

Norstar Voice Mail 3.0 Software Maintenance Manual

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Regulatory information

The Norstar Applications Module generates radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Part 15 of the FCC rules and CSA specification C108.8, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case users will be required, at their own expense, to take whatever measures necessary to correct the interference.

This apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations for the Canadian Department of Communications.

**CAUTION**

The Norstar Applications Module contains fragile electronic parts. DO NOT DROP OR BUMP THE MODULE.

Repair facilities

In the event of equipment malfunction, all repairs will be performed by Northern Telecom or by one of its authorized dealers.

In the USA	In Canada
Northern Telecom Inc.	Northern Telecom Canada Ltd.
Nashville Repair and Distribution Center	30 Norelco Drive
640 Massman Drive	Weston, ON
Nashville, TN 37210	M9L 2X6
Attn: RA#	Tel: (416) 744-5201
Tel: (615) 883-9220	Fax: (416) 744-5227

Note: You receive an RA# when you call the repair center in Nashville. This number should appear on the package of any and all parts sent to this location for repair.

Introduction

The Norstar Voice Mail Software Maintenance Manual provides technical information and procedures required by a technician to perform various Norstar Voice Mail tasks. This manual is useful during and after an initial installation. It should be used to supplement the information provided in the *Norstar Applications Module II Installation and Maintenance Manual*.

To use this manual, you should be:

- able to use an RS-232 terminal or laptop personal computer (PC)
- an experienced Norstar installer
- familiar with basic Norstar and Norstar Voice Mail terminology

Note: If you have never worked on a Norstar Voice Mail system before, carefully read "System overview" on page 5 before you begin.

How this manual is organized

The Norstar Voice Mail 3.0 Software Maintenance Manual is organized according to sections that cover:

How to use this manual — This section describes the contents of this manual and the conventions used.

System overview — This section provides an overview and functional description of Norstar Voice Mail software.

Using Norstar Voice Mail Administration software — This section explains how to use the Norstar Voice Mail Administration software.

Backing up and restoring Norstar Voice Mail programming — This section explains how to back up and restore Norstar Voice Mail programming.

Troubleshooting — This section provides procedures for diagnosing and solving problems.

Appendix A — This appendix describes the different alarm codes and meanings.

Appendix B — This appendix provides information about Norstar port numbers.

Appendix C — This appendix describes the different methods of administering the Norstar Voice Mail 3.0 programming.

Glossary — This section describes the different terms used in this manual.

Knowing the conventions and symbols

As you work with this guide, you will notice that conventions have been used to represent the words that appear on the Norstar telephone display and the laptop or monitor screen.

Norstar Telephone Display button and command line text

Any word or prompt that is part of the first line of the display on a Norstar telephone appears in a different typeface.

Example: Pswd:

Words in the second line of the display on a Norstar telephone appear in an underlined text.

Example: Press MBX.

When you see an underlined word, you can press the button directly below the option on the telephone display.

Any button named in the text or instructions indicates the telephone dialpad button that you must press to proceed.

Example: Press .

In the above example, you would press the telephone dialpad button labeled #.

Using an RS-232 terminal

Words or instructions that appear on an RS-232 terminal appear in a different typeface.

Example: Enter the shutdown option:

This manual uses button representations for instructions involving an RS-232 terminal keyboard. Any button that appears in the text or instructions indicates the key that you must press to proceed.

Example: Press .

In the above example, you would press the key labeled Return.

Symbols

This manual uses certain symbols to draw your attention to important information. You should pay attention to the following:

**CAUTION**

Alerts you to situations where there is the possibility of damaging the equipment.

**WARNING**

Alerts you to situations where there is the possibility of injuring yourself.

Note: Alerts you to information that is particularly critical or noteworthy.

Prerequisites

Before you attempt to set up Norstar Voice Mail, make sure you are familiar with how the Norstar one-line and two-line display telephones operate. We recommend you read your Norstar telephone user card before proceeding.

Other documents

For more information about Norstar Voice Mail, refer to the following documents:

- *Norstar Voice Mail 3.0 Programming Record*
- *Norstar Voice Mail 3.0 Set Up and Operation Guide*
- *Norstar Voice Mail 3.0 Reference Guide*
- *Norstar Voice Mail 3.0 User Guide*

For more information about the Norstar Applications Module II (NAM II), refer to the *Norstar Applications Module II Installation and Maintenance Manual*.

Introduction

Norstar Voice Mail works with a Norstar business communication system and offers a receptionist service that routes calls and provides voice message taking capability. A Norstar Voice Mail system consists of voice mail software installed on either a Norstar Applications Module (NAM) or a Norstar Applications Module II (NAM II). Both the NAM and the NAM II will be referred to as the Norstar applications server.

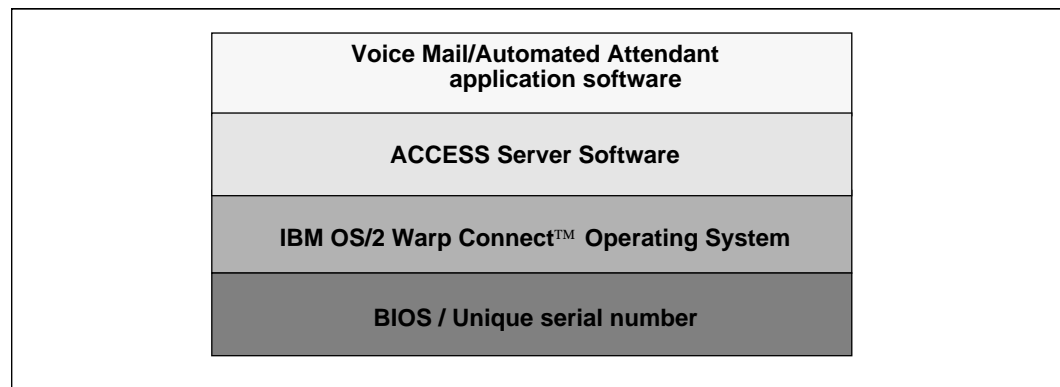
The Norstar applications server can also be used to run other software applications in conjunction with Norstar Voice Mail. You can also add optional upgrades and external peripherals to the module to enhance the Norstar Voice Mail system functionality. Refer to the *Norstar Applications Module II Installation and Maintenance Manual*.

A printer can be attached to the parallel port to print reports and alarms. Nortel recommends and supports any EPSON compatible printer.

Software

The Norstar applications server houses the voice mail and system software Norstar Voice Mail uses to operate. This software is stored on the hard disk. Figure 1 shows the hierarchical structure of the software.

Figure 1 Software hierarchy



Norstar Voice Mail software

The Norstar Voice Mail software supports the following features:

- Voice Mail – provides the mailboxes
- Auto Attendant (AA) – provides Norstar Voice Mail call answering functionality
- Custom Call Routing (CCR) – provides flexibility in customizing call answering functionality

The Norstar Voice Mail software also supports the following optional features:

- Norstar Voice Mail FAX – FAX works with Norstar Voice Mail to provide incoming and outgoing fax capability.
- Norstar Voice Mail AMIS – Audio Messaging Interchange Specification (AMIS) serves as a link between voice mail systems at different locations. AMIS allows networked voice messaging between linked mailboxes.
- Norstar Voice Mail Digital Networking – the Digital Networking option serves as a link between Norstar Voice Mail or Meridian Mail systems at different locations. Digital Networking allows the exchange of voice and fax messages between linked mailboxes on a network.
- Norstar Voice Mail Manager – is a Windows™ based application that allows the System Coordinator to administer all the Norstar Voice Mail features
- Norstar Voice Mail Desktop Messaging – allows you to create and receive Norstar Voice Mail Voice or Fax messages on your Personal Computer (PC)

System software

The Norstar applications server comes equipped with system software that allows Norstar Voice Mail to operate. In effect, Norstar Voice Mail runs on top of this software. The figure "Software hierarchy" on page 5 shows the hierarchy of the Norstar Voice Mail and system software.

System software includes the:

- ACCESS Server Software
- IBM OS/2 Warp Connect™ Operating system

ACCESS is designed to communicate with the Norstar system and provide support for voice, fax, and other applications running on the Norstar applications server. This software provides the following services:

- routing of all telephony (voice) commands between applications and Digital Voice Cards (DVCs) or the Media Services Base Interface Card (BIC)
- provision of special features, such as system shutdown
- management of shared resources, such as voice ports

Norstar Voice Mail uses the multi-tasking IBM OS/2 Warp Connect™ operating system version 3.0 or greater. OS/2 Warp Connect™ and ACCESS are factory installed on the module's hard disk. Norstar Voice Mail software is also factory installed.

Introduction

The Norstar Voice Mail administration software contains sets of commands that instruct Norstar Voice Mail to perform specific features or change programming. The administration software is installed on either a Norstar Applications Module (NAM) or a Norstar Applications Module II (NAM II). Both the NAM and the NAM II will be referred to as the Norstar applications server. The administration software is accessed from an RS-232 terminal or laptop personal computer (PC) connected to the Norstar applications server serial port.

When an RS-232 terminal or laptop PC is attached to Serial Port A (COM1), the administration software automatically takes control of Norstar Voice Mail and instructs it to perform its requested tasks. Using the administration software you can:

- Add, delete, or modify a Personal Mailbox, a Fax-on-demand Mailbox* or a Fax Overflow Mailbox*
- Reset the password for a Personal or Special Mailbox
- Add, delete, or modify a Group List
- Enable/Disable Multiple Administration Access
- Display different reports about Norstar Voice Mail configuration such as mailboxes, Group Lists, and Class of Service parameters
- Reset the statistics log used to create the Mailbox Activity Report, to zero
- Present a list of Alarms recorded during Norstar Voice Mail operation
- Reset the Alarm log for the Norstar applications server
- Change the menu language

* If Norstar Voice Mail is equipped with the FAX option.

This section describes the Norstar Voice Mail administration software and shows you how to use the RS-232 terminal keyboard.

Using an RS-232 terminal or laptop PC

The RS-232 terminal is used to access the administration software. This software provides menus where you can select different options that allow you to change configuration settings. Some configuration tasks require a terminal. Other configuration tasks can be performed using an M7310 or M7324 telephone.

Before you can use an RS-232 terminal, it must have the same communication settings as the Norstar applications server. To determine the terminal communication parameters, refer to the user manual that came with the RS-232 terminal. The Norstar Voice Mail communication parameters are:

- 9600 baud
- 8 data bits
- 1 stop bit
- no parity

Set the terminal communication parameters to these values. For instructions, refer to the terminal operating manual. When configuring the terminal, Norstar Voice Mail supports carriage return.

Note: Your terminal must be VT100 compatible and must support the VT100 National Character set. If the terminal does not support the VT100 National Character set, text will be incorrectly presented.

Using terminal emulation

If you have a laptop computer equipped with a terminal emulation package you can use it in the place of an RS-232 terminal. For more information about terminal emulation, refer to the terminal emulation documentation that came with your PC.

Connecting an RS-232 terminal or laptop computer

You must open the Norstar applications server's cable trough door before you can connect the RS-232 terminal or laptop computer. You must use a null-modem serial cable to connect Norstar Voice Mail to an RS-232 terminal or laptop computer. If the connector on the cable is not a 25-pin RS-232 connector, refer to the operating manual of the terminal you are connecting for instructions.

To connect the RS-232 terminal to Norstar Voice Mail:

1. Pin 2 on one end is connected to pin 2 on the other end, pin 3 on one end is connected to pin 3 on the other end, and pin 5 on one end is connected to pin 5 on the other end. The end of the cable attached to Norstar Voice Mail must be female.

Figure 2 Pin-out diagram

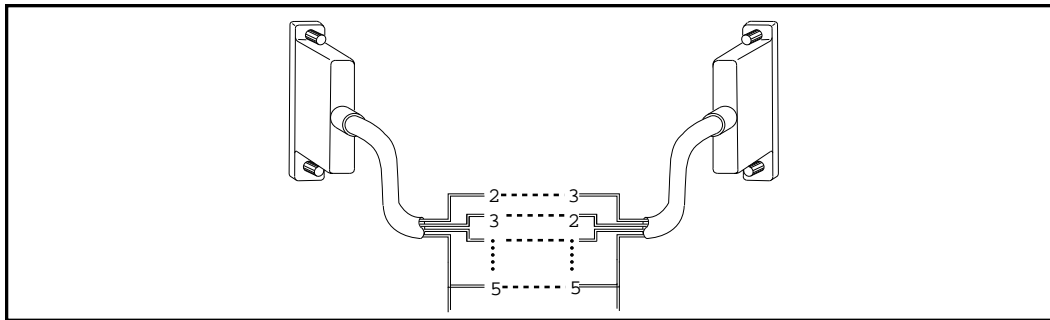
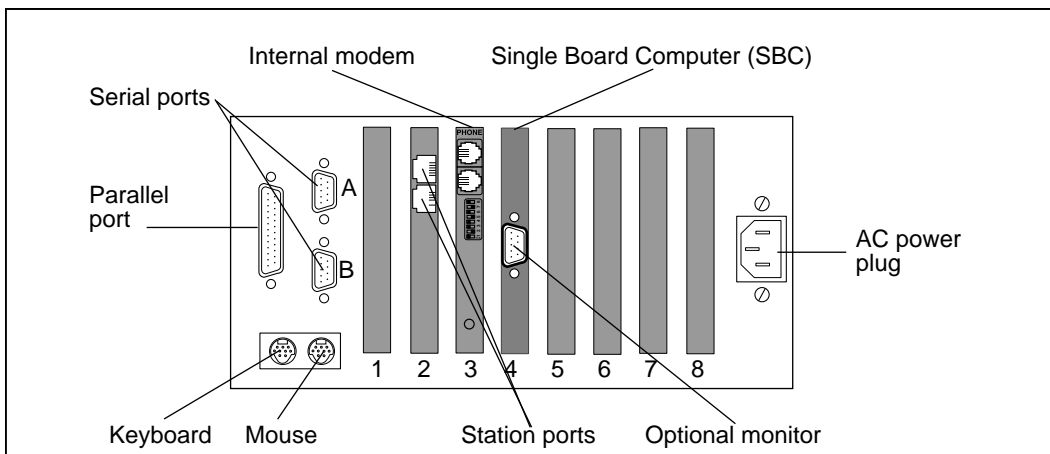


Table 1 Pin definition

Norstar applications server	Pin	RS-232 terminal
Transmit data	2	Receive data
Receive data	3	Transmit data
Ground	5	Ground

2. Attach the RS-232 cable to the Norstar applications server Serial Port A (COM1). Refer to Figure 3 for the location of Serial Port A (COM1).

