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Bell Labs Innovations

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Implementation and Service Manual

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CHAPTER 1

Implementation and Service Overview

The *Implementation and Service Manual* is designed to walk you through the steps for selecting, installing, testing, and troubleshooting a customer's Lucent Technologies Messaging 2000 system (hereafter referred to as M2000). Collectively, the steps presented in this manual will allow you to effectively implement different types and sizes of systems and minimize the time spent supporting and maintaining those systems.

This manual provides information on using all available system features and options. Note, however, that all features and options are not available with all M2000 systems. Access to features and options on a specific system depends on the optional add-on modules purchased for use with the system.

Understanding the Implementation and Service Toolset

Several organizational tools are provided in this manual to help you collect and maintain customer, software, and site information throughout the implementation process. These tools include:

- **Worksheets Tab –** Many of the chapters in this manual include steps that reference specific worksheets provided behind the Worksheets tab. Several of these worksheets are designed to be completed by the system manager at the customer's site. (The system manager is the customer representative who will be responsible for maintaining the M2000 system after it is installed.) Other worksheets are designed to assist you during the installation and system testing processes. Detailed instructions on completing or obtaining information using these worksheets, as well as interpreting and using the information, are provided at the implementation process points where the worksheets play a part. A summary of the purpose of each worksheet is provided below.

  One copy of each worksheet is provided in this *Implementation and Service Manual*. A blank copy of each worksheet is also included in each box containing M2000 system software disks and customer documentation.

  – **Customer Needs Worksheets** – Help introduce the customer to M2000 system features and functionality and assists the representative with identifying the hardware and software necessary to build the type of auto attendant and voice/fax mail system best suited for the customer.

  – **Preinstallation Configuration Worksheets** – Help determine which features should be activated on the M2000 system during installation and which, if any, can be set up before installation.

  – **System Configuration Record** – Provides the installer with a written transcript of how system setup screens are completed during the installation process and provides the installer with customer information that can be retained for future reference.

  – **Visual Mailbox™ Configuration Worksheets** – Help the installer successfully complete Visual Mailbox installation and configuration.

- **Customer Information Tab** – The Customer Information tab is provided to help you organize and retain data you collect from customer sites during the implementation process. After you have completed the entire M2000 system implementation process, you will be prompted to store all the worksheets you used throughout the process, along with any notes you accumulated, behind this tab. By storing information in this way, you will have easy access to critical site contact names and phone numbers, system setup records, and other information you may need to reference later to provide customer assistance.

- **Additional Information Tab –** The Additional Information tab is provided to help you store additional information you may receive from time to time. This information may include release notes, *Implementation and Service Manual* updates, product alerts, or product marketing material.

Tabs for this manual are provided in separate wrapping. Insert the tabs before their corresponding chapters. Place the Customer Information tab and the Additional Information tab at the back of the manual for your later use.

Additional Product Information Sources

In addition to this manual, other information tools are available for M2000:

- **Configuration Notes –** Each switch supported by M2000 has an associated Configuration Note that provides comprehensive, switch-specific integration considerations. Configuration Notes are available through your Lucent Technologies sales support office.
- ***System Manager Manual* –** The system manager is the individual at the customer site who will be responsible for maintaining the installed M2000 system. The *System Manager Manual* is designed to be left with a system manager at the site. The book provides information on creating, modifying, and deleting mailboxes; setting and modifying automated attendant features; generating system reports; and using various other system features such as AMIS Interface Module (AIM™), V-Trees™, and Fax Retrieval™.
- ***Quick Reference Guide* –** An easy-to-reference, foldout card, the *Quick Reference Guide* shows M2000 subscribers the telephone keypress navigation paths to accessing voice-mail features. Fifty *Quick Reference Guides* are provided with each M2000 system shipped.
- ***Wallet Card* –** The size of a typical business card, *Wallet Cards* can be easily carried by subscribers at all times, providing them fast access to high-level system navigation information. Fifty *Wallet Cards* are provided with each M2000 system shipped.
- **Online Help –** Extensive online help is available on most M2000 utilities and screens, including Visual Mailbox screens, to assist installers, system managers, and subscribers with using M2000. You can access online help using options on the Help drop-down menu and, in many cases, by pressing <F1> from program screens.
- **Technical Support –** Lucent technical support representatives are available to assist you with problems and issues you cannot resolve using the other available information sources.

Notes:

C H A P T E R 2

Determining the Customer’s System Needs

The steps provided in this chapter will help you to:

- Introduce the M2000 system to your customer
- Understand the customer’s system needs and expectations
- Determine the hardware and software required to support a system that meets the customer’s needs and expectations

As you follow the steps in this chapter, you will ask the customer to complete three of the Customer Needs worksheets provided behind the Worksheets tab in this manual:

- Feature Selection Sheet
- System Sizing Sheet
- Phone Usage Sheet

Information on using the data you obtain with these worksheets to determine the customer’s system needs is provided within each step. Note that new M2000 turnkey systems meet all of the necessary requirements.

Step 1: Complete the Feature Selection Sheet

The Feature Selection Sheet provides a forum for introducing the customer to the wide range of available features and identifying and discussing which features are most critical to satisfying the customer's needs. Provide the customer with both the worksheet and the Feature and Functionality Introduction information (also included behind the Worksheets tab). The customer will need to consult the Feature and Functionality Introduction while completing the Feature Selection Sheet. Be sure to encourage the customer to contact you with any questions on the material presented.

Interpreting the Completed Feature Selection Sheet

Use data provided on the Feature Selection Sheet to understand and set customer expectations.

First, by considering the features that the customer has indicated are important, identify which optional add-on modules should be included with the customer's system. Optional modules are identified on the Feature Selection Sheet with a superscript "o" (^{o}) immediately following the feature name. Optional modules will impact the price of the system. By determining early on which of these add-on modules are necessary, you can continually consider the pricing implications during the sales process. For pricing information, see your Lucent kit.

Second, ensure that the switch the customer plans to use with the system supports the features the customer has indicated are important. Do this by consulting the Feature Selection Sheet in conjunction with the Configuration Note issued for the customer's switch. The Configuration Note identifies switch limitations and helps you to present those limitations to the customer now, so there are no surprises later. Features that may be unavailable with certain switches are identified on the Feature Selection Sheet with a superscript "s" (^{s}) immediately following the feature name.

Step 2: Complete the System Sizing and Phone Usage Sheets

The System Sizing Sheet and Phone Usage Sheet help you better define the hardware needed to support the customer's system. Using the data provided on these sheets and the instructions provided in the following procedure, you can determine:

- Number of ports the system should include
- Number of mailboxes the system will support
- PC hard drive size required

Interpreting the Completed System Sizing Sheet and Phone Usage Sheet

To determine the number of ports necessary and mailboxes supported:

1. For each line entered on the System Sizing Sheet, add the Direct and Indirect values and enter the sum in the Lucent Use 1 column.
2. Multiply that sum by the Highest Number in Group value, and enter the result in the Lucent Use 2 column.

3. Add all the values in the Highest Number in Group column to determine the total.
4. Add all the values in the Lucent Use 2 column to determine the total. Divide this number by the total Highest Number in Group figure from step 3. This produces the Weighted Average of Minutes per Day per Mailbox value.

Refer to the Phone Usage Sheet. If phone system statistics are provided (the top section of the form is complete), continue with step 1, below. If call estimates are provided (the bottom section of the form is complete), continue with step 3.

1. Determine the Average Number of Calls per Business Day by dividing the sum of each business day column by the number of business days in the week.
2. Determine the Busiest Hour Percent of Calls by dividing the Average Number of Calls per Business Day figure by the number of calls during the busiest hour of the week. Skip step 3, and continue with step 4.
3. Determine the Busiest Hour Percent of Calls by dividing the number of calls on an average business day by the number of calls in the busiest hour of the busiest day of the week.
4. Considering the Weighted Average Minutes per Day per Mailbox figure calculated on the System Sizing Sheet and the Busiest Hour Percent of Calls figure calculated on the Phone Usage Sheet, locate the row in the following table that best applies to the customer. Following the row across, you can identify the number of mailboxes supported by different port sizings. By considering the size of the customer's organization and other needs and expectations the customer identified on the Feature Selection Sheet, estimate the number of ports necessary for the customer.

Port Sizing Table

Weighted Avg.	Busiest Hour % of Calls	4 Ports	8 Ports	12 Ports	16 Ports
10	18	50	151	265	385
"	14	65	194	340	494
"	10	91	272	477	692
8	18	65	189	331	480
"	14	81	243	426	618
"	10	114	340	596	865
6	18	84	252	442	641
"	14	108	324	567	824
"	10	152	454	795	1154
4	18	127	378	662	961
"	14	163	486	851	1236
"	10	229	681	1192	1731
2	18	254	758	1325	1923
"	14	327	973	1703	2473
"	10	457	1362	2385	3462

To determine the hard drive size required:

1. For each line entered in the System Sizing Sheet, multiply the Number in Category value by the Average Number of Messages Stored value. Multiply the result by the Average Length of Message value divided by 60 (to convert seconds to minutes). Enter the result in the Lucent Use 3 column.

2. Multiply the Number in Category value by the Average Number of Faxes Stored value. Multiply the result by the Average Number of Pages per Fax value divided by 4 (because four pages of typical fax data can be stored in one minute of storage space). Enter the result in the Lucent Use 4 column.

3. Add the values in the Lucent Use 3 column to determine the minutes of storage required for messages. Add the values in the Lucent Use 4 column to determine the minutes of storage required for faxes. Add these totals together to determine the total minutes of storage required. Multiply this figure by 1.15 to increase it by 15%, providing a peak load adjustment.

4. To determine the minimum megabytes of hard drive space required *for message storage*, multiply the Minutes of Disk Space Storage Required value by .25.

5. To determine the minimum *total* megabytes of hard drive space required to house messages *and* the OS/2® and system software, prompts, and subscriber information for up to 1,000 subscribers, add 40 MB to the number determined in step 4.

Example:

Category of Subscriber	No. in Category	Avg. No. of Msgs Stored	Avg. Len. of a Msg (Seconds)	Avg. No. of Faxes Stored	Avg. No. of Pages PerFax	Lucent Use 3	Lucent Use 4
Executive	5	6	45	8	10	22.5	100
Manager	20	6	30	5	8	60	200
General Professional	80	4	30	5	5	200	500
Service Technician	30	5	20	4	3	70	90
Order Entry Clerk	20	2	30	2	2	50	20
Other Clerks	30	2	30	2	2	45	30
Secretary	15	3	30	3	4	15	45

Minutes of storage required for messages ---------->462.5 985
Minutes of storage required for Faxes ------------------------------ ↑

Total Minutes of Storage Required:	(462.5 + 985)	1447.5
15% Peak Load Adjustment:	(1.15 x 1447.5)	+ 217
Minutes of Disk Space Storage Required:		1664.5
Minimum Megabytes Required for Messages:	(1664.5 x .25)	416
Minimum Megabytes Required for OS/2, system software, etc.:		40
Minimum Total Megabytes Required:		456

Step 3: Consider Additional Hardware Needs

The hardware requirements listed below represent the minimum required to run OS/2 and system software efficiently.

CPU and Memory

Use the following table to determine the minimum CPU and memory requirements for the system.

Voice Ports	System without Visual Mailbox	System with < 50 Visual Mailbox Clients	System with 50 - 250 Visual Mailbox Clients
4	486 /33 w/ 16 MB RAM	486 /33 w/ 16 MB RAM	486 /66 w/ 16 MB RAM
8	486 /33 w/ 16 MB RAM	486 /33 w/ 16 MB RAM	486 /66 w/ 16 MB RAM
12	486 /33 w/ 16 MB RAM	486 /100 w/ 16 MB RAM	486 /100 w/ 16 MB RAM
16	486 /33 w/ 16 MB RAM	486 /100 w/ 16 MB RAM	486 /100 w/ 24 MB RAM

Certain PCs have Energy Saving Modes that, when enabled, automatically shut down or conserve energy in various parts of the PC. Areas affected can include the hard drive (may stop spinning), the monitor (may be dimmed or turned off), and the CPU and associated components (may be put to "sleep" in a low-power consumption mode). These energy saving features can hinder performance and cause other system problems. If you are running on a PC with these features, you must disable them in the PC's CMOS. Consult your PC manual for instructions. This feature is disabled on all M2000 turnkey systems.

Monitor

A monochrome VGA or better is recommended.

Bus and Slots

The only voice and fax boards available for use with the system require the ISA bus interface. Each voice board requires one 8- or 16-bit slot (depending on the board), and each 2- or 4-port fax board requires one full-length 16-bit slot. We recommend that at least one full-length 16-bit slot be available for future expansion.

3½-inch Disk Drive

One 1.4 megabyte, 3½-inch drive is necessary to install software and perform system backups.

If you want to install OS/2 disks from a drive other than A, you must change the BIOS setup of the computer to assign the drive from which you will be installing as the A: drive. Additionally, most PCs require you to swap the cable before the alternate drive can be used as the boot drive. For example, if you have 3½-inch OS/2 disks, but the 3½-inch drive in your PC is configured as B, you must change the BIOS to make the 3½-inch drive the A drive. See your PC manual for instructions.

Parallel Port

A parallel port is required for the sentinel® protection device and the optional printer. This port must be bidirectional, as most are today.

Other than the printer or a BackPak®, nothing should be connected to the same parallel port as the sentinel. The sentinel may be corrupted if a tape backup unit is connected to it or if file transfer software is run through it. If you want to use a tape backup unit or a file transfer program, either use a different parallel port, use a device that connects to a serial port, or disconnect the sentinel while you are using the other program or device (make sure the voice-mail system is shut down first).

Serial Ports

Depending on the system configuration, up to four serial (RS-232) ports may be required:

- Mouse (unless using a bus-type mouse)
- UPS integration
- Serial integration
- External modem for remote diagnostics

If you require additional serial ports, a relatively inexpensive add-on card is available that meets the requirements for OS/2 (it accesses interrupts 10 through 15). Call your Lucent Technologies representative for additional information.

Voice Boards

Dialogic® and Rhetorex® voice boards are supported for the system. The system only recognizes a voice board only if the EPROM has been programmed to contain the proper "signature." If a non-signatured board is detected during initialization, its ports are disabled.

Mouse

A mouse is required for full functionality of the system. Either a bus or serial mouse can be used.

Modem

A modem can be used for remote diagnostics. Modems with a minimum speed of 9600 bps are recommended. An internal modem is supplied with some M2000 system configurations. Contact your Lucent Technologies representative for additional information.

UPS (Uninterruptible Power Supply)

A UPS protects the system PC from a sudden loss of power. You must connect the UPS to a serial port if you plan to run UPS integration. Call your Lucent Technologies representative for additional information.

A UPS may be provided with some M2000 configurations. Otherwise, it is optional.

Printer (Optional)

A printer can be attached to the system PC to produce hard copies (reports, V-Trees, for example). The printer, which must connect to a parallel port, can be attached to the back of the system's sentinel unit. The printer and/or PC must include drivers that allow the printer to operate properly with OS/2 programs. For information on required drivers, consult the printer and OS/2 documentation.

Tape Backup (Optional)

A tape backup unit can be used to archive your entire voice-mail system or a portion of it (for example, phrase files). For additional information on tape backup units, contact your Lucent Technologies representative.

Do not connect the tape backup unit to the same parallel port as the sentinel since it could cause sentinel corruption. Use either a different parallel port, use a tape backup device that connects to a serial port, or disconnect the sentinel while you are using the other program or device (make sure the voice-mail system is shut down first).

Brooktrout Fax Boards (Optional)

A Brooktrout fax board can be installed to use the Fax Solution™ fax mail and fax retrieval features. Brooktrout fax boards are available in 2-port (TR112™ and TruFax™) or 4-port (TR114™) configurations. The system recognizes a fax board only if the EPROM has been programmed to contain the correct "signature." If a non-signatured board is detected during initialization, its ports are disabled.

Notes:

CHAPTER 3

Gathering Necessary Information

The steps provided in this chapter will help you to:

- Collect information from the customer that you will use during the M2000 installation and system setup process
- Review the information provided with the customer, validating completeness and accuracy
- Understand how that information is used during the M2000 implementation process

As you follow the steps in this chapter, you will ask the customer to complete the Preinstallation Configuration Worksheets provided behind the Worksheets tab in this manual.

Information on using the data you obtain on these worksheets is provided in this chapter and throughout this manual.

Step 1: Complete the Preinstallation Configuration Worksheets

There are 14 worksheets provided behind the Worksheets tab in this manual that are collectively referred to as the Preinstallation Configuration Worksheets. These worksheets prompt the customer to provide information that will assist you as you install and set up the customer's M2000 system. Before you begin the installation process, ask the customer to complete the following sheets:

- Company Profile Sheet
- Call Flow Sheet
- Single-Company Greetings Sheet or Multiple-Company Greetings Sheet
- Attendant Menu Prompt Sheet
- Call Queuing Prompts Sheet
- Holiday Greetings Sheet
- Class of Service Sheet
- COS Redefinition Sheet
- Custom COS Definition Sheet
- Mailbox Assignment Sheet
- Auto Forward Sheet
- Message Notification Sheet
- V-Tree Design Sheet

Instructions on completing Preinstallation Configuration Worksheets are provided at the top of each sheet. Though these instructions should be adequate, be sure to encourage customers to contact you immediately with any questions.

To assist customers in completing certain sheets, be sure to provide them with the following information, which is also included behind the Worksheets tab:

- Class of Service Information Sheet
- Predefined COS Sheet
- V-Tree Design Sheet Instructions and V-Tree Design Sheet Example

When asking customers to complete the worksheets, inform them that Prompt # and Mailbox # fields that display in *italics* on many of the sheets will be completed by the installer when the system is implemented at the site.

Step 2: Agree on a Worksheet Return Date

In an effort to facilitate the implementation process, be sure to set a worksheet completion target date with the customer. Contact the customer two or three days prior to that target date to ensure that the worksheets will be completed on time and to address any questions the customer may have.

Step 3: Review Worksheet Information

After you receive completed Preinstallation Configuration Worksheets from the customer, review each worksheet. Be sure to note:

- Missing worksheets
- Missing worksheet entries
- Seemingly inconsistent or odd worksheet entries
- Worksheet entries that require optional add-on modules you had not previously planned to include with the system

By carefully reviewing the Preinstallation Configuration Worksheets your customer provides, you can become increasingly familiar with the customer's system needs and expectations before you actually implement the M2000 system. You can also identify any additional optional modules that should to be included with the system and were not previously planned. Furthermore, by identifying missing or seemingly inconsistent data now, you can immediately address worksheet entries that were confusing to or overlooked by the customer to facilitate the actual installation and setup steps.

Step 4: Understand How and When to Use Worksheet Data

The steps provided in this manual will guide you through the M2000 installation and setup process and periodically refer you to specific customer entries on the Preinstallation Configuration Worksheets, so you can make informed installation and setup decisions. In general terms, you will be asked to refer to worksheet entries while completing the following installation and setup tasks:

- Configuring software parameters on the System Setup screens
- Defining the functionality of the automated attendant
- Setting up special features for the customer, such as V-Trees or Visual Mailbox

Note that, after you complete the entire system implementation process, you should store all the worksheets you used throughout the process, along with any notes you accumulated, behind the Customer Information tab in this manual. By doing so, you have easy access to critical site contact information, system setup records, and other information that can help you better support customers.

Notes:

CHAPTER 4

Understanding the Installation Process

This chapter provides information on the general methodology you must follow to successfully install, set up, and test an M2000 system.

An Installation Checklist is is provided separately with the M2000 system to guide you through the installation methodology. Copy and use this checklist each time you perform an M2000 system installation.

In almost all cases, the M2000 system PC is delivered with all necessary voice and fax boards and both the OS/2 and system software installed on the system. Consequently, you may not need to complete many of the hardware and software installation procedures discussed in this manual. Information provided in each chapter instructs you whether you should complete a specific installation procedure.

Installation Methodology Steps

The following table identifies each general system installation step and its purpose. Detailed procedures for completing each step are provided throughout this manual.

Installation Step	Purpose and Importance
Determine the customer's system needs and gather necessary customer information	By defining exactly what your customer needs from the voice/fax mail system, you can address issues, concerns, and questions early on, thereby facilitating communication and avoiding confusion and surprises later. You can also make informed decisions on the size of the system, type of hardware, and the optional add-on modules necessary to meet your customer's needs. For additional information, see Chapter 2, "Determining the Customer's System Needs."
Collect phone system information	During the installation process, you will need to provide specific information on the customer's phone switch and system. This step prompts you to gather that information prior to installation, so that you have all the information you need at hand. This step is particularly critical if the switch at the customer's site is not among those supported by the system's Integrator utility. The Integrator utility sets several codes and parameters to those settings best suited for a particular switch. For additional information on the Integrator-supported switches, contact a technical support representative. For additional information, see Chapter 6, "Preparing the Hardware."
Assemble the required materials	To facilitate the actual installation process, you need to assemble all the materials you will be using. This helps to dramatically improve your installation efficiency. For additional information, see Chapter 6, "Preparing the Hardware."
Prepare the PC for installation	Before you install the system on the PC, you must set up and install certain hardware components such as the voice board and sentinel. This step walks you through the procedures. For additional information, see Chapter 6, "Preparing the Hardware."
Install the OS/2 and system software	On turnkey systems, the OS/2 and system software is preinstalled. If the OS/2 and system software is not preinstalled, see Chapter 7, "Installing the Software."
Run the Configure utility	The Configure utility enables the system to recognize the installed voice and fax boards. On turnkey systems, the voice boards are preinstalled in the system PC and the Configure utility is preconfigured. For information on running the Configure utility, see Chapter 8, "Setting Up the System to Recognize Voice and Fax Boards."
Run the Integrator utility	The Integrator utility configures the system for use with the phone switch installed at the customer site. The Integrator utility is preconfigured on some systems. To determine if you must run the Integrator utility, launch Integrator and verify that the Currently Installed Switch field displays the name of the switch to which the system is connected. If the field displays None or if the name displayed for the installed switch is incorrect, you must run Integrator. For information on running the Integrator utility, see Chapter 9, "Integrating with the Phone System."

Installation Step	Purpose and Importance
Run the Call Analysis Utility	The Call Analysis utility enables the system to recognize the specific signals of the phone system to which it is connected. For information on whether you must run the Call Analysis utility, refer to Chapter 10, “Defining Phone System Signals.”
Run the System Setup utility	The System Setup utility configures the system. For information on running the System Setup utility, see Chapter 14, “Setting Up the System.”
Install the Visual Mailbox module (optional)	The Visual Mailbox software is preinstalled on most systems. However, there are additional steps you must perform to complete Visual Mailbox installation. For information on implementing Visual Mailbox, see Chapter 20, “Installing and Configuring Visual Mailbox.”
Install serial integration software (optional)	If the phone system at the customer site requires a serial integration, you must install the appropriate serial integration software and run the ICONFIG utility. For information on running serial integration, see Chapter 11, “Establishing a Serial Integration.”
Run the UPS utility	For systems equipped with an Uninterruptible Power Supply (UPS), it is strongly recommended that the UPS utility be run to integrate the system and the attached UPS. Note that the UPS must have a serial port connection to run UPS integration. For information on running the UPS utility, see Chapter 12, “Integrating with an Uninterruptible Power Supply.”
Run the Dial Plan utility (optional)	The Dial Plan utility determines the correct outdial string for a number of outbound operations. For information on running the Dial Plan utility, see Chapter 13, “Determining Outdial Strings.”
Test the system using the provided test plan	After you have completed the actual software installation and setup steps, it is critical that you comprehensively test the system to ensure it is functioning properly. This step takes you through a low-level test plan and helps you to troubleshoot any problems. For information on testing the system, see Chapter 25, “Testing and Troubleshooting the System.”
Back up the system	Before you leave the customer site, it is imperative that you back up the newly installed and tested system. Doing so can save you hours of customer support time you would otherwise face if a customer accidentally deletes or modifies certain settings or files. For information on backing up the Quick Assist utility to back up system files, see Chapter 24, “Maintaining the System.”
Document and store site information	By completing the Site Information worksheets, provided behind the Worksheets tab in this manual, and storing this information with other worksheets used during the installation process, you have an easy-to-reference snapshot of key contact personnel, site data, and system setup information. This information can help you more quickly resolve customer support issues, since you should have available most if not all the information necessary to resolve an issue.

Notes:

CHAPTER 5

Upgrading to M2000 Version 3.0

The following systems can be upgraded directly to M2000:

- Overture Performer Version 1.5.14k or higher
- Overture Signature Performer Version 2.02.14k or higher
- Overture PC Version 1.0 or higher
- Compass Enhanced Office Version 2.1.6

Only systems currently running the versions listed above are supported for direct upgrade to M2000. If the currently installed version is not listed above, you must first complete the appropriate upgrade to a supported version. Contact your Lucent Technologies representative if you require a particular upgrade note.

If this is an initial system installation, proceed directly to the hardware installation procedures in Chapter 6 “Preparing the Hardware.”

Procedures in this chapter assume that the hard drive on which the system is installed is drive C, that any additional hard drive that may be installed is D, that the disk drive is A, and that the CD-ROM drive, if installed, is E. Drive designations on the specific PC on which you are working may vary. Confirm the appropriate drive letters, when necessary, in procedures provided in this chapter.

Upgrading from Overture Performer /Overture Signature Performer

The same procedure is used to upgrade Overture Performer (OPC) 1.15.14k or higher and Overture Signature Performer 2.02.14k or higher.

If you are not sure whether the version currently installed is 1.5.14k or higher or 2.02.14k or higher, you can run the Check Version utility to determine the currently installed version of the software. To run Check Version, open the Octel folder on the OS/2 desktop, then double-click the Check Version icon. When the Check Version window displays, verify that the title bar displays a version number of 1.5.14k or higher or 2.02.14k or higher.

Performing the Upgrade

Complete the following steps to successfully upgrade to M2000 Version 3.0:

1. Shut down the OPC system, if it is running. For information on logging into the system and shutting it down, see Chapter 21, “Starting, Logging Into, and Shutting Down the System.”
2. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop, the LaunchPad, and the OS/2 window:
   a. Press <CTRL+ESC> to open the Window menu.
   b. Highlight any application you see with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the highlighted application.
   d. Select Close.
   e. Repeat steps 2a – d for each open application.
3. Run Quick Assist in Update (Partial) mode. For information on running Quick Assist, see Chapter 24, “Maintaining the System.” Running Quick Assist ensures the integrity of the existing voice mail system before you begin the upgrade process. If Quick Assist recommends further action, such as performing an Update All or Rebuild All, contact a Lucent Technologies technical support representative before continuing.
4. Open an OS/2 window.
5. Insert Upgrade Utility Disk 1 into the A: drive.
6. From the C: prompt, type `A:` and press <ENTER>. The A:\ prompt displays.
7. From the A:\ prompt, type `INSTALL` and press <ENTER>. The message “Setup is initializing, please wait” displays.
8. The upgrade utility backs up three directories: CVR, CVR1, and REPAIR before it upgrades the system. By default, these directories are backed up in a directory called C:\OSP_OLD, which contains three subdirectories, CVROLD, CVR1OLD, and REPROLD, respectively. When the system displays the Installation Location dialog box and prompts you whether you want to back up the directories to C:\OSP_OLD, either click OK, or specify the drive to which you want the directories backed up then click OK. The backup process may take several minutes.

9. When prompted to insert Upgrade Utility Disk 2, remove Upgrade Utility Disk 1 from the disk drive and insert Upgrade Utility Disk 2. Specify the source drive if it is different than the default, then click OK.
10. The message “Uncompressing Installation Program files” displays. Replace disks as prompted. Specify the source drive if it is different than the default, then click OK.
11. After a dialog box displays informing you that the file upgrade is complete, click OK. The system database is then converted for M2000. The upgrade then completes and the OS/2 desktop displays.

    You may experience a delay while the upgrade completes.

12. From the A:\ prompt, type `E C:\CVR1\UPGRADE.RPT` then press <ENTER>. An OS/2 editor window displays the contents of the upgrade report.
13. Scroll through the report to determine if any errors were logged during the upgrade. If not, proceed with step 14. If errors were logged during the upgrade, contact a Lucent Technologies technical support representative before proceeding.
14. Double-click the icon in the upper-left corner of the window to close the editor.
15. To close the OS/2 window, from the A:\ prompt, type `EXIT` then press <ENTER>.
16. Remove the disk from the disk drive.
17. Select Shut Down from the LaunchPad.
18. When prompted to shut down or reboot, turn off power to the PC, wait 5 seconds, then turn it back on. If the M2000 system is configured to launch automatically on bootup, it launches. If the M2000 system is not configured to launch automatically on bootup, the OS/2 desktop displays. If the voice system does not start up as it should, contact a Lucent Technologies technical support representative immediately.

If the system was running Visual Mailbox, the Voice Fax Server is automatically upgraded when you upgrade the voice mail system. However, you must upgrade the Visual Mailbox Client. See the topic, “Installing the Client Software on the LAN Server,” in Chapter 20, Installing and Configuring Visual Mailbox.”

If you need to install new hardware in the M2000 system PC, see Chapter 6, “Preparing the Hardware.”

Post Upgrade Considerations

Please be aware of the following important post upgrade considerations:

- Call Analysis has been improved with this release for Dialogic systems to use custom tone information for transfers instead of the Dialogic defaults. Due to these enhancements, some Dialogic systems may experience problems with call progress after the upgrade. If this occurs, re-run call analysis so that the system can obtain the required tone information.
- After the system is upgraded to Version 3.0, if you need to reinstall the voice files at any time, do not attempt to install the voice files using the disks from a previous

version of the software. Reinstalling the voice files using a previous version will overwrite an important file and will result in the system not launching properly after you restart it. If you need to reinstall voice files for any reason, contact a Lucent Technologies technical support representative to obtain the necessary files for Version 3.0.

Upgrading from Overture PC 1.0 and Higher

Systems currently running OPC Version 1.0 and Higher can upgrade directly to M2000 Version 3.0. If the system is currently running Overture Performer 1.5.14k or higher or Overture Signature Performer 2.02.14k or higher, see the topic, “Upgrading from Overture Performer/Overture Signature Performer,” earlier in this section.

A Back-Pak external CD-ROM is provided with some upgrades. Instructions for connecting and using the Back-Pak are provided in the upgrade procedure.

Upgrade Considerations

Be aware of the following considerations before beginning the upgrade:

- Call handling changes made in previous versions may affect how call flow applications are set up after you upgrade the system. For comprehensive call flow functionality matrices for the current version of the software, see Prompts Voiced Under Specific Call Handling Conditions in Chapter 25, “Troubleshooting the System.”
- Group distribution lists are converted to accommodate 50 mailboxes per list.
- Settings for the INRINGS and inbound and outbound channels are carried over to a new Port Parameters tab in System Setup. You must enable the Application option for each port that is allowed to use V-Edit in Visual Architect or Visual Mailbox.
- Any existing V-Trees, whether they were created on screen or through the keypad interface, are converted to accommodate the new Visual Architect V-Tree generation tool on systems using Visual Architect.
- Message Confirmation data is not retained after the conversion.
- M2000 supports Daylight Savings Time. If your PC or other software packages support this feature, be sure to deactivate this feature in M2000. Note that this feature is based on North American standards. If the M2000 system location is based on a different standard, disable this feature in M2000 and enable it on the PC or in another software package, if available.
- New features, such as Follow-Me-Forward on the Class of Service dialog box and Personal Fax Number on the Subscriber Settings dialog box will be set to the M2000 default values.
- If you are upgrading from OPC Version 1.02 and there are fax events that have not yet occurred, the events will be successfully performed after the conversion. However, fax errors may be written to the log file even though the events were successful. If this occurs, ignore these errors.

WARNING: If the existing OPC system has custom phrase files in the ENGLISH1.O32 or ENGLISH2.O32 files, you must use V-Edit to manually restore the custom phrases after the upgrade is complete. This is required because new phrases have been added to M2000 and the phrases may not have the same assigned number. Therefore, if you are upgrading an OPC 1.0 or higher system, you must have a list of the custom phrase numbers and the text of the phrases before you perform the upgrade.

Performing the Upgrade from OPC 1.0 or Higher

Complete the following steps to successfully upgrade to M2000 3.0:

1. If the OPC system is running, shut it down. For information on logging into the system and shutting it down, see Chapter 21, “Starting and Shutting Down the System.”
2. You must run the Configure utility to record the settings of the installed boards. For information on running the Configure utility, see Chapter 8, “Setting Up the System to Recognize Voice and Fax Boards.” Record the current settings of the installed voice and fax boards. You will need to enter this information when you run the Configure utility.
3. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad (some systems will not include a LaunchPad):
   a. Press <CTRL+ESC> to open the Window menu.
   b. Highlight any application you see with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the open application.
   d. Select Close.
   e. Repeat steps 3a – d for each open application.
4. Run Quick Assist in Update (Partial) mode. For information on running Quick Assist, see Chapter 24, “Maintaining the System.” Running Quick Assist ensures the integrity of the existing voice mail system before you begin the upgrade process. If Quick Assist recommends further action, such as performing an Update All or Rebuild All, contact a Lucent Technologies technical support representative before continuing.
5. Install the BackPak CD-ROM (if provided) and perform any necessary hardware upgrades:
   a. Click the right mouse button on an empty area of the desktop and select Shutdown from the menu that displays. When you are prompted whether you want to close all windows and active programs, click OK.
   b. When prompted, turn off power to the PC.

c. If you are using the BackPak CD-ROM:

   i. If a printer is currently attached to the OPC system sentinel, disconnect the printer cable from the back of the sentinel.

   ii. Connect one end of the Backpack CD-ROM cable into the sentinel and the other end into the port marked “Computer” on the back of the Backpack CD-ROM.

   iii. Attach the power cable to the power connector on the Backpack CD-ROM and plug the Backpack power unit into a wall outlet.

d. If you do not need to perform any hardware upgrades, skip to step 6. If you do need to perform hardware upgrades, remove the cover of the PC, if necessary.

WARNING: Use caution when handling voice boards as they are electrostatic-sensitive. Be sure you ground the PC, the work area, and the ground end of the antistatic wrist strap prior to handling a board, and always use antistatic wrist straps and/or electrostatic-dissipative mats while handling a board.

e. If you are installing new voice or fax boards, see Chapter 6, “Preparing the Hardware.” If you are not installing new voice or fax boards, proceed with step 5g.

f. If you installed new voice or fax boards, record the settings of the boards. You will need to enter this information when you run the Configure utility.

g. If you are adding RAM to the PC, make sure that you modify the PC’s BIOS before continuing with the upgrade. For additional information on modifying the BIOS, refer to the PC documentation.

h. After the hardware upgrades are completed, replace the PC’s cover.

If you are performing the upgrade from disk, complete the procedures in the topics, “Installing OS/2 Warp Connect 3.0,” and, “Installing OS/2 Warp Fix Pak 17,” in Chapter 7, “Installing the Software.” Once you have completed those procedures, skip to step 22.

6. Insert the IBM Warp Connect Version 3.0 Installation Disk into the disk drive.

7. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM into the CD-ROM drive.

8. Turn on the PC. An introductory screen displays.

9. When prompted, remove the Installation Diskette from the disk drive, insert IBM Warp Connect Version 3 Diskette 1 for CD-ROM Upgrade in the disk drive, and press <ENTER>. You may experience a slight delay while the system prepares to load files.

10. A text message displays that you are about to install OS/2:

    - If the system is not running OS/2 Warp 3.0 or OS/2 Warp Connect 3.0, press any key to continue with the installation.

    - If the system is already running OS/2 Warp 3.0 or Warp Connect 3.0, you can skip the OS/2 installation. To abort the OS/2 install, remove the disk, turn the PC off, then turn it on again and skip to step 12.

You will see a series of commands display on the screen before the file installation begins. If any error messages display, note that these messages have no effect on OS/2 Warp Connect 3.0 installation and you should disregard them.

11. When a screen displays notifying you that the installation is complete and prompting you to remove the disk from the disk drive, remove Disk 1 from the disk drive and press <ENTER> to restart the PC.
12. After the PC restarts, shut down the OPC system if it automatically launches on boot.
13. Open an OS/2 window.
14. From the C:\ prompt, type `E:` and press <ENTER>.
15. From the E:\ prompt, type `instfp17` and press <ENTER>. The OS/2 Warp Fix Pak 17 install begins.
16. When Fix Pak 17 installation is complete, the OS/2 window displays a message prompting you to shut down all applications and restart the PC. Type `EXIT` then press <ENTER> to close the OS/2 window.
17. Select Shut down from the LaunchPad.
18. When you are prompted whether you want to close all windows and active programs, click OK.
19. When prompted to shut down or reboot, press <CTRL+ALT+DEL> to restart the PC.
20. After the PC restarts, shut down the OPC system if it automatically launches on boot.
21. Use the procedure defined in step 3 to shut down any open applications (for example, UPS) and windows except the OS/2 desktop and the LaunchPad.
22. Run the Sentinel Upgrade Utility:
    a. Insert the Sentinel Upgrade diskette in the A drive.
    b. Open an OS/2 window.
    c. At the C:\ prompt, type `A:` and press <ENTER>.
    d. At the A:\ prompt, type `SUU` and press <ENTER>. When the upgrade procedure is finished, the message “Sentinel upgrade successful” displays.
    e. Remove the sentinel upgrade diskette from the diskette drive.
    f. Type `C:` and press <ENTER>.
23. If you are upgrading from disk, skip to step 24. If you are upgrading from CD-ROM:
    a. From the C:\ prompt, type `E:` and press <ENTER> to change to the CD-ROM drive.
    b. From the E:\ prompt, type `CD M2000` then press <ENTER>. The \M2000 directory prompt displays.
    c. From the \M2000 directory prompt, type `INSTALL` and press <ENTER>. The message “Setup is initializing, please wait...” displays.
    d. Skip to step 25.

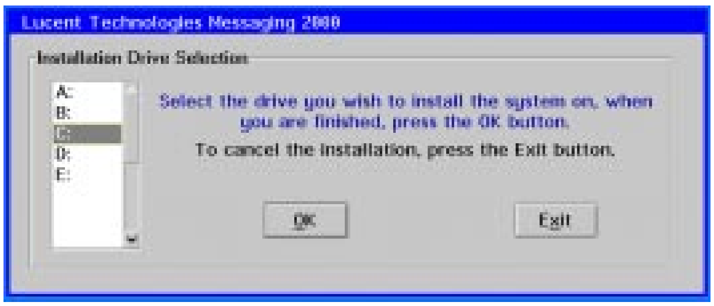
24. If you are upgrading from disk:

    a. Insert Lucent Technologies Messaging 2000 Installation Disk 1 into the A drive.

    b. From the C:\ prompt, type `A: INSTALL` and press <ENTER>. The message "Setup is initializing, please wait…" displays.

Do not attempt installation from the full screen OS/2 window because the installation process will run in the background, and the installation screens will not be visible to you. Consequently, you cannot follow the prompts for replacing diskettes and entering information.

25. A window displays, which briefly describes the installation procedure. To continue installing, click Continue or press <C>. The installation program presents a list of drives from which you can select.

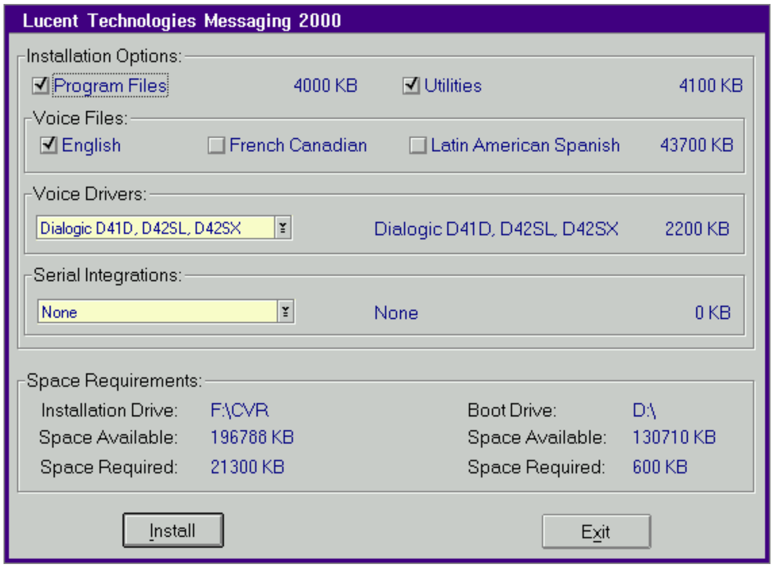


26. Select the drive to which the files should be installed. Use the down arrow key to highlight the appropriate drive, then click OK. (Drives A and B are disk drives.) The system prompts whether you want to install the system to the \CVR directory on the specified installation drive.

27. Click Yes to install the system to the \CVR directory and continue the installation process. If you click No, you are prompted to enter a destination directory.

28. You are prompted whether you want to back up the voice mail system. If you select Yes, the system backs up the CVR, CVR1, and REPAIR directories to the \OSP_OLD directory, which contains CVROLD, CVR1OLD, and REPROLD directories, respectively. It is strongly recommended that you back up the voice mail system.

29. Wait while the system prepares to load files. A dialog box with installation options and space requirements displays. The Space Requirements section of the window displays the disk space required, based on the selected options, the space availability, and the installation and boot drives.



30. Under Installation Options, leave all of the options selected:

- **Program Files** – Includes the executable files needed to run M2000.
- **Utilities** – Contains the files necessary to run system modules, such as DialPlan and Integrator.

31. Under Voice Files, select the language(s) that you are installing. Note that the sentinel attached to the M2000 PC controls the number of languages allowed on the M2000 system.

32. Under Voice Drivers, select the type of voice board installed in the system PC from the drop-down menu.

33. Under Serial Integrations, leave at the default, None, if you are not using serial integration. If you are using serial integration, select the appropriate option from the drop-down menu.

You can exit the installation at this point by clicking Exit. After you select Install, you cannot exit the installation process.

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34. Click Install to install M2000 based on the selections. If you are installing from CD-ROM, skip to step 39.

35. When prompted to insert Program Disk 1, remove the Installation Disk, insert Program Files Disk 1, and click OK.

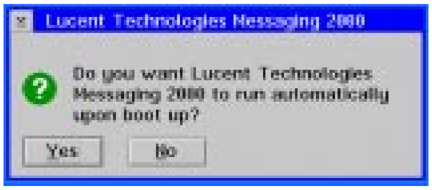
A small display appears to the left of the Disk Prompt window to show the progression of the installation process. The graph represents the percent of hard drive space and memory being used, as well as the progression of each file as it is copied from the disk to the hard drive. If the Low icon comes on during installation, do not be concerned.

36. Replace disks as prompted. For each disk, specify the source drive if it is different than the default, then click OK.

37. When you are prompted to enter the voice drivers disk, remove the voice files disk, insert the voice drivers disk for which the system prompts you, then click OK.

38. If you selected a Serial Integration option, you are prompted to insert the appropriate disk. Remove the voice drivers disk, insert the Serial Integrations disk for which the system prompts you, then click OK.

39. After all of the files have been copied, the system loads the configuration, modifies paths, and creates the desktop folder and program objects. The system then prompts you to indicate whether you want M2000 to launch automatically upon bootup.



40. Click Yes to configure M2000 to launch each time you restart the PC, which allows you to run third-party maintenance utilities from the RUNVM.CMD file. For information on modifying the RUNVM.CMD file, see the topic, "Verifying Files After Installation," in Chapter 7, "Installing the Software."

41. If you selected Yes in step 40, you are prompted to indicate whether you want the UPS monitor to load automatically upon boot up. Select Yes if the UPS is currently integrated with the M2000 system or you are planning to run UPS integration so the UPS monitors M2000 system status to recognize a potential interruption in operation before it occurs. For additional information on the UPS monitor, see Chapter 12, “Integrating with an Uninterruptible Power Supply.”

    Select No if you do not want the UPS monitor to load upon boot up.

Programs that load prior to the desktop coming up under OS/2, such as UPS, display a default OS/2 icon on the desktop rather than the custom icon.

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42. A dialog box displays informing you that the file installation is complete. Click OK to continue.

43. If database conversion is necessary, the Convert window displays and the system converts the existing database for use with the current release of M2000. Wait while the database is converted. If a warning displays stating that you must reconfigure inband templates, click Yes to continue. You will address this warning later in this procedure. After the conversion is complete, click Exit.

When the system converts the files from OPC 1.0 or higher for use with M2000 3.0, it creates a file, CONVERT.RPT, that logs conversion activity.

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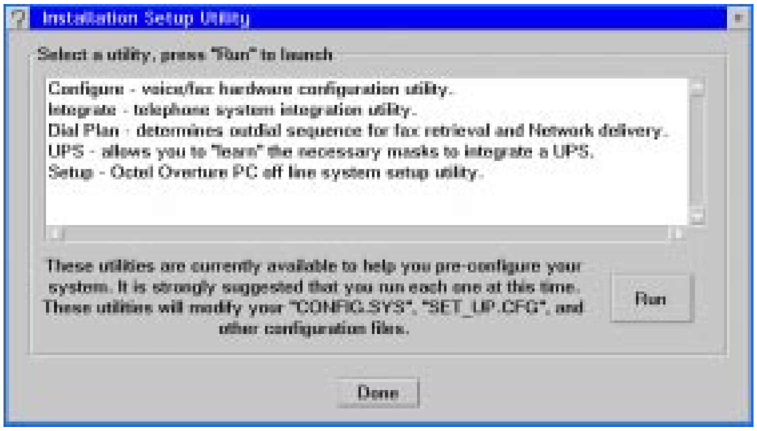
44. The Installation Setup Utility dialog box displays a list of utilities you can run to help you configure the M2000 system.



45. Select Configure from the Installation Setup Utility list, then click Run. Re-enter the settings for the installed voice and fax boards, using the information you recorded in step 2. For information on running Configure, see Chapter 8, “Setting Up the System to Recognize Voice and Fax Boards.”

46. Select Setup from the Installation Setup Utility list, then click Run. The General Parameters tab displays:

    a. If no message displayed during conversion in step 43 informing that you must reconfigure inband templates, proceed with step 46d. If you did receive a message during conversion informing you that you must reconfigure inband templates.

    b. Click the double arrow button in the lower-right corner of the screen to scroll down to the Inband Page 2 tab and click it to select it. The Inband Parameters Page 2 tab displays the inband templates created by the system during conversion. If the phone switch does not support inband templates, no templates are displayed on this tab and you should proceed to step 46d.

    c. Follow the procedures under the heading “Creating, Modifying, and Deleting Inband Templates” in Chapter 9, “Integrating with the Phone System,” to modify the templates to function properly with the phone system.

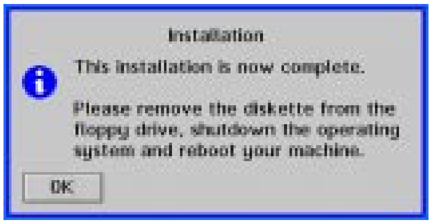
    d. Click the double arrow button in the lower-right corner of the screen to scroll down to the Voice System tab and click it to select it. The Voice System Parameters tab displays.

    e. View the value for the RECDTMF parameter. If the value is not set to at least 5, change it to 5 by highlighting the value, typing 5 and pressing <ENTER>.

    f. To save the settings, select Save from the File menu.

    g. To close System Setup, select Exit from the File menu. After a few moments, the Installation Setup Utility list displays.

47. Click Done to exit the Installation Setup Utility dialog box. The system then completes the installation. When installation is complete, the system displays a message reminding you to restart the computer for any changes to take effect. Do not restart at this time.



48. To close the dialog box and return to the OS/2 window, click OK. A new folder labeled Lucent Technologies displays on the desktop.

49. Remove the disk or CD-ROM.

50. To verify that the upgrade was successfully performed, you must review the upgrade reports. From the C:\ prompt, type `E C:\CVR1\convert.rpt` then press <ENTER>. An OS/2 editor window displays the contents of the upgrade report. Scroll through the report to determine if any errors were logged during the upgrade. If not, proceed with step 51. If errors were logged during the upgrade, contact a Lucent Technologies technical support representative before proceeding. Double-click the icon in the upper-left corner of the window to exit the editor.

51. If the STARTUP.CMD file was modified since the original installation, you must re-insert the modifications into the new STARTUP.CMD file now installed on the system:
    a. From the C:\ prompt , type `E STARTUP.CMD` then press <ENTER>. An OS/2 editor window displays the new STARTUP.CMD file.
    b. If necessary, insert the modifications made previously to the STARTUP.CMD file.
    c. Select Save from the File menu. If this is the first time you have saved the file, the Save Notification dialog box displays.
    d. Click Type. The Type dialog box displays.
    e. Click Plain Text, then click Set. The file is saved.
    f. Double-click the icon in the upper-left corner of the window to close the editor.

52. To exit the OS/2 window, type `EXIT` then press <ENTER>.

53. Select Shut down from the Launch Pad.

54. If you are prompted whether you want to close all windows and active programs, click OK.

55. When prompted to shut down or reboot, turn off power to the PC, then turn it back on.

WARNING: In step 56, you must launch Call Analysis, even if you determine that you are not required to actually run the utility. This is required because, when you launch Call Analysis, the TONE.PAR file is adjusted for this release of the software.

56. If the M2000 system is configured to launch automatically on bootup, it launches. If the M2000 system is not configured to launch automatically on bootup, the OS/2 desktop displays. Complete the following steps to launch Call Analysis:

    a. If the M2000 system is running, log into it as a level 2 or 3 supervisor and shut it down. For information on logging into the system and shutting it down, see Chapter 21, “Starting and Shutting Down the System.”

    b. Double-click the Lucent Technologies folder icon to open the Lucent Technologies folder.

    c. In the Lucent Technologies folder, double-click the Call Analysis icon. The Call Analysis for OS/2 dialog box displays.

    d. Click Continue to load required tone templates. The Call Analysis dialog box displays.

    e. Depending on the M2000 system, you may need to run the Call Analysis utility. For guidelines for running the Call Analysis utility, see Chapter 10, “Defining Phone System Signals.” If you determine that you are not required to run the Call Analysis utility, click Exit to close the utility. If you determine that you need to run the Call Analysis utility, see Chapter 10, “Defining Phone System Signals.”

    f. If the M2000 system is not already running, start it by double-clicking the M2000 icon in the Lucent Technologies folder.

    If the voice system does not start up as it should, contact a Lucent Technologies technical support representative immediately.

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57. It is essential that you test any inband templates currently defined for the switch to ensure the templates function as they should. To test the inband templates:

    a. Select Setup from the Options menu on the main window. The General Parameters tab displays.

    b. Use the scroll bar to scroll down to the Inband Page 2 tab and click it to select it. The Inband Parameters Page 2 tab displays the inband templates currently defined for the system. If the phone switch does not support inband templates, no templates are displayed on this tab, and you can skip to step 57e.

    c. Test each template by calling into system, performing the function associated with the template, and verifying that the call is processed correctly. For additional information on making any necessary modifications to the inband templates, see Chapter 9, “Integrating with the Phone System.”

    d. After you have tested each inband template and made necessary modifications, save the templates by selecting Save from the File menu.

    e. To exit System Setup, select Exit from the File menu.

    f. If you made any modifications to the inband templates as a result of the testing you performed, select Restart from the Options menu to restart the M2000 system. If it was not necessary for you to make modifications, you do not need to restart the system.

58. If you were not using custom phrase files in the [LANGUAGE]1.O32, [LANGUAGE]2.O32, or [LANGUAGE]3.O32 files, skip to step 59. If you were using custom phrase files, you must use V-Edit to restore the phrases individually from the back \CVR directory. For information on using V-Edit to restore phrases, see the

heading “Adding Segments to Phrases” in Chapter 16, “Recording and Editing Prompts.”

Make sure you restore the phrases to the correct phrase number.

59. It is important that you test the integration with the switch and the M2000 software features to ensure the entire system works as it should. A test plan you can use to help you exercise system features and options and confirm they are functioning appropriately is provided in Chapter 25, “Testing and Troubleshooting the System.”

If the system was running Visual Mailbox, the Voice Fax Server is automatically upgraded when you upgrade the voice mail system. However, you must upgrade the Visual Mailbox Client. See the topic, “Installing the Client Software on the LAN Server,” in Chapter 20, Installing and Configuring Visual Mailbox.” If you are adding Visual Mailbox to the system, see Chapter 20, “Installing and Configuring Visual Mailbox.”

Post Upgrade Considerations

Please be aware of the following important post upgrade considerations:

- Call Analysis has been improved with this release for Dialogic systems to use custom tone information for transfers instead of the Dialogic defaults. Due to these enhancements, some Dialogic systems may experience problems with call progress after the upgrade. If this occurs, re-run call analysis so that the system can obtain the required tone information.

Upgrading from Compass Enhanced Office

Compass Enhanced Office (CEO) systems currently running Version 2.1.6 are supported for upgrade directly to M2000 version 3.0. If the currently installed version of CEO is not 2.1.6, you must first complete the appropriate upgrade note to upgrade to CEO version 2.1.6.

If you are not sure whether the CEO version currently installed is 2.1.6, shut down the CEO system, if it is currently running, then complete the following steps:

1. Open an OS/2 window.
2. From the \CVR directory prompt, type `DIR CEO.EXE` then press <ENTER>. If the date of the CEO.EXE file is 11/05/96, the CEO system is running version 2.1.6. If the date is prior to 11/05/96, the CEO system is not running version 2.1.6.

Upgrade Considerations

Be aware of the following important considerations before beginning the upgrade:

- When you perform the upgrade from CEO 2.1.6 to M2000 Version 3.0, the existing CEO database is converted for use with M2000 3.0. Existing system information, such as network nodes, V-Trees, subscriber information, classes of service, etc. is retained. Due to functionality differences, however, when the conversion to M2000 is performed, personal and system distribution lists are not converted and must be re-created. During the conversion, the DISTLIST.RPT file is created in the \CVR1 directory. This file identifies the destinations assigned to each system distribution list and to each mailbox's personal distribution lists.

- There are a number of functional differences between CEO and M2000. You should consider these differences before performing the upgrade:
  - Telephone User Interface (TUI): there are differences between the CEO and M2000 subscriber interface. Some of these differences, such as sending and receiving messages and using message confirmation and distribution lists, are significant. It is strongly recommended that existing CEO subscribers be familiarized with the M2000 user interface. The *Quick Reference Guide* provides a high-level overview of user interface procedures for the M2000 system.
  - Subscriber directories function differently between CEO and M2000. For information on including the directory option in the Attendant Menu, see Chapter 15, "Setting Up System Prompts." For information on the Dial by Name feature, which enables subscribers to call another subscriber whose extension they do not know, see Chapter 17, "Managing System Mailboxes." For information on Caller Parameters, which enable outside callers to call a system subscriber whose extension they do not know, see Chapter 14, "Setting Up the System."
  - The subscriber Directory prompt is not used for M2000. The Name prompt is used for Dial by Name instead.
  - There are call handling differences between CEO and M2000. See Chapter 25, "Testing and Troubleshooting the System," for information on M2000 call handling.

Performing the Upgrade from CEO 2.1.6

Complete the following steps to successfully install the upgrade:

1. Shut down the CEO system, if it is running. For information on logging into the system and shutting it down, see Chapter 21, "Starting and Shutting Down the System."
2. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad:
   a. Press <CTRL+ESC> to open the Window menu.
   b. Highlight any application you see with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the highlighted application.
   d. Select Close.
   e. Repeat steps 2a – d for each open application.
3. Run Quick Assist in Update (Partial) mode. For information on running Quick Assist, see Chapter 24, "Maintaining the System." Running Quick Assist ensures the integrity of the existing voice mail system before you begin the upgrade process. If Quick Assist recommends further action, such as performing an Update All or Rebuild All, contact a Lucent Technologies technical support representative before continuing.

4. If no hardware upgrades (installing new voice or fax boards, adding RAM) are necessary, skip this step, and continue with step 5. If hardware upgrades are required:
   a. Use the procedure defined in step 2 to shut down any open applications (for example, UPS) and windows except the OS/2 desktop and the LaunchPad.
   b. Select Shut down from the LaunchPad.
   c. If you are prompted whether you want to close all windows and active programs, click OK.
   d. When prompted, turn off power to the PC.
   e. After the PC is off, follow the instructions in the PC manual to remove the cover, if necessary. If you are installing new voice or fax boards, see Chapter 6, “Preparing the Hardware.” If you are not installing new voice or fax boards, proceed with step 4f.
   f. If you are adding RAM to the PC, make sure that you modify the PC’s BIOS before continuing with the upgrade. For additional information on modifying the BIOS, refer to the PC documentation.
   g. After the hardware is installed, replace the PC’s cover and turn on power to the PC.
   h. Repeat steps 1 through 3.
5. If you received a new sentinel, remove the currently installed sentinel from the PC’s parallel port, then install the new sentinel, which you received with the upgrade software, to the PC’s parallel port.

   or

   If you received a sentinel upgrade diskette, complete the following steps to perform the sentinel upgrade:
   a. Shut down the CEO system, if it is running.
   b. Insert the sentinel upgrade disk in the A drive.
   c. Open an OS/2 window.
   d. At the C:\ prompt, type `A:` and press <ENTER>.
   e. At the A:\ prompt, type `SUU` and press <ENTER>.
   f. When the upgrade procedure is finished, the message “Sentinel upgrade complete” displays. Restart the software and test the new features or ports to ensure they are available.

WARNING:	You must upgrade the sentinel for use with M2000. Otherwise, you will receive a warning during M2000 installation and the CEO to M2000 conversion will not run automatically. You will have to run it from the Installation Utility during M2000 installation (step 29).

6. If you are installing from disk, skip to step 7. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.
   b. Open an OS/2 window, if one is not already open.
   c. From the C:\ prompt, type `E:` and press <ENTER>.

d. From the E:\ prompt, type `CD M2000` and press <ENTER>.

e. From the \M2000 directory prompt, type `INSTALL` and press <ENTER>. The message “Setup is initializing, please wait” displays.

f. Skip to step 8.

7. If you are installing from disk:

   a. Insert Lucent Technologies Messaging 2000 Installation Disk 1 into the A drive.

   b. Open an OS/2 window.

   c. From the C:\ prompt, type `A: INSTALL` and press <ENTER>. The message “Setup is initializing, please wait” displays.

Do not attempt installation from the full screen OS/2 window because the installation process will run in the background and the installation screens will not be visible to you. Consequently, you will not be able to follow the onscreen prompts for swapping disks and entering information.

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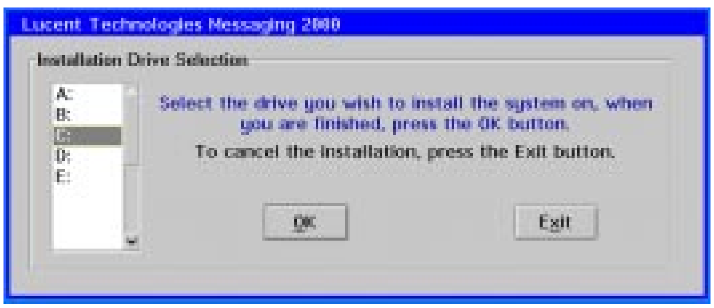
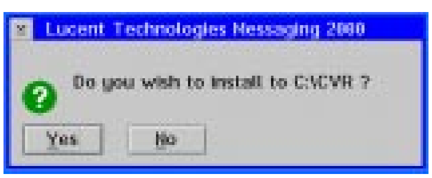
8. A window displays, which briefly describes the installation procedure. To continue installing, click Continue or press <C>. The installation program presents a list of drives from which you can select.



9. Select the drive to which the files should be installed. Use the down arrow key to highlight the appropriate drive, then click OK. (Drives A and B are disk drives.) The system prompts whether you want to install the system to the \CVR directory on the specified installation drive.



10. Click Yes to install the M2000 system to the \CVR directory and continue the installation process. If you click No, you are prompted to select a destination directory.

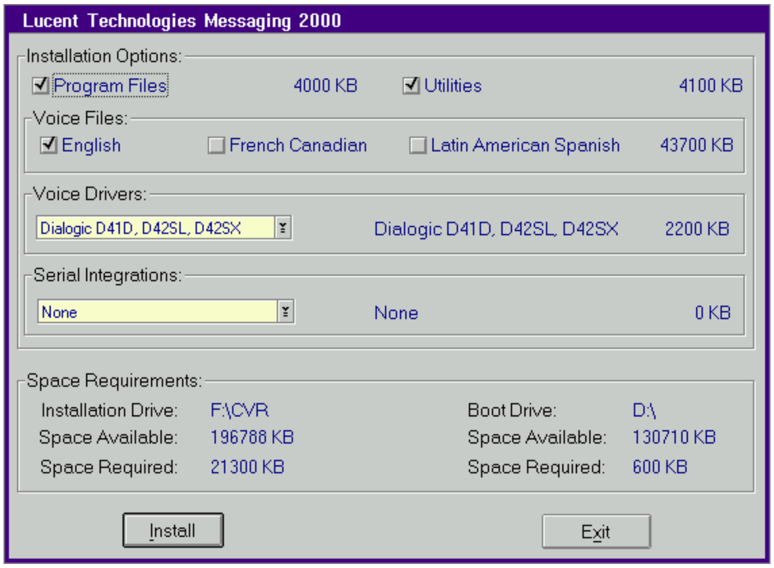
To facilitate system maintenance, it is recommended that you do not change the default installation directories.

---

11. A dialog box displays prompting whether you want to install M2000 over CEO and convert the database. Click Yes to continue.

12. The system automatically backs up the \CVR and \CVR1 directories into \OLDCVR and \OLDCVR1, respectively. Please wait while the system prepares to load files. A

dialog box with installation options and space requirements displays. The Space Requirements section of the window displays the disk space required, based on the selected options, the space availability, and the installation and boot drives.



13. Under Installation Options, leave all of the following options selected:
    - **Program Files** – Includes the executable files needed to run M2000.
    - **Utilities** – Contains the files necessary to run system modules, such as Dial Plan and Integrator.
14. Under Voice Files, select the language(s) that you are installing. Note that the sentinel attached to the M2000 PC controls the number of languages allowed on the M2000 system.
15. Under Voice Drivers, verify that the option displayed is correct. If it is not, select the appropriate option from the drop-down menu.
16. Under Serial Integrations, verify that the option displayed is correct. If it is not, select the appropriate option from the drop-down menu.

You can exit the installation at this point by clicking Exit. After you select Install, do not exit the installation process.

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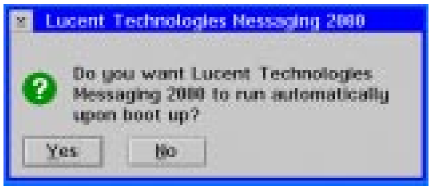
17. Click Install to install M2000 based on the selections. If you are installing from CD-ROM, skip to step 22.
18. When prompted to insert Program Disk 1, remove the Installation Disk, insert Program Files Disk 1, and click OK.

    A small display appears to the left of the Disk Prompt window to show the progression of the installation process. The graph represents the percent of hard drive space and memory being used, as well as the progression of each file as it is copied from the disk to the hard drive. If the Low icon comes on during installation, do not be concerned.
19. Replace disks as prompted. For each disk, specify the source drive if it is different than the default, then click OK.

20. When you are prompted to enter the voice drivers disk, remove the voice files disk, insert the voice drivers disk for which the system prompts you, then click OK.

21. If you selected a Serial Integration option, you are prompted to insert the appropriate disk. Remove the voice drivers disk, insert the Serial Integrations disk for which the system prompts you, then click OK

22. The system prompts you to indicate whether you want M2000 to launch automatically upon bootup.



23. Click Yes to configure M2000 to launch each time the PC restarts, which allows you to run third-party maintenance utilities from the RUNVM.CMD file. For information on modifying the RUNVM.CMD file, see the topic, "Verifying Files After Installation," in Chapter 7, “Installing the Software.”

24. If you selected Yes in step 23, you are prompted to indicate whether you want the UPS monitor to load automatically upon bootup. Select Yes if you are planning to run UPS integration so the UPS monitors system status to recognize a potential interruption in operation before it occurs. For additional information on the UPS monitor, see Chapter 12, “Integrating with an Uninterruptible Power Supply.”

    Select No if you do not want the UPS monitor to load upon bootup.

Programs that load prior to the desktop coming up under OS/2, such as UPS, display a default OS/2 icon on the desktop rather than the custom icon.

---

25. A dialog box displays when the installation is complete. Click OK to continue with system configuration.

26. After all of the files have been copied, wait while the system loads the configuration, modifies paths, creates the desktop folder, and creates program objects. The Convert dialog box displays and the system performs the CEO to M2000 conversion. After the conversion is successfully completed, click Exit to continue.

27. The Installation Setup Utility dialog box displays a list of utilities you can run to help you configure the M2000 system. You should not need to run any of the utilities, except Configure (see step 28).

28. If you did not add voice or fax boards or change voice board type, proceed with step 29. If you did add voice or fax boards or change voice board type, select Configure from the list of utilities and click the Run button. For information on running the Configure utility, see Chapter 8, “Setting Up the System to Recognize Voice and Fax Boards.” After you run System Setup, the Installation Setup Utility displays.

You do not need to run System Setup at this time, although you should familiarize yourself with the differences on the General and Networking tabs for M2000. See Chapter 14, “Setting Up the System,” for additional information on the General and Networking tab settings.

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29. If you did not receive an error message during M2000 installation that the M2000 sentinel was not installed, proceed with step 30. If you did receive an error message during M2000 installation because you did not replace the CEO sentinel with an M2000 sentinel before starting the M2000 installation, make sure the M2000 sentinel is attached, then select CEO2M2000 conversion from the list and click the Run button. The conversion screen displays. When the conversion is complete, click Exit to close the conversion utility and return to the Installation Setup Utility dialog box.

30. Click Done to exit the Installation Setup Utility dialog box. The system displays a message when installation is complete and reminds you to restart the computer for any changes to take effect.

31. To close the dialog box and return to the OS/2 window, click OK. A new icon labeled Lucent Technologies displays on the desktop.

32. From the A:\ prompt, type `E C:\CVR1\ceo2opc.rpt` then press <ENTER>. An OS/2 editor window displays the contents of the upgrade report.

33. Scroll through the report to determine if any errors were logged during the upgrade. If not, double-click the icon in the upper-left corner of the window to close the editor, and proceed with the next step. If errors were logged during the upgrade, contact a Lucent Technologies technical support representative before proceeding.

34. If the CEO system had system or personal distribution lists, a report was created during the conversion containing all of the lists and their entries. This report will help you re-create the system and personal distribution lists, which are not converted. To view the report, from the A:\ prompt, type `E C:\CVR1\distlist.rpt` then press <ENTER>. An OS/2 editor window displays the contents of the report. You can print the report, if a printer is attached to the M2000 system, or save it to a file for printing on another PC.

35. Type `EXIT` then press <ENTER> to close the OS/2 window.

36. Remove the disk or CD-ROM.

37. Click Shut down in the LaunchPad.

38. When you are prompted whether to close all windows and active programs, click OK.

39. When prompted to shut down or reboot, turn off power to the PC, wait 5 seconds, then turn it back on. If the system is configured to start automatically on bootup, the M2000 system launches. If the system is not configured to start automatically on bootup, start it now by double-clicking the Lucent Technologies Messaging 2000 icon in the Lucent Technologies folder.

If the CEO system was running Visual Mailbox, the Voice Fax Server is automatically upgraded when you upgrade the voice mail system. However, you must upgrade the Visual Mailbox Client. See the topic, “Installing the Client Software on the LAN Server,” in Chapter 20, Installing and Configuring Visual Mailbox.”

Post Upgrade Considerations

Please be aware of the following important post upgrade considerations:

- Call Analysis has been improved with this release for Dialogic systems to use custom tone information for transfers instead of the Dialogic defaults. Due to these enhancements, some Dialogic systems may experience problems with call progress after the upgrade. If this occurs, re-run call analysis so that the system can obtain the required tone information.

Notes:

CHAPTER 6

Preparing the Hardware

In almost all cases, the M2000 system is delivered with all necessary voice and fax boards and both OS/2 and M2000 software installed. Consequently, you may not need to complete certain hardware configuration and installation steps detailed in this chapter. You should, however, connect the phone and fax lines to the M2000 system and install certain additional hardware components, such as the uninterruptible power supply (UPS). If the M2000 PC is delivered without all necessary voice and fax boards installed or if you will need to modify the hardware, this chapter will also provide detailed board setup and installation information. The steps will provided help you to:

- Assemble the necessary materials
- Verify phone system readiness
- Configure the voice boards
- Configure the fax boards
- Install the voice and fax boards in the M2000 PC
- Connect the phone and fax lines to the phone system
- Install the sentinel on the PC
- Install the Serial integration device in the PC
- Install and test the UPS (if supplied)
- Install the tape backup unit (optional)
- Install peripherals, such as printers, to the PC (optional)

As you follow the steps in this chapter, complete the appropriate section of the Installation Checklist.

Step 1: Assembling Materials

Before you begin hardware installation, assemble the materials you are required to use. The materials are listed on the Installation Checklist provided with the M2000 system.

Some of the equipment listed, such as a tape backup device, is optional and therefore not required for the M2000 system.

Step 2: Verifying Phone System Readiness

Before beginning hardware installation, you must make sure that the phone system is ready for system installation by:

- Confirming the presence of a dial tone on each board used
- Verifying that the phone system is configured properly
- Compiling phone system configuration information

Confirming a Dial Tone

The first step in preparing the phone system at the customer site is to establish the presence of a dial tone.

To confirm the presence of a dial tone on the phone system:

1. Connect one end of a modular plug into the phone system.
2. Plug the other end of the modular plug into a 2500 set , a telephone test set, or the proprietary telephone instrument if using a Dialogic D/42D-NS, D/42D-SX, or D/42D-SL integration.
3. Lift the handset and confirm that a dial tone is present.

Verifying the Phone System Configuration

Verify that the phone system is configured properly for the system:

- Ensure that the phone system technician followed the procedures detailed in the latest Configuration Note when programming the phone system.
- If a Configuration Note is not available for the customer's switch, see the switch documentation to determine the codes indicated on the Installation Checklist. Record the appropriate code settings on the checklist.

Compiling Phone System Configuration Information

Obtain the following phone system configuration information:

- List of hunt groups configured for the phone system, if there are any.
- List of active phone system features, such as a distinctive ring or auto answer, so you can ensure they do not conflict with the intended M2000 application.

Step 3: Configuring the Voice Boards

Voice boards provide the interface between M2000 and the phone system that allows them to communicate. You must configure the voice boards for use with M2000 before you install them. Note that after you install M2000, you must also configure the software to recognize the voice boards.

Voice boards contain ports, which are the interface between a voice board and a phone system channel. The M2000 system supports a maximum of 16 ports. System access to ports is controlled by the sentinel attached to the M2000 PC.

The boards you install in the M2000 PC must be purchased from Lucent Technologies to ensure that they are programmed with the proper signature. If a non-signatured board is detected during system initialization, the number of ports on that board is not available. In addition, the system writes an entry to the log file identifying the location of the non-signatured board.

M2000 supports Rhetorex and Dialogic voice boards. Note that Dialogic and Rhetorex boards cannot be used together in the same system.

WARNING: Use caution when handling voice boards as they are electrostatic-sensitive. Be sure you ground the PC, the work area, and the ground end of the antistatic wrist strap prior to handling a board, and always use antistatic wrist straps and/or electrostatic-dissipative mats while handling a board.

Configuring Rhetorex Boards

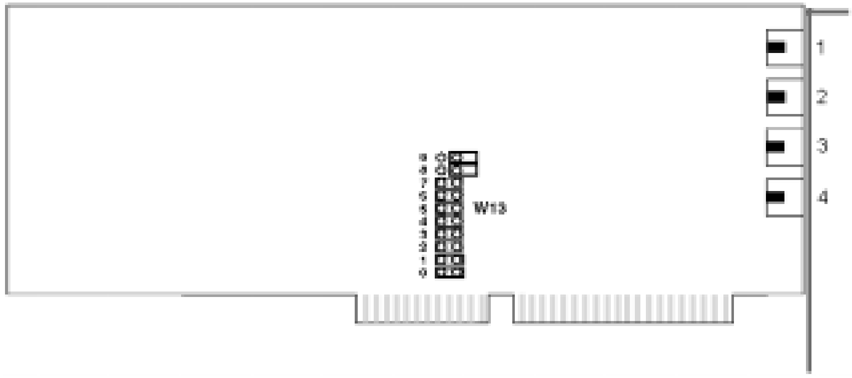
M2000 supports the following Rhetorex boards:

- Vantage VPS4 board: 4-port full-length board
- Vantage Volare board: 4-port half-length board

Configuring the Vantage VPS4 Board

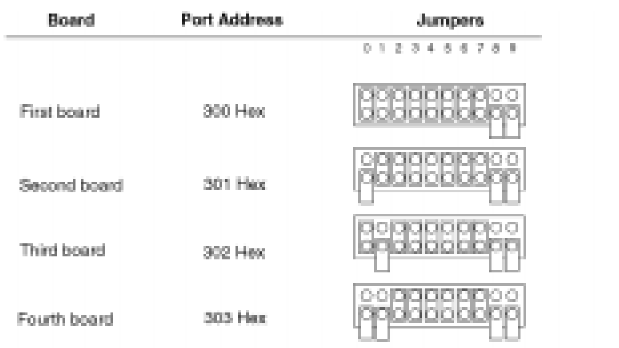
You must configure one jumper block on the VPS4 board to set the board’s base I/O port address before you install it in the M2000 PC. The hardware interrupt is set by the software when you run the Configure utility.

