                Basic Service    :                     6
                NMS Locations    :                     0
-------------------------------------------------------------------------
Enter the Keycode :
Enter 4 Character Block 1 : 3t7x
Enter 4 Character Block 2 : t723
Enter 4 Character Block 3 : 7tan
Enter 4 Character Block 4 : tkvw
Enter 4 Character Block 5 : 8nth
Is this correct ?  Yes█
```

> ***Note:*** The figure above is intended only as an example of this
> screen. Your keycode screen may differ in platform type,
> hardware and software specifications.

4   Is this correct?

        If Yes, go to step 5.

        If No, go to step 8.

5   Press the up or down arrow keys to select Yes, and press
        <Return>.

        Result: A second keycode screen listing the system features is
        displayed.

```
     Feature           Old  New       Feature            Old  New
     SMDI              :              Voiceforms          :    X
     Meridian Access   :              VMUIF
     AdminPlus         :    X         Multiple Admin      :
     AMIS              :              Meridian Connections :

     HVS               :              Fax On Demand       :    X
     Networking        :    X         Multiple Customer   :
     NMS               :              Bilingual Prompting :
     Outcalling        :    X         Voice Menus         :    X

     Multi SMDI        :              Client Mailbox Admin :   X
-------------------------------------------------------------------------
Is this correct ?  Yes█
```

> ***Note:*** The figure above is intended only as an example of this
> screen. Your keycode screen may differ in feature
> specifications.

Step	Action
6	Is this correct?
	If Yes, go to step 7.
	If No, go to step 8.
7	Press the up or down arrow keys to select Yes, and press <Return>.
	Go to "Entering your customer name" on page 14-11.
8	If the system configuration is not correct, contact your Nortel representative to obtain another keycode.

Entering your customer name

To

- change the customer name
- enter the link type
- enter the switch customer number
- confirm the hardware configuration
- enter loop numbers (Modular Option EC MMP40 only)
- enter NLI numbers (Option EC-11 only)

follow these steps.

Step	Action
1	When you confirm that your system features are correct, the system prompts:
	`Customer Name: MeridianMail`
	Requirement: This name is assigned by you and may be an alpha-numeric string up to 30 characters long.
2	Press backspace to delete the default customer name (MeridianMail).
3	Type in the desired name and press <Return>.

Step	Action
4	Use the following table as a guide on where to access information in this procedure.

IF your system is a	THEN go to
Modular Option	steps 5, Result:, 7, and 8
Modular Option EC MMP40 or an Option EC-11	steps 5, Result:, 7,and 8
Modular Option GP	steps Result: and 8
Card Option or MSM	notes in step 5 and step

5   As prompted enter the link type and the customer number, then press <Return>.

```
Please enter the following system
information.
```

```
Link Type: CSL (NoLink)
```

Note: Card Option and MSM do not prompt for Link Type.

Result: Next you are prompted for the switch customer number.

```
Switch Customer Number:
```

6   Enter "0" as your switch customer number and press <Return>.

Step	Action
7	Once the switch customer number is entered, your hardware configuration is displayed (see example screen below). *Note:* The numbers to the left in the screen below are the node numbers 1 to 5; the card slots are numbered from 1 to 8 starting at the left. Your display may differ in the number of nodes and placement of cards.

```
Customer Name : MeridianMail

Please enter the following system information.

Link Type : CSL
Switch Customer Number : 0

   1    EMPTY   EMPTY   EMPTY   EMPTY   EMPTY   UTIL    MMP40   EMPTY
   2    MMP40   NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   EMPTY
   3    NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   MMP40   EMPTY
   4    MMP40   NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   EMPTY
   5    NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   UTIL    MMP40   EMPTY

Is the configuration correct : Yes
```

Result: If the SMDI feature for Modular Option GP is enabled, the prompt System Environment appears.

```
Please enter the following system
information.

System Environment: CPE (CO)
```

Note: Card Option and MSM do not prompt for System Environment.

Step	Action
8	Is the configuration correct? If Yes, go to step 9, then continue to step 11. If No, go to step 10.

Step Action

9   Press the up or down arrow keys to select Yes, and press
       <Return>.

       Result: The following prompt appears.

       ```
       Do you wish to enable disk to disk backup?
       No (Yes)
       ```

       Note: The above prompt will be displayed depending on the
       number of hours on your system. For more information, see
       "Toggle disk to disk backup" on page 2-12.

IF you select No or Yes with a	THEN go to
Modular Option, Mod Op GP, Card Option, MSM	step 13
Modular Option EC MMP40 or an Option EC-11	step 11

10   Press the up or down arrow keys to select No, and press
       <Return>.

       At this point, the installation procedure aborts. Then do the
       following:

       a. Power down the system.
       b. Correct the hardware fault.
       c. Start the software installation procedure again. See "When
          to use the procedures" on page 14-5.

Step	Action

11 A Modular Option EC system prompts:

```
Your system requires "n" J4/J5 loops.
```

```
Please make sure you define enough loop(s)
for your system.
```

An Option EC-11 system prompts:

```
Your system requires "n" NLI loops.
```

```
Please make sure you define enough loop(s)
for your system.
```

Note: The following examples show displays for the Mod Op EC MMP40 and the Option EC-11 respectively. Also, in the examples below, "255" is a special number only to be employed if the loop is unused. For the Mod Op EC MMP40 example enter: 12, 13, 14, and 15. For the Option EC-11 example enter: 20, 24, 28, and 255.

Example: The screen immediately below shows a Mod Op EC MMP40 system with two utility cards installed in the number 6 card slot of nodes 1 and 5 respectively. In this case, four loop numbers are required.

```
Customer Name : MeridianMail

Please enter the following system information.

Link Type : CSL
Switch Customer Number : 0


  1    EMPTY   EMPTY   EMPTY   EMPTY   EMPTY   UTIL    MMP40   EMPTY
  2    MMP40   NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   EMPTY
  3    NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   MMP40   EMPTY
  4    MMP40   NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   EMPTY   EMPTY
  5    NVP8p   NVP8p   NVP8p   EMPTY   EMPTY   UTIL    MMP40   EMPTY

Is the configuration correct : Yes
Your system requires 4 J4/J5 loops.
Please make sure you define enough loop(s) for your system.

Please Enter the loop number associated with J4 on Node 1's Utility Card : 255
Please Enter the loop number associated with J5 on Node 1's Utility Card : 255
Please Enter the loop number associated with J4 on Node 5's Utility Card : 255
Please Enter the loop number associated with J5 on Node 5's Utility Card : 255
```

Step Action

Example: For an Option EC-11 your display may look similar to the screen below.

```
  1   UTIL   MMP40  NVP8p  NVP8p  NVP8p
  2   NVP8p  NVP8p  NVP8p  MMP40  UTIL

Is the configuration correct : Yes

Do you wish to enable disk to disk backup ? No

Your system requires 3 NLI loops.
Please make sure you define enough loop(s) for your system.

Please Enter the loop number associated with NLI1 : 255
Please Enter the loop number associated with NLI2 : 255
Please Enter the loop number associated with NLI3 : 255
Please Enter the loop number associated with NLI4 : 255
```

Note: For more information, refer to your *Modular Option EC Installation and Maintenance Guide* (NTP 555-7061-250) or the *EC-11 Installation and Maintenance Guide* (NTP 555-7081-250).

12   Press <Return> to accept the default loop number. If your system requires more than one loop, you will be prompted again as in the above example.

Note: If necessary, use the backspace key to delete each default number and enter the new loop number (between 0 and 255).

Result: When the operation is completed, the system displays the languages available on the Install/data tape.

13   Go to "Selecting languages" on page 14-17.

Selecting languages   To select languages for your system, follow these steps.

Step	Action
1	When the languages screen appears, with the prompt:

```
Select operation: AddLanguage
```

press <Return> to select a language(s) for your voice prompts.

Result: The following screen is displayed.