Figure 3 Module external points of connection



3. Attach the other end of the cable to the modem connector on the terminal. You must use a null-modem cable. The parameters must be set to match the Norstar applications server default parameters.

Using the Server administration software from the Norstar applications server monitor

If you have an optional monitor attached to the Norstar applications server, there is no need to attach an external RS-232 terminal or laptop computer. You can access the server software by opening the OS/2 Warp Connect™ window SPMSRV.

To access the server software from the Norstar applications server monitor:

1. Open the minimized window viewer.
2. Choose and open the SPMSRV window.
3. Press .

Continue by following the steps outlined in "About the Norstar Voice Mail administration menus and options" on page 14.

Connecting a printer to the Norstar applications server

Connecting and using a printer to print Norstar Voice Mail Reports is optional. The Norstar applications server supports any EPSON compatible printer. This printer is attached to the module's parallel port. Refer to Figure 3 on page 11 for the location of this port.

Remote access

You can also perform Norstar Voice Mail System administration from a remote location, such as your office. To perform administration from a remote location, both the Norstar applications server and the remote PC must have a modem installed. The Norstar applications server modem must be connected to Serial Port A (COM 1).

Figure 4 Remote terminal access to Norstar applications server

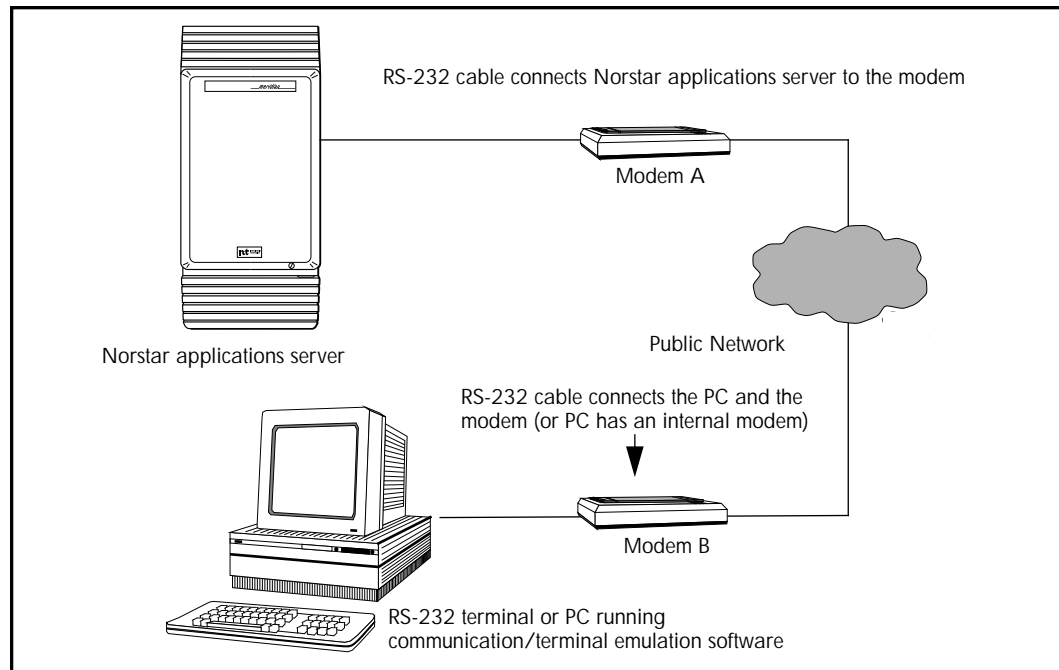


Figure 4 shows how the different components are connected to allow remote terminal access to Norstar Voice Mail.

Note: The modems must be set to Auto Answer in order for remote access to function. Refer to the manuals that came with your modem and PC communication software documentation for more information about cabling requirements, modem settings and communication parameters.

Table 2 Pin connection

Norstar applications server serial port	Modem
pin 2 (transmit) connects to	pin 3 (receive)
pin 3 (receive) connects to	pin 2 (transmit)
pin 5 (ground) connects to	pin 5 (ground)

Note: The Norstar applications server RS-232 port is a standard 9-pin RS-232 connector. Refer to Table 2 for the proper cable to connect the modem to the Norstar applications server.

About the Norstar Voice Mail administration menus and options

You access the different Norstar Voice Mail options through menus. The Norstar Voice Mail administration software has one Top-Level Menu and several sub menus. Each menu contains a list of numbered options that invoke the option command that appears next to the option number. Make menu choices until you reach a message to enter an action command, then enter the action you want Norstar Voice Mail to take.

Using the RS-232 terminal keyboard

All commands that invoke a task are entered on the RS-232 terminal keyboard. When selecting options, press the number corresponding to the option and press . The screen shows the next sub menu or the information field of the option.

For example:

1. Press (System Admin and Configuration), then press .

On some keyboards, the key can be labeled as . When you see instructions to press press the appropriate key.

Each set of instructions for entering Norstar Voice Mail configuration information is presented in easy-to-follow numbered steps. What appears on the terminal screen is shown to provide you with an orientation of where you are within the steps, and also where you are within the software.

Moving between menus and fields

Each time you select an option from a menu and press you are presented with either an information field or the next level menu. Fields appear on the screen one at a time. As you complete a field and press the next field appears. In fields where input is required, default or existing values are shown inside square brackets. To change information shown in a field, simply enter the new information.

After you finish entering information in all the fields under a menu, Norstar Voice Mail automatically returns to the menu you selected the option from.

To return to a previous level menu, press . To move up two levels, press twice. To return to the Top-Level Menu, press .

Starting the Norstar Voice Mail administration software

The Norstar Voice Mail administration software is always resident on the Norstar applications server. This software is invoked by first attaching a terminal or laptop computer to Serial Port A (COM1) of the module and then pressing .

Before you can start the Norstar Voice Mail administration software you must have the terminal or laptop computer attached to Serial Port A. If you are using a laptop computer, the terminal emulation window must be open.

To start the Norstar Voice Mail administration software:

1. Ensure the RS-232 terminal, or laptop computer, is correctly connected to Serial Port A (COM1) of the Norstar applications server.
2. Press .

The screen shows:

```
Select the language
1. English
2. Français

Q. Quit

Enter Selection Number:
```

3. Press for English or for French, then press .

The screen shows:

```
Enter the Login Password:
```

Note: This password must be entered in capital letters with no spaces.

4. Type **ADMIN**.

The screen shows:

```
Detailed/Concise Mode

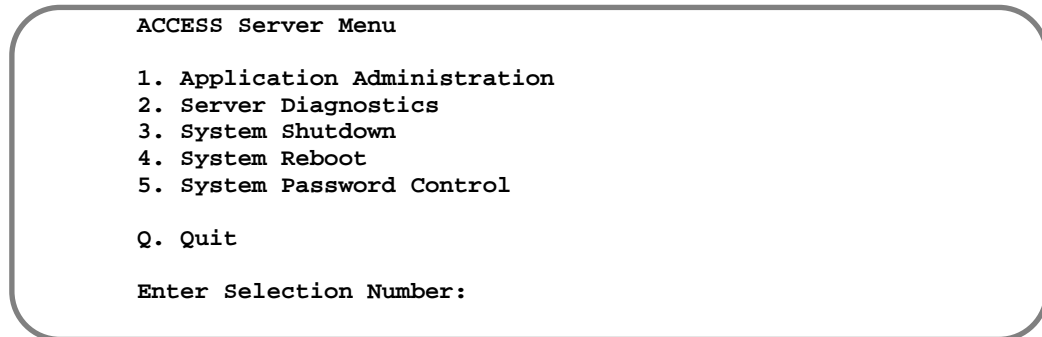
Enter Q to Quit

Select detailed mode (y):
```

5. Press and then press to select detailed mode.

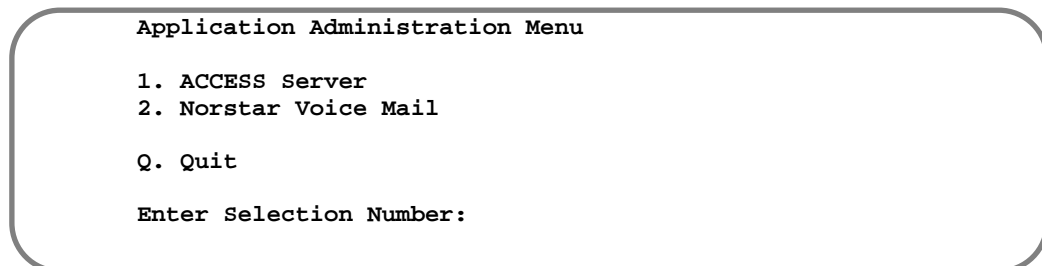
Note: Press to select concise mode.

The screen shows the ACCESS Server Main Menu:



6. Press for Application Administration, then press .

The screen shows the Application Administration Menu.



7. Press to start the Norstar Voice Mail administration software.

Note: For more information on the ACCESS Server Administration software, refer to the *Norstar Applications Module II Installation and Maintenance Manual*.

8. Press .

The screen shows the **password:** prompt.

9. Type `ADMIN`, then press .

Note: The password must be entered in uppercase letters.

```
*****
Northern Telecom Top-Level Norstar Voice Mail Release 3.0.xx
*****

0      Exit
1      Mailbox Admin
2      Group List Admin
3      System Admin and Configuration
4      Reports
8      Display Type [No accents]
9      Use French - Utilisation du francais

Enter a choice, ?, space, or ESC:
```

Note: When you select option 0 (press zero on the keyboard) and press you exit from the Top-Level Menu and are returned to the Application Administration Menu.

The Top-Level Menu provides access to all the administration options. From this menu, you can access:

- Mailbox Admin
- Group List Admin
- System Admin and Configuration
- Reports
- Display Type
- The Alternate Language

All the steps in the following sections assume you have accessed the Top-Level Menu.

Mailbox Administration

Mailbox Admin allows you to administer Mailboxes. From the Mailbox Admin Menu, you can:

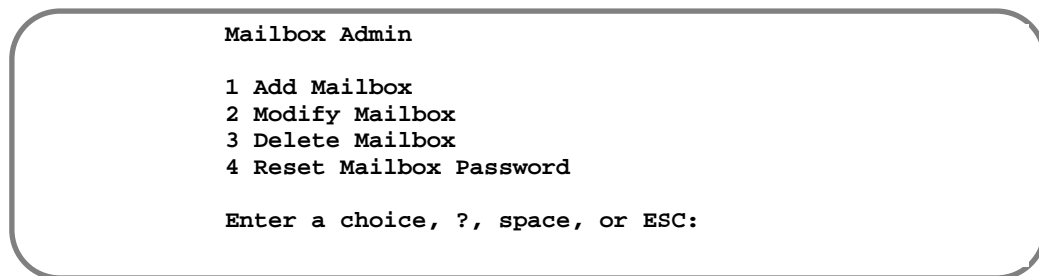
- add or modify a mailbox
- delete a mailbox
- reset a mailbox password

Before you can access the Mailbox Admin Menu, the Top-Level Menu must appear on the screen. For more information about accessing the Top-Level Menu, refer to "About the Norstar Voice Mail administration menus and options" on page 14.

To access the Mailbox Admin Menu:

1. Press (Mailbox Admin).
2. Press .

The screen shows the Mailbox Admin Menu:



Adding User Mailboxes

New mailboxes are required when new users are added to the system. To access the Add Mailbox Menu:

1. Press from the Mailbox Admin Menu.
2. Press .

The screen shows:

```
Enter the mailbox number (2-7 digits, Return if Done):
```

3. Enter a mailbox number, then press .

The screen shows:

```
What type of mailbox:? (SUB,FOD,FOV,) [SUB]
```

Note: The mailbox choices will be: **SUB** for Subscriber, **FOD** for Fax-on-demand and **FOV** for Fax Overflow. The steps below are an example of adding a Subscriber mailbox. If you have the FAX option installed and are adding a Fax-on-demand or Fax Overflow mailbox, see "Adding a Fax-on-demand Mailbox" on page 21 or "Adding a Fax Overflow Mailbox" on page 23.