The port address allows the Rhetorex board to communicate with the voice driver and, in turn, M2000. For the VPS4 board, jumper block W13 sets the base I/O port address. If you hold the board with the bracket to the right and the bus connector at the bottom, the W13 jumper block is located at the bottom of the board, slightly toward the right, as shown in the following figure. Note that only the jumper block relevant to the board’s configuration for use with M2000 is shown, and that the individual jumpers may not be labeled on the board.



Rhetorex Vantage VPS4 boards are factory-set to a default base I/O port address of 300 hex. If you are only installing one voice board, leave the base I/O port address at the factory default unless it conflicts with the address of another system component.

If you are using multiple VPS4 boards, you must assign a unique port address to each board. The following figure displays recommended jumper settings. The first column lists the board number, the second column lists the port address that should be assigned to each board, and the third column represents the jumper settings that correspond to the base I/O port address.

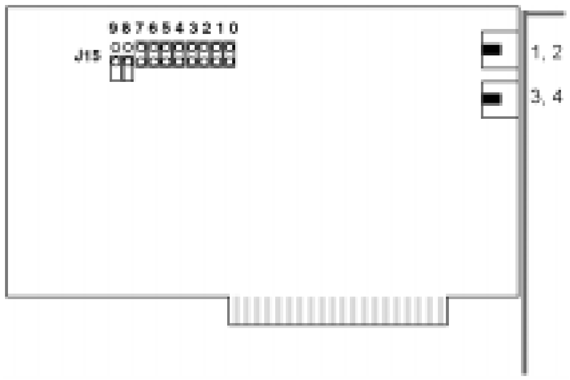


Record the base I/O port address for each Rhetorex board you configure. You will need to enter this information when you run the Configure utility.

Configuring the Vantage Volare Board

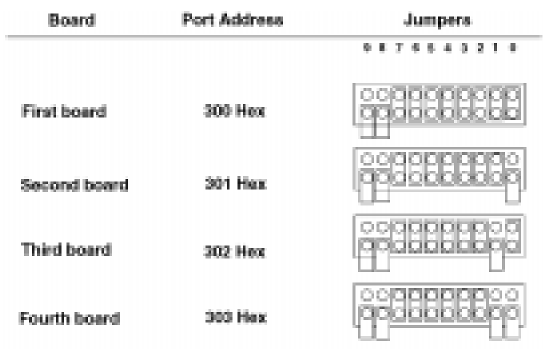
You must configure one jumper block on the Volare board to set the board's base I/O port address before you install it in the M2000 PC. The hardware interrupt is set by the software when you run the Configure utility.

The port address allows the Rhetorex board to communicate with the voice driver and, in turn, M2000. For the Volare board, jumper block J15 sets the base I/O port address. If you hold the board with the bracket to the right and the bus connector at the bottom, the J15 jumper block is located near the top of the board, slightly left of center, as shown in the following figure. Note that only the jumper block relevant to the board's configuration for M2000 is shown, and that the individual jumpers may not be labeled on the board.



Rhetorex Volare boards are factory-set to a default base I/O port address of 300 hex. If you are only installing one voice board, leave the base I/O port address at the factory default unless it conflicts with the address of another system component.

If you are using multiple Volare boards, you must assign a unique port address to each board. The following figure displays recommended jumper settings. The first column lists the board number, the second column lists the port address that should be assigned to each board, and the third column represents the jumper settings that correspond to the base I/O port address.



Record the port address for each Rhetorex board you configure. You will need to enter this information when you run the Configure utility.

Configuring Dialogic Boards

M2000 supports the following Dialogic boards:

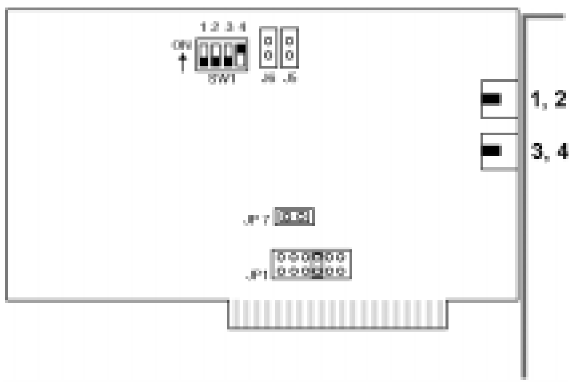
- DIALOG/4: 4-port, half-length version of the D/4xD board
- D/4xD: 4-port board
- D/42D-NS: 4-port digital board
- D/42D-SL: 4-port digital board
- D/42D-SX: 4-port digital board

Configuring DIALOG/4, D/4xD, D/42D-NS, D/42D-SX, and D/42D-SL Boards

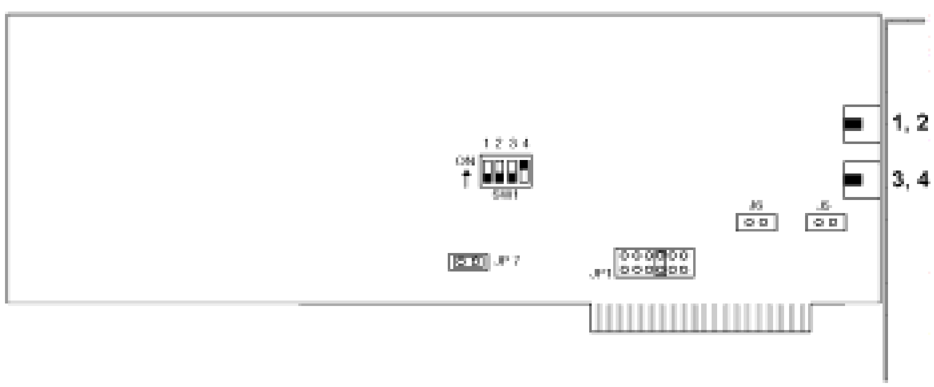
The steps for configuring the DIALOG/4, D/4xD, D/42D-NS, D/42D-SX, and D/42D-SL boards for M2000 are identical.

Different versions of the Dialogic voice boards may be installed in existing M2000 systems; therefore, the location of the relevant jumpers and switches may vary between versions. Note that only the jumper blocks and switches relevant to the boards' configuration for M2000 are depicted in the diagrams, and that individual switches may not be labeled on the actual boards.

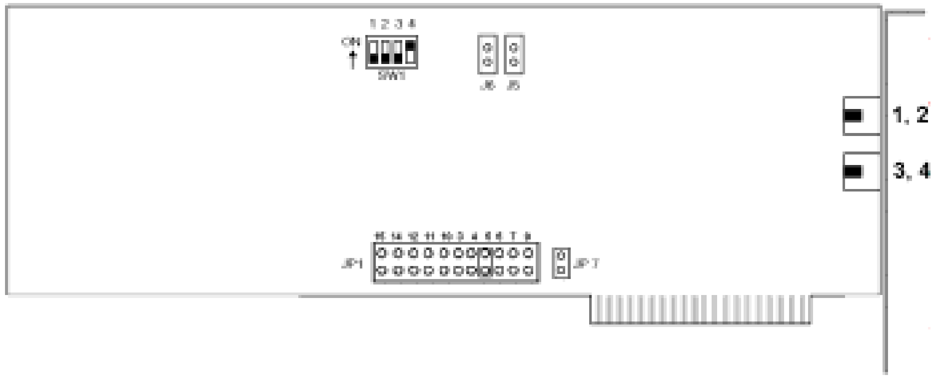
The following diagram illustrates the DIALOG/4 board.



The following diagram illustrates the D/4xD board. The location of the relevant jumpers and switches on the D/42D-SX and D/42D-SL boards are approximately the same as on the D/4xD board.



The following diagram illustrates the D/42D-NS board.



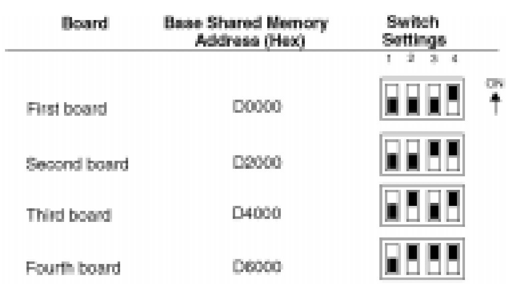
Complete the following steps, as required, to configure each Dialogic board:

1. Set the board’s base shared memory address.
2. Modify the board’s base memory segment.
3. Set the board’s hardware interrupt.
4. Set the default line state.
5. Configure for multiple boards.

Setting the board’s base shared memory address – The base shared memory address allows the voice board to communicate with the voice driver and, in turn, M2000. SW1 determines the Dialogic board’s base shared memory address.

If you are only installing one Dialogic board, leave SW1 at the default setting unless it conflicts with another component. If you are installing multiple boards or if there is a conflict, you can change the base shared memory address by configuring the first three switches on SW1.

The following figure illustrates the recommended switch settings. The first column lists the board number, the second column lists the base shared memory address that should be assigned to each board, and the third column represents the switch settings that correspond to the base shared memory address.



Record the Shared Memory Address for each DIALOG/4, D/4xD, D/42D-NS, D/42D-SX, and D/42D-SL board you configure. You will need to enter this information when you run the Configure utility.

Modifying the board’s base memory segment – The shared memory block on the PC is called a segment. Most Dialogic boards use the D segment, which is the default. To use the D segment, make sure that the J5 and J6 jumper clips are removed.

If you cannot use the D segment due to a conflict or for some other reason, a Lucent Technologies technical support representative can advise you to use an address in segment A or C.

To use an alternate segment, you must install one of two jumpers on the Dialogic board:

- Install the JP5 jumper clip if you assign the voice board an address using the A segment, such as A0000.
- Install the JP6 jumper clip if you assign the voice board an address using the C segment, such as C0000.

Do not change the settings of either of these jumpers unless a Lucent Technologies technical support representative directs you to set the voice board to an address using an alternate segment.

Setting the board's hardware interrupt – The JP1 jumper block sets the Dialogic board hardware interrupt level, also called the IRQ. Interrupt settings for these boards range from 2 through 7. Install the jumper that corresponds to the interrupt level you want to use. You must set all Dialogic boards to the same interrupt level. The recommended interrupt is IRQ **5**. Depending on the system configuration, you may have to try different interrupts before you find one that does not conflict with other devices.

The interrupt levels typically assigned to standard computer components are as follows:

IRQ3 = COM2

IRQ4 = COM1

IRQ5 = LPT2/recommended voice board interrupt

IRQ6 = disk drive

IRQ7 = LPT1

Record the Hardware Interrupt for each DIALOG/4, D/4xD, D/42D-NS, D/42D-SX, and D/42D-SL board you configure. You will need to enter this information when you run the Configure utility.

Setting the board's default line state – The fourth switch on SW1 determines whether the lines connected to the voice board return a ring-no-answer signal or a busy signal when M2000 is not running. Make sure this switch is always on, as shown in the board diagrams, to indicate that the lines should return a busy signal when M2000 is not running.

Configuring for multiple boards – If you are using a single voice board, leave the JP7 jumper clip installed. If you are installing multiple Dialogic boards, leave the JP7 jumper clip on the board with the lowest base shared memory address and remove the JP7 jumper clip on the other Dialogic boards.

Step 4: Configuring the Fax Boards

Fax boards allow M2000 to use the Fax Solution features. You must configure the fax boards for use with M2000 before you install them.

Fax boards contain ports, which are the interface between the fax board and a phone system channel. M2000 supports a maximum of 4 fax ports. System access to ports is controlled by the sentinel attached to the M2000 PC.

The boards you install in the M2000 PC must be purchased from Lucent Technologies so they are programmed with the proper signature.

Three Brooktrout fax boards are supported for use with M2000:

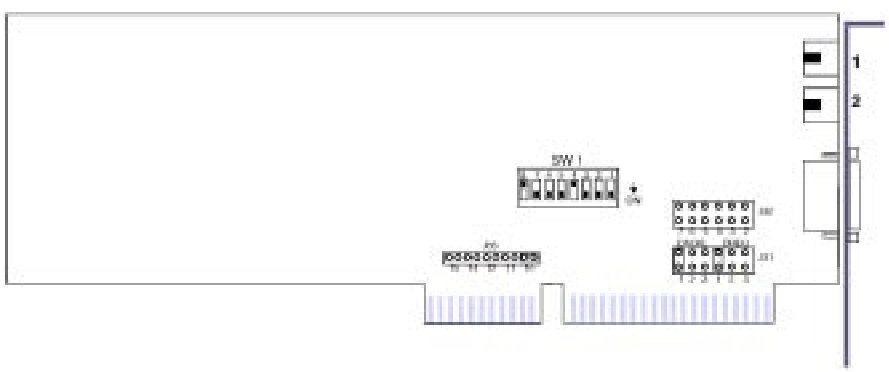
- TR112: 2-port board
- TR114: 4-port board approved for international use
- TruFax: 2-port board

You can use different types of Brooktrout boards in the same M2000 system.

Use caution when handling fax boards as they are electrostatic-sensitive. Make sure you ground the PC, the work area, and the ground end of the antistatic wrist strap prior to handling a board, and always use antistatic wrist straps and/or electrostatic-dissipative mats while handling a board.

Configuring the Brooktrout TR112 Board

The TR112 is a 2-port fax board supported for use with M2000.



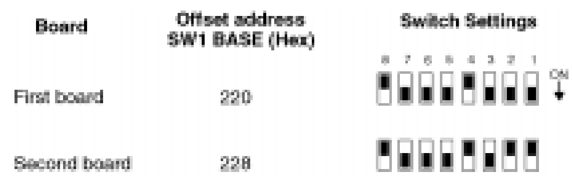
Before installing the TR112 board, you must:

- Set the board’s port address
- Set the interrupt level
- Set the DMA channel

Setting the TR112 Port Address

The board's port address allows the PC and the Brooktrout board to communicate. SW1 determines the TR112's port address. Use the default setting, 220, for the first TR112 board. If you are using two TR112 boards, you must assign each board a unique port address. The following figure illustrates the recommended SW1 settings for each TR112 board.

The system searches addresses 140 through 280 to determine if fax boards are present. Because the system considers any board found in this range of addresses a fax board, do not set other boards, such as LAN cards, to addresses within this range.



Record the port address for each TR112 board you configure.

Setting the TR112 Board's Hardware Interrupt Level

The hardware interrupt allows the board to communicate with the driver, which in turn communicates with M2000. The J32 and J33 jumpers control the TR112 board's hardware interrupt level. The recommended hardware interrupt level for Brooktrout boards is 10. You must install the board in a 16-bit slot to use interrupt 10, as shown in the board diagram. Use the same interrupt for all Brooktrout boards you install in the M2000 system.

Record the Hardware Interrupt Level for the fax boards. You will need to enter this information when you run the Configure utility.

Setting the Board's DMA Channel

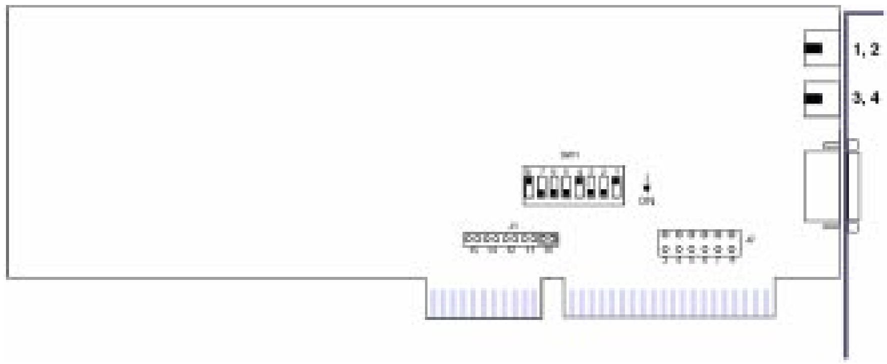
The DMA Channel transfers data from the TR112 board to the PC. The J31 jumper block controls the DMA Channel for the TR112 board. Channel 1 is the recommended setting. On the first TR112 board, you must set two jumpers—both jumpers must be set to the same channel, as shown in the TR112 board drawing on the previous page. On the second TR112 board, you only need to set one jumper.

Record the DMA Channel for each TR112 board you configure.

Configuring the Brooktrout TR114 Board

The TR114 is a 4-port fax board supported for use with M2000.

For information on using the Brooktrout TR114 board in international systems, contact a Lucent Technologies representative.



Before installing the TR114 board, you must:

- Set the board's port address
- Set the interrupt level

Setting the TR114 Board's Port Address

The board's port address allows the PC and the Brooktrout board to communicate. SW1 determines the board's port address. Use the default setting, 220, for the TR114 board. The following figure illustrates the recommended SW1 settings for the TR114 board.

The system searches addresses 140 through 280 to determine if fax boards are present. Because the system considers any board found in this range of addresses a fax board, do not set other boards, such as LAN cards, to addresses within this range.

Record the TR114 board's port address.

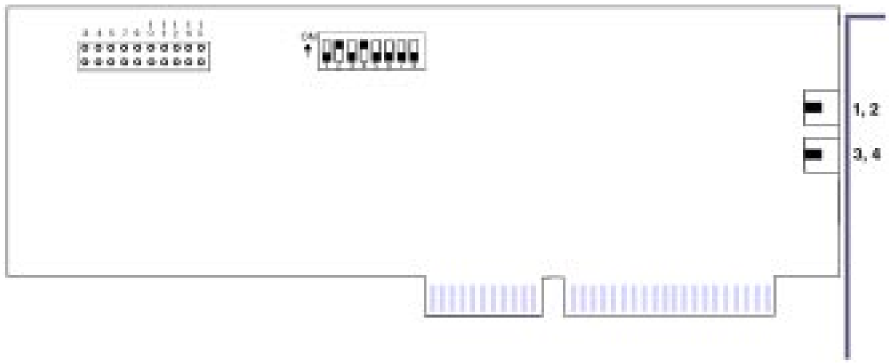
Setting the TR114 Board's Hardware Interrupt Level

The J1 and J2 jumpers control the TR114 board's hardware interrupt level. The recommended hardware interrupt level for Brooktrout boards is 10. Note that you must install the board in a 16-bit slot to use interrupt 10. Use the same interrupt for all Brooktrout boards you install in the M2000 system.

Record the Hardware Interrupt Level for the fax boards. You will need to enter this information when you run the Configure utility.

Configuring the Brooktrout TruFax Board

The TruFax is a 2-port fax board supported for use with M2000.



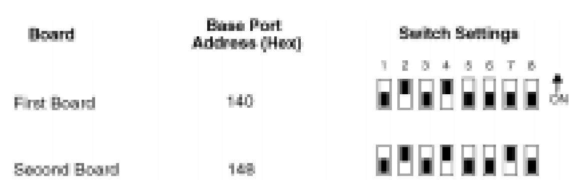
Before installing the TruFax board, you must:

- Set the board's port address
- Set the interrupt level

Setting the TruFax Board's Port Address

The board's port address allows the PC and the Brooktrout board to communicate. The Address Selector switch determines the board's port address. Use the default setting, 140, for the first TruFax board. If you are using two TruFax boards, you must assign each board a unique port address. The following figure illustrates the recommended Address Selector settings for each TruFax board.

The system searches addresses 140 through 280 to determine if fax boards are present. Because the system considers any board found in this range of addresses a fax board, do not set other boards, such as LAN cards, to addresses within this range.



Record the port address for each TruFax board you configure.

Setting the TruFax Board's Hardware Interrupt Level

The interrupt jumper in the upper-left corner of the board controls the TruFax board's hardware interrupt level. The recommended hardware interrupt level for Brooktrout boards is 10. Note that you must install the board in a 16-bit slot to use interrupt 10. Use the same interrupt for all Brooktrout boards you install in the M2000 system.

Record the Hardware Interrupt for the fax boards. You will need to enter this information when you run the Configure utility.

Step 5: Installing the Voice and Fax Boards

After you configure the voice and fax boards, you can install them in the PC. The same basic procedure is used to install both the voice and the fax boards.

Use caution when handling fax boards as they are electrostatic-sensitive. Make sure you ground the PC, the work area, and the ground end of the antistatic wrist strap prior to handling a board, and always use antistatic wrist straps and/or electrostatic-dissipative mats while handling a board.

To install the voice and fax boards:

1. Turn off the power to the PC and any peripherals.
2. Unfasten the screws retaining the PC’s cover and remove the cover.
3. Select an expansion slot in which to install the board. Use an 8- or 16-bit slot for Rhetorex Volare board and the Dialogic DIALOG/4, D/4xD, D/42-SL, D/42-SX, and D/42-NS boards. Use a 16-bit slot for the Brooktrout fax boards and the Rhetorex VPS4 board.
4. Unfasten the screw retaining the slot cover, located at the rear of the PC chassis, and remove the slot cover.
5. Insert the board into the expansion slot by holding the board at the top of each corner. Apply equal pressure to both sides of the board and push down firmly to seat the board. The board should easily slide down most of the way. If you feel any resistance, check the alignment of the board. Repeat for each voice or fax board you are installing.
6. Make sure that the board’s RJ-11 or RJ-14 jacks are accessible from the rear of the PC chassis.
7. Secure the board’s metal bracket with the retaining screw.
8. Replace the PC’s cover and fasten it back into place with the retaining screws.

Step 6: Connecting the Telephone Lines

After you install the voice boards, you must connect them to the switch. The method of connection depends on the type of voice boards you are using.

If you are installing fax boards using the non-transfer method, the connection procedures for the voice boards depend on the type of fax board and the wiring configuration you use.

Connecting Rhetorex Volare and Dialogic DIALOG/4 and D4xD Boards

The Rhetorex Volare and the Dialogic DIALOG/4 and D4xD boards all have two RJ-14 jacks on the brackets. Each jack carries two telephone lines:

- The top RJ-14 jack supports channels 1 and 2. Channel 1 is the inside pair of wires; Channel 2 is the outside pair.
- The lower RJ-14 jack supports channels 3 and 4. Channel 3 is the inside pair of wires; Channel 4 is the outside pair.

If the switch uses RJ-14 jacks, you need a pair of standard 4-wire modular cables. If the switch uses RJ-11 jacks, also called single-line terminations, you need RJ-14 to RJ-11 splitting cables. If one was not supplied with your system, they are available from most electronic stores. Each splitting cable consists of an RJ-14 plug and a Y cable that terminates in two RJ-11 plugs. If you have another type of telephone line termination, use an adapter or connector that starts with an RJ-14 connection and ends with the required termination.

To connect the Rhetorex Volare and Dialogic DIALOG/4 and D4XD boards to the phone system:

1. Insert the RJ-14 end of the modular telephone cable into one of the phone connectors on the bracket of the voice board. The cable should slide in easily and stay in place after the connection is made.
2. Connect the other end of the telephone cable to a telephone line termination on the phone system.
3. Repeat step 2 for the other phone connector on the back of the first board.
4. Repeat steps 1-3 for each voice board you are using.

Connecting Rhetorex VPS4 Boards

Rhetorex VPS4 boards have four RJ-11 jacks located on the bracket. Each RJ-11 jack holds one telephone line. If you hold the board upright, the jacks run consecutively from top to bottom.

To connect the Rhetorex VPS4 board to the phone system:

1. Insert one end of an RJ-11 cable an RJ-11 jack on the bracket of the board. The cable should slide in easily and stay in place after the connection is made.
2. Plug the other end of the telephone cable into a single-line termination on the phone system. If you have another type of telephone line termination, use an adapter or connector that starts with an RJ-11 connection and ends with the required termination.
3. Repeat step 2 for the other phone connectors on the back of the first board.
4. Repeat steps 1-3 for each VPS4 board you are using.

Step 7: Connecting the Fax Lines

After you install the Brooktrout fax boards, you must connect them to the phone system. There are two methods of connecting fax boards:

Transfer Method – Denotes a situation where the system performs an internal transfer from a voice port to a fax port when:

- An incoming fax is detected.
- A caller chooses to attach a fax message to a voice message.
- The system delivers a fax retrieved from a V-Tree.

Non-Transfer Method – Denotes a situation where voice and fax channels share telephone extensions. Using this method, both voice and fax transmission and reception occur on the same line.

Consult the Configuration Note for the phone system to determine whether a specific method is required to connect the fax board to the switch. For additional information, see the following considerations.

Using the Transfer Method vs. the Non-Transfer Method

Use the following table to help determine whether you should connect the fax lines using the transfer or non-transfer method.

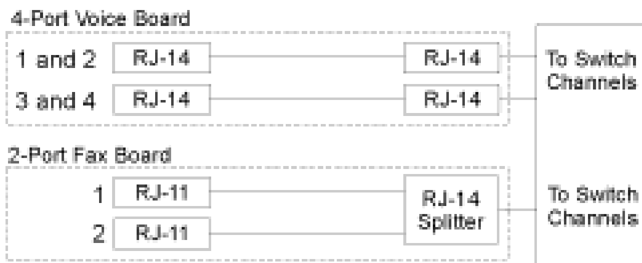
1.	Does your system use Dialogic D/42-NS, SL, or SX voice board(s)?	If Yes, you must use the Transfer Method. If No, go to step 2.
2.	How many analog voice ports are installed?	Go to step 3.
3.	How many analog fax ports are installed? __________	Go to step 4.
4.	Are the number of ports for steps 2 and 3 equal?	If Yes, go to step 5a. If No, go to step 5b.
5a.	Does the PBX support station-to-station blind transfers?	If Yes, go to step 6. If No, you may either: • Use the Non-Transfer Method. • Use Central Office lines to the fax board(s) using the Transfer Method.
5b.	Does your PBX support station-to-station blind transfers?	If Yes, use the Transfer Method. If No, use Central Office lines to the fax board(s) using the Transfer Method.
6.	Add the ports for steps 2 and 3. For example, if there are 4 voice ports and 4 fax ports, the total is 8. ________ Does the current PBX configuration support this number of analog extensions without exhausting the PBX capacity?	If Yes, you may either use the Transfer Method or Non-Transfer Method. If No, the Non-Transfer Method is recommended.

Connecting TR112 or TruFax Boards for the Transfer Method

Use the same procedure to connect Brooktrout TR112 and TruFax boards for the Transfer method. Consider the following when connecting these boards for the Transfer method:

- The TR112 and TruFax boards each have two RJ-11 jacks on the bracket. The top jack represents channels 1; the lower jack represents channel 2.
- You must identify the extensions connected to each fax channel on the Fax Extensions tab in System Setup.
- Depending on the type of termination from the switch and the type of boards used, splitters may be required.

The following diagram represents a TR112 sample wiring configuration for the Transfer method. In the sample diagram, the voice board and the switch use RJ-14s, while the fax port uses RJ-11 connectors. In this case a splitter must be used to connect the two RJ-11 lines from the fax board to the switch.

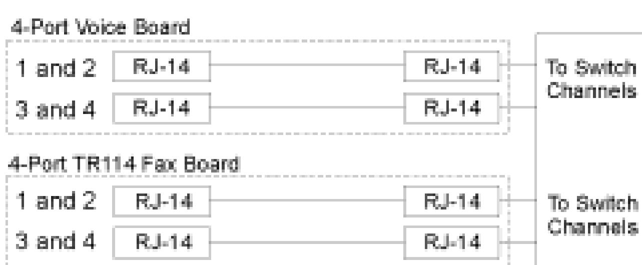


Connecting TR114 Boards for the Transfer Method

Consider the following when connecting TR114 boards for the Transfer method:

- The TR114 board has two jacks on its bracket. Each jack represents two channels. The top jack, P1, accesses channels 0 and 1. The lower jack, P2, accesses channels 2 and 3.
- You can use RJ-11 cables instead of cable splitters if you only want to access one channel per jack. In this case, the top jack represents channel 0 and the lower jack represents channel 2.
- You must identify the extensions connected to each fax channel on the Fax Extensions tab in System Setup.
- Depending on the type of termination from the switch and the type of boards used, splitters may be required.

The following diagram represents a sample TR114 wiring configuration for the Transfer method. In the sample, the switch, voice board, and fax board all use RJ-14s, so no splitters are required.

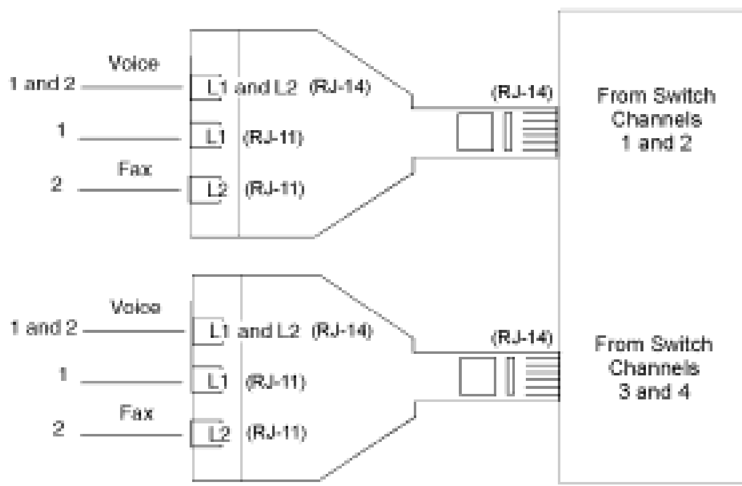


Connecting TR112 and TruFax Boards for the Non-Transfer Method

You use the same procedure to connect Brooktrout TR112 or TruFax boards for the Non-Transfer method. Consider the following when connecting TR112 and TruFax boards for the Non-Transfer method:

- Each voice channel must be assigned the same extension as the corresponding fax channel; for example, if you assign extension 2100 to voice channel 1, fax channel 1 must also be assigned extension 2100.
- You must have the same number of voice channels as fax channels.
- Depending on the type of termination from the switch and the type of boards used, splitters may be required.

The following diagram represents a sample TR112/TruFax wiring configuration for the Non-Transfer method. Note that you must use two TR112 or TruFax boards with each 4-port voice board installed.

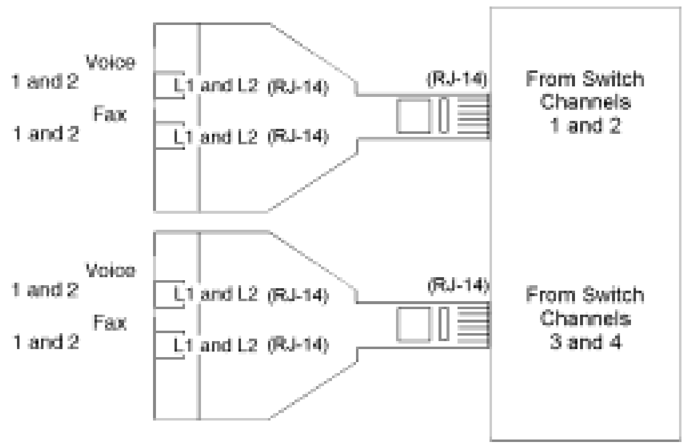


Connecting TR114 Boards for the Non-Transfer Method

Consider the following when connecting TR114 boards for the Non-Transfer method:

- Each voice channel must be assigned the same extension as the corresponding fax channel; for example, if you assign extension 2100 to voice channel 1, fax channel 1 must also be assigned extension 2100.
- You must have the same number of voice channels as fax channels.
- Depending on the type of termination from the switch and the type of boards used, splitters may be required.

The following diagram represents a sample TR114 wiring configuration for the Non-Transfer method.



Step 8: Installing the Sentinel

The sentinel shipped with the M2000 system controls:

- Maximum number of ports available on M2000
- System software version access
- Access to optional modules such as OctelNet™, AIM, Fax Solution™, Visual Mailbox, and the Visual Architect™ Toolkit
- System copy protection

All M2000 sentinels are assigned a unique serial number, which identifies the system and allows you to perform upgrades using the Sentinel Upgrade utility. The sentinel is preinstalled on most M2000 systems.

To install the sentinel:

1. Make sure that the M2000 PC's parallel ports are properly installed and configured. For example, if two ports are configured as LPT1, M2000 may not be able to locate the sentinel. In this case, M2000 does not run.
2. Attach the sentinel to the parallel port configured as LPT1. You must attach the sentinel before you attempt to run the M2000 software, and it must remain attached while the system is running. If the proper sentinel is not attached, you cannot run M2000.

Step 9: Installing Serial Integration Hardware

If the M2000 system is using serial integration, refer to the switch's Configuration Note to:

- Determine what, if any, additional hardware is required and how to install it
- Configure the device for use with M2000

Step 10: Installing and Testing the Uninterruptible Power Supply

An Uninterruptible Power Supply (UPS) is important to ensuring ongoing system operation. A power failure can cause corruption in any number of open M2000 or operating system files. Using a UPS with M2000 can greatly minimize the chance of data corruption. A UPS is supplied with some M2000 systems. Install and test the UPS using the instructions in its accompanying manual.

M2000 can integrate with the UPS through a COM port on the PC. When the UPS is integrated with M2000 and there is a power failure, the system is notified when the UPS reaches a low battery state, and the software automatically performs a proper shutdown. For additional information, see Chapter 12, “Integrating with an Uninterruptible Power Supply.”

Step 11: Installing the Tape Backup Unit (Optional)

You can use a tape backup unit to automatically create system back ups. Colorado Tape Backup is supported for use with M2000.

If you are installing a Colorado Tape Backup unit for use with M2000, use the instructions contained in the documentation shipped with the unit.

Step 12: Installing the Peripherals (Optional)

If you are using a mouse, modem, or printer, install and test them using the instructions in their respective manuals.

Notes:

CHAPTER 7

Installing the Software

In almost all cases, the M2000 PC is delivered with both OS/2 and the M2000 software installed. Consequently, you may not need to complete certain OS/2 and system software installation steps detailed in this chapter. You should, however, run certain utilities to set up M2000 to work with the phone switch. Step-by-step procedures on running each system utility are provided in subsequent chapters of this manual.

If OS/2 and M2000 software are not preinstalled on the PC, this chapter will help you prepare for and perform the installation. The steps provided will help you to:

- Prepare the PC for system installation
- Install the OS/2 Warp 3.0 operating system
- Create a backup copy of all the software
- Install the M2000 software

If you are upgrading from a previous version of the system, see Chapter 5, "Upgrading to M2000."

Other procedures in this chapter help you to:

- Verify the STARTUP.CMD, CONFIG.SYS, and RUNVM.CMD files
- Configure M2000 to support multiple languages

Procedures in this chapter assume that the hard drive on which the system is installed is drive C, that any additional hard drive that may be installed is D, that the disk drive is A, and that the CD-ROM drive, if installed, is E. Drive designations on the specific PC on which you are working may vary. Confirm the appropriate drive letters, when necessary, in procedures provided in this chapter.

Preparing the PC for System Installation

Before installing OS/2 and the M2000 software, prepare the PC by running maintenance programs such as disk utility and virus scanning software. This type of preventive maintenance should become a regular part of system maintenance.

Installing OS/2 Warp Connect 3.0

You must install OS/2 Warp Connect 3.0 on the PC before you can install the M2000 software, if it is not already installed.

If you are installing Visual Mailbox in a Windows NT Server or Local Files Server implementation, you must also install the IBM Peer for OS/2, if it is not already installed. For information on installing IBM Peer for OS/2, see Chapter 20, "Installing and Configuring Visual Mailbox."

If an existing system is already running OS/2 Warp 3.0, you do not need to install OS/2 Warp Connect 3.0, unless you are adding Visual Mailbox in a Windows NT Server or Local Files Server implementation.

WARNING: Because the entire hard drive on which you are installing OS/2 Warp Connect 3.0 will be reformatted during OS/2 Warp Connect installation, it is imperative that you copy any data files that you don't want to lose to another location.

To install OS/2 Warp Connect 3.0:

1. Insert the IBM Warp Connect Version 3 Installation disk in the A drive and turn on the PC. If you are installing OS/2 Warp Connect 3.0 from CD-ROM, also insert the Lucent Technologies Messaging 2000 3.0 CD-ROM into the CD-ROM drive. After the PC restarts, the IBM Operating System/2 Installation Version 3 screen displays.

   If you change the screen colors in OS/2, do not select blue for the desktop color because it makes some system software installation screens unreadable.

2. When prompted, remove the installation disk from the disk drive, insert IBM Warp Connect Version 3 disk 1 in the disk drive, then press <ENTER>. An OS/2 bitmap displays, followed by the message "Loading, Please Wait... ."
3. A welcome screen displays. You are then prompted to select whether you want to perform an easy or advanced installation.

4. Highlight the Advanced Installation option, then press <ENTER>. The Installation Drive Selection screen displays.

5. If you are installing to the C drive, highlight the Accept the drive option, press <ENTER>, and skip to step 6.

   If you are not installing to the C drive, highlight the Specify a different drive option, press <ENTER>, follow the onscreen prompts to specify the drive to which you want to install Warp, then continue with step 6.

   If you are installing to a new or unpartitioned hard drive:

   a. Highlight the Specify a different drive option and press <ENTER>. A warning displays.

   b. Press <ENTER>. The FDISK screen displays. If the partition list shows None, skip to step c. If there are existing partitions, delete them before continuing. Note that any data on existing partitions will be lost. To delete the existing partition(s):

      i. Highlight the first existing partition.

      ii. Press <ENTER> to display the Options menu.

      iii. Select Delete Partition. The selected partition is deleted.

      iv. Repeat steps i through iii for each existing partition.

   c. Press <ENTER> to display the Options menu.

   d. Select Create Partition. The Size of Partition box displays.

   e. Enter 1023 and press <ENTER>. The Type of Partition box displays.

   f. Select Primary Partition and press <ENTER>. The Location of Partition box displays.

   g. Select Create at Start of FreeSpace and press <ENTER>. The FDISK screen displays.

   h. Highlight the Primary Partition and press <ENTER> to display the Options menu.

   i. Select Set Installable and press <ENTER>. The New Name box displays.

   j. Enter OS2 and press <ENTER>. The FDISK screen displays the partition you just created, along with any remaining unpartitioned hard drive space.

   k. Press the down arrow key to highlight the remaining unpartitioned space and press <ENTER>. The Size of Partition box displays.

   l. To accept the default, which is the amount of remaining space, press <ENTER>. The Type of Partition box displays.

   m. Select Extended Logical Drive and press <ENTER>. The FDISK screen displays.

   n. Press <F3>. The Exit FDISK box displays. Select Save and Exit then press <ENTER>.

   o. Remove disk 1, reinsert the IBM Warp Connect Version 3 Installation disk, and press <ENTER>. The PC reboots and restarts the installation.

   p. Repeat steps 2 through 4. At step 5, select the Accept the drive option and press <ENTER>.

6. You are prompted to wait while the system files are loaded. When prompted, remove disk 1 from the disk drive and insert OS/2 Warp Connect disk 2, then press <ENTER>. If you are installing from CD-ROM, you will not see the messages to replace disks. The Formatting the Partition screen displays.

7. Highlight the Format the partition option then press <ENTER>. The Select the File System screen displays.
8. Highlight the High Performance File System option then press <ENTER>.
9. If there is data on the hard drive, a warning displays that the data will be lost. Press <ENTER> to continue. If you are installing from CD-ROM, skip to step 13.
10. When prompted, remove disk 2 from the disk drive, insert OS/2 Warp Connect disk 3 in the disk drive, and press <ENTER>. Repeat this step as prompted for disks 4, 5, and 6.
11. When prompted, remove disk 6 from the disk drive, re-insert the OS/2 Warp Connect Installation Disk, and press <ENTER>.
12. When prompted, remove the OS/2 Warp Connect Installation Disk, re-insert OS/2 Warp Connect disk 1 and press <ENTER>.
13. When prompted, remove the disk from the disk drive, then press <ENTER>. The PC then restarts, the desktop displays, and you are prompted to wait while the installation initializes.
14. When the System Configuration screen displays, verify that the information is correct. If the information is correct, click OK to continue. If the information is incorrect, click the icon next to the item that is incorrect, change it, click OK, then click OK on the System Configuration screen to continue. The Select System Default Printer screen displays.

The IBM NULL Printer Driver is recommended for use with dot matrix printers.

15. If you want to install a printer, select it from the list of available printers, then specify the port to which the printer is connected. If the printer you want to install is not listed, select Install Additional Printers. If you do not want to install a printer, select Do not install default printer. You may need to scroll up or down the screen to see these options. After you make a selection, click OK to continue.
16. If the Display Driver Install screen displays, select the Video Graphics Array (VGA) option and click OK.
17. If the System Configuration screen displays again, click OK. The OS/2 Setup and Installation screen displays.
18. Make the following changes on the OS/2 Setup and Installation screen:
    a. Click the More button next to Documentation to display the Documentation dialog box. Deselect the OS/2 Tutorial, then click OK to return to the OS/2 Setup and Installation screen.
    b. Click the More button next to Tools and Games to display the OS/2 Tools and Games dialog box. Deselect the Solitaire, Pulse, Chess, and Mahjongg Solitaire options. Then click OK to return to the OS/2 Setup and Installation screen.
    c. Deselect the WIN-OS/2 Support option if it is listed.
    d. Deselect the Multimedia Software Support option.
    e. Click Install. The Advanced Options screen displays.
19. Verify that the Add existing programs to your Desktop option is selected, then click OK to continue. Note that if you formatted the partition, the other options on the screen are dimmed. Two folders are displayed on the desktop, OS/2 System and Information.

20. If you are installing from CD-ROM, skip to step 24. When prompted, insert OS/2 Warp Connect disk 7, then press <ENTER>. The Transferring Files screen displays. As prompted, repeat this step for OS/2 Warp Connect disks 8 through 13.
21. If you selected a printer in step 15, you are prompted to insert the appropriate printer driver disk(s). Remove disk 13, insert the printer driver disk you are prompted for, then press <ENTER>.
22. If you did not install a printer in step 15, you are prompted to insert a Printer Drivers disk. Remove disk 13, insert the printer driver disk you are prompted for, then press <ENTER>. If you are prompted to insert additional Printer Drivers disks, do so and press <ENTER>. If you are not prompted to insert additional Printer Drivers disks, continue with step 23.
23. When you are prompted to insert a display driver disk, remove the current disk, insert the disk, then press <ENTER>.

After the printer and display drivers are installed, the system adds the program and folders to the desktop and updates the system configuration.

24. A dialog box displays when the installation is complete. If you are installing from disk, remove the disk from the disk drive, then click OK.
25. When prompted, press <CTRL+ALT+DEL> to restart the PC. When the PC restarts, icons are created on the desktop, and the LaunchPad displays.
26. If you did not create partitions in step 5, skip to step 27. If you created partitions in step 5, you now need to format the second partition (the primary partition was formatted when you installed OS/2 Warp Connect):
    a. Double-click the OS/2 System icon on the OS/2 desktop. The OS/2 System folder displays.
    b. Double-click the Drives icon. The Drives window displays.
    c. Click the right mouse button on the Drive D icon.
    d. Select Format disk from the menu that displays. The Format Disk D box displays.
    e. In the Volume Label field, enter Drive D.
    f. Under File System Type, select FAT (File Allocation Table).
    g. Click Format. The Format Progress screen displays.
    h. When the progress bar reaches 100%, click OK. The Format Disk D box displays.
    i. Click Cancel. The Drives window displays.
    j. Double-click the icon in the upper-left corner of the window to close the Drives folder. The OS/2 System window displays.
    k. Double-click the icon in the upper-left corner of the window to close the OS/2 System folder.
27. Install Fix Pak 17. See the topic, “Installing PS/2 Warp Fix Pak 17.”
28. If you are installing Visual Mailbox in a Windows NT Server or Local Files Server implementation, see Chapter 20, “Installing and Configuring Visual Mailbox.”

Installing OS/2 Warp Fix Pak 17

OS/2 Warp Fix Pak 17 must be installed on PCs running OS/2 Warp Connect 3.0. IBM issued Fix Pak 17 to address OS/2 Warp 3.0 operating system anomalies. Complete the applicable procedure to install Fix Pak 17 from disk or from CD-ROM.

To install OS/2 Warp Fix Pak 17 from disk:

1. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad:
   a. Press <CTRL+ESC> to open the Window menu.
   b. Highlight any application you see with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the open application.
   d. Select Close.
   e. Repeat steps 1a – d for each open application.
2. Select Shut Down from the LaunchPad. If you are prompted whether you want to close all windows and active programs, click OK.
3. When prompted, turn off power to the PC.
4. Insert the disk labeled Fix Pack 17 Corrective Service Diskette 1 into the PC’s disk drive.
5. Turn on the power to the PC.
6. When prompted, remove Disk 1 from the disk drive, insert Fix Pack 17 Corrective Service Diskette 2, then press <ENTER>. As the installation process begins, an information screen displays.
7. When the Installing This Service Pack screen displays, select installation option 1 by pressing <ENTER>. As the installation process proceeds, an information screen displays.
8. When prompted, remove disk 2, insert Fix Pack 17 XR_W017 Corrective Service Diskette 1, then press <ENTER>.
9. When prompted, repeat step 8, inserting Fix Pack 17 XR_W017 Corrective Service Diskettes 2 through 8.
10. When prompted, remove Disk 8 from the disk drive, and restart the PC by pressing <CTRL+ALT+DEL>.

To install OS/2 Warp Fix Pak 17 from CD:

1. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive. (If you are installing Fix Pak 17 immediately following OS/2 Warp Connect 3.0 installation, the CD-ROM should still be in the CD-ROM drive.)
2. Open an OS/2 window.
3. From the C:\ prompt, type `E:` and press <ENTER>.
4. From the E:\ prompt, type `instfp17` and press <ENTER>. The OS/2 Warp Fix Pak 17 install begins.
5. When the file update is complete, the OS/2 window displays a message that Fix Pak 17 installation is complete. Press any key to continue.

6. Remove the CD-ROM from the CD-ROM drive.
7. To close the OS/2 window, type `EXIT` and press <ENTER>.
8. Select Shut down from the LaunchPad.
9. When prompted to shut down or reboot, press <CTRL+ALT+DEL>.

Creating Backup Copies of Software

Because disk file corruption occurs without warning, it is important that you create a backup copy of the master OS/2 and system software, if you are using disks.

It is the customer's responsibility to back up the master software.

The procedure you use to create backup disks depends on the number and type of disk drives installed in the PC. You can create backups using:

- A single disk drive
- Two disk drives that are the same size
- Two disk drives that are different sizes

When you make backup copies of the master software disks, use high-density disks.

To make backup copies of the master software disks using a single disk drive:

1. Open an OS/2 window.
2. Insert in he A: drive the first source disk, which is the disk from which you are copying.
3. From the C:\ prompt, type `A:` and press <ENTER>.
4. From the A:\ prompt, type `DISKCOPY A:` and press <ENTER>.
5. When prompted, remove the source disk and insert the target disk, which is the disk to which you are copying.
6. You are prompted to copy another disk after the information has been copied. Type `Y` to continue and replace the source and target disks with the next source and target disks until you have copied all of the disks.
7. When you are done copying, type `N` when prompted to copy another disk.

To make backup copies of the master software disks using two disk drives that are the same size:

1. Open an OS/2 window.
2. Insert in the A: drive the first source disk, which is the disk from which you are copying, and insert in the B: drive the target disk, which is the disk to which you are copying.
3. From the C:\ prompt, type `A:` and press <ENTER>.

4. From the A:\ prompt, type `DISKCOPY A: B:` and press <ENTER> to copy the files on the source disk to the target disk.
5. After the information has been copied, a prompt displays to copy another disk . Select `Y` to continue and replace the source and target disks with the next source and target disks until you have copied all of the disks.
6. When you are done copying, type `N` when prompted to copy another disk.

To make backup copies of the master software disks using two disk drives that are different sizes:

1. Open an OS/2 window.
2. Insert in the A: drive the first source disk, which is the disk to which you are copying, and insert in the B: drive the target disk, which is the disk to which you are copying.
3. From the C:\ prompt, type `A:` and press <ENTER>.
4. From the A:\ prompt, type `XCOPY A: B:` and press <ENTER> copy the files on the source disk to the target disk.
5. You are prompted to copy another disk after the information has been copied. Select `Y` to continue and replace the source and target disks with the next source and target disks until you have copied all of the disks.
6. When you are done copying, type `N` when prompted to copy another disk.

For additional information on copying disks, see the OS/2 manual.

Installing the M2000 Software

Before you attempt to install the M2000 software, be sure to reference the Release Notes included with this release for information on any special considerations pertaining to installing system software.

To complete M2000 installation, you must know what type of voice boards are installed in the system PC. If you are not sure what type of voice boards is installed, contact a Lucent Technologies technical support representative before proceeding.

To install the M2000 software:

1. Turn on the PC, if it is not already running. OS/2 boots and the OS/2 Program Manager displays.
2. If you are installing from disk, skip to step 3. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `E:` and press <ENTER>.

d. From the E:\ prompt, type `CD M2000` and press <ENTER>.

e. From the \M2000 directory prompt, type `INSTALL` and press <ENTER>. The message “Setup is initializing, please wait” displays.

f. Skip to step 4.

3. If you are installing from disk:

a. Insert Lucent Technologies Messaging 2000 Installation Disk 1 into the A drive.

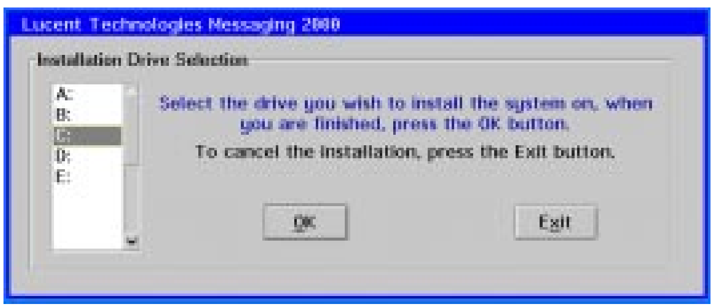
b. Open an OS/2 window.

c. From the C:\ prompt, type `A: INSTALL` and press <ENTER>. The message “Setup is initializing, please wait” displays.

Do not attempt installation from the full screen OS/2 window, because the installation process will run in the background and the installation screens will not be visible to you. Consequently, you will not be able to follow the on-screen prompts for swapping disks and entering information.

---

4. A window displays, which briefly describes the installation procedure. To continue installing, click Continue or press <C>. The installation program presents a list of drives from which you can select.



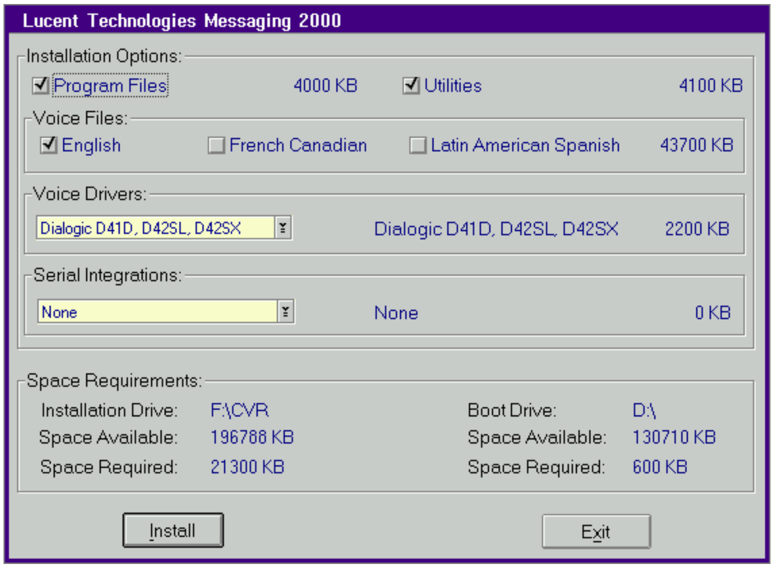
5. Select the drive to which the files should be installed. Use the down arrow key to highlight the appropriate drive, then click OK. (Drives A and B are disk drives.) The system prompts whether you want to install the system to the \CVR directory on the specified installation drive.

6. Click Yes to install the system to the \CVR directory and continue the installation process. If you click No, you are prompted to select a destination directory.

To facilitate system maintenance, it is recommended that you do *not* change the default installation directory.

---

7. Wait while the system prepares to load files. A dialog box with installation options and space requirements displays. The Space Requirements section of the window displays the disk space required, based on the selected options, the space availability, and the installation and boot drives.



8. Under Installation Options, leave all of the options selected:
   - **Program Files** – Includes the executable files needed to run M2000.
   - **Utilities** – Contains the files necessary to run system modules, such as DialPlan and Integrator.
9. Under Voice Files, select the language(s) that you are installing. Note that the sentinel attached to the M2000 PC controls the number of languages allowed on the M2000 system.
10. Under Voice Drivers, select the type of voice board installed in the system PC from the drop-down menu.
11. Under Serial Integrations, leave at the default, None, if the system is not using serial integration. If you are using serial integration, select the appropriate option from the drop-down menu.

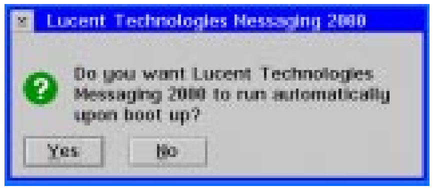
You can exit the installation at this point by clicking Exit. If you select Install, do not exit the installation process.

---

12. Click Install to install M2000 based on the selections. If you are installing from CD-ROM, skip to step 17.
13. When prompted to insert Program Disk 1, remove the Installation Disk, insert Program Files Disk 1, and click OK.

    A small display appears to the left of the Disk Prompt window to show the progression of the installation process. The graph represents the percent of hard drive space and memory being used, as well as the progression of each file as it is copied from the disk to the hard drive. If the Low icon comes on during installation, do not be concerned.
14. Replace disks as prompted. For each disk, specify the source drive if it is different than the default, then click OK.

15. When you are prompted to enter the voice drivers disk, remove the voice files disk, insert the voice drivers disk for which the system prompts you, then click OK.
16. If you selected a Serial Integration option, you are prompted to insert the appropriate disk. Remove the voice drivers disk, insert the Serial Integrations disk for which you are prompted, then click OK.
17. After all of the files have been copied, the system loads the configuration, modifies paths, and creates the desktop folder and program objects. The system then prompts you to indicate whether you want M2000 to launch automatically upon bootup.



18. Click Yes to configure M2000 to launch each time you restart the PC, which allows you to run third-party maintenance utilities from the RUNVM.CMD file. For information on modifying the RUNVM.CMD file, see the topic, "Verifying Files After Installation," later in this chapter.
19. If you selected Yes in step 18, you are prompted to indicate whether you want the UPS monitor to load automatically upon bootup. Select Yes if you are planning to run UPS integration so the UPS monitors system status to recognize a potential interruption in operation before it occurs. For additional information on the UPS monitor, see Chapter 12, “Integrating with an Uninterruptible Power Supply.”

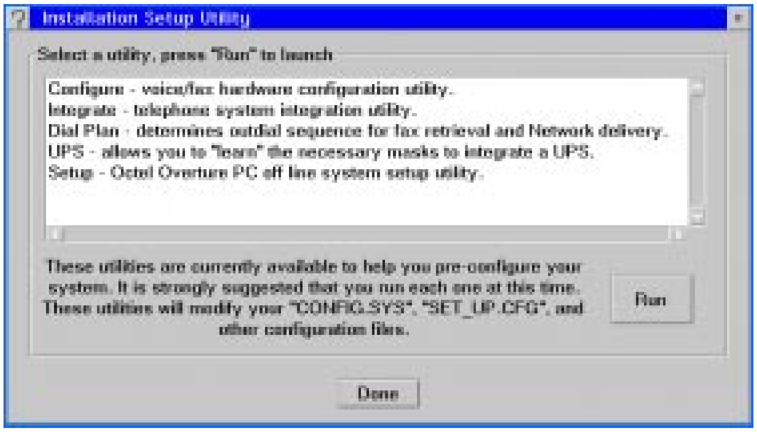
    Select No if you do not want the UPS monitor to load upon bootup.

Programs that load prior to the desktop coming up under OS/2, such as UPS, display a default OS/2 icon on the desktop rather than the custom icon.

---

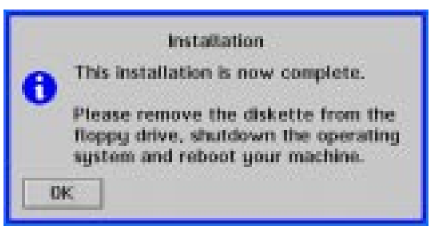
20. A dialog box displays when the installation is complete. Click OK to continue with system configuration.
21. The Installation Setup Utility dialog box displays a list of utilities you can run to help you configure M2000:
    - **Configure** – Unless the system has been preconfigured, you must run Configure, so that the system recognizes the installed voice and fax boards. For information on running the Configure utility, see Chapter 8, “Setting Up the System to Recognize Voice and Fax Boards.”
    - **Switch Integrator** – Run Integrator to integrate M2000 with the phone switch installed at the customer site, unless the system was preconfigured. For information on running the Integrator utility, see Chapter 9, “Integrating with the Phone System.”
    - **Dial Plan** – You can run Dial Plan to identify the local area code and associated prefixes. For information on running the Dial Plan utility, see Chapter 13, “Determining Outdial Strings.”

- **UPS** – Run UPS if you are integrating with the UPS attached to the system PC. Note that this requires a UPS with a serial connector. For information on running the UPS utility, see Chapter 12, “Integrating with an Uninterruptible Power Supply.”
- **System Setup** – Run System Setup to configure M2000 on a system level. For information on running the System Setup utility, see Chapter 14, “Setting Up the System.”



To run a utility, select it from the list and click the Run button. While you may access these utilities from the Lucent Technologies folder after installation, it is strongly recommended that you run them now. You must run Configure before you attempt to start the M2000 system, so that the system can detect the installed voice and fax boards. The system does not run if it cannot detect a voice board.

22. After you run each utility, the Installation Setup Utility displays. You may select another utility or click Done to exit the Installation Setup Utility dialog box. The system displays a message when installation is complete and reminds you to restart the computer for any changes to take effect.



23. To close the dialog box and return to the OS/2 window, click OK. A new folder labeled Lucent Technologies displays on the desktop.
24. Remove the disk or CD-ROM.
25. Select Shut Down from the LaunchPad.
26. When prompted to shut down or reboot, press <CTRL+ALT+DEL>. If you selected Yes in step 18 to launch M2000 on bootup, after the computer reboots, a Quick Assist screen briefly displays; then you are prompted to run the Call Analysis utility. For additional information on running call analysis, see Chapter 10, “Defining Phone System Signals.”
27. Start the system, if it is not already running, by double-clicking the Lucent Technologies Messaging 2000 icon in the Lucent Technologies folder.

Do not reinstall the M2000 software unless you are instructed to do so by a Lucent Technologies technical support representative. If you are instructed to reinstall the system software for any reason, you must follow the upgrade procedure instead of reinstalling the software. Otherwise, you may lose current system settings.

Verifying Files After Installation

After you complete system software installation, verify that the STARTUP.CMD, CONFIG.SYS, and RUNVM.CMD files are similar to the samples provided here. The STARTUP.CMD and CONFIG.SYS files are located on the root of the C drive. The RUNVM.CMD file is located in the \CVR directory.

Because systems and system setups vary, the exact contents of the files shown may vary. If you have any questions about the contents of these files, contact a Lucent technical support representative.

To open the STARTUP.CMD, CONFIG.SYS, and RUNVM.CMD files:

1. Shut down M2000, if it is running. For information on logging into the system and shutting it down, see Chapter 21, “Starting, Logging Into, and Shutting Down the System.”
2. Open an OS/2 window.
3. To open STARTUP.CMD, from the C:\ prompt, type `E STARTUP.CMD` and press <ENTER>. An OS/2 editor window displays the file.

   To open CONFIG.SYS, from the C:\ prompt, type `E CONFIG.SYS` and press <ENTER>. An OS/2 editor window displays the file.

   To open RUNVM.CMD, from the C:\ prompt, type `CD CVR` and press <ENTER> to change to the \CVR directory prompt. From the \CVR prompt, type `E RUNVM.CMD` and press <ENTER>. An OS/2 editor window displays the file.
4. Insert any modifications where appropriate in the open file.
5. If you made any changes, select Save from the File menu. If this is the first time you have saved the file, the Save Notification dialog box displays.
6. Click Type. The Type dialog displays.
7. Click Plain Text, then click Set. The file is saved.
8. Double-click the icon in the upper-left corner of the window to close the editor.
9. To close the OS/2 window, type `EXIT` and press <ENTER>.

Sample STARTUP.CMD File

If during installation you selected the option to start M2000 automatically upon bootup, the STARTUP.CMD file is executed each time the system reboots, similar to the AUTOEXEC.BAT file in a DOS environment. When it loads, STARTUP.CMD first checks the PLUS.CKP file to determine if there was a power failure. If so, Quick Assist runs in Update Partial mode, and any unattached messages are deleted. Then, if it has not yet been run, Call Analysis launches. Next, the UPS.EXE monitoring program executes (provided that, during installation, you selected it to run automatically) and runs in the background to monitor for power out conditions. Finally, the file that loads M2000, RUNVM.CMD, is executed.

The STARTUP.CMD file is stored in the root directory of the drive on which the system is installed.

```
C:
CD\CVR
IF EXIST C:\CVR1\PLUS.CKP CALL C:\CVR\QASSIST -A -D
IF EXIST C:\CVR\FIRST.CA CALL C:\CVR\RUNCA.CMD
START /PM /MIN UPS.EXE
START /MIN RUNVM.CMD
EXIT
```

Sample CONFIG.SYS File

Because the CONFIG.SYS file for OS/2 is quite lengthy, only the lines affected by the system are shown here. The CONFIG.SYS file is stored in the root directory of the drive on which the system is installed.

```
   LIBPATH=.;C:\OS2\DLL;C:\;C:\OS2\APPS\DLL;C:\CVR
   SET PATH=C:\OS2;C:\OS2\SYSTEM;C:\C:\OS2\INSTALL;C:\CVR
   FILES=20
   BUFFERS=30
   DEVICE=C:\CVR\OS2SNTNL.SYS

For Dialogic only:
   SET DLCFGPATH=C:\CVR
   SET DLFWLPATH=C:\CVR
   SET TSTDIR=:C\CVR
   SET SCTXTS_REQ=C:\CVR\SCTXTS.REQ
   DEVICE=C:\CVR\GENLOAD.SYS
   DEVICE=C:\CVR\DXSRM.DAM
   DEVICE=C:\DXGENDRV.SYS
   CALL=C:\CVR\SCTSMAP.EXE

For Rhetorex only:
   DEVICE=C:\RHTIR.SYS
   DEVICE=C:\RHTVP.SYS I5 M16 BD0000
   DEVICE=C:\RHTLS.SYS I5 H0
   DEVICE=C:\RHTRDSP.SYS 300

For Brooktrout only:
   DEVICE=C:\BFAX.SYS D1 I10
   CALL=C:\FAXINIT.EXE
   CALL=C:\FIRMWARE -D C:\TR114.PEX
```

Sample RUNVM.CMD File

The RUNVM.CMD file, located in the \CVR directory, is the file that launches the system.

```
:START
START /C /MIN SMDI.EXE (only if using SMDI)
CALL START /MIN RUNVFS.CMD (only if using Visual Mailbox)
CALL CALLPERF PLUS
IF ERRORLEVEL == 64 GOTO ERRORLOG
IF ERRORLEVEL == 50 GOTO DOW
GOTO END
:DOW
APFR
ALLDAY
IF ERRORLEVEL==7 GOTO SAT
IF ERRORLEVEL==6 GOTO FRI
IF ERRORLEVEL==5 GOTO THURS
IF ERRORLEVEL==4 GOTO WED
IF ERRORLEVEL==3 GOTO TUE
IF ERRORLEVEL==2 GOTO MON
IF ERRORLEVEL==1 GOTO SUN
GOTO START
:SUN
ECHO TODAY IS SUNDAY
GOTO START
:MON
ECHO TODAY IS MONDAY
CALL C:\GU20\GU.CMD (example of third-party Graham Utilities option)
GOTO START
:TUE
ECHO TODAY IS TUESDAY
GOTO START
:WED
ECHO TODAY IS WEDNESDAY
GOTO START
:THURS
ECHO TODAY IS THURSDAY
GOTO START
:FRI
ECHO TODAY IS FRIDAY
GOTO START
:SAT
ECHO TODAY IS SATURDAY
GOTO START
:ERRORLOG
ECHO | DATE >> RUNVM.LOG
ECHO | TIME >> RUNVM.LOG
ECHO ERRORLEVEL IS 64 OR GREATER >> RUNVM.LOG
:END
EXIT
```

When the system launches, the RUNVM.CMD file monitors for error codes. If the RUNVM.CMD receives an error code 50, indicating shutdown based on the System Setup parameter Shutdown System after Daily Maintenance, control is passed to the DOW label (Day of Week routines). The ALLDAY program determines the day of the week, and control is then passed to the appropriate label in the file. Under these labels, you can run other programs, such as a disk maintenance utility. For example, in the sample RUNVM.CMD file, the third-party Graham Utilities program is run Monday morning. After any specified utilities run, control is returned to the top of the file, and the system relaunches.

If you are running the UPS Monitor utility, and it detects an error code 15 (low battery), control drops to the :END label, and the system goes through a shutdown, where both idle and occupied ports are immediately disabled. When the UPS determines that the power has been restored, the UPS.EXE program calls RUNVM.CMD, which restarts the system.

The following command line options can be added to the `CALL CALLPERF PLUS` command line in the RUNVM.CMD file:

-SX Specifies that the system is using D/42-SX (or equivalent) voice boards. -SX can be used only with Mitel SX Series systems that have the special integration Dialogic boards.

Example: `CALL CALLPERF PLUS -SX`

-SL Specifies that the system is using D/42-SL or D/42-NS (or equivalent) voice boards. -SL can be used only with Northern Telecom SL Series systems or Norstar systems that have the special integration Dialogic boards. This option should also be used with the 1005 software on the Mitel SX200 Light switch.

Example: `CALL CALLPERF PLUS -SL`

-NS Specifies that the system is using D/42-NS (or equivalent) voice boards. -NS can be used only with Norstar systems that have the special integration Dialogic boards.

Example: `CALL CALLPERF PLUS -NS`

Configuring the System to Support Multiple Languages

M2000 supports up to five languages. Configuring a system for multiple languages involves the following steps:

- Installing language files
- Setting up the system to provide multilingual prompts
- Setting up system mailboxes to utilize the multilingual feature
- Specifying for each mailbox the language in which prompts are voiced to the mailbox subscriber

Installing Language Files

To add a language to M2000, you must install the language files.

To install language files on the system:

1. Shut down the M2000 system, if it is running. For information on logging into the system and shutting it down, see Chapter 21, “Starting, Logging Into, and Shutting Down the System.”
2. If you are installing from disk, skip to step 3. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type E: and press <ENTER>.

d. From the E:\ prompt, type `CD M2000` and press <ENTER>

e. From the \M2000 directory prompt, type `INSTALL` and press <ENTER>. The message “Setup is initializing, please wait” displays.

f. Skip to step 4.

3. If you are installing from disk:

a. Insert Lucent Technologies Messaging 2000 Installation Disk 1 into the A: drive.

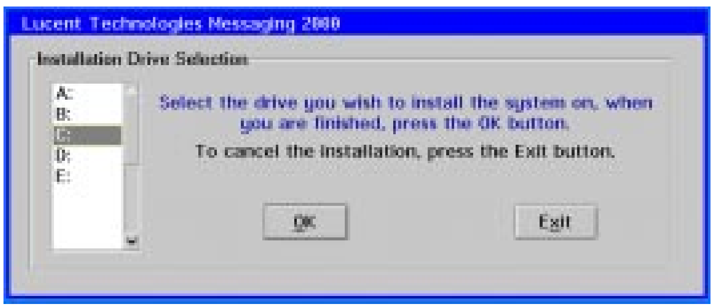
b. Open an OS/2 window.

c. From the C:\ prompt, type `A: INSTALL` and press <ENTER>. The message “Setup is initializing, please wait” displays.

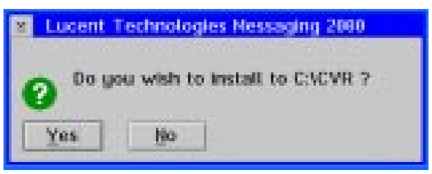
Do not attempt installation from the full screen OS/2 window, because the installation process will run in the background and the installation screens will not be visible to you. Consequently, you will not be able to follow the on-screen prompts for swapping disks and entering information.

---

4. A window displays, which briefly describes the installation procedure. To continue installing, click Continue or press <C>. The installation program presents a list of drives from which you can select.



5. Select the drive to which the files should be installed. Use the down arrow key to highlight the appropriate drive, then click OK. (Drives A and B are disk drives.) The system prompts whether you want to install to the \CVR directory on the specified installation drive.



6. Click Yes to install the M2000 system to the \CVR directory and continue the installation process. If you click No, you are prompted to select a destination directory.

To facilitate system maintenance, it is recommended that you do *not* change the default installation directory.

---

7. Wait while the system prepares to load files. A dialog box with installation options and space requirements displays. The Space Requirements section of the window displays the disk space required, based on the selected options, the space availability, and the installation and boot drives.

   You can exit the installation at this point by clicking Exit. If you select Install, do not exit the installation process.

8. Under Installation Options, deselect all of the options.
9. Under Voice Drivers, select None.
10. Under Serial Integrations, select None.
11. Under Voice Files, select the language you want to install.
12. Click Install to install the language files. If you are installing from CD-ROM, skip to step 15.
13. When prompted to insert the first language files disk, remove the Installation Disk, insert the first language files disk, and click OK.

    A small display appears to the left of the Disk Prompt window to show the progression of the installation process. The graph represents the percent of hard drive space and memory being used, as well as the progression of each file as it is copied from the disk to the hard drive. If the Low icon comes on during installation, do not be concerned.
14. Replace disks as prompted. For each disk, specify the source drive if it is different than the default, then click OK.
15. A dialog box displays when the installation is complete. Click OK to continue.
16. When the Installation Setup Utility displays, click Done to close it. The system displays a message when installation is complete and reminds you to restart the PC for any changes to take effect.

17. To close the dialog box and return to the OS/2 window, click OK. The OS/2 window displays.
18. Type `EXIT` and press <ENTER> to close the OS/2 window.
19. Remove the disk or CD-ROM.
20. Select Shut down from the LaunchPad.
21. When prompted to shut down or reboot, press <CTRL+ALT+DEL>.
22. If the M2000 system is not configured to launch automatically on bootup, start the system by double-clicking the Lucent Technologies Messaging 2000 icon in the Lucent Technologies folder.

If the system is to support more than one language, you must verify that the system sentinel supports multiple languages. You can use the ViewSent utility to verify the number of languages supported on the sentinel.

To verify that multiple languages are supported on the sentinel:

1. Open an OS/2 window.
2. Change the current directory to \CVR if it is not the current directory prompt.
3. At the \CVR prompt, type `VIEWSENT` and press <ENTER>. The sentinel information displays.
4. Look for the Max Languages line. Verify that the current setting is at least the number of languages you want installed on the system. If the sentinel does not support multiple languages, contact a Lucent technical support representative.

Setting Up the System to Provide Multilingual Prompts

To set up M2000 to provide multilingual prompts, you must:

- Specify the default language the system is to use and the other languages that are available
- Record and specify a language selection prompt

For procedures on completing each of these actions, see the topic, "Setting Up the Language Selection Prompt," in Chapter 15, "Setting Up System Prompts."

Setting Up System Mailboxes to Utilize the Multilingual Feature

On some multilingual systems, a caller may directly reach a mailbox on the system without having the opportunity to hear or select a language at the Language Selection prompt [on Direct Inward Dial (DID) systems, for example]. You can set up the mailboxes on these systems to voice the Language Selection Prompt when the caller reaches the mailbox.

To set up a mailbox to voice the Language Selection prompt to callers who have not yet heard it, you must activate Enable Multilingual Support in the class of service assigned to the mailbox. For additional information on adjusting this class of service setting, see the topic, "Class of Service Options," in Chapter 17, "Managing System Mailboxes."

Specifying the Language for a Mailbox

For each mailbox on a multilingual system, you can specify the language in which prompts are to be voiced to the mailbox subscriber. You specify this language in the class of service assigned to the mailbox. For additional information on specifying the mailbox language, see the topic, "Class of Service Options," in Chapter 17, "Managing System Mailboxes."