```
         Installed Languages              Selected Languages



                   You may include 1 more languages
--------------------------------------------------------------------------------
Select operation : AddLanguage

Languages Available from this tape are:
1 - American English
2 - Canadian French
3 - Latin American Spanish
4 - Brazilian Portuguese
5 - German
6 - Japanese
7 - From Another Tape

Enter the number of the language you require: 1

You have chosen American English
Is this Correct? Yes
```

Note: Your languages display may allow you to include more than one language depending on your keycode, and may have a different selection of languages.

| 2 | Press the up or down arrow key until the desired number of the language you require is displayed on the screen (or press backspace and type a number), then press <Return>. |

The following prompt is displayed.

```
You have chosen (language name).
```

Note: At this point, if you choose either "0" or the number for the From Another Tape option without selecting a language, you are advised that you must choose at least one language from this menu and the selection prompt is repeated. If you choose From Another Tape, you will be prompted to insert the other tape at the end of the installation. See "Continuing the software installation" on page 14-58.

```
Is this correct? No (Yes)
```

Step	Action
3	Is this correct?
	If No, go to step 4.
	If Yes, go to step 5.
4	If you select No, the language prompt is repeated.
5	Select Yes, then press <Return>.
	When you have finished your language selection(s), select Done, and press <Return>.
	Result: The Call Progress Tone Detection (CPTD) screen is displayed.
6	Go to "Selecting call progress tone detection" on page 14-19.

Selecting call progress tone detection

To select the Call Progress Tone Detection (CPTD) number for your country, follow these steps.

Step	Action
1	You are provided with the current CPTD selection and the following prompt: `Select operation: Done (Change)`
2	Select operation: If you select Done, go to step 4. If you select Change, go to step 3.
3	Select Change, then press <Return>. ***Result:*** The following CPTD screen is displayed.

```
    The current CPTD Selection is :  Generic - Ver. Fe94
-------------------------------------------------------------------------------
Select operation : Change
  1 : Generic - Ver. Fe94    2 : Australia            3 : Austria
  4 : Belgium                5 : Canada               6 : Denmark
  7 : Finland                8 : France               9 : Germany
 10 : Hong Kong             11 : India               12 : Ireland
 13 : Italy                 14 : Japan               15 : Korea
 16 : Malaysia              17 : Netherlands         18 : New Zealand
 19 : Norway                20 : Portugal            21 : Russia
 22 : Saudi Arabia          23 : Singapore           24 : Sweden
 25 : Switzerland           26 : Taiwan              27 : Turkey
 28 : United Kingdom        29 : United States       30 : China
Please enter the CPTD country index number : 1█
```

	Press the up or down arrow key until the desired country number is displayed on the screen (or press backspace and enter the number), then press <Return>.
4	Go to "Entering DSP parameters" on page 14-20.

Entering DSP parameters

To review or change the DSP parameters on your system, follow these steps.

Step	Action
1	From the previous procedure, press <Return>.

Result: The DSP parameters screen is displayed.

```
    DSP Encoding Type        : MuLaw
    Disable Silence Compression : No

    Transmit Level      : 0        Disable AGC         : No
    Receive  Level      : 0        AGC Center          : -20
    DTR Reject Level    : -36      Hook Flash Pulse    : 320
    DTR Max Accept Level : 1       TeleScan Debounce   : 128
                                   TeleScan Ring Time  : 1024
--------------------------------------------------------------------------------
Select operation : Change
```

Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "Done" if you are satisfied with the default values or after you have completed all the parameter changes
- "Change" if any of the parameters require changing. You will be stepped through each parameter
- "Redraw" if your screen becomes overwritten with errant characters and you need to clear them from your DSP screen
- "Reset" if you decide to go back to the default settings after you have changed them

2	At the "Select operation:" prompt,

if Done, go to step 8.

If Change, go to step 3.

Step	Action
3	Select Change, and press <Return>. The following prompts are displayed. `DSP Encoding Type: MuLaw (Alaw)`

ATTENTION

If the above DSP encoding parameter is set incorrectly, severely degraded voice quality may result.

Note: Do not change DSP parameters unless you are instructed to by Nortel.

Example: The following screen is provided as an example of how your display may look.

```
    DSP Encoding Type          : MuLaw
    Disable Silence Compression : No

    Transmit Level       : 0          Disable AGC         : No
    Receive  Level       : 0          AGC Center          : -20
    DTR Reject Level     : -36        Hook Flash Pulse    : 320
    DTR Max Accept Level : 1          TeleScan Debounce   : 128
                                      TeleScan Ring Time  : 1024
--------------------------------------------------------------------------------
Select operation : Change
DSP Encoding Type          : MuLaw
Disable Silence Compression : No
Do you wish to change other DSP parameters ? Yes
Transmit Level                : 0
Receive  Level                : 0
DTR Reject Level              : (-36)
DTR Max Accept Level          : (1)
Disable AGC                   : No
AGC   Center                  : -20
Hook Flash Pulse              : 320
TeleScan Debounce             : (128)
TeleScan Ring Time            : 1024
Select operation : Change
```

Note: For a list of DSP parameters, see "DSP parameters" on page A-3.

Step	Action

4 At the prompt "Select operation:"

IF you select	THEN go to
Done, and have Fax on Demand	step Result:.
Done, and do not have Fax on Demand	step 8.
Change or Reset	step 3.

Result: The following Fax specific parameter screen is displayed:

```
 Fax Transmit Level (dB)     : -13      Handshake Timeout (sec)         : 7
 CNG/CED Gain (dB)           : -6       Switchover Time (msec)          : 75
 Equalizer                   : None     Response Timeout (100 ms)       : 35
 Poor Quality Page Threshold : 10       Training Length                 : 200
 Rx CDET Threshold           : -47dBm   V29/V27 CDET timeout (100 ms) : 20
 Call Connect Timeout (sec)  : 35
-------------------------------------------------------------------------------
Select operation : Change
```

5 At the prompt "Select operation:",

   if Change, go to step 6.

   If Done, go to step 8.

Step	Action

6 Select Change, then press <Return>.

Result: You are stepped through the Fax specific parameters (see the display below).

Example: The following screen is provided as an example of how your display may look.

```
 Fax Transmit Level (dB)      : -13     Handshake Timeout (sec)       : 7
 CNG/CED Gain (dB)            : -6      Switchover Time (msec)        : 75
 Equalizer                    : None    Response Timeout (100 ms)     : 35
 Poor Quality Page Threshold : 10       Training Length               : 100
 Rx CDET Threshold            : -47dBm  V29/V27 CDET timeout (100 ms) : 20
 Call Connect Timeout (sec)  : 35
-------------------------------------------------------------------------------
Select operation : Change
Fax Transmit Level (dB)    : (-13)
CNG/CED Gain (dB)          : (-6)
Equalizer                  : None
Enter Poor Quality Page Threshold : 10
Enter Rx CDET Threshold : -47dBm
Call Connect Timeout (sec) : 35
Handshake Timeout (sec) : 7
Switch Over Time (msec) : 75
Response Timeout (100 ms) : 35
Training Length : 200
V29/V27 CDET timeout (100 ms) : 20
Select operation : Change
```

Note: For a list of Fax specific DSP parameters, see "Fax-specific DSP parameters" on page A-3.

7 At the prompt "Select operation:"

If Change, or Reset, go to step Result:.

If Done, go to step 8.

8 When you select Done, use the following table to find the next procedure associated with your platform.

IF your system is	THEN go to
a Mod Op, Mod Op EC	page 14-31.
a Card Option	page 14-35.
an Option EC-11	page 14-38.
Mod Op GP	page 14-27.
MSM	page 14-24.

Defining T1 spans for the MSM

To define T1 spans on your Message Services Module (MSM) system, follow these steps.

Step	Action
1	When you select Done, to complete the DSP configuration on your MSM system, the T1 span configuration is displayed.

Example: The following screen is an example of a 48-channel system.