4. Press to add a Subscriber mailbox.

The screen shows:

```
Enter the extension number (2-7 digits):[]
```

Note: A mailbox number must have the same length as the Norstar extension number. The mailbox number entered here is the default value for the mailbox extension. In most cases, Norstar Voice Mail mailbox numbers match the extension number of the Norstar extension associated with the mailbox.

5. Enter a valid extension number, then press . If this is a Guest Mailbox, press .

The screen shows:

```
Enter the subscriber's class of service(1-16):[1]
```

6. Enter the Class of Service number from 1 to 16, then press .

The screen shows:

```
Enter the subscriber's name (last,first <16 characters>):[NONAME]
```

7. Enter the subscriber's name, then press .

The screen shows:

```
Is message waiting allowed? (y/n): [Yes]
```

Note: Names may be entered as a last name, a first name, or the last name, a comma, and the first name. The total length including a comma is a maximum of 16 characters.

8. Press Y or N then press .

The screen shows:

Do you wish to include the subscriber in the directory access?
(y/n):[Yes]

9. Press Y or N then press .

The screen shows:

What to use when dialing out? (LINE, POOL): [NONE]

10. Enter the outdial route, then press .

The screen shows:

What line? (1-500): [1]

Note: If you selected pool as the outdial route, the screen shows:

What pool? (1-15): [1]

11. Enter the line or pool number, then press .

The screen shows:

Enter alternate extension number 1: (2-7 digits, 0=NONE): [0]

12. Enter the first Alternate extension number, then press .

The screen shows:

Enter alternate extension number 2: (2-7 digits, 0=NONE): [0]

13. Enter the second Alternate extension number, then press .

The screen shows:

Enter the subscriber's fax line (0-500, 0=NONE): [0].

Note: Fax Lines are only available on systems with FAX installed.

14. Enter the Fax Line number, then press .

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

After adding a mailbox you can add another mailbox or press to exit from the Add Mailbox Menu.

Adding a Fax-on-demand Mailbox

To access the Add Mailbox Menu:

1. Press from the Mailbox Admin Menu.
2. Press .

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

3. Enter a mailbox number, then press .

The screen shows:

What type of mailbox:? (SUB,FOD,FOV) [SUB]

4. Enter **FOD** for Fax-on-demand, then press .

The screen shows:

Enter the subscriber's class of service(1-16):[1]

5. Enter the Class of Service number from 1 to 16, then press .

The screen shows:

Enter the subscriber's name (last,first <16 characters>):[NONAME]

Note: Names may be entered as a last name, a first name, or the last name, a comma, and the first name. The total length including a comma is a maximum of 16 characters.

6. Enter the Fax-on-demand Mailbox name, then press .

The screen shows:

Do you wish to include the subscriber in the directory access?
(y/n):[Yes]

7. Press or then press .

The screen shows:

What to use when dialing out? (LINE, POOL): [NONE]

8. Enter the outdial route, then press .

The screen shows:

What line? (1-500): [1]

Note: If you selected pool as the outdial route, the screen shows:

What pool? (1-15): [1]

9. Enter the line or pool number, then press .

The screen shows:

Number of retries: [3]

10. Enter the number of retries, then press .

Note: The number of retries ranges from one to 99.

The screen shows:

Retry interval: [10]

11. Enter the retry interval, then press .

Note: This is a two-digit field. The retry interval is a value between 01 and 60 minutes.

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

After adding a mailbox you can add another mailbox or press to exit from the Add Mailbox Menu.

For more information on Fax-on-demand Mailboxes, refer to the *Norstar Voice Mail 3.0 FAX Set Up and Operation Guide*.

Adding a Fax Overflow Mailbox

To access the Add Mailbox Menu:

1. Press from the Mailbox Admin Menu.
2. Press .

The screen shows:

```
Enter the mailbox number (2-7 digits, Return if Done):
```

3. Enter a mailbox number, then press .

The screen shows:

```
What type of mailbox:? (SUB, FOD,FOV) [FOV]
```

4. Enter `fov` for Fax Overflow, then press .

The screen shows:

```
Enter the extension number (2-7 digits):[]
```

Note: A mailbox number must have the same length as the Norstar extension number length. In most cases, Norstar Voice Mail mailbox numbers match the extension number of the extension associated with the mailbox.

5. Enter a valid Norstar extension number, then press .

The screen shows:

```
Enter the subscriber's name (last,first <16 characters>):[NONAME]
```

Note: Names may be entered as a last name, a first name, or the last name, a comma, and the first name. The total length, including comma, is a maximum of 16 characters.

6. Enter the Fax Overflow Mailbox name, then press .

The screen shows:

Number of retries [99]

7. Enter the number of retries, then press .

Note: The number of retries ranges from one to 99.

The screen shows:

Retry interval [1]

8. Enter the retry interval, then press .

Note: This is a two-digit field. The retry interval is a value between 01 and 60 minutes.

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

After adding a mailbox, you can add another mailbox or press to exit from the Add Mailbox Menu.

For more information on Fax Overflow Mailboxes refer to the *Norstar Voice Mail 3.0 FAX Set Up and Operation Guide*.

Modifying mailbox parameters

Any mailbox can be modified to reflect a new owner, Class of Service, extension number, Mailbox Overrides, Alternate extensions* and Fax Line number**. The Mailbox Admin Menu must be accessed to change mailbox parameters. Refer to "Mailbox Administration" on page 18.

Note: Current values are indicated at the end of each field. Press to skip a field. The next field appears on the screen. When you skip to the next field, the field parameter does not change.

*Subscriber mailboxes only.

**On systems with FAX enabled. Subscriber mailboxes only.

To modify User Mailbox parameters:

1. Press (Modify Mailbox) from the Mailbox Admin Menu.
2. Press .

The screen shows:

```
Enter the mailbox number (2-7 digits, Return if Done):
```

3. Enter a mailbox number, then press .
- The screen shows:

```
Enter the extension number (2-7 digits):[xxx]
```

Note: **xxx** represents the current extension number. In most cases, Norstar Voice Mail mailbox numbers match the extension number of the Norstar extension associated with the mailbox. If this is a Guest Mailbox, no extension number will appear.

4. If you want to change the extension number enter the new number, then press . If this is a Guest Mailbox, just press .

The screen shows:

```
Enter the subscriber's class of service(1-16):[xx]
```

5. To change the Class of Service, enter a number between 1 and 16, then press .

The screen shows:

Enter the subscriber's name (last,first <16 characters>):[SMITH,D]

Note: The existing subscriber's name is shown in the square brackets at the end of the field.

6. To change the subscriber's name, enter the new name in the format of last name, comma, first name, then press .

The screen shows:

Is message waiting allowed? (y/n):[Yes]

7. To change the Message Notification parameter, press or then press .

The screen shows:

Do you wish to include the subscriber in the directory access?
(y/n):[Yes]

8. To change the directory access, press or then press .

The screen shows:

What to use when dialing out? (LINE, POOL): [LINE]

9. To change the outdial route, enter line or pool, then press .

The screen shows:

What line? (1-500): [0]

Note: If you selected pool as the outdial route, the screen shows:

What pool? (1-15): [0]

10. To change the line or pool number, enter a new value, then press .

The screen shows:

Enter alternate extension number 1: (2-7 digits, 0=NONE): [xxx]

Note: xxx represents the current first alternate extension number. If this is a Guest Mailbox, and no extension number was entered in step 4, the screens in steps 10, 11 and 12 will not appear.

11. Enter a new value for the first Alternate extension number, then press .

The screen shows:

Enter alternate extension number 2: (2-7 digits, 0=NONE): [xxx]

Note: xxx represents the current second alternate extension number.

12. Enter the second Alternate extension number, then press .

The screen shows:

Enter the subscriber's fax line (0-500, 0=NONE): [xx]

Note: Fax Lines are only available on systems with FAX installed. xx represents the current Fax Line number.

13. Enter a new value for the Fax Line number, then press .

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

After modifying a mailbox you can modify another mailbox or press to exit from the Modify Mailbox Menu.

To modify Fax-on-demand Mailbox parameters:

1. Press (Modify Mailbox) from the Mailbox Admin Menu.
2. Press .

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

3. Enter a mailbox number, then press .

The screen shows:

Enter the subscriber's class of service(1-16):[x]

4. To change the Class of Service, enter a number between 1 and 16, then press .

The screen shows:

Enter the subscriber's name (last,first <16 characters>):[REGISTER,PM]

Note: The existing name is shown in the square brackets at the end of the field.

5. To change the mailbox name, enter the new name in the format last name, comma, first name, then press .

The screen shows:

**Do you wish to include the subscriber in the directory access?
(y/n):[Yes]**

6. To change the directory access, press or then press .

The screen shows:

What to use when dialing out? (LINE, POOL): [LINE]

7. To change the outdial route, enter line or pool, then press .

The screen shows:

What line? (1-500): [x]

Note: If you selected pool as the outdial route, the screen shows:

What pool? (1-15): [x]

8. To change the line or pool number, enter a new value, then press .

The screen shows:

Number of retries: [x]

9. To change the number of retries, enter a new value, then press .

Note: The number of retries ranges from one to 99.

The screen shows:

Retry interval: [x]

10. To change the retry interval, enter a new value, then press .

Note: This a two-digit field. The retry interval is a value between 01 and 30 minutes.

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

After modifying a mailbox you can modify another mailbox or press to exit from the Modify Mailbox Menu.

To modify Fax Overflow Mailbox parameters:

1. Press (Modify Mailbox) from the Mailbox Admin Menu.
2. Press .

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

3. Enter a mailbox number, then press .

The screen shows:

Enter the extension number (2-7 digits, Return if Done): [xxxx]

Note: A mailbox number must have the same length as the Norstar extension number length. The mailbox number entered here is the default value for the mailbox extension. In most cases, Norstar Voice Mail mailbox numbers match the extension number of the Norstar extension associated with the mailbox.

4. To change the extension number, enter a valid extension number, then press .

The screen shows:

Enter the subscriber's name (last,first <16 characters>):[MAINFAX,NT]

Note: The existing name is shown in the square brackets at the end of the field.

5. To change the mailbox name, enter the new name in the format last name, comma, first name, then press .

The screen shows:

Number of retries: [xx]

6. To change the number of retries, enter a new value, then press .

Note: The number of retries ranges from one to 99.

The screen shows:

Retry interval: [xx]

7. To change the retry interval, enter a new value, then press .

Note: This a two-digit field. The retry interval is a value between 01 and 30 minutes.

The screen shows:

Enter the mailbox number (2-7 digits, Return if Done):

After modifying a mailbox you can modify another mailbox or press to exit from the Modify Mailbox Menu.

Deleting a mailbox

Deleting a mailbox is necessary for some troubleshooting procedures, and also necessary when the mailbox is no longer required. To delete a mailbox, you must access the Mailbox Admin Menu. For more information, refer to "Mailbox Administration" on page 18.

1. Press (Delete Mailbox) from the Mailbox Admin Menu.
2. Press .

The screen shows:

Enter the mailbox number to delete (2-7 digits, return if done):

3. Enter the number of the mailbox to be deleted, then press .

The screen shows:

Are you sure?(y/n):[n]

4. Press then press .

The screen shows:

Mailbox deleted.

Note: If the mailbox number entered is incorrect, press and re-enter the mailbox number.

After deleting a mailbox you can delete another mailbox or press to exit from the Delete Mailbox Menu.

Resetting a mailbox password

Resetting a mailbox password is required when a mailbox subscriber forgets the personal password. Resetting a password returns the mailbox to the default password of four zeros. To reset a mailbox password, you must access Mailbox Admin. For more information, refer to "Mailbox Administration" on page 18.

To reset a mailbox password:

1. Press (Reset Password) from the Mailbox Admin Menu.
2. Press .

The screen shows:

Enter the mailbox number for password reset (2-7 digits):

3. Enter the mailbox number, then press .

The screen shows:

Are you sure?(y/n):[n]

4. Press then press .

The screen shows:

Password has been reset.

After resetting the password for a mailbox you can reset the password for another mailbox or press to exit from the Reset Password Menu. Press then to return to the Top-Level Menu.