If Enable Multilingual Support is not activated in a mailbox's assigned class of service, callers who reach the mailbox without having the opportunity to hear or select a language at the Language Selection prompt [on Direct Inward Dial (DID) systems, for example] hear prompts in the language specified for the mailbox.

Notes:

CHAPTER 8

Setting Up the System to Recognize Voice and Fax Boards

The steps provided in this chapter will help you use the Configure utility to specify the interrupts and addresses of the voice and fax boards you installed in the M2000 system. These settings determine the voice and fax driver and firmware command lines used in the CONFIG.SYS file. The correct interrupts and addresses must be specified in the CONFIG.SYS file for the system to recognize the voice and fax boards. The M2000 system will not run if it cannot locate the voice boards.

Configure is preconfigured on some systems. In this case, you do not need to run Configure during installation. If Configure is not preconfigured, it is important that you run Configure during system installation, especially if you are installing M2000 for the first time.

Procedures in this chapter assume that the hard drive on which the system is installed is drive C, that any additional hard drive that may be installed is D, that the disk drive is A, and that the CD-ROM drive, if installed, is E. Drive designations on the specific PC on which you are working may vary. Confirm the appropriate drive letters, when necessary, in procedures provided in this chapter.

Specifying Rhetorex Board Settings

The following Rhetorex voice boards are supported for use with the M2000 system:

- Volare
- VPS4

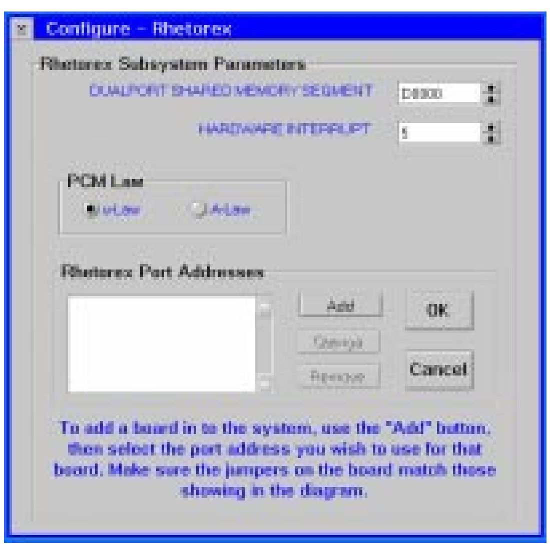
You use the same procedure to specify settings for both the VPS4 and the Volare boards.

To specify settings for a new Rhetorex board:

1. During installation, select Configure from the Installation Setup Utility dialog box. The Configure dialog box displays.

If the M2000 system is already installed, you can launch Configure any time by double-clicking the Configure icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run Configure.

2. Under Installable Hardware, select Rhetorex Vantage Volare if you are specifying settings for a Volare board, then click Configure; or select Rhetorex VPS4/432 if you are specifying settings for a VPS4 board, then click Configure. The Configure – Rhetorex dialog box displays.

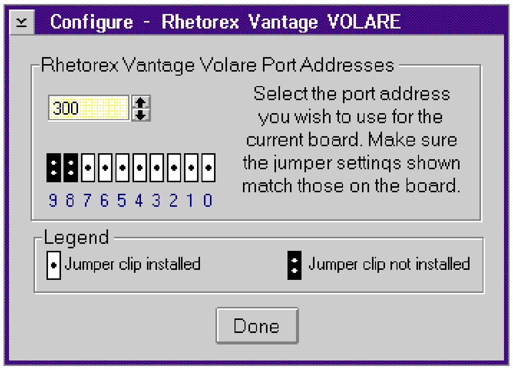


3. In the Dual Port Shared Memory Segment field, enter the shared memory segment for the Rhetorex boards that you recorded when you configured the boards. The shared memory segment defines the range of addresses for the Rhetorex boards. You only need to set the base shared memory address for the first board; the addresses for the remaining boards are assigned automatically based on that address.

4. In the Hardware Interrupt field, enter the hardware interrupt for the Rhetorex boards that you recorded when you configured the boards. You do not have to configure any jumpers on the boards to set the hardware interrupt. All Rhetorex boards use the same hardware interrupt.

5. Under PCM Law, leave the default setting, u-Law.

6. Under Rhetorex Port Addresses, click Add. The dialog box displays for the Rhetorex board type you selected. The Configure – Rhetorex Vantage Volare dialog box displays.



7. In the field under Rhetorex Vantage Volare Port Addresses, enter the port address you recorded when you configured the boards. The diagram displays the proper jumper configuration for the port address you selected. The jumper settings on the board must match the diagram or the board will not load properly when you restart the PC.

8. To save the port address, click Done. The Configure – Rhetorex dialog box displays.

9. Repeat steps 6-8 for each additional Rhetorex board you installed.

10. To save the settings, click OK. The Configure dialog box displays.

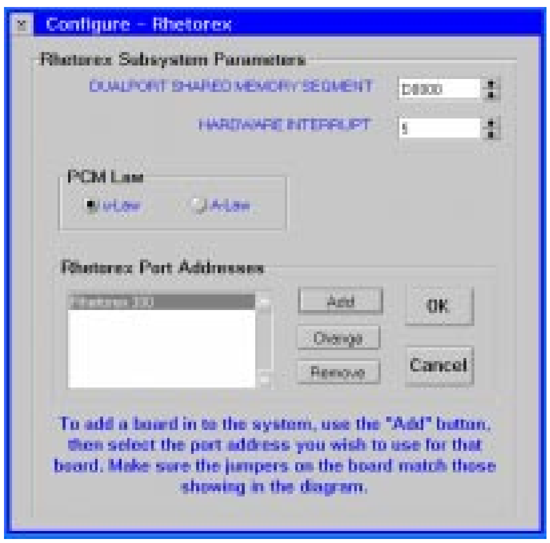
11. To close Configure, click Exit.

12. Shut down OS/2 and restart the PC for the changes to take effect.

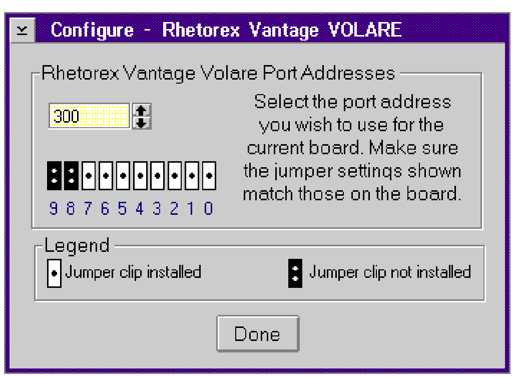
To modify settings for an existing Rhetorex board:

1. Shut down M2000, if it is running.
2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.

3. Under Installable Hardware, select Rhetorex Vantage Volare if you are modifying settings for a Volare board, then click Configure; or select Rhetorex VPS4/432 if you are modifying settings for a VPS4 board, then click Configure. The Configure – Rhetorex dialog box displays.



4. Under Rhetorex Port Addresses, select the address of the board you want to modify, then click Change. The dialog box displays for the Rhetorex board type you selected. The Configure – Rhetorex Vantage Volare dialog box is displayed below.



5. In the field under Rhetorex Vantage Volare Port Addresses, enter the board's new shared memory address. The diagram displays the proper jumper configuration for the port address you selected. The jumper settings on the board must match the diagram or the board will not load properly when you restart the PC.

6. Record the board's new port address.

7. To save the port address, click Done. The Configure – Rhetorex dialog box displays.

8. Repeat steps 4-7 for each Rhetorex address you want to modify.

9. To save the settings, click OK. The Configure dialog box displays.

10. To close Configure, click Exit.

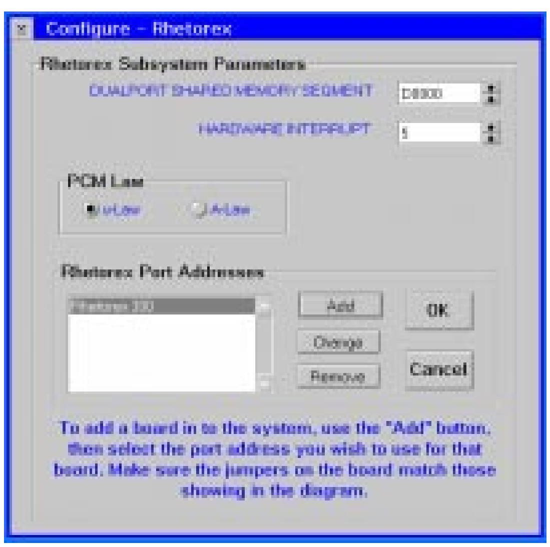
11. Shut down OS/2 and restart the PC for the changes to take effect.

To delete settings for an existing Rhetorex board:

1. Shut down M2000, if it is running.

2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.

3. Under Installable Hardware, select Rhetorex Vantage Volare if you are deleting settings for a Volare board, then click Configure; or select Rhetorex VPS4/432 if you are deleting settings for a VPS4 board, then click Configure. The Configure – Rhetorex dialog box displays.



4. Under Rhetorex Port Addresses, select the address of the board you want to delete.
5. To delete the port address from the list, click Remove. When you delete a board's address from Configure, the system no longer recognizes the board.
6. Repeat steps 4 and 5 for each port address you want to delete.
7. To save the settings, click OK. The Configure dialog box displays.
8. To close Configure, click Exit.
9. Shut down OS/2 and restart the PC for the changes to take effect.

Specifying Dialogic Board Settings

The procedure you use to specify Dialogic board settings depends on the type of Dialogic boards you installed in the system:

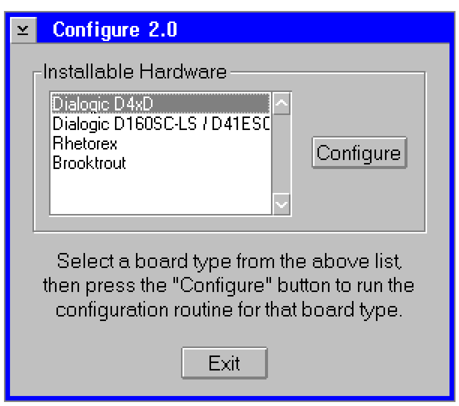
- D/41D board
- DIALOG/4 board
- D/42D-SL and D/42D-SX board
- D/42D-NS board

Specifying Settings for Dialogic D/41D and DIALOG/4 Boards

Use the following procedures to specify, modify, or delete settings for Dialogic D/41D or DIALOG/4 boards.

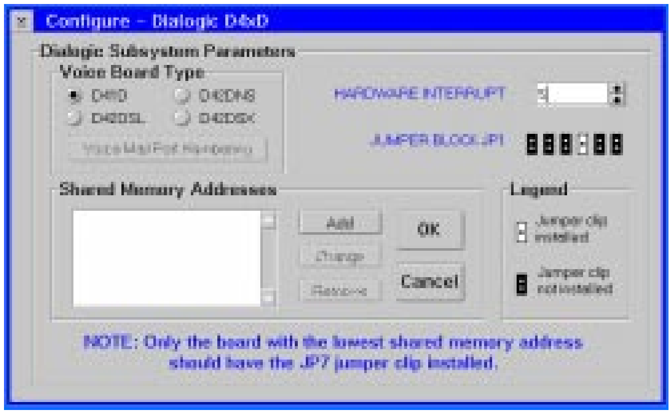
To specify settings for a new Dialogic D/41D or DIALOG/4 board:

1. During installation, select Configure from the Installation Setup Utility dialog box. The Configure dialog box displays.



If the M2000 system is already installed, you can launch Configure any time by double-clicking the Configure icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run Configure.

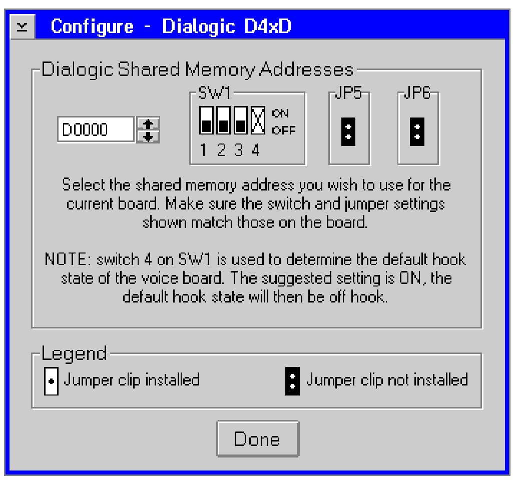
2. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



3. Under Voice Board Type, select the D41D option.

4. In the Hardware Interrupt field, enter the hardware interrupt you recorded when you configured the boards. The Jumper Block JP1 diagram displays the proper jumper configuration for the interrupt you selected. The jumper settings on the board must match the diagram or the board will not load properly when you restart the PC. You must set all Dialogic boards to the same hardware interrupt.

5. Under Shared Memory Addresses, click Add. The Configure – Dialogic D4xD dialog box displays.



6. In the field under Dialogic Shared Memory Addresses, enter the shared memory address you recorded when you configured the boards. The SW1 diagram displays the proper switch configuration for the Shared Memory Address you selected. The jumper settings on the board must match the diagram or the board will not load properly when you restart the PC.

7. To save the board's shared memory address, click Done. The Configure – Dialogic D4xD dialog box displays.

8. Repeat steps 5-7 for each additional D/41D or DIALOG/4 board you installed.

9. To save the settings, click OK. The Configure dialog box displays.

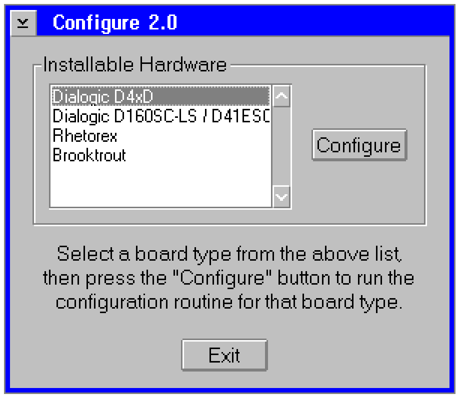
10. To close Configure, click Exit.

11. Shut down OS/2 and restart the PC for the changes to take effect.

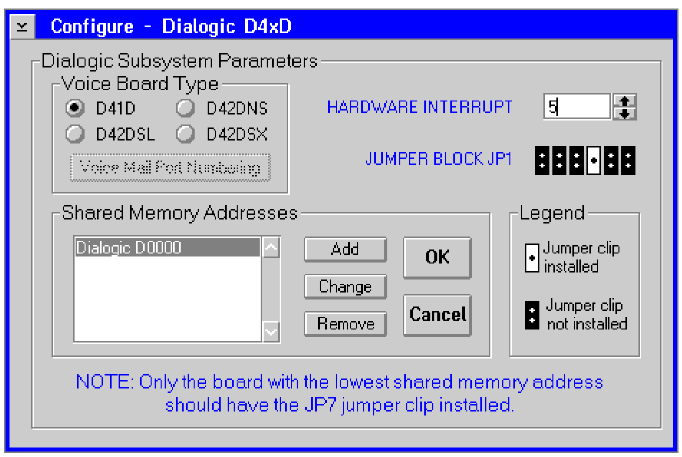
To modify settings for an existing Dialogic D/41D:

1. Shut down M2000, if it is running.

2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.

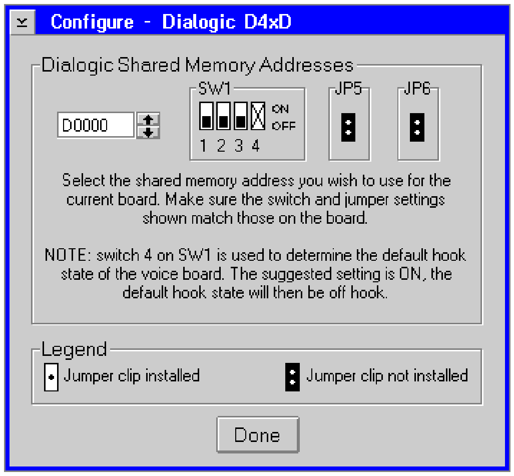


3. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



4. Under Voice Board Type, select the D41D option.

5. Under Shared Memory Address, select the address of the board you want to modify, then click Change. The Configure – Dialogic D4xD dialog box displays.



6. In the field under Dialogic Shared Memory Addresses, enter the board's new shared memory address. The SW1 diagram displays the proper jumper configuration for the Shared Memory Address you selected. The switch settings on the board must match the diagram or the board will not load properly when you restart the PC.

7. Record the board's new shared memory address.

8. To save the shared memory address, click Done. The Configure – Dialogic D4xD dialog box displays.

9. Repeat steps 5-8 for each D/41D or DIALOG/4 address you want to modify.

10. To save the changes, click OK. The Configure dialog box displays.

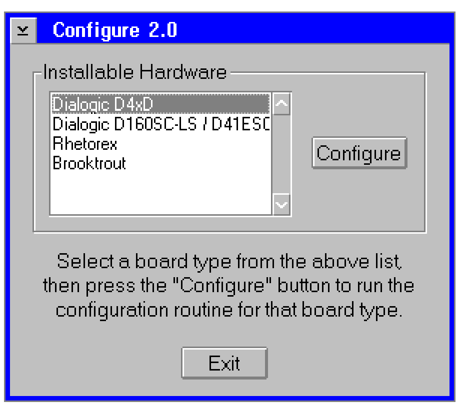
11. To close Configure, click Exit.

12. Shut down OS/2 and restart the PC for the changes to take effect.

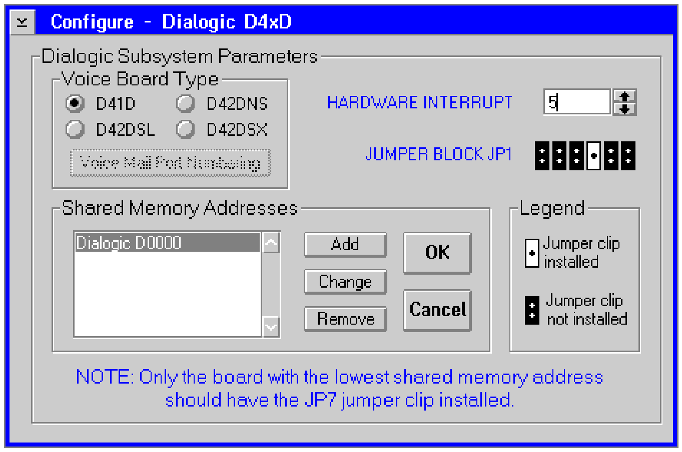
To delete settings for an existing Dialogic D/41D or DIALOG/4 board:

1. Shut down M2000, if it is running.

2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.



3. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



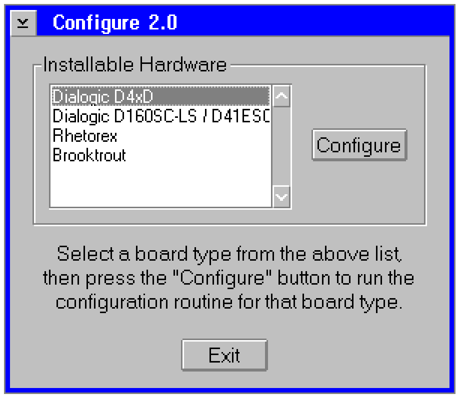
4. Under Voice Board Type, select the D41D option.
5. Under Shared Memory Address, select the address of the board you want to delete.
6. To remove the selected shared memory address from the list, click Remove. When you delete a board's address from Configure, the system no longer recognizes the board.
7. Repeat steps 5 and 6 for each D/41D or DIALOG/4 address you want to delete.
8. Click OK. The Configure dialog box displays.
9. To close Configure, click Exit.
10. Shut down OS/2 and restart the PC for the changes to take effect.

Specifying Settings for Dialogic D/42D-SL and D/42D-SX Boards

Use the following procedures to specify, modify, or delete settings for Dialogic D/42D-SL and D/42D-SX boards. When using digital boards, you must also verify that two SET_UP.CFG file parameters are set correctly if the system is configured for OctelNet or AMIS messaging.

To specify settings for a new Dialogic D/42D-SL or D/42D-SX board:

1. During installation, select Configure from the Installation Setup Utility dialog box. The Configure dialog box displays.



If the M2000 system is already installed, you can launch Configure any time by double-clicking the Configure icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run Configure.

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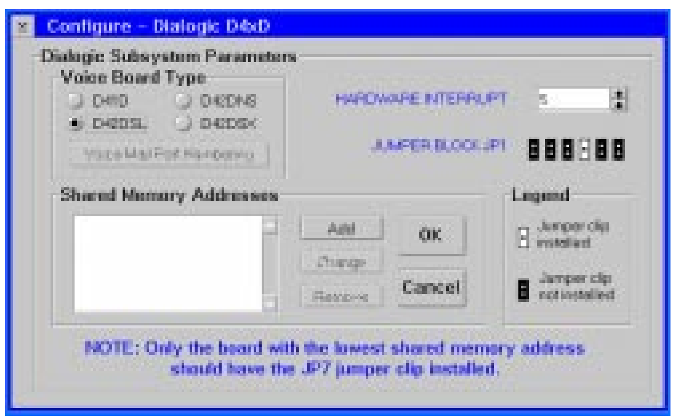
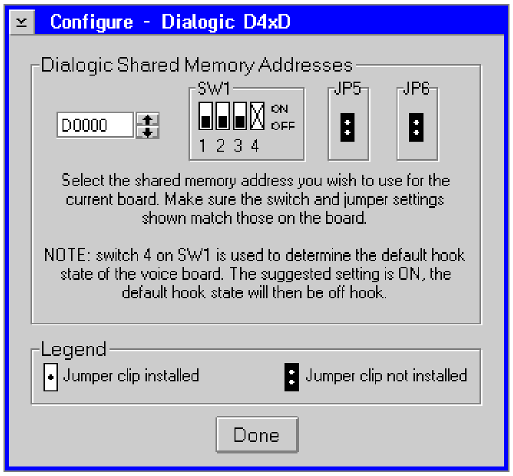
2. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



3. Under Voice Board Type, select the D/42DSL or D/42DSX option as it applies to the board.

4. In the Hardware Interrupt field, enter the hardware interrupt you recorded when you configured the boards. The Jumper Block JP1 diagram displays the proper jumper configuration for the interrupt you selected. The jumper settings on the board must match the diagram or the board will not load properly when you restart the PC. You must set all Dialogic boards to the same hardware interrupt.

5. Under Shared Memory Addresses, click Add. The Configure – Dialogic D4xD dialog box displays.



6. In the field under Dialogic Shared Memory Addresses, enter the shared memory address you recorded when you configured the boards. The SW1 diagram displays the proper jumper configuration for the Shared Memory Address you selected. The switch settings on the board must match the diagram or the board will not load properly when you restart the PC.

7. To save the board's shared memory address, click Done. The Configure – Dialogic D4xD dialog box displays.

8. Repeat steps 5-7 for each D42D-SL or D/42D-SX board you installed.

9. To save the settings, click OK. The Configure dialog box displays.

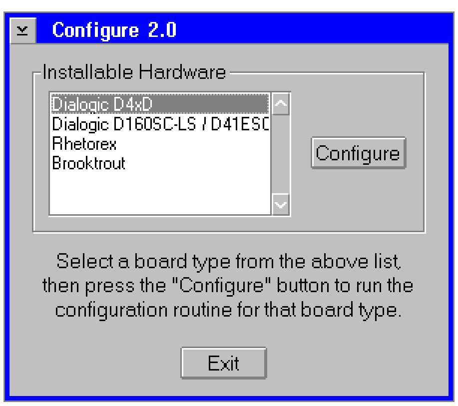
10. To close Configure, click Exit.

11. Shut down OS/2 and restart the PC for the changes to take effect.

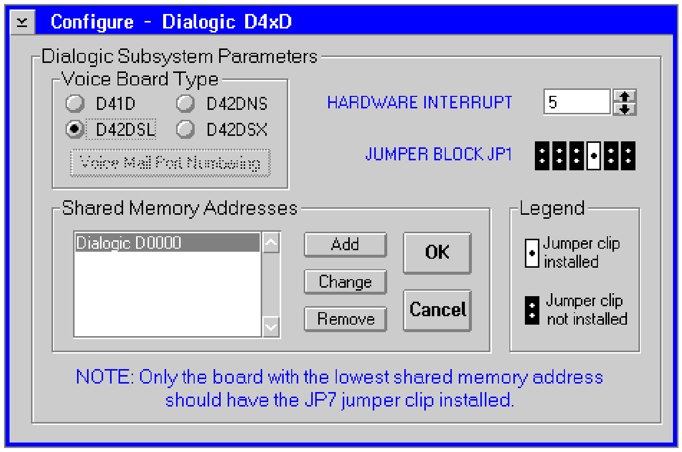
To modify settings for an existing Dialogic D/42D-SL or D/42D-SX board:

1. Shut down M2000, if it is running.

2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.

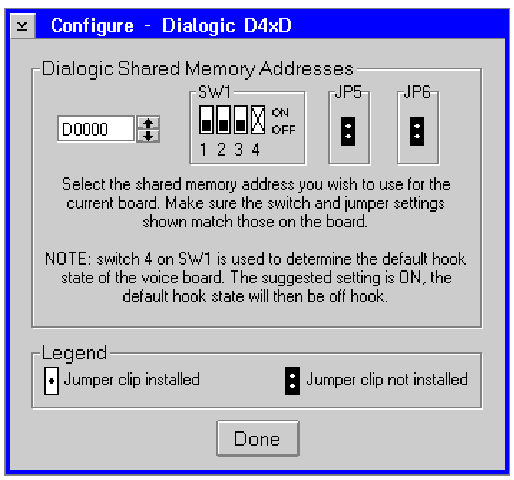


3. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



4. Under Voice Board Type, select the D/42DSL or D/42DSX option as applies to the board.

5. Under Shared Memory Addresses, select the address of the board you want to modify, then click Change. The Configure – Dialogic D4xD dialog box displays.



6. In the field under Dialogic Shared Memory Addresses, enter the board's new shared memory address. The SW1 diagram displays the proper jumper configuration for the Shared Memory Address you selected. The switch settings on the board must match the diagram or the board will not load properly when you restart the PC.

7. Record the board's new shared memory address.

8. To save the shared memory address, click Done. The Configure – Dialogic D4xD dialog box displays.

9. Repeat steps 5-8 for each D/42D-SL or D/42D-SX address you want to modify.

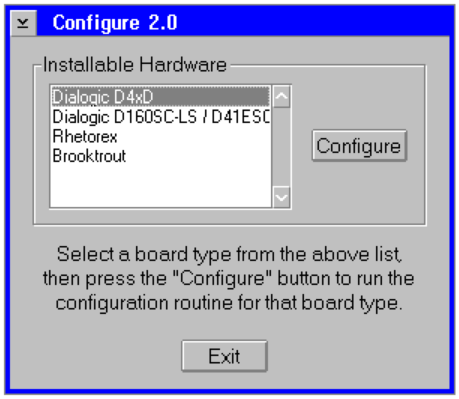
10. To save the changes, click OK. The Configure dialog box displays.

11. To close Configure, click Exit.

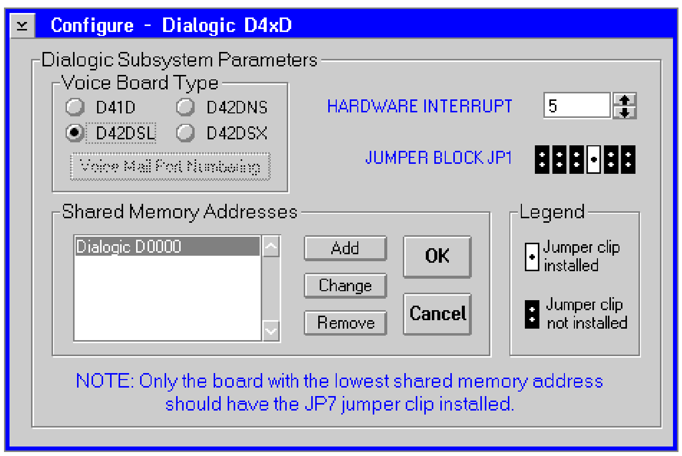
12. Shut down OS/2 and restart the PC for the changes to take effect.

To delete settings for an existing Dialogic D/42D-SL or D/42D-SX board:

1. Shut down M2000, if it is running.
2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.



3. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



4. Under Voice Board Type, select the D/42D-SL or D/42D-SX option as applies to the board.
5. Under Shared Memory Addresses, select the address of the board you want to delete.
6. To delete the selected shared memory address from the list, click Remove. When you delete a board's address from Configure, the system no longer recognizes the board.
7. Repeat steps 5 and 6 for each D/42D-SL or D/42D-SX address you want to delete.
8. Click OK. The Configure dialog box displays.
9. To close Configure, click Exit.
10. Shut down OS/2 and restart the PC for the changes to take effect.

To verify the SET_UP.CFG file is set up correctly for the D/42D-SL or D/42D-SX board:

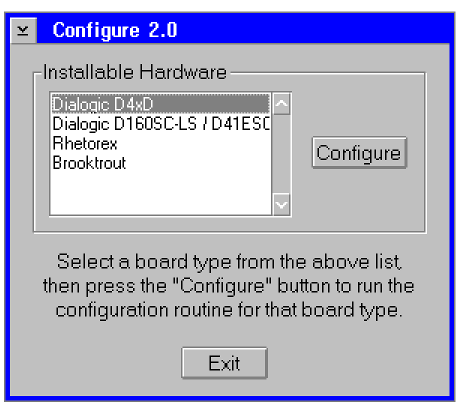
1. Shut down M2000, if it is running.
2. Open an OS/2 window.
3. From the \CVR1 prompt, type `E SET_UP.CFG` and press <ENTER>. An OS/2 editor window containing the SET_UP.CFG file displays.
4. Use the scroll bar to verify that parameter A62 is set to →DI. If it is not, use the right arrow key to move to the end of the line, backspace over the existing setting, use the numeric keypad to press <ALT+2+7> to insert the right arrow character, then type `DI`.
5. Verify that A63 is set to →DO. If it is not, use the right arrow key to move to the end of the line, backspace over the existing setting, use the numeric keypad to press <ALT+2+7> to insert the right arrow character, then type `DO`.
6. To save any changes, select Save from the File menu.
7. To exit the editor, click the icon in the upper-left corner of the window and select Close.
8. Type `EXIT` and press <ENTER> to close the OS/2 window.
9. Shut down OS/2 and restart the PC for the changes to take effect.

Specifying Settings for the Dialogic D/42D-NS Boards

Use the following procedures to add, modify, or delete settings for Dialogic D/42D-NS boards. When using digital boards, you must also verify two SET_UP.CFG file parameters if the system is configured for OctelNet or AMIS.

To specify settings for a new Dialogic D/42D-NS board:

1. During installation, select Configure from the Installation Setup Utility dialog box. The Configure dialog box displays.



If the M2000 system is already installed, you can launch Configure any time by double-clicking the Configure icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run Configure.

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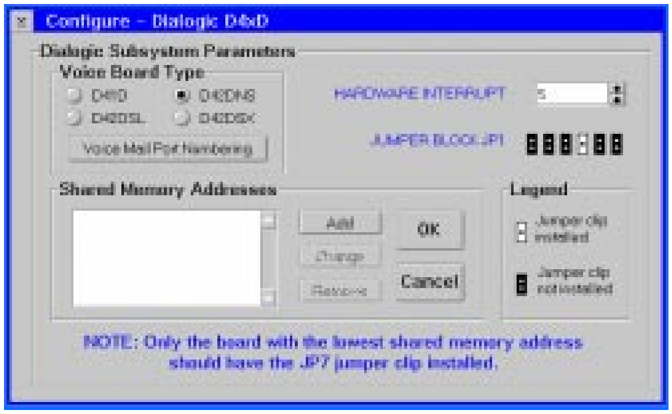
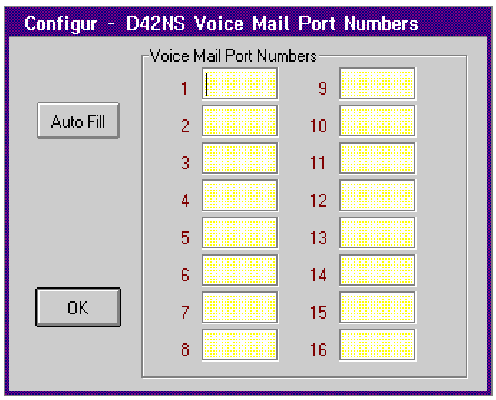
2. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



3. Under Voice Board Type, select the D/42DNS option.

4. To identify the extensions assigned to each D/42D-NS port, click Voice Mail Port Numbering. The Configure – D42NS Voice Mail Port Numbers dialog box displays.



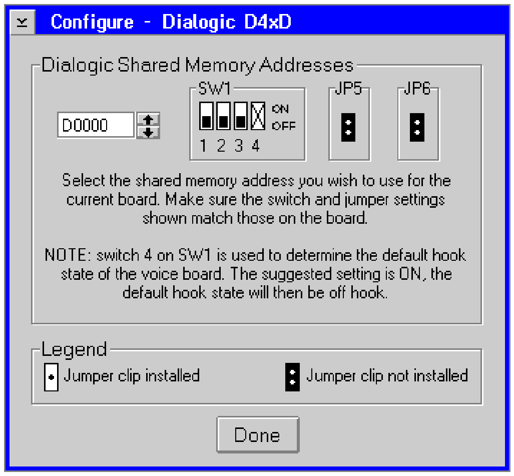
5. To specify the extension for port 1, enter the extension number in the corresponding field.

6. To identify the remaining extensions, either enter each extension number next to each port number or, if the extension numbers are consecutive, click Auto Fill.

7. To save the entered extensions, click OK. The Configure – Dialogic D4xD dialog box displays.

8. In the Hardware Interrupt field, enter the hardware interrupt you recorded when you configured the boards. The Jumper Block JP1 diagram displays the proper jumper configuration for the interrupt you selected. The jumper settings on the board must match the diagram or the board will not load properly when you restart the PC. You must set all Dialogic boards to the same hardware interrupt.

9. Under Shared Memory Addresses, click Add. The Configure – Dialogic D4xD dialog box displays.



10. In the field under Dialogic Shared Memory Addresses, enter the shared memory address you recorded when you configured the boards. The SW1 diagram displays the proper jumper configuration for the Shared Memory Address you selected. The switch settings on the board must match the diagram or the board will not load properly when you restart the PC.

11. To save the shared memory address, click Done. The Configure – Dialogic D4xD dialog box displays.

12. Repeat steps 9-11 for each additional D42D-NS board you installed.

13. To save the settings, click OK. The Configure dialog box displays.

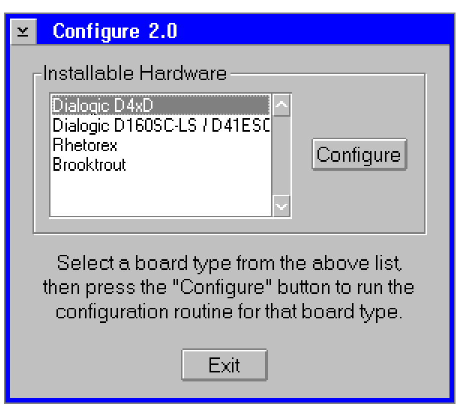
14. To close Configure, click Exit.

15. Shut down OS/2 and restart the PC for the changes to take effect.

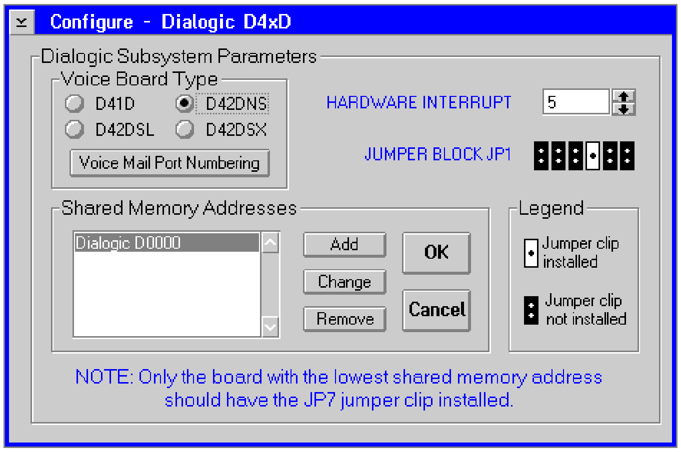
To modify settings for an existing Dialogic D/42D-NS board:

1. Shut down M2000, if it is running.

2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.

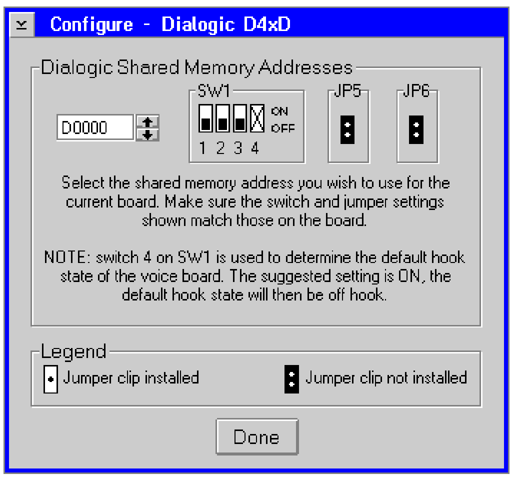


3. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



4. Under Voice Board Type, select the D/42DNS option.

5. Under Shared Memory Addresses, select the address of the board you want to modify, then click Change. The Configure – Dialogic D4xD dialog box displays.



6. In the field under Dialogic Shared Memory Addresses, enter the board's new shared memory address. The SW1 diagram displays the proper jumper configuration for the Shared Memory Address you selected. The switch settings on the board must match the diagram or the board will not load properly when you restart the PC.

7. Record the board's new shared memory address.

8. To save the shared memory address, click Done. The Configure – Dialogic D4xD dialog box displays.

9. Repeat steps 5-8 for each D/42D-NS address you want to modify.

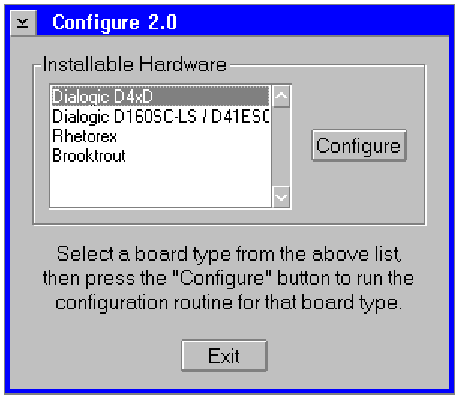
10. To save the settings, click OK. The Configure dialog box displays.

11. To close Configure, click Exit.

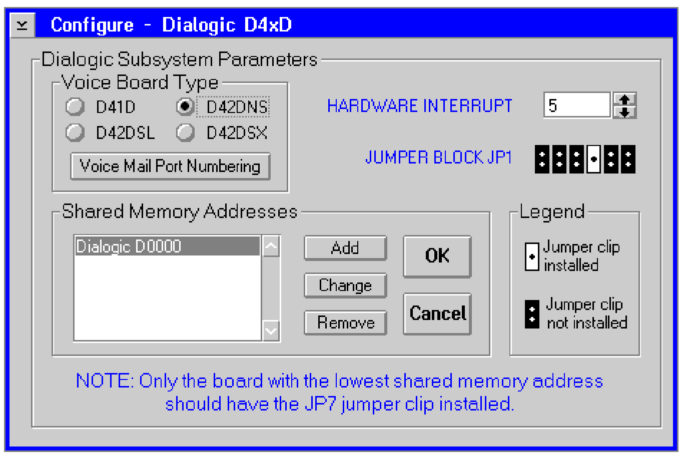
12. Shut down OS/2 and restart the PC for the changes to take effect.

To delete settings for an existing Dialogic D/42D-NS board:

1. Shut down M2000, if it is running.
2. Double-click the Configure icon in the Lucent Technologies folder. The Configure dialog box displays.



3. Under Installable Hardware, select Dialogic D4xD, then click Configure. The Configure – Dialogic D4xD dialog box displays.



4. Under Voice Board Type, select the D/42DNS option.
5. Under Shared Memory Addresses, select the address of the board you want to delete.
6. To delete the selected shared memory address from the list, click Remove. When you delete a board's address from Configure, the system no longer recognizes the board.
7. Repeat steps 5 and 6 for each D/42D-NS address you want to delete.
8. To save the settings, click OK. The Configure dialog box displays.
9. To close Configure, click Exit.
10. Shut down OS/2 and restart the PC for the changes to take effect.

To verify the SET_UP.CFG file is set up correctly for the D/42D-NS board:

1. Shut down M2000, if it is running.
2. Open an OS/2 window.

3. From the \CVR1 prompt, type `E SET_UP.CFG` and press <ENTER>. An OS/2 editor window containing the SET_UP.CFG file displays.

4. Scroll to parameter A62. Verify that it is set to →DI. If it is not, use the right arrow key to move to the end of the line, backspace over the existing setting, use the numeric keypad to press <ALT+2+7> to insert the right arrow character, then type `DI`.

5. Verify that A63 is set to →DO. If it is not, use the right arrow key to move to the end of the line, backspace over the existing setting, use the numeric keypad to press <ALT+2+7> to insert the right arrow character, then type `DO`.

6. To save any changes, select Save from the File menu.

7. To exit the editor, click the icon in the upper-left corner of the window and select Close.

8. Type `EXIT` and press <ENTER> to close the OS/2 window.

9. Shut down OS/2 and restart the PC for the changes to take effect.

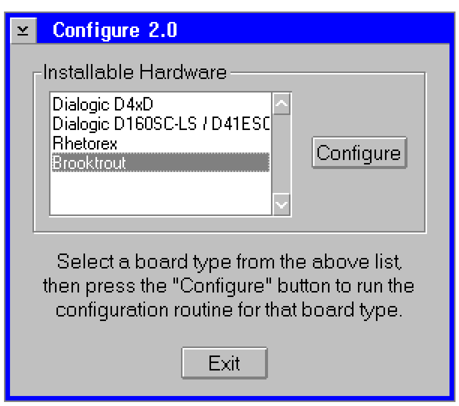
Specifying Brooktrout Board Settings

The procedure you use to specify Brooktrout board settings depends on the type of Brooktrout boards you installed in the system:

- TR112 board
- TR114 board
- TruFax board

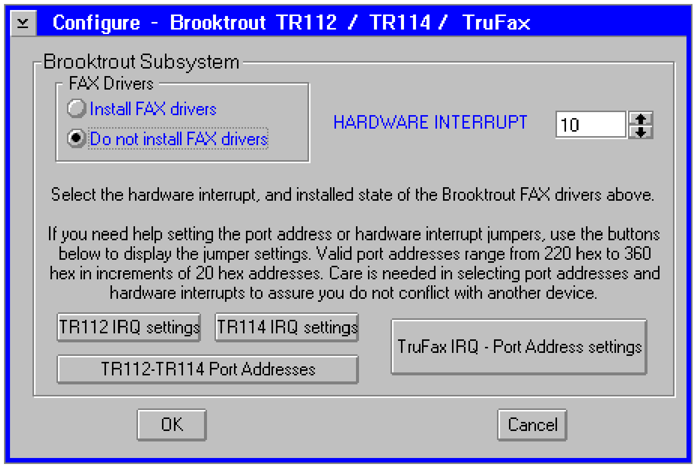
To specify Brooktrout TR112 board settings:

1. During installation, select Configure from the Installation Setup Utility dialog box. The Configure dialog box displays.



If the M2000 system is already installed, you can launch Configure any time by double-clicking the Configure icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run Configure.

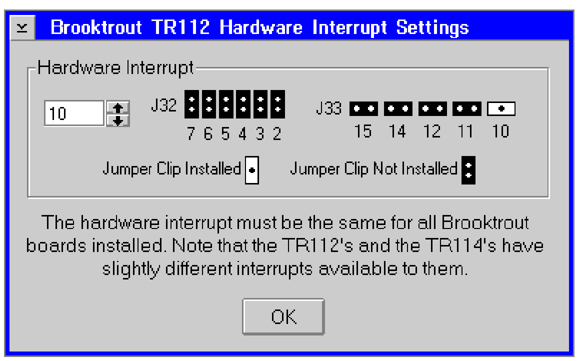
2. Under Installable Hardware, select Brooktrout, then click Configure. The Configure – Brooktrout TR112/TR114/TruFax dialog box displays.



3. The FAX Drivers box indicates the current state of the Brooktrout board drivers. If the drivers are not installed, select the Install FAX drivers option to load the drivers upon bootup. If you remove the Brooktrout boards later, you can select the Do not install FAX drivers option to make sure the drivers are not loaded.

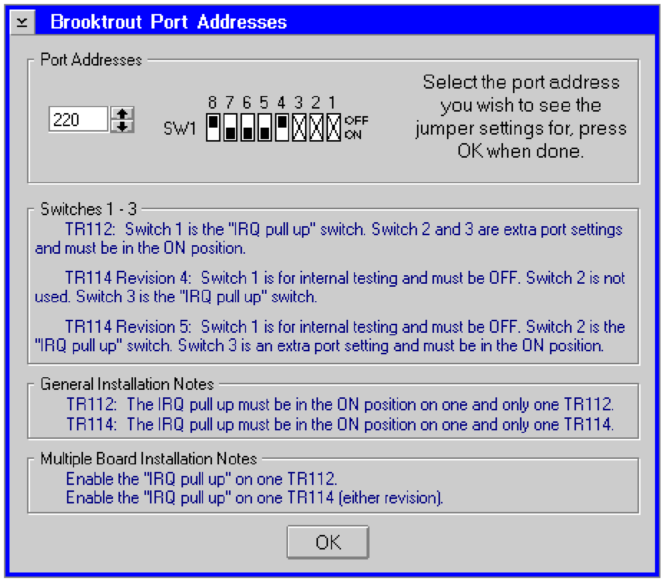
4. In the Hardware Interrupt field, enter the hardware interrupt you recorded when you configured the boards.

5. To view the correct interrupt settings for the hardware interrupt you selected, click TR112 IRQ Settings. The Brooktrout TR112 Hardware Interrupt Settings dialog box displays. The J32 and J33 diagrams display the proper jumper configuration for the interrupt you selected. If the board does not load properly when you restart the PC, verify that the board’s J32 and J33 jumper settings match the diagram. You must set all Brooktrout boards to the same hardware interrupt.



6. To save the settings, click OK. The Brooktrout TR112/TR114/TruFax dialog box displays.

7. Click TR112-TR114 Port Addresses. The Brooktrout Port Addresses dialog box displays.



8. In the Port Addresses field, enter the port address you recorded when you configured the boards. The SW1 diagram displays the proper switch configuration for the port address you selected. If the board does not load properly when you restart the PC, verify that the board's SW1 switch configuration matches the diagram.

9. When you are done viewing port address settings, click OK. The Brooktrout TR112/TR114/TruFax dialog box displays.

10. Repeat steps 7-9 for each additional TR112 board you installed.

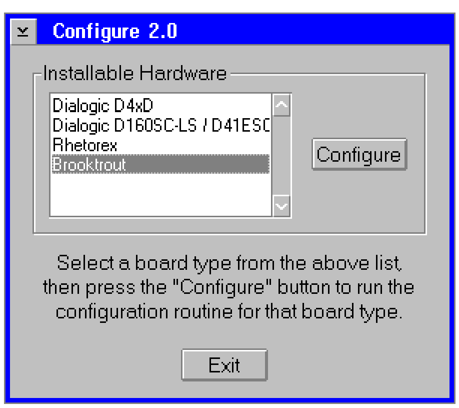
11. When you are done, click OK. The Configure dialog box displays.

12. To close Configure, click Exit.

13. Shut down OS/2 and restart the PC for the changes to take effect.

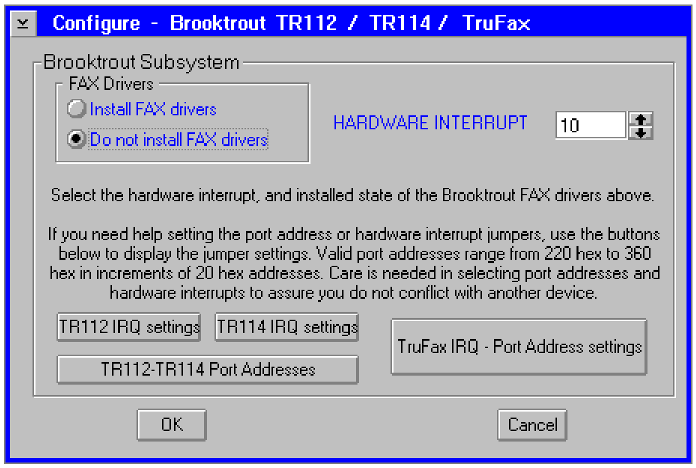
To specify Brooktrout TR114 board settings:

1. During installation, select Configure from the Installation Setup Utility dialog box. The Configure dialog box displays.



If the M2000 system is already installed, you can launch Configure any time by double-clicking the Configure icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run Configure.

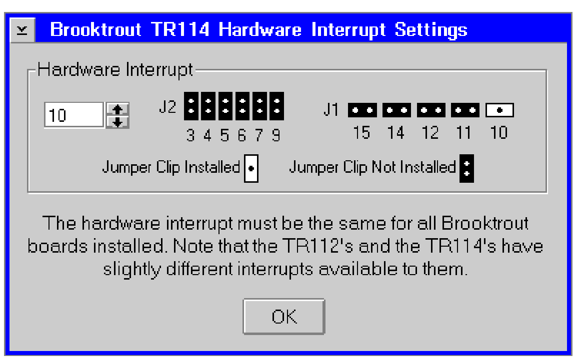
2. Under Installable Hardware, select Brooktrout, then click Configure. The Configure – Brooktrout TR112/TR114/TruFax dialog box displays.



3. The FAX Drivers box indicates the current state of the Brooktrout board drivers. If the drivers are not installed, select the Install FAX drivers option to load the drivers upon bootup. If you remove the Brooktrout boards later, you can select the Do not install FAX drivers option to make sure the drivers are not loaded.

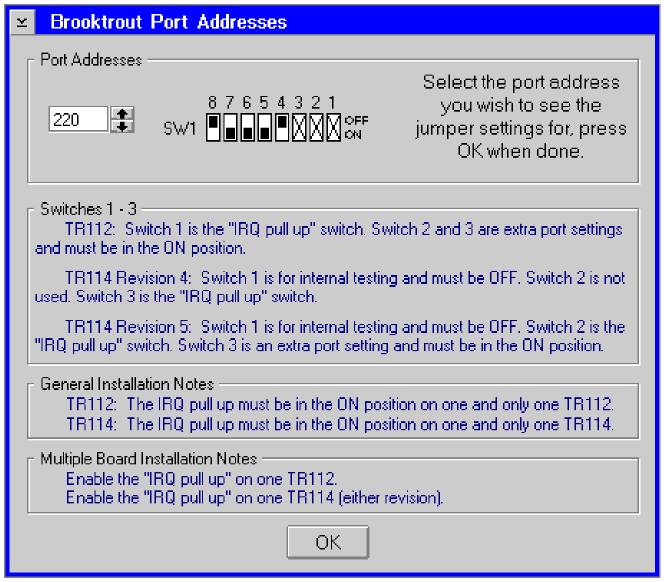
4. In the Hardware Interrupt field, enter the hardware interrupt you recorded when you configured the boards.

5. To view the correct interrupt settings for the hardware interrupt you selected, click TR114 IRQ Settings. The Brooktrout TR114 Hardware Interrupt Setting dialog box displays. The J1 and J2 diagrams display the proper jumper configuration for the interrupt you selected. If the board does not load properly when you restart the PC, verify that the board’s J1 and J2 jumper settings match the diagram. You must set all Brooktrout boards to the same hardware interrupt.



6. To save the settings, click OK. The Brooktrout TR112/TR114/TruFax dialog box displays.

7. Click TR112-TR114 Port Addresses. The Brooktrout Port Addresses dialog box displays.



8. In the Port Addresses field, enter the port address you recorded when you configured the boards. The SW1 diagram displays the proper switch configuration for the port address you selected. If the board does not load properly when you restart the PC, verify that the board's SW1 switch matches the diagram.

9. When you are done viewing port address settings, click OK. The Brooktrout TR112/TR114/TruFax dialog box displays.

10. Repeat steps 7-9 for each additional TR114 board you installed.

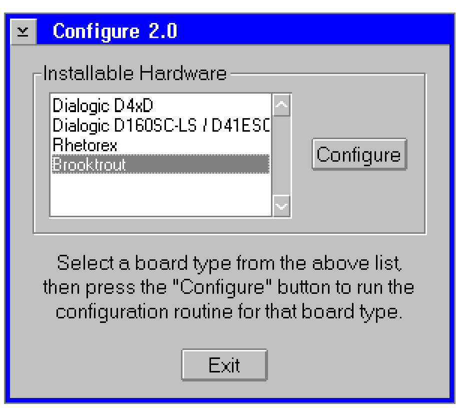
11. When you are done, click OK. The Configure dialog box displays.

12. To close Configure, click Exit.

13. Shut down OS/2 and restart the PC for the changes to take effect.

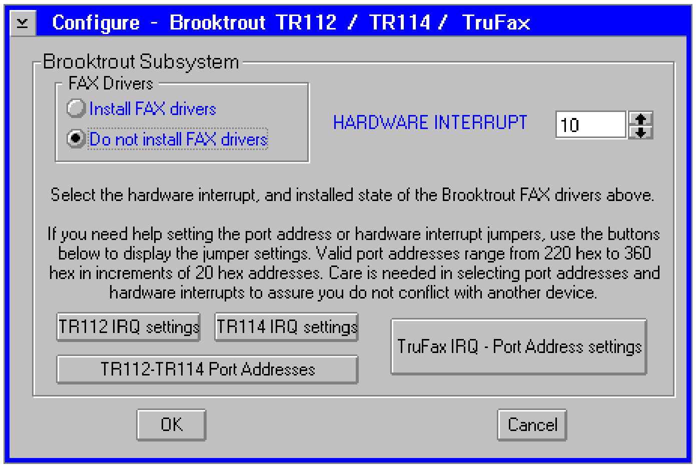
To specify Brooktrout TruFax board settings:

1. During installation, select Configure from the Installation Setup Utility dialog box. The Configure dialog box displays.



If the M2000 system is already installed, you can launch Configure any time by double-clicking the Configure icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run Configure.

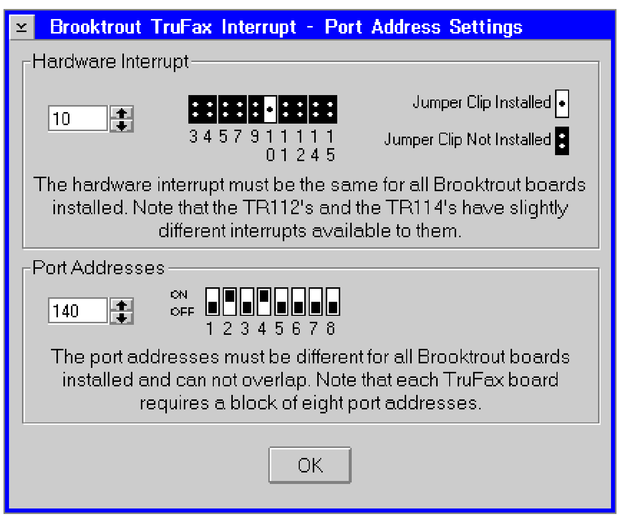
2. Under Installable Hardware, select Brooktrout, then click Configure. The Configure – Brooktrout TR112/TR114/TruFax dialog box displays.



3. The FAX Drivers box indicates the current state of the Brooktrout board drivers. If the drivers are not installed, select the Install FAX drivers option to load the drivers upon bootup. If you remove the Brooktrout boards later, you can select the Do not install FAX drivers option to make sure the drivers are not loaded.

4. In the Hardware Interrupt field, enter the Hardware Interrupt you recorded when you configured the boards.

5. Click TruFax IRQ – Port Address settings. The Brooktrout TruFax Interrupt – Port Address Settings dialog box displays.



6. In the Hardware Interrupt field, enter the hardware interrupt you recorded when you configured the boards. The accompanying diagram displays the proper jumper configuration for the interrupt you selected. If the board does not load properly when you restart the PC, verify that the board's jumper settings match the diagram. You must set all Brooktrout boards to the same hardware interrupt.

7. In the Port Addresses field, enter the port address you recorded when you configured the boards. The accompanying diagram displays the proper switch configuration for the port address you selected. If the board does not load properly when you restart the PC, verify that the board’s Address Selector switches match the diagram.
8. Repeat step 7 for each additional TruFax board you installed.
9. When you are done viewing hardware interrupt and port address settings, click OK. The Configure – Brooktrout TR112/TR114/TruFax dialog box displays.
10. To save the settings, click Done. The Configure dialog box displays.
11. To close Configure, click Exit.
12. Shut down OS/2 and restart the PC for the changes to take effect.

C H A P T E R 9

Integrating with the Phone System

The Integrator utility configures M2000 for use with the telephone switch by setting many of the software's parameters to values appropriate for the switch. This allows you to move through the System Setup utility much faster and reduces the possibility of making invalid entries in some of the more advanced setup fields.

Integrator is preconfigured on some systems. In this case, you do not need to run Integrator during installation. If Integrator is not preconfigured, it is important that you run Integrator during system installation, especially if you are installing M2000 for the first time.

For you to use the Integrator utility, the phone system must be certified for use with M2000. If a Configuration Note is available for the phone switch, it is certified for use with the system. If the phone system is not certified, contact a Lucent Technologies technical support representative.

The steps provided in this chapter will help you to:

- Run the Integrator utility
- Create inband templates to allow the system to efficiently process incoming inband strings from the phone switch

Running the Integrator Utility

To run the Integrator utility:

1. During installation, select Integrator from the Setup Installation Utility dialog box. An initial information dialog box displays.

   If the M2000 system is already installed, you can launch Integrator any time by double-clicking the Integrator icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you can run Integrator.

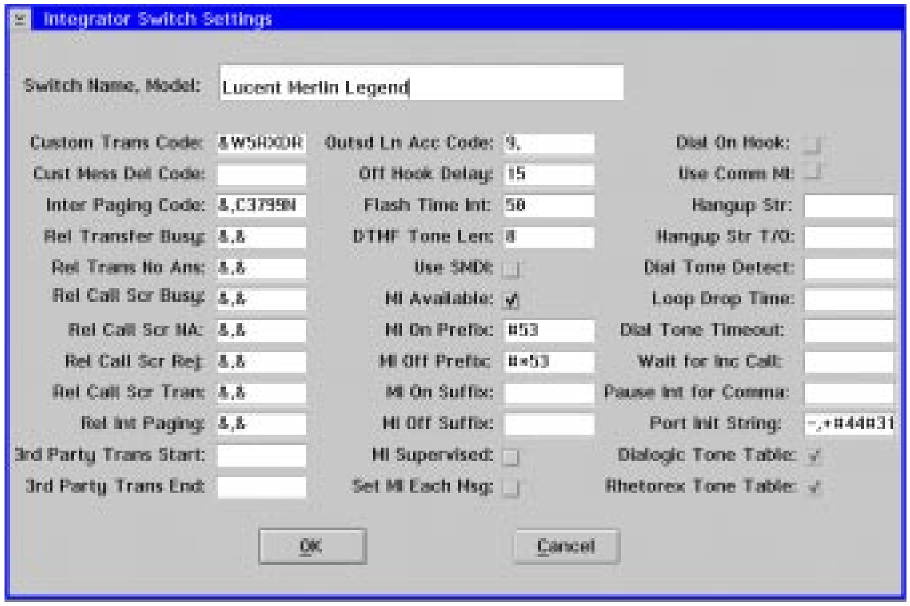
2. To continue, click OK. The Integrator dialog box displays the currently installed switch. If this is an initial installation or the system was not preconfigured, the Currently Installed Switch field displays None.

3. To view the list of phone systems certified for use with M2000, click the arrow button to the right of the Select Switch field.

4. Select the name of the phone switch from the list. The switch name displays in the Select Switch field.

   If you are using Serial integration, make sure you select the proper switch (the switch name will include “with Direct Serial”, “with VoiceBridge”, or “with SMDI” for example). Also, be sure to select the proper switch for any set emulation integrations, such as the Dialogic D42NS.

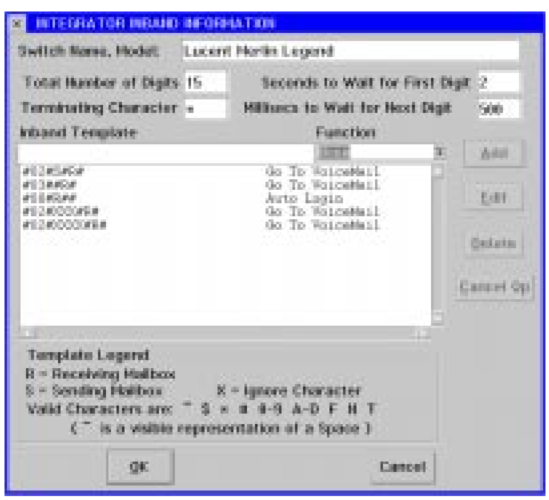
5. If you want to view or customize the codes for the selected phone system, click Switch Settings. The Integrator Switch Settings dialog box displays.



The codes displayed are the defaults for the selected phone system. The system automatically loads these codes when you select Install from the Integrator dialog box. A description of each parameter is provided in Chapter 14, “Setting Up the System.” Do not modify any of the switch settings without consulting a Lucent technical support representative.

6. To save any modifications, click OK. The Integrator dialog box displays.

7. If you want to view or specify the phone system’s inband settings and templates, click Inband Information. The Integrator Inband Information dialog box displays.



The inband settings displayed in the upper half of the dialog box represent the defaults for the selected phone system. The system automatically loads the listed inband settings when you select Install from the Integrator dialog box. A description of each parameter is provided in Chapter 14, “Setting Up the System.” Do not modify any of the switch settings without consulting a Lucent technical support representative.

The remainder of the dialog box contains the default inband templates defined for the selected phone system. An inband template is a series of characters that represents an incoming DID or inband string from the switch. The system automatically loads the listed inband templates when you select Install from the Integrator dialog box.

Detailed information on creating and editing inband templates is provided later in this chapter.

If you change any of the phone system codes or templates in Integrator, the system updates the SET_UP.CFG or PLUS.SYS file, or both, as appropriate, when you select Install from the Integrator dialog box. The changes, however, are not saved in the switch data file, SWDATA.TXT, that is shipped with the system. Consequently, if you reinstall the switch at a later time, be sure to back up the SET_UP.CFG and PLUS.SYS files before you reinstall the switch, and then restore them after you reinstall the phone system to prevent the loss of the modifications.

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8. To close the dialog box, click OK. The Integrator dialog box displays.
9. To integrate with the selected switch, click Install. A confirmation dialog box displays.
10. Click Yes to confirm the switch.
11. If you are reinstalling a switch or installing a different switch, a dialog box displays the message "Key switch-specific parameters are already defined. Do you wish to terminate this installation?"
12. To continue the integration, select **No**. Integrator installs the selected switch and loads the settings and templates in System Setup. A dialog box displays when the installation is complete and informs you whether default tone tables have been installed for the switch. If default tone tables are installed, you do not have to run Call Analysis. If default tone tables are not installed, you should run Call Analysis. For information on running Call Analysis, see Chapter 10, "Defining Phone System Signals."
13. To close the dialog box, click OK. A dialog box with Configuration Note information for the installed phone switch displays.
14. To close the dialog box, click OK. The Integrator dialog box displays.
15. To close Integrator, click Exit.

Understanding Inband Templates

An inband template is a series of characters that represents an incoming Direct Inward Dialing (DID) or inband string from the switch. When the system receives an incoming string, it matches it to a defined inband template. This enables the system to interpret the string and associate the corresponding function with it.

Understanding Inband Template Characters

You may use the following characters to create templates representing the incoming inband string. Up to 32 characters can be entered for each template. Put these characters together to form the closest possible match to the incoming string:

R Represents the Receiving Mailbox. The number of digits extracted for the receiving mailbox ID is determined by the Number of Digits in a Mailbox parameter. For example, if the number of digits in a mailbox is 4, an `R` in an Inband Template represents 4 digits.

If the Receiving information sent by the switch is not valid, the caller is placed at the main greeting.

S Represents the Sending Mailbox. The ability to transmit sender information, which is not supported by all switches, enables the system to recognize a caller as an internal subscriber. The number of digits extracted for the sending mailbox ID is determined by the Number of Digits in a Mailbox parameter. For example, if the number of digits in a mailbox is 4, an `S` in an Inband Template represents 4 digits.

If the Sending information sent by the switch is not valid, the caller is treated as an outside caller.

X Signals the system to ignore the character in that position in the string. For example, if the number of digits in an extension is greater than the number of digits in a mailbox, insert one or more `X` characters in the positions immediately preceding or following the `R` or `S` to indicate the characters to be ignored. More than one `X` may be inserted in a single Inband Template.

? The wildcard, which is not displayed in the template legend, may also be included in templates. The wildcard signals the system that one or more digits should be ignored. Only one wildcard may be used per template. The position of the wildcard within the template determines which digits are ignored:

- When the wildcard is placed at the end of the template, any characters after the wildcard position in the incoming string are ignored and the total length of the string is not enforced. For example, if a template is defined as `#02#R?`, any characters after the Receiving Mailbox ID are ignored and the string need not be a certain length.
- When the wildcard is placed in the position immediately before the `S` or `R`, it signals the system to start at the end of the string to extract the sending or receiving mailbox ID. For example, if a template on a system with 3-digit mailboxes is defined as `#02#?R`, the system extracts the last three digits for the receiving mailbox ID.

It is recommended you only use the wildcard for functions that do not have a consistent string length.

In addition to the codes listed, you may include the following characters in templates:

- `*`, `#`, `0-9`, `A`, `B`, `C`, `D` are valid DTMFs that may be received in an incoming inband string.
- `~` (tilde) is the visual representation of a space. Tildes are only received from Digital Emulation (such as Mitel SX) or Direct Serial integrations, including VoiceBridge.

- `$` is only received from Digital Emulation integrations (such as Northern Telecom SL-1) and is viewed as an inband digit.
- `T` is commonly used by Digital Emulation integrations to identify the Trunk ID.
- `F` and `N`, which, along with `B` and `C` already listed above, are used in Serial integrations. Common serial codes received are `F` for Forward, `N` for Ring-No-Answer, `B` for Busy, and `C` for Auto Station Login.

Understanding Inband Functions

The Function field on the Inband Information dialog box identifies the inband function associated with the template displayed in the Inband Template field. This is the action the system performs when it receives a template assigned to the function.

The following functions are available:

- **Go to Voice Mail** – Instructs the system to transfer a caller directly to the receiving mailbox. When this code is used, the caller hears either the Personal Greeting prompt such as, *“Hi, this is Mark. I’m either away from my desk or on another call. Please leave your name...,”* or the call handling condition, if call handling is activated.
- **AutoLogin** – Instructs the system to allow subscribers immediate access to their mailboxes when dialing from their own extensions. When this code is used, the caller hears, *“Please enter your password.”* This function cannot be assigned to a template that includes the `S` for the Sending Mailbox ID.
- **Busy** – Informs the system, via the code sent by the switch, that a caller dialed a busy extension and instructs the system to handle the busy condition as defined by that mailbox. When a caller dials an extension that is busy, the system voices either, *“I’m sorry, that extension is busy,”* or invokes a call-handling feature that blocks calls when the extension is busy. This function is used primarily in Serial integrations and some set emulations, including those using a VoiceBridge.
- **Ring, No Answer** – Informs the system that a call dialed an extension with no answer and instructs the system to handle the no answer condition as defined by that mailbox. When a caller dials an extension with no answer, the system voices either, *“I’m sorry , there is no answer at that extension,”* or invokes a call-handling feature that blocks calls when there is no answer. This function is used primarily in Serial integrations and some set emulations, including those using a VoiceBridge.
- **Immediate Record** – Instructs the system to transfer a caller to the mailbox number that follows the code. The caller can then begin recording after the beep without listening to a mailbox greeting. This function is often used in an Internal Call Forward to Voice Mail scenario, where the subscriber knows to begin recording at the beep. This function can also be used for recording phone conversations, if supported by the switch. When used in this application, the subscriber can record the call by pressing a button on the telephone keypad.
- **Immediate Transfer** – Instructs the system to transfer a caller directly to the extension that follows the code. When this code is used, the caller hears, *“Please hold for <mailbox owner’s name prompt>.”* This function cannot be assigned to a template that includes the `S` for the Sending Mailbox ID.
- **Go to Voice Mail, Get Mailbox** – Instructs the system to transfer a caller to voice mail to retrieve the mailbox number. When this code is used, the caller hears,

"Please enter the destination mailbox number… ." This function must be assigned to an inband template that does not include an `S` or `R`.

- **Go to Automated Attendant, Get Mailbox** – Instructs the system, via the code sent by the switch, to transfer a caller to the automated attendant mailbox entry point. When this code is used, the caller hears, *"Please dial the mailbox number of the person you are calling… ."* This function cannot be assigned to an inband template that includes an `S` or `R`.

Understanding Inband Template Rules

The following rules apply when creating templates:

- Each template must be unique to the system; duplicates are not permitted.
- One template may not be a subset of another template if the wildcard (?) displays in both. For example, `#02#R` and `#02#R#S` are allowed even though the first template is a subset of the second. This is allowed because the total length of string is enforced for both, which means no wildcards are used. However, `#02#R?` and `#02#R#?` are not allowed because they both use the wildcard.
- A template that uses the wildcard can be a subset of another template that does not use the wildcard. When an incoming string matches both templates, it is considered a match of the template that does not use the wildcard because it is an exact match. For example, suppose two templates defined as `$RXS` and `$R?` are created on a system with three-digit mailboxes. In the case of the first template, this means that an incoming string must be exactly eight characters and start with `$` to match. For the second template, an incoming string must start with `$` and be at least five characters to be considered a match. An 8-character incoming string beginning with `$` would therefore match both templates. The function assigned to `$RXS`, however, is used because it is an exact match.
- Only one wildcard may be used within each template.

If the incoming string does not match an identified template, the caller is transferred to the automated attendant.

Creating, Modifying, and Deleting Inband Templates

The default templates for the phone system you specify are automatically loaded by the Integrator utility. You can create new templates, however, or modify existing templates at any time.

Use these procedures to create new inband templates and modify existing templates.

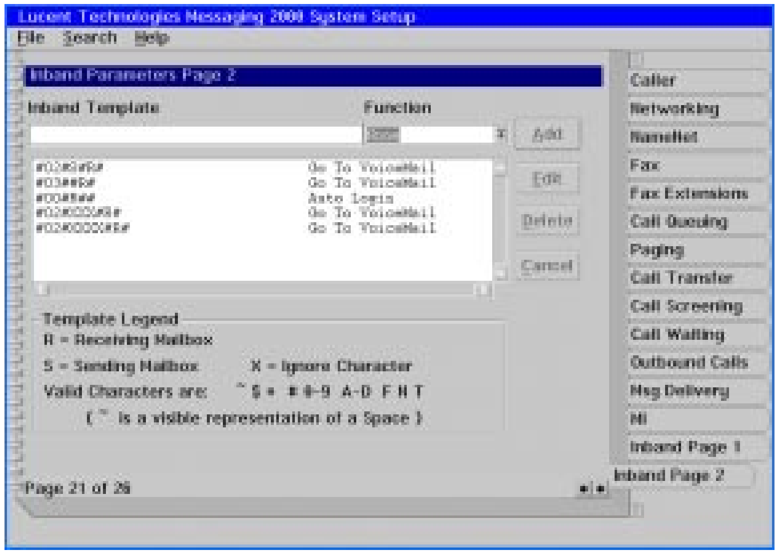
If the Total Number of DID Digits (DIDCOUNT) parameter on the Inband Page 1 Parameters tab is set to 0, the Inband Page 2 Parameters are dimmed.

To create a new template:

1. Select Setup from the Options menu. The System Setup General Parameters tab displays. Note that you must be logged into the M2000 system as a Level 3 system

manager. For information on logging into the system, refer to Chapter 21, "Starting, Logging Into, and Shutting Down the System."

2. Scroll to the Inband Page 2 tab and click it. The Inband Parameters Page 2 tab displays the existing templates.



3. In the Inband Template field, enter the template characters. For additional information, see the topic, "Understanding Inband Template Characters," earlier in this chapter. Identify as many characters in the incoming string as possible. For example, for an incoming string `$FROM200555`, you could create a template `$FXXXRS`, where `F` represents the first letter in the word `FROM`.

   The system parses trailing and terminating characters, which are sent by some switches, from the incoming string. You therefore should not include them in the inband templates.

5. To display the list of available functions, click the arrow button next to the Function field. Select the function to be associated with the current template. For additional information, see the topic, "Understanding Inband Template Characters," earlier in this chapter.