```
                    Line   Line interface   Start      Trunk     Frame
Span  Sync Mode     Signal      type        Type       Type      Format  OOFD
A    ExternalTlTiming DTMF  FXOGrdStart    WinkStart  NonDIDTrunk  D4      0
B    ExternalTlTiming DTMF  FXOGrdStart    WinkStart  NonDIDTrunk  D4      0

     Line Code    Line    T1       T1      T1 Guard            Ring  Hook Flash
Span Format       Length  Alarm    Debounce Time   ESFD BVCR Pulse    Pulse
A    B8ZS         0to133  Bit_two  130      130     0    0   130      320
B    B8ZS         0to133  Bit_two  130      130     0    0   130      320
--------------------------------------------------------------------------------


Select operation : Display

```

Note: For a 72-channel system the display includes spans A to C. For a 192-channel system, span A to span H will be displayed.

Note: For a list of T1 span parameters, see "T1 span parameters" on page A-4.

| 2 | To change any settings, press the up or down arrow keys until Change, appears, then press <Return>. |

Example: The following screen is displayed. Your display may be different.

```
                    Line   Line interface   Start      Trunk     Frame
Span  Sync Mode     Signal      type        Type       Type      Format  OOFD
A    ExternalTlTiming DTMF  FXOGrdStart    WinkStart  NonDIDTrunk  D4      0
B    ExternalTlTiming DTMF  FXOGrdStart    WinkStart  NonDIDTrunk  D4      0

     Line Code    Line    T1       T1      T1 Guard            Ring  Hook Flash
Span Format       Length  Alarm    Debounce Time   ESFD BVCR Pulse    Pulse
A    B8ZS         0to133  Bit_two  130      130     0    0   130      320
B    B8ZS         0to133  Bit_two  130      130     0    0   130      320
--------------------------------------------------------------------------------

Select operation : Change
From: SpanA
To:   SpanA

```

Step	Action
3	Using the example above, you are prompted to enter the start range.

Note: In this case, Span A.

```
From: SpanA
```

Press <Return>.

Enter the end range by pressing the up or down arrow keys to select the range you require.

Note: In this case, Span B.

```
To: SpanB
```

Press <Return>.

Step	Action
4	To enter a different setting from the default, press the up or down arrow keys until the required setting is displayed.

Press <Return> after each entry whether you change the default or not.

Result: The following is an example of what your display may look like after you have completed your changes.

```
                    Line    Line interface  Start       Trunk      Frame
Span   Sync Mode    Signal     type         Type        Type       Format  OOFD
A     ExternalTlTiming DTMF  FXOGrdStart   WinkStart  NonDIDTrunk  D4      0
B     ExternalTlTiming DTMF  FXOGrdStart   WinkStart  NonDIDTrunk  D4      0

       Line Code   Line      Tl       Tl    Tl Guard            Ring   Hook Flash
Span   Format      Length   Alarm   Debounce  Time   ESFD BVCR Pulse     Pulse
A     B8ZS         0to133   Bit_two  1000      130     0    0   130       320
B     B8ZS         0to133   Bit_two   130      130     0    0   130       320
-------------------------------------------------------------------------------
Trunk Type        : NonDIDTrunk
Frame Format      : D4
OOFD              : 0
Line Code Format  : B8ZS
Line Length       : 0to133
Tl Alarm          : Bit_Two
Tl_Debounce       : 1000
Tl_GuardTime      : 130
ESFD              : 0
BVCR              : 0
Ring Pulse        : 130
Hook Flash Pulse  : 320

Select operation : Display
```

Note: At the last entry, the upper part of the display (above the dotted line) will reflect any changes you have made.

Step	Action
5	Select "Display", then press <Return> to see the spans.
6	Select Done, then press <Return> when you have finished.
7	Go to "Defining links for Modular Option GP and MSM" on page 14-27.

Defining links for Modular Option GP and MSM

To define the links if your platform is a Modular Option GP (Mod Op GP) or an MSM, follow these steps.

Step	Action
1	For the Mod Op GP, the following prompt is displayed.

```
Please enter the information to create or
redefine a Link
```

Result: After a short time the following screen is displayed. Your display may differ.

```
Link Link-ID      Red. NRRDDCode  AgtPos  Switch      Login   Logout  AgentID
1                 NO *88   9999   DMS100_Cent|*85     *86     *87
--------------------------------------------------------------------------------
Select operation : Change
```

Note: For Mod Op GP: using Meridian Connections installations, Login code, Logout code, Agent Position ID and NRRDD code are not used.

| 2 | For the MSM, the following prompt is displayed. |

```
Please define the T1 Channels
```

Result: After a short time the following screen is displayed. Your display may differ.

```
Link Link-ID      Red. NRRDDCode  AgtPos  Switch      Login   Logout  AgentID
1                 NO *99   2800   DMS100_Cent|*88     *89     *98
2                 NO *99   2800   DMS100_Cent|*88     *89     *98
--------------------------------------------------------------------------------
Select operation : Reset
```

Requirement: You have five selections at the "Select operation" prompt which are revealed each time you press the up or down arrow keys. Select

- "Done" if you are satisfied with the default values or after you have completed all the parameter changes
- "Change" if any of the parameters require changing. You will be stepped through each parameter
- "Redraw" if your screen becomes overwritten with errant characters and you need to clear them from your link screen
- "Reset" if you decide to go back to the default settings after you have changed them
- "Add" if you require another link

Step	Action

3   Select operation:

if Done, go to "Defining voice port hardware locations for Modular Option GP" on page 14-41, or "Defining T1 hardware locations for the MSM" on page 14-44.

If Change, go to step 4.

4   Select Change, then press <Return>.

Result: The following prompt is displayed:

```
Enter the Link ID:
```

Note: If the system has or requires more than 1 SMDI Link, you must enter the unique SMDI Link ID.

ATTENTION

It is recommended that you use a meaningful name instead of a number, so that the link is easily identified.

---

5   Enter your link number, then press <Return>.

Result: Other prompts are displayed as you enter values and press <Return> until the following screen is displayed:

Note: Select your switch type using the up and down arrow keys, then press <Return>.

Note: The software scans through all the T1 channels with the selected Link ID and updates the T1 channels to the new Link ID, Login Code, Logout Code, etc.

Example: The folloeing example is for a Modular Option GP system.

Step Action

```
Link Link-ID        Red. NRDDCode  AgtPos  Switch      Login   Logout  AgentID
 1                   NO *88         9999    DMS100_Cent|*85     *86     *87
-----------------------------------------------------------------------------
Select operation : Change
       Enter the Link ID   : 1
New Link ID        : 1
Login Code         : *85
Logout Code        : *86
NRDD Code          : *88
Switch Type        : DMS100_Centrex
DSP Telescan Ring : 1024
Agent Position ID : 9999
Select operation : Change
```

Requirement: For Mod Op GP: Login Code, Logout Code, and NRDD Code should be changed to blank unless otherwise specified by the system administrator. For Login and Logout Code, see also the *MSM Translations Guide* (NTP 557-7001-310). For The MSM, blank out the Login and Logout Codes if the channel is connecting to a PBX.

For the DSP Telescan Ring value:

ATTENTION

The DSP Telescan Ring parameters should be compatible with the switch type. Do not change the default values unless informed by Nortel. In those cases, the administrator may change the DSP Telescan Ring parameters to match the type of switch.

Step	Action
6	Select Done, and press <Return>.
7	Use the following table to locate your next procedure.

IF your platform is the	THEN go to
Modular Option GP	page 14-41.
MSM	page 14-44.

Defining voice port hardware locations for Modular Option and Modular Option EC

To define your voice channels for entries into the Voice Port Hardware Location table for Modular Option and Modular Option EC, follow these steps.

Step	Action
1	Select Done on the DSP parameters.

Result: The voice port hardware location screen is displayed.

Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   2   M -- M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   3  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   4  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   5  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
-------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

Step Action

2   Press the up or down arrow key until the desired choice is
         displayed on the screen, then press <Return>.

         Example: Select Change, then press <Return>.

         Result: The following screen is displayed showing results after
         all choices have been made (your display may differ):

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   2  M -- M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   3  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   4  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   5  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
----------------------------------------------------------------------------
Select operation : Change
Port Type     : MultiMedia
First Node    : 2
First Location :  21
Last Node     : 2
Last Location :  24
ACDDN         : 3650
SECDN         : 2820
Port Density : Double
Loop  Number : 2
Shelf Number : 0
Card  Number : 2
Unit  Number : 4
Switch Type  : Meridian_1
```

         Note: In this display and in the display in step 3, Port Type
         required is MultiMedia. Other choices are Voice_Full and
         Voice_Basic. All entries are changed by pressing the up or
         down arrow keys and then pressing <Return> which moves you
         on to the next value.