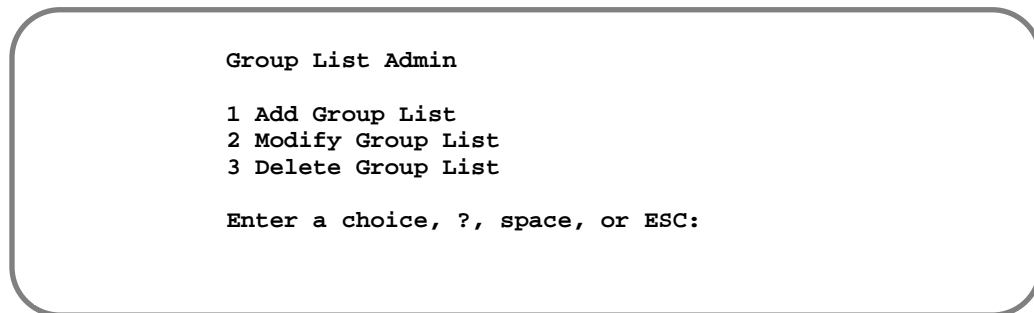
Adding, modifying or deleting Group Lists

The Group List Admin option allows you to add, modify or delete Group Lists. The Group List Admin option is selected from the Top-Level Menu. For more information, refer to "About the Norstar Voice Mail administration menus and options" on page 14.

To access the Group List Admin Menu:

1. Press (Group List Admin) from the Top-Level Menu.
2. Press .

The Group List Admin Menu appears.



From the Group List Admin Menu, you can:

- add a Group List
- modify a Group List
- delete a Group List

Adding a Group List

To access the Add Group List Menu:

1. Press (Add Group List) from the Group List Admin Menu.
2. Press .

The screen shows:

```
Group list:[xxx]
```

Note: `xxx` represents the number that Norstar Voice Mail automatically assigns to the Group List.

The screen changes to show:

```
What type of group list? (<V>oice, <F>ax): [V}
```

Note: The Group List choices will either be Voice or Fax. The steps below are an example of a Voice Group list. If the FAX option is installed and you wish to add a Fax Group List, the steps will vary. For more information on Fax Group Lists, refer to the *Norstar Voice Mail 3.0 FAX Set Up and Operation Guide*.

3. Enter `v` for Voice, then press .

The screen shows:

```
Enter the group list name (1-16 characters):[ ]
```

4. Enter the Group List name, then press .

The screen shows:

```
Enter mailbox number to add to grp. list (2-7 digits, Return if Done):
```

5. Enter the mailbox number, then press .

The screen shows:

```
Enter mailbox number to add to grp. list (2-7 digits, Return if Done):
```

Note: Only initialized mailboxes can be added to a Group List.

After adding a mailbox to a Group List, you can add another mailbox, or press to exit from the Add Group List Menu.

Modifying a Group List

Group Lists are modified as new mailboxes are added to the list and other mailboxes are removed. Ask the System Coordinator for a list of current Group List numbers before proceeding. Then go to the Group Administration Menu. For more information, refer to "Adding, modifying or deleting Group Lists" on page 33.

To modify a Group List:

1. Press (Modify Group List) from the Group List Admin Menu.
2. Press .

The screen shows:

```
Enter group list number to modify (3 digits, Return if Done):
```

3. Enter the Group List number, then press .

The screen shows:

```
Enter the group list name (1-16 characters):[PRESENTNAME]
```

4. The existing name of the Group List is shown. Enter the new name for the Group List, then press .

The screen shows:

```
Enter mailbox number to add to grp. list (2-7 digits, Return if Done):
```

5. Enter the number of a mailbox to be added to the Group List, then press .

Note: Only initialized mailboxes can be added to Group Lists.

The screen shows:

```
Enter mailbox number to add to grp. list (2-7 digits, Return if Done):
```

6. Continue adding mailboxes to the Group List.
7. Press when all the mailboxes have been added to the Group List.
The screen shows:

```
Enter mailbox number to delete from grp. list (2-7 digits, Return if Done):
```

8. Enter the mailbox number to be deleted, then press .

The screen shows:

```
Enter mailbox number to delete from grp. list (2-7 digits, Return if Done):
```

9. Press to return to the Modify Group List prompt or press again to return to the Group List Admin Menu.

Deleting a Group List

Group Lists can be deleted at any time. Once a Group List is deleted, the Group List number is reassigned the next time a Group List is added. To delete a Group List, you must first access the Group List Administration Menu from the Top-Level Menu. For more information, refer to "Adding, modifying or deleting Group Lists" on page 33.

To delete a Group List:

1. Press (Delete Group List) from the Group List Admin Menu.
2. Press .

The screen shows:

```
Enter group list number to delete (3 digits, Return if Done):
```

3. Enter the Group List number to be deleted, then press .

The screen shows:

```
Are you sure?(y/n):[n]
```

4. Press then press .

Note: If the number is incorrect, press and re-enter the number.

The screen shows:

```
Group List deleted
```

After deleting a Group List you can delete another Group List or press to exit from the Delete Group List Menu. Press and then to return to the Top-Level Menu.

System Administration and Configuration Menu

The System Administration and Configuration option allows you to access all the Administration and Configuration task options to adjust the system setup. These include:

- Disable/Enable System
- Allow/Disallow Multiple System Admin
- Modify Class of Service Profiles

To access the System Admin and Configuration option, the Top-Level Menu must appear on the screen. For more information, refer to "About the Norstar Voice Mail administration menus and options" on page 14. To access System Admin and Configuration menu options:

1. Press (System Admin and Configuration) from the Top-Level Menu.
2. Press .

The screen shows the System Admin and Configuration Menu:

```
System Admin and Configuration

1      Disable System
2      Allow/Disallow Multiple System Admin
3      Modify Class of Service Profiles

Enter a choice, ?, space, or ESC:
```

From the System Admin and Configuration Menu, you can:

- enable/disable the Norstar Voice Mail system (this feature temporarily disables Norstar Voice Mail)
- enable Multiple System Admin (Multiple System Admin allows several Norstar telephones to administer a single Norstar Voice Mail system simultaneously)
- modify Class of Service values (this feature allows you to edit any of the 16 Classes of Service)

Enabling or Disabling Norstar Voice Mail

This feature allows you to temporarily disable Norstar Voice Mail. This option is useful when you are performing maintenance on the Norstar applications server and do not want to shut down the entire unit.

To disable or enable the Norstar Voice Mail system:

1. Press from the System Admin and Configuration Menu.

When you select this option, the menu toggles between Disable and Enable.

Enabling/Disabling Multiple Administration Access

The Allow/Disallow Multiple System Admin option allows you to enable/disable multiple Administration sessions. When Multiple System Admin is allowed, several Norstar telephones can simultaneously administer a single Norstar Voice Mail system.

Note: Allow this option for training purposes only. Disallow this option when the system is in service enabling only the System Coordinator access to programming.

To access the Multiple System Admin Menu, the System Administration and Configuration Menu must appear on the screen. For more information, refer to "System Administration and Configuration Menu" on page 37.

To enable/disable multiple Administration sessions:

1. Press (Allow/Disallow Multiple System Admin) from the System Admin and Configuration Menu.
2. Press .

The screen shows:

```
Multi admin is currently NOT ALLOWED.  
Enter Password:
```

3. Enter the password . Entering the password and pressing changes the value of the Multiple System Admin Parameter.

The screen shows:

```
Multi admin is currently ALLOWED.
```

The screen then returns to the System Admin and Configuration Menu.

Press and then to return to the Top-Level Menu.

Editing Classes of Service

The Modify Class of Service Profiles option allows you to edit any of the elements associated with a specific Class of Service. You select a Class of Service you want to change and then you can change the value for each element. There are 13 elements for each Class of Service.

If a Class of Service has been edited, you have the option of returning the Class of Service to the original default settings. Refer to the *Norstar Voice Mail 3.0 Set Up and Operation Guide*: Section 4, Setting up mailboxes for more information on Classes of Service.

You can press if you do not want to change a particular Class of Service element. The default for each element will appear to the right of the display and will be in square [] brackets. In the steps that follow, the values inside the [] brackets are examples only.

Before you change the elements of a Class of service, ensure you have completed the Editable Classes of Service section in the *Norstar Voice Mail 3.0 Programming Record*.

To edit a Class of Service:

1. Press (Modify Class of Service Profiles) from the System Admin and Configuration Menu.
2. Press .

The screen shows:

Enter the Class of Service number (1-16), Return if Done:

3. Enter the Class of Service number to be edited, then press .

The screen shows:

Reset this Class of Service to factory defaults? (y/n): [No]:

4. Enter the Y or N, then press .

5. Enter 1 for the Primary language or, 2 for the Alternate language, then press .

Note: The Norstar Voice Mail Bilingual setting must be set to Yes in order to select the Alternate language. This feature was assigned during the initialization of Norstar Voice Mail. Refer to the *Norstar Voice Mail 3.0 Software Installation Guide, Initializing Norstar Voice Mail 3.0 software.*

The screen shows:

Enter the maximum mailbox message time (1-180 min): [15]

6. Enter the maximum mailbox message time, then press .

The screen shows:

Enter the maximum message length (1-60 min): [3]

7. Enter the maximum mailbox message length, then press .

The screen shows:

Enter the maximum days for retention of messages (0-365, 0=Don't purge): [30]

8. Enter the maximum number of days a message will be stored, then press . If you want messages to be stored indefinitely, press then press .

The screen shows:

Enter the maximum personal greeting length (1-30 min): [1]

9. Enter the maximum length, in minutes, of the personal mailbox greeting then press .

The screen shows:

Is Off-Premise message notification allowed? (y/n): [Yes]

10. Press if do not want Off-premise Message Notification available for this Class of Service.

The screen shows:

Enter retry interval (1-120): [5]

11. Enter the retry interval for Off-premise Message Notification, then press .

Note: If Off-premise Message Notification is set to No, this step will not appear.

The screen shows:

Enter the number of attempts (1-20): [3]

Note: If Off-premise Message Notification is set to No, this step will not appear.

12. Enter the number of retry attempts for Off-premise Message Notification, then press .

The screen shows:

Is Personal Target Attendant allowed? (y/n): [Yes]

13. Press if do not want a Target Attendant for this Class of Service.

The screen shows:

Is Outbound Transfer allowed? (y/n): [Yes]

14. Press if do not want to allow Outbound Transfer for this Class of Service.

The screen shows:

Is Networking allowed? (y/n): [Yes]

15. Press if do not want to allow Networking for this Class of Service.

Note: If Networking is not installed, this step will not appear.

The screen shows:

Enter the maximum number of incorrect login attempts (4-20): [9]

16. Enter the maximum number of incorrect password attempts allowed, then press .

The screen shows:

Enter the number of days before password expires (0-365): [90]

17. Enter the number of days before a password expires, then press .

The screen shows:

Enter the class of service number (1-16, Return if Done):

After editing a Class of Service you can edit another Class of Service or press to exit from the Modify Class of Service Profile Menu.

Resetting a Class of Service to the preset defaults

If you have made changes to a Class of Service, you have the option of resetting it to the preset defaults.

To reset an edited Class of Service back to the preset defaults:

1. Press (Modify Class of Service Profile) from the System Admin and Configuration Menu.
2. Press .

The screen shows:

Enter the Class of Service number (1-16, Return if Done):

3. Enter the Class of Service number to be reset, then press .

The screen shows:

Reset this Class of Service to factory defaults? (y/n): [No]

4. Press to return the Class of Service to the preset defaults.

Note: If you do not want to reset the Class of Service, press .

The screen shows:

Class of Service x has been reset to factory defaults.

The screen changes to show:

Enter the class of service number (1-16, Return if Done):

After resetting a Class of Service you can reset another Class of Service or press to exit from the Modify Class of Service Profile Menu.

The Norstar Voice Mail Reports Menu

The Reports option allows you to view and print reports that can assist in troubleshooting the Norstar Voice Mail system hardware, software, and setup configurations. From the Reports Menu, you can also view Alarm messages.

To access the Report options, the Top-Level Menu must appear on the screen. For more information, refer to "About the Norstar Voice Mail administration menus and options" on page 14.

To view Norstar Voice Mail Reports:

1. Press (Reports).
2. Press .

The screen shows:

```
Reports
0      Dial Table Reports
1      Subscriber Reports
2      System Group List Report
3      Service Class Profiles
4      Message Usage Report
5      Reset Statistics
6      System Parameters Report
7      CLID Table Report
8      Alarms
9      Printing destination [Terminal]

Enter a choice, ?, space or ESC
```

There are eight groups of Norstar Voice Mail Reports:

- Dialing Translation Table Reports
- Subscriber Reports (including Directory, Numeric Subscriber, and Mailbox Activity)
- System Group List Report
- Class of Service Report
- Message Usage Report
- System Parameters Report
- CLID Table Report
- Alarms Report

Note: To cancel a report at any time, press . To return to the Top-Level Menu, press .

Changing the printing destination

The printing destination option allows you to specify whether reports are printed to the terminal screen or the printer. When you select this option, the menu selection toggles between [Terminal] and [Printer]. When [Terminal] is selected, all reports are sent to the screen and when [Printer] is selected, all reports are sent to the printer.

To change the printing destination:

1. Press (Printing Destination).

Note: Before you can print reports, you must attach a printer to the Norstar applications server parallel port. The Norstar applications server supports any EPSON compatible printer. For more information about attaching a printer, refer to "Connecting a printer to the Norstar applications server" on page 12.

Viewing the Dialing Translation Report

This report lists the current settings of the Dialing Translation Parameters and a list of all the entries in the Dialing Translation Table.