6. To create the template and add it to the listbox, click Add. If the template is not valid, an error message displays prompting you to reenter the template. For additional information, see the topic, "Understanding Inband Template Rules," earlier in this chapter.

7. Repeat steps 3-6 for each template you want to define. You may define a maximum of 25 templates for the system. This allows you to assign the same inband function to multiple templates.

8. To save the changes, select Save from the File menu.

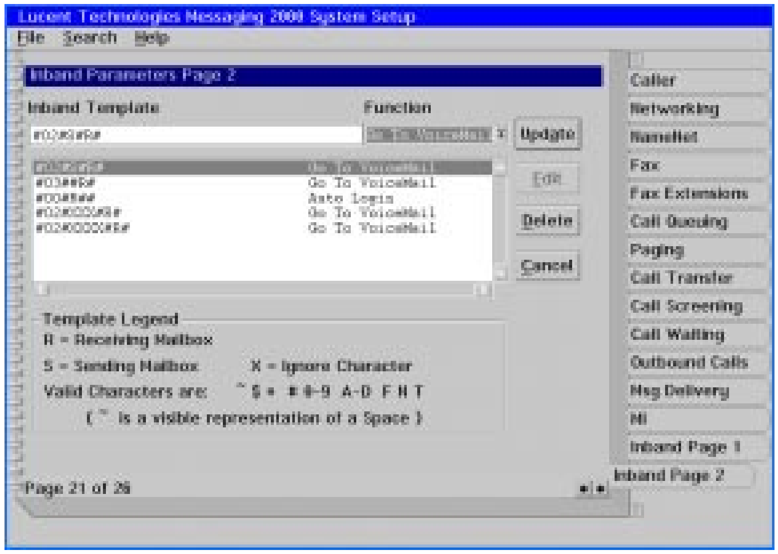
9. To close System Setup, select Exit from the File menu.

10. Select Restart from the Options menu for the changes to take effect.

To modify an existing template:

1. Select Setup from the Options menu. The System Setup General Parameters tab displays. Note that you must be logged into the M2000 system as a Level 3 system manager. For information on logging into the system, refer to Chapter 21, "Starting, Logging Into, and Shutting Down the System."

2. Scroll to the Inband Page 2 tab and click it. The Inband Parameters Page 2 tab displays the existing templates.



3. In the listbox, select the template you want to edit. The template displays in the Inband Template field.

4. Click Edit. The Edit button changes to Update after you select it.

5. Edit the template or select another function to associate to it. To select another function, click the arrow button next to the Function field, then select the new function.

6. To accept the modifications, click Update.

7. Repeat steps 3-6 for each template you want to modify.

8. To save the changes, select Save from the File menu.

9. To close System Setup, select Exit from the File menu.

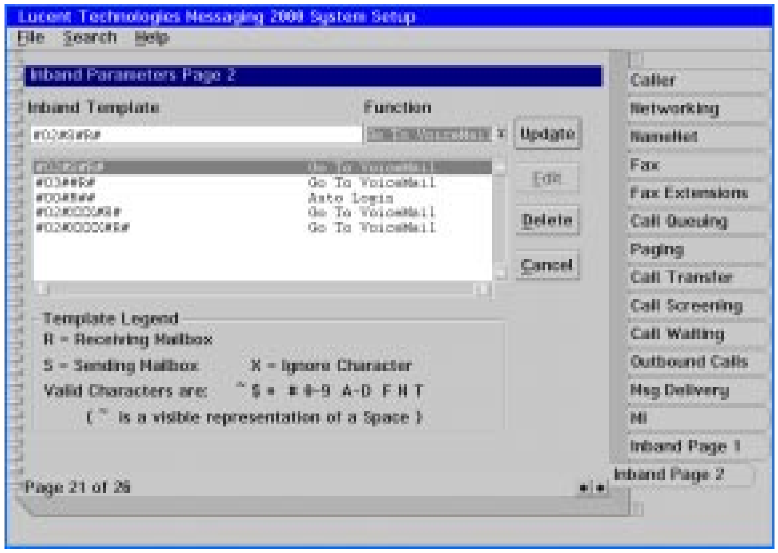
10. Select Restart from the Options menu for the changes to take effect.

To delete an existing template:

1. Select Setup from the Options menu. The System Setup General Parameters tab displays. Note that you must be logged into the M2000 system as a Level 3 system manager. For information on logging into the system, refer to Chapter 21, "Starting, Logging Into, and Shutting Down the System."

2. Double-click the System Setup icon in the Lucent Technologies folder. The first System Setup tab displays.

3. Scroll to the Inband Page 2 tab, and click it. The Inband Parameters Page 2 tab displays the existing templates.



4. In the listbox, select the template you want to delete. The template displays in the Inband Template field.
5. To remove the selected template, click Delete. The template is deleted.
6. Repeat steps 4 and 5 for each template you want to delete.
7. To save the changes, select Save from the File menu.
8. To close System Setup, select Exit from the File menu.
9. Select Restart from the Options menu for the changes to take effect.

Inband Template Examples

Sample Inband Templates 1 through 4 provide examples of inband templates for three switches.

These are only examples of possible templates. Consult the Configuration Note for the switch to determine the correct templates.

The first column in each table provides examples of the actual incoming inband strings that match the templates and the type of call for which the string would be received. The second column provides the templates that are created to match the incoming string, and the third column defines the corresponding function assigned to the template.

Sample Inband Template 1

Sample 1 assigns multiple templates to a single function (Go to Voice Mail). In the Incoming String and Format column, 5678 is used in the examples to represent the calling (sending) party, if supplied by the switch; 1234 represents the called (receiving party); and TRNK represents the Trunk ID (the number of the trunk).

Incoming String and Format	Template	Function
INT Busy C35678#1234#	C3S#R#	Go to Voice Mail
INT RNA C45678#1234#	C4S#R#	Go to Voice Mail
INT All C55678#1234#	C5S#R#	Go to Voice Mail
EXT Busy C8(TRNK)#1234#	C8S#R#	Go to Voice Mail
EXT RNA C9(TRNK)#1234#	C9S#R#	Go to Voice Mail
Internal Direct Call C11234#	C1R#	Auto Login
External Direct Call C2(TRNK)#	C2S#R#	Go to Voice Mail

Sample Inband Template 2

Sample 2 allows for a character in the middle of the string that is not a recognized character. In this case, X represents the unrecognized character. In the Incoming String and Format column, 5678 is used in the examples to represent the calling (sending) party, if supplied by the switch; 1234 represents the called (receiving party); and TRNK represents the Trunk ID (the number of the trunk).

Incoming String and Format	Template	Function
DND/Forward All $CFFM234	$CFFXR	Go to Voice Mail
Direct Call $1234	$R	Auto Login
Busy $CFB1234	$CFBR	Go to Voice Mail
RNA $CFNA1234	$CFNAR	Go to Voice Mail

Sample Inband Template 3

Sample 3 provides the templates for a Centrex Integration on a system with 4-digit mailboxes. In the Incoming String and Format column, 5678 is used in the examples to represent the calling (sending) party, if supplied by the switch; 1234 represents the called (receiving party); and TRNK represents the Trunk ID (the number of the trunk).

Incoming String and Format	Template	Function
Forward All F1234(space)5678	FR~S	Go to Voice Mail
Direct Call C1234	CR	Auto Login
Busy B1234(space)5678	BR~S	Go to Voice Mail
RNA N1234(space)5678	NR~S	Go to Voice Mail
Forward All F1234(space)5678	FR	Go to Voice Mail
Busy B1234(space)5678	BR	Go to Voice Mail
RNA N1234(space)5678	NR	Go to Voice Mail

Sample Inband Template 4

Sample 4 provides the templates for a Merlin Legend on a system with 3-digit mailboxes.

Incoming String and Format	Template	Function
External Direct Call #01#512##	Default	Go to Voice Mail
Direct Call #00#234##	#00#R##	Auto Login
Internal Call Coverage #02#212#234#	#02#S#R#	Go to Voice Mail
External Call Coverage #03##234#	#03##R#	Go to Voice Mail
Internal Call Coverage 2 digit MB (No source MB) #02#10#23#	#02#XX#R#	Go to Voice Mail
Internal Call Coverage 3 digit MB (No source MB) #02#777#234#	#02#XXX#R#	Go to Voice Mail
Internal Call Coverage 4 digit MB (No source MB) #02#8234#2345#	#02#XXXX#R#	Go to Voice Mail
Leave Word Calling #05#212#234	#05?	Go to AA get Mailbox
Message Indicator Refresh #06###	#06###	Go to AA get Mailbox
Maintenance Return to Service #07###	#07###	Go to AA get Mailbox
Maintenance Remove from Service #08##256#	#08?	Go to AA get Mailbox
PBX is in day mode #10###	#10?	Go to AA get Mailbox
PBX is in night mode #11###	#11?	Go to AA get Mailbox

CHAPTER 10

Defining Phone System Signals

For M2000 to process calls correctly, it must be able to recognize the specific signals of the phone system to which it is connected.

Because ring and busy signals can differ between phone systems, you must run a call analysis program to enable the system to learn the signals. Call Analysis is the only call analysis program supported for the system.

Procedures in this chapter will help you to:

- Determine if you should run Call Analysis
- Meet the requirements for running the Call Analysis utility
- Run Call Analysis for Rhetorex boards
- Run Call Analysis for Dialogic boards
- Re-run Call Analysis, if necessary

Determining If You Should Run Call Analysis

In most cases, you must run Call Analysis when you are installing a system. There are instances, however, when you are not required to run it.

For some phone switches, default tone tables are downloaded when the Integrator utility is run. In this case, you should not run Call Analysis. Refer to the Configuration Note for the installed phone switch to determine whether default tone tables are downloaded.

You must run Call Analysis if:

- You are installing a new system for which Call Analysis has not already been run.
- You are upgrading an existing system.

You may not need to run Call Analysis if:

- You are running a special integration, such as a D/42-NS or D/42-SX. Consult the Configuration Note included with the system to determine if you need to run Call Analysis for the type of board you are installing.
- You are adding the Fax Solution utility to the system. The fax tone table that ships with the system is the industry-standard tone for a fax machine. If you find that the fax machine uses tones that do not fall within an acceptable variance for the fax tone standard, contact a Lucent Technologies technical support representative to help you increase the fax tone variance.

You do not need to run Call Analysis if:

- You are installing a new system for which Call Analysis has already been run.
- You are installing a new voice board in an existing system.
- You are upgrading to add additional ports to the system.
- You set up the system to only perform blind transfers.

Meeting the Requirements to Run Call Analysis

Before you run Call Analysis on the system, determine if the system meets the following requirements:

- The system has access to at least one extension from the phone system. Access to two extensions is preferred.
- The extensions you use to run Call Analysis are not in a hunt or rollover group.
- No one can access the extensions used to run Call Analysis while it is running.
- Auto Answer, Call Forwarding, and Camp-On features are deactivated while you run Call Analysis.

Running the Call Analysis Utility for Rhetorex Boards

You can run Call Analysis for Rhetorex boards in auto mode or manual mode:

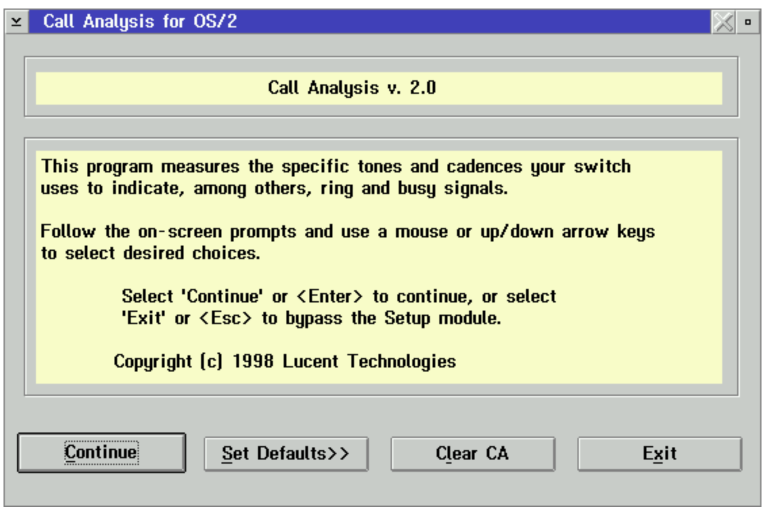
- When you run Call Analysis in auto mode, the voice board controls the extension status, which determines whether the line is on or off hook. You must have at least two extensions to run Call Analysis automatically.
- When you run Call Analysis in manual mode, you only need to use one extension, for which you control the status.

You determine whether Call Analysis is run in auto mode or manual mode when you specify the channels to use when you start Call Analysis. Depending on the phone system, you may need to run the Call Analysis utility in a specific mode. For additional information, consult the switch's Configuration Note.

Running Call Analysis in Auto Mode for Rhetorex Boards

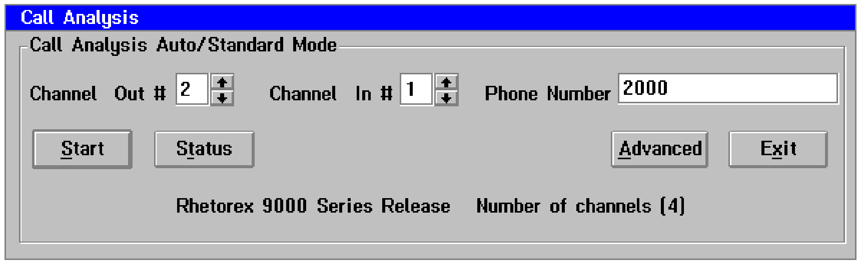
To run Call Analysis in auto mode for Rhetorex boards:

1. The system automatically launches Call Analysis and displays the Call Analysis for OS/2 dialog box when you restart the PC after installation.



The Set Defaults button on the Call Analysis for OS/2 dialog box accesses the Call Analysis Options dialog box, which controls how Call Analysis is run. If the system includes the Fax Solutions module, you must change the Fast Busy selection in this dialog box to the Do Not Check option before you run Call Analysis. This change will allow M2000 to recognize fax tones that are emitted as callers select faxing options. Unless the Fax Solutions module is included with the system, do not change the Fast Busy or any other parameter setting on the Call Analysis Options dialog box without specific instructions to do so from a Lucent Technologies technical support representative.

2. Click Continue. The system initializes Call Analysis and checks for active lines. The Call Analysis dialog box displays.



3. In the Channel Out # field, enter the number of the channel you want the system to call out from for Call Analysis.

4. In the Channel In # field, enter the number of the channel you want the system to call for Call Analysis.

5. Plug an extension into the port you specified in the Channel Out # field.

6. Plug an extension into the port you specified in the Channel In # field.

7. In the Phone Number field, enter the extension number of the port connected to the Channel In #.

8. To begin Call Analysis, click Start. After you select Start, you cannot stop Call Analysis. The Call Analysis Status dialog box displays and M2000 automatically runs Call Analysis tests for busy, ring, and fast busy. When the tests are complete, the system displays the message “Call Analysis Complete.” In most cases, standard analysis passes all tests.

9. If the analysis tests fail for any or all of the signals, check that the ports are valid and re-run Call Analysis in manual mode so that you can control the hook state. If the analysis fails again, contact a Lucent Technologies technical support representative to guide you through Advanced Call Analysis, if necessary.

10. To close the Call Analysis Status dialog box, click OK. The Call Analysis for OS/2 dialog box displays.

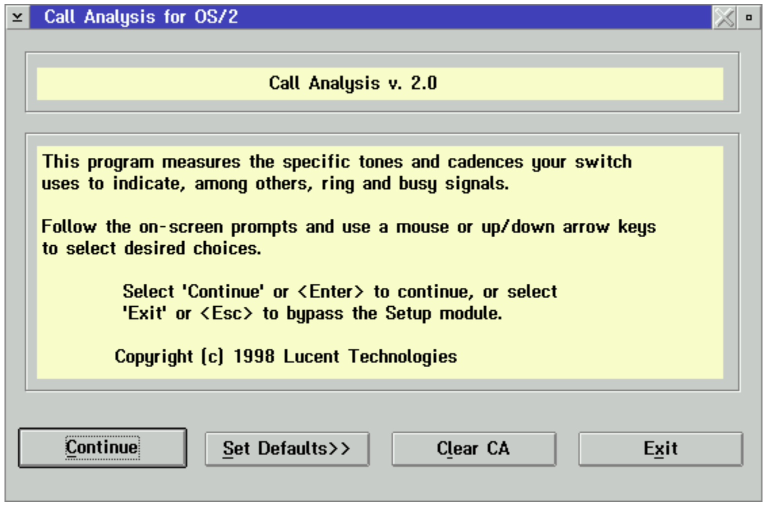
11. To close the Call Analysis for OS/2 dialog box, click Exit.

12. Shut down OS/2 and restart the PC.

Running Call Analysis in Manual Mode for Rhetorex Boards

To run Call Analysis in manual mode for Rhetorex boards:

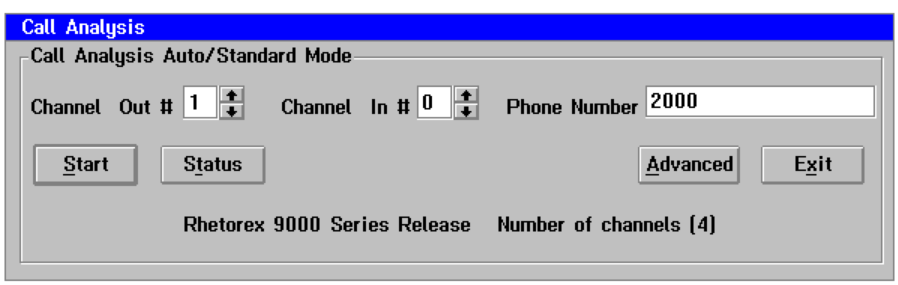
1. The system automatically launches Call Analysis and displays the Call Analysis for OS/2 dialog box when you restart the PC after installation.



The Set Defaults button on the Call Analysis for OS/2 dialog box accesses the Call Analysis Options dialog box, which controls how Call Analysis is run. If the system includes the Fax Solutions module, you must change the Fast Busy selection in this dialog box to the Do Not Check option before you run Call Analysis. This change will allow M2000 to recognize fax tones that are emitted as callers select faxing options. Unless the Fax Solutions module is included with the system, do not change the Fast Busy or any other parameter setting on the Call Analysis Options dialog box without specific instructions to do so from a Lucent Technologies technical support representative.

---

2. Click Continue. The system initializes Call Analysis and checks for active lines. The Call Analysis dialog box displays.

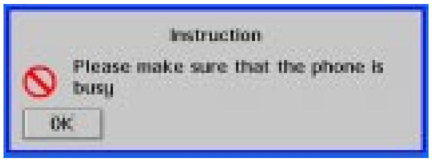


3. In the Channel Out # field, enter the number of the channel you want the system to call out from for Call Analysis.

4. In the Channel In # field, enter 0 to indicate that you are running Call Analysis in manual mode.

5. Plug an extension into the port you specified in the Channel Out # field.

6. In the Phone Number field, enter the number of the extension you want Call Analysis to dial. Make sure that the phone connected to this extension is not forwarded and that it does not have multiple appearances.
7. To begin Call Analysis, click Start. The Call Analysis Status dialog box displays and the system begins the test for busy by displaying the message "Please make sure that the phone is busy."

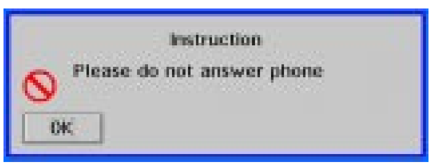


8. Verify that the extension you entered in the Channel In # field is busy by creating a talk path to another phone. Dialing another number ensures that there is not a tone change or time-out on the line.

   The system checks for busy by taking the Channel Out # off hook and dialing the extension you entered in the Phone Number field. After the system establishes the busy cadence, it runs the test for busy five times.

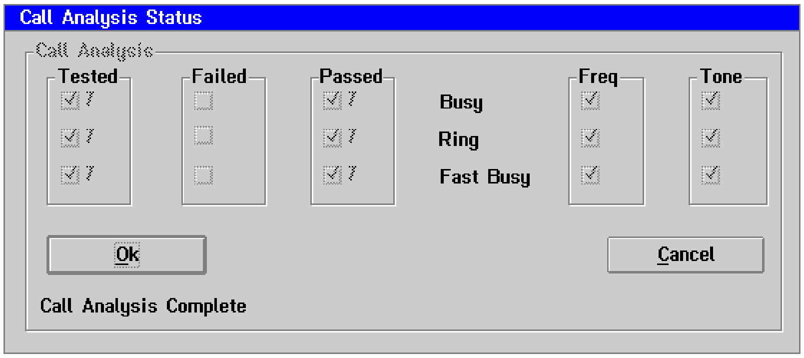
   When the test for busy is complete, the system displays a dialog box with the message "Please hang up now."

9. Return the handset and click OK to close the dialog box. The system then begins the test for ring by displaying the message "Please do not answer phone."



10. Do not lift the handset while the system is running the test for ring. The system dials the extension you specified in the Phone Number field approximately eight times to establish a ring cadence. This test is also run five times. After the ring test is complete, the system runs the test for fast busy. Unless you were advised by a Lucent Technologies technical support representative to change the Fast Busy option on the Call Analysis Options dialog box, the system runs the test for fast busy by dialing an invalid extension number.

When the tests are complete, the system displays the message "Call Analysis Complete." In most cases, standard analysis passes all tests.



11. If the analysis tests fail for any or all of the signals, check that the ports are valid and re-run Call Analysis. If the analysis fails again, contact a Lucent Technologies technical support representative, who can help you determine the problem and guide you through Advanced Call Analysis, if necessary.

12. To close the Call Analysis Status dialog box, click OK. The Call Analysis for OS/2 dialog box displays.

13. To close the Call Analysis for OS/2 dialog box, click Exit.

14. Shut down OS/2 and restart the PC.

Running the Call Analysis Utility for Dialogic Boards

You can run Call Analysis for Dialogic boards in auto mode or manual mode:

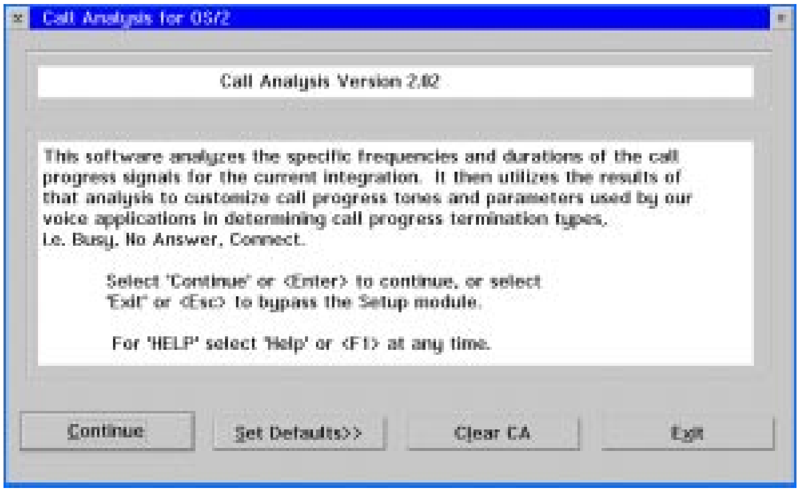
- When you run Call Analysis in auto mode, the voice board controls the extension status, which determines whether the line is on or off hook. You must have at least two extensions to run Call Analysis automatically.
- When you run Call Analysis in manual mode, you only need to use one extension, for which you control the status.

You determine whether Call Analysis is run in auto mode or manual mode when you specify the channels to use when you start Call Analysis. Depending on the phone system, you may need to run the Call Analysis utility in a specific mode. For additional information, consult the switch's Configuration Note.

Running Call Analysis in Auto Mode for Dialogic Boards

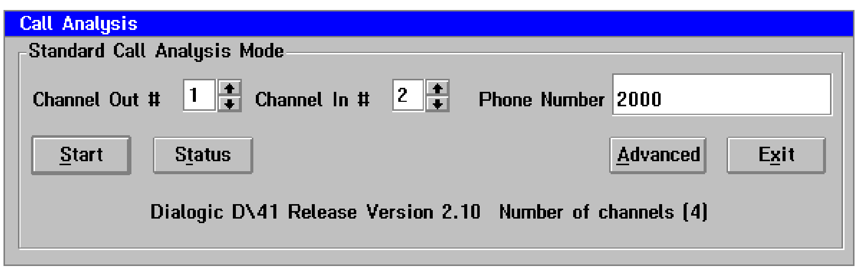
To run Call Analysis in auto mode for Dialogic boards:

1. The system automatically launches Call Analysis and displays the Call Analysis for OS/2 dialog box when you restart the PC after installation.



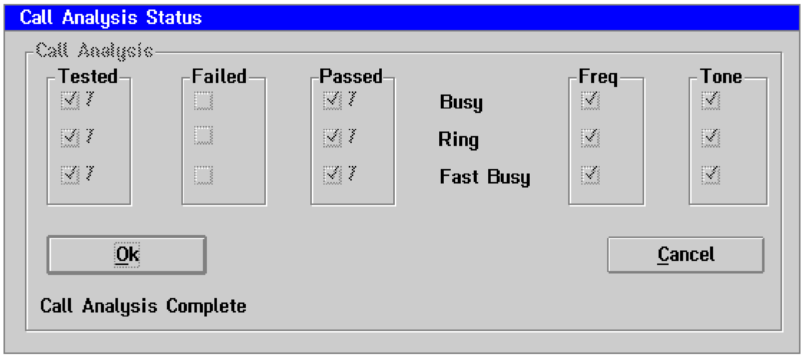
2. Click Continue. The system initializes Call Analysis and checks for active lines. The Call Analysis dialog box displays.

The Set Defaults button on the Call Analysis for OS/2 dialog box accesses the Call Analysis Options dialog box, which controls how Call Analysis is run. Do not change the default parameters unless instructed to do so by a Lucent Technologies technical support representative.



3. In the Channel Out # field, enter the number of the channel you want the system to call out from for Call Analysis.
4. In the Channel In # field, enter the number of the channel you want the system to call for Call Analysis.
5. Plug an extension into the port you specified in the Channel Out # field.
6. Plug an extension into the port you specified in the Channel In # field.
7. In the Phone Number field, enter the extension number of the port connected to the Channel In #.

8. To begin Call Analysis, click Start. After you select Start, you cannot stop Call Analysis. The Call Analysis Status dialog box displays and automatically runs Call Analysis tests for busy, ring, and fast busy.



   When the tests are complete, the system displays the message "Call Analysis Complete." In most cases, standard analysis passes all tests.

9. If the analysis tests fail for any or all of the signals, check that the ports are valid and re-run Call Analysis in manual mode so that you can control the hook state. If the analysis fails again, contact a Lucent Technologies technical support representative to help you determine the problem and guide you through Advanced Call Analysis, if necessary.

10. To close the Call Analysis Status dialog box, click OK. The Call Analysis for OS/2 dialog box.

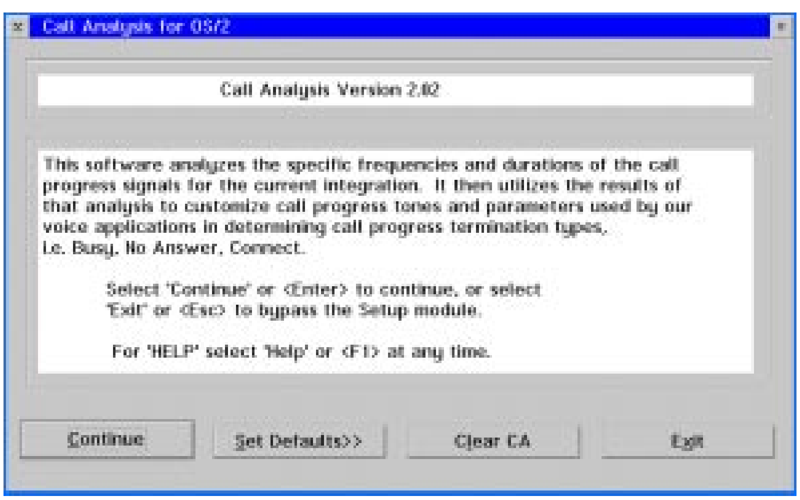
11. To close Call Analysis, click Exit.

12. Shut down OS/2 and restart the PC.

Running Call Analysis in Manual Mode for Dialogic Boards

To run Call Analysis in manual mode for Dialogic boards:

1. The system automatically launches Call Analysis and displays the Call Analysis for OS/2 dialog box when you restart the PC after installation.



2. Click Continue. The system initializes Call Analysis and checks for active lines. The Call Analysis dialog box displays.

The Set Defaults button on the Call Analysis for OS/2 dialog box accesses the Call Analysis Options dialog box, which controls how Call Analysis is run. Do not change the default parameters unless instructed to do so by a Lucent Technologies technical support representative.

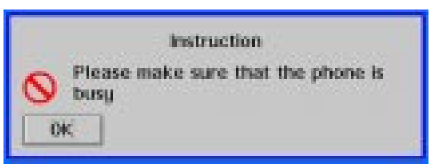
3. In the Channel Out # field, enter the number of the channel you want the system to call out from for Call Analysis.

4. In the Channel In # field, enter 0 to indicate that you are running Call Analysis in manual mode.

5. Plug an extension into the port you specified in the Channel Out # field.

6. In the Phone Number field, enter the number of the extension you want Call Analysis to dial. Make sure that the phone connected to this extension is not forwarded and that it does not have multiple appearances.

7. To begin Call Analysis, click Start. The Call Analysis Status dialog box displays. The system begins the test for busy by displaying the message "Make sure that the phone is busy."

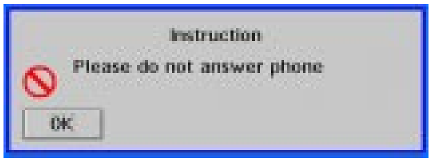


8. Verify that the extension you entered in the Channel In # field is busy by creating a talk path to another phone. Dialing another number ensures that there is not a tone change or time-out on the line.

   The system checks for busy by taking the Channel Out # off hook and dialing the extension you entered in the Phone Number field. After the system establishes the busy cadence, it runs the test for busy seven times.

   After the test for busy is complete, the system displays a dialog box with the message "Please hang up now."

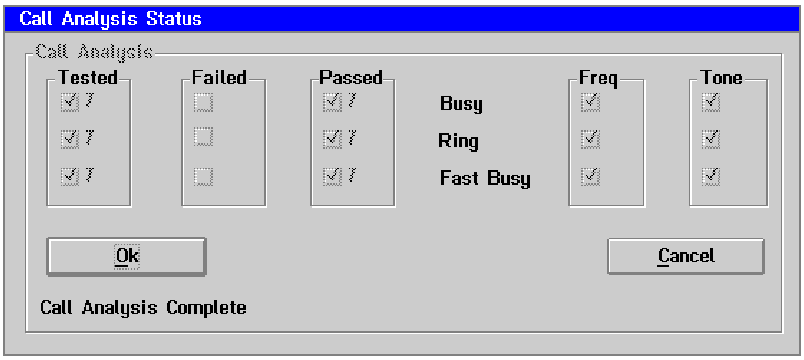
9. Return the handset and click OK to close the dialog box. The system then begins the test for ring by displaying the message "Please do not answer phone."



10. Do not lift the handset while the system is running the test for ring. The system dials the extension you specified in the Phone Number field approximately eight times to establish a ring cadence. This test is also run seven times.

    After the ring test is complete, the system runs the test for fast busy. Unless you were advised by a Lucent Technologies technical support representative to change the Fast Busy option on the Call Analysis Options dialog box, the system runs the test for fast busy by dialing an invalid extension number.

    When the tests are complete, the system displays the message "Call Analysis Complete." In most cases, standard analysis passes all tests.



11. If the analysis tests fail for any or all of the signals, check that the ports are valid and re-run Call Analysis. If the analysis fails again, contact a Lucent Technologies technical support representative, who can help you determine the problem and guide you through Advanced Call Analysis, if necessary.

12. To close the Call Analysis Status dialog box, click OK. The Call Analysis for OS/2 dialog box displays.

13. To close the Call Analysis for OS/2, click Exit.

14. Shut down OS/2 and restart the PC.

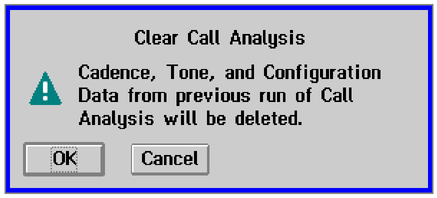
Re-Running the Call Analysis Utility

You may have to run Call Analysis again if you entered an incorrect extension or channel number the first time or if a Lucent Technologies technical support representative advises you to modify Advanced parameters because the initial analysis failed.

To re-run Call Analysis:

1. Double-click the Call Analysis icon in the Lucent Technologies folder. The Call Analysis for OS/2 dialog box displays.

2. If you want to clear the previous Call Analysis results, click the Clear CA button on the Call Analysis for OS/2 dialog box. The system prompts you to confirm the clear command. Each time you run Call Analysis, the results from the new tests are combined with previous results to calculate the acceptable tone ranges.



3. To clear the previous analysis results, click OK. The system deletes the files created when Call Analysis was previously run.
4. Select Continue from the Call Analysis for OS/2 dialog box. The Call Analysis Status dialog box displays.
5. Perform the Call Analysis. For additional information, refer to one of the previous procedures to run the Call Analysis utility for the voice boards installed in the PC.

CHAPTER 11

Establishing a Serial Integration

Some phone systems require you to establish a serial integration between M2000 and the phone switch. The Serial Integration utility takes proprietary information sent from the phone system through M2000 PC's serial port, interprets it, and passes it to the system. The utility is provided on a separate disk that you install after you install the system software. Because Serial Integration is an optional utility, the sentinel controls access to it. Do not attempt to run this utility unless you have a Serial Integration disk.

Steps provided in this chapter will help you to:

- Run the Serial Integration utility
- Configure the Serial Integration to support multiple-prefix Centrex systems

Procedures in this chapter assume that the hard drive on which the system is installed is drive C, that any additional hard drive that may be installed is D, and that he disk drive is A. Drive designations on the specific PC on which you are working may vary. Confirm the appropriate drive letters, when necessary, in procedures provided in this chapter.

Running the Serial Integration Utility

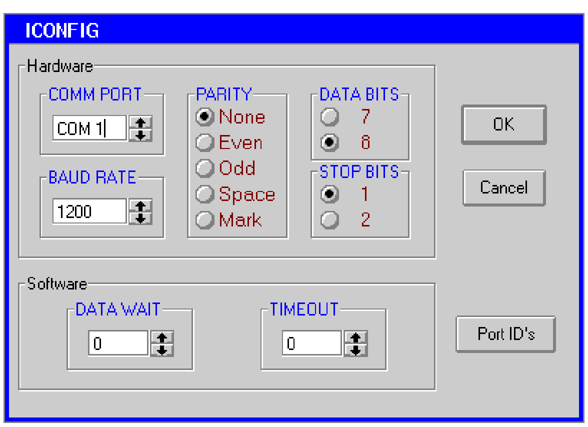
There are two types of Serial integrations:

- Generic Simplified Message Desk Interface (SMDI), which works for any switch that uses standard Bellcore serial information or for Centrex systems
- Switch-specific integrations, which are software communications packages that are produced for specific switches, such as MCI Link for the NEC 2400 and 2000 IVS, and DMID for the Northern Telecom Meridian-1

The phone system dictates whether you must use an SMDI or Switch-Specific Integrations disk. Consult the phone system's Configuration Note before beginning Serial Integration to ensure you are using the correct disk.

To run the Serial Integration utility:

1. Shut down M2000, if it is running.
2. If you are running the UPS Integration utility, you must shut it down because there is a file shared by the Serial Integration and the UPS Integration utilities. To close the UPS program, click the UPS icon once and select Close. After Serial Integration is installed, the UPS program automatically reloads when you restart the M2000 PC.
3. Place the Serial Integration disk into the disk drive.
4. Open an OS/2 window.
5. From the C:\ prompt, type `A:INSTALL` and press <ENTER>. An informational dialog box displays.
6. Click Continue to proceed with the installation.
7. Select the drive on which M2000 is installed and click OK.
8. Click Yes if you want to install the files to the \CVR directory. The files are copied to the designated directory. A dialog box displays prompting you to specify whether you want serial integration to load automatically upon boot-up.
9. Click Yes if you want serial integration to load automatically. The ICONFIG dialog box displays. The values on the ICONFIG dialog box depend on the system configuration and are strictly defined if the M2000 system connects directly to a Central Office (CO) or switch. Consult the Configuration Note to determine the correct settings for the switch.



10. In the Comm Port field, specify the serial port where the data link with the switch is to be established.

11. Select the Baud Rate, which is the speed at which the data is transferred.

12. Under Parity, select the algorithm used to calculate the parity bit in a word.

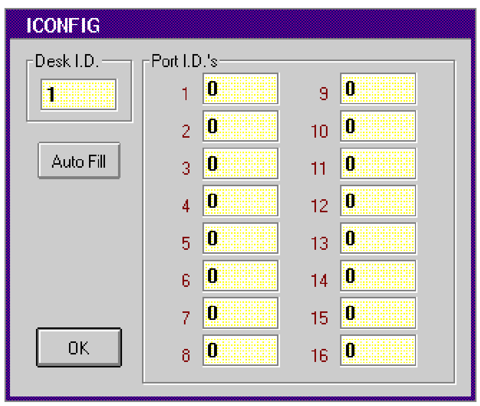
13. Under Data Bits, select the number of bits in each character (word).

14. Under Stop Bits, select the number of bits used to signify the end of the word (byte).

15. In the Data Wait field, enter the number of cycles the system is to hold data before sending it to M2000. This parameter should be used on sites where data arrives before the call.

16. In the Time Out field, enter the intercharacter timeout period, which determines the amount of time M2000 is to wait between characters before assuming a bad or failed packet and aborting. If the system receives ring voltage, this parameter also determines the number of cycles the system is to wait for data before answering anyway.

17. To identify the switch's voice ports, select Port IDs. The Port ID dialog box displays.



18. In the Desk I.D. field, enter the number that identifies the M2000 system. If you are using Generic SMDI in a Centrex application, you must get the Desk ID from the CO. M2000 does not use this field if you are using an RS-232 integration.

19. To complete the Port ID's fields, refer to the Configuration Note for the switch connected to M2000.

20. To save the port assignments, click OK.

21. To complete installation, click OK.

22. Remove the Serial Integration utility disk.

23. To close the OS/2 window, type `EXIT` and press <ENTER>.

24. Shut down OS/2 and restart the PC.

You can change the ICONFIG or Port ID settings at any time. To access the ICONFIG dialog box, double-click the Integration Configuration icon in the Lucent Technologies folder.

Supporting Multiple-Prefix Centrex Systems

On multiple-prefix Centrex systems using the automatic station login (direct subscriber login to their mailbox) or message indicator features, M2000 must determine whether an incoming call is from an internal or external extension.

To define the internal prefix/extension combinations for the M2000 system, you must create one or both of the following files:

- SMDI.TPT–if you are activating the automatic station login feature
- SMDI.PFX – if you are configuring the message indicators

You are not required to create these files if you are using a single-prefix Centrex configuration or if you are using a multiple-prefix Centrex, but are not using the automatic station login or message indicator features.

Creating the SMDI.TPT File

On Centrex systems with multiple prefixes, the system must determine whether a call is from an internal extension to properly process the call as an automatic station login. If the system cannot determine whether a call is internal or external, external callers could mistakenly be placed at a mailbox login prompt instead of the main greeting. The SMDI.TPT file allows the system to differentiate between calls from internal extensions and external callers.

You must create the SMDI.TPT file manually using a standard OS/2 editor. The file must consist of variable-length ASCII strings called Target Prefix Strings. Target Prefix Strings represent the prefix information for internal extensions.

See Preinstallation Configuration Worksheets

Refer to the Call Flow Sheet for a list of prefixes.

When a call is received, the calling telephone field of the serial integration packet is compared to the Target Prefix Strings defined in the file. The number of digits in each Target Prefix String determines how many digits are compared.

If M2000 finds a match to one of the Target Prefix Strings:

1. The call is considered an internal call.
2. The mailbox number is extracted by removing the Number of Digits in a Mailbox Number, specified in System Setup, starting from the right.
3. The extracted mailbox number is then passed to M2000 with the correct integration code—in this case, the Automatic Station Login code.

If the calling digits do not match any of the Target Prefix Strings, the call is treated as an outside call and the caller hears the main greeting.

To create the SMDI.TPT file:

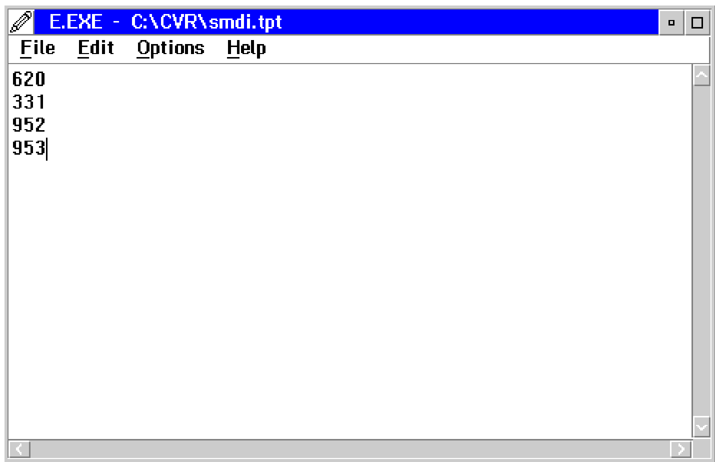
1. Shut down M2000, if it is running.
2. Open an OS/2 window.

3. From the \CVR directory prompt, type `E SMDI.TPT` and press <ENTER>. A blank OS/2 Editor window displays.

4. Enter the first Target Prefix String and press <ENTER>. Each string can be up to 10 characters, which is the maximum currently supported by Centrex. The minimum length is 1 character. Each character must be a single digit (0-9). Characters other than digits are considered invalid and generate an error message, such as, “The TPS on line #1 contains invalid characters.”

   It is important to set up SMDI.TPT specifically for the type of Centrex application. If you use a 7-digit Centrex implementation, do not include the area code in the prefix information.

5. Repeat step 4 for each Target Prefix String. You can define up to 25 Target Prefix Strings in the SMDI.TPT file. The strings do not have to be in any certain order or the same length.



6. To save the file, select Save from the File menu. The first time you save the SMDI.TPT file, the Save Notification dialog box displays.

7. Click Type. The Type dialog box displays.

8. Select Plain Text, then click Set. The file is saved as a plain text file.

9. To exit the editor, click the icon in the upper-left corner of the window and select Close.

10. To close the OS/2 window, type `EXIT` and press <ENTER>.

11. To load the file, shut down OS/2 and restart the PC. When the Serial Integration driver is loaded during bootup, the SMDI.TPT file is loaded into memory and the Target Prefix Strings are used to compare against the incoming strings to determine if the dialing number is internal or external. If the file is not found, a warning is logged and no comparisons are performed.

Example SMDI.TPT File

The following scenarios are provided as examples. The digits being compared in these scenarios are enclosed in brackets.

For the first two examples, a 10-digit Centrex implementation is used, the number of digits in a mailbox number is 4 digits, and the following SMDI.TPT file is used:

```
555111
555112
555113
```

In the third example, a 7-digit Centrex implementation is used, the Number of Digits in a Mailbox is set to 4, and the following SMDI.TPT file is used:

```
111
112
113
```

Sample SMDI.TPT File 1

If the incoming string is 5551112323:

- The system compares [555111]2323 to the first entry in SMDI.TPT [555111] and finds a match.
- The 4 digits for the mailbox (2323) are extracted and passed to the system as an automatic station login for mailbox 2323.

Sample SMDI.TPT File 2

If the incoming string is 5552224444:

- The system compares [555222]4444 to the first entry in SMDI.TPT [555111] and does not find a match.
- The system compares [555222]4444 to the second entry in SMDI.TPT [555112] and does not find a match.
- The system compares [555222]4444 to the last entry in SMDI.TPT [555113] and does not find a match.
- The call is determined to be an external call, and the caller is placed at the Main greeting.

Sample SMDI.TPT File 3

If the incoming string is 1136789:

- The system compares [113]6789 to the first entry in SMDI.TPT [111] and does not find a match.
- The system compares [113]6789 to the second entry in SMDI.TPT [112] and does not find a match.
- The system compares [113]6789 to the last entry in SMDI.TPT [113] and finds a match. The four digits for the mailbox (6789) are extracted and passed to the system as an automatic station login for mailbox 6789.

While there can be duplicate extension numbers on a single system (multiple prefixes with the same extension number), mailbox numbers must be unique. For example, while there can be an extension 1200 on prefixes 511 and 512, there cannot be two mailboxes numbered 1200 on the same M2000 system.

You can edit the SMDI.TPT file at any time. M2000 must be restarted, however, for the changes you make to be recognized.

Creating the SMDI.PFX Table

Some Centrex applications require prefix information when sending message indicator Activation and Deactivation codes.

In a single-prefix application, you can add the `-p`*`xxx`* switch, where *xxx* represents the prefix to the `START /C /MIN SMDI.EXE` statement in the RUNVM.CMD file. For example, on a system where a single prefix of 301 is used, you can add -p301 to the line so it reads `START /C /MIN SMDI.EXE -P301`.

In a multiple-prefix application, however, there must be a method of determining the correct prefix information to insert in the outgoing Centrex message indicator packet.

In this case, you must create a SMDI.PFX file using a standard OS/2 editor to determine the correct prefix information. You can use the `-p`*`xxx`* switch in a multiple-prefix application to specify a default prefix. If there is one prefix associated with the majority of Centrex extensions, specify that prefix in the RUNVM.CMD file and include the other prefixes in the SMDI.PFX file.

When using SMDI.PFX file information to create a message indicator packet, the digits are sent as specified in the file; there is no error-checking or padding. For example, if you are using 7-digit Centrex, make sure that the number of digits in the prefix and extension combination is exactly 7; otherwise, the packet will be incorrect.

The SMDI.PFX file should contain three columns:

- The first two columns, Starting Mailbox Number and Ending Mailbox Number, must identify a mailbox number, or a range of mailbox numbers, that exist son the system. The Ending Mailbox Number is optional if you are identifying a single mailbox number.
- The third column must identify the corresponding prefix information for the mailbox, or range of mailboxes, identified in the first two columns. If you are using a 7-digit Centrex application, do not include the area code in the prefix.

See Preinstallation Configuration Worksheets

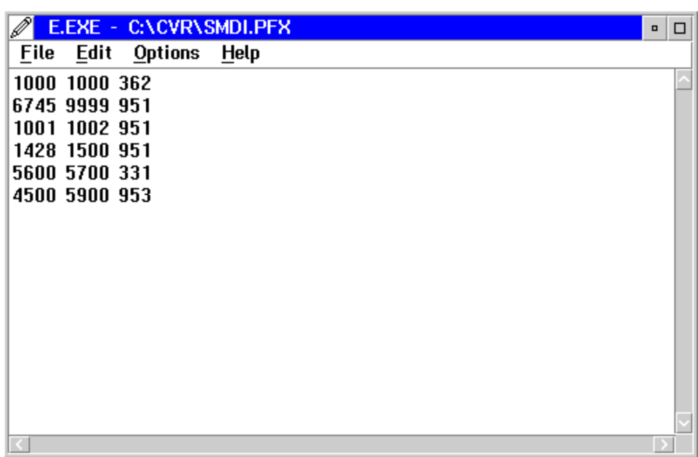
Refer to the Call Flow Sheet for a list of prefixes.

When the system sends a message indicator request, the mailbox number portion of the string is compared to the Starting and Ending Mailbox Numbers defined in the SMDI.PFX file:

- If a match is found, the mailbox number and prefix combination is placed in a Centrex message indicator packet and sent across the serial port.
- If no match is found, the current message indicator prefix is used.
- If no prefix is defined, the system looks to the RUNVM.CMD file to determine if the `-pxxx` switch is present. If no prefix is specified, the Centrex request packet is sent with the extension number only.

To create the SMDI.PFX file:

1. Shut down M2000, if it is running.
2. Open an OS/2 window.
3. At the \CVR directory prompt, type `E SMDI.PFX` and press <ENTER>. A blank OS/2 Editor window displays.
4. Enter the Starting Mailbox Number in the first column. Each entry in these fields can be up to 10 characters (the maximum currently supported by Centrex). Each character must be a digit from 0-9; characters other than digits are considered invalid and generate an error message.
5. Insert a space or a tab to separate the first and second columns.
6. If it is the first mailbox in a range of mailboxes, enter the Ending Mailbox Number in the range in the second column. The Ending Mailbox Number is not required if you are specifying an individual mailbox. Entries can vary in length, but must fit on a single line. Duplicate or overlapping mailbox numbers are not permitted.
7. Insert a tab or space to separate the second and third columns.
8. Enter the corresponding prefix for the mailbox or range of mailboxes.
9. Repeat steps 4-8 for each entry, using a carriage return between lines. The entries do not have to be in any particular order. There is no limit to the number of entries that can be included in the file. To minimize processing time, however, you should use ranges of mailboxes rather than individual mailbox entries whenever possible.



10. To save the file, select Save from the File menu. If OS/2 prompts you to select a file type to associate with the new file, click Plain Text.
11. To exit the editor, click the icon in the upper-left corner of the window and select Close.
12. To close the OS/2 window, type `EXIT` and press <ENTER>.
13. To load the file, shut down OS/2 and restart the PC.

Example SMDI.PFX File

The following sample file illustrates how you can set up the SMDI.PFX for a system using a 10-digit Centrex application. In the sample, the system has three prefixes (709513, 709514, 709515). Prefix 709513 is associated with mailboxes 7000 through 7500; prefix 709514 is associated with mailbox 7501; and prefix 709515 is associated with mailboxes 7600 through 7650. The following SMDI.PFX file is used:

```
7000        7500        709513
7501        709514
7600        7650        709515
```

The second entry above can also be specified as:

```
75017501    709514
```

You can edit the SMDI.PFX file at any time. The system must, however, be restarted for the changes you make to be recognized.

Notes:

CHAPTER 12

Integrating with an Uninterruptible Power Supply

During a power failure, the M2000 system files and the PC can be severely damaged. Attaching an Uninterruptible Power Supply (UPS) provides protection against failures of a relatively short duration. Note, however, if there is a major power failure that exceeds the life of the UPS's battery, the PC can lose power and the M2000 system and PC can be damaged.

The UPS utility enables M2000 to integrate with the UPS's status and recognize a potential interruption in operation before it occurs. The UPS utility can shut down M2000 to maintain system integrity, and then restart M2000 when power returns.

Procedures in this chapter will help you to:

- Understand how the UPS utility works
- Meet the requirements for running the UPS utility
- Run the UPS utility
- Run the UPS utility after system installation
- Check the UPS's current operating state

Understanding How UPS Integration Works

Most UPSs have three states of operation:

- **Normal Operation** – The UPS is receiving power from the local utilities company through the electrical outlet.
- **Power Out** – The UPS is not receiving power from the local utilities company, and the UPS is supplying power to the PC.
- **Low Battery** – The UPS is still supplying power to the PC, but the battery is low and the UPS may cease to supply power to the PC at any moment.

When you run the UPS utility, the system learns how to recognize these three states of operation.

After the UPS is integrated, if a power failure occurs, the UPS monitor recognizes that the UPS is supplying power to the system, and normal operation continues. If the power failure is lengthy and the UPS reaches a low-battery state, M2000 immediately performs a shutdown. All idle and occupied ports are disabled immediately. This procedure prevents a shutdown with open files, which can cause data corruption.

Because the UPS monitor still runs after M2000 is shut down, UPS.EXE also monitors for the restoration of power. After power returns to the PC and the UPS recognizes a normal operating state, UPS.EXE signals the RUNVM.CMD file to restart M2000. This minimizes system downtime.

Meeting the Requirements for Running the UPS Integration Utility

The following requirements must be met to run UPS integration:

- The UPS you use must have a serial port connection.
- A serial port on the PC must be dedicated to the UPS. The M2000 system configuration (modem, serial integration, mouse, etc.) may require you to purchase an additional serial port card.
- For the UPS utility to monitor the UPS, it must run in the background, independent of M2000. During M2000 software installation, the prompt, “Do you want the UPS monitor to load automatically upon boot up?” displays. If you are going to run UPS integration during installation, answer Yes to load the UPS.EXE file upon bootup. When auto-loaded, UPS.EXE is executed and stays resident until the PC is restarted.
- Some M2000 systems use a serial integration to the phone system (for example, Voice Bridge, DMID). You cannot run the Serial Integration utility, however, while the UPS monitor is active, because there is a common executable file (COMM.DLL) shared by the utilities. If you run the UPS Integration utility and M2000 is instructed to run UPS automatically upon bootup, the UPS constantly runs in the background. Consequently, if you attempt to run the Serial Integration utility after UPS integration, the necessary file is not accessible to run the Serial Integration utility.

There are two ways to avoid this file-sharing problem:

- Run the Serial Integration utility before running the UPS Integration utility.
- If you need to run the Serial Integration utility after the UPS integration has been run, close the UPS Monitor before running the Serial Integration utility. To do this, click the UPS icon once and select Close. After Serial Integration installation is complete, perform a shutdown and restart the PC. The UPS automatically starts upon bootup.

Running the UPS Integrator Utility

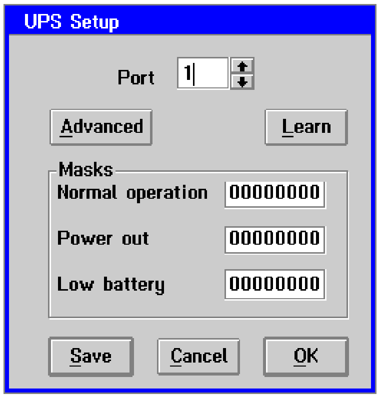
Use the following procedure to integrate the UPS with M2000.

By default, the UPS Integrator only learns the normal and power-out states and interprets any mask (an 8-digit binary image that represents the state of operation) that is not recognized as either a normal or power-out state as a low-battery state and handles it accordingly. You can change the default so that the system attempts to learn the UPS's low-battery state. This ensures that the system performs an automatic shutdown only when a true low-battery state is reached. However, you should only change the default if you know that the UPS has a consistent low-battery mask. Consult the manual that came with the UPS for more information.

Also, the UPS may require a signal to indicate that the system is monitoring UPS operation. This signal can come from the DTR (data terminal ready) or RTS (request to send) pin on the PC's serial port. You can configure the UPS Integrator utility to set the proper pin to signal the UPS. By default, the Request to Send pin is set to signal the UPS. If the UPS requires the DTR pin to signal the UPS, or if you do not want any signal sent, you can change the default. Before doing so, however, consult the UPS documentation to determine if you should enable one or both of these options.

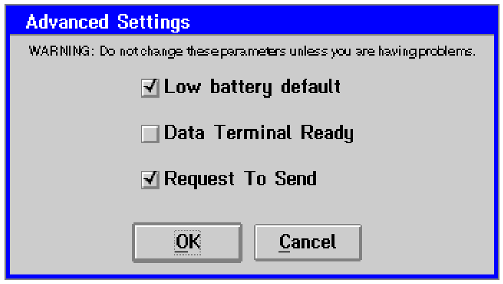
To run the UPS Integrator utility immediately following M2000 installation:

1. During M2000 installation, select UPS from the Installation Setup utility dialog box. The UPS Integrator dialog box displays.
2. From the Options menu, select Setup. The UPS Setup dialog box displays.



3. If you do not want the system to attempt to learn the UPS's low-battery state and you do not want to change the pin-signaling default, proceed with step 4. If you do want the system to attempt to learn the UPS's low-battery state or you do want to change the pin-signaling default, complete the following:

   a. Click Advanced. The Advanced Settings dialog box displays.

   b. If you want the UPS Integrator to attempt to learn the UPS's low-battery mask, disable the Low Battery Default option (remove the check from the checkbox). This enables the UPS Integrator to attempt to learn the UPS's low-battery state.

   c. If you want to change the pin-signaling setting, change the Data Terminal Ready and Request to Send options as appropriate for the UPS.

   d. To save the settings, click OK. The UPS Setup dialog box displays.

4. In the Port field, enter the serial port to which you connected the UPS.

5. If you know the Normal Operation, Power Out, and Low Battery masks of the UPS connected to the M2000 PC, you can manually enter them in their respective fields under Masks on the UPS Setup dialog box, then proceed to step 9. Refer to the UPS manual to determine if the masks are provided. If you do not know the masks for the UPS, click Learn to start the Learn mode, which enables the UPS monitor to establish the UPS signals. The system displays the message, "Begin Learn Mode." You can select Cancel at any time to abort the Learn process.

6. The system displays a message prompting you to verify that the cable from the UPS to the serial port is securely attached. Click OK. The system displays the message "Learn normal state" as it learns the mask for the UPS's normal operating state.

   After the system learns the normal operating state, it displays the message "Disconnect power from the UPS." This allows the system to emulate a power out condition.

7. Remove the UPS power cord from the electrical outlet, then click OK. The system then learns the power out state. If you did not change the default low-battery setting in step 3, proceed to step 8.

   If the Low Battery Default option is disabled on the Advanced Settings dialog box, after the system learns the mask for the power out state, it continues running off the UPS until the UPS reaches a low-battery state. There is a delay between learning the power out state and learning the low-battery state mask as the system waits for the power on the UPS to diminish.

8. After the system learns the necessary states, the message "Reconnect power to UPS" displays. Reconnect the UPS power cord to the electrical outlet, then click OK. A dialog box displays the message "End Learn Mode." After Learn mode is complete or you manually enter the UPS's masks, the system constantly monitors the current

mask and compares it to the recognized masks for each state to determine the current state of UPS operation.

9. To close the dialog box, click OK. The UPS Setup dialog box displays.
10. To retain the setup values, click Save.
11. To close the UPS Setup dialog box, click OK. The UPS Integrator dialog box displays.
12. To close the UPS Integrator, select Exit from the File menu.

Running UPS Integration After M2000 Installation

Although it is recommended that you run UPS Integration during M2000 system installation, you can run it at any time.

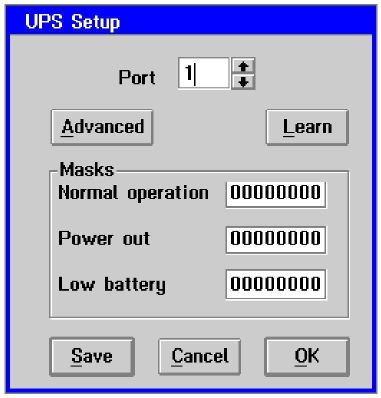
By default, the UPS Integrator only learns the normal and power out states and interprets any mask (an 8-digit binary image that represents the state of operation) that is not recognized as either a normal or power out state as a low-battery state and handles it accordingly. You can change the default so that the system attempts to learn the UPS's low-battery state. This ensures that the system performs an automatic shutdown only when a true low-battery state is reached. You should only change the default, however, if you know that the UPS has a consistent low-battery mask. Consult the manual that came with the UPS for more information.

Also, the UPS may require a signal to know that the system is monitoring UPS operation. This signal can come from the DTR (data terminal ready) or RTS (request to send) pin on the PC's serial port. You can configure the UPS Integrator utility to set the proper pin to signal the UPS. By default, the Request to Send pin is set to signal the UPS. If the UPS requires the DTR pin to signal the UPS, or if you do not want any signal sent, you can change the default. Before doing so, however, consult the UPS documentation to determine if you should enable one or both of these options.

To run the UPS Integrator utility after M2000 installation:

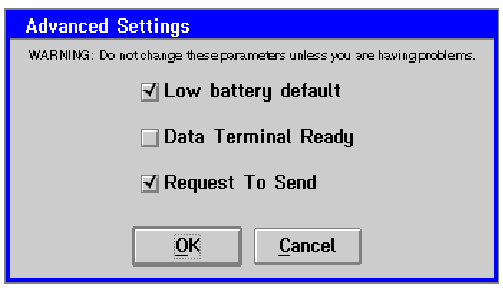
1. Shut down M2000, if it is running.
2. Double-click the UPS Monitor icon in the Lucent Technologies folder. The UPS Integrator dialog box displays.

3. From the Options menu, select Setup. The UPS Setup dialog box displays.



4. If you do not want the system to attempt to learn the UPS's low-battery state and you do not want to change the pin-signaling default, proceed with the step 5. If you do want the system to attempt to learn the UPS's low-battery state or you do want to change the pin-signaling default, complete the following:

   a. Click Advanced. The Advanced Settings dialog box displays.



   b. If you want the UPS Integrator to attempt to learn the UPS's low-battery mask, disable the Low Battery Default option (remove the check from the checkbox). This enables the UPS Integrator to attempt to learn the UPS's low-battery state.

   c. If you want to change the pin signaling setting, change the Data Terminal Ready and Request to Send options as appropriate for the UPS.

   d. To save the settings, click OK. The UPS Setup dialog box displays.

5. In the Port field, enter the serial port to which the UPS is connected.

6. If you know the Normal Operation, Power Out, and Low Battery masks of the UPS connected to the M2000 PC, you can manually enter them in their respective fields under Masks on the UPS Setup dialog box, then proceed to step 10. Refer to the UPS manual to determine if the masks are provided. If you do not know the masks for the UPS, click Learn to start the Learn mode, which enables the UPS monitor to establish the UPS signals. The system displays the message "Begin Learn Mode." You may select Cancel at any time to abort the Learn process.

7. The system displays a message prompting you to verify that the cable from the UPS to the serial port is securely attached. Click OK. The system displays the message "Learn normal state" as it learns the mask for the UPS's normal operating state. A mask is an 8-digit binary image that represents the state of operation.

After the system learns the normal operating state, it displays the message "Disconnect power from the UPS." This allows the system to emulate a power out condition.

8. Remove the UPS power cord from the electrical outlet, then click OK. The system then learns the power out state. If you did not change the default low-battery setting in step 4, proceed to step 9.

   If the Low Battery Default option is disabled on the Advanced Settings dialog box, after the system learns the mask for the power out state, it continues running off the UPS until the UPS reaches a low-battery state. There is a delay between learning the power out state and learning the low-battery state mask as the system waits for the power on the UPS to diminish.

9. After the system learns the necessary states, the message "Reconnect power to UPS" displays. Reconnect the UPS power cord to the electrical outlet, then click OK. A dialog box displays the message "End Learn Mode."

   After Learn mode is complete or you manually enter the UPS's masks, the system constantly monitors the current mask and compares it to the recognized masks for each state to determine the current state of UPS operation.

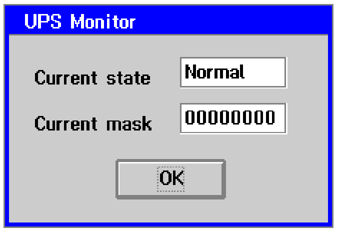
10. To close the dialog box, click OK. The UPS Setup dialog box displays.
11. To retain the setup values, click Save.
12. To close the UPS Setup dialog box, click OK. The UPS Integrator dialog box displays.
13. To close the UPS Integrator, select Exit from the File menu.
14. Open an OS/2 window.
15. From the C:\ prompt, type `COPY STARTUP.CMD STARTUP.BAK` and press <ENTER>. This creates a backup of the STARTUP.CMD file.
16. From the C:\ prompt, type `E STARTUP.CMD` and press <ENTER>.
17. Move the cursor to the line `START /MIN RUNVM.CMD` and press <Home> to move the cursor to the beginning of the line.
18. Press <ENTER> to insert a new line.
19. Place the cursor at the start of the blank line.
20. Type `START /PM /MIN UPS.EXE`. This command loads the UPS monitor each time the system boots.
21. Select Save from the File menu.
22. Type `EXIT` and press <ENTER> to close the OS/2 window.
23. Shut down OS/2 and restart the PC.

Checking the UPS's Current Operating State Manually

Use this procedure to check the current operating state of the UPS.

To check the UPS current operating state:

1. Press <CTRL+ESC> to display the Window List.
2. Double-click UPS Integrator. The UPS Integrator dialog box displays.
3. From the Options menu, select Monitor. The UPS Monitor dialog box displays.



   Current State is a read-only field that displays the current state of UPS operation—Normal, Power Out, or Low Battery. Current Mask is a read-only field that displays the mask for the current state of UPS operation.

4. When you finish viewing the current operating state and mask, click OK. The UPS Integrator dialog box displays.
5. Click the icon in the upper-left corner of the window, and select Minimize from the menu that displays. The UPS Monitor is minimized to an icon.

CHAPTER 13

Determining Outdial Strings

An outbound dialing operation is any call scheduled by the M2000 system for which it must access an outbound port. For an outbound dialing operation to an outside number to be successful, M2000 must have the correct outdial string, which consists of the applicable access codes and prefixes followed by the destination telephone number. For the following outbound dialing operations, the entire outdial string may not be supplied by the application and must be determined by M2000:

- Replying to network messages
- Dispatching OctelNet or Administered AMIS messages
- Sending a fax requested through fax retrieval to external destinations

The Dial Plan utility determines the correct outdial string for these outbound dialing operations. Use Dial Plan to identify the local area code and associated prefixes for the customer's M2000 system. This information is then compared to the outdial string supplied by the application to determine the string the system dials.

Procedures in this chapter will help you to:

- Identify local area codes and prefixes
- Delete a local call combination
- Activate Dial Plan
- Understand how Dial Plan works

If the phone switch is configured for Least-Cost Routing (LCR), Automatic Route Selection (ARS), or a similar type of routing, Dial Plan is not required.

Identifying Local Area Code and Prefixes

Use this procedure to identify the local area code and associated prefixes for the M2000 system.

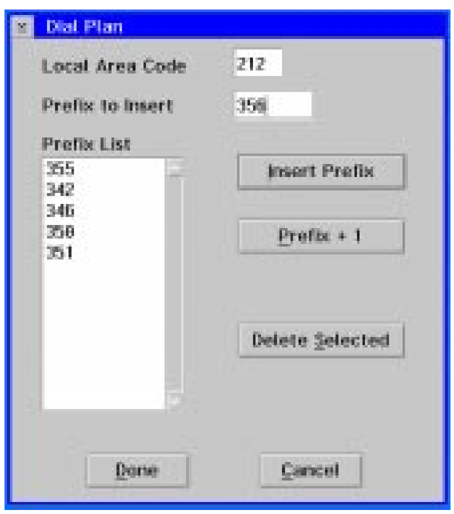
To identify local area code and prefixes:

1. During installation, select DialPlan from the Installation Setup Utility dialog box. An introductory dialog box displays.

   If the M2000 system is already installed, you can launch DialPlan any time by double-clicking the DialPlan icon in the Lucent Technologies folder. If the M2000 system is running, you must select Exit from the File menu to shut it down before you run DialPlan.

   If you upgraded an existing system and the Dial Plan database contains 6-digit prefixes, where the first three digits match the defined local area code, a dialog box displays each time you launch Dial Plan prompting you to convert the 6-digit data to 3-digit data. If you want M2000 to include the area code, but not the long distance access code, in the outdial sequence, click No. If you click Yes, the first three digits representing the area code are removed from the entry to convert it to a 3-digit prefix, and M2000 dials the prefix and subscriber identification number without the long distance access code or the area code.

2. Click OK to continue. The Dial Plan dialog box displays.



3. In the Local Area Code field, enter the local area code for the M2000 system.

   A standard 10-digit phone number has the format *aaapppnnnn*, where *aaa* represents the 3-digit area code, *ppp* is the 3-digit prefix, and *nnnn* represents the 4-digit suffix. For example, for the phone number (212) 355-1234, 212 is the area code, 355 is the prefix, and 1234 is the suffix.

   Some calling areas allow more than one local area code. For example, when an area code is changed, there is usually a transition period when both the old and new codes are accepted. Although the Local Area Code field allows for only one entry, step 5 discusses a method of configuring Dial Plan to recognize more than one local area code.

4. In the Prefix to Insert field, enter a prefix associated with the area code you defined as the Local Area Code. Prefixes can be three, four, or six digits:
   - **Three-digits prefixes**–Standard 3-digit prefix.
   - **Four-digit prefixes**–Use a 4-digit prefix to define a long distance call within the same area code. Four-digit prefixes must begin with a 1.
   - **Six-digit prefixes**–Use a 6-digit prefix to identify a second local area code. Six-digit prefixes consist of the area code and an associated prefix. You must create a separate entry for the second area code and each associated prefix.

   If the Long Distance Access Code and area code are required before in-state, long distance calls, do not identify those prefixes in the Prefix List. The system then uses the entire call string (1*aaapppnnnn*) during the outdial operation.

5. To add the prefix to the Prefix List, click Insert Prefix.
6. Repeat steps 5 and 6 for each prefix you want to add. You may define a maximum of 900 prefixes.
7. To add a new prefix that is one greater than the last prefix you entered, click Prefix + 1.
8. To exit Dial Plan, click Done.

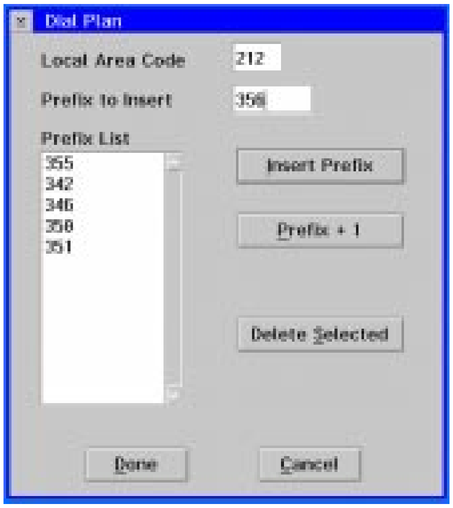
Deleting a Prefix

Complete the following procedure to delete a prefix from the Prefix List.

To delete a prefix from the Prefix List:

1. Shut down M2000, if it is running.
2. Double-click the Dial Plan icon in the Lucent Technologies folder. An introductory dialog box displays.

3. Click OK to continue. The Dial Plan dialog box displays any defined prefixes for the local area code.



4. Select the prefix you want to delete from the list.
5. Click Delete Selected. The prefix is removed from the Prefix List.
6. Repeat steps 4 and 5 for any additional prefixes you want to delete.
7. To exit Dial Plan, click Done.

Activating Dial Plan

To activate Dial Plan:

1. Start M2000, if it is not already running.
2. Log in as a Level 3 system manager.
3. From the Options menu, select System Setup. The initial System Setup window displays.
4. Click the Outbound tab to view the Outbound Dialing Parameters tab.
5. To enable Dial Plan, select the Use Dial Plan checkbox.
6. From the File menu, select Save.
7. To close System Setup, select Exit from the File menu. The main window displays.

Understanding How Dial Plan Works

After you configure and activate Dial Plan, a request to dispatch an Administered network message or a fax retrieval request triggers a search for a match of the destination phone number's area code to the data you entered in Dial Plan:

1. If the destination number's area code (*aaa*) does not match the Local Area Code defined in Dial Plan, a match of *aaappp* is attempted. If *aaappp* is found in the Prefix List, the system dials *aaapppnnnn*. If a match is not found, the system assumes the number is long distance and dials 1*aaapppnnnn*, where 1 represents the Long Distance Access Code you defined on the Networking tab in System Setup.

2. If the destination number's area code matches the defined Local Area Code, Dial Plan conducts the following additional searches:
   a. Searches for an *aaappp* match. If a match is found, the system dials *aaapppnnnn*.
   b. Searches for *ppp* in a four-digit entry (1*ppp*). If a match is found, the system dials 1*pppnnnn*.
   c. Searches for a *ppp* match. If a match is found, the system dials *pppnnnn*.
   d. If no matches are found from the above searches, the system dials 1*aaapppnnnn*, where 1 represents the Long Distance Access Code.

Dial Plan is not used for international calls. When the Country Code you identify in System Setup is different than the country code of the destination phone number, the system dials the destination telephone number as entered.

If you have any questions regarding call sequence requirements for the local area in which the M2000 system is being installed, contact a phone company representative.