3   When you select your Switch Type and press <Return>, the
         table will change to display your changes, as in the following
         example.

         Result: Two more multimedia ports have been added at ports
         21 and 23 on node 2.

Step Action

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   2   M --  M --  M --  M --  M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf  M --  M --
   3  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   4  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   5  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
-------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Node     : 2
First Location :  21
Last Node      : 2
Last Location  :  24
ACDDN        : 3650
SECDN        : 2820
Port Density : Double
Loop  Number : 2
Shelf Number : 0
Card  Number : 2
Unit  Number : 4
Switch Type  : Meridian_1
Select operation : DetailedDisplay
```

4   Select DetailedDisplay, then press <Return>.

Note: You are asked to provide node ranges and location ranges to view the hardware locations on a particular node or range of nodes.

Result: The following example shows that node 2 and locations 1 to 23 have been specified.

```
Num  VP Locn  Type    ACD      SECDN  Loop Shlf Crd Unit Density   Switch
----  --------  ----  --------  -------- ---- ---- --- ---- ------- --------------
2- 1  2-2-1-1   M     3658     2800    1    0    2    0  Double    Meridian_1
2- 3  2-2-2-1   M     3658     2802    1    0    2    2  Double    Meridian_1
2- 5  2-2-3-1   M     3650     2804    1    0    2    4  Double    Meridian_1
2- 7  2-2-4-1   M     3650     2806    1    0    2    6  Double    Meridian_1
2- 9  2-3-1-1   M     3650     2808    1    0    3    0  Double    Meridian_1
2-11  2-3-2-1   Vf    3650     2810    1    0    3    2  Double    Meridian_1
2-12  2-3-2-2   Vf    3650     2811    1    0    3    3  Double    Meridian_1
2-13  2-3-3-1   Vf    3650     2812    1    0    3    4  Double    Meridian_1
2-14  2-3-3-2   Vf    3650     2813    1    0    3    5  Double    Meridian_1
2-15  2-3-4-1   Vf    3650     2814    1    0    3    6  Double    Meridian_1
2-16  2-3-4-2   Vf    3650     2815    1    0    3    7  Double    Meridian_1
2-17  2-4-1-1   Vf    3650     2816    2    0    2    0  Double    Meridian_1
2-18  2-4-1-2   Vf    3650     2817    2    0    2    1  Double    Meridian_1
2-19  2-4-2-1   Vf    3650     2818    2    0    2    2  Double    Meridian_1
2-20  2-4-2-2   Vf    3650     2819    2    0    2    3  Double    Meridian_1
2-21  2-4-3-1   M     3650     2820    2    0    2    4  Double    Meridian_1
2-23  2-4-4-1   M     3650     2822    2    0    2    6  Double    Meridian_1
Press RETURN to continue:
```

Note: For multimedia entries the table displays only the odd-numbered hardware locations because multimedia ports take up two hardware locations.

Step	Action

5   Press <Return>.

      Result: The Voice Port Hardware Location table (see below) is displayed again.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  2    M -- M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf M -- M --
  3    Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  4    Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  5    Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb Vb Vb
--------------------------------------------------------------------------------
Select operation : Done
Is this correct?  No
```

      If you are satisfied with the changes, select Done. The following prompt is displayed.

```
Is this correct? No (Yes)
```

      Note: At this point in the procedure,that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

6   Is this correct?

      If No, go to step 7.

      If Yes, go to step 8.

7   Selecting No, returns you to the Select Operation mode. In this case, go to step 1.

8   See "Assigning the dataport locations" on page 14-49.

Defining voice port hardware locations for Card Option

To define your voice channels for entries into the Voice Port Hardware Location table for Card Option, follow these steps.

Step	Action
1	Select Done on the DSP parameters. *Result:* The following voice port screen is displayed. *Note:* The display below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  -------- Voice Port Hardware Location ---------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
   1   M --  M -- Vf Vf Vf Vf Vf Vf Vb Vb
-------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>. **Example:** Select Change, then press <Return>. *Note:* In the display in step 3, Port Type required is MultiMedia. Other choices are Voice_Full and Voice_Basic. All entries are changed by pressing the up or down arrow keys, and then pressing <Return> which moves you on to the next value. *Note:* Card Option systems have only 1 node, so enter 1 after the First and Last Node in the screen in step 3.

Step Action

3   When you select your ACDDN and press <Return>, the table
         will change to display your changes, as in the following
         example.

```
Node  -------- Voice Port Hardware Location ---------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
   1   M --  M --  M -- Vf Vf Vf Vf Vb Vb
--------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Node   : 1
First Location : 5
Last Node    : 1
Last Location : 6
ACDDN        : 7000
Select operation : DetailedDisplay
```

         Result: One more multimedia port has been added at port 5.

4   Select DetailedDisplay, then press <Return>.

         Note: You are asked to provide node ranges and location
         ranges to view the hardware locations on a particular node or
         range of nodes.

         Result: The following example shows that node 1 (only one
         node can be specified for Card Option) and locations 1 to 12
         have been specified.

```
Num   VP Locn  Type   ACD      SECDN   Loop Shlf Crd Unit Density   Switch
-----  -------- ----  -------- -------- ---- ---- --- ---- ------- --------------
1- 1  1-4-1-1   M     7000     7800                2   0   Octal   Meridian_1
1- 3  1-5-1-1   M     7000     7802                2   1   Octal   Meridian_1
1- 5  1-6-1-1   M     7000     7804                2   2   Octal   Meridian_1
1- 7  1-7-1-1   Vf    7000     7806                2   3   Octal   Meridian_1
1- 8  1-7-1-2   Vf    7000     7807                2  11   Octal   Meridian_1
1- 9  1-8-1-1   Vf    7000     7808                2   4   Octal   Meridian_1
1-10  1-8-1-2   Vf    7000     7809                2  12   Octal   Meridian_1
1-11  1-9-1-1   Vb    7000     7810                2   5   Octal   Meridian_1
1-12  1-9-1-2   Vb    7000     7811                2  13   Octal   Meridian_1
Press RETURN to continue:
```

         Note: For multimedia entries the table displays only the odd-
         numbered hardware locations because multimedia ports take
         up two hardware locations.

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Step	Action
5	Press <Return>. ***Result:*** The Voice Port Hardware Location table (see below) is displayed again.

```
Node  -------- Voice Port Hardware Location ---------
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16
  1   M -- M -- M -- Vf Vf Vf Vf Vb Vb
---------------------------------------------------------------------------
Select operation : Done
Is this correct?  Yes
```

If you are satisfied with the changes, select Done. The following prompt is displayed.

```
Is this correct? No (Yes)
```

Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

Step	Action
6	Is this correct? If No, go to step 7. If Yes, go to step 8.
7	Select No, then press <Return> ***Result:*** You are returned to the Select Operation mode at step 1.
8	Go to "Assigning the dataport locations" on page 14-49.

Defining voice port hardware locations for the Option EC-11

To define your voice channels for entries into the Voice Port Hardware Location table for the Option EC-11, follow these steps.

Step	Action
1	Select Done on the DSP parameters.

Result: The voice port hardware location screen is displayed.

Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node ----- V o i c e    P o r t    H a r d w a r e    L o c a t i o n -----
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1  M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   2 Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb
--------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>.

Example: Select Change, then press <Return>.

Note: In the display in step 3, Port Type required is MultiMedia. Other choices are Voice_Full and Voice_Basic. All entries are changed by pressing the up or down arrow keys and then pressing <Return> which moves you on to the next value.

Step	Action

3   When you select your Switch Type and press <Return>, the table will change to display your changes, as in the following example.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  1   M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  2   Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb
---------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Node     : 1
First Location : 5
Last Node      : 1
Last Location  : 8
ACDDN        : 3650
SECDN        : 2804
Port Density : Octal
Loop  Number : 0
Shelf Number : 0
Card  Number : 2
Unit  Number : 4
Switch Type  : Meridian_1
Select operation : DetailedDisplay
```

Result: Two more multimedia ports have been added at ports 5 and 7.

4   Select "DetailedDisplay", then press <Return>.

Note: You are asked to provide node ranges and location ranges to view the hardware locations on a particular node or range of nodes.

Result: The following example shows that node 1and locations 1 to 12 have been specified.

```
Num  VP Locn  Type    ACD     SECDN  Loop Shlf Crd Unit Density   Switch
----- -------- ----  -------- -------- ---- ---- --- ---- ------- --------------
1- 1  1-3-1-1  M      3658    2800           2   0   Octal   Meridian_1
1- 3  1-3-2-1  M      3658    2802           2   2   Octal   Meridian_1
1- 5  1-3-3-1  M      3650    2804           2   4   Octal   Meridian_1
1- 7  1-3-4-1  M      3650    2806           2   6   Octal   Meridian_1
1- 9  1-4-1-1  Vf     3650    2808           2   8   Octal   Meridian_1
1-10  1-4-1-2  Vf     3650    2809           2   9   Octal   Meridian_1
1-11  1-4-2-1  Vf     3650    2810           2  10   Octal   Meridian_1
1-12  1-4-2-2  Vf     3650    2811           2  11   Octal   Meridian_1
Press RETURN to continue:
```

Note: For multimedia entries the table displays only the odd-numbered hardware locations because multimedia ports take up two hardware locations.

Step	Action

5   Press <Return>.

        Result: The Voice Port Hardware Location table (see below) is displayed again.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
        1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1    M -- M -- M -- M -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   2    Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vb Vb
----------------------------------------------------------------------------
Select operation : Done
Is this correct?  Yes
```

        If you are satisfied with the changes, select Done. The following prompt is displayed.

        ```
        Is this correct? No (Yes)
        ```

        Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

6   Is this correct?

        If No, go to step 7.

        If Yes, go to step 8.

7   Selecting No, returns you to the Select Operation mode. In this case, go to step 1.

8   Go to "Assigning the dataport locations" on page 14-49.

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Defining voice port hardware locations for Modular Option GP

To define your voice channels for entries into the Voice Port Hardware Location table for Modular Option GP, follow these steps.

Step	Action
1	Select Done on the Link parameters.

Result: The following voice port hardware location screen is displayed.

Note: The display below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1   M --  M -- Vf Vf Vf Vf Vf Vf Vb Vb
--------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>.

Example: Select Change, then press <Return>.

Note: In the display in step 3, Port Type required is MultiMedia. Other choices are Voice_Full and Voice_Basic. All entries are changed by pressing the up or down arrow keys and then pressing <Return> which moves you on to the next value.

Step Action

3   When you select your Message Terminal and press <Return>,
       the table will change to display your changes, as in the
       following example.

```
Node  ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1   M -- M -- M -- Vf Vf Vf Vf Vb Vb
-------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Node   : 1
First Location : 5
Last Node    : 1
Last Location : 6
DN           : 2804
Link Type    : SMDI
UCDDN        : 3650
Link ID      : 1
Message Desk : 63
Message Terminal : 5
Select operation : DetailedDisplay
```

Result: One more multimedia port has been added at port 5 on
node 1.

4   Select DetailedDisplay, then press <Return>.

Note: You are asked to provide node ranges and location
ranges to view the hardware locations on a particular node or
range of nodes.

Result: The following example shows that node 1 and
locations 1 to 12 have been specified:

```
                    Msg.  Msg.            Login  Logout              Agent
Number   DN   Type  Term  Desk  UCDDN     Code   Code    Link ID    Posn
------ ------- ---- ----- ----- ------ ------- ------- ------------- -------
 1-  1  2800   M     1    63    3658    *85    *86                1   9999
 1-  3  2802   M     3    63    3658    *85    *86                1   9999
 1-  5  2804   M     5    63    3650    *85    *86                1   9999
 1-  7  2806   Vf    7    63    3650    *85    *86                1   9999
 1-  8  2807   Vf    8    63    3650    *85    *86                1   9999
 1-  9  2808   Vf    9    63    3650    *85    *86                1   9999
 1- 10  2809   Vf   10    63    3650    *85    *86                1   9999
 1- 11  2810   Vb   11    63    3659    *85    *86                1   9999
 1- 12  2811   Vb   12    63    3659    *85    *86                1   9999
Press RETURN to continue:
```

Note: For multimedia entries the table displays only the odd-
numbered hardware locations because multimedia ports take
up two hardware locations.

Step	Action
5	Press <Return>. *Result:* The Voice Port Hardware Location table (see below) is displayed again.

```
Node ----- V o i c e   P o r t   H a r d w a r e   L o c a t i o n -----
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  1   M --  M --  M --  Vf Vf Vf Vf Vb Vb
-----------------------------------------------------------------------------
Select operation : Done
Is this correct?  No
```

Step	Action
6	If you are satisfied with the changes, select Done. *Result:* The following prompt is displayed. `Is this correct? No (Yes)` *Note:* At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

ATTENTION

If after selecting Change again, or Done you receive an error, there may be an incorrect assignment of the voice ports to the link. The error must be corrected before the user may proceed.

Step	Action
7	Is this correct? If No, go to step 8. If Yes, go to step 9.
8	Selecting No, returns you to the Select Operation mode. In this case, go to step 1.
9	Go to "Assigning the dataport locations" on page 14-49.

Defining T1 hardware locations for the MSM   To define your T1 hardware locations for the MSM, follow these steps.

Step	Action
1	Select Done on the Link parameters.

Result: The T1 hardware location table screen is displayed.

Note: The display below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Span ----------- T 1   H a r d w a r e   L o c a t i o n -----------
      1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   1 Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
   2 Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
--------------------------------------------------------------------------------
Select operation : DetailedDisplay
```

Requirement: You have four selections at the "Select operations" prompt. When making selections, press the up or down arrow keys until the desired response is displayed on the screen, then press <Return>. Select

- "DetailedDisplay" if you need to see a detailed display of all the hardware locations on a particular node or range of nodes.
- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

| 2 | Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>. |

Example: Select Change, then press <Return>.

Result: The following screen is displayed showing results after all choices have been made (your display may differ):

Step	Action

Note: If you are required to make changes, the T1 hardware location table will change to display your changes. In the following display, notice that 6 multimedia ports have been added at locations 5 through 10 on Span 1.

Note: For the MSM, a multimedia port requires one and a half hardware locations. An easier way to look at this is that 2 multimedia ports require 3 hardware locations. This is seen in the following display with 6 ports requiring 9 locations. The locations marked "--" are part of the total multimedia ports.