To view the Dialing Translation Report:

1. Press (Dial Table Reports) from the Reports Menu.
2. Press .

The screen shows:

DIALING REPORT		Date:1997/04/05
Long distance code:	1	
Area code:	403	
Access code:	9	
Translate reply?:	Y	
<u>Number to Match</u>		<u>Number to Substitute</u>
011*		011*
403250*		250*
403284*		284*
403640*		640*
403*		1403*
604978*		978*
604*		1604*
*		1*

Note: The "*" character shown after a value signifies any digits in the telephone number remaining to be dialed. Norstar Voice Mail automatically adds the "*" character after every Input and Output value.

Viewing Subscriber Reports

The Subscriber Reports group contains three Report options that allow you to view the Directory Report, the Numeric Subscriber Report, and the Mailbox Activity Report.

To access the Subscriber Reports, the Reports Menu must appear on the screen. For more information, refer to "The Norstar Voice Mail Reports Menu" on page 43.

To view the Subscriber Reports:

1. Press (Subscriber Reports) from the Reports Menu.
2. Press .

The screen shows:

```
Subscriber Reports

1      Directory Report
2      Numeric Subscriber Report
3      Mailbox Activity Report

Enter a choice, ?, space or Esc:
```

The Directory Report

The Directory Report shows all the mailboxes on the Norstar Voice Mail system, with the Directory option set to YES, in alphabetical order. Uninitialized mailboxes, Guest Mailboxes, and Special Mailboxes also appear in this report. When the Networking option is installed, Network Mailboxes will appear in this report. When the FAX option is installed, Fax-on-demand and Fax Overflow Mailboxes will appear in this report.

To view the Directory Report:

1. Press (Directory Report) from the Subscriber Reports Menu.
2. Press .

The screen shows:

DIRECTORY REPORT				1997/05/04	
<u>Subscriber</u>	<u>MB</u>	<u>Type</u>	<u>Ext</u>	<u>Name Recorded</u>	<u>Greeting Recorded</u>
AMISNET	22	NET	22	N	N
CHATTERTON,P	51	SUB	51	Y	Y
FAX_ON,DEMAND	31	FOD	31	Y	N
GENERAL_DELIVERY,MB	10	GEN	10	Y	N
GUEST,ONE	19	SUB		N	Y
JORDAN,M	21	SUB	21	Y	Y
MALONE,K	35	SUB	35	Y	Y
PIPPEN,S	40	SUB	40	Y	Y
RODMAN,D	44	SUB	44	Y	Y
SYSTEM_MANAGER, MB	12	ADM	12	Y	Y

The Numeric Subscriber Report

The Numeric Subscriber Report shows all the mailboxes on the Norstar Voice Mail system in numerical order (the example in step 2 only shows 10 mailboxes as an example of the report format). Uninitialized mailboxes, Guest Mailboxes, Information and Special Mailboxes appear on this report. When the Networking option is installed, Network Mailboxes will appear in this report. When the FAX option is installed, Fax-on-demand and Fax Overflow Mailboxes will appear in this report.

To view the Numeric Subscriber Report, the Subscriber Report Menu must appear on the screen. For more information, refer to "The Norstar Voice Mail Reports Menu" on page 43. To view the Numeric Subscriber Report:

1. Press (Numeric Subscriber Report) from the Subscriber Reports Menu.
2. Press .

The screen shows:

NUMERIC MAILBOX INFORMATION REPORT								Date: 1997/05/04
<u>MB</u>	<u>Type</u>	<u>Subscriber</u>	<u>COS</u>	<u>Msg</u>	<u>Min</u>	<u>Msg</u>	<u>Min</u>	<u>Out_dial</u>
10	GEN	GENERAL_DELIVERY,MB	1	0	0	0	0	P 1
12	ADM	SYSTEM_MANAGER,MB	7	0	0	0	0	none
21	SUB	JORDAN,M	1	6	1	4	0	L 1
22	SUB	KUKOC,T	1	3	1	2	0	P 1
23	SUB	ONEAL,S	1	2	1	1	1	L 5
24	SUB	HILL,G	9	10	1	9	2	P 2
26	SUB	BARKLEY,C	1	0	0	0	0	P 2
27	SUB	ROBINSON,D	15	12	5	4	2	L 3
41	SUB	KEMP,S	1	0	0	0	0	none
45	SUB	MOTUMBO,D	13	14	7	8	2	P 1

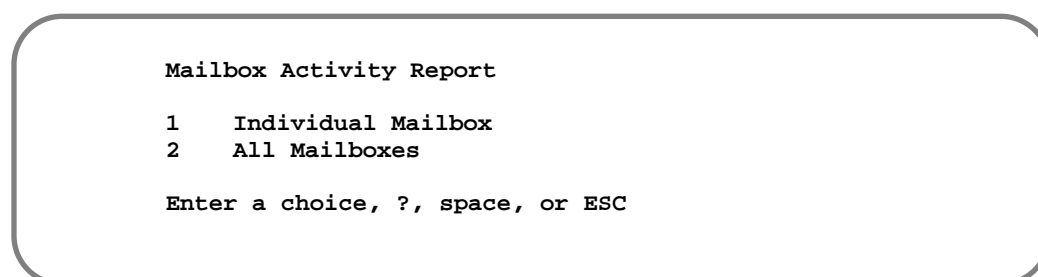
The Mailbox Activity Report

The Mailbox Activity Report shows all the activity occurring within a single mailbox, or all the mailboxes stored within the system. When you select this option, you can view an individual mailbox, or you can view all the mailboxes. When you view a single mailbox, you must enter the mailbox number.

To view the Mailbox Activity Report, the Subscriber Report Menu must appear on the screen. For more information, refer to "The Norstar Voice Mail Reports Menu" on page 43. To view the Mailbox Activity Report:

1. Press (Mailbox Activity Report) from the Subscriber Reports Menu.
Press .

The screen shows:



To display a report on an individual mailbox, press then press .

The screen shows:

```
Enter the mailbox number (2-7 digits, Return if Done):
```

To view an Activity Report for all mailboxes, press then press .

2. Enter the mailbox number, then press .

Note: The Mailbox Activity Report appears. Refer to Figure 5 and Figure 6 for a sample of this report. After the report appears, the screen shows:

```
Enter the mailbox number (2-7 digits, Return if Done):
```

3. Press .

The screen shows the Mailbox Activity Report

Figure 5 Mailbox Activity Report (page 1)

MAILBOX ACTIVITY REPORT		Date: 1997/05/04						
Mailbox 10								
Name GENERAL_DELIVERY,MB								
Last access date 8/7/95								
	<u>Tues</u>	<u>Mon</u>	<u>Sun</u>	<u>Sat</u>	<u>Fri</u>	<u>Thur</u>	<u>Wedn</u>	
No. of messages recorded	5	3	0	0	1	3	9	
Total length of messages	4.0	2.0	0.0	0.0	0.3	3.0	6.0	
Average length of message	0.7	0.5	0.0	0.0	0.4	0.8	0.5	
No. of times maximum message length reached (recorded by sender)	0	0	0	0	0	0	0	
No. of messages received	2	0	1	4	3	2	5	
Total length of messages	0.7	0.0	0.0	0.9	0.3	0.5	1.1	
Average length of message	0.3	0.0	0.0	0.2	0.1	0.2	0.2	
No. of accesses	9	3	0	0	3	7	15	
Connect time in mailbox								
Total minutes	5	2			2	4	9	
Average minutes/access	0	0	0	0	0	0	0	
Average time before messages heard	0	0	0	0	0	0	0	
Average time before messages deleted	0	0	0	0	0	0	0	
No. of times 3 bad passwords entered	0	0	0	0	0	0	0	

Note: The order of the days at the top of the report depends on the day the report is requested. The first day in the list is always the day prior to the day the report is being shown. For example, if the report is viewed on Tuesday, the first day in the list at the top of the page is Monday.

Figure 6 Mailbox Activity Report (page 2)

CUMULATIVE AVERAGE	Date Last Cleared:1997/05/04
No. of messages recorded	21
Total length of messages	15.3
Average length of message	5.15
No. of times maximum message length reached (recorded by sender)	0
No. of messages received	17
Total length of messages	3.5
Average length of message	0.9
No. of accesses	37
Connect time in mailbox Total minutes	22
Average minutes/access	0
Average time before messages heard	0
Average time before messages deleted	0
No. of times 3 bad passwords entered	0
Personal Greeting Recorded - Yes	
Alternate Greeting Recorded - Yes	
Any CLID Greeting Recorded - No	

To generate another report, enter the mailbox number. Press and to return to the Reports Menu.

The System Group List Report

The System Group List Report shows the Group List names and numbers, the mailbox numbers included in each Group List, type of Group List and mailbox subscriber's names. When the FAX option is activated, this report will also show the FAX Group Lists. The report will show the recipient's name, phone number, outdial route and line or line pool number.

To view the System Group List Report, the Reports Menu must appear on the screen. For instructions about accessing this menu, refer to "The Norstar Voice Mail Reports Menu" on page 43. To view the System Group List Report:

1. Press (System Group List Report) from the Reports Menu.
2. Press .

The screen shows:

SYSTEM GROUP LIST REPORT				Date:1997/05/04	
<u>No</u>	<u>Type</u>	<u>Name</u>	<u>MB</u>	<u>MB Name</u>	<u>MB Type</u>
901	Voice	SALES	21	JORDAN, M	SUB
			22	KUKOC, T	SUB
			35	MALONE, K	SUB
902	Voice	SHIPPING	40	PIPPEN, S	SUB
			44	RODMAN, D	SUB

The Class of Service Profiles Report

The Class of Service Profiles option is used to view parameter settings for each of the 16 Classes of Service.

To view the Class of Service Report, the Reports Menu must appear on the screen. For instructions about accessing this menu, refer to "The Norstar Voice Mail Reports Menu" on page 43. To view the Class of Service Profiles Report:

1. Press (Service Class Profiles) from the Reports Menu.
2. Press .

The report begins printing.

Note: If you want to stop viewing the Class of Service report, press and then press .

The Message Usage Report

The Message Usage Report shows the available storage space, in minutes, available on the Norstar Voice Mail system.

To view the Message Usage Report, the Reports Menu must appear on the screen. For instructions about accessing this menu, refer to "The Norstar Voice Mail Reports Menu" on page 43. To view the Message Usage Report:

1. Press (Message Usage Report) from the Reports Menu.
2. Press .

The screen shows:

MESSAGE USAGE REPORT	Date: 1997/05/06
Current storage available	<u>Minutes</u> 520

Reset Statistics

The Reset Statistics option, on the Reports Menu, is used to reset the Mailbox Activity Report statistics to zero. These statistics are reset for every mailbox on the Norstar Voice Mail system when you use the Reset Statistics Menu item. Exercise caution when using the Reset Statistics Menu item.

To access the Reset Statistics option, the Reports Menu must appear on the screen. For instructions about accessing this menu, refer to "The Norstar Voice Mail Reports Menu" on page 43.

To reset the Mailbox Activity Report Statistics:

1. Press (Reset Statistics) from the Reports Menu.
2. Press .

The screen shows:

```
WARNING: The statistics in the Mailbox Activity Report will be reset  
to zero.  
Are you sure? (y/n):[n]
```

3. Press to reset the report statistics, then press .

The screen shows:

statistics reset.

After the Mailbox Activity Report Statistics are reset, the screen returns to the Reports Menu.

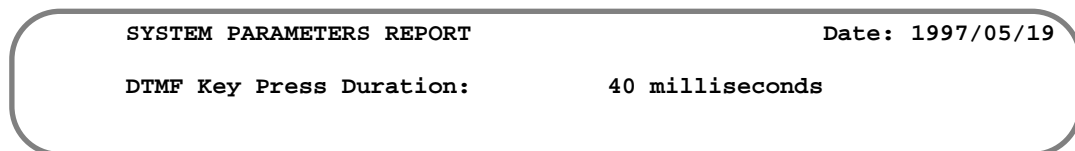
The System Parameters Report

The System Parameters Report shows Norstar Voice Mail parameters that are configured at the factory. To view the System Parameters Report, the Reports Menu must appear on the screen. For instructions about accessing this menu, refer to "The Norstar Voice Mail Reports Menu" on page 43.

To view the System Parameters Report:

1. Press (System Parameters Report) from the Reports Menu.
2. Press .

The screen shows:



SYSTEM PARAMETERS REPORT **Date: 1997/05/19**
DTMF Key Press Duration: **40 milliseconds**

The CLID Table Report

The CLID Table Report shows the external caller's number, the length of the phone number, and where the call was directed to. To view the CLID Report, the Reports Menu must appear on the screen. For instructions about accessing this menu, refer to "The Norstar Voice Mail Reports Menu" on page 43.

To view the CLID Report:

1. Press (CLID Table Report) from the Reports Menu.
2. Press .

The screen shows:

CLID REPORT			Date: 1997/05/05
Calling ID	CLID Length	Dest. Type	Dest. Number
4031920439	10	Greet Tbl	1
4032910440	10	CCR Node	Tree 1 Path 2
4032910441	10	Mbox	26
4032910442	10	Ext	22

Alarms Menu option

The Alarms option is used to view and reset the Alarm log. Alarms are created when a diagnostic test fails. For more information on diagnostics and alarms, refer to "Appendix A: Norstar Voice Mail Alarm Codes" on page 77.