Notes:

CHAPTER 14

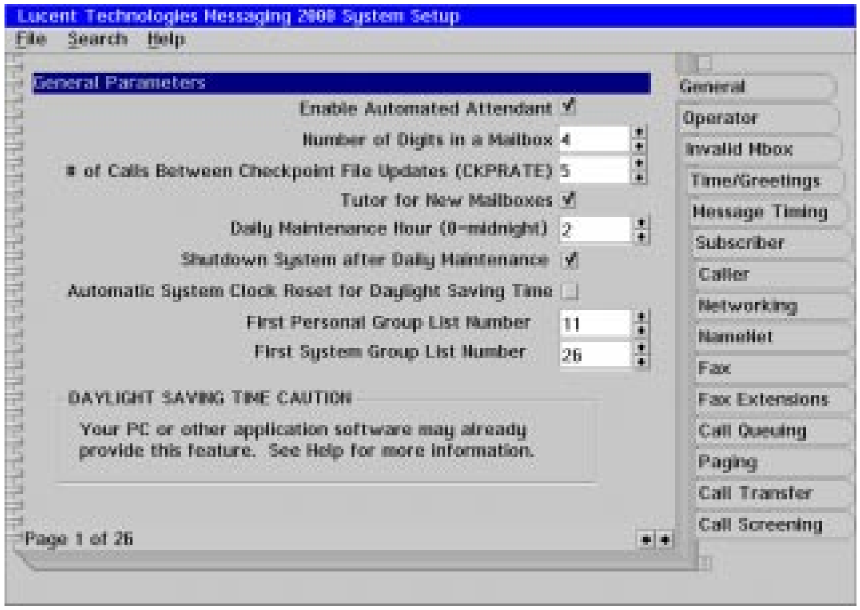
Setting Up the System

This chapter provides procedures that help you:

- Run the System Setup utility
- Save the System Setup configuration
- Search for a particular System Setup parameter
- Configure features and functions on a system level

Running the System Setup Utility

During M2000 installation, run System Setup when you are prompted by the Installation Setup utility. Be sure you run the Integrator utility, if the M2000 system was not preconfigured, before you run System Setup, as the Integrator presets some parameter settings based on the switch you specify.



If M2000 is already installed, you can launch System Setup any time by double-clicking on the System Setup icon in the Lucent Technologies folder. You must shut down M2000 before you can run System Setup.

If you need to modify the system settings after initial M2000 installation, you can run the System Setup utility by:

- Selecting the Setup option from the Options menu on the main system window when logged in as a Level 3 system manager
- Double-clicking the System Setup icon in the Lucent Technologies folder

Saving the System Setup Configuration

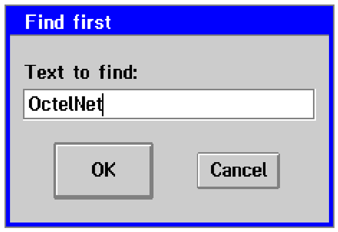
You can save the current System Setup configuration at any time by selecting the Save option from the System Setup File menu. Some parameter modifications require you to restart or shut down M2000, so the new settings can take effect. The system notifies you, when you save System Setup, whether you are required to restart M2000.

Searching for a Particular System Setup Parameter

If you are not sure what tab a certain parameter is located on, you can search for the parameter by the parameter name.

To locate a specific System Setup parameter:

1. From the Search menu in System Setup, select Find. The Find First dialog box displays.



2. In the Text to find field, enter the name, or part of the name, of the parameter you want to locate.

3. To initiate the search, click OK. The system displays the first tab on which the text you entered is located.

Configuring Features and Functions on a System Level

System Setup is comprised of 26 tabs that contain parameters grouped by a specific feature or function, such as Operator parameters and Networking parameters. To access a particular feature's parameters, click the corresponding tab.

Some of the System Setup parameters are preset for you by the Integrator utility. It is strongly recommended that you run the Integrator utility, if M2000 was not preconfigured, before running the System Setup utility. Also, individual parameters are preconfigured on some M2000 systems for optimal use with the phone switch.

System Setup controls feature settings on a system-wide basis. You can, however, override some System Setup parameters on a class of service level. For example, you can permit inbound and outbound network messaging at a system level in System Setup, then disable networking options for a particular group of mailboxes in the class of service. Note, however, that you cannot activate options in an individual class of service unless they are permitted on a system-wide basis in System Setup.

General Parameters (Page 1 of 26)

The General parameters control general system-level functions.

General Parameters

Enable Automated Attendant

The Automated Attendant routes calls to M2000 extensions.

When the Automated Attendant is disabled, M2000 routes callers directly to the subscribers' mailboxes. It does not attempt to transfer calls to subscriber extensions.

Note that this parameter does not affect the Attendant menu, system prompts, or holidays, which determine what the system voices to callers, or the ability to press <0> to reach a default or personal operator.

When/How to Use

You should enable this parameter unless M2000 is being used in an application such as a service bureau, where callers should not be allowed to transfer to extensions.

On systems with live operators, you can configure the Automated Attendant to handle call overflow.

Related Parameters/Features

When the Automated Attendant is disabled, the following M2000 features are not available and their respective System Setup parameters are dimmed:

- Call screening
- Call queuing
- Call handling (although call blocking is still available)
- Call waiting
- Intercom paging

The following System Setup parameters are also dimmed:

- Operator parameters related to transfers
- Invalid Mailbox tab parameters
- Max Number of Forwarded Extensions on the Subscriber tab

First six Call Transfer parameters

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet

Call Flow Sheet (Should the Automated Attendant...)

General Parameters

Number of Digits in a Mailbox

This parameter determines the length and available range of M2000 subscriber mailboxes. For example, if you set this parameter to 5, the range of available mailboxes is 10000 to 99999.

When/How to Use

You must set this parameter using the System Setup before you begin creating subscriber mailboxes. If you change the value of this parameter after you have created mailboxes, the existing mailboxes are unusable. In this case, all M2000 mailboxes must be deleted and recreated, and all prompts, messages, and events are lost.

Because you cannot change this parameter after you create mailboxes, you must be careful to allow for extra mailboxes for new subscribers and any additional applications, such as V-Trees, that may require a mailbox.

This parameter is dimmed when you run System Setup from the Options menu, and does not reset when you select the Set to Defaults option from the System Setup File menu.

Related Parameters/Features

This parameter determines how many digits are represented by the R and S codes used in inband templates and in the X for the Custom Transfer Code.

If Set Too High

While you want to make sure that you allow sufficient mailboxes for expansion, setting this parameter too high may make it more difficult for subscribers to remember their mailbox numbers.

If you set this parameter higher than the number of digits in extension numbers on the phone system, inband signaling may fail due to the mismatch between the length of the extension and mailbox numbers.

If Set Too Low

You may have fewer mailboxes than the subscribers and applications requiring them.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1	*9*	*4*	*Yes*	***	*No*

* Required minimum for some switches.

See Preinstallation Configuration Worksheet

Company Profile Sheet (Range of Extension No.)

General Parameters

Number of Calls Between Checkpoint File Updates

This parameter specifies the number of completed calls to or from M2000 before the Checkpoint file, PLUS.CKP, is saved. The Checkpoint file records critical system data, such as business hours, statistics, system manager passwords, prompt assignments, multilingual information, and group lists.

When/How to Use

This parameter should be set lower on lower call volume systems than on high call volume systems. Do not set this parameter to 0, as this disables it.

Related Parameters/Features

None.

If Set Too High

The higher you set this parameter, the longer between file saves and the greater the chance of data loss should there be a power outage.

If Set Too Low

A low setting for this parameter does not affect M2000 performance. Setting it to 0 would disable the parameter and is not recommended.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*5*	*No*	*No*	*No*

General Parameters

Tutor for New Mailboxes

This parameter determines whether Call Educator, the M2000 tutorial, is enabled for subscribers accessing their mailboxes for the first time.

Call Educator provides an introduction to M2000 and guides subscribers through the steps to change their password and record their personalized prompts (Please Hold, Name, and Personal Greeting prompts).

When/How to Use

Enable this parameter to help ensure that subscribers change their password from the assigned default and record their personalized prompts as soon as possible.

Related Parameters/Features

If you enable this parameter, the Forced Password Change parameter will not be enforced at first login for subscribers who change their password during the tutorial.

If Set Too High

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

General Parameters

Daily Maintenance Hour

This parameter determines when M2000 performs its daily maintenance. During daily maintenance, the system ages messages and purges expired messages, purges NameNet entries, updates statistics, and performs other functions.

Daily maintenance only takes a moment. M2000 remains up and continues to answer calls.

When/How to Use

Set this parameter to the desired hour in Military format, 0 to 23, where 0 represents midnight. This parameter can only be set for the top of the hour and cannot be specified in minutes.

Related Parameters/Features

If you enable Shutdown After Daily Maintenance, you should set Daily Maintenance Hour for a low-traffic time, so that call traffic is not interrupted.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*23*	*2*	*No*	*No*	*No*

General Parameters

Shutdown System After Daily Maintenance

This parameter determines whether M2000 goes through an automatic shutdown after daily maintenance is complete. After the system shutdown is complete, the user-supplied third-party utilities specified in the RUNVM.CMD file execute and M2000 restarts.

When/How to Use

Enable this parameter if you want to run third-party utilities, such as backups and disk maintenance, after daily maintenance.

You must manually edit the RUNVM.CMD file to initiate the utilities or programs that you want run after the shutdown.

If you enable this parameter, make sure that you launch the system from the Lucent Technologies Messaging 2000 icon or by typing `RUNVM.CMD` from the command line. Otherwise, the system returns to the command line after the shutdown—the utilities will not be run and M2000 will not restart.

Related Parameters/Features

The Daily Maintenance Hour parameter setting determines when M2000 will perform the shutdown.

If you enable Shutdown System After Daily Maintenance, set the Daily Maintenance Hour to a low-traffic time, as M2000 will be unable to accept calls until it restarts. Also, because the shutdown must wait for all ports to be idle, scheduling maintenance for a low-traffic time lessens the chance that the shutdown will be delayed due to occupied ports.

When this parameter is enabled, the OFFHDIS parameter on the Voice System tab determines whether callers hear a busy or no answer while M2000 is shut down. Note that, if OFFHDIS is enabled, some phone switches may see the off hook as a line problem and disable the ports.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

General Parameters

Automatic Clock Reset for Daylight Saving Time

This parameter determines whether the system's clock is automatically adjusted to comply with Daylight Saving Time.

When this parameter is on, the PC's clock is automatically advanced one hour at approximately 2:00 AM on the first Sunday in April and then set back one hour at approximately 2:00 AM on the last Sunday in October.

When/How to Use

You cannot modify the time or date of the adjustment. If the system location observes a different daylight saving time, disable this parameter.

Some PC and vendor applications contain their own automatic clock reset feature for Daylight Saving Time. Check the PC and vendor application documentation to determine if this feature is already supported. If it is, either disable this parameter or disable the feature on the PC or application. If more than one automatic reset feature is enabled, the system clock will be reset by two or more hours instead of one, causing it to be inaccurate.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No*	*No*	*No*

General Parameters

First Personal Group List Number

This parameter determines the first number and defines the range for the 10 personal group lists available to each subscriber mailbox.

When/How to Use

The First Personal Group List Number must be at least 10 less than the First System Group List Number. The maximum for First Personal Group List Number parameter, therefore, is 10 less than the current First System Group List Number parameter setting. For example, if the First System Group List Number is set to 35, you can set the First Personal Group List number from 11 to 25.

Once this parameter has been set and subscribers start creating group lists, do not change this parameter. Otherwise, existing lists may be damaged.

Related Parameters/Features

The current setting of the First System Group List Number determines the maximum for First Personal Group List Number.

Access to the personal group list feature is controlled on the Class of Service dialog box.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
11	*80**	*11*	*No*	*No*	*No*

* The maximum for this parameter is ten less than the current First System Group List Number.

General Parameters

First System Group List Number

This parameter determines the first number and defines the range for the 10 system group lists that system managers can create.

When/How to Use	The First System Group List Number must be at least 10 more than the First Personal Group List Number. The minimum for First System Group List Number parameter, therefore, is 10 more than the current First Personal Group List Number parameter setting. For example, if the First Personal Group List Number is set to 35, you can set the First System Group List number from 45 to 90. Once this parameter has been set and system group lists have been created, do not change this parameter. Otherwise, existing lists may be damaged.
Related Parameters/Features	The current setting of the First Personal Group List Number determines the minimum for First System Group List Number. Access to system group lists is controlled by the global group list feature on the Class of Service dialog box.
If Set Too High	If this parameter is set to 90, only eight system group lists are available, since 98 and 99 are reserved for the division and company lists, respectively.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
*21**	*90*	*26*	*No*	*No*	*No*

* The minimum for this parameter is ten more than the current First Personal Group List Number.

Operator Parameters (Page 2 of 26)

The Operator parameters specify extensions to which callers requesting to speak to an operator or exceeding a specified number of errors are transferred during or after business hours. These parameters also determine how M2000 handles callers dialing from rotary phones and whether subscribers are informed of calls transferred from the attendant.

Operator Parameters

Default Operator Mailbox Number	This parameter defines the mailbox where M2000 routes callers during business hours when they press <0> to speak to an operator, when they are dialing from a rotary phone, or they exceed the Maximum Number of Errors parameter setting.

When/How to Use

You must manually create the default operator mailbox on the M2000 system; it is not automatically created. If you do not create the default operator mailbox, callers transferred to that mailbox are told that the mailbox is not recognized on M2000 and they are disconnected.

Make sure that the mailbox number specified for this parameter is used for an operator mailbox or for a regular subscriber. Otherwise, the subscriber assigned this mailbox number may receive calls that should be directed to the operator.

Related Parameters/Features

Callers to mailboxes that have a personal operator defined on the Mailbox Entry dialog box are transferred to the personal operator instead of the default operator mailbox when they press <0>.

The minimum and maximum values for this parameter depend on the Number of Digits in a Mailbox. For example, on a system with three-digit mailboxes, the default for this parameter is 100.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1000	*9999*	*1000*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet
Company Profile Sheet (Primary Operator’s Extension)

Operator Parameters

After Hours Operator Mailbox Number

This parameter defines the mailbox where M2000 routes callers after business hours.

When/How to Use

You must manually create the after hours operator mailbox on the system; it is not automatically created. If you do not create the after hours operator mailbox, callers transferred to that mailbox are told that the mailbox is not recognized on the system and they are disconnected.

Related Parameters/Features

The minimum and maximum allowed values for this parameter depend on the Number of Digits in a Mailbox parameter setting. For example, on a system with three-digit mailboxes, the default for this parameter is 100.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1000	*9999*	*1000*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet
Company Profile Sheet (After Hours Operator's Extension)

Operator Parameters

Inform Subscriber Transfer Is from Attendant

This parameter determines whether M2000 voices a prompt informing subscribers when it transfers calls.

When M2000 transfers a call, and the Announce Subscriber Name Prompt is selected under Special Options on the Subscriber Settings dialog box, the system voices, *"I have a call for <subscriber's name prompt>,"* when the subscriber answers the phone; the system then transfers the call. Otherwise, the system voices, *"One moment, you have a call."*

When/How to Use

Use this parameter if the phone system cannot display the origin of calls and you want subscribers to be able to distinguish between external and internal callers. Note that this only applies when call progress is used.

Related Parameters/Features

The Announce Subscriber Name Prompt option under Special Options on the Subscriber Settings dialog box determines which transfer prompt the system voices.

This parameter only applies when calls are supervised.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

Operator Parameters

Disconnect All Rotary Callers

This parameter determines whether M2000 disconnects all callers dialing from a rotary phone. M2000 considers a rotary call to be any call from which it does not detect touch-tone digits at the initial greeting or at the main greeting for a V-Tree. When you enable this parameter and the system detects a rotary call, it voices, *"Good-bye,"* and disconnects the caller.

When/How to Use	Enable this parameter when the switch does not use positive disconnect to indicate hang-ups. This parameter allows ports from which callers have hung up to become available more quickly. If this parameter is enabled, the main greeting should include an alternate phone number for rotary callers. If this feature is not enabled, M2000 transfers rotary calls to the Default Operator Mailbox Number during business hours or to the After Hours Operator Mailbox Number after business hours.
Related Parameters/Features	You must create the default operator mailbox and the after hours operator mailboxes if you want to transfer callers using rotary phones.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet

Call Flow Sheet (Should incoming calls from non-touch-tone phones...)

Operator Parameters

Number Attempts Rotary Transfer to Busy Operator

This parameter specifies the number of times the system attempts to transfer a rotary caller to the operator's extension when it is busy.

When/How to Use	The default should be sufficient for most systems. If a call cannot be transferred to the operator, it is directed to the operator's mailbox and the caller can leave a message. This parameter only applies if calls to the operator are supervised.
Related Parameters/Features	This parameter is not used if Disconnect All Rotary Callers is enabled.
If Set Too High	The higher you set this parameter, the longer the port holding the rotary caller is tied up.
If Set Too Low	If this parameter is set to 0, M2000 attempts to transfer rotary callers once before they are transferred to voice mail to leave a message.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
0	*9*	*3*	*No*	*No*	*No*

Operator Parameters

Maximum Number of Errors

This parameter specifies the maximum number of consecutive invalid mailbox entries and keypresses the system allows each caller to make before the system transfers the caller to the operator or disconnects.

When/How to Use

The default setting should be sufficient.

When you set this parameter to 0, the system transfers or disconnects the caller after one error.

Related Parameters/Features

This parameter determines the number of errors before the system transfers the caller to the operator if Transfer Calls to Operator after Maximum Errors is enabled.

If Set Too High

The higher this number, the more invalid entries each caller is allowed to make.

If Set Too Low

A low setting does not affect M2000 performance; however, callers could perceive the system as intolerant if they are disconnected or transferred after only one error.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
0	*9*	*3*	*No*	*No*	*No*

Operator Parameters

Maximum Number of No Entries

This parameter specifies the number of times the system prompts callers for an entry before assuming they have hung up and releasing the line.

When/How to Use

The default value for this parameter should be sufficient.

When this parameter is set to 0, the caller is disconnected after the first no entry.

This parameter is not used when a caller fails to make an entry at the initial greeting. In this case, the call is considered a rotary call.

Related Parameters/Features

None.

If Set Too High

The higher the setting, the longer the off-hook time between callers hanging up and the system resetting the port.

If Set Too Low

Callers may perceive the system as intolerant if they are transferred or disconnected after the first no entry.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*3*	*No*	*No*	*No*

Operator Parameters

Transfer Calls to Operator after Maximum Errors

This parameter determines whether M2000 transfers a caller exceeding the Maximum Number of Errors parameter setting to the default operator or politely disconnects the caller.

When/How to Use

Enable this parameter when you want callers who exceed the Maximum Number of Errors setting to be transferred to an operator for assistance or be allowed to leave a message.

Related Parameters/Features

If you enable Transfer Calls to Operator after Maximum Errors, you must create the default operator mailbox and the after-hours mailbox. If you do not, callers transferred to those mailboxes are told that the mailboxes are not recognized on the system, and the callers are disconnected.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

Invalid Mailbox Parameters (Page 3 of 26)

The Invalid Mailbox parameters control whether calls to invalid mailboxes are transferred to the switch.

Invalid Mailbox Parameters

Transfer Invalid Mailboxes during Business Hours

This parameter determines whether calls to an invalid mailbox during business hours are transferred to the switch. An invalid mailbox is an extension that is not assigned an M2000 mailbox number.

If this parameter is on, calls during business hours to numbers that do not exist as mailboxes are transferred directly to the switch.

If this parameter is off, callers dialing invalid mailbox numbers during business hours hear, *“<Mailbox number> is not valid. Please redial the number of the person you are calling.”*

When/How to Use	Disable this parameter unless you have extensions that callers should be allowed to dial directly. Be aware that enabling this parameter can pose a security concern in that, depending on the configuration of the switch, callers transferred to the switch may use this capability to attempt to access an outside line. This is most relevant for M2000 ports used for outcalls for networking or message notification to a beeper.
Related Parameters/Features	If you turn off Enable Automated Attendant, this parameter is dimmed. Business hours are defined under the Attendant menu.
If Set Too High	Not applicable
If Set Too Low	Not applicable

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Invalid Mailbox Parameters

Transfer Invalid Mailboxes after Business Hours

This parameter determines whether calls to an invalid mailbox after business hours are transferred to the switch. An invalid mailbox is an extension that is not assigned an M2000 mailbox number.

If this parameter is on, calls after business hours to numbers that do not exist as mailboxes are transferred directly to the switch.

If this parameter is off, callers dialing invalid mailbox numbers hear, *"<Mailbox number> is not valid. Please redial the number of the person you are calling."*

When/How to Use	Disable this parameter unless you have extensions that callers should be allowed to dial directly. Be aware that enabling this parameter can pose a security concern in that, depending on the configuration of the switch, callers transferred to the switch may use this capability to attempt to access an outside line.
Related Parameters/Features	If you turn off Enable Automated Attendant, this parameter is dimmed. Business hours are defined under the Attendant menu.
If Set Too High	Not applicable
If Set Too Low	Not applicable

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
—	—	No	No	No	No

Time/Greetings Parameters (Page 4 of 26)

The Time/Greetings parameters determine when the system voices the time of day greetings (Morning, Afternoon, and Evening) defined on the System Prompts dialog box. They also determine how the system voices times and dates.

The system only voices time-of-day greetings during business hours. It voices the Closed greeting after business hours.

Time/Greetings Parameters

Start of Morning Hours

This parameter defines when, during open hours, the system begins voicing the Morning greeting identified on the System Prompts dialog box.

If you do not specify a Morning greeting on the System Prompts dialog box, either the Attendant Menu prompt or, if no Attendant Menu is defined, the default prompt is voiced during morning hours.

When/How to Use

Enter the hour and minutes, in AM/PM format, to specify when you want morning hours to begin. Morning hours cannot be set on a day-by-day basis.

If you use Military format, the system converts the time to AM/PM format after you save and exit System Setup.

Related Parameters/Features

The Start of Afternoon Hours parameter determines when the morning hours end.

The Morning greeting does not begin voicing each day until the Open hours on the Business Hours dialog box is reached. For example, if you set the Start of Morning Hours parameter to 6:00 AM, but the Open time field on the Business Hours dialog box to 8:00 AM, the Morning greeting does not begin voicing until 8:00 AM.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
12:00 AM	11:59 PM	6:00 AM	No	No	No

Time/Greetings Parameters

Start of Afternoon Hours

This parameter defines when, during open hours, the system begins voicing the Afternoon greeting identified on the System Prompts dialog box.

If you do not specify an Afternoon greeting on the System Prompts dialog box, either the Attendant Menu prompt or, if no Attendant Menu is defined, the default prompt is voiced during afternoon hours.

When/How to Use

Enter the hour and minutes, in AM/PM format, to specify when you want afternoon hours to begin. Afternoon hours cannot be set on a day-by-day basis.

If you use Military format, the system converts the time to AM/PM format after you save and exit System Setup.

Related Parameters/Features

The Start of Evening Hours parameter determines when afternoon hours end.

The Start of Afternoon Hours parameter must be later than the Start of Morning Hours parameter.

The Afternoon greeting is voiced only during the Open hours set on the Business Hours dialog box. For example, if you set the Start of Afternoon Hours to 1:00 PM, but the Closed time on the Business Hours dialog box to 12:00 PM, the Afternoon greeting does not voice.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
12:00 AM	11:59 PM	12:00 PM	*No*	*No*	*No*

Time/Greetings Parameters

Start of Evening Hours

This parameter defines when, during open hours, the system begins voicing the Evening greeting identified on the System Prompts dialog box.

If you do not specify an Evening greeting on the System Prompts dialog box, either the Attendant Menu prompt or, if no Attendant Menu is defined, the default prompt is voiced during evening hours.

When/How to Use

Enter the hour and minutes, in AM/PM format, to specify when you want evening hours to begin. Evening hours cannot be set on a day-by-day basis.

If you use Military format, the system converts the time to AM/PM format after you save and exit System Setup.

Related Parameters/Features	The Start of Morning Hours parameter determines when the evening hours end. The Start of Evening Hours parameter must be set later than the Start of Afternoon Hours parameter. The Evening greeting is voiced only during the Open hours set on the Business Hours dialog box. For example, if you set the Start of Evening Hours to 5:00 PM and the Closed time on the Business Hours dialog box to 9:00 PM, the Evening greeting voices from 5:00 PM to 9:00 PM.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
12:00 AM	11:50 PM	6:00 PM	*No*	*No*	*No*

Time/Greetings Parameters

Enable Chinese Date

This parameter determines how the system voices dates and times. In Chinese format, the system voices the complete date in numerical terms, such as, *"one, five,"* instead of January 5th, and the time of day as *"in the morning"* and *"in the afternoon"* instead of AM/PM format.

When/How to Use	Enable this parameter if you want the system to voice dates and times in Chinese format.
Related Parameters/Features	None.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Message Timing Parameters (Page 5 of 26)

The Message Timing parameters control the message playback features and the maximum allowed lengths of message and prompt recordings.

Message Timing Parameters

Number of Seconds to Rewind Message

This parameter defines the number of seconds a message rewinds when a subscriber presses <1> during playback.

When/How to Use

For most systems, the default value should be sufficient.

Subscribers can press <1><1> to rewind to the beginning of the message.

When you set this parameter to 0, the message continues to play without rewinding when subscribers press <1>.

Related Parameters/Features

None.

If Set Too High

When this parameter is set too high, subscribers have less control over how much of the message they can review when they press <1>.

If Set Too Low

When this parameter is set too low, subscribers may have to press <1> several times to review the desired portion of the message. Set this parameter to 0 to disable it.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*5*	*No*	*No*	*No*

Message Timing Parameters

Number of Seconds to Pause Message

This parameter defines the number of seconds a message pauses when a subscriber presses <2> during playback.

When/How to Use

For most systems, the default value should be sufficient.

Subscribers may press <2> while the message is paused to resume the playback of the message.

When you set this parameter to 0, the message continues playback without pausing when subscribers press <2>.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Extremely short pauses may not allow sufficient time for subscribers to complete what they wanted to do when they paused the message. Set this parameter to 0 to disable it.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*5*	*No*	*No*	*No*

Message Timing Parameters

Number of Seconds to Fast Forward Message

This parameter defines the number of seconds to fast forward a message when a subscriber presses <3> during the playback.

When/How to Use

For most systems, the default value should be sufficient.

Subscribers can press <3><3> to fast forward to the end of the message.

When you set this parameter to 0, the message continues to play without fast forwarding when subscribers press <3>.

Related Parameters/Features

None.

If Set Too High

When this parameter is set too high, subscribers do not have much control over how much of the message they can fast forward through when they press <3>.

If Set Too Low

When this parameter is set too low, subscribers must press <3> several times to fast forward to the desired portion of the message. Set this parameter to 0 to disable it.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*5*	*No*	*No*	*No*

Message Timing Parameters

Maximum Time to Record Mailbox Prompts

This parameter specifies the maximum amount of time, in seconds, for subscribers to record mailbox prompts and folder labels.

When/How to Use

For most systems, the default setting should be sufficient.

Some applications may require longer prompts. For example, if you are using V-Trees, you may want to raise this parameter value. If you need to conserve disk space on small systems, set this value lower to limit the amount of disk space required to store prompts.

Related Parameters/Features

None.

If Set Too High

The higher this setting, the more disk space mailbox prompts and folder labels are allowed to use on systems.

If Set Too Low

The lower this setting, the less time subscribers have to record their prompts and folder labels. If this parameter is set to 0, subscribers cannot record prompts or folder labels.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*999*	*90*	*No*	*No*	*No*

Message Timing Parameters

Minimum Message Length in Seconds — This parameter specifies the minimum allowed length, in seconds, for messages on the system.

When/How to Use

For most systems using positive disconnect, the default setting should be sufficient.

If the switch does not provide positive disconnect, set this parameter higher than 0. This prevents the system from recording blank messages when callers hang up during recording.

When a caller or subscriber records a message that does meet the minimum and then presses pound, the system voices, *"I'm sorry, I did not get your message. Your message is too short."* The system then prompts the caller to rerecord the message or disconnect.

Related Parameters/Features

None.

If Set Too High

When set too high, the system may delete actual messages.

If Set Too Low

If you leave this parameter set to 0 and your switch does not provide positive disconnect, mailboxes may receive blank messages.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*2*	*No*	*No*	*No*

Subscriber Parameters (Page 6 of 26)

The Subscriber parameters control password security features and message maintenance features for subscriber mailboxes.

Subscriber Parameters

Permit Subscribers to Leave Messages to Themselves — This parameter allows subscribers to send messages to their own mailboxes. When this parameter is on, subscribers may use this feature as a message reminder. If this parameter is off, subscribers attempting to send a message to their own mailboxes are informed that the mailbox is not recognized on the system, and they are prompted to enter another mailbox number.

When/How to Use

For most systems, leave this parameter enabled to allow subscribers to send messages to themselves. Disable this parameter to conserve hard disk space on small systems if the system is being used in an application, such as a service bureau, where you do not want subscribers to leave messages for themselves.

Related Parameters/Features The subscriber mailboxes must be enabled for receive messages in their class of service.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

Subscriber Parameters

Permit Listen-Only Messages to be Reviewed

This parameter determines whether M2000 allows subscribers to review listen-only messages before deleting them. Messages marked as listen-only cannot be saved or copied to another mailbox.

When/How to Use If this parameter is on, subscribers are given the choice of replaying the message, accessing envelope information, erasing the message, or exiting the message review.

If this parameter is off, the message plays, then the system voices, *“Message erased,”* and continues to play the rest of the new messages before returning to the Main menu.

Related Parameters/Features None.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No*	*No*	*No*

Subscriber Parameters

Enable Confirmation of Deleted Messages

This parameter determines whether the system prompts subscribers to confirm that they want to delete a message by pressing <9>.

When/How to Use For most systems, leave this parameter enabled to help prevent subscribers from accidentally deleting messages.

Related Parameters/Features Subscribers may retrieve accidentally deleted messages during the same message review session by pressing <3> from the review message menu.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

Subscriber Parameters

Voice Warning when Messages Expire

This parameter enables the system to notify subscribers when messages will be deleted; the number of days to save is defined in the class of service.

When/How to Use

Enable this parameter when you want the system to inform subscribers that messages have been deleted from their mailboxes because the messages exceeded the Number of Days to Save New and Saved messages.

It is recommended you enable this parameter if the Days to Save messages is set low. This should prevent subscribers from thinking they have lost messages when, in fact, the messages have expired.

Related Parameters/Features

The Number of Days to Save New and Saved messages determines when messages are purged from the subscriber's mailboxes. Setting Number of Days to Save New and Saved messages to 99 saves the messages indefinitely, so the Voice Warning when Messages Expire is not used.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No*	*No*	*No*

Subscriber Parameters

Voice Warning when Message Time is Less than 2 Minutes

This parameter does not affect M2000 performance and will be removed from System Setup in a future version.

Subscriber Parameters

Maximum Number of Forwarded Extensions

This parameter determines the maximum number of extensions the system allows in a forwarding chain when the desired extension is busy or not answered. When this maximum is reached, the system voices that the extension is busy or not answered, then prompts the caller to try another extension, leave a message for the original mailbox, or disconnect.

When/How to Use

The mailboxes included in the forwarding chain must be using supervised transfers. A call is a supervised transfer if the Max Rings setting in the mailbox's class of service is 1 or above. A call is a blind transfer if the Max Rings setting is 0. If the mailboxes are not using supervised transfers, the system cannot track the forwarding, which prevents the system from voicing the greeting of the original called party should the maximum be reached.

For most M2000 systems, the default setting should be sufficient. If you change this setting, consider the maximum amount of time you want callers to wait as they are transferred from extension to extension before they are prompted to try another extension, leave a message, or disconnect.

M2000 does not allow circular forwarding situations. When the system encounters a circular forwarding situation, the system does not forward the call, regardless of the value of this parameter, and prompts the caller to dial another extension, leave a message, transfer to an operator, or disconnect.

Setting this parameter to 0 disables Call Forwarding.

Related Parameters/Features

Subscribers using call forwarding must have Forward to selected as the No Answer/Call Blocking or Busy option on the Subscriber Settings dialog box.

If Set Too High

The higher the setting, the longer callers wait while they are transferred from extension to extension, and the longer the voice port is occupied.

If Set Too Low

If you set this parameter to 0, automatic Call Forwarding is not used, and callers will only be allowed to dial another extension, leave a message, or disconnect.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*10*	*No*	*No*	*No*

Subscriber Parameters

Consecutive Login Failures Before Lock-Out

This parameter specifies the maximum number of failed mailbox login entries allowed before the system locks the mailbox. A single failed login entry is logged when a caller attempting to log into a mailbox exceeds the Maximum Number of Errors (as defined on the Operator tab in System Setup). This feature is used as a security measure to prevent unauthorized access to M2000 mailboxes.

A mailbox that has been locked due to excessive failed login attempts must be unlocked by the system manager. For information on unlocking a mailbox, see Chapter 17, “Managing System Mailboxes.”

When/How to Use

Set this parameter to a value high enough to allow a subscriber to make a few errors before the system locks the mailbox, but low enough to limit the risk of unauthorized entry to M2000.

Set this parameter to 0 disable it.

Related Parameters/Features

When you set this parameter higher than 0, subscribers may turn this feature on and off for their mailboxes through the security options under the Personal Options menu.

If Set Too High

The higher the setting, the more opportunity for callers to guess mailbox passwords and gain unauthorized access to the system.

If Set Too Low

If this parameter is set too low, subscribers may be locked out of their mailboxes after few errors.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*999*	*0*	*No*	*No*	*No*

Subscriber Parameters

Enable Extended Password Security

This parameter determines whether the system requires subscribers to press <#> after they enter their passwords to gain immediate access to their mailboxes.

If you enable this parameter and a subscriber enters the correct password, but does not press <#>, the system pauses after the last digit before permitting access to the mailbox.

If you disable this parameter, the system allows the subscriber access as soon as they finish entering the last digit of the correct password.

When/How to Use

For most systems, leave this parameter enabled to provide added security for mailboxes.

Related Parameters/Features

Enable Extended Password Security is only used if mailboxes have passwords.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

Subscriber Parameters

Minimum Length of Password

This parameter specifies the minimum number of digits the system requires for a valid mailbox password. This parameter is used as a security feature to require subscribers to use passwords to log into their mailboxes.

When/How to Use

For most systems, the default should be sufficient.

If you change this parameter to a higher value, the system prompts subscribers using existing mailboxes to change their passwords to comply with the new value before gaining access to their mailboxes.

If you change this parameter to a lower value, subscribers are not required to change their passwords, since their current passwords exceed the minimum.

Related Parameters/Features

The minimum Length of Password determines the length of the default password under Initial Password for New Mailboxes.

If Set Too High

Subscribers are required to enter very long strings of keypresses to access their mailboxes.

If Set Too Low

Setting this parameter low increases the opportunity for a caller to guess a password and gain unauthorized access to the system.

If this parameter is set to 0, a password is not required to access M2000 mailboxes. Individual subscribers, however, can assign passwords to their mailboxes.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*4*	*No*	*No*	*No*

Subscriber Parameters

Days Before Forced Password Change

This parameter specifies the number of days before the system requires subscribers to change their passwords when they log into their mailboxes. This parameter also determines whether the system requires subscribers to change their passwords at initial login.

When/How to Use	The default for this parameter should be sufficient. The counter for this parameter is reset every time the subscriber or system manager changes the password for the mailbox. Set this parameter to 0 to disable it.
Related Parameters/Features	This parameter is not used for mailboxes created with the minimum Length of Password set to 0, which do not use a password.
If Set Too High	If set too high, this parameter allows more opportunity for unauthorized access to the system.
If Set Too Low	If set too low, subscribers are required to change their passwords so often they may forget them. Setting this parameter to 0 disables it.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*999*	*28*	*No*	*No*	*No*

Subscriber Parameters

Initial Password for New Mailboxes – None Required

This parameter determines whether the system requires subscribers logging into new mailboxes to enter a password.

When/How to Use	When you select this option, the system allows a subscriber logging into a new mailbox to gain immediate access to the mailbox. Subscribers may assign a password to their individual mailboxes even though none is required.
Related Parameters/Features	When you want to use a password for new mailboxes, select either Set to Default or Random Generator Method options under Initial Password for New Mailboxes.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Subscriber Parameters

Initial Password for New Mailboxes – Set to Default

This parameter determines whether the system assigns the same initial password to all new mailboxes. This option is the default for Initial Password for New Mailboxes. When you enable this option, subscribers must enter the default to gain access to their new mailboxes.

When/How to Use

The default password in the Set to Default field is a series of ones equal in length to the minimum length for password. You can use the default password in the Set to Default field or enter a different default password. The default password must be the same length as the minimum Length of Password.

Related Parameters/Features

If Days Before Forced Password Change is set greater than 0, subscribers must change their passwords upon initial login.

When you do not want to use a password for new mailboxes, select None Required under Initial Password for New Mailboxes.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

Subscriber Parameters

Initial Password for New Mailboxes – Random Generator Method

This parameter determines whether the system assigns random passwords to new mailboxes. When you enable this parameter, the system automatically assigns a series of digits equal in length to the Minimum Length of Password to each new mailbox that is created.

When you create new mailboxes through the screen interface using this option, a dialog box displays after the mailboxes are created listing the new mailbox numbers, the subscribers’ names, and the randomly generated initial passwords. You may print or save the contents of this dialog box. If you save to a file, you are prompted for the drive and filename.

When you create new mailboxes through the phone interface using this password option, the system voices the generated passwords.

When/How to Use

When you enable this parameter, the system generates a different password for each new mailbox. The system manager must provide subscribers with the initial password for their mailboxes.

The system generates passwords for new mailboxes equal in length to the minimum Length of Password.

Related Parameters/Features	When you do not want to use a password for new mailboxes, select None Required under Initial Password for New Mailboxes. The Uninitialized Mailbox Report under the Reports menu contains the mailbox number, subscribers' name, initial password, and last login time for all uninitialized mailboxes on the system.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Caller Parameters (Page 7 of 26)

The Caller parameters control whether outside callers are allowed to leave multiple messages during a call.

Caller Parameters

Permit Callers to Leave Multiple Messages	This parameter determines whether outside callers are allowed to leave multiple messages for system subscribers during a single phone call. If you enable this parameter, the system voices an option to disconnect, along with the options to try another extension or transfer to the operator. If you disable this parameter, callers are politely disconnected after leaving a single message.
When/How to Use	This parameter should be enabled for most systems. If you disable it, callers could become frustrated by having to call back to leave additional messages. An application for which you may want to disable this parameter is a service bureau, where you want callers directly routed to subscriber mailboxes to leave a message and then disconnected. Also, on smaller systems, such as those with fewer ports, you may want to restrict callers from tying up ports for considerable lengths of time.
Related Parameters/Features	If you enable this parameter, you can use the PROGTIME parameter on the Voice System tab to control the total length of calls to the M2000 system.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

Caller Parameters

Permit Callers to Access Directory Services

This parameter determines whether outside callers can access dial by name subscriber directories from the Attendant Menu.

If you enable this parameter, you can configure the Attendant Menu to provide callers the option of accessing a directory they can use to dial the names of the subscribers they want to reach.

If you disable this parameter, callers must know the number of the subscribers to whom they wish to speak, or they can transfer to the default operator.

When/How to Use

If the M2000 system is being used as a service bureau, you may want to disable this parameter.

If you do not have a live operator, it is recommended that this parameter be enabled. Otherwise, callers will have no timely way of reaching subscribers whose numbers they do not know.

Related Parameters/Features

To create dial by name entries, you must enter the First and Last Names on the Mailbox Entry dialog box, and the subscribers must record their name prompt.

If you enable this parameter, you must include a directory option in the Attendant Menu and you must record an Attendant Menu prompt that instructs callers how to access the directory.

If you disable this parameter, and the directory option is included in the Attendant Menu, callers selecting that option are told that it is not valid, and they are prompted to reenter the number of the person they are calling.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

Networking Parameters (Page 8 of 26)

The Networking parameters identify the local M2000 system and define system-wide defaults for dispatching network messages. Some of these parameters can be overridden on a per-node basis on the Network Node Maintenance dialog box. Networking parameters only apply to M2000 systems with sentinels that support one or both of the network protocols, OctelNet and AMIS.

For the first five parameters, the minimum and maximum refer to the length of the entry allowed, not an actual number.

Networking Parameters

System Telephone Access Number

This parameter defines the local system's phone number. M2000 includes the System Telephone Access Number as part of network message dispatches to remote systems. This allows remote sites to reply directly to messages you send them.

When/How to Use

When defining the System Telephone Access Number, you must include the area code and seven-digit phone number, such as 2125551234. For consistent results, you should only enter digits for this parameter.

If you do not enter the System Telephone Access Number, remote systems will be unable to reply directly to messages dispatched from M2000.

Related Parameters/Features

The Country Code is placed in front of the System Telephone Access Number to identify the M2000 system for remote sites.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*No*	*No*

Networking Parameters

Network Prefix

This parameter defines the code that the system must insert before the dialing string when dispatching network messages. This code can be used to identify a local phone network or the Code for Accessing an Outside Line.

When/How to Use	Use the Network Prefix to identify the code that must be dialed if you are part of a local network. For example, some companies have multiple sites that use a code other than the Code for Accessing an Outside Line to indicate that they are dialing another network site. If the customer's M2000 system does not require a special prefix to be dialed for network messages, leave this parameter blank. If you do not define a Network Prefix, subscribers sending Casual AMIS messages to destinations that require a prefix must insert the prefix before the destination telephone number when dialing. To use multiple prefixes, use the Network Prefix to define the code used most often, and then use the Node Prefix field on the Network Node Maintenance dialog box to override the Network Prefix for nodes that require a different prefix. The Network Prefix is not used for replies to network messages; the Code for Accessing an Outside Line is used instead.
Related Parameters/Features	The Node Prefix field on the Network Node Maintenance dialog box overrides the Network Prefix on a per-node basis. The system uses the Code for Accessing an Outside Line when no Network Prefix or Node Prefix is defined. If you do not want to use a prefix or the Code for Accessing an Outside Line, insert a comma in this field.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*3*	*9,*	*No*	*No*	*No*

Networking Parameters

International Access Code

This parameter defines the code used to access international dialing in the country in which the M2000 system is located. The system uses this code when sending network replies to remote systems in other countries.

The system determines whether the International Access Code is required for a reply by comparing the Country Code of the remote destination to the system's Country Code. If the codes are different, the system inserts the International Access Code in the dialing string.

When/How to Use

Enter the International Access Code for the country in which the local M2000 system is located. This code can only contain numbers or commas.

The International Access Code for the United States is 011.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

You must correctly define the Country Code for the M2000 system to determine whether the International Access Code is required for a network reply.

This parameter is used only for network replies. If Network Reply is disabled for all subscribers on the Class of Service dialog box, the International Access Code is not used.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*011*	*No*	*No*	*No*

Networking Parameters

Long Distance Access Code

This parameter defines the code used to access long distance dialing at the M2000 location. The system uses this code when sending network replies to remote systems in other area codes.

Dial Plan determines whether the Long Distance Access Code is required for network replies. If the prefix of the remote system is not found in Dial Plan, M2000 assumes it is a long distance number and inserts the Long Distance Access Code in the dialing string.

When/How to Use

Enter the Long Distance Access Code for the M2000 location. The Long Distance Access Code for the United States is 1.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

This code is only used for network replies. If Network Reply is disabled for all subscribers on the Class of Service dialog box, the Long Distance Access Code is not used.

Use DialPlan database must be enabled on the Outbound Dialing dialog box for the system to insert the Long Distance Access Code when required for network replies.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*3*	*1*	*No*	*No*	*No*

Networking Parameters

Country Code

This parameter defines the dialing code for the country in which the M2000 system is located.

The system transmits the Country Code to remote systems when it dispatches both casual and administered network messages. This allows remote sites to reply directly to messages sent to them.

The Country Code must be defined for network transmissions to be successful.

When/How to Use

Enter the Country Code for the country in which the M2000 system is located. The Country Code for the United States is 1.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

The system uses the Country Code to determine if the International Access Code is required for network replies.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*3*	*1*	*No*	*No*	*No*

Networking Parameters

Dispatch Options/Permit Inbound

This parameter determines whether M2000 is permitted to receive AMIS and OctelNet messages.

When/How to Use

When you enable this parameter, all subscribers on the system who can receive messages from local subscribers can also receive AMIS and OctelNet messages.

Related Parameters/Features

If Permit Inbound is enabled, but Permit Outbound is disabled, subscribers can receive network messages, but cannot send or reply to them.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

Networking Parameters

Dispatch Options/Permit Outbound

This parameter determines whether the M2000 system can send network messages and replies.

When/How to Use

Permit Outbound controls the ability to send network messages and replies from the system.

Related Parameters/Features

You must also activate the networking options on the Class of Service dialog box.

The Network Mailbox Forwarding feature will not forward messages to network addresses if outbound network messaging is disabled, regardless of whether Follow-Me-Forward is enabled on the Class of Service and Subscriber Settings dialog boxes.

You must enable at least one port for AMIS/OctelNet on the Port Parameters tab in System Setup for outbound network messaging to be available.

If Outbound is enabled but Inbound is disabled, you can send network messages but you cannot receive replies to those messages.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

Networking Parameters

Economy Hours/Starting Weekday Time

This parameter defines the system-wide start of Economy dispatch hours during the week. During Economy hours, the system sends any casual or administered network messages marked for Economy dispatch since the end of Economy Hours the previous day.

When/How to Use

Enter the hour and minute that Economy time begins in standard AM/PM time. The same Economy time is used for each weekday; you cannot specify different Economy times for different weekdays.

If you use Military format, the system converts the time to AM/PM format after you save and exit System Setup.

When defining Economy hours, use the off-peak rate period defined by the phone carrier.

It is recommended that you start the Economy hours a few minutes after the start of the lower rate period to allow for discrepancies between the system clock and the carrier's clocks.

Related Parameters/Features

You can use the Economy Dispatch fields on the Network Node Maintenance dialog box to override the Economy Hours for individual nodes.

The Ending Weekday Time determines when Economy Hours end.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	11:00 PM	*No*	*No*	*No*

Networking Parameters

Economy Hours/Starting Weekend Time

This parameter defines the system-wide start of Economy dispatch hours for the weekend. During Economy hours, the system sends any casual or administered network messages marked for Economy dispatch since the end of Economy Hours on the previous day.

When/How to Use

Enter the hour and minutes that Economy time begins for Saturday and Sunday in standard AM/PM time. The same Economy time is used for both weekend days; you cannot specify different Economy times.

If you use Military format, the system converts the time to AM/PM format after you save and exit System Setup.

When setting Economy hours, use the off-peak rate period defined by the phone carrier. Many carriers have different off-peak hours on the weekend.

It is recommended that you start the Economy hours a few minutes after the start of the lower rate period to allow for discrepancies between the system clock and the carrier's clocks.

Related Parameters/Features You can use the Economy Dispatch fields on the Network Node Maintenance dialog box to override Economy Hours for individual nodes.

The Ending Weekend Time determines when Economy Hours end.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	11:00 PM	*No*	*No*	*No*

Networking Parameters

Economy Hours/Ending Weekend Time

This parameter defines the system-wide end of Economy dispatch hours for the weekend. During Economy hours, the system sends any casual or administered network messages marked for Economy dispatch since the end of Economy Hours on the previous day.

When/How to Use Enter the hour and minutes that Economy time ends in standard AM/PM time. The same Economy time is used for Saturday and Sunday; you cannot specify different Economy times.

If you use Military format, the system converts the time to AM/PM format after you save and exit System Setup.

When setting Economy hours, use the off-peak rate period defined by the phone carrier. Many carriers have different off-peak hours on the weekend.

It is recommended that you end the Economy hours a few minutes before the end of the lower rate period to allow for discrepancies between the system clock and the carrier’s clocks.

The Economy time frame can overlap into the next day. For example, Sunday’s time may extend into Monday morning. In this case, the hours that extend into Monday are still considered part of the weekend Economy time.

Related Parameters/Features You can use the Economy Dispatch fields on the Network Node Maintenance dialog box to override Economy Hours for individual nodes.

The Starting Weekend Time determines when Economy Hours begin.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
—	—	6:00 AM	*No*	*No*	*No*

Networking Parameters

Economy Hours/Ending Weekday Time

This parameter defines the system-wide end of Economy dispatch hours during the week. During Economy hours, the system sends any casual or administered network messages marked for Economy dispatch since the end of Economy Hours the previous day.

When/How to Use

Enter the hour and minute that Economy time ends in standard AM/PM time. The same Economy time is used for each weekday; you cannot specify different Economy times for different weekdays.

If you use Military format, the system converts the time to AM/PM format after you save and exit System Setup.

When setting Economy hours, use the off-peak rate period defined by the phone carrier.

It is recommended that you end the Economy hours a few minutes before the end of the lower rate period to allow for discrepancies between the system clock and the carrier's clocks.

The Economy time frame can overlap into the next day. For example, Friday's time may extend into Saturday morning. In this case, the hours that extend into Saturday are still considered part of the weekday Economy time.

Related Parameters/Features

You can use the Economy Dispatch fields on the Network Node Maintenance dialog box to override Economy Hours for individual nodes.

The Starting Weekday Time determines when Economy Hours begin.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
—	—	6:00 AM	*No*	*No*	*No*

Networking Parameters

Maximum Number of Attempts Before Failure

This parameter defines the allowed number of unsuccessful dispatch attempts to an Administered node before the system deactivates the node. When a node is inactive, subscribers cannot send any messages to it until it has been reactivated on the Network Node Maintenance dialog box.

This parameter only applies to OctelNet and Administered AMIS nodes.

An attempt is counted whenever the system returns one of the following messages to the sending subscriber's mailbox:

- Maximum number of retries for busy has been reached
- Minimum number of retires for no answer has been reached
- Number of Attempts on the Network Node Maintenance dialog box has been reached
- Destination mailbox is full
- Dispatch has failed

For example, if you set this parameter to 5, the node will be disabled when five messages to that node have been returned to the sending subscribers' mailboxes.

When/How to Use

The default for this parameter should be sufficient for most systems.

If subscribers notify you that they are unable to enter a node number when sending a network message, he node has probably been deactivated. Check the Network Node Maintenance dialog box to determine if the system has automatically disabled the Node Active checkbox. If so, you should determine the reason for the messaging failures before reactivating the node.

Related Parameters/Features

Each time the No Answer/Number of Retries is reached for a message, the system returns the message to the subscriber's mailbox and an attempt is counted toward the Maximum Number of Attempts Before Failure.

Each time the Busy/Number of Retries is reached for a message, the system returns the message to the subscriber's mailbox and an attempt is counted toward the Maximum Number of Attempts Before Failure.

Each time the Number of Attempts on the Network Node Maintenance dialog box is reached for a message, the system returns the message to the subscriber's mailbox and an attempt is counted toward the Maximum Number of Attempts Before Failure.

If Set Too High

It may be some time before you determine that there is a problem with a node.

If Set Too Low

You may deactivate nodes unnecessarily. Setting this parameter to 0 acts the same as when you set it to 1.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*5*	*No*	*No*	*No*

Networking Parameters

Maximum Delay for Queued Dispatch in Minutes

This parameter defines the number of minutes that any message can be held in a standard dispatch queue. When any message in the queue reaches the maximum delay, the system dispatches all messages in the queue. This parameter applies to all network messages assigned standard dispatch (OctelNet, Administered AMIS, Casual AMIS).

When/How to Use

When setting this parameter, keep in mind that only one message in the queue will be held for the maximum delay. When the delay is reached, the system sends all messages in the queue, regardless of how long they have been there.

Consider what type of messages subscribers usually send with standard dispatch. If time-critical messages are regularly sent with standard dispatch, you may want to set this parameter low to ensure that messages are sent in a timely manner.

Also consider how active the queues are. The more messages that are regularly sent with standard dispatch, the higher you can set this parameter.

Related Parameters/Features

This parameter defines the delay for queued dispatch on a system-wide basis. You can override this parameter for individual nodes using the Standard Dispatch Maximum Delay field on the Network Node Maintenance dialog box.

If Maximum Number of Queued Messages in System Setup or Maximum Messages or Maximum Delay on the Network Node Maintenance dialog box is reached first, the system dispatches all of the messages in the queue before the maximum delay is reached.

If Priority dispatch is the enabled dispatch option available in the Classes of Service, subscribers cannot send messages with Standard dispatch, and this parameter is not used.

M2000 creates queues for standard dispatch based on the System Telephone Access Number, not the node number. Therefore, on an OctelNet system, if you create multiple nodes for a single destination, the dispatch queue can contain messages for different nodes.

If Set Too High

Some messages may be held in the queue for quite a while before they are dispatched.

If Set Too Low

The system will make more outcalls to the remote sites to dispatch messages.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
3	*999*	*15*	*No*	*No*	*No*

Networking Parameters

Maximum Number of Queued Messages

This parameter defines the number of messages that can accumulate in a standard dispatch queue. When the queue reaches the maximum number, the system dispatches all messages in the queue. This parameter applies to all network messages (OctelNet, Administered AMIS, Casual AMIS) assigned Standard dispatch.

When/How to Use

Consider what type of messages subscribers usually send with standard dispatch. If time-critical messages are regularly sent with standard dispatch, you may want to set this parameter low to ensure that messages are sent in a timely manner.

Also consider how active the queues are. The more messages that are regularly sent with standard dispatch, the higher you can set this parameter.

Related Parameters/Features

This parameter defines the maximum messages for queued dispatch on a system-wide basis. You can override this parameter for individual nodes using the Standard Dispatch Maximum Messages field on the Network Node Maintenance dialog box.

If Maximum Delay for Queued Dispatch in Minutes parameter in System Setup or Maximum Delay or Maximum Messages on the Network Node Maintenance dialog box is reached first for a queue, the system dispatches all of the messages in the queue before the maximum number of messages accumulate.

If Priority dispatch is the enabled dispatch option available in the Classes of Service, subscribers cannot send messages with Standard dispatch, and this parameter is not used.

M2000 creates queues for standard dispatch based on the System Telephone Access Number, not the node number. Therefore, on an OctelNet system, if you create multiple nodes for a single destination, the dispatch queue can contain messages for different nodes.

If Set Too High

Some messages may be held in the queue for quite a while before they are dispatched.

If Set Too Low

The system will make more outcalls to the remote sites to dispatch messages.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
2	*9*	*3*	*No*	*No*	*No*

Networking Parameters

No Answer/ Number of Retries

This parameter defines the number of no answer responses the system allows when attempting dispatch to a remote access phone number. This parameter applies to all outbound network messaging (OctelNet, Administered AMIS, Casual AMIS, Network Replies).

When/How to Use

The default for this parameter should be sufficient on most systems.

Related Parameters/Features

The No Answer/Delay (in Minutes) parameter determines how long M2000 waits between retries for attempts resulting in a no answer.

If the Number of Retries for Busy is reached first, the system places the message in the sender's new message queue and makes no further attempts.

Each time the No Answer/Number of Retries is reached for a message and the system returns the message to the sender's mailbox, an attempt is counted toward the Maximum Number of Attempts Before Failure.

If Set Too High

The system may unnecessarily tie up a port trying to reach a remote system that may be down.

If Set Too Low

The system may unnecessarily return messages to subscriber mailboxes. If this parameter is set to 0, the system places the message in the sender's mailbox after the first attempt resulting in a no answer.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*5*	*No*	*No*	*No*

Networking Parameters

No Answer/Delay (in Minutes)

This parameter defines the number of minutes M2000 waits between retries when dispatching to a remote access phone number that does not answer. This parameter applies to all outbound network messaging (OctelNet, Administered AMIS, Casual AMIS, Network Replies).

When/How to Use

The default for this parameter should be sufficient for most systems.

Related Parameters/Features

This parameter determines the delay between No Answer/Number of Retries.

If Set Too High

The higher you set this parameter, the longer it will take for the message to reach its intended destination

If Set Too Low

The lower you set this parameter, the faster the system exhausts the number of retries.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
3	*99*	*5*	*No*	*No*	*No*

Networking Parameters

Busy/Number of Retries

This parameter defines the number of busy responses M2000 allows when attempting dispatch to a remote access phone number. This parameter applies to all outbound network messaging (OctelNet, Administered AMIS, Casual AMIS, Network Replies).

When/How to Use

The default for this parameter should be sufficient on most systems.

Related Parameters/Features

The Busy/Delay (in Minutes) determines how long the system waits between retries for attempts resulting in a busy.

If the Number of Retries for No Answer is reached first, the system places the message in the sender's new message queue and makes no further attempts.

Each time the specified Busy/Number of Retries is reached for a message and the system returns the message to the sender's mailbox, an attempt is counted toward the Maximum Number of Attempts Before Failure.

If Set Too High

The system may unnecessarily tie up a port trying to reach a remote system that may be down.

If Set Too Low

The system may unnecessarily return messages to subscriber mailboxes. If this parameter is set to 0, the system places the message in the sender's mailbox after the first attempt resulting in a busy.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*5*	*No*	*No*	*No*

Networking Parameters

Busy/Delay (in Minutes)

This parameter defines the number of minutes M2000 waits between retries when dispatching to a remote access phone number that is busy. This parameter applies to all outbound network messaging (OctelNet, Administered AMIS, Casual AMIS, Network Replies).

When/How to Use

The default for this parameter should be sufficient on most systems.

Related Parameters/Features

This parameter determines the delay between Busy/Number of Retries.

If Set Too High	The higher you set this parameter, the longer it will take for the message to reach its intended destination
If Set Too Low	The lower you set this parameter, the faster the system exhausts the number of retries.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
3	*99*	*5*	*No*	*No*	*No*

NameNet Parameters (Page 9 of 26)

The NameNet parameters set limits for the system's NameNet records and determines how long M2000 waits before notifying the local sender that an OctelNet message was not received.

These parameters apply only to M2000 systems configured with OctelNet. If OctelNet is not present on the system or is disabled, disregard these parameters.

NameNet Parameters

Maximum Number of NameNet Records

This parameter defines the total number of NameNet entries that the system is allowed. When the system reaches the maximum, no new NameNet entries can be created.

When/How to Use

NameNet records are created in either of two ways:

- You can create entries manually from the Network Node Maintenance dialog box.
- NameNet entries are automatically created when subscribers send messages to users at remote OctelNet sites.

When you are setting this parameter, consider the number and size of the OctelNet sites to which subscribers are allowed to send messages.

Related Parameters/Features

The fewer NameNet records you allow, the lower you should set the Maximum Number of Idle Days for NameNet Records. This allows the system to purge idle entries, thereby allowing new entries to be created.

If Set Too High

Increasing this parameter should have no affect on M2000 performance.

If Set Too Low

If this parameter is set too low, the maximum can be reached and no new NameNet entries will be allowed on the system.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
1	*5000*	*1000*	*No*	*No*	*No*

NameNet Parameters

Maximum Number of Idle Days for NameNet Records

This parameter determines how many days the system will store idle usage-based NameNet entries before automatically purging them.

When/How to Use

The default for this parameter should be sufficient, unless Maximum Number of NameNet Records is set high and hard drive space is a concern.

Related Parameters/Features

If the system PC reaches 90% of its capacity, the system disregards this parameter and automatically purges the usage-based NameNet entries that have been idle the longest, until the capacity drops to 80%.

If Set Too High

The higher you set this parameter, the longer idle NameNet entries will be allowed to take up space on the system.

If Set Too Low

If this parameter is set to 0, it is ignored, and idle NameNet entries are allowed to remain on the system indefinitely.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
0	*365*	*180*	*No*	*No*	*No*

NameNet Parameters

Interval for Notification of Non-Receipt for OctelNet Messages

This parameter determines how many days a remote system waits before notifying a local M2000 system subscriber that a message sent with confirmation to a subscriber on the remote system has not been received. Messages are considered received after they have been listened to or skipped.

If messages have not been received in the specified number of days, the remote system sends notification messages to the local subscribers' mailboxes. No notification is provided when messages are received.

This notification concerns only messages that are successfully dispatched. Messages that are not successfully dispatched are always returned to the local subscriber's mailbox with a reason for the failure.

When/How to Use

The default for this parameter should be sufficient on most systems.

Related Parameters/Features	Subscribers can also use Message Locator to check on message status for messages sent to OctelNet sites with confirmation. Message Confirmation must be enabled in the subscribers' Class of Service. Both Permit Inbound and Permit Outbound must be enabled on the Networking tab in System Setup. OctelNet must be enabled in the subscribers' class of service for them to be able to send OctelNet messages.
If Set Too High	If this parameter is set too high, subscribers are not informed in a timely manner of messages that are not received.
If Set Too Low	If this parameter is set too low, subscribers may not have a reasonable amount of time to retrieve messages.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1	*30*	*5*	*No*	*No*	*No*

Fax Parameters (Page 10 of 26)

The Fax parameters determine where and how callers retrieve faxes from M2000. The Fax parameters are available only on M2000 systems with sentinels that support the Fax Solutions module.

Fax Parameters

Local Fax Machine Telephone Number	This parameter defines the phone number of the fax machine where system subscribers retrieve faxes sent to their mailboxes. This phone number can be an extension on the system or an external phone number.
When/How to Use	The Local Fax Machine Telephone Number can be an extension, an external phone number, or a long distance number. If the Local Fax Machine Telephone Number is an internal extension, enter the extension number. If the fax machine is a local external phone number, enter that number. If the Local Fax Machine Number is a long distance number, enter the long distance access code, followed by the area code and the phone number. The minimum and maximum for this parameter refer to the length of the entry allowed in this field, not an actual value.
Related Parameters/Features	If Fax Mail Allowed is disabled and the system detects fax tones, it performs a blind transfer to the Local Fax Machine Telephone Number. If the number of digits in the Local Fax Machine Telephone Number is equal to or greater than the Number of Digits in

Local Phone Number, the Fax Prefix Code is inserted at the beginning of the dialing string. If the Fax Prefix Code is not defined, the Custom Message Delivery Code is inserted at the beginning of the dialing string.

If the number of digits in the Local Fax Machine Telephone Number is less than the Number of Digits in Local Phone Number, the Custom Message Delivery Code is inserted at the beginning of the dialing string.

If both the Fax Prefix Code and Custom Message Delivery code are undefined, the system dials the fax number as it is displayed in the field.

The Primary Fax Destination field on the Subscriber Settings dialog box can be used to override this parameter for individual mailboxes.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*No*	*No*

Fax Parameters

Fax Board Type

This parameter indicates the type of fax board in the M2000 PC. When you select None, all the Fax parameters, except Local Fax Machine Telephone Number, are disabled.

When/How to Use Enter None if the system does not have a fax board. Select Brooktrout for all Brooktrout boards.

If you change this parameter, you must perform a shutdown by selecting Exit from the File menu for M2000 to recognize the change. Changes are not recognized if you select Restart Voice System from the Options menu.

Related Parameters/Features When None is selected, the following parameters are dimmed:

- V-Tree Fax Retrieval
- Use Immediate Fax Delivery in V-Trees
- Fax Retrieval Storage Mailbox
- Fax Mail Allowed
- Use Fax Cover Sheet
- Number of Attempts when Sending a Fax
- Fax Delivery Retry Delay
- Fax Prefix Code

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
—	—	None	Yes	No	No

Fax Parameters

V-Tree Fax Retrieval

This parameter determines whether M2000 can distribute faxes requested by callers from a V-Tree.

When/How to Use

You should enable this parameter when you want the system to be able to send faxes to callers—for example, to provide product information to customers.

Related Parameters/Features

Use Immediate Fax Delivery Mode in V-Trees is disabled if V-Tree Fax Retrieval is off.

If Use Fax Cover Sheet is enabled, the system sends a cover sheet with every outbound fax.

If Fax Mail Allowed is disabled, a Fax Retrieval Mailbox must be defined to store faxes for V-Tree Fax Retrieval.

At least one port on the system must be enabled for fax on the Port Parameters tab.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	Max	Default	Requires Restart	Switch-Dependent	Set by Integrator
—	—	No	No	No	No

Fax Parameters

Use Immediate Fax Delivery Mode in V-Trees

This parameter determines whether M2000 delivers a fax during the phone call requesting it or schedules the fax for later delivery. If this parameter is enabled, callers must be calling from a fax machine to receive the fax. If this parameter is disabled, callers must enter a valid fax machine number in order for the fax to be delivered successfully.

When/How to Use

Enable this parameter if you do not want the system to incur long distance charges for delivering faxes requested by callers from a V-Tree.

Related Parameters/Features

When V-Tree Fax Retrieval is disabled, Use Immediate Fax Delivery Mode in V-Trees is dimmed.

Fax cover sheets are not sent with faxes retrieved from V-Trees when Use Immediate Fax Delivery Mode in V-Trees is enabled.

If Set Too High

Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No*	*No*	*No*

Fax Parameters

Fax Retrieval Storage Mailbox

This parameter defines the mailbox number where fax documents are stored for retrieval.

When/How to Use

The mailbox specified in this parameter is where all faxes for V-Tree fax retrieval are stored when the M2000 system does not use fax mail.

You must create this mailbox on the system and enable Fax Options Send and Receive in its Class of Service.

Related Parameters/Features

If you enable Fax Mail Allowed, you can store faxes for fax retrieval in any mailbox enabled for sending and receiving faxes.

The Fax Retrieval Storage Mailbox parameter is dimmed if V-Tree Fax Retrieval is disabled.

The Number of Digits in a Mailbox determines the maximum and minimum values for this parameter. (The minimum and maximum shown below is for systems using four-digit mailboxes.)

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1000	*9999*	*1000*	*No*	*No*	*No*

Fax Parameters

Fax Mail Allowed

This parameter determines whether M2000 is permitted to use fax mail.

When/How to Use

This parameter permits fax mail for all M2000 mailboxes. Mailboxes must also be enabled for send or receive faxes in the class of service.

Related Parameters/Features

If a subscriber mailbox has AutoPrint enabled on the Subscriber Settings dialog box, faxes sent to that mailbox are printed at the local fax machine or Personal Fax Destination defined in the Subscriber Settings dialog box as soon as they are received.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Fax Parameters

Use Fax Cover Sheet

This parameter specifies whether M2000 attaches a fax cover sheet when it delivers faxes retrieved from a V-Tree.

When/How to Use — If you enable this parameter, you must create a system-wide fax cover sheet. You can only have one fax cover sheet in the M2000 system.

Related Parameters/Features — A Fax cover sheet is not sent from a V-Tree when Use Immediate Fax Delivery Mode in V-Trees is enabled.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Fax Parameters

Number of Attempts when Sending a Fax

This parameter specifies the number of times M2000 attempts to send a fax for V-Tree fax retrieval and fax mail when it encounters a busy or no answer condition at the destination fax machine.

When/How to Use — The default should be acceptable for most systems.

If you set this parameter to 0, and the system encounters a busy or no answer condition at the destination fax machine, the fax is not delivered.

Related Parameters/Features — The Fax Delivery Retry Delay (Minutes) parameter determines how long the system waits between attempts to deliver a fax.

If Set Too High — The maximum is the default value for this parameter.

If Set Too Low — If this parameter is set too low, the system may be unable to deliver the fax.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*9*	*No*	*No*	*No*

Fax Parameters

Fax Delivery Retry Delay (Minutes)

This parameter determines the number of minutes the system waits before again attempting to send a fax after it encounters a busy or no answer at the destination fax machine.

When/How to Use

For most systems, the default should be sufficient. Increase this value if the system experiences heavy fax traffic and the outbound ports are constantly occupied by fax delivery.

Related Parameters/Features

If the Number of Attempts when Sending a Fax is set to 0, this parameter is not used.

If Set Too High

The higher you set this parameter, the longer callers have to wait for fax delivery.

If Set Too Low

If you set this parameter too low, ports may not have enough time to reset between delivery attempts. Also, the number of attempts could be exhausted before the fax can be delivered.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1	*60*	*2*	*No*	*No*	*No*

Fax Parameters

Fax Prefix Code

This parameter specifies the prefix the system dials when accessing an external line to send a fax.

When/How to Use

Most systems use the default.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

If the length of the destination fax number is equal to or greater than Number of Digits in Local Telephone Number, the system uses the fax prefix code to access an external fax line when dialing the destination fax number.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*9,*	*No*	*Yes*	*No*

Fax Extensions (Page 11 of 26)

The Fax Extensions parameters are used for M2000 systems using the Transfer Method to send and receive faxes. The Transfer Method is used when the system has fewer fax ports than voice ports. When the Transfer Method is used, the system must put the voice channel on hold, then dial a fax port extension.

Fax Extensions Parameters

Transfer to Extensions (Requires Shutdown)

This parameter determines whether the system transfers calls from a voice port to a fax port when sending and receiving faxes.

When/How to Use

Enable this parameter if M2000 must use the Transfer Method to send and receive faxes.

When you change this parameter, you must shut down M2000 by selecting Exit from the File menu for the changes to be recognized. The changes will not take effect if you select Restart from the Options menu.

Related Parameters/Features

When Transfer to Extensions is enabled, you must configure the Extension Connected to Fax Channel *n* parameters.

The Fax Extensions parameters are dimmed when the Fax Board Type parameter is set to None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No**	*No*	*No*

* If you change this parameter, you must shut down and restart the M2000 system for the change to take effect.

Fax Extensions Parameters

Extension Connected to Fax Channel 0-11

These parameters define the phone system extension number connected to each fax channel. M2000 systems using the Transfer Method dial these extensions to transfer faxes to a fax port.

When/How to Use	Enter the extension number for each fax port on your system. The extensions you enter for each channel must be valid extensions that you assigned to the fax ports. Note that the channel numbers begin at 0. For example, if you have four fax ports on the system, enter an extension for ports numbered 0-3. The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.
Related Parameters/Features	Transfer to Extensions (Requires Shutdown) must be enabled for these parameters to be available.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*No*	*No*

Call Queuing Parameters (Page 12 of 26)

The Call Queuing parameters control the number of callers allowed in holding queues for the M2000 system and the prompts voiced to callers holding in queues. Call Queuing is only available when Enable Automated Attendant is on, and when call progress is used.

Call Queuing Parameters

Maximum Number of Callers Allowed in Queue	This parameter specifies the total number of callers that can be holding in queues at any one time.
When/How to Use	When setting this parameter, consider the following: • Set this parameter high enough to accommodate as many callers as possible, but low enough so all the inbound ports are not constantly tied up with callers on hold. • Do not set this parameter higher than the number of ports installed on the M2000 system.
Related Parameters/Features	The number of ports enabled for Inbound events determines the maximum number of callers allowed in the system.
If Set Too High	If this parameter is set too high, all inbound ports on the system are tied up by callers on hold. If this occurs, M2000 will be unable to receive inbound calls.
If Set Too Low	If this parameter is set too low, callers will not be able to wait in queues. Set this parameter to 0 to disable it.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*16*	*5*	*No*	*No*	*No*

Call Queuing Parameters

Voice "Extension is (still) busy" while in Queue

This parameter determines whether the system voices, *"That extension is busy,"* to callers after the system first attempts to transfer them to a busy extension enabled for call queuing.

If this parameter is enabled and the caller is in the first queue position, the system voices, *"That extension is still busy,"* each time the system attempts to transfer the caller to the busy extension.

Callers in any queue position but the first do not hear this phrase again until they move to the first queue position.

When/How to Use

For most systems, leave this parameter enabled.

Related Parameters/Features

System managers can record call queuing prompts using SOLVE or the phone interface.

If the Voice "Please Hold while Call is Transferred" parameter is enable, the system voices this prompt after the phrase *"Please hold, someone will be with you shortly."*

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet

Call Queuing Prompts Sheet (Call Queuing Setup Options)

Call Queuing Parameters

Voice "Please Hold while Call is Transferred"

This parameter determines whether the system voices, *"Please hold, someone will be with you shortly,"* to the caller in the first queue position each time the system attempts to transfer to an extension enabled for call queuing.

When/How to Use

For most systems, leave this parameter enabled, if you are not using a Custom Transfer prompt for call queuing.

Related Parameters/Features — If you recorded a Custom Transfer prompt using SOLVE or the system manager's phone interface, that prompt is voiced each time M2000 attempts to transfer the caller. In this case, disable this parameter so the system does not voice two transfer prompts.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet
Call Queuing Prompts Sheet (Call Queuing Setup Options)

Call Queuing Parameters

Voice Caller's Position in Queue

This parameter determines whether the system voices call queue positions to callers in the second queue position or higher.

When/How to Use — For most systems, leave this parameter enabled. This parameter gives callers an indication of how long they may need to wait to be connected to the subscriber at the busy extension. Disable this parameter if you do not want the system to inform callers of their positions in the queue.

Related Parameters/Features — When the caller is first transferred to the second queue position or higher, the system voices*, "Please hold, someone will be with you shortly," and, "That extension is busy,"* followed by, *"You are number <n> in the queue,"* if these phrases are enabled. Afterwards, the system only voices the keypress options phrase, any additional call queuing phrases, and the caller's position phrase until the caller moves into the first queue position.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet
Call Queuing Prompts Sheet (Call Queuing Setup Options)

Call Queuing Parameters

Voice and Accept Keypress Options while in Queue

This parameter determines whether the system voices keypress options to all callers waiting in queues. Providing keypress options gives callers alternatives to holding for the busy extension.

When this parameter is enabled, the system voices, *"To continue holding do nothing. To try another extension, press <1>. To leave a voice message, press <2>. If you need assistance, press <0>. To disconnect, press <#>."*

This prompt is voiced after, *"Please hold, someone will be with you shortly,"* and, *"That extension is busy,"* if each of these phrases is enabled. If the caller is holding in the second queue position or higher, this prompt is voiced after the caller's position.

When/How to Use

For most systems, leave this parameter enabled. If this parameter is disabled, callers can only choose to continue to hold or hang up.