```
Span ------------ T 1   H a r d w a r e   L o c a t i o n  ------------
        1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
     1  Vf Vf Vf Vf  M  M  M  M  M  M Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
     2  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf -- -- --
--------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Span       : 1
First Location : 5
Last Span        : 1
Last Location  : 10
DN               : 2804
Link Type        : SMDI
UCDDN            : 3650
Link ID          : 1
Message Desk     : 63
Message Terminal : 5
Select operation : DetailedDisplay
```

3   Select DetailedDisplay, and press <Return>.

Note: Selecting "DetailedDisplay" requires you to provide span ranges and location ranges to view the hardware locations on a particular node or range of nodes.

Result: The following example shows that Span 1 and locations 1 to 10 have been specified:

```
                                  Login   Logout  Msg.
Number    DN   Type  UCDDN   Code    Code    Term     Link ID         Agt Posn
------ ------- ---- ------- ------- ------- ------ -------------------- -------
     1    2800  Vf    3650    *88     *89      1                        1    2800
     2    2801  Vf    3650    *88     *89      2                        1    2800
     3    2802  Vf    3650    *88     *89      3                        1    2800
     4    2803  Vf    3650    *88     *89      4                        1    2800
     5    2804  M     3650    *88     *89      5                        1    2800
     6    2805  M     3650    *88     *89      6                        1    2800
     7    2806  M     3650    *88     *89      7                        1    2800
     8    2807  M     3650    *88     *89      8                        1    2800
     9    2808  M     3650    *88     *89      9                        1    2800
    10    2809  M     3650    *88     *89     10                        1    2800
Press RETURN to continue:
```

Step	Action

4   Press <Return>.

    Result: The T1 Hardware Location table (see below) is displayed again.

```
Span ----------- T 1   H a r d w a r e   L o c a t i o n -----------
     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  1  Vf Vf Vf Vf  M  M  M  M  M  M Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  2  Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf -- -- --
--------------------------------------------------------------------------------
Select operation : DetailedDisplay
First Span     : 1
First Location : 1
Last Span      : 1
Last Location  : 10
```

    If you are satisfied with the changes, use the up or down arrow keys to select Done, and then press <Return>. The following prompt is displayed.

```
Is this correct? No (Yes)
```

    Note: At this point in the procedure, that is, if you select No, Reset and Change are still available as choices if you wish to do anything to the settings.

> ### ATTENTION
>
> If after selecting Change again, or Done you receive an error, there may be an incorrect assignment of the ports to the link. The error must be corrected before you proceed.

5   Is this correct?

    If No, go to step 6.

    If Yes, go to step 7.

6   Select No, then press <Return>.

    Result: This choice returns you to the Select Operation mode. In this case, go to step 1.

7   Select Yes, then press <Return>.

8   See "Defining voice hardware locations for the MSM" on page 14-47.

Defining voice hardware locations for the MSM

To define your voice hardware locations for the MSM, follow these steps.

Step	Action
1	Select Done on the T1 Hardware Location screen. ***Result:*** The voice hardware location screen is displayed. ***Note:*** The display below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node --------- V o i c e   H a r d w a r e   L o c a t i o n ----------
       1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
    3  VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE
    4  VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE VE
-----------------------------------------------------------------------------
Select operation : Change
```

Requirement: You have three selections at the "Select operations" prompt which are revealed each time you press the up or down arrow keys. Select

- "Change" if you want to change the port definition on a range of hardware locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

Step	Action
2	Press the up or down arrow key until the desired choice is displayed on the screen, then press <Return>. **Example:** Select Change, then press <Return>. ***Note:*** In the display in step 3, all entries are changed by pressing the up or down arrow keys and then pressing <Return> which moves you on to the next value.

Step Action

3   When you select your Last Location, and press <Return>, the
         table will change to display your changes, as in the following
         example.

```
Node --------- V o i c e   H a r d w a r e   L o c a t i o n ---------
     1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  3  M  M  --  M  M  --  M  M  -- Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
  4 Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf Vf
-------------------------------------------------------------------------------
Select operation : Change
Port Type    : MultiMedia
First Node   : 3
First Location :  1
Last Node    : 3
Last Location :  9
Select operation : Reset
```

         Result: Nine multimedia ports have been added at ports1
         through 9 on node 3.

4   If you are satisfied with the changes, select Done, then press
         <Return>.

         Result: The following prompt is displayed:

         ```
         Is this correct? No (Yes)
         ```

         Note: At this point in the procedure, that is, if you select No,
         Reset and Change are still available as choices if you wish to
         do anything to the settings.

5   Is this correct?

         If No, go to step 6.

         If Yes, go to step 7.

6   Selecting No, returns you to the Select Operation mode. In this
         case, go to step 1.

7   Go to "Assigning the dataport locations for the MSM" on
         page 14-54.

Assigning the dataport locations

To assign dataport locations to your system, follow these steps.

Step	Action
1	From the previous procedure.
	Select Yes, then press <Return>.
	Result: The dataport configuration table is displayed:
	Note: The display below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node   Card   Type        Port 1        Port 2        Port 3        Port 4
  1      6    UTIL       MODEMCON      PRINTER        MODEM         MODEM
  1      7    MMP40      CONSOLE       CSL1
  2      1    MMP40      PRINTER       PRINTER
  3      7    MMP40      PRINTER       PRINTER
  4      1    MMP40      PRINTER       PRINTER
  5      6    UTIL       MODEMCON      PRINTER        MODEM         MODEM
  5      7    MMP40      PRINTER       PRINTER
---------------------------------------------------------------------------------

Please assign the data port locations.


Select operation : Display
```

Requirement: You have four selections at the "Select operation" prompt. When making selections, press the up or down arrow keys until the desired response is displayed on the screen, then press <Return>. Select

- "Display" if you wish to see a detailed display of all the dataport locations on a particular node or range of nodes.
- "Change" if you want to change the dataport definition on a range of dataport locations on or across nodes and to modify default values to the switch agent configuration
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you decide to go back to the default settings after you have changed them.

Step	Action
2	Select operation:
	If Display, go to steps 3 and 4.
	If Change, go to step 5.
	If Done, go to step 11.
3	Select Display, then press <Return>.
	Result: The following detailed dataport configuration table with your default settings is displayed:

```
The following dataports are on this system :

Node  1, Type  UTIL, Port 1: Dataport Name = MODEMCON
Node  1, Type  UTIL, Port 2: Dataport Name = PRINTER
Node  1, Type  UTIL, Port 3: Dataport Name = MODEM
Node  1, Type  UTIL, Port 4: Dataport Name = MODEM
Node  1, Type MMP40, Port 1: Dataport Name = CONSOLE
Node  1, Type MMP40, Port 2: Dataport Name = CSL1

Node  2, Type MMP40, Port 1: Dataport Name = PRINTER
Node  2, Type MMP40, Port 2: Dataport Name = PRINTER

Node  3, Type MMP40, Port 1: Dataport Name = PRINTER
Node  3, Type MMP40, Port 2: Dataport Name = PRINTER

Node  4, Type MMP40, Port 1: Dataport Name = PRINTER
Node  4, Type MMP40, Port 2: Dataport Name = PRINTER

Node  5, Type  UTIL, Port 1: Dataport Name = MODEMCON
Node  5, Type  UTIL, Port 2: Dataport Name = PRINTER

Press RETURN to continue:
```

Step	Action
4	Press <Return>.
	Result: The display continues to scroll if there are more dataports to display or you are returned to the dataport locations table.
5	Select Change, then press <Return>.
	Result: The following prompt is displayed:

```
Specify a range of nodes for which to
configure dataports

Starting node number: 1
```

Step	Action
6	Select the starting node number by using the up and down arrow keys, then press <Return>.
	Result: The following prompt is displayed.

```
Ending node number: 3
```

Step	Action
7	Select the ending node number by using the up and down arrow keys, then press <Return>.

Note: In this case, node 3 has been chosen.

Result: You are stepped through each dataport location and given the opportunity to either change it or go on to the next dataport. After a number of inputs, the following screen is displayed.

Note: For information on assigning specific features to dataports, see "Dataport rules" on page 2-45.