To access the Alarms option, the Reports Menu must appear on the screen. For instructions about accessing this menu, refer to "The Norstar Voice Mail Reports Menu" on page 43.

To access the Alarms option:

1. Press (Alarms) from the Reports Menu.
2. Press .

The screen shows:

Alarms	
1	Alarm Report
2	Reset Alarms
Enter a choice, ?, space or Esc:	

- To view the Alarm Report, press then press .

The screen shows:

ALARM REPORT			Date: 1997/05/10
<u>Date</u>	<u>Time</u>	<u>Error Message</u>	
1997/04/02	09:37:24	Msg too short (discarded)-mailbox:26 RetCode=65535	
1997/04/07	09:55:36	Msg too short (discarded)-mailbox:22 RetCode=65535	
1997/04/07	00:46:59	Portman: Port_Group_Busy received RetCode=65535(ffff)	
1997/04/08	03:09:57	Shell 1: Idle: Unexpect event RetCode=25(19)	

Note: After the Alarm Report is shown, the screen shows:

- 1 Alarm Report
- 2 Reset Alarms

- To erase the Alarm log, and reset the record of alarms to NONE, press then press .

The screen shows:

Are you sure? (y/n): [n]

- Press then press .

Note: To cancel erasing the Alarm log, press .

The screen shows:

Alarm log file cleared.

The screen changes to show:

- 1 Alarm Report
- 2 Reset Alarms

- To return to the Reports Menu, press then press .

Press then press to return to the Top-Level Menu.

Using an Alternate Language

When you select this option, the Norstar Voice Mail Administration software appears in French.

To select this option, the Top-Level Menu must appear on the screen. To change all menus to the Alternate Language:

1. Press (Use French) from the Top-Level Menu.
2. Press .

The screen shows:

```
*****
Menu principal MV Norstar de Northern Telecom, version 3.0.xx
*****

0      Sortie systeme
1      Administration boite
2      Admin liste diff
3      Administration et configuration du systeme
4      Releves
8      Type d'affichage
9      Utilisation de l'anglais - Use English

Entrer une option, un ?, un espace ou ESC:
```

3. To change the menus back to English, press then press .

Introduction

The key to effective system maintenance is to perform frequent backups of Norstar Voice Mail programming. This ensures configuration information can be restored if the hard disk drive fails.

When you perform a backup, all Norstar Voice Mail configuration and programming information is written to floppy disks that you insert into the Norstar Applications Module. Once the backup is complete, you should store the floppy disks for safe keeping in the event of hard disk drive failure.

Backing up Norstar Voice Mail programming copies:

- System configuration parameters
- Company Greetings
- Mailbox programming
- User Greetings
- Directory Name recordings
- Group Lists
- Dialing Translation information
- CCR information including CCR Trees, CCR Paths, and CCR prompts

Note: In all backup and restore operations, floppy disk drive A is assumed. You cannot specify a different drive or an external tape drive.

Backing up Norstar Voice Mail programming

Before you begin, make sure you have sufficient formatted floppy disks to complete the backup. We suggest you have at least seven high density disks on hand. It is also a good idea to label the disks from one to seven. Labeling the disks enables you to insert the disks in the correct order when you are performing a restore procedure.

All backed up data is stored in special backup files on the floppy disks. These files are named STBCKUP.001, STBCKUP.002 and so on. The last disk in a backup has a LASTDISK file written on it. This file is used to notify Norstar Voice Mail that the restore process is complete.

To back up a Norstar Voice Mail system:

1. Press .

Log:
QUIT RETRY

2. Enter the System Coordinator Mailbox number and password and press OK.

Admin
MBOX AA OTHR

3. Press .

Backup
QUIT

4. Press CONT.

When calls are still active, the display shows:

Calls completing*

Before the backup procedure can begin, all Norstar Voice Mail channels must be idle. Norstar Voice Mail automatically disables each channel as it becomes idle. The * will blink while call are still active.

Insert disk <x>
QUIT

5. Insert the appropriate disk and press OK.

Backing up <x>
QUIT

The display will continue to prompt for more disks until the backup is complete. When the backup is complete, the system will prompt for the first disk again to run a self test. This test ensures that all the files have been backed up. If the test is successful, the display shows:

Backup Complete

6. Press OK.

7. Press to end this session.

A backup can take several minutes, depending on the number of mailboxes, greetings, and the amount of other information stored on the hard disk.

Note: If there is a power interruption during the backup, you must start the backup again.

Backing up the NAM capabilities file

When you perform a backup of the Norstar Voice Mail programming, you must also back up the capabilities file SEKUR. The SEKUR file contains all upgrade and capability information about your Norstar Voice Mail system, including the number of voice and FAX channels, if the FAX option is enabled and if Networking is enabled. The SEKUR file must be restored along with Norstar Voice Mail programming if a hard disk failure occurs. Capability information includes how many voice ports are allocated to Norstar Voice Mail and to Networking, if it is installed.

If this file is lost and your hard disk drive fails, all upgrades made to your Norstar Voice Mail system will be lost.

Note: Before you begin, ensure you have a blank high density formatted 1.44 MB 3.5" floppy disk. Label the disk **SEKUR/Capabilities File**.

To back up the NAM capabilities file:

1. Press .

Password:
RETRY

2. Enter the default password (ACCESS2).

ACCESS Server
BACK NEXT ADMIN

3. Press ADMIN.

A. Prt queue mgr
QUIT NEXT SHOW

4. Press NEXT until the display shows:

E. Bckp/Rstr
QUIT NEXT SHOW

5. Press SHOW.

Backup & Restore
QUIT BCKP RSTR

6. Press BCKP.

Insert floppy
QUIT OK

7. Insert a formatted floppy disk and press OK.
When complete the display shows:

Backup complete
OK

8. Press OK.

9. Press to end this session.

Once you have complete backing up the Norstar Voice Mail programming and the NAM capabilities file, make sure you store the floppy disks in a safe place.

Restoring a Norstar Voice Mail system

In the event you have to replace a hard disk drive, you can restore your old Norstar Voice Mail configuration and programming to the replacement drive using the Norstar Voice Mail restore feature. If your Norstar Voice Mail system is operating in a multiple applications scenario, the administrator must restore applications in the same order in which they were backed up.

When you restore backed up data to a Norstar Voice Mail system, you must make sure you are restoring the most recent backup.

To restore a Norstar Voice Mail system:

1. Press .

Log:
QUIT RETRY

2. Enter the System Coordinator Mailbox number and password and press OK.

Admin
MBOX AA OTHR

3. Press .

Restore
QUIT

4. Press CONT.

Confirm restore?
QUIT

5. Press OK. All Norstar Voice Mail programming data is erased before the restore begins. If you are unsure about performing a restore, press QUIT.

When calls are still active, the display shows:

Calls completing

Before the restore procedure can begin, all Norstar Voice Mail channels must be idle. Norstar Voice Mail automatically disables each channel as it becomes idle. The display then shows:

Insert disk <x>
QUIT

6. Insert the appropriate disk and press OK.

Restoring <x>
QUIT

7. The display will continue to prompt for more disks until the restore is complete. When the restore is complete, the display shows:

Restore complete

8. Press OK.

9. Press to end this session.

Restoring the NAM capabilities file

If your Norstar Voice Mail system fails and a new hard disk drive is installed, the new drive is installed with all the necessary system software. The SEKUR file contains all upgrade and capability information about your Norstar Voice Mail system and must be restored along with Norstar Voice Mail programming if a hard disk failure occurs. If this file is lost and your hard disk drive fails, all upgrades made to your Norstar Voice Mail system will be lost.

When you restore the SEKUR file you must make sure you are restoring the most recent backup.

To restore the NAM capabilities file:

1. Press .

2. Enter the default password (ACCESS2).

3. Press ADMIN.

4. Press NEXT until the display shows:

5. Press SHOW.

6. Press RSTR.

7. Insert the backup disk and press OK.

When complete the display shows:

8. Press OK.

9. Press to end this session.

Introduction

Troubleshooting Norstar Voice Mail problems involves determining the symptoms and diagnosing the cause of the problem.

This section describes how to diagnose a Norstar Voice Mail problem and how to:

- use Norstar Voice Mail Diagnostics and Alarms
- determine the source of the problem
- assess the troubleshooting procedure to use
- check the Channel Status
- correct the problem

A problem can be the result of more than one component failure. Diagnosing a Norstar Voice Mail problem involves isolating the cause, and determining whether or not the malfunction involves a failed hardware component or the Norstar Voice Mail software.



Important: After you have determined the cause of the problem, and corrected the problem, you must test the module to determine whether or not it is working properly.

We recommend you use an RS-232 terminal attached to the Norstar Applications Module (NAM) to assist you in diagnosing and fixing problems. Refer to "Using Norstar Voice Mail administration software" on page 9 for more information.

Diagnostics and Alarms

Norstar Voice Mail generates Alarms when certain conditions are detected. The Alarm message provides the date and time the alarm occurred and an Alarm Code.

Not all alarms are an indication of a problem with Norstar Voice Mail. Some are generated routinely during normal operation. For example, a power-up alarm is generated each time the NAM is plugged in.

Reading an Alarm Report is not a substitute for thorough troubleshooting. When users report problems, the Alarm Report is a supplement for isolating the problem. For example, if a troubleshooting procedure indicates that one of two components might have failed, an Alarm Report could indicate which of the two components is faulty.

Diagnosing problems

A malfunctioning Norstar Applications Module can be caused by a faulty component or the Norstar Voice Mail software. The following two sections describe the symptoms that occur when Norstar Voice Mail malfunctions. The first section describes symptoms particular to hardware. The second section describes symptoms particular to Norstar Voice Mail software. The symptoms are described first, followed by procedures to confirm and correct the problem.

Hardware problems

This sections describes the steps required if the RS-232 terminal does not communicate and how to check the Norstar Voice Mail Channel status. If you suspect a different hardware problem, or if none of the software troubleshooting procedures solve the problem, refer to the *Norstar Applications Module II Installation and Maintenance Manual* for hardware troubleshooting information.

The RS-232 terminal cannot communicate with Norstar Voice Mail

Communication problems appear as garbled text or a blank screen. You need to determine if the problem is a communication problem, or if Norstar Voice Mail is not working at all.

1. Check to see if Norstar Voice Mail responds to the Feature Codes.

Press on any Norstar telephone connected to the system. Norstar Voice Mail should respond with the **Pswd:** display prompt. The **Log:** display prompt can also appear if the telephone is not assigned a mailbox.

Note: Norstar Voice Mail Feature Codes might not be the default codes shown here. Refer to the *Norstar Voice Mail 3.0 Set Up and Operation Guide* for more information on determining Norstar Voice Mail Feature Codes.

If there is no response, this indicates that Norstar Voice Mail is not functioning. Refer to the *Norstar Applications Module II Installation and Maintenance Manual*.

If Norstar Voice Mail responds with the appropriate prompt, there is a communication problem. Continue with the steps in this procedure until you find the problem.

2. Ensure the RS-232 terminal communication parameters are set to 9600 baud/8 data bits/1 stop bit/no parity. For instructions about setting these parameters, refer to the manual supplied with the terminal.

3. If the problem persists, continue with this procedure.
4. Check the RS-232 cable. Ensure it is connected to Serial Port A on Norstar Voice Mail, and to the modem connector on the terminal. The connector must be a null-modem connector.
5. Reset the RS-232 terminal, turn the power off, then turn the power on.
6. Use a different RS-232 terminal.
7. If there is still a problem, reboot the system. If there is no improvement, call your support line.

Checking the Channel Status

Checking the Channel Status allows you to check each Channel for the following:

- If the Channel is installed
- If the Channel is idle
- If Norstar Voice Mail is currently receiving or dialing a call
- If the Channel is connected to a call
- If the Channel is connected to the KSU, but Norstar Voice Mail is not using the Channel
- If the Channel is available, but has been not connected to the KSU

Note: Channel Status will show the status for all Voice and Fax Channels. Channel Status will not identify the Channels as Voice or Fax*.

*Fax Channels are only available on systems with Norstar Voice Mail FAX installed.

To check the Channel Status:

1. Press .

Password:

2. Enter the default password (ACCESS2).

ACCESS Server
BACK ADMIN

3. Press NEXT until the display shows:

Channel Status
BACK NEXT

4. Press SHOW.

Chan Status Menu
QUIT ALL

5. Press SHOW to show the status of a range of Channels. The first range shows Channel 1 to 8. The second range shows Channel 9 to 16. The third range shows Channel 17 to 24. The fourth range shows Channel 25 to 32.

Press ALL to view all 32 Channels at once.

01-o8 > cr...cc
QUIT CLR

6. Press DETAIL for specific details about the individual Channels.

01-o8 represents the first 8 Channels. The display cr...cc is an example of a display. Each of the 8 characters on the display signifies a Channel number. For example, Channel number one's status is c, Channel two's status is r. The display information is updated every two seconds. The information appearing on the display will vary depending on the Norstar Voice Mail model number and the number of Voice Channels that are installed. Refer to Table 3 on page 70 for a definition of the Channel Status symbols.