Related Parameters/Features

If this parameter is disabled, the Custom Call Queuing Phrase for Operator and the Require Caller to Press Star to Stay in Queue parameters are dimmed.

If Require Caller to Press Star to Stay in Queue is enabled, the system substitutes the phrase, *"To continue holding, press star,"* in the keypress options prompt.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet

Call Queuing Prompts Sheet (Call Queuing Setup Options)

Call Queuing Parameters

Custom Call Queuing Phrase for Operator

This parameter determines whether the system uses a custom call queuing phrase for callers holding for the default operator mailbox.

This phrase should be recorded as phrase 93 in the ENGLISH2.O32 voice file using V-Edit.

When/How to Use

If you use the custom call queuing phrase, make sure that the default operator mailbox is enabled for call queuing in the Class of Service and that call queuing is active on the Subscriber Settings dialog box.

Related Parameters/Features	This parameter is dimmed if Voice and Accept Keypress Options while in Queue is disabled.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet

Call Queuing Prompts Sheet (Call Transfer Prompt)

Call Queuing Parameters

Require Caller to Press Star to Stay in Queue

This parameter determines whether the system prompts all callers to press <✶> to remain holding in a call queue.

When this parameter is enabled, the system voices, *"To continue holding, press <✶>. To try another extension, press <1>. To leave a voice message, press <2>. If you need assistance, press <0>. To disconnect, press <#>."* Callers in the queue who do not press <✶> when prompted to stay in the queue are disconnected.

When/How to Use	If M2000 experiences hang-up detection problems, enable this parameter to allow the system to reset ports when callers on hold hang up. If Require Caller to Press Star to Stay in Queue is enabled, the system substitutes the phrase, *"To continue holding, press star,"* in the keypress options prompt.
Related Parameters/Features	This parameter is dimmed if Voice and Accept Keypress Options while in Queue is disabled.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

See Preinstallation Configuration Worksheet

Call Queuing Prompts Sheet (Call Queuing Setup Options)

Call Queuing Parameters

Number of Seconds for First Caller in Queue to Wait	This parameter specifies the number of seconds M2000 waits after attempting to transfer the first caller in a queue to the desired extension before attempting to transfer them again.
When/How to Use	For most systems, the default setting should be sufficient. Increase this value if you want callers to remain on hold longer between prompt voicing.
Related Parameters/Features	None.
If Set Too High	If this parameter is set too high, callers may assume they have been disconnected and hang up.
If Set Too Low	Not applicable; the default is the minimum allowed setting.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1	*99*	*1*	*No*	*No*	*No*

Intercom Paging Parameters (Page 13 of 26)

The Intercom Paging parameters define the codes M2000 dials to activate the Intercom Paging feature. They also determine how many times and how often the system pages a subscriber.

Intercom Paging Parameters

Intercom Paging Code	This parameter specifies the dialing string M2000 must send to the switch to activate Intercom Paging. When the system initiates a page, it puts the caller on hold, dials the Intercom Paging Code, then returns to the caller.
When/How to Use	This parameter is set when the Integrator is run, if required by the switch. The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.
Related Parameters/Features	If you want to configure zone paging, enter the zone paging code for each mailbox in the Number field under Intercom Paging on the Subscriber Settings dialog box. This code overrides the Intercom Paging code.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*Yes*	*Yes*	*Yes*

Intercom Paging Parameters

Release Code for Intercom Paging

This parameter specifies the code the system dials when required by the switch to return to a call after the system attempts to page the subscriber.

When/How to Use

This parameter is set when the Integrator is run, if required by the switch.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Intercom Paging Parameters

Repeat Intercom Paging Phrase

This parameter determines whether the system automatically repeats the paging phrase when performing a page.

When/How to Use

When this parameter is enabled and a subscriber does not respond to the paging announcement within the time specified in Paging Wait Time (Intercom Redirect), the system repeats the announcement.

Related Parameters/Features

If the subscriber's mailbox is configured for Automatic paging on the Subscriber Settings dialog box, the system automatically pages the subscriber when the extension is not answered. If Repeat Intercom Phrase is enabled, the system voices the announcement twice, then prompts the caller to try another extension, leave a message, retry the page, or disconnect. Note that the system prompts callers to try the page again only if Maximum Number of Retries in Paging (Intercom Redirect) is set to greater than 0.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Intercom Paging Parameters

Number of Retries when Paging is Busy

This parameter specifies the number of times the system attempts to page the subscriber when the paging extensions are busy.

When/How to Use

For most systems, the default value is sufficient. If the system experiences heavy traffic, increase this value.

Related Parameters/Features

None.

If Set Too High

The higher the setting, the more times the system attempts to send the page.

If Set Too Low

If the system cannot access the busy paging system at the first attempt, the page is not voiced.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*3*	*No*	*No*	*No*

Intercom Paging Parameters

Maximum Number of Retries in Paging (Intercom Redirect)

This parameter specifies the number of times the system allows a caller to retry a page. When the caller reaches the maximum number of retries, the system prompts the caller to try another extension, to leave a message, or to disconnect.

When/How to Use

When setting this parameter, consider the following:

- If Repeat Intercom Paging Phrase is enabled, the system voices the paging announcement twice for each paging attempt before prompting the caller to try another extension, leave a message, retry the page, or disconnect. Note that the system prompts callers to try the page again only if the Maximum Number of Retries in Paging (Intercom Redirect) parameter is set to greater than 0.
- If the subscriber's mailbox is enabled for automatic paging, the system immediately pages the subscriber when the extension is not answered, before prompting the caller to try another extension, to leave a message, to retry the page (if this parameter is greater than 0), or to disconnect.

Related Parameters/Features

The Paging Wait Time (Intercom Redirect) parameter determines the amount of time the system waits after paging a subscriber before allowing the caller to retry the page.

If Set Too High

The higher the setting, the more times the intercom paging announcement is voiced.

If Set Too Low	A low setting for this parameter does not affect M2000 performance.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*3*	*Yes*	*No*	*No*

Intercom Paging Parameters

Paging Wait Time (Intercom Redirect)

This parameter specifies the number of seconds M2000 waits for a subscriber to respond to a page before prompting the caller try another extension, to leave a message, to page the subscriber, or to disconnect. Note that the system prompts callers to try the page again only if the Maximum Number of Retries in Paging (Intercom Redirect) parameter is set to greater than 0.

When/How to Use	For most systems, the default should be sufficient. If you find that many subscribers do not have enough time to retrieve their pages, however, increase this parameter.
Related Parameters/Features	This parameter specifies the time between the paging retries specified in Maximum Number of Retries in Paging (Intercom Redirect) and the time between the paging phrases for Repeat Paging Phrase.
If Set Too High	If this parameter is set too high, callers may have to wait on hold for an excessive amount of time before the subscriber answers the page or the system prompts them to try another extension, to leave a message, to page the subscriber again [if Number of Retries in Paging (Intercom Redirect) is set to greater than 0], or to disconnect.
If Set Too Low	If this parameter is set too low, subscribers do not have adequate time to respond to a page.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
10	*99*	*90*	*No*	*No*	*No*

Call Transfer Parameters (Page 14 of 26)

The Call Transfer parameters define the general transfer and release code sequences and dialing standards that enable the voice boards installed in the M2000 PC to communicate with the switch.

The minimums and maximums for the codes on this screen refer to the allowed length of the entry, not an actual number.

Call Transfer Parameters

Transfer Prefix Code

This parameter defines the code required by the switch to perform a transfer. M2000 places this code in the command string that the voice board uses to signal the switch to perform a transfer. This code is not used on most switches.

This code is always placed before the extension in the command string.

When/How to Use

This code is either hard-coded or programmable, depending on the switch. It is recommended that you do not change this parameter without speaking to a Lucent Technologies technical support representative. If you do choose to modify this parameter, write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

The system looks for a Transfer Prefix Code only if no Custom Transfer Code is defined.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*No*

Call Transfer Parameters

Custom Transfer Code

This parameter defines the series of commands required by the switch to perform a transfer. M2000 uses this code to instruct the switch to attempt a transfer for switches that require something other than a standard hook flash.

When/How to Use

If this code is required by the switch, the system automatically enters it when the Integrator utility is run for the switch.

This code is either hard-coded or programmable, depending on the switch. It is recommended that you do not change this parameter without speaking to a Lucent Technologies technical support representative. If you do choose to modify this parameter, write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Custom Transfer Codes can include the following commands and codes, which signal the switch to perform specific actions:

& Represents a flash hook.

, Represents a pause.

– Signals the switch to go on hook.

+ Signals the switch to come off hook.

D Tells the switch to dial with call progress.

H Tells the switch to perform a hard hang-up.

N Tells the switch to dial without call progress.

R Signals the switch to release the call to the system.

X Places the extension in the dialing string.

B Aborts the transfer if a busy (or reorder) signal is received from the switch after the extension is dialed. Otherwise, the transfer is completed as an unsupervised transfer. This code should be used only on switches, such as the Lucent PARTNER®, that do not allow completion of transfers into busy or reorder tone. When using this code, Max Rings in the Class of Service **must** be set to 0; otherwise, this code is ignored.

W (Followed by a single-digit number) Instructs the switch to wait the specified number of seconds for recognized dial tone. If dial tone is not detected, a busy release code is sent if an R is included in the string immediately following W(number). The transfer is then reattempted starting at the beginning of the customer transfer code string. If it fails again, the caller hears the busy options. Valid settings are 0 – 9, where 1 through 9 indicate the number of seconds to wait, and 0 indicates that the system should wait up to 60 seconds. The suggested setting is W5. Note that this code must be set higher than the DTONWAIT parameter because DTONWAIT determines the amount of continuous energy M2000 must detect to recognize it as dial tone.

C (followed by a number) Indicates that the system is to send a special feature code to the switch. The C is always followed by a number that defines how many characters are in the special feature code. For example, if 550 is the special feature code to activate intercom paging, a C3 would be entered in the dialing code string for intercom paging.

T Tells the switch to use DTMF dialing.

M Tells the switch to use MF dialing.

P Tells the switch to use Pulse dialing.

Do not use `M` or `P` unless required by the switch. Once used, all calls continue to be dialed using multifrequency or pulse dialing until you shut down M2000.

Codes within the Custom Transfer Code must be followed by a `D` for call progress or an `N` for no call progress. Otherwise, the codes are ignored.

If a release code is required on a busy, no answer, or connect, an `R` must follow the `D`. The `R` instructs the switch to get the code to connect or appropriate release code. If a release code is required for a connect, the code should immediately follow the R in the Custom Transfer

Code. For example, if a switch required a 1 to be dialed before the extension to transfer the call as DID with call progress, the Custom Transfer Code would be `&C11XDR`.

Related Parameters/Features

If the Custom Transfer Code is deleted, the system looks for a Transfer Prefix Code. If neither is defined, the system uses a default that performs a hook flash, pauses, dials the extension number with call progress, and then looks for the appropriate release code.

If the Custom Transfer Code includes an `R`, the switch looks for the appropriate release code. Release codes allow the system to pull calls back from the switch for routing. There are basic release codes for no answer and busy, and feature-specific release codes for call screening, call waiting, intercom paging, and message indicators. If no release codes are defined, the system uses an ampersand.

If the Custom Transfer Code does not include an `R`, a flash hook is used.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*16*	*&,XDR*	*No*	*Yes*	*Yes*

Call Transfer Parameters

Number of Seconds to Delay before Transferring

This parameter defines the number of seconds the M2000 system is off hook after receiving a call before it sends the transfer code to the switch.

When/How to Use

The default should be adequate for most systems. I you experience call transfer problems, however, try increasing this parameter.

Related Parameters/Features

None.

If Set Too High

Increasing this parameter should not adversely affect M2000. However, the higher you set this parameter, the longer the caller waits to be transferred.

If Set Too Low

On some switches, a slight delay may be required.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*0*	*No*	*Yes*	*No*

Call Transfer Parameters

Transfer Release Code when Busy

This parameter defines the series of commands required for M2000 to pull a call back from the switch when the switch receives a busy on an attempted transfer.

When/How to Use

If this code is required by the switch, the system automatically enters it when the Integrator utility is run for the switch.

This code is either hard-coded or programmable, depending on the switch. It is recommended that you do not change this parameter without speaking to a Lucent Technologies technical support representative. If you do modify this parameter, write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*&,*	*No*	*Yes*	*Yes*

Call Transfer Parameters

Transfer Release Code when No Answer

This parameter defines the series of commands required for M2000 to pull a call back from the switch when the switch receives no answer on an attempted transfer.

When/How to Use

If this code is required by the switch, the system automatically enters it when the Integrator utility is run for the switch.

This code is either hard-coded or programmable, depending on the switch. It is recommended that you do not change this parameter without speaking to a Lucent Technologies technical support representative. If you do modify this parameter, write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*&,*	*No*	*Yes*	*Yes*

Call Transfer Parameters

Permit Voice Mail After a Busy or No Answer

This parameter determines if callers can leave a voice-mail message for a subscriber whose extension is busy or unanswered.

If you disable this parameter, callers are able to try another extension or transfer to the operator only when an extension is busy or unanswered. The system will not voice the option to leave a voice-mail message.

When/How to Use

If you have a live operator, but use the Automated Attendant for overflow, disabling this parameter forces callers who came in through the Automated Attendant to go to the operator for routing to voice mail, if the extensions they enter are busy or unanswered.

You may want to disable this parameter if you do not have a live operator, but you want callers to busy or unanswered extensions to leave messages in an operator’s mailbox, instead of in the subscribers’ mailboxes. The operator can then distribute the messages to the appropriate voice mailboxes. For this application, enable call blocking to Default (voice mail) for the operator mailboxes.

Related Parameters/Features

This parameter is only relevant when the system attempts to transfer a caller and the extension is busy or unanswered. It does not disable the voice-mail feature as a whole. Callers can still be blocked or manually transferred to voice mail.

If Enable Automated Attendant is disabled, this parameter is irrelevant, as the system does not attempt to transfer callers to extensions.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*No*	*No*

Call Transfer Parameters

Flash Time Interval (FLINTVL)

This parameter defines the length of time, in 10 millisecond units, that the hookswitch must be depressed for the switch to recognize it as a flash hook.

When/How to Use

If the switch requires a specific flash time interval, it is automatically entered when the Integrator utility is run for the switch.

If this parameter is blank, the system default of 50 (half a second) is used. This default should be sufficient for most switches.

Related Parameters/Features

This parameter determines the length of the flash hook for any codes that include an ampersand, such as release codes.

If Set Too High

If this parameter is set too high, the phone system may misinterpret the flash hook as a hang-up.

If Set Too Low

If this parameter is set too low, the phone system may not recognize the flash hook.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*50*	*No*	*Yes*	*Yes*

Call Transfer Parameters

Pause Interval for Comma in Dial String (PAINTVL)

This parameter defines the duration of the pause, in 10 milliseconds units, represented by a comma in a dialing string. When a comma displays in a dialing string, the voice board waits the value of PAINTVL before sending the next character in the dialing string.

When/How to Use

This parameter is set when the Integrator utility is run

If this parameter is blank, the system default of 200 (two seconds) is used. This default should be sufficient for most switches.

Related Parameters/Features

This parameter determines the length of the pause for any codes that include a comma, such as release codes.

If Set Too High

Setting this parameter higher should not adversely affect M2000 operation.

If Set Too Low

The switch may not recognize the pause.

Min	*Max*	*Default*	*Requires Restart*	*Switch Dependent*	*Set by Integrator*
0	*30000*	*200*	*No*	*No*	*Yes*

Call Transfer Parameters

Inter-Digit Delay Time (TONEDLY)

This parameter defines the delay, in 10 millisecond units, between characters such as digits and commas in a dialing string necessary for the switch to recognize them. This parameter only applies to transfers or outcalls.

When/How to Use

If this parameter is blank, the system default of 8 is used. This default should be sufficient for most switches.

Related Parameters/Features

None.

If Set Too High

If this parameter is set too high, the switch may fail to recognize DTMF. In addition, OctelNet sessions may fail.

If Set Too Low

If this parameter is set too low, the switch may not recognize the pause.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*8*	*No*	*No*	*No*

Call Transfer Parameters

Duration Time of Valid DTMF (TONELEN)

This parameter defines the minimum duration, in 10 millisecond units, of DTMF digits for them to be recognized by the switch. This parameter applies only to transfer and outcalls.

The TONELEN required for the switch is automatically entered when the Integrator utility is run for the switch.

Related Parameters/Features

Parameter G72 in the SET_UP.CFG file controls TONELEN for OctelNet. If you are using OctelNet, set this parameter to 8.

If Set Too High

Setting this parameter higher should not adversely affect M2000 operation.

If Set Too Low

If this parameter is set too low, the switch may not recognize the digits.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*8*	*No*	*Yes*	*Yes*

Call Transfer Parameters

Third-Party Transfer (Start) Code

This parameter defines the code required for the Visual Mailbox voice fax server to place a subscriber's voice-mail extension on hold when performing an unsupervised transfer when using the dialer or immediate call.

This parameter only applies to M2000 systems that support Visual Mailbox.

When/How to Use

If this code is required by the switch, the system automatically enters it when the Integrator utility is run for the switch.

If this code is incorrect, the switch may misinterpret it as a double flash hook or a hang up, and the call will not be transferred.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Call Transfer Parameters

Third-Party Transfer (End) Code

This parameter defines the code required for the Visual Mailbox voice fax server to be released from a conference between the switch, the voice fax server, and a subscriber's extension after a blind transfer is initiated when using the dialer or immediate call.

This parameter applies only to M2000 systems that support Visual Mailbox.

When/How to Use

If this code is required by the switch, the system automatically enters it when the Integrator utility is run for the switch.

If this code is incorrect, the switch may misinterpret it as a double flash hook or a hang up.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Call Screening Parameters (Page 15 of 26)

The Call Screening parameters define the call screening release codes for the switch. These release codes enable M2000 to either pull the call back from the switch after a no answer, a busy, or a reject, or to release the call to the switch on an accept for call screening.

If the switch uses call screening release codes, they are automatically entered for you when the Integrator utility is run for the switch. Do not modify the release codes unless instructed to do so by a Lucent Technologies technical support representative. If the release codes are not defined, M2000 uses an ampersand.

Call screening is available only on M2000 systems using supervised transfers. Call screening must be enabled on the Class of Service and Subscriber Settings dialog boxes for subscribers to have access to the feature.

If you disable the Enable Automated Attendant parameter on the General tab in System Setup, call screening is not available on the M2000 system and the Call Screening parameters are dimmed.

Call Screening Parameters

Release Code When Busy

This parameter defines the release code required to pull the call back from the switch when a busy response is received at the subscriber's extension for a call screening attempt.

After M2000 retrieves the call, it informs the caller that the line is busy and voices the available options.

When/How to Use

The Release Code When Busy is defined, if required, when the Integrator utility is run for the switch. You should not need to modify this parameter after it is set by Integrator.

This release code is hard-coded for some switches and programmable on others. If you choose to modify this parameter, it is recommended that you write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*&,*	*No*	*Yes*	*Yes*

Call Screening Parameters

Release Code When No Answer

This parameter defines the release code required to pull the call back from the switch when no answer is received at the subscriber's extension for a call screening attempt.

After the system retrieves the call, it informs the caller that there was no answer and voices the available options.

When/How to Use

The Release Code When No Answer parameter is defined, if required, when the Integrator utility is run for the switch. You should not need to modify this parameter after it is set by Integrator.

This release code is hard-coded for some switches and programmable on others. If you choose to modify this parameter, it is recommended that you write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*&,*	*No*	*Yes*	*Yes*

Call Screening Parameters

Release Code When Reject

This parameter defines the release code required to pull the call back from the switch when the subscriber rejects the call during a call screening attempt.

After M2000 retrieves the call, it informs the caller that there was no answer and voices the available options.

When/How to Use

The Release Code When Reject parameter is defined, if required, when the Integrator utility is run for the switch. You should not need to modify this parameter after it is set by Integrator.

This release code is hard-coded for some switches and programmable on others. If you choose to modify this parameter, it is recommended that you write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features

None.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*&,*	*No*	*Yes*	*Yes*

Call Screening Parameters

Release Code When Transfer

This parameter defines the code required to release the call to the switch when a subscriber redirects a call screening request.

When/How to Use

The Release Code When Reject parameter is defined, if required, when the Integrator utility is run for the switch. You should not need to modify this parameter after it is set by Integrator.

This release code is hard-coded for some switches and programmable on others. If you choose to modify this parameter, it is recommended that you write down the original code in case you need to reenter it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

Related Parameters/Features None.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*&,*	*No*	*Yes*	*Yes*

Call Waiting Parameters (Page 16 of 26)

The Call Waiting parameters determine how M2000 dispatches call waiting attempts. Call waiting notifies the subscriber of another incoming call when the subscriber is on the line by sounding a tone over the subscriber’s handset or intercom. Call waiting is a system-wide feature and cannot be activated or deactivated for individual mailboxes. When Enable Automated Attendant is disabled, the Call Waiting parameters are dimmed.

Call Waiting Parameters

Call Waiting Code

This parameter determines the code M2000 dials to instruct the switch to activate call waiting.

When/How to Use

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features The system dials the Transfer Prefix or the Custom Transfer Code, if defined, to transfer the call to the desired extension. If the extension is busy, the system places the call on hold, then dials the Call Waiting Code to activate the call waiting feature.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*No*

Call Waiting Parameters

Number of Attempts for Call Waiting

This parameter specifies the number of times M2000 attempts to notify a subscriber of an incoming call before returning a busy or no answer condition to the caller.

When/How to Use Set this parameter to a value greater than 0 if you want to use Call Waiting.

Related Parameters/Features None.

If Set Too High If this parameter is set too high, the system ports activating call waiting are tied up for Call Waiting instead of calls.

If Set Too Low Not applicable; the default value is the minimum allowed for this parameter. Set this parameter to 0 to disable call waiting.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*0*	*No*	*No*	*No*

Call Waiting Parameters

Release Code for Call Waiting

This parameter determines the code M2000 dials to retrieve the call from hold after the call waiting is activated.

When/How to Use The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features The system dials the Release Code for Call Waiting after the Call Waiting Code to take control of the call.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Blank*	*No*	*Yes*	*No*

Outbound Dialing Parameters (Page 17 of 26)

The Outbound Dialing parameters define the standards that allow M2000 to perform outcalls through the switch. M2000 features that require outbound dialing are message notification, OctelNet, AMIS, message indicators, and wake-up calls.

Outbound Dialing Parameters

Code for Accessing an Outside Line

This parameter defines the code required by the switch to access an outside line. This code is used by M2000 to obtain an outside line for outbound dialing operations (message notification, message indicators, and wake-up calls) when the length of the destination phone number equals or exceeds the Number of Digits in Local Telephone Number. The system also uses this code for network messaging (OctelNet, AMIS) when no Network or Node Prefix is defined, regardless of the length of the destination phone number.

When/How to Use

This parameter is set when the Integrator utility is run for the switch.

This code consists of the number you normally press to dial an outside line on the phone system, usually followed by a comma to instruct the switch to wait momentarily before dialing the number.

For most phone systems, the default, 9, is used.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

If the Code for Accessing an Outside Line is not properly defined, the system will not be able to execute outcalls.

The Network Prefix or Node Prefix parameters override the Code for Accessing an Outside Line for network (OctelNet, AMIS) outcalls.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*16*	*9,*	*No*	*Yes*	*Yes*

Outbound Dialing Parameters

Number of Digits in Local Telephone Number

This parameter defines the number of digits in telephone numbers in the local dialing area.

When/How to Use

In the United States and Canada, the default of 7 is normally used. In other countries, however, the number of digits may be different.

Related Parameters/Features

Dial Plan is used only when the destination number exceeds the Number of Digits in Local Telephone Number.

The system only uses the Code for Accessing an Outside Line for numbers that are equal to or greater than the length of Number of Digits in Local Telephone Number.

The Custom Message Delivery Code is used for Message Notification and Fax delivery when the length of the destination number is less than the Number of Digits in Local Telephone Number.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*11*	*7*	*No*	*No*	*No*

Outbound Dialing Parameters

Maximum Rings Before No Answer (RINGS)

This parameter defines the number of rings M2000 will listen to before assuming a no answer. This parameter is used only for outdial operations.

When/How to Use

The default should be adequate for most systems. If you find that the switch is routinely pulling calls back, however, try lowering this parameter.

Related Parameters/Features

This parameter is used only if the system is supervising calls.

The Maximum Rings field on the Class of Service dialog box, which controls the number of rings that is considered a no answer for both outcalls and internal transfers, can override this parameter on a class-of-service basis.

Do not confuse this parameter with the Ring Count parameter on the Port Parameters tab. Ring Count determines the number of rings each port must hear before it answers an inbound call.

If Set Too High — If you set this parameter higher than the number of rings the switch regards as a no answer, the call might go back to the switch.

If Set Too Low — If this parameter is set too how, call progress may fail.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99999*	*5*	*No*	*No*	*No*

Outbound Dialing Parameters

Use DialPlan Database

This parameter determines whether the Dial Plan utility is used to determine the correct dialing sequence for the following outcall operations:

- OctelNet
- Administered AMIS
- Network replies
- Delivery of Fax Retrieval requests

When/How to Use — Dial Plan compares destination phone numbers to the Dial Plan database to determine whether the numbers are local. If a match is found, the last seven digits, but not the area code, are dialed. If the numbers do not match identified local prefixes, the entire number is dialed.

For network replies to long distance numbers within the country, Dial Plan also determines whether the Long Distance Access Code is inserted in the dialing string.

If you enable this parameter, you must configure the Dial Plan utility.

Related Parameters/Features — Dial Plan is only used when the length of the destination number is equal to or greater than the Number of Digits in Local Telephone Number.

Make sure that you enter the Long Distance Access Code on the Networking tab to ensure that network replies are dialed properly.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No*	*No*	*No*

Outbound Dialing Parameters

Time to Wait for Possible Incoming Call (SCHDWAIT)

This parameter defines the amount of time, in 10 millisecond units, that M2000 waits for dial tone to be recognized before initiating a scheduled outbound event on a port. SCHDWAIT starts as soon as the port comes off hook. If the system detects dial tone within the SCHDWAIT limit, it immediately initiates the outbound event.

The system recognizes dial tone by detecting continuous energy for the length of time specified by the DTONWAIT parameter on the Message Delivery tab. DTONWAIT must be recognized within the SCHDWAIT time frame. If the system does not recognize dial tone within SCHDWAIT, it assumes that there is an incoming call and does not initiate the outbound event. In this case, the system answers the call and places it at the main greeting.

While this parameter does not prevent call collision, it does prevent the loss of outbound events due to call collision. If call collision does occur, however, the inband information for the incoming call may be lost.

When/How to Use

This parameter is set when the Integrator utility is run for the switch.

If you find that outbound events are routinely not occurring as scheduled, try increasing this parameter.

If you set this parameter to 0, the system does not look for dial tone before starting an outbound event. If a port is not a dedicated outbound port, call collision can occur if an inbound call arrives at the port at the same time that the system takes the port off hook for an outbound event. When this happens, the outbound event may be lost.

Related Parameters/Features

If a port is dedicated to Outbound on the Port Parameters tab, the system does not use SCHDWAIT for that port.

The DTONWAIT parameter on the Message Delivery tab determines the amount of continuous energy the system must detect to recognize it as dial tone.

If Set Too High

If call collision occurs and SCHDWAIT is set high, an inbound caller may experience a delay before hearing the main greeting, as the system will wait the entire length of SCHDWAIT before determining there is an inbound call.

If Set Too Low

If you set this parameter lower than DTONWAIT, the system will not be able to reach DTONWAIT within SCHDWAIT. Consequently, the system will not initiate the outbound events.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9999*	*500*	*Yes*	*Yes*	*Yes*

Message Delivery Parameters (Page 18 of 26)

The Message Delivery parameters determine how M2000 dispatches message notification attempts and delivers faxes to fax machines on internal extensions.

Message Delivery Parameters

Custom Message Delivery Code

This parameter specifies the series of digits M2000 must dial for message notification attempts and fax delivery to internal phone and fax numbers, respectively.

When/How to Use

This parameter is set by Integrator, if required by the switch.

The system inserts the Custom Message Delivery Code, when defined, in the dialing string before the phone number for message notification or the fax destination phone number.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

If the phone number for message notification is equal to or greater than the Number of Digits in Local Phone Number, the Code for Accessing an Outside Line is used instead of the Custom Message Delivery Code.

If the destination fax phone number is equal to or greater than the Number of Digits in Local Phone Number, the Fax Prefix Code is used instead of the Custom Message Delivery Code.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Message Delivery Parameters

Number of Seconds to Wait before Message Delivery

This parameter defines the number of seconds M2000 waits to voice the Message Notification phrase after a subscriber answers the phone.

When/How to Use

For most systems, the default value should be sufficient. Some switches require a few seconds, however, to establish a voice path after an extension goes off hook. Set this parameter to a higher value if the message notification phrase is not always voiced completely.

Related Parameters/Features

None.

If Set Too High — If this parameter is set to high, subscribers hear a long silence and may hang up before the Message Notification prompt is voiced.

If Set Too Low — If this parameter is set too low, subscribers do not hear the entire Message Notification prompt.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9*	*1*	*No*	*Yes*	*No*

Message Delivery Parameters

Dial Tone Timeout During Message Delivery (DTONWAIT)

This parameter specifies the amount of continuous energy, in 10 millisecond units, that the system must detect from the switch before recognizing it as dial tone. This parameter helps to ensure that the system allows the switch enough time to stabilize dial tone after completion of a call before initiating an event.

This parameter only applies when M2000 goes off hook to initiate an outbound message delivery or fax event. The count for DTONWAIT starts as soon as a voice port goes off hook.

If the system does not detect dial tone for the specified time, the system assumes the port is receiving an incoming call and attempts to answer.

When/How to Use — This parameter is set when the Integrator utility is run.

For most systems, the default value should be sufficient to allow the switch to reset the port after a call before the next event.

If you modify this parameter, make sure that it is less than the value of SCHDWAIT on the Outbound Dialing tab and DTONDET on the Hangup Detection tab.

Related Parameters/Features — DTONDET must be set at least 4 seconds higher than DTONWAIT, unless DTONWAIT is set to 0 (which disables it). For example, if you set DTONWAIT to 300, set DTONDET to at least 700.

DTONWAIT must be set lower than SCHDWAIT on the Outbound Dialing tab. Otherwise, the system will be unable to detect dial tone within the specified time and outbound events will not be initiated.

If Set Too High — If this parameter is set too high, switches send dial tone for a specified time before they time out and stop sending it. If DTONWAIT is set too high, the switch timeout is exceeded and DTONWAIT is never completed. Consequently, the outbound event is never initiated.

If Set Too Low — If DTONWAIT is set too low, and the switch does not send constant, stable dial tone immediately, the system attempts to answer the port, and the outbound event is never initiated.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*200*	*Yes*	*Yes*	*Yes*

Message Indicator Parameters (Page 19 of 26)

The Message Indicator parameters specify how M2000 activates and deactivates message indicators for the switch. All required Message Indicator parameters are set when the Integrator utility is run. To use message indicators, at least one port on the M2000 system must be enabled for Message Indicators on the Port Parameters tab.

Message Indicator Parameters

Permit Message Indicators

This parameter enables and disables the Message Indicator feature for the M2000 system.

When/How to Use — This parameter is set when the Integrator utility is run, if your switch supports the Message Indicator feature.

Related Parameters/Features — If this parameter is turned off, the other Message Indicator parameters are dimmed.

Message Indicators must be enabled in the subscriber's class of service.

If Use Communications Message Indicator Software on the SMDI tab is enabled, the Permit Message Indicators parameter must be on.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*No*	*Yes*	*Yes*

Message Indicator Parameters

Message Indicator Prefix ON Code

This parameter specifies the code M2000 must insert at the beginning of the dialing string to turn on a message indicator.

When/How to Use — This parameter is set when the Integrator utility is run, if required by the switch.

Related Parameters/Features

Some switches require both a prefix code and a suffix code. When Integrator is run, the system sets both these parameters, if required.

If Use Communications Message Indicator Software on the SMDI tab is enabled, the Message Indicator Prefix ON Code must be left blank.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Message Indicator Parameters

Message Indicator Prefix OFF Code

This parameter specifies the code M2000 must insert before dialing the extension to turn the Message Indicator off.

When/How to Use

This parameter is set when the Integrator utility is run, if required by the switch.

Related Parameters/Features

Some switches require both a prefix code and a suffix code. When Integrator is run, the system sets both these parameters, if required.

If Use Communications Message Indicator Software on the SMDI tab is enabled, the Message Indicator Prefix OFF Code must be left blank.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Message Indicator Parameters

Message Indicator Suffix ON Code

This parameter specifies the code M2000 must insert after the extension number is dialed to turn on the Message Indicator.

When/How to Use — This parameter is set when the Integrator utility is run, if required by the switch.

Related Parameters/Features — Some switches require both a prefix code and a suffix code. When the Integrator utility is run, the system sets both parameters, if required.

If Use Communications Message Indicator Software on the SMDI tab is enabled, the Message Indicator Suffix ON Code must be left blank.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Message Indicator Parameters

Message Indicator Suffix OFF Code

This parameter specifies the code M2000 must insert at the end of the dialing string to turn off the Message Indicator.

When/How to Use — This parameter is set when the Integrator utility is run, if required by the switch.

Related Parameters/Features — Some switches require both a prefix code and a suffix code. When the Integrator utility is run, the system sets both parameters, if required.

If Use Communications Message Indicator Software on the SMDI tab is enabled, the Message Indicator Suffix OFF Code must be left blank.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual value.

If Set Too High — Not applicable.

If Set Too Low — Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*No*	*Yes*	*Yes*

Message Indicator Parameters

Message Indicator Supervised

This parameter determines whether M2000 performs call progress for message indicator requests to the switch.

When/How to Use

This parameter is set when the Integrator utility is run. Some switches require the system to wait for a confirmation tone to indicate the switch accepted the message indicator event before returning to the call.

This parameter should also be enabled for switches that do not allow message indicators to be activated on busy extensions.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*Yes*	*Yes*

Message Indicator Parameters

Light Message Indicator for Every Message

This parameter determines whether M2000 sends a message indicator request every time a message is received.

When/How to Use

This parameter is set when the Integrator utility is run for switches that do not reliably schedule message indicators. Do not change the setting of this parameter unless instructed to do so by a Lucent Technologies technical support representative.

When this parameter is disabled, the system synchronizes message indicator events by sending a message indicator activation code to a port, then one message indicator deactivation code when the messages are accessed by the subscriber. A message is considered accessed when the subscriber selects to listen to it, either through the phone interface or through Visual Mailbox. The subscriber does not have to listen to the message completely for it to be considered accessed.

If this parameter is enabled, message indicator synchronization is disrupted when a port has several message indicator activation codes for a mailbox and receives only one message indicator deactivation code. When this occurs, the message indicator stays active, even though there are no more new messages, until the port is manually reset.

Some switches limit the number of message indications per phone. In this case, do not enable this parameter.

Related Parameters/Features	If this parameter is enabled, outbound ports that activate and deactivate message indicators are tied up until the port is manually reset.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No*	*Yes*	*Yes*

Message Indicator Parameters

Message Indicator Dials Number On Hook

This parameter determines whether the phone system remains on hook when M2000 sends the string for message indicator events.

When/How to Use	This parameter is set when the Integrator utility is run for M2000 systems using some SL-1 integrations. Do not adjust this parameter unless instructed to do so by a Lucent Technologies technical support representative.
Related Parameters/Features	None.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*No*	*Yes*	*Yes*

Inband Page 1 Parameters (Page 20 of 26)

The Inband parameters configure M2000 to properly receive and interpret the inband information sent from the switch.

When the Integrator utility is run, the system enters default settings for the codes required by the switch. These settings are determined based on default settings for the switch. If you or the manufacturer modify the switch programming or features, the integration may be affected. If this occurs, call a Lucent Technologies technical support representative.

Inband Page 1 Parameters

Total Number of Inband Digits (DIDCOUNT)

This parameter defines the maximum number of digits M2000 expects the switch to send in an inband string. If the switch sends more digits than the maximum defined in DIDCOUNT, the system does not see the additional digits.

When/How to Use

If you are using inband, this parameter must be defined. The system automatically enters this number for you when the Integrator utility is run. You should not need to change it.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

If the incoming string is less than the Total Number of Inband Digits, the Inband Terminating Character determines the end of the string. If the Inband Terminating Character parameter is blank, the Number of Milliseconds to Wait for Digits determines when the system considers the string complete.

This parameter enables Inband for the system. If this field is set to 0, the remaining Inband parameters are dimmed.

If Set Too High

Setting this parameter higher should not adversely affect system operation, although you should not modify it without talking to a Lucent Technologies technical support representative.

If Set Too Low

If this parameter is set too low, the system may not catch the whole string, and integration may fail.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*32*	*0*	*No*	*Yes*	*Yes*

Inband Page 1 Parameters

Inband Terminating Character (DIDTERM)

This parameter defines the character that the switch sends to signify the end of an inband string. The most common terminating character is a #.

When/How to Use

The system automatically enters this character for you when the Integrator utility is run. You should not need to change it.

If the switch uses the # sign as separators in strings, you cannot use # for DIDTERM. In this case, insert a tilde (~) for the terminating character instead. The tilde represents a space.

The minimum and maximum for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

If the Total Number of Inband Digits is set to 0, this parameter is dimmed.

If the Inband Terminating Character is blank, the Number of Milliseconds to Wait for Digits parameter determines when the system considers the inband string complete.

If Set Too High

Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*Yes*	*Yes*	*Yes*

Inband Page 1 Parameters

Seconds to Wait for DID (DIDTIME)

This parameter defines the number of seconds M2000 waits for the first inband digit from the switch before timing out. When a string times out, the system ignores it.

The most common cause of a string timing out is an invalid mailbox number.

When/How to Use The system automatically sets this parameter when the Integrator utility is run. You should not need to change it. If the system regularly misses inband digits, however, try increasing this parameter.

Some switches require the use of a sender to pass digits to the system. Under light traffic, the sender is readily available. When the switch is busy, however, the delay before sending digits may exceed the value of this parameter and cause it to time out before the digits are sent.

Related Parameters/Features If the Total Number of Inband Digits is set to 0, this parameter is dimmed.

If Set Too High Setting this parameter higher may cause initial callers into the system to hear silence before the main greeting is voiced. Do not modify this parameter without talking to a Lucent Technologies technical support representative.

If Set Too Low If this parameter is set too low, the system may regularly miss one or more inband digits at the end of the inband string.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99*	*1*	*No*	*Yes*	*Yes*

Inband Page 1 Parameters

Number of Milliseconds to Wait for Digits

This parameter defines the delay, in millisecond units, between inband signaling tones sent from the switch. If M2000 does not detect another tone within this time, it processes the string. Each time the system detects another tone, it resets the count for this parameter.

When/How to Use The system automatically sets this parameter when the Integrator utility is run. You should not need to change it.

Related Parameters/Features	If the Total Number of Inband Digits is set to 0, this parameter is dimmed. If no Inband Terminating Character is defined, this parameter determines when the system considers the string to be complete.
If Set Too High	Setting this parameter higher may cause initial callers into the system to hear silence before the main greeting is voiced. Do not modify this parameter without talking to a Lucent Technologies technical support representative.
If Set Too Low	If this parameter is set too low, the system may not receive the entire string.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*9999*	*0*	*No*	*Yes*	*Yes*

Inband Page 1 Parameters

Off Hook Delay Time (OFFHDLY)

This parameter determines the delay, in 10 millisecond units, after M2000 takes a port off hook, and before it starts DIDTIME.

When/How to Use	The system automatically sets this parameter when the Integrator utility is run. You should not need to change it.
Related Parameters/Features	If the Total Number of Inband Digits is set to 0, this parameter is dimmed. DIDTIME does not begin until OFFHDLY is reached.
If Set Too High	If the parameter is set too high, the system may regularly miss one or more inband digits at the beginning of the string.
If Set Too Low	If this parameter is set too low, the system may prematurely drop incoming calls.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*25*	*Yes*	*Yes*	*Yes*

Inband Page 1 Parameters

Activate Digit Grabber (DIGRAB)

This parameter determines whether M2000 logs incoming DTMF to the screen and to the PLUS.LOG file.

When/How to Use	Enable this parameter if you want to monitor the DTMF that the system receives during the initial inband window. This information is especially useful for troubleshooting to determine if the system is missing one or more inband digits in a string.
Related Parameters/Features	If the Total Number of Inband Digits is set to 0, this parameter is dimmed. For the incoming DTMF to be logged to the PLUS.LOG file, you must enable Debug Mode on the Voice System tab.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Off*	*No*	*No*	*No*

Inband Page 2 Parameters (Page 21 of 26)

The second Inband parameters tab, which determines the inband templates used, is discussed in Chapter 9, “Integrating with the Phone System.”

Hangup Detection Parameters (Page 22 of 26)

The Hangup Detection parameters provide information on how a switch indicates that a caller has hung up. This allows M2000 to release the port and wait for another call. There are three ways switches indicate hang-ups: dial tone, hang-up strings, or a drop in loop current. When the Integrator utility is run, the system sets the parameters required by the switch.

Hangup Detection Parameters

Dial Tone Detection Time (DTONDET)	This parameter specifies the amount of time, in 10 millisecond units, M2000 must detect constant dial tone to determine a caller has hung up before dropping the line.
When/How to Use	This parameter is set when the Integrator utility is run for switches that use dial tone to indicate a hang-up. If the Load Default Dial Tone option is enabled on the Call Analysis Default Parameters dialog box in Call Analysis, DTONDET must be set to 0. Adjust this parameter only when instructed to do so by a Lucent Technologies technical support representative.
Related Parameters/Features	You must set DTONDET at least 4 seconds higher than DTONWAIT, unless DTONDET is set to 0. For example, if you set DTONWAIT to 300, DTONDET must be set to at least 700.

If Set Too High

A high setting causes excessive off hook time between calls.

If Set Too Low

Setting this parameter to 0 disables it, and the system does not detect dial tones. The result is excessive off hook time between calls.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*1200*	*0*	*Yes*	*Yes*	*Yes*

Hangup Detection Parameters

Hangup String (HANGUPSTR)

This parameter defines the sequence of digits the switch sends to indicate a hang-up.

When/How to Use

This parameter is set when the Integrator utility is run for switches that use hang-up strings to signal disconnects.

If your switch is programmable, and you modify the hang-up string, be sure the string does not represent a sequence of keypresses that a caller might use to navigate through system menus.

The minimum and maximum values for this parameter refer to the allowed length of the entry, not an actual number.

Related Parameters/Features

If using a hang-up string, the Hangup String Timeout (HANGUPDLY) should be a value greater than 0.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*15*	*Blank*	*Yes*	*Yes*	*Yes*

Hangup Detection Parameters

Hangup String Timeout (HANGUPDLY)

This parameter specifies the amount of time, in 100 millisecond units, that the system waits between digits before identifying a string of DTMFs as a hang-up string. This eliminates false hang-up string detections.

When/How to Use

This parameter is set when the Integrator utility is run.

Adjust this parameter only when instructed to do so by a Lucent Technologies technical support representative.

Related Parameters/Features

This parameter must be set to a value greater than 0 if using the Hangup String (HANGUPSTR) parameter.

If Set Too High

DTMFs from keypresses entered by callers or subscribers using system features may be incorrectly interpreted as hang-up strings.

If Set Too Low

Hang-up strings may be ignored if the switch cannot send the digits fast enough to meet this value. This may cause excessive off hook times between calls.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*0*	*Yes*	*Yes*	*Yes*

Hangup Detection Parameters

Minimum Duration for Drop in Loop Current (LCDTIME)

This parameter specifies the amount of time, in 10 millisecond units, necessary to recognize a drop in loop current, when detecting a disconnect.

When/How to Use

This parameter is set when the Integrator utility is run.

Adjust this parameter only when instructed to do so by a Lucent Technologies technical support representative.

A setting of 0 disables this parameter.

Related Parameters/Features

None.

If Set Too High

If the switch sends a loop current drop for a shorter time than the time set for LCDTIME, the system does not identify the disconnect. This may cause excessive off hook times between calls.

If Set Too Low

If this parameter is set too low, noise spikes on the line could cause disconnect. Set this parameter to 0 to disable it.

A low setting can also cause call ghosting on the ports.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*30*	*Yes*	*Yes*	*Yes*

Hangup Detection Parameters

Maximum Silence Before Hanging Up (MAXSIL)

This parameter specifies the amount of time, in 10 millisecond units, during message recording that the system records silence before it determines the caller has hung up and drops the line. MAXSIL prevents the system from recording silence when a caller has hung up during a record session.

When/How to Use	This parameter is used for switches that do not use positive disconnects or dial tones to indicate disconnects. For most systems, the default value should be sufficient.
Related Parameters/Features	Set this parameter to a value less than 1000 if using AMIS messaging. Set this parameter to a value greater than 0 if using HANGUPSTR.
If Set Too High	If this parameter is set too high, the system records silence. Also, switches could detect a port as available and mistakenly pass incoming calls to a port on which the system is recording silence (missed disconnect). In this case, a new caller would append to the previous recording.
If Set Too Low	If this parameter is set too low, callers could be cut off during recording due to natural pauses when they speak.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000*	*2000*	*No*	*Yes*	*No*

Port Parameters (Page 23 of 26)

The Port parameters control the answering mode and ring count and define the types of events allowed for each M2000 port.

M2000 supports a maximum of 16 ports. The ports displayed on the Port Parameters tab are determined by the number of ports allowed by the M2000 sentinel. For example, on a four-port system, you can only view ports 1 through 4. If the system supports more than eight ports, you can access the remaining ports by clicking the buttons on the bottom of the screen. For example, to view the settings for ports 9 through 16, click the Ports 9 – 16 button.

If you run System Setup from the Installation Setup utility during M2000 installation, the system maximum of ports is accessible on the Port Parameters tab. After installation is complete and you restart M2000, the number of ports displayed reflects the maximum allowed by the sentinel.

You must set each Port parameter for each M2000 port.

Port Parameters

Init Mode

Init Mode reflects the method of answering for each port. M2000 supports the following modes:

- C Serial integration.
- D Inband signaling, off hook waiting for inband signaling digits.
- N Normal, on hook waiting for rings.
- P Pulse inband signaling, off hook waiting for inband signaling digits.
- T Tone inband signaling, off hook waiting for inband signaling digits.
- W Wink start.

When/How to Use

Enter the letter in the field that represents the answering mode required by the switch.

If the switch uses the COM port to indicate calls and hang-ups or to execute message indicators, set Init Mode to C for each M2000 port using serial integration.

Related Parameters/Features

None.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*Yes*	*Yes*	*No*

Port Parameters

Ring Count

This parameter specifies the number of rings each port must hear before it answers an incoming call. For example, if Ring Count is set to 2, a port must ring twice before it comes off hook to answer an incoming call.

When/How to Use

Enter the Ring Count in the corresponding field for each port. The default should be acceptable for most phone systems.

On some phone systems, especially those without true hunt groups, Ring Count should be set to consecutive numbers to prevent multiple lines from being answered at the same time.

Related Parameters/Features

This parameter should not be confused with the Maximum Rings Before No Answer (RINGS) parameter on the Outbound Dialing tab in System Setup or the Max Rings parameter on the Class of Service dialog box.

If Set Too High

The higher you set this parameter, the longer the delay before the port answers the call.

If Set Too Low The minimum of 1 should be sufficient for most systems.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1	*9*	*1*	*Yes*	*Yes*	*No*

Port Parameters

Inbound

This parameter determines whether each port is allowed to accept incoming calls.

When/How to Use Enable Inbound for each port that should be allowed to accept incoming calls. If you want to dedicate the port to outbound calls, disable Inbound.

Related Parameters/Features If both Inbound and Outbound are enabled for a port, use SCHDWAIT to prevent the loss of outbound events due to call collision. Call collision occurs when an inbound call reaches a port at the same time as the port comes off hook to perform an outbound event.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*No*	*No*	*No*

Port Parameters

Outbound

This parameter determines whether each port is allowed to perform outbound events: message indicators, message notification, AMIS, fax, V-Edit, Visual Mailbox, future delivery, auto forward, and wake-up calls.

When/How to Use Enable Outbound for each port that should be allowed to perform outbound events. If you want to dedicate the port to receive outbound calls, disable Inbound.

If you dedicate a port to outbound events, remove it from the voice-mail hunt group to prevent call collisions and subsequent loss of outbound events.

When you dedicate a port to outbound events, the events are scheduled one after another. The system does not pause between events to determine if there is an incoming call to the port. This can greatly facilitate the performance of outbound events, especially message indicator events.

When you enable Outbound for a port, you may enable and disable individual outbound events for that port by using the Outbound Usage Permitted parameters.

If you disable all ports for Outbound, the system displays a warning when you save System Setup (“No ports have been designated for outbound calling. Outbound events, including Future Delivery and Auto Forward, cannot be supported.”)

You may disable a port’s Outbound setting at any time. When you disable a port for Outbound, the system schedules no new events for that port. Events already scheduled at the time you disable Outbound, however, are still performed from that port.

Related Parameters/Features

The Outbound Usage Permitted parameters determine which outbound events are allowed for each port. When multiple ports are enabled for the same outbound events, the events go out on the highest numbered port enabled for that event at the time it is scheduled.

Auto forwarding and wake-up calls are general outbound events that go out on the highest numbered port available for Outbound.

If both Inbound and Outbound are enabled for a port, use SCHDWAIT to prevent the loss of outbound events due to call collision. Call collision occurs when an inbound call reaches a port at the same time as the port comes off hook to perform an outbound event.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*Yes*	*No*	*No*

Port Parameters

Outbound Usage Permitted/Msg Delivery

This parameter determines whether each port is allowed to perform message delivery events—message notification and future delivery. To use message notification and future delivery, you must enable at least one port for Msg Delivery.

Msg Delivery is dimmed if Outbound is disabled.

When/How to Use

Enable Msg Delivery for each port that should be allowed to perform message notification or future delivery. If you want to dedicate the port to message notification and future delivery events, disable Inbound as well as all Outbound Usage Permitted options except Msg Delivery.

If you experience delayed message notification and future delivery events, increase the number of ports enabled for Msg Delivery.

You may disable a port for Msg Delivery at any time. When you disable a port previously enabled for Msg Delivery, the system schedules no new message notification or future delivery events for that port. Events already scheduled at the time you disable Msg Delivery, however, are still performed from that port.

If you disable the port entered in the Line 1 field on the Subscriber Settings dialog box for Msg Delivery, message notification events do not occur, and the system writes an error to the PLUS.LOG file.

Related Parameters/Features

You must enable message notification in the subscribers' Class of Service and configure it on the Subscriber Settings dialog box for message notification and future delivery to be available. In addition, if you set Delivery Options on the Class of Service dialog box to Not Allowed, you cannot use message notification.

The parameters on the Message Delivery tab in System Setup must also be properly configured for the system for message notification to function.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*Yes*	*No*	*No*

Port Parameters

Outbound Usage Permitted/Msg Indicator

This parameter determines whether each port is allowed to perform message indicator events. To use message indicators, you must enable at least one port for Msg Indicator.

Msg Indicator is dimmed if Outbound is disabled.

When/How to Use

Enable Msg Indicator for each port that should be allowed to perform message indicator events. If you want to dedicate the port to message indicator events, disable Inbound as well as all Outbound Usage Permitted options except Msg Indicator.

If you experience delayed indicator events, increase the number of ports enabled for Msg Indicator.

If you disable a port for Msg Indicator that was used to turn a message indicator on, the system still allows the message indicator off event to go through that port. The system allows this because some switches require message indicators to be turned off through the same port that turned it on.

Related Parameters/Features

You must enable Msg Indicator in the subscribers' Class of Service for Msg Indicators to be available.

The parameters on the Msg Indicator tab in System Setup must be properly configured for message indicators to function.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*Yes*	*No*	*No*

Port Parameters

Outbound Usage Permitted/ OctelNet/AMIS

This parameter determines whether each port is allowed to perform outbound OctelNet and AMIS events, including network messages, follow-me-forward messages, and delivery of group distribution list messages to remote sites. To perform outbound network events, you must enable at least one port for OctelNet/AMIS.

OctelNet/AMIS is dimmed if Outbound is disabled.

When/How to Use

Enable OctelNet/AMIS for each port that should be allowed to send network messages. If you want to dedicate the port to outbound network events, disable Inbound as well as all Outbound Usage Permitted options except OctelNet/AMIS.

If you experience delayed outbound network events, increase the number of ports enabled for OctelNet/AMIS.

If you disable a port previously enabled for OctelNet/AMIS, the system schedules no new events. Any events already scheduled for the port at the time you disabled it, however, are executed from that port.

If no ports are enabled for OctelNet/AMIS, subscribers can still address messages to network destinations. The system will, however, be unable to locate a port from which to schedule them, and the messages will be placed in the sending subscribers' local mailboxes.

Related Parameters/Features

If the M2000 sentinel does not support OctelNet and AMIS, the OctelNet/AMIS checkbox is disabled for all ports.

You must enable an outbound network option (Casual AMIS, Administered AMIS, OctelNet) in the subscribers' Class of Service for outbound network messaging to be available.

You must enable Permit Outbound and enter the system location information on the Networking tab in System Setup for outbound network messaging to function properly.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*Yes*	*No*	*No*

Port Parameters

Outbound Usage Permitted/Fax

This parameter determines whether each port is allowed to perform outbound fax events, including delivery of fax retrieval documents, and sending or auto printing to local fax machines or primary fax destinations. To perform outbound fax events you must enable at least one port for Fax.

Fax is dimmed if Outbound is disabled.

When/How to Use

Enable Fax for each port that should be allowed to support fax retrieval or auto printing and subscriber retrieval of fax mail documents to local fax machines or primary fax destinations. If you want to dedicate the port to outbound fax events, disable Inbound as well as all Outbound Usage Permitted options except Fax.

If you experience delayed fax events, increase the number of ports enabled for Fax.

If you disable a port previously enabled for Fax, the system schedules no new events. Any events already scheduled for the port at the time you disabled it, however, are executed from that port.

If no ports are enabled for Fax, subscribers cannot retrieve fax messages and the fax retrieval feature cannot deliver fax documents.

Related Parameters/Features

If the M2000 sentinel does not support the fax solutions module (fax mail and fax retrieval), the Fax checkbox is disabled for all ports.

Fax Options must be configured on the Class of Service dialog box. You must also configure the Fax parameters in System Setup.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*Yes*	*No*	*No*

Port Parameters

Outbound Usage Permitted/ Application

This parameter determines whether each port is allowed to support external applications (Visual Mailbox, V-Edit). To support one or both of these external applications, you must enable at least one port for Applications.

Applications is dimmed if Outbound is disabled.

When/How to Use	Enable Applications for each port that should be allowed to support V-Edit or Visual Mailbox. If you want to dedicate the port to outbound V-Edit or visual mailbox events, disable Inbound as well as all Outbound Usage Permitted options, except Applications. If subscribers have trouble connecting to Visual Mailbox or system managers have trouble connecting to V-Edit due to a lack of available ports, increase the number of ports enabled for Applications. If no ports are enabled for Applications, subscribers cannot connect to Visual Mailbox and system managers will not be able to connect to V-Edit.
Related Parameters/Features	While V-Edit is available on all M2000 systems, Visual Mailbox is a sentinel-controlled feature.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*Yes*	*Yes*	*No*	*No*

Voice System Parameters (Page 24 of 26)

The Voice System parameters provide information for M2000 for interaction with the switch.

Voice System Parameters	
Go OFF Hook when Port Disabled (OFFHDIS)	This parameter determines whether M2000 takes a port off hook when the port is disabled, so callers to that port hear a busy signal. A number of occurrences can temporarily disable a port, such as a power loss or an M2000 shutdown after daily maintenance.
When/How to Use	It is generally recommended that you enable this parameter so callers hear a busy signal instead of ringing when they call a disabled port. Some switches, such as those using digital integration, lock the disabled ports when they have been off hook for a long time. If your switch uses digital integration, you should disable OFFHDIS. Refer to the configuration note for your switch for information on setting this parameter.
Related Parameters/Features	None.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*Yes*	*Yes*	*Yes*	*No*

Voice System Parameters

Maximum Call Duration (PROGTIME)

This parameter specifies the maximum amount of time, in minutes, M2000 allows a call to occupy a port before it disconnects the call without warning.

When/How to Use

Use caution when setting this parameter. If callers are disconnected while performing mailbox functions, such as listening to messages or creating mailboxes, data corruption could occur. Set this parameter to 0 disable it.

If you set PROGTIME to a value greater than 0, consider the following:

- Set PROGTIME to a value high enough so calls delivering faxes and callers on hold are not disconnected.
- PROGTIME overrides Message Time on the Class of Service dialog box. Set PROGTIME higher to prevent callers from being disconnected while recording messages. If this happens, data corruption could occur.

Related Parameters/Features

If PROGTIME is shorter than the Message Time setting on the Class of Service dialog box, callers may be disconnected before they finish recording long messages.

If Set Too High

The higher you set this parameter, the longer callers are allowed to remain in the system before being disconnected.

If Set Too Low

If this parameter is set to low, callers recording messages, sending faxes, or waiting in call queues are disconnected without warning and data corruption could occur. Set this parameter to 0 to disable it.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*999*	*0*	*No*	*Yes*	*No*

Voice System Parameters

DTMF Length to Interrupt a Prompt (PLAYDTMF)

This parameter specifies the length of a DTMF the voice board must receive to interrupt a prompt voiced by the system.

For Dialogic, this parameter is set in 10 millisecond units, and the range is from 0 to 30000. The default is 5 (50 milliseconds).

For Rhetorex, possible parameter settings are as follows:

0	32 milliseconds
1	48 milliseconds
2	64 milliseconds
3	80 milliseconds
4	96 milliseconds

The default is 1 (48 milliseconds).

When/How to Use

For most systems, the default value is sufficient. If the system misinterprets voice data as DTMF tones during prompts, try increasing this setting.

When setting this parameter, keep in mind that when systems send OctelNet messages, they send DTMFs to signal an incoming OctelNet message. If you set this parameter too high or too low, the main greeting will not be interrupted, and the system may miss incoming OctelNet messages.

Related Parameters/Features

When RECDTMF is set to a higher value than PLAYDTMF, the RECDTMF value is used for both.

If Set Too High

If this parameter is set too high, the system may not recognize DTMF tones and will not interrupt the prompt. If the DTMF is not recognized, OctelNet messages may be missed.

If Set Too Low

If this parameter is set too low, the system may interpret voice data as DTMF. If the DTMF is not recognized, OctelNet messages may be missed.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000/4*	*5/1*	*Yes*	*Yes*	*No*

Voice System Parameters

DTMF Duration to Interrupt Record (RECDTMF)

This parameter specifies the length of a DTMF a voice board must receive to interrupt recording on the system.

For Dialogic, this parameter is set in 10 millisecond units, and the range is from 0 to 30000. The default is 5.

For Rhetorex, the possible parameter settings are as follows:

0	32 milliseconds
1	48 milliseconds
2	64 milliseconds
3	80 milliseconds
4	96 milliseconds

The default is 0 (32 milliseconds).

When/How to Use

If the system misinterprets voice data as DTMF tones during recording, try increasing this setting.

Related Parameters/Features

When RECDTMF is set to a higher value than PLAYDTMF, the RECDTMF value is used for both.

If Set Too High

The system does not interrupt the recording session when the callers enter DTMFs.

If Set Too Low

The system may misinterpret voice data as DTMF and interrupt the recording.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*30000/4*	*5/0*	*Yes*	*Yes*	*No*

Voice System Parameters

Default Input Timeout (TIMEOUT)

This parameter specifies the number of seconds M2000 waits for the caller to respond with a keypress after hearing a prompt before the system voices, *"Are you still there,"* and repeats the prompt.

When/How to Use

For most systems, the default allows sufficient time for most callers to respond to prompts.

Related Parameters/Features

The Maximum Number of No Entries parameter specifies the maximum number of times the system voices prompts without receiving input before it disconnects the caller.

If Set Too High

If this parameter is set too high, there may be long pauses when the system voices prompts and waits for input. Consequently, calls occupy ports for a long time.

If Set Too Low

Setting this parameter to 0 does not allow callers enough time to respond to prompts. Callers could exceed the Maximum Number of No Entries and be disconnected.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
0	*99999*	*20*	*Yes*	*No*	*No*

Voice System Parameters

Duration of Ring Off (RINGOFF)

This parameter specifies the amount of time, in 100 millisecond units, that ring voltage must be off for M2000 to determine that a ring has stopped.

When/How to Use

For most systems, the default value is sufficient. If your switch uses European-style rings, you may need to adjust this setting. Call a Lucent Technologies technical support representative for information on setting this parameter for European-style rings.

Related Parameters/Features

None.

If Set Too High

If this parameter is set too high, the system cannot detect rings and does not answer incoming calls.

If Set Too Low

If this parameter is set too low, the system could misinterpret skips and jumps in the ring voltage as incoming calls.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1	*30000*	*5*	*Yes*	*Yes*	*No*

Voice System Parameters

Duration of Ring On (RINGON)

This parameter specifies the amount of time, in 100 millisecond units, that ring voltage must be on for M2000 to identify a ring cycle.

When/How to Use

For most systems, the default is sufficient. If your phone system uses European-style rings, you may need to adjust this setting. Call a Lucent Technologies technical support representative for information on setting this parameter for European-style rings.

Related Parameters/Features

None.

If Set Too High

The system cannot detect rings and does not answer incoming calls.

If Set Too Low

The system could misinterpret short instances of line noise as incoming calls.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
1	*30000*	*3*	*Yes*	*Yes*	*No*

Voice System Parameters

Sound Tone on Answer (ANSTONE)	This parameter determines whether M2000 sounds an audible tone when it answers an incoming call.
When/How to Use	For most systems, leave this parameter disabled. Enable this parameter when recommended by a Lucent Technologies technical support representative for troubleshooting activities.
Related Parameters/Features	None.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*Yes*	*No*	*No*

Voice System Parameters

Debug Mode	This parameter determines whether M2000 records system events such as incoming calls, messages, system maintenance, outbound events, and faxes in the PLUS.LOG file.
When/How to Use	Enable Debug Mode when you want to monitor system activity to optimize system parameter settings, or for troubleshooting activities.
Related Parameters/Features	None.
If Set Too High	Not applicable.
If Set Too Low	Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*No*	*No*	*No*

Simplified Message Desk Interface Parameters (Page 25 of 26)

The Simplified Message Desk Interface parameters specify whether M2000 uses Serial integration and whether the system communicates message indicator commands through the serial interface.

These parameters apply only to M2000 systems with sentinels that support Serial integration.

You can modify these parameters only when you run System Setup by clicking on the System Setup icon in the Lucent Technologies folder. You cannot modify these parameters when you access System Setup from the Options menu.

Simplified Message Desk Interface Parameters

Use SMDI (SMDI Used)

This parameter determines whether M2000 uses Serial integration for incoming calls. If you enable this parameter, the system looks for the supporting Serial Integration program. If the system does not find the required program, it displays an error message.

When/How to Use

This parameter is enabled, if required, when the Integrator utility is run for the switch.

Do not enable this parameter unless the system sentinel supports Serial integration and you have installed the supporting program. If the system does not find the required program when you attempt to launch the system, an error displays and the system does not run.

Related Parameters/Features

You must set the Init Mode parameter on the Port Parameters tab to C for all ports on which you are using Serial integration.

If Set Too High

Not applicable.

If Set Too Low

Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	—	*No*	*Yes*	*Yes*	*Yes*

Simplified Message Desk Interface Parameters

Use Comm Message Indicator Software (COMMMWL)

This parameter determines whether M2000 uses communications message indicator software to activate and deactivate message indicators through the serial (COM) port instead of sending DTMFs.

If this parameter is enabled, the system looks for the supporting software. If the system does not find the required program when you attempt to launch the system, an error displays and the system does not run.

When/How to Use

This parameter is enabled, if required, when the Integrator utility is run for the switch.

Make sure the sentinel supports Serial integration and you have installed the supporting program before attempting to launch the system.

Related Parameters/Features

You must set the Init Mode parameter on the Port Parameters tab to C for all ports on which you are using communications message indicator software. Each port must also be enabled for message indicator.

If you enable this parameter, the Permit Message Indicators parameter must be enabled on the Message Indicator tab; you can configure the Light Message Indicator for Every Message parameter as you like. The remaining parameters on the Message Indicator tab, however, must be blank and disabled.

If Set Too High Not applicable.

If Set Too Low Not applicable.

Min	*Max*	*Default*	*Requires Restart*	*Switch-Dependent*	*Set by Integrator*
—	*—*	*No*	*Yes*	*Yes*	*Yes*

Server Parameters (Page 26 of 26)

Information on completing fields on the Server tab is provided in Chapter 20, “Installing and Configuring Visual Mailbox.”

CHAPTER 15

Setting Up System Prompts

M2000 provides default voice prompts for the system; however, you can specify custom prompts to personalize the system to meet your company's needs. You can:

- Set up prompts to voice morning, afternoon, evening, and after hours messages
- Set up prompts for special holidays
- Set up Greeting by Port prompts
- Set up a Language Selection prompt
- Set up the Attendant Menu prompt
- Set up Call Queuing prompts
- Set up Message Notification prompts
- Set up Network Node prompts

Understanding System Prompts

System prompts greet callers and direct them through the M2000 system so they can dial extensions, leave messages, send faxes, or access different types of information. You can customize system prompts to personalize the system to meet the company's needs or use the default prompts provided with the system. This chapter describes the system prompts and explaining how to specify custom prompts. For procedures on how to record and edit prompts, see Chapter 16, "Recording and Editing Prompts."

M2000 allows you to specify the following system prompts:

- **System Greetings prompts** – Greet callers with a morning, afternoon, evening, or office closed message.
- **Holiday Greetings prompts** – Greet callers with specific holiday messages.
- **Greeting by Port prompts** – Greet callers to specific ports on the same system with different messages. These prompts are used when several companies share the same system.
- **Language Selection prompt** – Prompts callers to select the language in which system prompts are to be voiced.
- **Attendant Menu prompt** – Directs callers on selecting options for proceeding through the system.
- **Message Notification prompt** – Informs subscribers of new messages in their mailboxes.
- **Call Queuing prompts** – Provide information to callers waiting on hold in call queues.

When callers call the system on a typical day, the first prompt they hear is a System Greeting prompt (or a Greeting by Port prompt, if set up). An example is, *"Hello and thank you for calling ABC corporation."* If the system includes language files for multiple languages, the next prompt callers hear is the Language Selection prompt, such as, *"For service in English, press <1>. Pour la service en Français, appuyez sur <2>."* After callers select a language, the remaining system prompts are voiced in that language. The Attendant Menu prompt is voiced next to guide callers through the system. A typical Attendant Menu prompt is, *"Enter the extension of the person you would like to speak with, or press one of the following options, followed by <#>. To speak to Sales, press <1>; to leave a message, press <2>; to send a fax, press <3>; for a directory, press <4>; or to speak to an operator, press <0>."* Depending on the selections the callers make, callers are transferred to either extensions or the operator, or they hear prompts for mailboxes, instructions for voice mail, or instructions for sending faxes.

Setting Up System Greetings

System Greetings are prompts that are voiced at specified times of the day. These prompts include a morning, afternoon, evening, and an office-closed prompt. The System Greeting prompt is the first prompt voiced by the system to callers (except on days specified as holidays). A typical morning System Greeting prompt may say, *"Good morning, and thank you for calling ABC Corporation."*

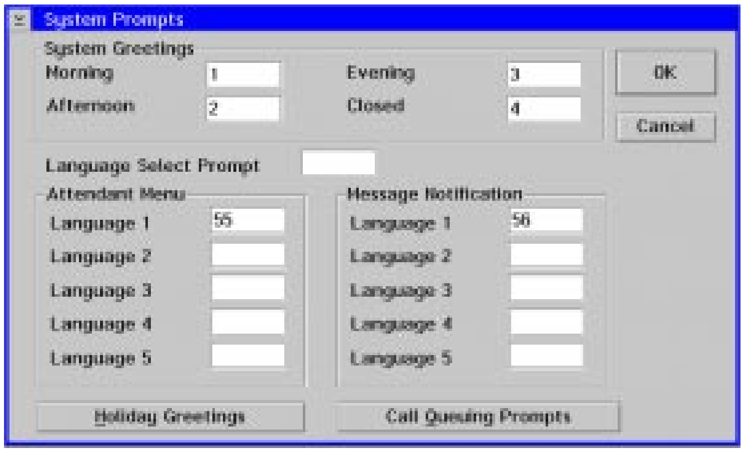
Entries on the Time/Greetings tab in System Setup determine when the morning, afternoon, and evening greetings are voiced. The daily business hours specified under the

Attendant menu Business Hours option determine when the office-closed greeting is voiced.

The System Greetings prompts are not voiced if the Greeting by Port feature is used.

To set up System Greetings prompts:

1. From the Attendant menu, select Prompts. The System Prompts dialog box displays.



2. Under System Greetings, click in the field for the prompt you want to specify.

3. Enter the prompt number of the prompt you want the system to voice. If you want to use a prompt stored in the [Language]3.O32 phrase file, where [Language] is the primary language on the system, precede the phrase number with the letter D.

   If the prompt has not been recorded, record it using any of the three tools described in Chapter 16, “Recording and Editing Prompts.”

See Preinstallation Configuration Worksheets

When recording System Greetings prompts, refer to information provided on the Single-Company Greetings Sheet(s). Enter the numbers of the prompts you record in the Prompt # fields on the sheet.

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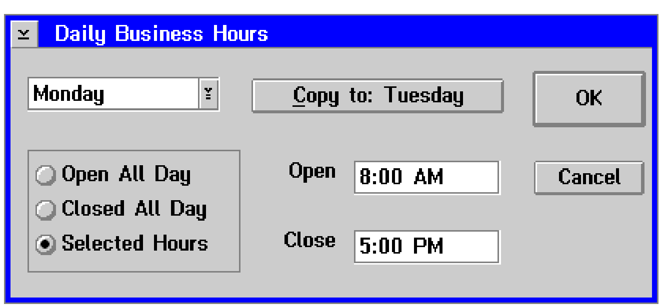
4. To save the entered prompts, click OK. The main system window displays.

5. To adjust the daily business hours, which determine when the office-closed prompt is voiced, select Business Hours from the Attendant menu. The Daily Business Hours dialog box displays.



See Preinstallation Configuration Worksheets

When defining the daily business hours, refer to entries made on the Company Profile Sheet. If the Greeting by Port feature is set up, the daily business hours specified on the Greeting by Port dialog box override the business hours specified in the Daily Business Hours dialog box for the active port.

6. To select the day of the week for which you want to specify business hours, select the appropriate day of the week from the pull-down menu.
7. In the box below the day of week, select the appropriate business hours option.
   - **Open All Day** – The time-of-day greetings (morning, afternoon, and evening) are voiced at the appropriate times during the day at the times specified on the System Setup Time/Greetings tab. The office-closed greeting is not voiced during that day.
   - **Closed All Day** – The office-closed greeting is voiced during the whole day. The time-of-day greetings are not voiced during that day.
   - **Selected Hours** – The time-of-day greetings are voiced during the times specified in the Open and Close fields. The office-closed greeting is voiced the rest of that day.
8. If you chose the Selected Hours option, enter the time of day the company opens for business and closes in the Open and Close fields in either standard AM/PM format or military format.
9. If you want to configure several consecutive days with the same daily business hours, click Copy To: to copy the information to the next day.
10. To save the entered daily business hours, click OK. The main system window displays.

Setting Up Greeting by Port

Greeting by Port allows you to set up mailboxes to answer different ports with unique greetings. This feature is often used when several companies share the same system.

See Preinstallation Configuration Worksheets

To determine whether the system should be set up to voice greetings by port, refer to entries made on the Call Flow Sheet under “If more than one company or organization is being supported... .”

When setting up Greeting by Port, consider the following:

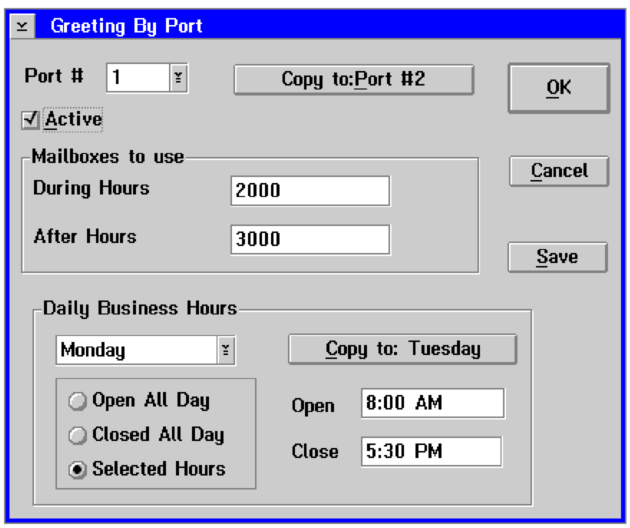
- For each port, it is recommended that you designate two mailboxes to answer the port. On the Greeting by Port dialog box, set up the first mailbox to voice a during-hours greeting and the second mailbox to voice an after hours greeting. If only one greeting needs to be voiced for the port, you can enter the same mailbox number in the During Hours and After Hours fields on the Greeting by Port dialog box.
- To ensure that the appropriate mailboxes are included in the company-wide directories, verify that the entries in the Company field on the Mailbox Entry screen

are the same for the mailbox assigned to answer the port and the subscriber mailboxes assigned to the company. For additional information, see Chapter 17, “Managing System Mailboxes.”