```
Node  Card  Type       Port 1      Port 2      Port 3      Port 4
 1     6    UTIL       ACCESS      MODEM       CON         MODEM
 1     7    MMP40      CONSOLE     CSL1
 2     1    MMP40      ACCESS      MODEM
 3     7    MMP40      PRINTER     CON
 4     1    MMP40      PRINTER     PRINTER
 5     6    UTIL       MODEMCON    PRINTER     MODEM       MODEM
 5     7    MMP40      PRINTER     PRINTER
-------------------------------------------------------------------------------

Starting node number: 1
Ending node number:   3
Node 1 UTIL card Port 1 : ACCESS
       Select the Baud Rate : 9600
Node 1 UTIL card Port 2 : MODEM
Node 1 UTIL card Port 3 : CON
Node 1 UTIL card Port 4 : MODEM
Node 2 MMP40     Port 1 : ACCESS
       Select the Baud Rate : 19200
Node 2 MMP40     Port 2 : MODEM
Node 3 MMP40     Port 1 : PRINTER
Node 3 MMP40     Port 2 : CON

Select operation : Display
```

Note: To select a different value for a dataport location, use the up and down arrow keys, and then press <Return>. If a dataport location does not need to be changed, simply press <Return>, and the next dataport is displayed.

Step	Action

8   Select Display, then press <Return>.

Result: The following screen of the dataport selections is displayed:

```
The following dataports are on this system :

Node  1, Type  UTIL, Port 1: Dataport Name = ACCESS
                                 Baud Rate = 9600
Node  1, Type  UTIL, Port 2: Dataport Name = MODEM
Node  1, Type  UTIL, Port 3: Dataport Name = CON
Node  1, Type  UTIL, Port 4: Dataport Name = MODEM
Node  1, Type MMP40, Port 1: Dataport Name = CONSOLE
Node  1, Type MMP40, Port 2: Dataport Name = CSL1

Node  2, Type MMP40, Port 1: Dataport Name = ACCESS
                                 Baud Rate = 19200
Node  2, Type MMP40, Port 2: Dataport Name = MODEM

Node  3, Type MMP40, Port 1: Dataport Name = PRINTER
Node  3, Type MMP40, Port 2: Dataport Name = CON

Node  4, Type MMP40, Port 1: Dataport Name = PRINTER
Node  4, Type MMP40, Port 2: Dataport Name = PRINTER

Node  5, Type  UTIL, Port 1: Dataport Name = MODEMCON

Press RETURN to continue:
```

9   Press <Return>.

Result: The following screen is displayed:

```
Node  Card  Type      Port 1      Port 2      Port 3      Port 4
  1    6    UTIL      ACCESS      MODEM       CON         MODEM
  1    7    MMP40     CONSOLE     CSL1
  2    1    MMP40     ACCESS      MODEM
  3    7    MMP40     PRINTER     CON
  4    1    MMP40     PRINTER     PRINTER
  5    6    UTIL      MODEMCON    PRINTER     MODEM       MODEM
  5    7    MMP40     PRINTER     PRINTER
-------------------------------------------------------------------------------

Select operation : Done
```

Step	Action
10	Select operation:
	If Done, go to step 11.
	If Change, go to step 5 and proceed.
	If Reset, go to step 1 at the screen display and proceed.
	If Display, go to step 8 and proceed.
11	Select Done, then press <Return>.
12	Go to "Continuing the software installation" on page 14-58.

Assigning the dataport locations for the MSM

To assign dataport locations to your MSM system, follow these steps.

Step	Action
1	Select Yes, and press <Return>.

Result: The following dataport configuration table is displayed:

Note: The table below depends on your system configuration as defined by your keycode and the installed system hardware. Your display may differ.

```
Node  Card  Type      Port 1       Port 2       Port 3       Port 4
  1    2    SBC      CONSOLE      CONO122      PRTO123      PRTO124
  2    3    SBC      CONSOLE      CONO232      CONO233      PRTO234
  3    1    SBC      CONO311      CONO312      CONO313      CONO314
  4    3    SBC      CONO431      CONO432      CONO433      CONO434
 13    3    SBC      SMDI1331     MOD1332      MOD1333      MOD1334
 14    1    SBC      MOD1411      MOD1412      MOD1413      MOD1414
----------------------------------------------------------------------

Please assign the data port locations.


Select operation : Display
```

Requirement: You have four selections at the "Select operation" prompt. When making selections, press the up or down arrow keys until the desired response is displayed on the screen, then press <Return>. Select

- "Display" if you wish to see a detailed display of all the dataport locations on a particular node or range of nodes.
- "Change" if you want to change the dataport definition on a range of dataport locations on or across nodes and to modify default values to the switch agent configuration.
- "Done" if you are satisfied with the default values or your changes.
- "Reset" if you need to go back to the default settings after you have changed them.

2	Select operation:

If Display, go to steps 3 and 4.

If Change, go to step 5.

If Done, go to step 11.

Step	Action

3   Select "Display", then press <Return>.

Result: The following detailed dataport configuration table with your default settings is displayed:

```
The following dataports are on this system :

Node  1, Type    SBC, Port 1: Dataport Name = CONSOLE
Node  1, Type    SBC, Port 2: Dataport Name = CON0122
Node  1, Type    SBC, Port 3: Dataport Name = PRT0123
Node  1, Type    SBC, Port 4: Dataport Name = PRT0124

Node  2, Type    SBC, Port 1: Dataport Name = CONSOLE
Node  2, Type    SBC, Port 2: Dataport Name = CON0232
Node  2, Type    SBC, Port 3: Dataport Name = CON0233
Node  2, Type    SBC, Port 4: Dataport Name = PRT0234

Node  3, Type    SBC, Port 1: Dataport Name = CON0311
Node  3, Type    SBC, Port 2: Dataport Name = CON0312
Node  3, Type    SBC, Port 3: Dataport Name = CON0313
Node  3, Type    SBC, Port 4: Dataport Name = CON0314

Node  4, Type    SBC, Port 1: Dataport Name = CON0431
Node  4, Type    SBC, Port 2: Dataport Name = CON0432
Node  4, Type    SBC, Port 3: Dataport Name = CON0433

Press RETURN to continue:
```

4   Press <Return>.

Result: The display continues to scroll if there are more dataports to display or, you are returned to the dataport locations table:

5   Select Change, then press <Return>.

Result: The following prompt is displayed:

```
Specify a range of nodes for which to
configure dataports

Starting node number: 1
```

6   Select the starting node number by using the up and down arrow keys, then press <Return>.

Result: The following prompt is displayed:

```
Ending node number: 14
```

Step	Action
7	Select the ending node number by using the up and down arrow keys, then press <Return>.

Note: In this case, node 14 has been chosen.

Result: You are stepped through each dataport location and given the opportunity to either change it or go on to the next dataport. After all the necessary inputs have been made, the system window indicates your changes.

Note: For information on assigning specific features to dataports, see "Dataport rules" on page 2-45.

Example: The following screen is displayed:

```
Node  Card  Type        Port 1        Port 2        Port 3        Port 4
  1     2   SBC         CONSOLE       MODEM         MODEM         MODEM
  2     3   SBC         CONSOLE       PRINTER       CONO233       MODEM
  3     1   SBC         CONO311       CONO312       ADMIN         MODEM
  4     3   SBC         CONO431       ACCESS        CONO433       CONO434
 13     3   SBC       M SMDI1331      MOD1332       MOD1333       MOD1334
 14     1   SBC       S SMDI1411      MOD1412       MOD1413       MOD1414
-------------------------------------------------------------------------------
        Select the Baud Rate : 4800
Node 4 Card 3 Port 3 : CONO433
Node 4 Card 3 Port 4 : CONO434
Node 13 Card 3 Port 1 : SMDI
        Enter the Link ID   : 1
        Select the Baud Rate : 2400
        Is this link redundant?  Yes
        Partnered locations : Node 13 Port 1 and : Node 14 Port 1
Node 13 Card 3 Port 2 : MOD1332
Node 13 Card 3 Port 3 : MOD1333
Node 13 Card 3 Port 4 : MOD1334
Node 14 Card 1 Port 2 : MOD1412
Node 14 Card 1 Port 3 : MOD1413
Node 14 Card 1 Port 4 : MOD1414

Select operation : Display
```

Note: To select a different value for a dataport, use the up and down arrow keys, and then press <Return>. If a dataport does not need to be changed, simply press <Return>, and the next dataport is displayed.

Step	Action
8	Select Display, then press <Return>.
	Result: The following screen of the dataport selections is displayed.