Note: Press QUIT to return to the Channel Status display. Press CLR to reset the display to an idle status. Once any new activity on the Channels begins, the display will change to show the activity of the Channels. Pressing CLR does **not** physically clear all activity from the Channels.

1: 2235 2291
QUIT NEXT DSBL

7. Continue pressing **NEXT** to view the specific details about the remaining Channels.

The display 1: 2235 2291 is an example of a display. 1 is the number of the Channel. 2235 is the DN assigned to the Channel. The DN can be up to seven digits in length. 2291 is the DN of the extension that is currently connected to the Channel. This number can either be the line number being used or a DN. The number can be up to seven digits in length.

If the display shows *** in the last three characters on the display, the Channel is idle and not in use. For example, the display might show:

11: 2245 ***

Note: Specific details will only be available for Channels that are assigned an a , . , c or r in the Channel Status display in step 5.

If the display shows: x: Not in sync this means that the Channel has not been connected to the KSU and there is no DN assigned to the Channel.

If the display shows: x: No DVC this means that there is no Digital Voice Card (DVC) or Media Services Base Interface Card (BIC) installed to the corresponding Channel number.

Note: The x in the display will be the number of the Channel.

32: No DVC ***
BACK NEXT DSBL

Press **Rls** to end this programming session.

If a new Voice Channel has been added, you will have to quit the Channel Status session and re-enter Channel Status in order to view the changes.

Table 3 Channel Status Symbols

Channel Status Symbol	Definition of symbol
.	The Channel is installed and functioning, but is currently idle.
r	The Channel is ringing. The Channel is either receiving a call or is attempting to make a call.
c	The Channel is connected and is on an active call.
a	The Channel is connected to the KSU, but is not activated for Norstar Voice Mail.
x	A Channel is detected, but there is a connection problem.
*	No Channel detected. Channel is not installed.

Disabling and Re-enabling Norstar Voice Mail Channels

In the course of diagnosing a system problem you may find it necessary to disable a particular Norstar Channel. After the problem has been solved, you will need to re-enable the Channel. If you attempt to disable all the Channels, the system will reboot itself.

To disable a Channel:

1. Press .

Password:

2. Enter the default password (ACCESS2).

ACCESS Server
BACK ADMIN

3. Press NEXT until the display shows.

Channel Status
QUIT NEXT

4. Press SHOW.

Chan Status Menu
QUIT ALL

5. Press SHOW.

01-08 > cc****rr
QUIT NEXT

6. Press DETAIL.

1: 2225 ***
QUIT DSBL

7. Press NEXT until the Channel you want to disable is displayed.

3: 2227 ***
QUIT NEXT

8. Press DSBL.

3: Not in sync
QUIT NEXT

9. Press to end this programming session.

To re-enable the Channel:

1. Press Feature 9 1 5.

2. Enter the default password 2 2 2 3 7 7 2 (ACCESS2).
Password: RETRY

3. Press NEXT until the display shows.
ACCESS Server
BACK NEXT ADMIN

4. Press SHOW.
Channel Status
QUIT NEXT SHOW

5. Press SHOW.
Chan Status Menu
QUIT ALL SHOW

6. Press DETAIL.
01-08 > *****
QUIT NEXT DETAIL

7. Press NEXT until the Channel you want to disable is displayed.
1: 2225 ***
QUIT NEXT DSBL

8. Press ENBL.
3: Not in sync
QUIT NEXT ENBL

9. Press Rls to end this programming session.
3: 2227 ***
QUIT NEXT DSBL

Software problems

Software problems are usually caused by a configuration parameter conflicting with how Norstar Voice Mail operates. These symptoms appear as:

- Norstar Voice Mail does not respond properly to DTMF signals, or stops recording in the middle of messages.
- Recorded message quality is poor. For example, messages are garbled or messages are noisy or have low amplitude.
- The **Message for you** indication on a Norstar telephone does not appear when a message is left in a mailbox.
- Users cannot open their mailboxes.
- Call forward to Norstar Voice Mail goes to wrong mailbox.

Norstar Voice Mail does not respond properly to DTMF signals on incoming calls or stops recording in the middle of a message.

Before you can assess what is causing this problem, you must determine if the problem is intermittent or if Norstar Voice Mail is not responding to DTMF signals at all.

1. If Norstar Voice Mail does not respond at all:

Monitor an incoming call to determine if an outside call can transmit DTMF signals to Norstar Voice Mail. Norstar Voice Mail does not respond to signals from a rotary dial telephone. Calls received from a rotary telephone are transferred to the General Delivery Mailbox. Check the messages in this mailbox.

If Norstar Voice Mail is receiving DTMF signals and is not responding, replace the Digital Voice Card (DVC) or Media Services Base Interface Card (BIC). Refer to the *Norstar Applications Module II Installation and Maintenance Manual*.

Message recording quality is poor

Poor quality recordings can result in garbled messages or low amplitude recordings.

1. Check incoming calls for low amplitude transmission. Attach a telephone test set to each CO line in turn and monitor an incoming call. If the calls are low amplitude, the problem is with the telephone company, not with Norstar Voice Mail. Contact the telephone company.
2. Reboot the NAM.

3. If incoming calls are not low amplitude, replace the Digital Voice Card (DVC) or Media Services Base Interface Card (BIC). Refer to the *Norstar Applications Module II Installation and Maintenance Manual*.

The Message Notification prompt does not appear

The System Coordinator determines whether or not the Message Notification prompt is enabled for each mailbox. When enabled, a prompt appears on the Norstar display each time a message is left in a mailbox. If Message Notification is enabled, yet the prompt does not appear on the telephone display:

1. Check the Message Notification setting for the mailbox using a terminal. Use the Change Subscriber Mailbox Menu to determine the Mailbox Options.
2. Verify there is only one mailbox assigned to the extension. Ensure the mailbox is assigned to a DN that is operating on the Norstar system.

Users cannot open their mailboxes

This problem might be encountered by a single user or by all users. You must determine if all users are having the same trouble.

1. If all users are having the same problem opening their mailboxes from outside the Norstar system from a CO line, refer to "Norstar Voice Mail does not respond properly to DTMF signals on incoming calls or stops recording in the middle of a message." on page 72.
2. Use the Subscriber Reports Menu to verify the User Mailbox exists. Refer to Section 3 for more information on using the Norstar Voice Mail Administration software. If the mailbox does not exist, add the mailbox.
3. Verify that the user is entering the correct password.
4. If there is still a problem, reset the mailbox password.
5. Delete the mailbox, then add a new one.

The System Coordinator has forgotten the System Administration password

If the System Coordinator has forgotten the password to access the System Administration Feature Code, you must reset it to the default password 0000.



Caution: Change your System Coordinator's password often to minimize risk of unauthorized activity.

To reset the System Coordinator password:

1. Press .

2. Press .

Note: XXXX will be the Norstar Voice Mail Directory Number (DN).

3. Enter the password

(RESETSMPSWD) and press OK.

4. Press YES.

The System Coordinator password is now reset to 0000.

The Operator has forgotten the Operator Status password

If the Operator has forgotten the password to access the Operator Status Feature Code, you must reset it to the default password 67372867 (OPERATOR).

To reset the Operator password:

1. Press .

2. Press .

Note: XXXX will be the Norstar Voice Mail Directory Number (DN).

3. Enter the password

(RESETOPERPSWD) and press OK.

Reset pswd?
<input checked="" type="radio"/> YES <input type="radio"/> NO

4. Press YES.

The Operator password is now reset to 67372867 (OPERATOR).

Call forward to Norstar Voice Mail goes to wrong mailbox

This problem may be caused by a simultaneous Call Forward.

1. Determine if more than one telephone is Call Forwarded to Norstar Voice Mail for the same line. If so, incoming calls will be sent only to the mailbox of the telephone with the lowest KSU Channel number.
2. Remove line appearances so that each line appears on only one set. Then call forward need not be changed and no set loses call coverage by voice mail.

Appendix A: Norstar Voice Mail Alarm Codes

Introduction

Alarm Codes shown in this chapter are from the Alarm queue. Alarm Codes not appearing in this appendix can be ignored. A single occurrence of an alarm does not always indicate a problem. If an alarm is repeated several times, appropriate measures should be taken to correct the problem.

Each Error Message ends with a return code that details what provoked the message. These return codes are not usually important since the message gives a textual description of what the error is. In all cases the return code 65535 means everything is all right and is usually accompanied by an informational message. Any message that contains the word “unknown” or “unexpected” is not serious and can happen during normal operation.

The following table below shows a selection of the more important messages and actions to take for each message.

Table 4 Actions to take for error messages

Error Message	Meaning/Action
AS: ASPOptimer plan; timer stack empty: Retcode=dd(hh)	This message is not serious and is usually cleared up when the call is released.
Art: OM calls: Retcode=dd(hh)	An audit-related operation has failed.
Art: Task missed watchdog timer: Retcode=dd(hh)	If this message occurs more than once, reboot the system. If the problem still persists, call your support line.
BCK: Error occurred in function xxxxxxxx	Any message that begins with this display means a problem has occurred with a Backup or Restore operation. In all cases you must restart the Backup or Restore.
CCR: CCRxxxxxxxxxx	CCR Error Messages are not serious. The only solution is to delete and rebuild the affected Tree.
Daily statistics ...*** One call FOD xx Two call FOD xx FOV xx Fax print xx Incoming AMIS xx Outgoing AMIS xx VPorts Busy xx FPorts Busy xx F980 Sess xx F981 Sess xx F982 Sess xx F983 Sess xx F985 Sess xx F986 Sess xx F987 Sess xx Ext trans xx Ctx Trans xx Broadcast Msg xx SMTP Receive xx SMTP Send xx NVM Manager xx Dsktp Logins xx Dsktp Open msgs xx Text Bodies xx Swapper Size: xx	This message is generated once a day at midnight. It gives an indication of the daily usage of the Feature Codes. VPorts Busy and FPorts Busy indicates the number of times a day that either all the Voice ports or FAX ports were busy and could not handle a call. This could indicate the need for either more Voice ports or FAX ports. Contact your advice line.

Error Message	Meaning/Action
Dump: Shell xx	This message and the following 24 logs indicate that port xx had an error. If this occurs frequently, contact your support line.
F981: Mailbox xxxx locked from DN xxxx	An internal caller unsuccessfully attempts to login to mailbox xxxx. The caller reached the maximum incorrect password attempts and the system locked the mailbox. The DN of the internal caller is given. The System Coordinator must reset the password to unlock the mailbox.
F981: Mailbox xxxx locked by external caller	An external caller unsuccessfully attempts to login to mailbox xxxx. The caller reached the maximum incorrect password attempts and the system locked the mailbox. The System Coordinator must reset the password to unlock the mailbox.
Fax on demand failed to phone number xxxxxxxx*	The system failed to deliver a fax document that was requested via a Fax-on-demand (two-call method) mailbox. Call the phone number to verify that it is a fax machine. If the number is correct, check the entries in your Dialing Translation Table to ensure the correct translation of the telephone number.
mbMakeCall Failure RetCode = 63(3e)	The system is attempting to outdial on a line that is for incoming calls only. This is likely caused by incorrect Off-premise Notification, Call Reply or AMIS** or FAX* line/pool programming. Have the System Coordinator review user programming.
Msg: DeliverMsg: Message not delivered because system volume is full: Retcode=dd(hh)	All users must delete unwanted messages. If this message occurs frequently, an upgrade to a bigger hard disk drive is recommended.
Msg: MsgAddVoice Retcode: 8240(2030)	Any message with a Retcode of 8240 signifies that the system's volume for voice messages has been reached. No further messages can be deposited into mailboxes. Have the System Coordinator remind users to delete unneeded messages from their mailboxes. If this doesn't help, recommend the addition of a secondary hard disk drive.

Error Message	Meaning/Action
PortMan debug MakeCall failed RetCode = 36(24)	A user pressed a Feature Code but could not connect because there were no free intercom keys. If this happens frequently, add additional intercom keys.
PM: ...exiting...: Retcode=dd(hh)	If this message appears, reboot the module. Then contact your support line for more information on why this message is occurring.
PM: Port out of service: Retcode=dd(hh)	This message means a phone cable to the system is unplugged.
PM: Port in service: Retcode=dd(hh)	This message means a phone cable has been plugged in. This message usually follows the above message when a cable is plugged back in.
PM: Acquired and set up new port: Retcode=dd(hh)	This message follows the above message. Once this message appears, new ports are usable immediately.
PM: Unable to acquire/configure new port in service: Retcode=dd(hh)	This message follows the port in service message when the module is unable to use the new ports. Reboot the module and wait to see if the above three messages occur. If the problem persists, contact your advice line.
PM: Can't set allocatable num of ports: Retcode=dd(hh)	This message could occur after the port in service message. This could mean the new ports are not usable. Reboot the module. If the problem persists, contact your advice line.
PM: Unable to send event to AS: Retcode=dd(hh)	This message means one of the new ports is not usable. Reboot the module. If the problem persists, contact your advice line.
PM: Unable to configure new port: Retcode=dd(hh)	This message means one of the new ports is not usable. Reboot the module. If the problem persists, contact your advice line.
PM: DN Length has changed: Retcode=dd(hh)	This message is for information only. It means the System Coordinator has changed the number of digits of the extensions of the KSU or PBX. Following such a change, the Coordinator must reboot and reinstall the system to create mailboxes with the new length.
PM: System shutdown: Retcode=dd(hh)	This message is for information only and means the system will reboot within 15 minutes.
PortMan: xxxxxxxxxxxx	Any message beginning with this character string indicates a call may not have connected to the system.