- For the mailbox designated to answer calls to the port, record the greeting for the port as the Personal Greeting prompt for the mailbox.
- If you want the system to voice the Attendant Menu prompt, do not select the Call Blocking option on the Subscriber Settings dialog box. If you want to use an optional prompt, a V-Tree, or call forwarding, select the Call Blocking option on the Subscriber Settings dialog box, then select the appropriate Call Blocking option. For additional information, see the topic, "Managing Subscriber Settings," in Chapter 17, “Managing System Mailboxes.”
- To allow the supervisor access to all the ports on the system through the phone interface, do not enter a Company for the supervisor’s mailbox. For additional information, see Chapter 17, “Managing System Mailboxes.”

To configure Greeting by Port:

1. Start M2000 if it is not already running and log in as a Level 3 supervisor.
2. From the Options menu, select Greeting by Port. The Greeting by Port dialog box displays.



See Preinstallation Configuration Worksheets

When recording the prompts to be used for Greeting by Port, see the Multiple-Company Greetings Sheet(s). Enter the numbers of the mailboxes for which you recorded greetings in the Mailbox # fields on the sheet.

3. In the Port # field, enter the number of the port you want to configure for greeting by port.
4. To activate the port for greeting by port, select the Active option.
5. Under Mailboxes to use, enter the number of the mailbox you want to assign to answer the port during business hours in the During Hours field.

6. Under Mailboxes to use, enter the number of the mailbox you want to assign to answer the port after business hours in the After Hours field.
7. Under Daily Business Hours, select the appropriate day of the week from the drop-down menu.
8. In the box below the day of week field, select the appropriate business hours option:
   - **Open All Day** – The Mailbox to Use During Hours is used all day.
   - **Closed All Day** – The Mailbox to Use After Hours is used all day.
   - **Selected Hours** – The Mailbox to Use During Hours is used during the hours specified in the Open and Close field. The Mailbox to Use After Hours is used the rest of the day.

See Preinstallation Configuration Worksheets

When specifying daily business hours on the Greeting by Port dialog box, refer to entries made in the Business Hours section on the Company Profile Sheet(s).

9. If you chose the Selected Hours option, enter the time of day the company opens for business and closes in the Open and Close fields in either standard AM/PM format or military format.
10. If you want to configure several consecutive days with the same daily business hours, click the Copy To: button to copy the information to the next day.
11. To save the entered Greeting by Port information, click Save.
12. To copy the entered information to the next consecutive port number on the system, click Copy to Port #.
13. To close the Greeting by Port dialog box, click OK. The main system window displays.

Setting Up the Language Selection Prompt

The Language Selection prompt is voiced on multilingual M2000 systems to allow callers to select the language in which they want to hear system prompts and to instruct callers as to which key to press to change the language of the prompts voiced by the system.

If the system only uses one language, do not set up this prompt.

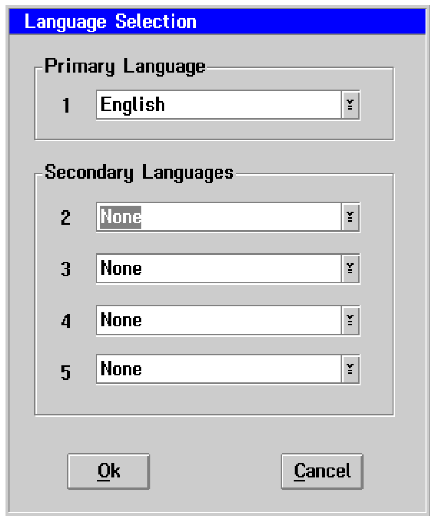
To set up the Language Selection prompt, you must specify the languages available in the Language Selection dialog box, then specify the Language Selection prompt in the System Prompts dialog box. The field numbers on the Language Selection dialog box correspond to the keypresses a caller must enter to select the languages. For example, if you specify French in the number 2 field on the Language Selection dialog box, the Language Selection prompt must instruct callers to press <2> to select French.

The Attendant Menu prompt and the Message Notification prompts can be voiced in up to five languages. The language 1–5 fields under Attendant and Message Notification on the System Prompts dialog box correspond to the languages specified in the number fields on the Language Selection dialog box. For example, if French is specified in the number 2 field of the Language Selection dialog box, and the caller presses <2> to select French at the Language Selection prompt, the system searches the French phrase files and voices the Attendant Menu prompt or Message Notification prompt associated with the prompt number specified in the Language 2 field on the System Prompts dialog box.

To set up the Language Selection prompt:

1. Log into the system as a Level 3 supervisor.

2. From the Options menu, select Language Selection. The Language Selection dialog box displays.



See Preinstallation Configuration Worksheets

When completing the Language Selection dialog box, refer to entries made in the "Languages to be supported…" section on the Company Profile Sheet(s).

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3. Under Primary Language, select the primary language from the drop-down menu. The primary language is the language used for the system greeting prompts until a caller selects another language.

If you change the primary language, all classes of service that had the previous primary language selected in the Language field on the Class of Service dialog box are updated to use the new primary language you indicate on the Language Selection dialog box.

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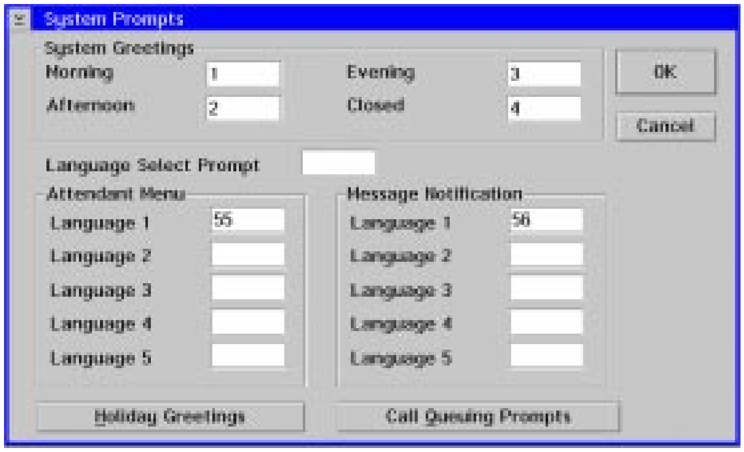
4. To select secondary languages, click a language field under Secondary Languages and select a language from the drop-down menu. The Secondary Language prompts are used when a caller selects to hear system prompts in a language other than the primary language.

5. To save the language selections, click OK. The main system window displays.

6. From the Attendant menu, select Prompts. The System Prompts dialog box displays.



7. In the Language Select Prompt field, enter the prompt number of the prompt you want the system to voice. If the system is using one language, do not enter a number in this field. If the prompt has not been recorded, record it using any of the three tools described in Chapter 16, "Recording and Editing Prompts." If you want to use a prompt stored in the [Language]3.O32 phrase file where [Language] is the primary language on the system, precede the phrase number with the letter D.

8. To save the entered Language Selection, click OK. The prompt information is saved and the main system window displays.

Setting Up the Attendant Menu Prompt

The automated attendant feature allows you to provide options to callers, such as contacting specific subscribers, leaving messages, and sending faxes. For example, when callers call the company, the attendant may give them the options to dial a particular extension, press <1> to speak to Sales, press <2> to speak to technical support, press <3> to use the dial by name feature, press <4> to send a fax, or press <5> to leave a message. These options are voiced to callers by the Attendant Menu prompt. The Attendant Menu prompt is voiced after the morning, afternoon, and evening System Greetings prompts, and the Language Selection prompt, if one is set up on the system.

The Attendant Menu prompt you record should instruct callers to press <#> immediately after entering an Attendant Menu option. This prevents callers from experiencing a slight delay while the system determines whether they are entering an Attendant Menu option or a mailbox number. Callers entering a mailbox number at the Attendant Menu prompt do not need to press <#>. For example, *"Enter the extension of the person you would like to speak with, or press one of the following options, followed by <#>. To speak to Sales, press <1>; to leave a message, press <2>; to send a fax, press <3>; for a directory, press <4>; or to speak to an operator, press <0>."*

To set up the automated attendant, you must first record the Attendant Menu prompt then configure the Attendant Menu prompt options. If no Attendant Menu prompt is recorded, the system voices the default prompt, *"Please dial the number of the person you are calling. If you have a mailbox on the system, please press <#>. If you need assistance, press <0>. If you do not have a Touch-Tone phone, or require assistance, please stay on the line."*

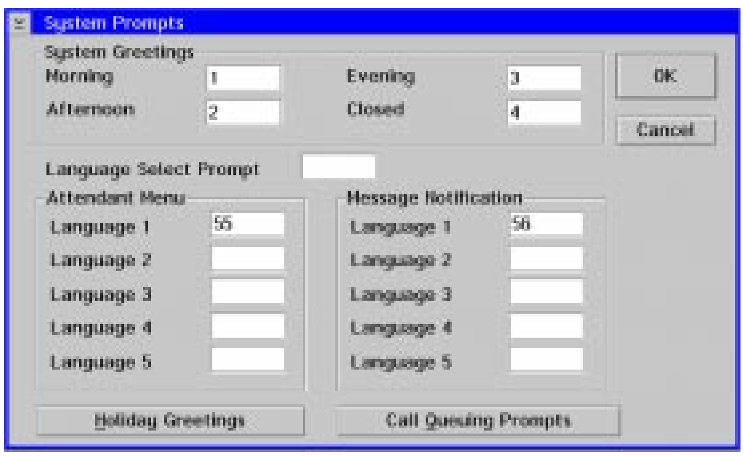
Record the Attendant Menu prompt before you configure the Attendant Menu prompt options.

When you record the Attendant Menu prompt, consider the following:

- If you want to provide an option for callers to transfer to departments, such as Sales or Customer Service, compile a list of the departments and the assigned mailbox numbers to help you configure the Attendant menu options.
- If you want to provide an option for callers to leave a message for a subscriber, you may want to inform callers that if they select this option, they are transferred to voice mail, not to the caller’s extension.
- If you want to provide an option for callers to send faxes to a subscriber, you may want to inform callers selecting this option that they must be calling from a fax machine.
- When you set up Attendant Menu prompts, record and specify a prompt for each language you specified in the Language Selection dialog box. For additional information, see the topic, "Setting Up the Language Selection Prompt," earlier in this chapter.

To set up the Automated Attendant prompt:

1. From the Attendant menu, select Prompts. The System Prompts dialog box displays.



2. In the Language fields under Attendant Menu, enter the prompt number of the prompts you want the system to voice for each language. If the system only uses one language, specify the prompt number in the Language 1 field. If you want to use a prompt stored in the [Language]3.O32 phrase file where [Language] is the primary language on the system, precede the phrase number with the letter D.

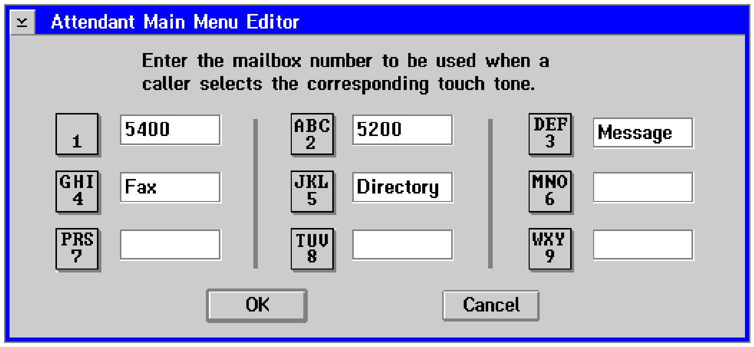
   If the prompt has not been recorded, record it using any of the three tools described in Chapter 16, “Recording and Editing Prompts.”

   See Preinstallation Configuration Worksheets

   When recording the Attendant Menu prompt, consider entries made on the Call Flow Sheet and the Attendant Menu Prompt Sheet(s). Enter the number of the Attendant Menu prompt you record in the Attendant Prompt # field on the Attendant Menu Prompt Sheet.

3. To save the entered automated attendant prompts, click OK. The main system window displays.

4. To configure the Attendant Menu prompt options, select Attendant from the Attendant menu. The Attendant Main Menu Editor dialog box displays.



5. Enter the options for each caller keypress option in the field next to the keypress icon based on the options recorded in the Attendant Menu prompt. When you configure the Attendant Menu prompt options, there are four different options you can assign to a keypress:

   - **Mailbox Number** – If you want callers to be transferred to a particular mailbox, enter the mailbox number in the field. For example, if you want to transfer callers to mailbox 3124 when they press <2>, type `3124` next to the 2 keypress icon.

   - **FAX** – If you want callers to be able to send a fax to system mailboxes, type `FAX` in the field. Callers selecting this option are prompted to enter the number of the mailbox to which they want to send the fax. The system delivers the fax to the mailbox if the mailbox is enabled for fax receipt in its associated class of service, or to the local fax machine if the mailbox is not enabled for fax receipt.

   The optional Fax Solution module must be installed and set up on the system to use the fax mail features.

   - **MESSAGE** – If you want callers to transfer directly to voice mail to leave a message for a subscriber, type `MESSAGE` in the field. The system prompts the caller to enter the destination mailbox and record the message.

   - **DIRECTORY** – If you want callers to be able to use the Dial by Name feature, type `DIRECTORY` in the field next to the keypress. Dial by name allows callers who do not know a subscriber's extension or mailbox number to access it by spelling the subscriber's last name using the telephone keypad.

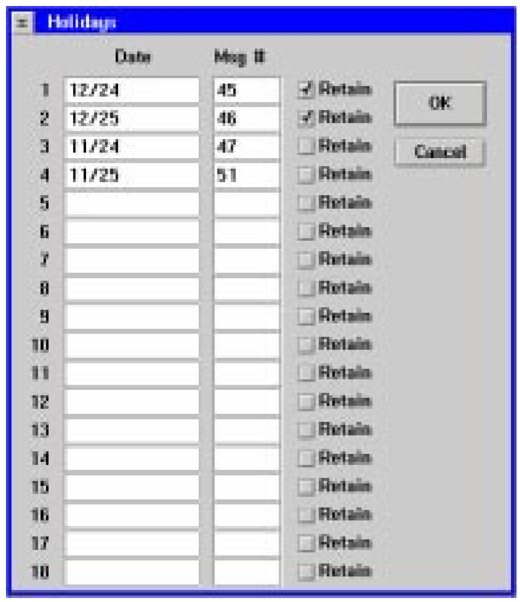
6. To save the entered Automated Attendant options, click OK. The main system window displays.

Setting Up Holiday Greeting Prompts

The holiday feature allows you to designate as holidays specific days the office is closed and to record special holiday greetings. During days designated as holidays, the system voices the Holiday Greeting prompt all day instead of the System Greetings prompts (morning, afternoon, evening, and closed). Any messages left by callers are stored in the After Hours Operator mailbox if it is specified.

To set up Holiday prompts:

1. From the Attendant menu, select Holidays. Note that you can also access the Holidays dialog box from the System Prompts dialog box by clicking the Holiday Greetings button. The Holidays dialog box displays.



2. In a Date field, enter the date of the holiday in month/day (MM/DD) format.

3. In the Msg # field, enter the prompt number of the prompt you want the system to voice on the corresponding date. If the prompt has not been recorded, record it using any of the three tools described in Chapter 16, “Recording and Editing Prompts.”

See Preinstallation Configuration Worksheets

When recording Holiday Greeting prompts, refer to information provided on the Holiday Greetings Sheet(s). Enter the numbers of the prompts you record in the Prompt # fields on the sheet.

4. If you want the system to automatically retain the same date as a holiday for the next year and voice the same prompt, select the Retain option next to the Msg # field.

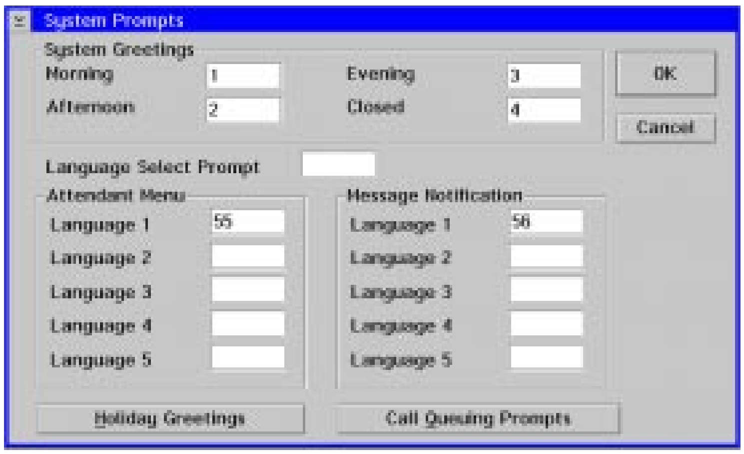
5. To save the entered Holiday prompts, click OK. If you accessed the Holidays dialog box from the System Prompts dialog box, the System Prompts dialog box displays. Otherwise, the main system window displays.

Setting Up Call Queuing Prompts

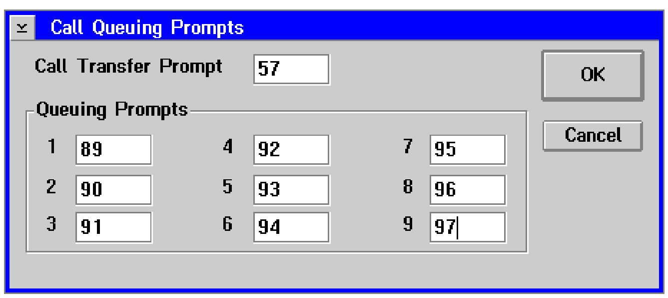
The Call Queuing prompts allow you to record up to nine different messages the system voices to callers waiting in a call queue. For example, you can record messages about the products and services the company offers. You can also record a call-queuing transfer prompt voiced to the first caller in the queue when the system attempts to transfer the caller to the busy extension. These queuing prompts are voiced in addition to the system Call Queuing prompts enabled on the Call Queuing tab in System Setup. The system voices the Call Queuing prompts in the order specified on the Call Queuing System Prompts dialog box.

To set up Call Queuing prompts:

1. From the Attendant menu, select Prompts. The System Prompts dialog box displays.



2. Click Call Queuing Prompts. The Call Queuing Prompts dialog box displays.



3. In each appropriate prompt field, enter the prompt number of the prompt you want the system to voice. If the prompt has not been recorded, record it using any of the three tools described in Chapter 16, “Recording and Editing Prompts.”

See Preinstallation Configuration Worksheets

When recording Call Queuing prompts, refer to information provided on the Call Queuing Prompts Sheet(s). Enter the numbers of the prompts you record in the Prompt # fields on the sheet.

4. To save the entered Call Queuing prompts, click OK. The System Prompts dialog box displays.
5. To close the System Prompts dialog box, click OK. The main system window displays.

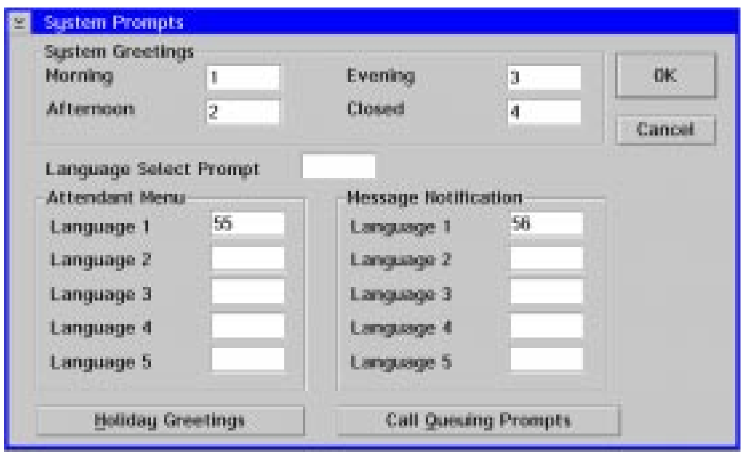
Setting Up Message Notification Prompts

Message Notification prompts are voiced to subscribers when the system calls to inform them of new messages that are in their mailboxes. The system voices the Message Notification prompt in the language specified in the class of service assigned to the subscriber's mailbox.

When you set up Message Notification prompts, record and specify a prompt for each language set up on the system. For additional information, see the topic, "Setting Up the Language Selection Prompt," earlier in this chapter.

To set up Message Notification prompts:

1. From the Attendant menu, select Prompts. The System Prompts dialog box displays.



2. In the Message Notification Language fields, enter the prompt numbers of the prompts you want the system to voice. If the system uses only one language, enter the prompt number in the Language 1 field. If the prompt has not been recorded, record it using any of the three tools described in Chapter 16, "Recording and Editing Prompts."
3. To save the entered Message Notification prompts, click OK. The main system window displays.

Setting Up Network Node Prompts

Network Node prompts are voiced as part of the destination information provided to subscribers when they send a network message. The prompt voices the site or company name where the node sends the messages. If you do not record a prompt for the node, the default system prompt, *"To send to node <node number> mailbox number <mailbox number>, press pound now,"* voices when subscribers enter a network destination for a message.

To set up Network Node prompts:

1. From the Options menu, select Network Maintenance. The Select Node dialog box displays.

2. In the Enter Node Number field, enter the number of the node for which you recorded the prompt, then click Edit. The Network Node Maintenance dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," in Chapter 19, “Using Network Messaging.”

3. In the System Prompt field, enter the number of the prompt you want the system to voice. If the prompt has not been recorded, record it using any of the three tools described in Chapter 16, “Recording and Editing Prompts.”

4. To save the entered Network Node prompt, click OK. The main system window displays.

CHAPTER 16

Recording and Editing Prompts

You can record and edit system prompts to help customize the M2000 system. Procedures provided in this chapter will help you to record and edit prompts using three recording and editing techniques:

- Keypad prompt recording functions
- Supervisor's Online Voice Editor (SOLVE)
- Visual Voice Editor (V-Edit)

Selecting a Recording and Editing Technique

M2000 provides three tools for recording and editing prompts:

- **Keypad prompt recording functions** – The keypad prompt recording functions allow you to rerecord existing prompts from a telephone without accessing the M2000 PC. To rerecord prompts using the keypad prompt recording functions, access a supervisor mailbox over the phone and enter the number of the prompt you want to rerecord, then record over the existing prompt. Note that you can record new prompts using the keypad functions, but you cannot set up the prompts to voice on the system unless you access the M2000 screen interface and enter the prompt number in the appropriate prompt number field.
- **SOLVE** – SOLVE uses both the screen and phone interfaces to allow you to specify and record prompts at the same time. This helps ensure that you are specifying the prompt you want in the appropriate prompt number field. To use SOLVE, access the M2000 PC and start SOLVE from any screen containing a prompt number field. Prompts you record using SOLVE are stored in the \REC00 directory as .SUP files and are accessible from both SOLVE and the keypad prompt recording functions.
- **V-Edit** – V-Edit is an advanced phrase editing tool that allows you to make intricate modifications to existing phrases. Though more complicated in nature, V-Edit features allow you to generate the highest quality system phrases.

Recording and Editing Prompts Using the Keypad Prompt Recording Functions

You can record system prompts over the phone using the keypad prompt recording functions available in supervisor mailboxes. When you record system prompts using the keypad prompt recording functions, the prompts are saved by prompt number in the \REC00 directory with the .SUP file extension.

Be sure to write down the prompt numbers assigned to the prompts you record. You must specify the prompt numbers in the appropriate fields of the screens on which you specify prompts to be voiced by the system.

Phrases in the .O32 files (for example, ENGLISH2.O32) can **only** be edited using V-Edit.

To record prompts using the keypad prompt recording functions:

1. Pick up the handset and dial the system access number.
2. Access a mailbox that has been assigned supervisor rights. The Subscriber main menu voices.
3. From the Subscriber main menu, press <9> to access the supervisor functions.
4. When prompted, enter the system manager password. The system voices the Supervisor main menu.
5. At the Supervisor main menu, press <2> to select Change System Prompts.

6. To record a prompt, enter the number of the prompt you want to record, followed by <#>. The system voices the prompt associated with the prompt number if one exists. To rerecord the prompt, press <2>.
7. When you hear the beep, record the prompt, then press <#> to stop recording. The system voices the prompt you recorded.
8. To accept the prompt, press <1>. To rerecord the prompt, press <2>. To delete the prompt, press <3>.
9. To exit Change System Prompts and return to the Supervisor main menu, press <*>.

Recording and Editing Prompts Using SOLVE

SOLVE allows you to use both the M2000 screen and phone interfaces to assign and record system prompts. When you record system prompts using SOLVE, the prompts are saved by prompt number in the \REC directories with the .SUP file extension.

Be sure to write down the prompt numbers assigned to the prompts you record. You must specify the prompt numbers in the appropriate fields of the screens on which you specify prompts to be voiced by the system.

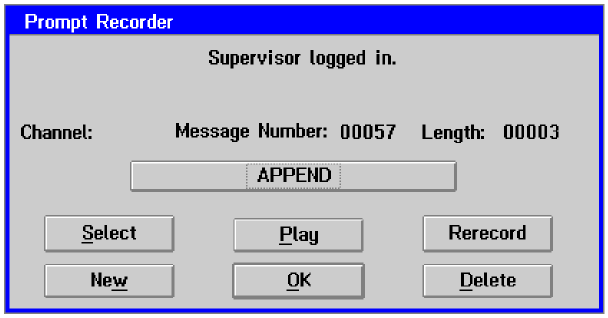
Phrases in the .O32 files (for example, ENGLISH2.O32) can **only** be edited using V-Edit.

To record and edit prompts using SOLVE:

1. Open the screen on which the prompt number for the prompt you want to record is to be specified. Place the cursor in the field for the prompt. If the field is blank, no custom prompt is currently set up to voice. You can assign a prompt number in the field now or allow the system to assign a number automatically when you record and accept a prompt.

   If a prompt number exists in the field, a prompt is currently set up to voice on the system. In this case, you can accept or rerecord the prompt.
2. To start SOLVE, press <F7>. The SOLVE Prompt Recorder dialog box displays and shows the status Waiting for Login.
3. Call into the system over the phone and log into a supervisor mailbox.
4. From the Main menu, press <4> to select Personal Options, then when prompted, enter the Level 2 or Level 3 supervisor password.

5. From the Supervisor main menu, press <4>. The Prompt Recorder dialog box shows the status Supervisor logged in.



6. To begin recording a new prompt, click the Record button. To rerecord an existing prompt, click Rerecord. When you hear the beep over the handset, begin recording the prompt.

7. To stop or pause recording, click Stop. The prompt recording is saved and assigned to the prompt number displayed next to Message Number. The length field displays the length of the prompt in seconds.

8. To listen to the prompt, click Play.

9. To rerecord the prompt, click Rerecord.

10. To delete the prompt and start over, click Delete.

11. After you access the Prompt Recorder dialog box, you can create other new prompts or select existing prompts to review and edit. To create a new prompt, click New. SOLVE automatically assigns a new number to the prompt. To select an existing prompt to review or edit, click Select. The Select Phrase dialog box displays. Select the number of the prompt you want to review or edit and click OK. Follow the steps above to record and review prompts.

12. To close the Prompt Recorder dialog box and return to the prompt screen, click OK.

13. To log out of the SOLVE phone interface, press <*> on the phone keypad. Always log out of SOLVE by pressing <*> before hanging up the handset to allow the port to reset.

Never shut down a port running SOLVE or perform a Force shutdown while you are logged into SOLVE. This causes channel errors that will eventually halt M2000 operation.

Recording and Editing Prompts Using V-Edit

V-Edit is an advanced phrase editing tool that allows you to combine and edit:

- Existing phrases previously recorded with V-Edit
- Phrases professionally recorded outside the M2000

V-Edit is also a phrase recording tool used in conjunction with the Visual Architect V-Tree authoring tool. The phrases you create or modify using V-Edit are stored by phrase number in the [Language]3.O32 phrase file, where [Language] is the primary language on the system.

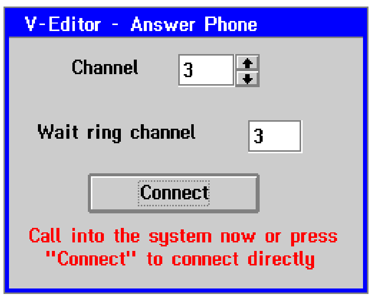
Starting V-Edit

When you start V-Edit, you can configure the startup routine to automatically prompt you to connect to V-Edit using the phone, or you can go directly to the V-Edit main window. Note that if you want to record or play phrases, you must connect to V-Edit through the phone. If you want to perform any other V-Edit tasks, for example, entering text comments for phrases and editing phrase files, you can do so without connecting over the phone.

To start V-Edit:

1. Shut down M2000 if it is running. For additional information on shutting down the system, see the topic, "Shutting Down the System," in Chapter 21, "Starting, Logging Into, and Shutting Down the System."

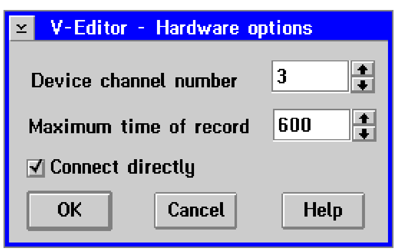
2. From the Lucent Technologies folder, double-click the Visual Voice Editor icon. By default, the Answer Phone dialog box displays.



3. To connect to V-Edit over the phone, select the channel you want to use to call into V-Edit and dial the access phone number. If you do not want to connect to V-Edit over the phone, click the Connect button. The V-Edit main window displays.

Steps 4-8 describe how to modify the startup routine for V-Edit.

4. To modify the startup routine, select Hardware from the Voice menu. The Hardware Options dialog box displays.



5. In the Device Channel Number field, enter the channel number you want to use to call into V-Edit. The number you enter in this field displays as the default channel number in the Answer Phone dialog box.

6. In the Maximum Time of Record field, enter the maximum recording time allowed. This number limits the amount of time, in seconds, you can record during a single recording session using the phone—not the maximum length of the phrases you record. When this maximum is reached, V-Edit stops recording the phrase, and you must begin recording again.

7. If you want to change the startup routine to start V-Edit without connecting over the phone, select the Connect directly option. When this option is selected, the V-Edit main window displays immediately when you start V-Edit.

8. To save the settings, click OK. The V-Edit main window displays.

You can connect to V-Edit over the phone any time by selecting Connect under the File menu. When you select Connect, the Answer Phone dialog box displays. To connect, select the channel you want to use to call into V-Edit and dial the access phone number. The V-Edit main window displays.

Changing the V-Edit Display

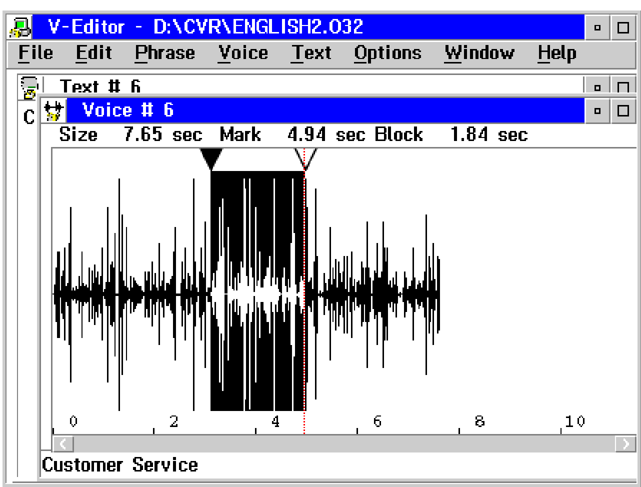
You can change the V-Edit displays to help you perform different tasks. The V-Edit display contains two windows, Voice and Text. The Voice window displays a graphical representation of a phrase. The Text window displays any comments attached to the phrase. When you first start V-Edit, both the Voice and the Text windows are tiled with the Voice window above the Text window. To view one window at a time, cascade the windows. You can use the zoom features in the Voice window to change the magnification of the phrase graphic.

To cascade the Voice and Text windows:

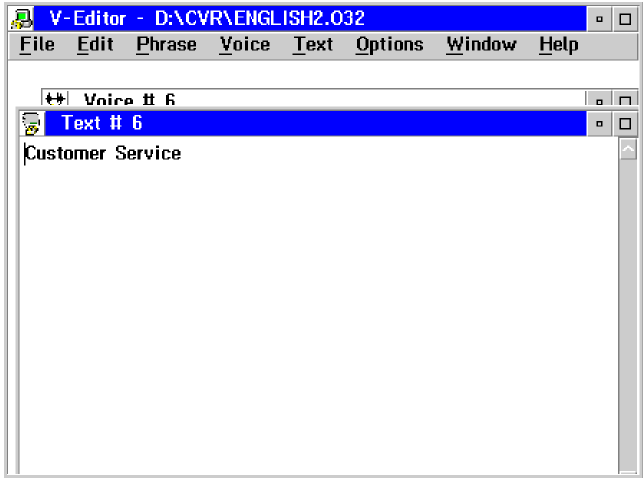
1. Start V-Edit if it is not already running.

2. To cascade the window so that the Voice and Text windows overlap, select Cascade from the Window menu.

3. To display the Voice window, select Voice from the Window menu. The Voice window displays in the V-Edit main window.



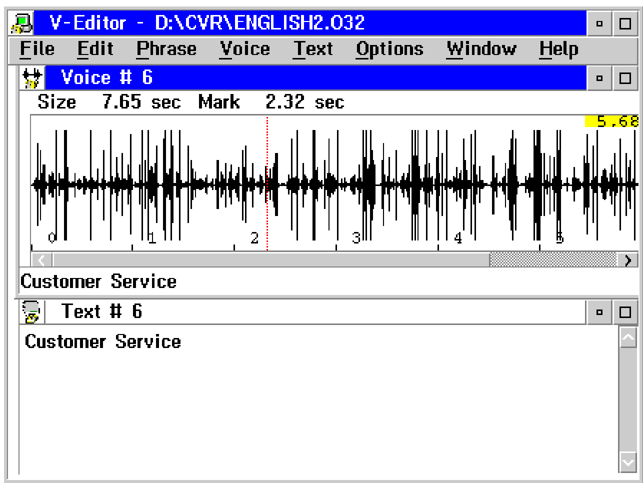
4. To display the Text window, select Text from the Window menu. The Text window displays in the V-Edit main window.



To tile the Voice and Text windows:

1. Start V-Edit if it is not already running.

2. To tile the windows so both the Voice and Text windows display without overlapping, select Tile from the Window menu.



To change the magnification of the phrase graphic in the Voice window:

1. Start V-Edit if it is not already running. Open the phrase file containing the phrase you want to view.

2. To increase the magnification of the graphic, select Zoom In from the Voice menu.

3. To decrease the magnification of the graphic, select Zoom Out from the Voice menu.

Opening Phrase Files

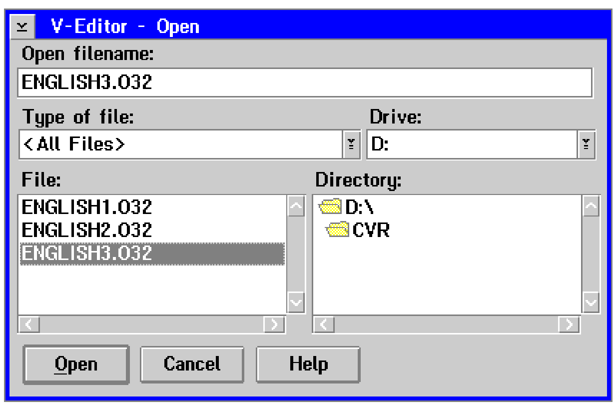
M2000 includes two phrase files for each language that store the default prompts voiced by the system. The system also provides a third phrase file to store the custom phrases you create using V-Edit tools or that you have professionally recorded outside of the M2000. These phrase files are designated by the language name and the .O32 file extension. For example, the default phrase files for English are stored ENGLISH1.O32 and ENGLISH2.O32. ENGLISH3.O32 is provided for storage of custom phrases you generate.

When you specify in a prompt number field a number for a phrase stored in the third .O32 phrase file, you must precede the prompt number with the letter D. The D instructs the system that the prompt you want the system to voice is stored in the .O32 file and not in a \REC directory where the prompts you create using SOLVE or keypad prompt recording functions are stored.

Use this procedure whenever you are instructed to open a phrase file in V-Edit.

To open an existing phrase file:

1. Start V-Edit, if it is not running.
2. From the File menu, select Open. The Open dialog box displays.



3. Select the drive, directory, and phrase filename of the phrase you want to open, then click OK. The V-Edit main window displays the first phrase in the file.
4. The first time you open the [Language]3.O32 phrase file, there are 100 blank phrases. To create room for the additional phrases, select Compress from the File menu and enter the number of phrases you want to store in the file in the Maximum Number of Phrases field up to a maximum of 4001. When entering a number in this field, consider the amount of hard disk space you want the file to use. The larger the number, the more space the file uses. To create the space for the phrases, click OK.

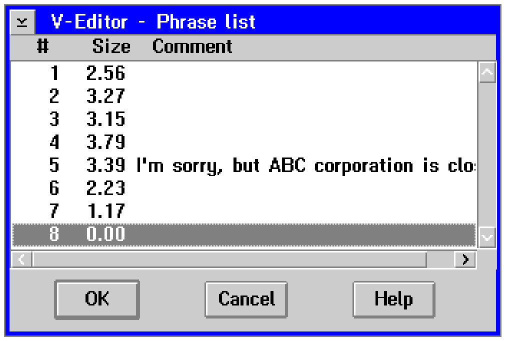
Selecting Individual Phrases in the Phrase File

You can select a specific phrase from a phrase file by either selecting the phrase number from a list of existing phrases or by entering the phrase number.

To select a phrase from a list:

1. Open the file containing the phrase you want to select.

2. From the Phrase menu, select List. The Phrase List dialog box displays.



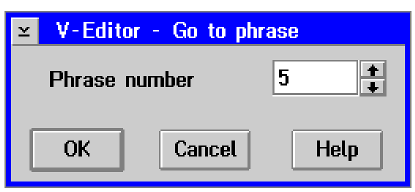
3. Select the phrase you want to select, then click OK. The Voice window displays a graphical representation of the phrase you selected.

To display the next or previous phrase in the phrase file, select Next or Previous from the Phrase menu.

To select a phrase by entering its phrase number:

1. Open the file containing the phrase you want to select.

2. From the Phrase menu, select Number. The Go to phrase dialog box displays.



3. Enter the number of the phrase you want to select, then click OK. The Voice window displays a graphical representation of the phrase you selected.

To display the next or previous phrase in the phrase file, select Next or Previous from the Phrase menu.

Recording Phrases

Use these procedures to record phrases using V-Edit record features. You can record a single phrase at a time or use the Record Group option to speed procedures for recording several phrases during one session. The Record Group option speeds the recording process by automatically prompting you to record phrases, saving you the time it takes to do so by selecting menus and options.

Be sure to write down the numbers assigned to the new prompts you create. You must specify the prompt numbers—preceded with the letter D to indicate phrases stored in a .O32 file)—in the appropriate fields of the screens on which you specify prompts voiced by the system.

To record a single phrase:

1. Start V-Edit, if it is not running.
2. If the Answer Phone dialog box does not automatically display, select Connect from the File menu. The Answer Phone dialog box displays. To connect to V-Edit through the phone, dial the system access phone number.
3. Open the phrase file in which you want to store the phrase.
4. From the Phrase menu, select Number or List to indicate the number of the phrase you want to record or rerecord.
5. To record the phrase, select Record Phrase from the Voice menu. The V-Editor # dialog box displays.

6. Click the Record button and begin recording the phrase when you hear the beep.
7. To stop recording, click Stop. The phrase is saved and assigned the number displayed next to V-Editor # in the dialog box's title bar. The Time field displays the length, in seconds, of the phrase you recorded.
8. To listen to the phrase, click Play.
9. To rerecord the phrase, click Record. Begin recording the prompt when you hear the beep.
10. To close the V-Edit # dialog box, click OK. A graphical representation of the recording displays in the Voice window of the V-Edit main window.

To record a group of phrases:

1. Start V-Edit, if it is not running.
2. If the Answer Phone dialog box does not automatically display, select Connect from the File menu. The Answer Phone dialog box displays. To connect to V-Edit through the phone, dial the system access phone number.
3. Open the phrase file in which you want to store the phrase.
4. From the Voice menu, select Record Group. The Record dialog box displays.

5. In the Phrase Number field, enter the number of the first phrase in the group you want to record, then click OK. The V-Editor # dialog box displays.

6. To record the phrase, click Record and begin recording the phrase when you hear the beep.
7. To stop recording, click Stop. The recording is saved and assigned the number displayed next to Phrase # in the dialog box title bar. The Time field displays the length, in seconds, of the phrase you recorded.
8. To listen to the phrase, click Play.
9. To rerecord the phrase, click Record. Begin recording the phrase when you hear the beep.
10. To save the current phrase and record the next phrase, click OK. The Record dialog box displays, and the Phrase number field displays the next consecutive phrase number in the phrase file.
11. To accept this phrase number, click OK. To enter a new number, enter the number in the Phrase Number field, then click OK. The V-Editor # dialog box displays.
12. Repeat steps 4-11 until you have recorded all the phrases in the group.
13. When you finish recording phrases, click Cancel in the Record dialog box. The V-Edit main window displays. A graphical representation for the last phrase you recorded displays in the Voice window of the V-Edit main window.

Adding Segments to Phrases

V-Edit editing tools allow you to construct new phrases by piecing together parts of existing phrases. You can use the cut, copy, and paste features of V-Edit to merge parts of phrases to create a single phrase. You can also insert existing files and new recordings into phrases.

To undo the last editing task you performed, select the Undo from the Edit menu.

To cut or copy and paste parts of phrases into other phrases:

1. Start V-Edit, if it is not running.
2. Open the phrase file in which the phrase from which you want to cut or copy a segment is currently stored.
3. From the Phrase menu, select Number or List to select the number of the phrase from which you want to cut or copy.
4. Using the mouse, select the part of the phrase you want to cut or copy. The selected part is marked with vertical dotted lines. To select the entire phrase, choose Select All from the Edit menu.
5. To listen to the selected part of the phrase, select Play from the Voice menu. To listen to the unselected part of the phrase, select Play Unselected from the Voice menu. This helps to ensure that you have selected the correct part of the phrase. Note that you must be connected to V-Edit through the phone to use the play features.
6. To remove the selected part from the phrase and place it on the clipboard, select Cut from the Edit menu. The selected part is removed and the remaining parts of the phrase are displayed in the Voice window.
7. To copy the selected part from the phrase and leave the original phrase intact, select Copy from the Edit menu. The selected part of the phrase is copied to the clipboard.

   After you use the Cut or Copy options under the Edit menu, they are not active again until you clear the clipboard by selecting the Paste command.

8. Open the phrase in which you want to add the phrase segment you cut or copied.
9. In the Voice window, click the graphical representation of the phrase to place the insertion point where you want to paste the phrase from the clipboard. The insertion point is marked with a vertical dotted line. If the Voice window for the phrase you want to add to is blank, click in the Voice window to place the insertion point at the left side of the window.
10. To add the phrase from the clipboard into the currently displayed phrase, select Paste from the Edit menu. The segment is inserted to the right of the insertion point. The Voice window displays the modified phrase.

To insert a file or recording into a phrase or replace a phrase:

1. Start V-Edit, if it is not running.
2. Open the phrase file in which the phrase you want to edit is currently stored.

3. From the Phrase menu, select Number or List to select the number of the phrase you want to edit.
4. In the Voice window, click the graphical representation of the phrase to place the insertion point where you want to insert the file or recording. The insertion point is marked with a vertical dotted line.
5. From the Insert menu, select File if you want to insert a phrase file, or select Record if you want to add a recording to a phrase. If you select File, the Open dialog box displays. If you select Record, the V-Editor # dialog box displays.
6. To insert a file, select the drive, directory, and filename for the file you want to insert, then click OK. The selected file is copied into the current phrase, and the modified phrase displays in the Voice window of the V-Edit main window.
7. To insert a recording, select Record Phrase from the Insert menu, record the phrase, then click OK. The modified phrase displays in the Voice window of the V-Edit main window. For additional information on recording, see the topic, "Recording Phrases," earlier in this chapter.
8. To replace the phrase with another phrase, select Read from the Voice menu. Select the file containing the phrase that is to replace the current phrase from the dialog box, then click OK.

Removing Parts of a Phrase

You can remove parts of phrases by using the Delete and Trim options under the Edit menu. The Delete feature allows you to specify the parts of the phrase you want to delete. The Trim feature allows you to specify the parts of the phrase you want to save.

To undo the last editing task you performed, select Undo from the Edit menu .

To delete parts of a phrase:

1. Start V-Edit, if it is not running.
2. Open the phrase file containing the phrase you want to modify.
3. Using the mouse, select the part of the phrase you want to delete.
4. To listen to the selected part of the phrase, select Play from the Voice menu. To listen to the unselected part of the phrase, select Play Unselected from the Voice menu. This helps to ensure that you have selected the correct part of the phrase. Note that you must be connected to V-Edit through the phone to use the play features.
5. To delete the selected part of the phrase, select Delete from the Edit menu. The Voice window displays the modified phrase.

To trim parts of a phrase:

1. Start V-Edit, if it is not running.
2. Open the phrase file containing the phrase you want to modify.
3. Using the mouse, select the part of the phrase you want to save.

4. To listen to the selected part of the phrase, select Play from the Voice menu. To listen to the unselected part of the phrase, select Play Unselected from the Voice menu. This helps to ensure that you have selected the correct part of the phrase. Note that you must be connected to V-Edit through the phone to use the play features.

5. To trim the unselected part of the phrase, select Trim from the Edit menu. The Voice window displays the modified phrase.

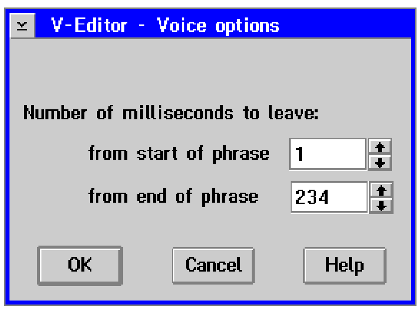
Controlling Silence Before and After a Phrase

V-Edit allows you to specify the amount of silence to leave at the beginning and the end of every phrase. A small amount of silence before and after phrases provides a natural break in voicing when phrases are strung together. For example, if you enter 250 in the from end of phrase field, ¼ second of silence is left at the end of the phrase. After you specify the amount of silence you want to leave before and after all phrases, you can use the Delete Silence option to delete excess silence from individual phrases.

To control silences before and after a phrase:

1. Start V-Edit if it is not running.

2. To specify the amount of silence that should be left at the beginning and end of phrases, select Voice from the Options menu. The Voice Options dialog box displays.



3. In the From Start of Phrase field, enter the number of milliseconds of silence you want at the beginning of phrases.

4. In the From End of Phrase field, enter the number of milliseconds of silence you want at the end of phrases.

5. To save the entered values, click OK. The V-Edit main window displays.

6. To remove excess silence from an individual phrase, open the phrase file and select the phrase's phrase number.

7. From the Voice menu, select Del Silence. V-Edit removes any silence before and after the phrase in excess of the amount you specified in the Voice Options dialog box.

Managing Phrase Files

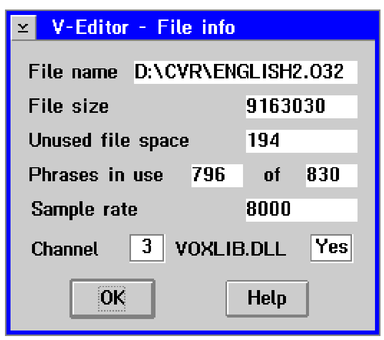
V-Edit provides options that allow you to display detailed phrase file information, copy several phrases into another phrase file for modifying, and compress phrase files to eliminate unused file space.

To display phrase file information:

1. Open the phrase file for which you want to display file information.

2. From the File menu, select File Information. The File Information dialog box displays the following information:

   - **File Name** – The path and name of the phrase file.
   - **File Size** – The length of the file in milliseconds.
   - **Unused File Space** – The amount of silence in the file in milliseconds.
   - **Phrase in Use** – The phrase number currently displayed in the Voice window.
   - **Sampling Rate** – The number of times per second the voice board converts the voice signal to digital.
   - **Channel** – The channel to which the phone interface connects to V-Edit.
   - **VOXLIB.DLL** – Displays whether the play and record functions are available on the system.

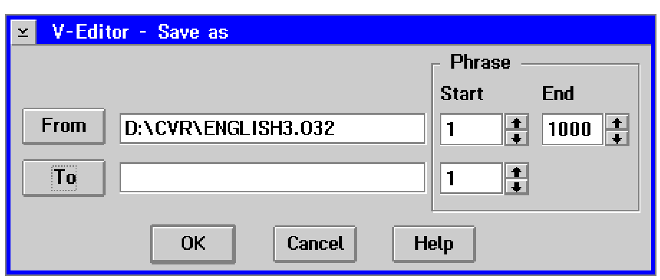


3. To close the File Information dialog box, click OK. The V-Edit main window displays.

To save a range of phrases into another phrase file:

1. Open the phrase file containing the phrases you want to save to another file.

2. From the File menu, select Save As. The Save As dialog box displays.



3. Verify that the path and filename of the file containing the phrases you want to save is displayed in the From field. If the path and filename are not correct, either enter the appropriate path and filename, or click From and select the appropriate path and filename.

4. Under Phrase, enter the first phrase number in the range of phrases you want to save in the Start field next to From.

5. Under Phrase, enter the last phrase number in the range of phrases in the End field next to From.

6. Enter the path and filename where you want to save the phrases by either entering the path and filename in the To field, or clicking To and selecting the path and filename.

7. Under Phrase, select the first phrase number for the phrases in the Start field next to To.

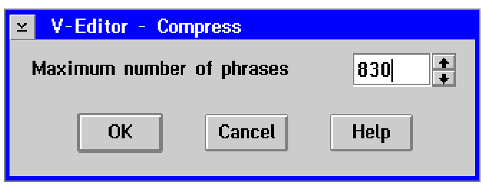
8. To save the phrases in the new file, click OK. The V-Edit main window displays.

Existing phrases within the specified range are overwritten in the current file.

To compress phrase files:

1. Open the phrase file you want to compress.

2. From the File menu, select Compress. The Compress dialog box displays.



3. In the Maximum Number of Phrases field, enter a number larger than the highest phrase number in the file.

If you enter a number lower than the highest phrase number, all phrases with numbers higher than that number are deleted when you compress the file.

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4. To compress the file, click OK. A progress indicator box displays the progress of the compression.

Creating, Displaying, and Printing Text Comments

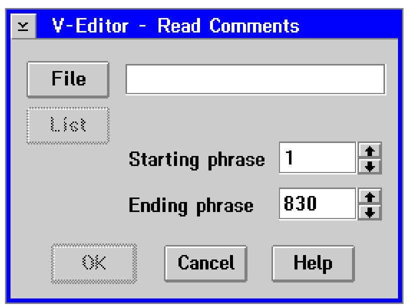
You can use V-Edit's text options to attach comments to phrase files to help you identify phrase contents when performing editing tasks. You can enter comments in V-Edit by typing text directly in the Text window or importing text created using other text editors into the .O32 phrase files. You can also use V-Edit to export text you entered in the Text window to a text file.

To enter text comments using V-Edit:

1. Open the phrase file and number containing the phrases to which you want to enter comments.
2. Click the Text window to select it, or select Text from the Window menu.
3. Enter the comments in the Text window. When you finish entering comments, click the Voice window to activate it, or select another phrase number.

To import text comments into a .O32 file:

1. Open the phrase file containing the phrases to which you want to import comments.
2. From the Text menu, select Read. The Read Comments dialog box displays.



3. Specify the text file you want to import by either entering the path and filename, or clicking File and selecting the drive, directory, and filename.

Only comments contained in .TXT files can be read into V-Edit phrase files. Each comment in the text file should start on a new line and must be preceded by the corresponding phrase number in brackets, such as:

```
[1] Enter the extension of the person you are calling.
```

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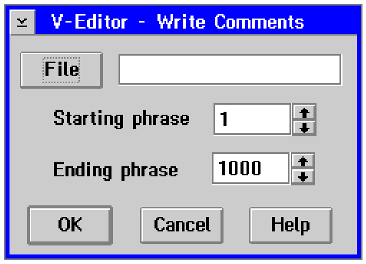
4. In the Starting phrase field, enter the first phrase number for which you want to import comments.
5. In the Ending phrase field, enter the phrase number of the last phrase file for which you want to import comments.
6. To import the comments for the selected file, click OK. The file imports, and the V-Edit main window displays.

Existing comments within the specified range are overwritten in the current phrase file.

To export text comments to text files:

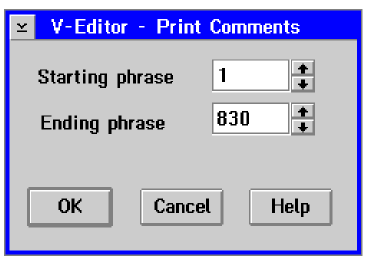
1. Open the phrase file containing comments you want to export to a file.
2. From the Text menu, select Write. The Write Comments dialog box displays.



3. Specify the .TXT file you want to export to either by entering the path and filename or by clicking File and selecting the drive, directory, and filename.
4. In the Starting phrase field, enter the number of the first phrase containing the comments you want to export.
5. In the Ending phrase field, enter the number of the last phrase containing the comments you want to export.
6. To export the comments to the selected file, click OK. The comments export to the file you specified, and the V-Edit main window displays.

To print text comments:

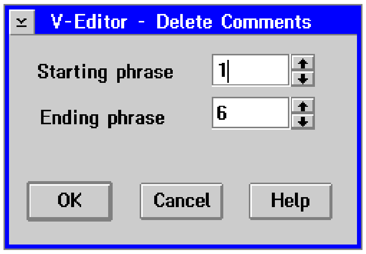
1. Open the phrase file containing the comments you want to print.
2. From the Text menu, select Print. The Print Comments dialog box displays.



3. In the Starting phrase field, enter the number of the first phrase containing the comments you want to print.
4. In the Ending phrase field, enter the number of the last phrase containing the comments you want to print.
5. To print the comments for the selected file, click OK. The comments print, and the V-Edit main window displays.

To delete comments:

1. Open the file containing the comments you want to delete.
2. From the Text menu, select Delete. The Delete Comments dialog box displays.



3. In the Starting Phrase field, enter the number of the first phrase containing the comment you want to delete.
4. In the Ending Phrase field, enter the number of the last phrase containing the comment you want to delete.
5. To delete the comments for the selected file, click OK. The comments are deleted, and the V-Edit main window displays.

Shutting Down V-Edit

When you have completed the recording or editing session, use this procedure to shut down V-Edit. If you connected to V-Edit over the phone, do *not* disconnect by hanging up the handset since this could prevent the port from resetting.

To shut down V-Edit:

1. From the File menu, select Quit.
2. The V-Edit main window closes, and the phone connection, if established, is terminated. The OS/2 desktop displays.

Notes:

CHAPTER 17

Managing System Mailboxes

System mailboxes are one of the primary ways that users interact with M2000. Mailboxes allow users to record messages, store messages, and perform many other actions on the system. Procedures provided in this chapter will help you to:

- Create mailboxes
- Edit a mailbox
- Delete a mailbox
- View mailbox information
- Search for a mailbox
- Automatically forward messages to other mailboxes
- Notify subscribers of new messages through a phone or a beeper
- Manage mailbox subscriber settings
- Clear mailbox information
- Unlock mailboxes
- Understand Class of Service options
- Using dialing codes

The procedures in this chapter provide steps for managing system mailboxes using the screen interface. You can also perform some system mailbox management functions via the Supervisor menu over the phone. For information on accessing the Supervisor menu over the phone, see Chapter 21, “Starting, Logging Into, and Shutting Down the System.”

Creating Mailboxes

When you create mailboxes, it is important that each mailbox has the appropriate features available for its purpose on the system. Mailboxes you create for subscribers may need very different features than mailboxes that are used simply to store messages or handle calls. To help you create mailboxes more efficiently, M2000 provides techniques you can use to create:

- A single mailbox
- A single copy of an existing mailbox
- Multiple mailboxes with different features
- Multiple mailboxes with the same features
- A guest mailbox, which uses another mailbox as a sponsor

Knowing the needs of M2000 subscribers can help you determine how you create mailboxes. For example, if you need to create mailboxes for 20 new employees who all need the same mailbox features, you can create 20 mailboxes with the same features simultaneously, only having to enter an employee name and extension for each.

See Preinstallation Configuration Worksheets

When creating system mailboxes, refer to information provided on the Mailbox Assignment Sheet(s).

Things to Consider Before Creating Mailboxes

Before you create any mailboxes, you should consider the purpose and needs of the subscriber. This enables you to determine how you will create the mailboxes. When you create mailboxes, you must specify the following information for each mailbox:

- Mailbox number
- Subscriber’s extension
- Subscriber’s name
- Company
- Division
- Password

You can also enter a personal operator for a mailbox and set special mailbox features such as class of service, subscriber settings, auto-forwarding of messages, Message Notification, and V-Trees. It is recommended that you collect and organize this information before you create any mailboxes, so you can generate the appropriate mailboxes with the least amount of effort.

Creating a Single Mailbox

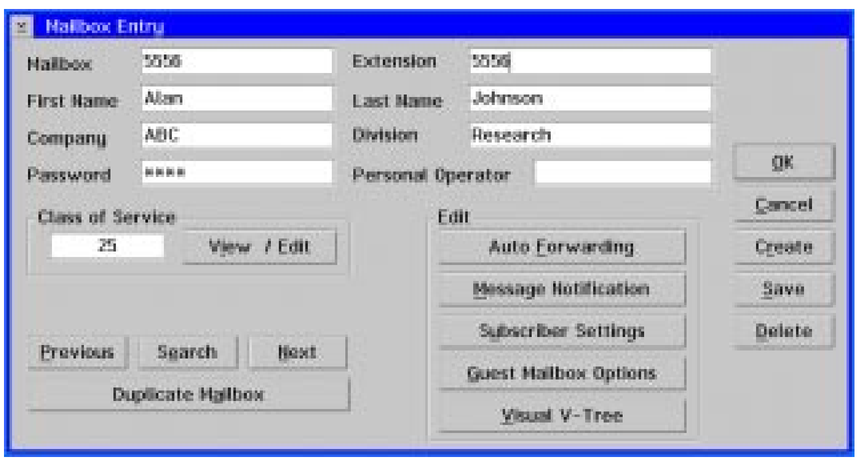
Use this procedure to create one mailbox on the system. This procedure allows you to specify mailbox information and features for a single mailbox. For additional information about creating mailboxes, see the topics, "Creating a Single Duplicate Mailbox," "Creating Multiple Mailboxes," or "Creating Multiple Duplicate Mailboxes," later in this chapter.

It is recommended that you use this procedure to create a mailbox with unique features or a mailbox that will be used as a template to create other similar mailboxes.

To create a mailbox:

1. From the Mailbox menu, select Create. The Create Mailbox dialog box displays.

2. In the Create ____ Mailboxes field, enter 1 to indicate that you want to create one mailbox.
3. In the Starting with Number field, enter a mailbox number for the new mailbox. For easier organization, it is recommended that the mailbox number be the same as the mailbox subscriber's extension.
4. To select mailbox features, click Create. The Mailbox Entry dialog box displays with the mailbox number displayed in the Mailbox field.



5. If the mailbox subscriber's extension is different from the mailbox number, enter the extension for the mailbox in the Extension field.
6. In the First Name field, enter the first name of the mailbox subscriber.
7. In the Last Name field, enter the last name of the mailbox subscriber.
8. In the Company Name field, enter in alphanumeric characters the name of the company to which the mailbox subscriber belongs. The company name you enter allows subscribers to send messages to all subscribers in the same company through

system-wide distribution lists. Note that the company name must match the company name entered for other mailboxes exactly.

9. In the Division field, enter in alphanumeric characters the name of the division to which the mailbox subscriber belongs. The division name you enter allows subscribers to send messages to all subscribers in the same division through system-wide distribution lists. Note that the division name must exactly match the division name entered for other mailboxes.

Mailboxes for which you specify no Company or Division receive all messages sent to company list 99 or division list 98, respectively.

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10. If the system is not set up to automatically generate a password, and you want the mailbox to have a password, enter the password for the mailbox in the Password field. The system displays the password as asterisks (*) for added system security.

It is recommended that you use the password automatically generated by the system. If the system is set up so that no password is required for a mailbox, a password is not generated by the system and the field is blank. If the system is set up to use a default password for each mailbox, the default password, usually 1111, is automatically assigned to the mailbox. If the system is set up to generate a random password, a dialog box displays the mailbox number and the random password generated for the mailbox, when you save the mailbox. Record the mailbox password at that time and provide it to the mailbox subscriber.

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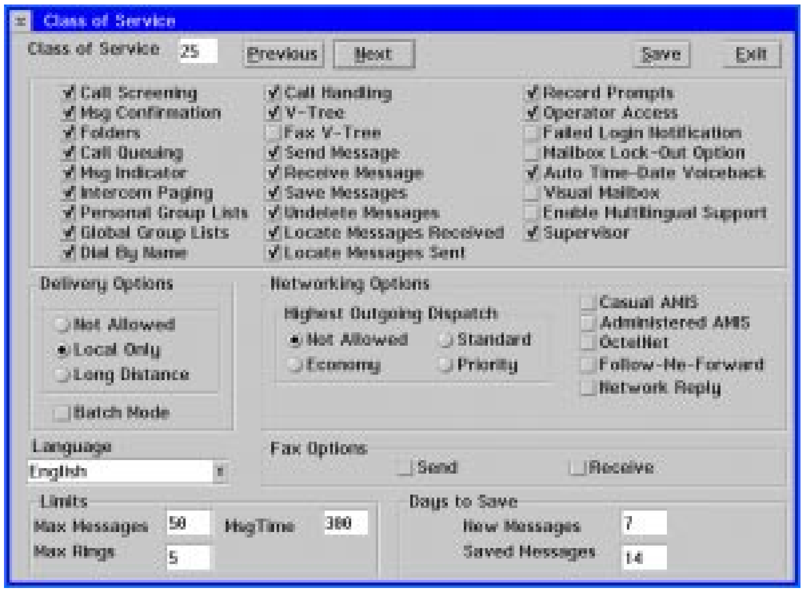
11. If the mailbox requires a personal operator other than the default operator, enter the mailbox number of the personal operator. The personal operator feature allows you to assign a mailbox to a mailbox other than the system operator mailbox. For example, you can assign the sales receptionist's mailbox as the personal operator mailbox for all subscribers in the sales department.

12. To select a Class of Service for the mailbox, click View/Edit under Class of Service. The Class of Service dialog box displays the selected features available for the displayed Class of Service. For information on individual Class of Service features, see the topic, "Class of Service Options," later in this chapter.

See Preinstallation Configuration Worksheets

When assigning classes of service to mailboxes, refer to information provided on the Class of Service Sheet(s), the COS Redefinition Sheet, and the Custom COS Definition Sheet.



13. To display the other defaults for Classes of Service, click Next or Previous.

14. If the features for the defined classes of service are not appropriate for the mailbox, you can create a custom Class of Service if you are logged into the system as a Level 3 supervisor. To create a custom Class of Service for the mailbox, click Use Custom COS and select the appropriate options. It is recommended, however, that you use the default classes of service to select mailbox features, so there is more consistency among system mailbox setups.

The custom Class of Service options on the Class of Service dialog box are not displayed unless you are logged in as a Level 3 supervisor.

15. To assign the selected Class of Service, click Save, then click Exit. The Mailbox Entry dialog box displays.

16. If you want to automatically forward messages in the mailbox to another mailbox, click Auto Forwarding under Edit, then select the appropriate options. For additional information, see the topic, "Auto-Forwarding Messages Between Mailboxes on the Same System," later in this chapter.

17. If you want to notify the mailbox subscriber of messages in the mailbox by phone or beeper, click Message Notification, then select the appropriate options. For additional information, see the topic, "Notifying Subscribers of New Messages," later in this chapter.

18. If you want to change the settings a subscriber can assign to the mailbox, click Subscriber Settings, then select the appropriate options. For additional information, see the topic, "Managing Subscriber Settings," later in this chapter.
19. If you want to create a guest mailbox for the mailbox, click Guest Mailbox, then select the appropriate options. For additional information, see the topic, "Creating a Guest Mailbox," later in this chapter.
20. If you want to create or assign a V-Tree to the mailbox, click Visual V-Tree, then select the appropriate options. For additional information, see Chapter 18, “Working with V-Trees.”
21. To create the mailbox with the entered options, click Save. A dialog box displays informing you that the mailbox has been created. Click OK to close the dialog box.

If the system is set up to generate random passwords for mailboxes, a dialog box displays the password assigned to the mailbox. Record the mailbox password and provide it to the mailbox subscriber.

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22. To close the Mailbox Entry dialog box, click OK. The new mailbox displays on the Mailbox Status screen.

Creating a Single Duplicate Mailbox

Use this procedure to create a new mailbox with the same company, division, personal operator, and Class of Service as an existing mailbox. For example, you could use this procedure to create a mailbox for a new employee in the sales department that has the exact same features as the other sales department employee mailboxes. When you copy a mailbox, you need to enter the mailbox number, extension, and subscriber’s name. Note that you can modify a mailbox’s features after you duplicate an existing mailbox.

To create a single duplicate mailbox:

1. From the Mailbox menu, select Edit. The Edit Mailbox dialog box displays.

2. Enter the number of the mailbox to copy, then click Edit. The Mailbox Entry dialog box displays the selected mailbox’s information.

If you do not know the mailbox number for the mailbox number to edit, click Search and locate the mailbox. For additional information, see the topic, "Searching for a Mailbox," later in this chapter.

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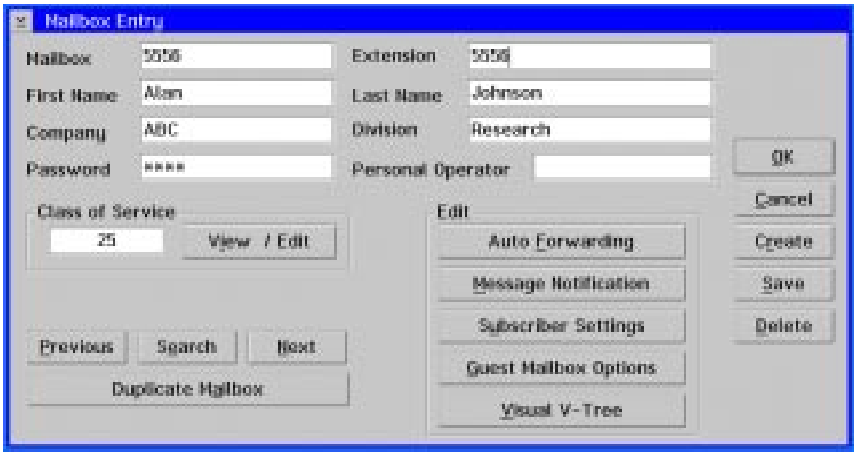
3. To copy the displayed mailbox information, click Duplicate Mailbox. The Duplicate Mailbox dialog box displays.

4. Enter the mailbox number for the mailbox to create, then click Create. The new mailbox displays.



5. In the Extension field, enter the extension for the mailbox if it is different from the mailbox number.

6. In the First Name field, enter the first name of the mailbox subscriber.

7. In the Last Name field, enter the last name of the mailbox subscriber.

8. If any mailbox information or features need to be changed, enter the changes.

9. To create the mailbox with the entered features, click Save. A dialog box displays informing you that the mailbox has been created. Click OK to close the dialog box.

10. To close the Mailbox Entry dialog box, click OK. The new mailbox displays on the Mailbox Status screen of the main system window.

If the tutor was already run for the mailbox you copied, the owner of the duplicate mailbox will not hear the tutor at first login.

Creating Multiple Mailboxes

Use this procedure to create multiple system mailboxes at one time. For each mailbox you create, you must specify the mailbox features for that mailbox if they are different from the default features. To create multiple mailboxes that have the same features, see the topic, "Creating Multiple Duplicate Mailboxes," later in this chapter.

To create multiple mailboxes:

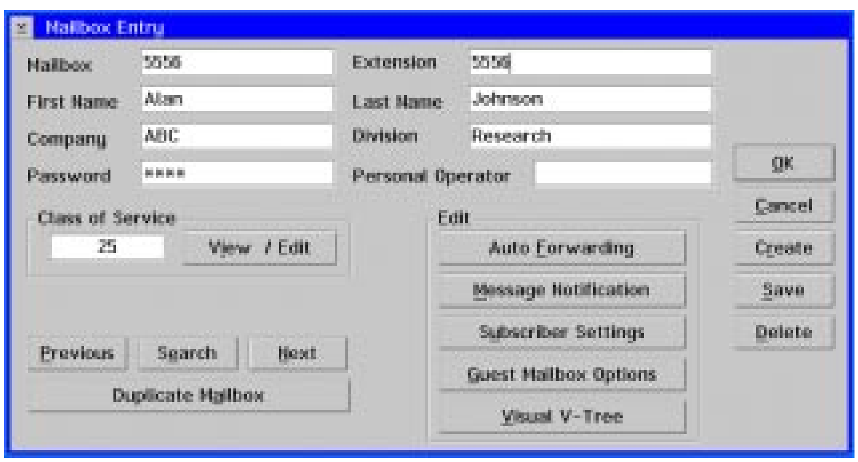
1. From the Mailbox menu, select Create. The Create Mailbox dialog box displays.

2. In the Create ____ Mailboxes field, enter the number of mailboxes that you want to create.

3. In the Starting with Number field, enter the first mailbox number for the new mailboxes. It is recommended that the mailbox number match the mailbox subscriber's extension.

4. Under Increment By, select the number by which to increment the new mailbox numbers. For example, if you create five mailboxes starting with mailbox number 2000 and increment them by 5, the mailboxes created are numbered 2000, 2005, 2010, 2015, and 2020.

5. To select mailbox features, click Create. The Mailbox Entry dialog box displays the first mailbox with the mailbox number displayed in the Mailbox field.



6. To create all of the new mailboxes, click Save. The mailboxes are created with the default features and a dialog box displays informing you that the mailboxes have been created. Click OK to close the dialog box. The first new mailbox redisplays.

Steps 7-23 explain how to enter mailbox features for the currently displayed mailbox. To enter mailbox features for another of the newly created mailboxes, click Next until the mailbox is displayed and continue with this procedure.

7. In the Extension field, enter the extension for the mailbox if it is different from the mailbox number.

8. In the First Name field, enter the first name of the mailbox subscriber.

9. In the Last Name field, enter the last name of the mailbox subscriber.

10. In the Company Name field, enter the name of the company to which the mailbox subscriber belongs. The company name you enter allows subscribers to send messages to all subscribers in the same company through system-wide distribution lists. Note that the company name must match the company name entered for other mailboxes exactly.

11. In the Division field, enter the name of the division to which the mailbox subscriber belongs. The division name you enter allows subscribers to send messages to all subscribers in the same division through system-wide distribution lists. Note that the division name must match the division name entered for other mailboxes exactly.

Mailboxes for which you specify no Company or Division receive all messages sent to company list 99 or division list 98, respectively.

12. If the system is not set up to generate a password automatically, and you want the mailbox to have a password, enter the password for the mailbox in the Password field. The system displays the password as asterisks (*) for added system security.