```
The following dataports are on this system :

Node  1, Type   SBC, Port 1: Dataport Name = CONSOLE
Node  1, Type   SBC, Port 2: Dataport Name = MODEM
Node  1, Type   SBC, Port 3: Dataport Name = MODEM
Node  1, Type   SBC, Port 4: Dataport Name = MODEM

Node  2, Type   SBC, Port 1: Dataport Name = CONSOLE
Node  2, Type   SBC, Port 2: Dataport Name = PRINTER
Node  2, Type   SBC, Port 3: Dataport Name = CONO233
Node  2, Type   SBC, Port 4: Dataport Name = MODEM

Node  3, Type   SBC, Port 1: Dataport Name = CONO311
Node  3, Type   SBC, Port 2: Dataport Name = CONO312
Node  3, Type   SBC, Port 3: Dataport Name = ADMIN
                               Baud Rate = 2400
Node  3, Type   SBC, Port 4: Dataport Name = MODEM

Node  4, Type   SBC, Port 1: Dataport Name = CONO431
Node  4, Type   SBC, Port 2: Dataport Name = ACCESS
                               Baud Rate = 4800

Press RETURN to continue:
```

Step	Action
9	Press <Return>.
	Result: Either the display scrolls to the next dataport display, or returns to the dataport configuration table. The following prompt is displayed:
	`Select operation:`
10	Select operation:
	If Done, go to step 11.
	If Change, go to step 5 and proceed.
	If Reset, go to step 1 at the dataport configuration table and proceed.
	If Display, go to step 8 and proceed.
11	Select Done, then press <Return>.
12	Go to "Continuing the software installation" on page 14-58.

Continuing the software installation

To continue the software installation, reenter information, or to abort the installation, follow these steps.

Step	Action
1	Select Done, then press <Return>.
	Result: The following prompt is displayed:
	``
	All required information has been input.
	Do you wish to continue, re-enter
	information, or abort? Continue
	``
2	Do you wish to continue, re-enter information, or abort?
	If Continue, go to steps 3, 4, and 5.
	If Re-enter, go to step 6.
	If Abort, go to step 7.
3	Select Continue, then press <Return>.
	Note: If you selected "From Another Tape" for languages (see "Selecting languages" on page 14-17), you are prompted to remove the current tape and insert the other tape.
	Result: Whether you are required to use another tape or, "languages" does not appear because you did not require another tape, the system runs various routines:
	When these routines are completed, the following message is displayed:
	``
	The operation successfully completed.
	Remove the tape when it finishes rewinding
	and boot into Service.
	Shutting down tape server
	#TAPE:MMTAPE1>
	``

Step	Action

IF your platform is	THEN see
a Modular Option or Modular Option EC	a.
a Card Option or Option EC-11	b.
a Modular Option GP or an MSM	step 4.

a. Prior to booting, ensure that the BPS for the AML link has been updated from 4800 to 9600. (For Modular Option EC-MMP40 systems, set the baud rate to 9600.) See the chapter entitled "Configuring your Meridian 1" in the *Installation and Maintenance Guide* (NTP 555-70x1-250).

b. Go to the PBX terminal and verify that the AML link is disabled before rebooting. Refer to the *Option 11 Installation and Maintenance Guide* (NTP 555-7071-210) or the *EC-11 Installation and Maintenance Guide* (NTP 555-7081-250).

4 Remove the tape and turn the power off. After approximately 10 seconds, boot the system by turning the power on again.

Note: This takes from 10 to 15 minutes per node.

Result: Various system routines are displayed and the Meridian Mail logon screen appears. Normal system administration operations may begin.

ATTENTION

Store the Install/data tape in a safe place. This will ensure that if you need to reinstall or modify the system, you will have quick access to the tape.

Step	Action
5	Logon using the system default password ADMINPWD (not case sensitive), then change the password immediately.
6	Select Re-enter, then press <Return>.
	Result: You are returned to the beginning of the installation procedure.
	Note: All the data you have entered is lost and must be entered again.
7	Select Abort, then press <Return>.
	Result: The installation is terminated.
	Note: Reboot the system from the Install/data tape and try the installation again (see "Beginning the software installation" on page 14-6), or call your Nortel representative.

Appendix A

MM12 parameters

In this chapter

Overview

Introduction   This appendix provides information needed when changing
settings for the following:

- DSP parameters
- FAX-specific DSP parameters
- T1 spans

Parameters

DSP parameters   The following table lists the DSP parameters for all platforms.

DSP parameter name	Default value	Range
DSP encoding type	Mulaw	Mulaw, Alaw
Disable silence compression	No	No, Yes
Transmit level	0	-10 to +10 dBm
Receive level	0	-10 to +10 dBm
DTR reject level	-57	-60 to - 30 dB (increments of 3 dB)
*DTR Max accept level	1	-11, -8, -5, -2, 1, or 4 dBm
Disable AGC	No	No, Yes
*AGC center	-20	-20 to -10 dBm
Hook flash pulse	320	304, 320, 336, . . . 1024 (increments of 16)
Telescan debounce	128	96, 112, 128, . . . 512 (increments of 16)
Telescan ring time	1024	224 to 1024 (increments of 16)

Note: DSP parameters marked with an "*" cannot be modified. They are reserved for future use.

Fax-specific DSP parameters   The following table lists the Fax-specific DSP parameters for all platforms.

Fax-specific DSP parameter name	Default value	Range
Fax transmit level	-13	-37 to -7 dB (increments of 2 dB)
CNG/CED gain	-6	-12 to 0 dB (increments of 2 dB)
Equalizer	None	2.5 dB, 5.5 dB, 8.58 dB
Poor quality page threshold	10	1 to 100 (increments of 1)

Fax-specific DSP parameter name	Default value	Range
Rx CDET threshold	-47	-36 dBm, -43 dBm, -47 dBm
Call connect timeout	35	25 to 95 sec (increments of 5 sec)
Handshake timeout	7	5 to 20 (increments of 1)
Switchover time	75	None
Response timeout (100 ms)	35	0 to 70 ms (increments of 1 ms)
Training length	100	(75 to 250 data words) increments of 25
V29/V27 CDET timeout (100 ms)	20	10 to 40 ms (increments of 1 ms)

Note: Training length is measured in data words ranging from 75 to 250. The training length graduates in increments of 25 (25 datawords = 200 ms).

T1 span parameters   The following table lists T1 span parameters for the MSM.

T1 span parameters	Default value	Range
Sync mode	ExternalT1Timing	ExternalT1Timing, InternalT1Timing
Line signal	DTMF	DTMF, DP
Line interface type	FX0GrdStart	FX0GrdStart, FXOLoopStart, FXSGrdStart, FXSLoopStart, FourW_EnMtype
Start type	WinkStart	WinkStart, ImmedStart, DelayStart
Trunk type	NonDIDTrunk	NonDIDTrunk, DIDTrunk, ASPTrunk
Frame format	D4	D4, ESF
00FD	0	0 to 15
Line code format	B8ZS	B8ZS, B7, Transparent
Line length	0 to 133	0 to 133, 133 to 266, 266 to 399, 399 to 533, 533 to 655
T1 alarm	Bit_two	Bit_two, s_Bit

T1 span parameters	Default value	Range
T1_Debounce	130	50 to MAXINT
T1_GuardTime	130	0 to MAXINT
ESFD	0	0 to 15
BVCR	0	0 to 255
Ring Pulse	130	0 to MAXINT
Hook Flash Pulse	320	0 to MAXINT

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Numerics

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Reader Response Form

Meridian Mail 12

System Installation and Modification Guide
555-7001-215
January 1998

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
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Reader Response Form

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522 University Avenue, 14th Floor
Toronto, Ontario M5G 1W7
Canada

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