Error Message	Meaning/Action
Timed Delivery from mailbox xxxx on <date> at: <time>	Mailbox xxxx sent a message to be delivered at the indicated time and date. No action is necessary.

*If the FAX option is installed on the System.

**If Networking is installed on the System.

***If both FAX and Networking are installed on the System.

Appendix B: Norstar port numbers

Introduction

Norstar is a digital system capable of carrying two simultaneous voice conversations over a single station port. These two voice channels are referred to as the B1 and B2 channels.

The following charts can be used to determine the B1 and B2 Directory Numbers (DNs) of the Norstar Compact and Modular systems.

Table 5 Compact KSU DNs

Port number	B1 DNs	B2 DNs	System type
101 - 116	21 - 36	41 - 56	Compact

Table 6 Modular KSU DNs

Port number	B1 DNs	B2 DNs	System type
101 - 124	21 - 44	45 - 68	Non-expanded
101 - 124	221 - 244	341 - 364	Expanded

Table 7 Modular 2-port cartridge DNs

Port number	B1 DNs	B2 DNs	Expansion port #
301 - 316	245 - 260	365 - 380	3
401 - 416	261 - 276	381 - 396	4

Table 8 Modular 6-port cartridge DNs

Port number	B1 DNs	B2 DNs	Expansion port #
301 - 316	245 - 260	365 - 380	3
401 - 416	261 - 276	381 - 396	4
501 - 516	277 - 292	397 - 412	5
601 - 616	293 - 308	413 - 428	6
701 - 716	309 - 324	429 - 444	7
801 - 816	325 - 340	445 - 460	8

Table 9 Non-expanded Modular ICS DNs

Station port	B1 DNs	B2 DNs	Module number
101 - 132	21 - 52	53 - 84	KSU #1
Line port	Lines		Module number
201 - 248	001 - 048		KSU #2

Table 10 Modular ICS 2-port cartridge DNs

Station port	B1 DNs	B2 DNs	Module number
101 - 132	221 - 252	285 - 316	KSU #1
301 - 316	253 - 268	317 - 332	TM #3
401 - 416	269 - 284	333 - 348	TM #4
Line port	Lines		Module number
201 - 248	001 - 048		KSU #2
401 - 412	049 - 060		TM #4
301 - 312	061 - 072		TM #3

Table 11 Modular ICS 6-port cartridge DNs

Station port	B1 DNs	B2 DNs	Module number
101 - 132	221 - 252	349 - 380	KSU #1
301 - 316	253 - 268	381 - 396	TM #3
401 - 416	269 - 284	397 - 412	TM #4
501 - 516	285 - 300	413 - 428	TM #5
601 - 616	301 - 316	429 - 444	TM #6
701 - 716	317 - 332	445 - 460	TM #7
801 - 816	333 - 348	461 - 476	TM #8
Line port	Lines		Module number
201 - 248	001 - 048		KSU #2
801 - 812	049 - 060		TM #8
701 - 712	061 - 072		TM #7
601 - 648	073 - 084		TM #6
501 - 512	085 - 096		TM #5
401 - 412	097 - 108		TM #4
301 - 312	109 - 120		TM #3

Programming Norstar Voice Mail DNs to memory buttons

There are times when you will want to monitor each of the B1 and B2 channels that Norstar Voice Mail uses. You can do this by programming a Norstar telephone with Autodial buttons for the B1 and B2 DNs. It is useful for troubleshooting to program the Norstar Voice Mail DNs to appear on the memory buttons or BLF of a Norstar telephone.

After you have determined the Norstar Voice Mail DNs, program them onto the memory buttons on an M7324 or a BLF attached to an M7310 telephone. Program the dual-memory buttons (without indicators) using .

B2 DNs will not be displayed if Norstar Voice Mail is connected to MICS 1.0 or any Modular ICS product released after MICS 1.0.

Note: MICS R1T1 was released prior to MICS 1.0.

When the Norstar Voice Mail DNs are programmed to memory buttons, it is easy to monitor Norstar Voice Mail traffic levels and determine if any Norstar Voice Mail ports are not functioning.

Appendix C: Norstar Voice Mail 3.0 programming administration table

Introduction

The Norstar Voice Mail 3.0 programming can be administered by three methods: Feature 9 8 3, Norstar Voice Mail Manager and by the Norstar Voice Mail administration software. Table 12 lists the types programming functions that can be performed by each method.

Table 12 Norstar Voice Mail 3.0 programming administration comparison

Section	Administration function	<input type="checkbox"/> Feature <input type="checkbox"/> 9 <input type="checkbox"/> 8 <input type="checkbox"/> 3	Norstar Voice Mail Manager	Norstar Voice Mail administration software
Mailbox				
	Add Mailbox	√	√	√
	Create Mailbox Utility (subscriber only)	√	√	√
	Change	√	√	√
	Delete	√	√	√
Auto Attendant (AA)				
	Return to AA	√	√	√
	Edit Greeting Tables	√	√	√
	Line Configuration	√	√	√
	Record Greetings	√		
	Calling Line Identification Table Administration	√	√	√
	Touchtone Gate	√	√	
CCR Tree				
	Add	√		
	Change	√		
	Delete	√		
Networking				
	General Networking Parameters	√	√	
	AMIS-specific Parameters	√	√	
	Digital Networking-specific Parameters	√	√	
	AMIS Site Administration	√	√	
	SMTP Site Administration	√	√	

86 Appendix C: Norstar Voice Mail 3.0 programming administration table

Section	Administration feature	Feature <input type="checkbox"/> 9 <input type="checkbox"/> 8 <input type="checkbox"/> 3	Norstar Voice Mail Manager	Norstar Voice Mail administration software
FAX				
	FAX Parameters	√	√	√
	Loading Faxes	√		
Reports				
	Directory	√	√	√
	Mailbox Information	√	√	√
	Group List	√	√	√
	Message Usage	√	√	√
	Mailbox Activity	√	√	√
	Calling Line Identification	√	√	√
	Dialing Translation	√	√	√
	Alarm	√	√	√
	CCR Tree	√	√	√
	Class of Service	√	√	√
	Call Handling & Port Usage	√	√	
	System Configuration	√	√	
	Fax-on-Demand Usage	√	√	
General				
	Bilingual On/Off	√	√	√
	Voice Mail Enable/Disable	√	√	√
	General Delivery Mailbox Enable/Disable	√	√	√
	Norstar Voice Mail Version Number	√	√	√
	Number of Outdial Channels	√	√	√
	Backup and Restore	√		
	Dialing Translation Table	√	√	√
	Dialing Translation Parameters	√	√	√
	Centrex Transfer Restrictions	√	√	√
	Editable Classes of Service		√	√

Glossary

Administration

The tasks involved in maintaining the Norstar Voice Mail Mailboxes, greetings and setup configuration.

AMIS

Audio Messaging Interchange Specification (AMIS) provides voice messaging to different mailboxes located at different sites on a communication network.

Application

A computer program that performs a wide range of tasks as specified by the user. Examples of application programs include word processing packages, spreadsheet packages and accounting packages.

Back up

To make a duplicate copy of data files so that you can store the originals in a safe place. Backing up your original files protects them from damage if a hardware failure occurs.

Baud rate

A unit of measurement of data transmission speed. It is approximately equivalent to Bits Per Second (BPS). Typical baud rates are 300, 1200, 2400, 4800, and 9600.

Bit

An abbreviation for Binary Digit. A bit is the smallest unit of information recognized by the computer. A bit has one of two values (0 or 1) to indicate off or on.

BIOS (Basic Input Output System)

A program contained in Read Only Memory (ROM) that acts as the interface between software programs and the computer hardware.

BPS (Bits Per Second)

The speed of data transmission between two computers.

Byte

The amount of space required to store a single character. One byte equals eight bits.

Company Directory

An internal voice list containing the names of users with initialized mailboxes.

Configuration

The tasks involved in setting up the different parameters of Norstar Voice Mail. For example, configuring the telephone lines answered by Norstar Voice Mail. See also **Administration**.

Conventions

The way certain information is described. For example, using underlined text to represent second-line display prompt information.

Cursor

A marker on the monitor screen that indicates where the next input from the keyboard or mouse will appear.

Default

The parameters that are preset within the Applications Module.

Disk drive

A mass storage device that seeks, reads and writes data on a disk.

Diskette

A removable magnetic disk used to store data.

Display

A one-line or two-line screen on a Norstar telephone that shows Norstar Voice Mail commands and options.

Display buttons

The three buttons that appear underneath Norstar two-line LCD display. When pressed, these buttons select the specified Norstar Voice Mail Option.

Display options

The choices available to a user that appear on the Norstar two-line display. Options appearing on the display can be selected using the display or dialpad buttons.

FAX

FAX works with Norstar Voice Mail and Norstar, offering a caller the capability of sending a fax document to a mailbox as easily as sending a voice message.

Feature Code

A unique three-digit code used to access Norstar Voice Mail Features and options.

File

A collection of related information stored on a disk under a given name for later reference and use by an operating system or application program. Each application program that you use saves the data you create in files. Files are identified by a file name and optional extension.

File name

A name that identifies a file and consists of one to eight characters.

General Delivery Mailbox

One of the two Special Mailboxes provided on the Norstar Voice Mail System. It is used to collect messages for individuals who have not been assigned a Personal Mailbox.

Hard disk drive

A data storage device that uses non-removable, rigid magnetic platters. Hard disk drives work faster and store more data than disk drives do for diskettes.

Hardware

The physical components of an Applications Module.

Initialization

The steps required to prepare hardware or software for operation.

Install

To set up for operation. For example, hardware is installed by attaching it to the appropriate connectors or sockets either inside or outside the Applications Module.

Interface

An information interchange path that allows communication between computer parts.

Kbyte

The abbreviation for kilobyte. A kilobyte is equal to 1024 bytes.

Mailbox

A storage place for messages on the Norstar Voice Mail system.

Mbyte

The abbreviation for megabyte. A megabyte is equal to 1,048,576 bytes. Megabyte is also abbreviated as MB.

Modem

A communications device that allows data to be exchanged between computers over telephone lines. The exchange is done by electronic processes called modulation and demodulation. The modem changes (modulates) the data into tones to send to another modem and also converts (demodulates) tones when receiving from another modem.

Mouse

A hand-held pointing device that controls cursor movement.

M7100 telephone

The Norstar model M7100 telephone that has a single-line display and one programmable button without an indicator.

M7208 telephone

The Norstar model M7208 telephone that has a single-line display and eight programmable buttons with indicators.

M7310 telephone

The Norstar model M7310 telephone that has a two-line display with three display buttons, 10 programmable buttons with indicators and 12 dual programmable buttons without indicators.

M7324 telephone

The Norstar model M7324 telephone that has a two-line display with three display buttons and 24 programmable buttons with indicators.

Network

Two or more computers linked together electronically to share programs and exchange data. Joining computers over a network requires adding specialized hardware and software to each computer.

Operating system

The disk-based software that manages the operation of the Applications Module. An operating system controls the flow of information between the computer hardware such as the keyboard, video display, disk drives and printer. IBM OS/2 is the operating system that manages the Applications Module.

Option

A Norstar Voice Mail choice that is given to a user through voice or display prompts.

Parallel port

A port that transfers data through multiple wires so that eight bits are transmitted simultaneously. Parallel ports usually use a 25-pin interface that transmits and receives data one byte at a time using a separate data line for each bit.

Password

A four-digit to eight-digit number that is entered using the dialpad. A password is used to open mailboxes or perform configuration tasks.

Peripheral

A device that is connected to and communicates with a computer. A printer and mouse are peripherals.

Pin-1

The first pin in a multiple-pin connector or chip designated as such to help you properly orient the component when attaching or installing it.

Port

A connector on the Applications Module that allows data exchange with other devices, such as a printer, mouse or external modem.

Power cable

A cable that connects the Applications Module to a power source.

RAM (Random Access Memory)

Computer memory that stores data temporarily. RAM stores the data used by the microprocessor as it executes instructions. The contents of RAM are erased each time the Applications Module is turned off or restarted.

ROM (Read Only Memory)

Memory that stores data permanently. ROM contains instructions that the Applications Module needs to operate. The instructions stored in ROM cannot be changed and are used by the Applications Module each time it is turned on or restarted.

Serial port

A port that sends and receives data one bit at a time. This port can be used to connect the Applications Module to a printer, external modem or mouse. Serial port connectors usually have nine pins and are designated by software with the letters COM and a single digit, such as COM1.

Tone dial telephone

A push button telephone that emits DTMF tones.

Voice prompts

The prerecorded voice instructions that play when accessing the different Norstar Voice Mail Features and options. Voice prompts also enable a caller to proceed along the call Path of a CCR Tree.

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