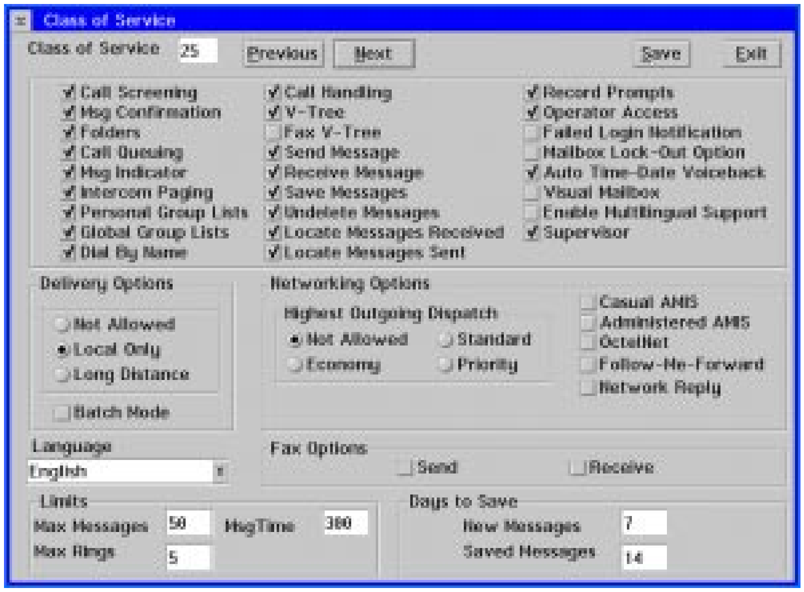
It is recommended that you use the password automatically generated by the system. If the system is set up so that no password is required for a mailbox, passwords are not generated by the system, and the field is blank. If the system is set up to use a default password for each mailbox, the default password, usually 1111, is automatically assigned to the mailboxes. If the system is set up to generate a random password, a dialog box displays when you save the mailboxes, which displays the mailbox numbers and the random passwords generated for the mailboxes. You can print this list or save it to disk. Make sure you provide the passwords to the mailbox subscribers.

13. If the mailbox requires a personal operator other than the default operator, enter the mailbox number of the personal operator. The personal operator feature allows you to assign a mailbox to a mailbox other than the system operator mailbox. For example, you can assign the sales receptionist's mailbox as the personal operator mailbox for all subscribers in the sales department.

14. To select a Class of Service for the mailbox, click View/Edit under Class of Service. The Class of Service dialog box displays the selected features available for the displayed Class of Service. For information on individual Class of Service features, see the topic, "Class of Service Options," later in this chapter.

See Preinstallation Configuration Worksheets

When assigning classes of service to mailboxes, refer to information provided on the Class of Service Sheet(s), the COS Redefinition Sheet, and the Custom COS Definition Sheet.



15. To display the other default classes of service, click Next or Previous.

16. If the features for the defined classes of service are not appropriate for the mailbox, you can create a custom Class of Service if you are logged into the system as a Level 3 supervisor. To create a custom Class of Service for the mailbox, click Use Custom COS and select the appropriate options. It is recommended, however, that you use the default classes of service to select mailbox features, so there is more consistency among system mailbox setups.

The custom Class of Service options on the Class of Service dialog box are not displayed unless you are logged in as a Level 3 supervisor.

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17. To assign the selected Class of Service, click Save, then click Exit. The Mailbox Entry dialog box displays.

18. If you want to automatically forward messages in the mailbox to another mailbox, click Auto Forwarding under Edit, then select the appropriate options. For additional information, see the topic, "Auto-Forwarding Messages Between Mailboxes on the Same System," later in this chapter.

19. If you want to notify the mailbox subscriber of messages in the mailbox by pager or call forwarding, click Message Notification, then select the appropriate options. For additional information, see the topic, "Notifying Subscribers of New Messages," later in this chapter.

20. If you want to change the settings the subscriber can assign to the mailbox, click Subscriber Settings, then select the appropriate options. For additional information, see the topic, "Managing Subscriber Settings," later in this chapter.

21. If you want to create a guest mailbox for the mailbox, click Guest Mailbox, then select the appropriate options. For additional information, see the topic, "Creating a Guest Mailbox," later in this chapter.

22. If you want to create or assign a V-Tree to the mailbox, click Visual V-Tree, then select the appropriate options. For additional information, see the Chapter 18, “Working with V-Trees.”

23. To save the entered features, click Save. The mailbox features for the mailbox are saved.

24. To enter mailbox features for the next newly created mailbox, click Next and repeat this procedure starting with step 7.

25. To close the Mailbox Entry dialog box, click OK. The new mailboxes display on the Mailbox Status screen.

Creating Multiple Duplicate Mailboxes

Use this procedure to create multiple mailboxes that all have the same company, division, personal operator, and class of service. You do have to enter the subscriber's name, extension, and mailbox number for each mailbox created. For example, you could use this procedure to create mailboxes with the same features for all system subscribers or for a group of subscribers who all perform similar jobs.

To create multiple duplicate mailboxes:

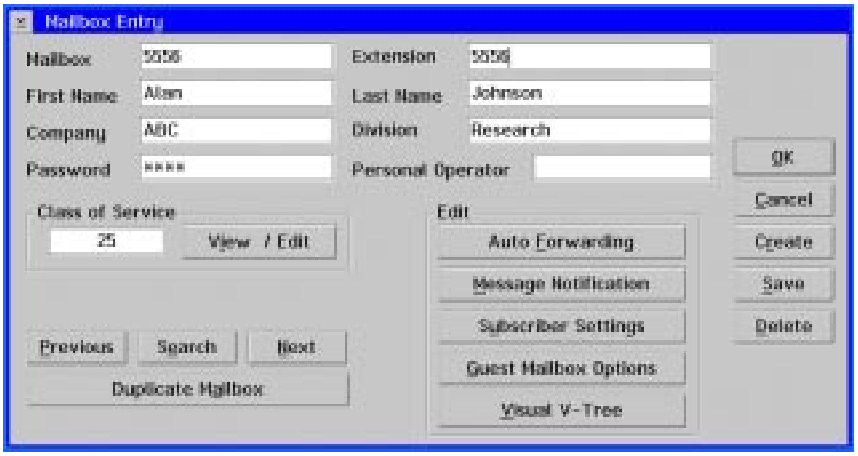
1. From the Mailbox menu, select Create. The Create Mailbox dialog box displays.

2. In the Create ____ Mailboxes field, enter the number of mailboxes that you want to create.

3. In the Starting with Number field, enter the first mailbox number for the new mailboxes. It is recommended that the mailbox numbers be the same as the mailbox subscriber's extension.

4. Under Increment by, select the number by which to increment the new mailbox numbers. For example, if you create five mailboxes starting with mailbox number 2000 and increment them by 5, the mailboxes created will be numbered 2000, 2005, 2010, 2015, and 2020.

5. To select mailbox features, click Create. The Mailbox Entry dialog box displays the first mailbox with the mailbox number displayed in the Mailbox field.



Steps 6-22 explain how to enter the mailbox features that will be copied to all of the new mailboxes.

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6. In the Company Name field, enter the name of the company to which the mailbox subscriber belongs. The company name you enter allows subscribers to send messages to all subscribers in the same company through system-wide distribution lists. Note that the company name must match the company name entered for other mailboxes exactly.

7. In the Division field, enter the name of the division to which the mailbox subscriber belongs. The division name you enter allows subscribers to send messages to all subscribers in the same division through system-wide distribution lists. Note that the division name must match the division name entered for other mailboxes exactly.

Mailboxes for which you specify no Company or Division receive all messages sent to company list 99 or division list 98, respectively.

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8. If the system is not set up to generate a password automatically, and you want the mailbox to have a password, enter the password for the mailbox in the Password field. The system displays the password as asterisks (*) for added system security.

It is recommended that you use the password automatically generated by the system. If the system is set up so that no password is required for a mailbox, passwords are not generated by the system, and the field is blank. If the system is set up to use a default password for each mailbox, the default password, usually 1111, is automatically assigned to the mailboxes. If the system is set up to generate a random password, a dialog box displays when you save the mailboxes, which displays the mailbox numbers and the random passwords generated for the mailboxes. You can print this list or save it to disk. Make sure you provide the passwords to the mailbox subscribers.

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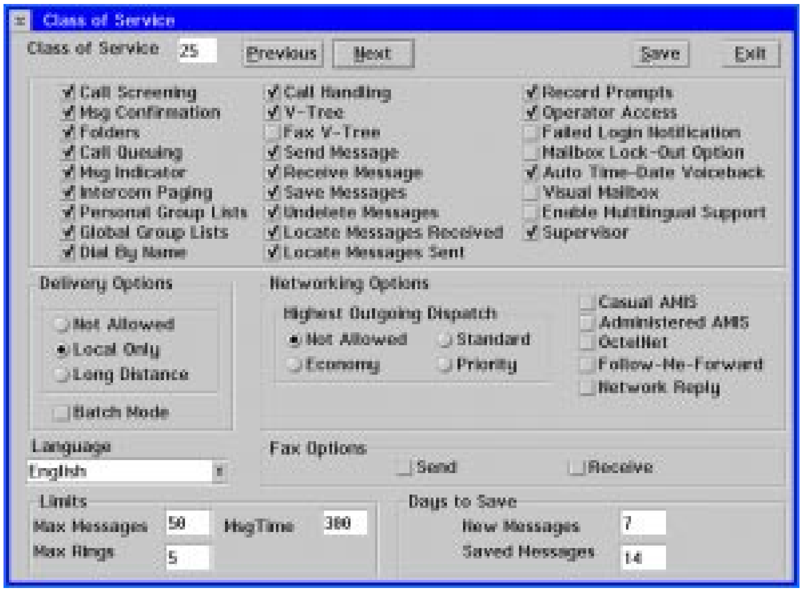
9. If the mailbox requires a personal operator other than the default operator, enter the mailbox number of the personal operator. The personal operator feature allows you to assign a mailbox to a mailbox other than the system operator mailbox. For example,

you can assign the sales receptionist's mailbox as the personal operator mailbox for all subscribers in the sales department.

10. To select a Class of Service for the mailbox, click View/Edit under Class of Service. The Class of Service dialog box displays the selected features available for the displayed Class of Service. For information on individual Class of Service features, see the topic, "Class of Service Options," later in this chapter.

See Preinstallation Configuration Worksheets

When assigning classes of service to mailboxes, refer to information provided on the Class of Service Sheet(s), the COS Redefinition Sheet, and the Custom COS Definition Sheet.



11. To display the other default classes of service, click Next or Previous.

12. If the features for the defined classes of service are not appropriate for the mailbox, you can create a custom Class of Service if you are logged into the system as a Level 3 supervisor. To create a custom Class of Service for the mailbox, click Use Custom COS and select the appropriate options. It is recommended, however, that you use the default classes of service to select mailbox features, so there is more consistency among system mailbox setups.

The custom Class of Service options on the Class of Service dialog box are not displayed unless you are logged in as a Level 3 supervisor.

13. To assign the selected Class of Service, click Save, then click Exit. The Mailbox Entry dialog box displays.

14. If you want to automatically forward messages in the mailbox to another mailbox, click Auto Forwarding under Edit, then select the appropriate options. For additional information, see the topic, "Auto-Forwarding Messages to Mailboxes," later in this chapter.

15. If you want to notify the mailbox subscriber of messages in the mailbox by phone or beeper, click Message Notification, then select the appropriate options. For additional information, see the topic, "Notifying Subscribers of New Messages," later in this chapter.
16. If you want to change the settings a subscriber can assign to the mailbox, click Subscriber Settings, then select the appropriate options. For additional information, see the topic, "Managing Subscriber Settings," later in this chapter.
17. If you want to create a guest mailbox for the mailbox, click Guest Mailbox, then select the appropriate options. For additional information, see the topic, "Creating a Guest Mailbox," later in this chapter.
18. If you want to create or assign a V-Tree to the mailbox, click Visual V-Tree, then select the appropriate options. For additional information, see Chapter 18, “Working with V-Trees.”
19. To save the entered features, click Save. The new mailboxes are created, and the mailbox features you entered are copied to all the new mailboxes. A dialog box displays informing you that the mailboxes have been created. Click OK to close the dialog box. The first new mailbox redisplays.

Steps 20-24 explain how to enter the mailbox subscriber’s extension and name for each of the newly created mailboxes.

20. In the Extension field, enter the extension for the mailbox if it is different from the mailbox number.
21. In the First Name field, enter the first name of the mailbox subscriber.
22. In the Last Name field, enter the last name of the mailbox subscriber.
23. To save the subscriber’s extension and name, click Save. The mailbox information is saved.
24. To enter the mailbox subscriber’s extension and name for the next newly created mailbox, click Next and repeat this procedure starting with step 20.
25. To close the Mailbox Entry dialog box, click OK. The new mailboxes display on the Mailbox Status screen.

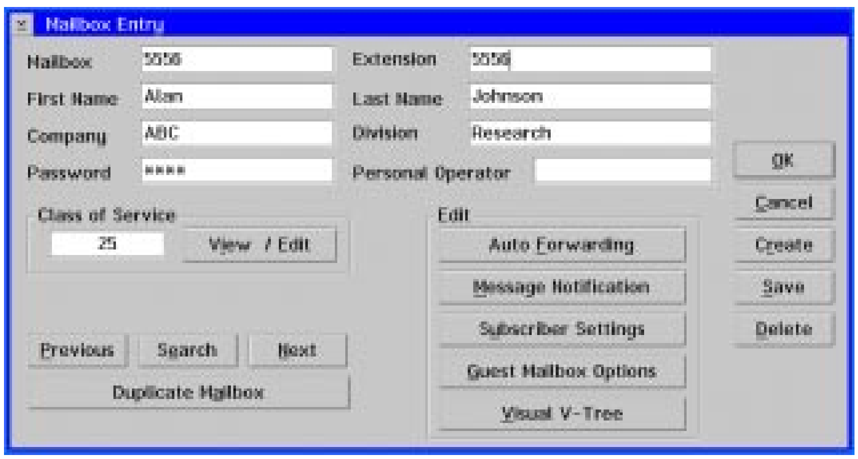
Creating a Guest Mailbox

Use this procedure to create a guest mailbox, which is a mailbox with limited features that uses an existing mailbox as a sponsor mailbox. A guest-mailbox subscriber can receive messages from anyone but can only send messages to the sponsor mailbox. For example, you could create a guest mailbox for a temporary consultant working for the sales manager. The guest mailbox would be sponsored by the sales manager's mailbox. The consultant could only send messages to the sales manager, but could receive messages from anyone who can send messages to the sponsor mailbox.

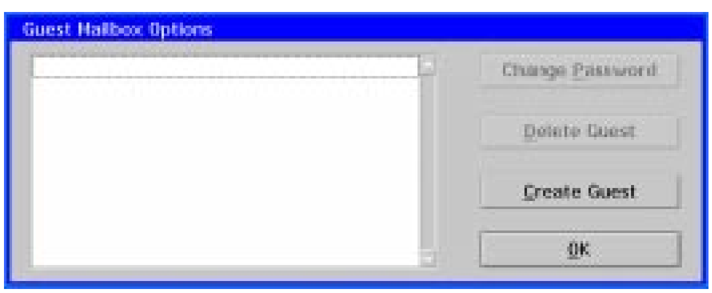
To create a guest mailbox:

1. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

2. Enter the number of the mailbox for which you want to create a guest mailbox, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



3. Under Edit, click Guest Mailbox Options. The Guest Mailbox Options dialog box displays the current guest mailboxes for the mailbox.



4. To create a new mailbox, click Create Guest. A new mailbox is added to the guest mailbox list. The mailbox is automatically assigned the next available mailbox number after the sponsorship mailbox number.

5. If the system is not set up to automatically generate a password, and you want the mailbox to have a password, click Change Password. When the Guest Mailbox Edit

Password dialog box displays, enter the new password, then click OK. The system displays the password as asterisks (*) for added system security.

It is recommended that you use the password automatically generated by the system. If the system is set up so that no password is required for a mailbox, a password is not generated by the system. If the system is set up to use a default password for each mailbox, the default password, usually 1111, is automatically assigned to the mailbox. If the system is set up to generate a random password, a dialog box displays when you save the mailbox, identifying the mailbox number and the random password generated for the mailbox. Record the mailbox password at that time and provide it to the guest mailbox subscriber.

6. To change the password for a guest mailbox, click Change Password. When the Guest Mailbox Edit Password dialog box displays, enter the new password, then click OK.
7. To delete a guest mailbox from the sponsor mailbox, select the mailbox to delete, then click Delete Guest. When the Delete dialog box displays, click OK to confirm the mailbox deletion.
8. To save the mailboxes in the list, click OK. The guest mailbox subscriber can begin using the mailbox.

Editing a Mailbox

Use this procedure to edit a system mailbox. When you edit a mailbox, you can edit any of the mailbox features including the mailbox subscriber's name and extension. This procedure is especially useful if a subscriber leaves your office and you want to assign the mailbox to a new employee without having to create a new mailbox. Note that you can only edit one mailbox at a time.

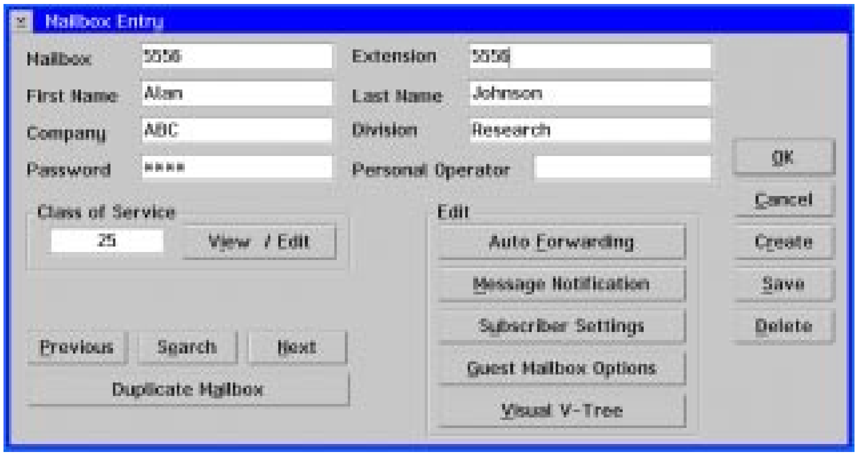
You can also edit a mailbox by clicking the mailbox to edit, then when the Mailbox dialog box displays, click the Edit button. The Mailbox Entry dialog box displays the mailbox features.

To edit a mailbox:

1. From the Mailbox menu, select Edit. The Edit Mailbox dialog box displays.

2. Enter the mailbox number you want to edit, then click Edit. The Mailbox Entry dialog box displays the mailbox features.

> If you do not know the number of the mailbox you want to edit, click Search and locate the mailbox. For additional information, see the topic, "Searching for a Mailbox," later in this chapter.



3. Make the changes to the mailbox, then click Save to save the changes.
4. To close the Mailbox Entry dialog box, click OK. The main system window displays.

Deleting Mailboxes

Use this procedure to delete a mailbox. When you delete a mailbox, all mailbox features and messages stored in the mailbox are also deleted.

To delete a mailbox:

1. From the Mailbox menu, select Delete. The Delete Mailbox dialog box displays.

2. Enter the mailbox number you want to Delete, then click Delete. A deletion confirmation dialog box displays.

> If you do not know the number of the mailbox you want to delete, click Search and locate the mailbox. For additional information, see the topic, "Searching for a Mailbox," later in this chapter.

3. To delete the mailbox from the system, click Yes. A dialog box displays informing you that the mailbox has been deleted. Click OK to close the dialog box. The main system window displays.

You can also delete a mailbox displayed on the Mailbox Entry dialog box by clicking Delete.

Viewing Mailbox Information

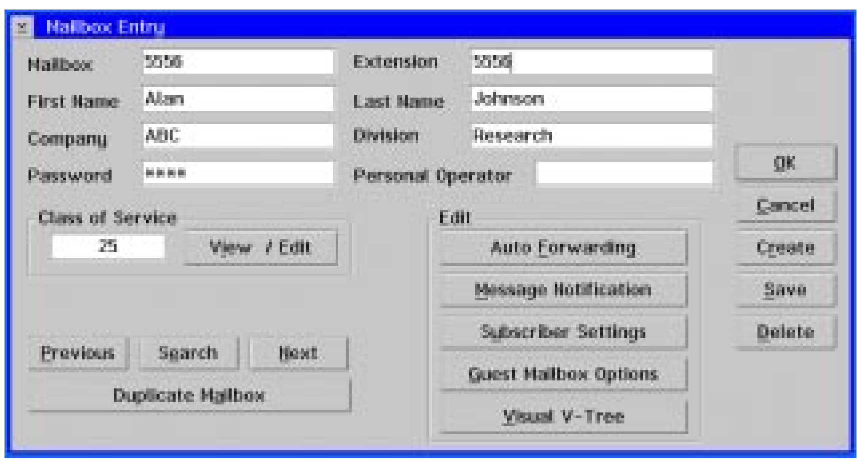
Use this procedure to view mailbox information. If you want to view mailbox information for multiple mailboxes, generate one of the mailbox reports available on the Reports menu. For additional information, see Chapter 22, “Generating and Interpreting Reports.”

You can also view mailbox information by clicking the mailbox to view, then when the Mailbox dialog box displays, clicking Edit. The Mailbox Entry dialog box displays the mailbox features.

To view mailbox information:

1. From the Mailbox menu, select Edit. The Edit Mailbox dialog box displays.

2. Enter the mailbox number you want to view, then click Edit. The Mailbox Entry dialog box displays the mailbox features.



If you do not know the number of the mailbox you want to view, click Search and locate the mailbox. For additional information, see the topic, "Searching for a Mailbox," later in this chapter.

3. If you want to modify the mailbox, make the changes, then click Save to save the changes.

4. When you finish viewing the mailbox information, click OK to close the dialog box. The main system window displays.

Searching for a Mailbox

Use this procedure to locate a mailbox by the mailbox subscriber's last name. Depending on how you access the Search feature of the system, you can view, edit, or delete mailboxes after locating a mailbox.

To search for a mailbox:

1. To search for a mailbox, do one of the following:
   - From the Mailbox menu, click Edit. When the Edit dialog box displays, click Search.
   - From the Mailbox menu, click Delete. When the Delete dialog box displays, click Search.
   - From the Mailbox Entry dialog box, click Search.

   The Search dialog box displays all of the system mailboxes alphabetically by the mailbox subscriber's last name.

2. Use the scroll bars to display additional mailboxes.
3. To search for a mailbox by entering the mailbox subscriber's last name, enter the name to search for in the Target field, then click Begin New Search. The system displays the mailbox name at the top of the list if a match was found. If a match of the name was not found, the next closest name alphabetically displays.
4. Click OK to select the mailbox. If you searched for a mailbox from the Edit dialog box or Mailbox Entry dialog box, the selected mailbox displays. If you searched for a mailbox from the Delete Mailbox dialog box, a deletion confirmation dialog box displays.

Auto-Forwarding Messages to Mailboxes

You can set up a mailbox to send messages automatically to other system mailboxes or to mailboxes on other voice-mail systems.

When the Visual Mailbox main window is open on a subscriber's PC desktop, new messages received in the mailbox are not auto-forwarded. This is because Visual Mailbox assumes that the subscriber is actively monitoring the mailbox, even if he/she is periodically away from the computer. For the system to perform auto-forwarding functions set up for the mailbox, the subscriber must either minimize the Visual Mailbox window or exit Visual Mailbox.

Auto-Forwarding Messages Between Mailboxes on the Same System

The auto-forwarding feature allows you to send messages in one system mailbox to another system mailbox if the message is not listened to within a specified time. For example, if a customer leaves a message in a salesperson's mailbox and the message is not listened to within an hour, the mailbox can be set up to automatically send the message to another salesperson.

Messages marked private or listen-only that are sent or recorded in a mailbox cannot be auto-forwarded.

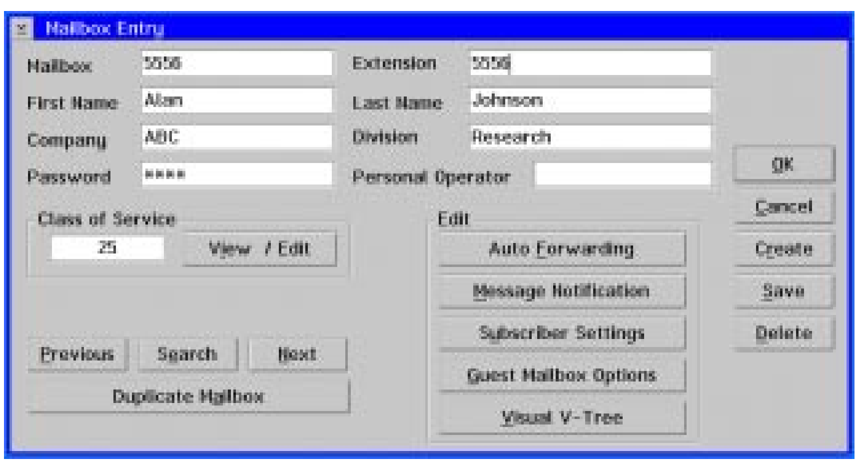
See Preinstallation Configuration Worksheets

When setting up Auto Forwarding for mailboxes, see information provided on the Auto Forward Sheet.

To automatically forward messages from one system mailbox to another:

1. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

2. Enter the number of the mailbox for which you want to auto forward messages, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



3. Under Edit, click Auto Forwarding. The Auto Forwarding dialog box displays.

4. To turn the auto-forward feature on for the mailbox, select the Auto Forwarding Active option.
5. In the Forward to field, enter the mailbox to which you want the messages forwarded. If you do not know the mailbox number, click Search to locate the mailbox. For additional information, see the topic, "Searching for a Mailbox," earlier in this chapter.
6. Under Delay, in the Hours and Minutes fields, enter the length of time a message can remain in the original mailbox before being forwarded to the other mailbox.
7. If you want the message to be deleted from the original mailbox when it is forwarded to the other mailbox, select the Delete Message After Forwarding option. If this option is not selected, the message remains in the original mailbox, and a copy of the message is forwarded to the other mailbox.
8. To save the auto-forwarding options for the mailbox, click OK. The Mailbox Entry dialog box displays.
9. To save the auto-forwarding feature and close the Mailbox Entry dialog box, click Save, then click OK. The main system window displays.

Auto-Forwarding Messages Between Mailboxes on Different Systems

The Follow-Me-Forward feature allows you to forward messages to a mailbox on another voice-mail system. Note that the appropriate network nodes must be set up before you can use this feature.

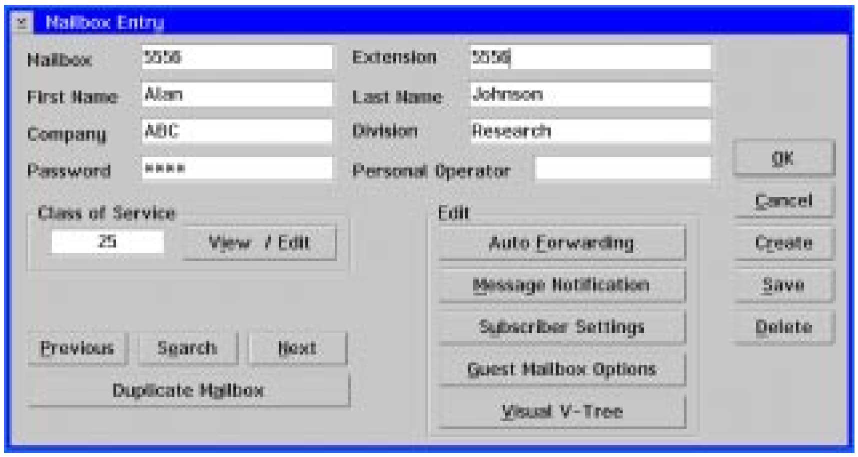
Messages that are sent to a mailbox on this system from another voice-mail system cannot use the Follow-Me-Forward feature. The messages are delivered to the system mailbox and must be accessed by logging into the mailbox as the subscriber.

This feature is available through the subscriber settings. If the mailbox Class of Service does not permit network messaging, you can use this procedure to override the Class of Service and enable this option. If you override the Class of Service, the subscriber can turn this feature off after it is activated but cannot turn it back on.

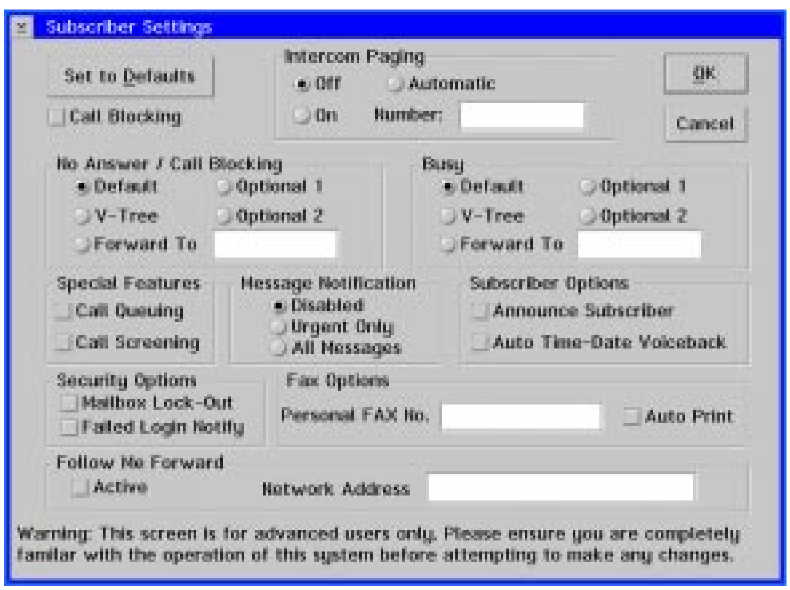
To automatically forward messages from a system mailbox to another system:

1. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

2. Enter the number of the mailbox for which you want to auto-forward messages, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



3. Under Edit, click Subscriber Settings. The Subscriber Settings dialog box displays.



4. Under Follow Me Forward, select the Active option to turn the feature on.

5. In the Network Address field, enter the node address and mailbox number where you want to send messages. For additional information, see Chapter 19, “Using Network Messaging.”

6. To save the options, click OK. The Mailbox Entry dialog box displays.

7. To close the Mailbox Entry dialog box, click OK. The main system window displays and all new messages to the mailbox are automatically sent to the network address according to the network options set up on the system.

Notifying Subscribers of New Messages

The Message Notification feature allows subscribers to be notified of new messages in their mailboxes by having the system call them at a specified phone or beeper number. For example, a mailbox can be set up to call the subscriber on a beeper on weekends when the subscriber is away from the office. This feature can also enable you to notify subscribers who do not have Message Indicators on their phones that they have new messages by having the system call their extension.

When the Visual Mailbox main window is open on a subscriber's PC desktop, new messages received in the mailbox are not dispatched through Message Notification. This is because Visual Mailbox assumes that the subscriber is actively monitoring the mailbox, even if he/she is periodically away from the computer. For the system to perform Message Notification functions set up for the mailbox, the subscriber must exit Visual Mailbox.

See Preinstallation Configuration Worksheets

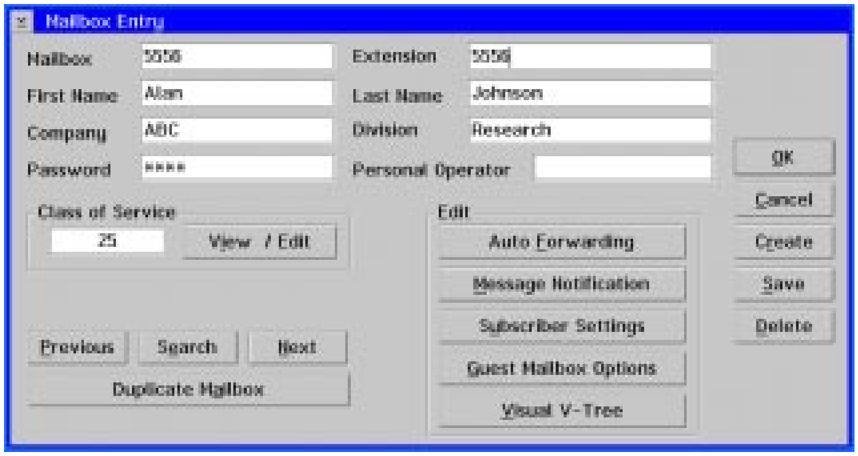
When setting up Message Notification for mailboxes, refer to information provided on the Message Notification Sheet(s).

Sample Message Notification scenarios are provided at the end of this procedure to help you configure entries for subscriber mailboxes.

To set up a mailbox for Message Notification through a phone or beeper:

1. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

2. Enter the number of the mailbox for which you want to activate Message Notification, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



3. Under Edit, click Message Notification. The Message Notification dialog box displays.

4. In the Entry # field, select the number to assign to the Message Notification configuration. You can set up eight different configurations to have the system call a phone or beeper. For example, you could specify Entry #1 to have the system call a sales representative's beeper, and specify Entry #2 to have the system call another sales representative's beeper when the first sales representative fails to receive the message.

Regardless of when a message is received by the system, it attempts to deliver the message based on the specifications for the first active Entry #. Only when the maximum number of attempts to deliver the message has been met, does the system attempt to deliver the message based on the next active Entry # specifications.

If the day and time specified for message delivery/notification for the first active Entry # includes all the days and times of the week, the system immediately attempts to deliver a message as soon as it is received by the system. For example, if the system receives a message at 4:00 AM, it attempts to deliver the message at 4:00 AM.

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5. To turn the Message Notification feature on for the entry, select the Active option.

6. In the On Time field, enter the time of day to start Message Notification for the currently selected Entry #.

You must include AM or PM in the time of day you enter.

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7. In the Off Time field, enter the time of day to end Message Notification for the currently selected Entry #.

8. In the On Day field, select the day to start Message Notification for the currently selected Entry #.

9. In the Off Day field, select the day to end Message Notification for the currently selected Entry #. The On Day and Off Day you select determines the range of days the messages are delivered. For example, if you specify Tuesday as the On Day and Sunday as the Off Day, the Message Notification feature will deliver messages during the times you specify for every day of the week except Monday.

10. Under Retries in the Max Attempts field, enter the maximum number of times the system should attempt to call either the phone number or beeper.

11. Under Retries in the Busy Delay field, enter the number of minutes the system should wait before reattempting to call a number that is busy.

12. Under Retries in the No Ans Delay field, enter the number of minutes the system should wait before reattempting to call a number when there is no answer at the number.

13. In the Phone # field, enter the complete phone number, including long distance access code and area code, to dial to notify the subscriber that a new message is in the mailbox. If the digits in the phone number are less than the number of digits defined as a local number in System Setup, the system assumes the number is an internal extension. If the number contains at least the defined number of digits, the code to access an outside line is used to place the call. If the number is for a beeper, the letter N should usually precede the number so that call progress is not used. For additional information, see the topic, "Using Dialing Codes," later in this chapter.

14. In the Call Back field, enter one of the following:

    - The number you want to display on the beeper when the subscriber is notified. This number is usually the number the subscriber calls to access the system.

      You may need to enter a comma or series of commas before the call back number to ensure the paging system receives the call-back number.

    - `PHONE` to have the system call the entered phone number and voice, *"I have a message for <subscriber's name>,"* when the subscriber answers the phone.

    - `OPER` to have the system call the entered phone number and voice, *"<mailbox number> has not picked up messages,"* notifying the operator that the subscriber has not listened to messages in the mailbox.

15. In the Line 1 field, enter the system port to use if you want to use a specific port to call the subscriber. To use any available port to call the subscriber, enter 99.

    The port you specify for Message Notification must be set up on the system to allow Message Notification through that port.

16. To enter another configuration for Message Notification, select another Entry # and repeat this procedure starting with step 5.

17. To save the entered Message Notification entries, click OK. The Mailbox Entry dialog box displays.

18. To close the dialog box, click OK. The main system window displays.

Message Notification Sample Scenarios

The following scenarios show how messages are delivered based on the specifications for the active Entry #s and on when the message is received by the system.

Example 1

Entry #1 is set to deliver messages Monday through Friday from 8:30 AM to 5:30 PM.

System receives message:	System attempts to deliver message:
Tuesday 11:30 AM	Tuesday 11:30 AM
Wednesday 7:00 PM	Thursday 8:30 AM
Friday 8:00 PM	Monday 8:30 AM

Example 2

Entry #1 is set to deliver messages Saturday through Sunday from 7:30 AM to 8:30 PM.

System receives message:	System attempts to deliver message:
Tuesday 11:30 AM	Saturday 7:30 AM. (If the mailbox subscriber checks messages before Saturday at 7:30 AM, the system does not attempt to deliver the message.)
Saturday 2:00 PM	Saturday 2:00 PM
Saturday 11:00 PM	Sunday 7:30 AM

Example 3

Entry #1 is set to deliver messages to Sales Rep 1’s beeper Monday through Friday from 7:30 AM to 1:30 PM and attempts to deliver the message a maximum of five times. Entry #2 is set to deliver messages to Sales Rep 2’s beeper Monday through Friday from 11:00 AM to 6:30 PM and attempts to deliver the message a maximum of five times.

System receives message:	System attempts to deliver message:
Tuesday 9:30 AM	To Sales Rep 1, Tuesday at 9:30 AM (If the message is not delivered to Sales Rep 1 after five attempts, the system attempts to deliver the message to Sales Rep 2, Tuesday at 11:00 AM.)
Tuesday 5:00 PM	To Sales Rep 1, Wednesday at 7:30 AM (If the message is not delivered to Sales Rep 1 after five attempts, the system attempts to deliver the message to Sales Rep 2, Wednesday at 11:00 AM.)
Saturday 5:00 PM	To Sales Rep 1, Monday at 7:30 AM (If the message is not delivered to Sales Rep 1 after five attempts, the system attempts to deliver the message to Sales Rep 2, Monday at 11:00 AM.)

Example 4

Entry #1 is set to deliver messages to a beeper Monday through Friday from 5:30 PM to 11:30 PM and attempts to deliver the message a maximum of five times. Entry #2 is set to deliver messages to a beeper Saturday through Sunday from 8:00 AM to 6:30 PM and attempts to deliver the message a maximum of five times.

System receives message:	System attempts to deliver message:
Tuesday 6:00 PM	Tuesday at 6:00 PM (If the message is not delivered to the subscriber after five attempts, the system attempts to deliver the message Saturday at 8:00 AM.)
Tuesday 1:00 PM	Tuesday at 5:30 PM (If the message is not delivered to the subscriber after five attempts, the system attempts to deliver the message Saturday at 8:00 AM.)
Sunday 2:00 PM	Monday at 5:30 PM (If the message is not delivered to the subscriber after five attempts, the system attempts to deliver the message Saturday at 8:00 AM.)

Managing Subscriber Settings

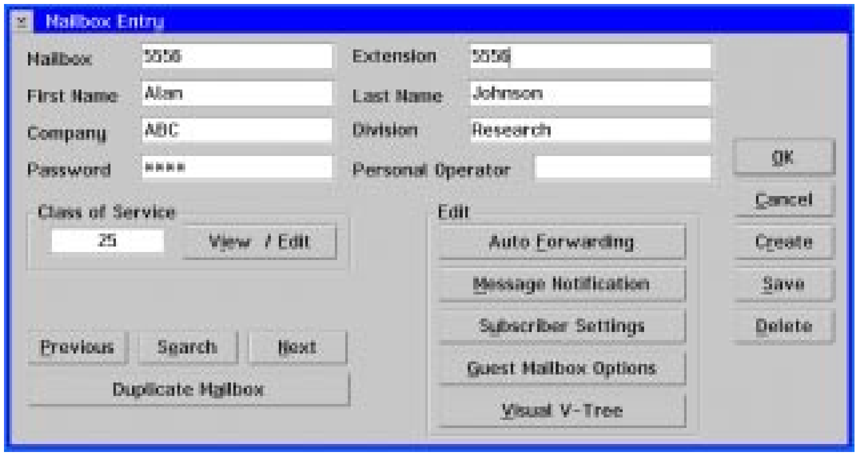
Use the following procedures to help manage the settings subscribers that have applied to their system mailboxes. You can view or change the options that a subscriber currently has set up and change those settings based on the subscriber's needs.

When you change subscriber settings, you can enable features that are not part of the mailbox's Class of Service. If you enable a feature for a mailbox that is not in the Class of Service, the subscriber cannot change the option, except to turn the feature off. After a feature is turned off, the subscriber cannot turn it back on.

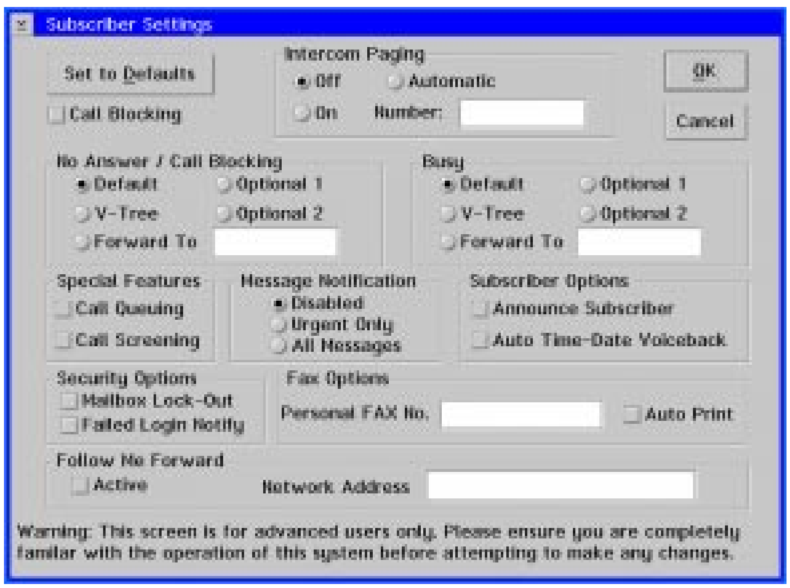
To view or change the subscriber settings for a mailbox:

1. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

2. Enter the number of the mailbox for which you want to view or change subscriber settings, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



3. Under Edit, click Subscriber Settings. The Subscriber Settings dialog box displays the currently selected options for the mailbox.



4. To set all of the subscriber settings to the system defaults, click Set to Defaults. This feature allows you to reset all current settings that either the system manager or subscriber has previously set for the mailbox.

5. Under Intercom Paging select the appropriate option.

- **Off** – Does not allow callers to page subscribers through the intercom.
- **On** – Provides callers with the option to page subscribers through the intercom if there is no answer at the extension.
- **Automatic** – Automatically pages the subscriber through the intercom.
- **Number** – Specifies the paging number if the On or Automatic option is selected. Enter the number to call to page the subscriber if it is different from the system default paging number. For example, if the system uses zone paging, enter the number for the zone to which the mailbox is assigned. If the

field is left blank, the system calls the default paging number set up on the system.

Intercom paging is available only if an intercom is connected to the system, and an intercom paging number is specified either as a System Setup parameter or in the Number field.

If a subscriber is paged through the intercom, the subscriber can reroute the call from the mailbox to another extension on the system, using the intercom redirect feature. If a subscriber does not answer a page, the caller has the option of leaving a message for the subscriber, calling a different mailbox, transferring to the operator, or disconnecting.

The options you select in steps 6-8 set up the Call Handling for the mailbox, which determines how calls to the mailbox are handled by the system under certain conditions.

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6. To block all incoming calls to a particular mailbox, without first ringing the extension, and then to handle the calls according to an option you specify, select the Call Blocking option.

7. Under No Answer/Call Blocking, select the appropriate No Answer option to perform when a caller receives no answer at the subscriber's extension, or select the appropriate call-blocking option if the call is to be blocked:

   - **Default** – Forwards callers to the subscriber's mailbox
   - **V-Tree** – Activates the V-Tree assigned to the mailbox if one has been assigned
   - **Optional 1** – Voices the Optional 1 prompt, then forwards callers to the subscriber's mailbox
   - **Optional 2** – Voices the Optional 2 prompt, then forwards callers to the subscriber's mailbox
   - **Forward To** – Forwards callers to the mailbox number entered in the field next to the option

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If a caller is forwarded to another mailbox, then chooses to record a message, the message is recorded in the original mailbox the caller accessed. Even if the caller is forwarded to multiple mailboxes, the message is recorded in the original mailbox.

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8. Under Busy, select the appropriate option to perform when a caller receives a busy signal when calling the subscriber's extension.

   - **Default** – Forwards callers to the subscriber's mailbox
   - **V-Tree** – Activates the V-Tree assigned to the mailbox if one has been assigned
   - **Optional 1** – Voices the Optional 1 prompt, then forwards callers to the subscriber's mailbox

- **Optional 2** – Voices the Optional 2 prompt, then forwards callers to the subscriber's mailbox
- **Forward To** – Forwards callers to the mailbox number entered in the field next to the option

If a caller is forwarded to another mailbox, then chooses to record a message, the message is recorded in the original mailbox the caller accessed. Even if the caller is forwarded to multiple mailboxes, the message is recorded in the original mailbox.

9. Under Special Features, select the Call Queuing option to place callers in a queue when the extension is busy. Make sure that call-queuing prompts have been recorded so that callers are notified appropriately that their call is in a queue and will soon be addressed.
10. Under Special Features, select the Call Screening option to prompt callers to record their name to announce the call before the subscriber receives it. This feature allows subscribers to identify a caller and then determine if they want to receive the call.
11. Under Message Notification, select the appropriate option to notify users of new messages. For additional information, see the topic, "Notifying Subscribers of New Messages," earlier in this chapter.
    - **Disabled** – Message notification does not notify subscribers of new messages
    - **Urgent Only** – Notifies subscribers of new messages through a phone or beeper only when urgent messages are sent to the mailbox
    - **All Messages** – Notifies subscribers of any new messages through a phone or a beeper
12. Under Subscriber Options, select Announce Subscriber to have the system voice, *"I have a call for <subscriber's name prompt>,"* instead of the default prompt, *"One moment, you have a call,"* when the system transfers a call to an extension. This feature enables subscribers to hear who a call is for before the transfer is completed, which is especially useful when multiple subscribers share the same extension.
13. Under Subscriber Options, select Auto Time-Date Voiceback to voice the date and time a message was received in the mailbox at the beginning of each message.
14. Under Security Options, select Mailbox-Lockout to lock a mailbox when a caller attempts to log into the mailbox and is disconnected after failing to enter the correct mailbox password within the specified number of attempts. A locked mailbox prevents any caller, including the subscriber, from logging into the mailbox. The system manager must manually unlock the mailbox before the subscriber can access the mailbox. For additional information, see the topic, "Unlocking a Mailbox," later in this chapter.
15. Under Security Options, select Failed Login Notify to notify the subscriber when logging into the mailbox that a caller to the system has unsuccessfully attempted to access the mailbox. The subscriber can review the failed login message or delete it.
16. Under Fax Options in the Personal Fax Number field, enter the number of the fax machine to which the mailbox is to send fax messages if it is different from the Local Fax Machine number specified in System Setup. If you want faxes to print automatically on the fax machine when sent to the mailbox, select the AutoPrint option.

The system must include the optional Fax Solution module to use Fax Options.

17. To automatically send messages in the mailbox to another voice-mail system, under Follow-Me-Forward, enter the network node address to which the messages are to be sent in the Network Address field. Select the Active option to have the system automatically send the message or deselect the option to retain the network node address yet disable the feature until needed. For additional information on network nodes, see the topic, "Auto-Forwarding Messages Between Mailboxes on Different Systems," earlier in this chapter.
18. To save the changes made to the subscriber settings, click OK. The Mailbox Entry dialog box displays.
19. To close the Mailbox Entry dialog box, click OK. The main system window displays.

Clearing Mailbox Information

Use this procedure to clear mailbox information for specified mailboxes. For example, you can clear all of the mailbox information for a mailbox whose subscriber is being transferred to another office in the company and will no longer need the mailbox. This allows you to reassign the mailbox to a new subscriber without having to create a new mailbox.

Clearing a mailbox is permanent and irreversible.

When you clear mailboxes, you can specify which mailboxes to clear by entering a range of mailbox numbers, a company, and/or a division. Mailboxes that are not included in the range, company, and division you enter are not cleared. You can clear the following information for the mailboxes you select:

- **Statistics** – Erases all of the mailbox statistics that are displayed when you generate mailbox reports. This enables you to view mailbox statistics from the time you cleared the mailbox statistics to the present date.
- **Messages** – Erases all new and saved messages in the selected mailboxes.
- **Prompts** – Erases all of the prompts the subscribers have recorded for the selected mailboxes and replaces the prompts with the default system prompts.
- **Distribution Lists** – Erases all distribution lists created by the subscribers in the mailboxes. Clearing distribution lists for mailboxes does not clear system distribution lists.
- **Guest Mailboxes** – Deletes all guest mailboxes in the selected mailboxes.
- **Folders** – Deletes all folders created by subscribers in the selected mailboxes.

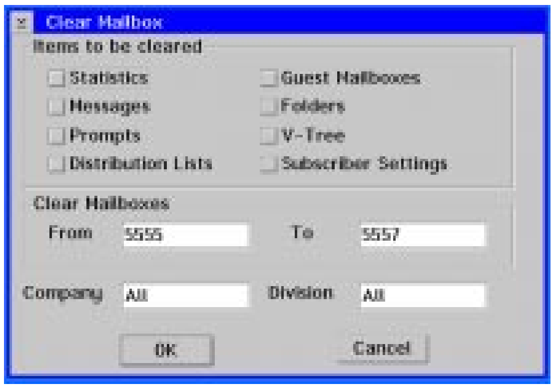
- **V-Tree** – Deletes the V-Trees from the selected mailboxes.

If the Visual Architect Developer's Toolkit is installed and set up on the system, and the V-Tree for a mailbox is exported to a file, the V-Tree file is not deleted from the system when the mailbox is cleared. The V-Tree is simply deleted from the mailbox.

- **Subscriber Settings** – Resets all of the mailbox subscriber settings to the default settings.

To clear mailbox information:

1. From the Mailbox menu, select Clear. The Clear Mailbox dialog box displays.



2. Under Items to be cleared, select the options for the items you want to clear from the mailbox.

To clear information for a mailbox, the mailbox must be in the entered range of mailbox numbers, in the entered company, and in the entered division. If a mailbox does not meet all of the entered values, the mailbox information is not cleared. For example, if you include all mailbox numbers in the range, all divisions, and enter ABC for the company, only mailboxes in company ABC are cleared. Mailboxes in all other companies are not cleared.

3. If you do not want to include all the system mailboxes in the range to clear, enter the number of the first mailbox in the range you want to clear in the From field under Clear Mailboxes, and enter the last mailbox number in the range you want to clear in the To field. If you only want to clear information for a single mailbox, enter that mailbox number in both the From and To fields.

The number entered in the From field must be equal to or smaller than the number entered in the To field.

4. In the Company field, enter the name of the company to clear, or enter All to clear mailbox information for all companies on the system. If this field is left blank, the system includes all companies in the range.

5. In the Division field, enter the name of the division to clear, or enter All to clear mailbox information for all divisions on the system. If this field is left blank, the system includes all divisions in the range.

6. To clear the mailbox information based on the entered options, click OK. A clear mailbox confirmation dialog box displays.

7. To clear only the displayed mailbox, click OK. The next mailbox in the range of mailboxes displays or, if there are no more mailboxes in the range, the main system window displays.
8. To retain the mailbox information for the displayed mailbox and continue with the next mailbox in the range, click Skip. The next mailbox in the range displays or, if there are no more mailboxes in the range, the main system window displays.
9. To clear all of the mailboxes in the range you specified without being prompted for each mailbox, click No Ask. All of the mailboxes in the range are cleared, and the main system window displays.
10. To cancel clearing any additional mailboxes, click Stop. No additional mailboxes in the range are cleared, and the main system window displays. Note that all mailbox information that was cleared before you clicked on Stop remains cleared.

Unlocking a Mailbox

Use this procedure to unlock a mailbox that has been locked because a caller attempted to access the mailbox by entering the incorrect mailbox password several consecutive times. The mailbox locking feature helps prevent callers from accessing mailboxes without permission.

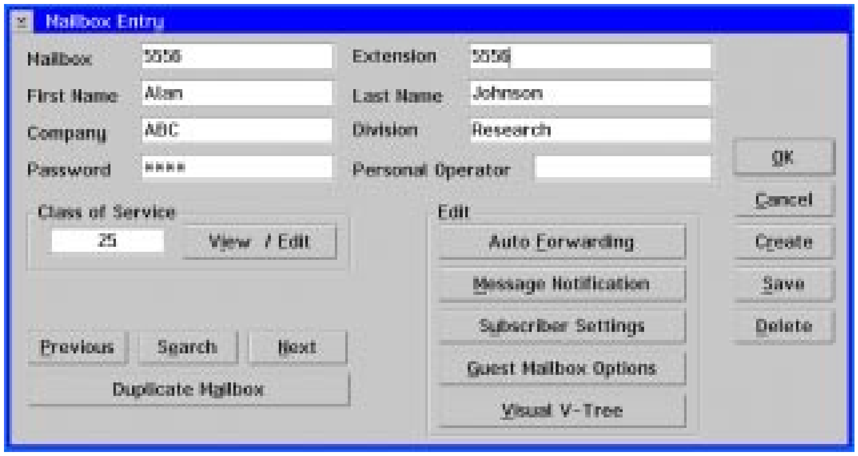
The password parameters defined in System Setup determine how many times a caller can enter an incorrect password before being disconnected. Subscribers are notified that their mailboxes are locked when they log in using the correct password. The system manager must then unlock the mailbox before the subscriber can again access the mailbox.

You can also unlock a mailbox by clearing the subscriber settings for a mailbox. Since clearing subscriber settings resets all of the subscriber settings, not just the mailbox locking feature, it is recommended that you use the following procedure to unlock a mailbox.

To unlock a mailbox:

1. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

2. Enter the number for the mailbox you want to unlock, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



3. In the Password field, enter a new password for the mailbox. Write down this new password and provide it to the mailbox subscriber. Note that the password you enter displays as asterisks for additional security.

4. To save the new password, click Save. The mailbox is now unlocked and has a new password assigned to it. The subscriber can now access the mailbox using the new password, then change it to another password.

Subscribers can change their passwords back to their original passwords when they log into their mailboxes after the system manager has unlocked the mailbox.

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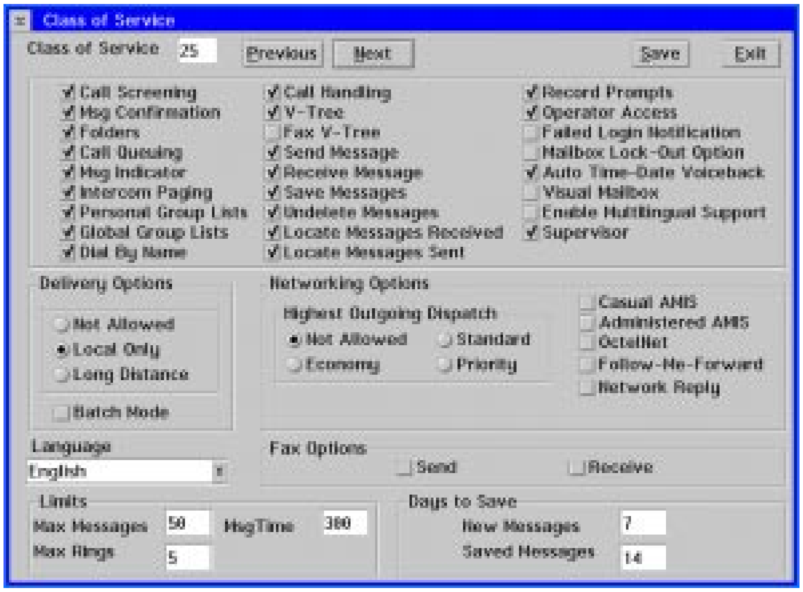
5. To close the Mailbox Entry dialog box, click OK. The main system window displays.

Class of Service Options

A Class of Service is a set of features and specifications that are assigned to a mailbox. The Class of Service assigned to a mailbox dictates which features are accessible to the subscriber. When a feature, such as call screening, is not activated in the Class of Service assigned to a mailbox, options relating to the feature are not voiced when the subscriber accesses the mailbox.



There are 25 defined classes of services you can assign to a mailbox. To view the features available for each Class of Service, click the Next and Previous buttons on the Class of Service dialog box. You may also create custom classes of service for individual mailboxes if you are logged into the system as a Level 3 supervisor. Note that the custom Class of Service options on the Class of Service dialog box are not displayed unless you are logged in as a Level 3 supervisor on the system.

See Preinstallation Configuration Worksheets

When adjusting default classes of service or creating custom classes of service, see information provided on the Class of Service Sheet(s), the COS Redefinition Sheet, and the Custom COS Definition Sheet.

You can use the Subscriber Settings feature to control some of the features available to a subscriber, without creating a custom Class of Service. You can disable Subscriber Settings features for the mailbox, preventing the subscriber from using the features. You can also enable features in the Subscriber Settings that are not selected in the mailbox's Class of Service. See the topic, "Managing Subscriber Settings," earlier in this chapter for information on the using Subscriber Settings.

Some Class of Service features are not available for use in a mailbox unless the system has been set up to use those features. For example, if the system does not have the Fax Solution module installed and set up, the mailbox subscriber cannot create V-Trees that use faxes, send faxes, or receive faxes.

Call Screening

Call Screening allows a subscriber to accept, reject, or redirect a call. When call screening is activated, the system instructs callers requesting an extension to, *“Please speak your name at the tone, so I may say who is calling.”* Before the call is transferred to the subscriber’s extension, the subscriber hears, *“You have a call from <caller’s name>. To take this call, press pound. To reject the call, press one. Or to redirect the call, press star.”* If the subscriber wants to take the call, the subscriber presses <#>, and the caller is transferred to the extension. If the subscriber wants to reject the call, the subscriber presses <1> and immediately hangs up the phone. The caller is then told there was no answer at the extension and is given the choice of trying another extension, leaving a voice-mail message, transferring to the operator’s extension, or disconnecting. If a call is rejected by the subscriber, the caller is not given the option to page. The subscriber may also choose to redirect the call by pressing <*>, followed by the destination mailbox number. The subscriber must then immediately hang up the phone so the caller can be transferred to the specified extension.

If you want to prohibit subscribers from changing the call screening for their mailbox, do not select the Call Screening option in the mailbox’s Class of Service, and instead select the Call Screening option in the mailbox’s subscriber settings.

Message Confirmation

Message Confirmation allows the subscriber to review the date and time a message was sent, to whom it was sent, and, if applicable, the date and time the recipient listened to or skipped the message. This feature helps the sender of a message determine if and when another subscriber received the message. This feature is not supported by the AMIS protocol; only messages sent to local subscribers or OctelNet destinations may be sent with confirmation.

Folders

The folders feature allows a subscriber to organize messages and faxes by storing them in “folders” in the mailbox. A subscriber can create up to nine folders to store messages. The subscriber records a label for each folder, which is voiced when the subscriber accesses the mailbox. For example, if a subscriber regularly receives messages that are either technical or administrative, the subscriber can create two folders with the labels *“Technical”* and *“Administration”* to save and organize the messages.

Call Queuing

Call Queuing allows callers either to hold for a specific extension or leave a voice message when an extension is busy. Depending on the how call queuing is set up on the system, callers may be informed of their status in the queue, including their position (the number of calls ahead of them), while they hold for that extension. Call queuing may also give callers periodic opportunities to leave a voice message, continue to hold, or disconnect. The caller on hold may be provided with prerecorded music or messages, such as product information.

You may record up to nine verbal or musical messages for callers to listen to while holding in the queue. For example, the messages could provide new product information or sales promotions to callers in the queue. The system voices each of the nine messages to each caller in the queue. After voicing each recorded message, the system voices the caller’s status followed by the available options. After the system plays all the recorded messages, it returns to the first message and begins voicing the messages again. All mailboxes on a system that have call queuing activated in the Class of Service use the same nine prompts. The first caller in the queue hears a prompt before the call is transferred to the extension. For additional information, see the topic, "Setting Up Call Queuing Prompts," in Chapter 15, “Setting Up System Prompts.”

If the system is set up to play prerecorded music when callers are placed in the queue, do *not* use music that plays long tones. The system may misinterpret the long tones as disconnect signals.

If you want to prohibit subscribers from changing the call queuing for their mailboxes, do not select the Call Queuing option in the mailboxes' Classes of Service. Instead, select the Call Queuing option in the mailboxes' subscriber settings.

Message Indicator

Message Indicators, such as lights and LEDs, can be used to notify subscribers of new messages in their mailboxes. After a subscriber listens to or skips a message in a mailbox, the Message Indicator on the phone is turned off. Note that Message Indicators only work if the phone system supports the feature, and the system has been set up to use the Message Indicators.

Intercom Paging

Intercom Paging allows a caller to page a subscriber who does not answer the mailbox extension. When a subscriber is paged, the system announces over the paging system, *“There is a call for <subscriber’s name>.”* The subscriber can then either retrieve the call from the subscriber’s extension or use the intercom redirect feature to access the call from another extension by rerouting the call. If the subscriber does not respond to the page, the caller is given the option to try another extension, leave a voice message in the subscriber’s mailbox, transfer to the operator, or disconnect. If the caller retries to call the original extension, the system waits approximately one minute before redialing that extension.

Paging may be set to Off, On, or Automatic. When paging is Off, callers cannot page subscribers. When paging is On, the caller is given the option to page when there is no answer at the subscriber’s extension. When paging is set to Automatic, the subscriber is always paged once before the system performs the Call Handling options that are set up for the mailbox.

If you want to prohibit subscribers from changing the selected Intercom Paging option for their mailbox, do not select the Intercom Paging option in the mailbox’s Class of Service. Instead, select the appropriate intercom paging option in the mailbox’s subscriber settings.

Paging is available only if an intercom is connected to the phone system and the intercom paging feature has been set up on the system.

Personal Group List

Personal Group List allows subscribers to create lists of mailboxes, so one message can be sent to multiple recipients in one step. For example, a subscriber can create a personal group list of all subscribers working on a particular project. The subscriber can then send a message to all subscribers on the project by entering a single number. Subscribers can create up to 10 personal group lists in their mailboxes, numbered 11-20 (unless the system is set up to use different numbers). Each of the personal group lists can contain up to 50 destinations, which can include local subscriber mailboxes, destinations on other voice-mail systems through network nodes, or other group list numbers, including global group lists (if available in the mailbox's Class of Service). Each group list included as a destination on a personal group list counts as one destination. To include destinations on other voice-mail systems, the subscriber must also be permitted access to network message features in the mailbox's Class of Service.

Global Group List

Global Group List allows subscribers to send messages to system group lists, numbered 26-35 (unless the system is set up with different numbers), and the global group lists, numbered 98 and 99. Each group list can contain up to 50 destinations, which can include local subscriber mailboxes, destinations on other voice-mail systems through network nodes, or other group list numbers. System group lists 26-35, which are created by the system manager over the phone in a supervisor mailbox by following the prompts, allow subscribers to send messages to mailboxes defined by the system manager. Global Group Lists 98 and 99, which are created automatically by the system, allow subscribers to send messages to all mailboxes in the subscriber's division and company, respectively. Subscribers cannot include these lists in their own personal group lists unless Global Group List is selected for the mailbox's Class of Service.

Dial by Name

Dial by Name allows subscribers to enter a subscriber name through the phone keypad to dial a mailbox number, which allows subscribers to send messages to other subscribers without requiring them to know the subscriber's mailbox number. If there are multiple subscribers with the same or similar names, the system voices those names then allows the subscriber to choose from the available names. This feature can also be used to send messages to other systems through the NameNet feature. For additional information, see the topic, "Specifying Mailboxes on Other OctelNet Systems," in Chapter 19, "Using Network Messaging."

In some instances, subscribers may belong to a voice-mail service bureau, in which case they do not need to know the mailbox numbers of other system subscribers. In this case, this feature should be disabled. If the system is set up to use Greeting by Port, only mailboxes with the same company or those that have no assigned company are voiced when a directory is requested.

Call Handling

Call Handling allows subscribers to control how calls to their mailboxes are routed. For example, a subscriber can set up a mailbox to block all calls to a prompt that requests the caller to leave a message while the subscriber is on vacation. The mailbox can be set up to voice an optional prompt, forward the call to another extension, or route the call to a V-Tree. The mailbox can also be set up to perform one of these actions for all calls to the mailbox, calls that are not answered, calls that receive a busy signal, or calls that are busy or not answered. For additional information, see the topic, "Managing Subscriber Settings," earlier in this chapter.

If you want to prohibit subscribers from changing the selected Call Handling option for their mailbox, do not select the Call Handling option in the mailbox's Class of Service. Instead, select the appropriate Call Handling option in the mailbox's subscriber settings. This is especially useful when mailboxes are blocked to V-Trees because it prevents the feature from being accidentally de-activated by a subscriber. For additional information, see the topic, "Managing Subscriber Settings," earlier in this chapter.

V-Tree

V-Trees allow subscribers to create custom voice menus in their mailboxes. V-Trees can route calls, provide information to callers, or collect information from callers. For example, a mailbox for a sales department can contain a V-Tree that allows callers to press <1> for information on product A, press <2> for information on product B, or press <3> to talk to a sales representative. For additional information, see Chapter 18, “Working with V-Trees.”

If you want to prohibit subscribers from changing the selected V-Tree options for their mailbox, do not select the V-Tree option in the mailbox’s Class of Service. Instead, select the appropriate V-Tree options in the mailbox’s subscriber settings.

Fax V-Tree

Fax V-Tree allows subscribers to create V-Trees in their mailboxes that have fax options. For example, a mailbox for a sales department can contain a V-Tree that allows callers to press <1> for information on product A, press <2> for information on product B, press <3> to talk to a sales representative, or press <4> to have information on all products faxed to them. Note that the system must have the Fax Solution module set up, and have both the Fax V-Tree and V-Tree options selected in the mailbox’s Class of Service to allow the subscriber to include fax features in a V-Tree.

If you are loading faxes into the M2000 system and need to retrieve the fax document numbers for use in a V-Tree, the 8-digit fax number is only voiced as part of Envelope Information if the Fax V-Tree option is enabled in the mailbox’s Class of Service.

Send Messages

Send Messages allows subscribers to send messages from their mailboxes to other system subscribers or subscribers on other voice-mail systems, if networking options are set up for the system. For additional information on networking options, see Chapter 19, “Using Network Messaging.”

Receive Messages

Receive Messages allows subscribers to receive messages in their mailboxes from both subscribers and outside callers (non-subscribers). When both this feature is selected and the system is set up to receive messages from other voice-mail systems, subscribers can receive messages from remote subscribers whose voice-mail systems support AMIS or OctelNet. For additional information on networking options, see Chapter 19, “Using Network Messaging.”

Save Messages

Save Messages allows subscribers to save messages sent to their mailboxes. The values entered in the Days to Save chapter of the Class of Service dialog box determine how long the mailbox subscriber can save a messages in the mailbox before the system deletes them.

Undelete Messages

Undelete Messages allows subscribers to recover either new or saved messages deleted from their mailboxes. This feature helps prevent subscribers from accidentally deleting a message in the mailbox. Subscribers can only undelete the messages that they deleted during the current session. After a subscriber exits a mailbox by hanging up or backing out of the mailbox, the messages are permanently deleted.

Locate Messages Received

Locate Messages Received allows subscribers to scan their new messages for messages sent from a particular subscriber. This feature allows subscribers to scan for a message only from another subscriber on the system. Subscribers cannot locate messages from another voice-mail system or an outside caller.

Locate Messages Sent

Locate Messages Sent allows subscribers to search for and edit messages they have already sent to other mailboxes as long as the messages are still in the mailbox’s new message queue. Subscribers can only use this feature to locate and edit messages sent to other subscribers on the system. Messages designated for dispatch to other voice-mail systems, including those scheduled for Follow-Me-Forward, cannot be edited.

Record Prompts

Record Prompts allows mailbox subscribers to record their own mailbox prompts. These prompts include the Please Hold prompt, Name prompt, Personal Greeting prompt, Optional 1 prompt, and Optional 2 prompt. If prompts are not recorded for a mailbox, the system default prompts are used. It is recommended that subscribers be allowed to record their own prompts to add a personal touch to the system.

Operator Access

Operator Access allows callers to the mailbox to transfer to the mailbox’s operator. This operator can be the default operator set up for the system or a personal operator specified on the Mailbox Entry dialog box.

Failed Login Notification

Failed Login Notification allows the system to notify the subscriber logging into the mailbox that a caller to the system has attempted to access the mailbox by entering an incorrect password. After the subscriber is notified, the subscriber can review the failed login message or delete it.

If you want to prohibit subscribers from changing the failed login notification feature for their mailbox, do not select the Failed Login Notification option in the mailbox’s Class of Service. Instead, select the Failed Login Notification option in the mailbox’s subscriber settings.

Mailbox Lock-Out Option

Mailbox Lock-Out Option allows the system to lock a mailbox when a caller attempts to log into the mailbox and is disconnected after failing to enter the correct password for the mailbox after a specified number of attempts. A locked mailbox prevents any caller, including the subscriber from gaining access to the mailbox other than to leave messages. The system manager must manually unlock the mailbox before the subscriber can access the mailbox. For additional information, see the topic, "Unlocking a Mailbox," earlier in this chapter.

If you want to prohibit subscribers from changing the mailbox lock-out feature for their mailbox, do not select the Mailbox Lock-Out Option in the mailbox’s Class of Service. Instead, select the Mailbox Lock-Out Option in the mailbox’s subscriber settings.

Auto Time-Date Voiceback

Auto Time-Date Voiceback configures the system to voice the time and date a message was received in a subscriber mailbox automatically when the subscriber listens to a message. When activated in a mailbox, the time and date information is voiced first for each message sent to the mailbox. This feature differs from the message information feature in three ways:

- Auto Time-Date Voiceback, when selected, is voiced for every message. Message information is only voiced when selected for an individual message.
- Auto Time-Date Voiceback is voiced before the message. Message Information is voiced only after the message has been voiced, and the subscriber has selected Message Information from the Message menu.
- Auto Time-Date Voiceback is selected in a mailbox's Class of Service and must be turned on or off by either the system manager in the mailbox's subscriber settings or by the mailbox subscriber. The Message Information feature is always available to the subscriber from the Message menu.

Visual Mailbox

Visual Mailbox is an add-on module that allows subscribers to access their mailbox using a visual interface on their PC. For additional information on using Visual Mailbox, see Chapter 20, "Installing and Configuring Visual Mailbox," online help, or your Lucent Technologies representative.

Enable Multilingual Support

Enable Multilingual Support allows callers to the mailbox to choose the language in which they want the prompts to voice when they perform actions in the mailbox if a language has not already been selected at some point during the call. For example, if a caller dials an extension without accessing the automated attendant, a prompt is voiced that allows the caller to select the language in which system prompts are to be voiced. From that point on in the call, all system prompts are voiced in the selected language.

If a language has already been selected at some point during the call, no language prompt is voiced when the caller accesses the mailbox. For additional information, see the topic, "Setting Up the Language Selection Prompt," in Chapter 15, "Setting Up System Prompts."

Note that this feature only selects the language for system prompts. The prompts associated with personal prompts or V-Trees voice in the language in which they were recorded.

Supervisor

Supervisor allows a subscriber to access the Supervisor menu over the phone by logging into the mailbox, pressing <9> at the Main menu, and entering the system's Level 2 or 3 supervisor password. This allows the subscriber to perform a number of supervisor functions through the phone, including creating, editing, and deleting mailboxes; recording system and personalized prompts; maintaining system group lists; and using SOLVE, the Supervisor Online Voice Editor. Although the system allows any number of supervisors, only a few subscribers should have the supervisor feature selected in their mailbox's Class of Service to limit the control of supervisor functions. It is recommend that one subscriber in each company be able to use supervisor features, if the system is set up to use Greeting by Port.

Delivery Options

Delivery Options control whether subscribers can use the Message Notification, Wake-Up Call, Casual AMIS, and primary fax destination features in the mailbox, and whether they can call local and long-distance numbers.

Not Allowed

Not Allowed does not permit subscribers to use the Message Notification, Wake-Up Calls, Casual AMIS, and primary fax destination features.

Local Only

Local Only allows subscribers to enter only numbers defined as local numbers. The number of characters a subscriber can enter for a local number is limited by values entered during the setup of the system.

A system manager can manually enter a long-distance number for a mailbox feature even though the mailbox has Local Only selected as a delivery option. This allows the system manager to specify which features the mailbox can use to call long-distance numbers. To manually enter a long-distance number for a feature, enter the long-distance number (up to 16 characters) in the mailbox's subscriber settings. The subscriber cannot change this number in the mailbox after it is entered in the subscriber settings.

Long Distance

Long Distance allows subscribers to enter up to 16 numbers to call numbers for the Message Notification, Wake-Up Calls, Casual AMIS, and primary fax destination features.

Batch Mode

Batch Mode, if selected, specifies that when the system performs Message Notification, it should consider the subscriber successfully notified of the message when someone or something, such as an answering machine, answers. For example, if the system calls the number specified for Message Notification, and an answering machine answers the call, the system interprets the attempt as successful and does not attempt to notify the subscriber again.

If the Batch Mode option is not selected, the system interprets a Message Notification attempt successful when the subscriber logs into the mailbox.

The batch mode feature does not affect Message Notification through a beeper. Batch mode is only used with Message Notification and has no effect on the Wake-Up Calls, Casual AMIS, and primary fax destination features.

Networking Options

Networking Options determine subscriber ability to send messages to other voice-mail systems.

Highest Outgoing Dispatch

Highest Outgoing Dispatch defines how messages are sent from the mailbox.

- **Not Allowed** – Does not allow the mailbox subscriber to send any messages to other voice-mail systems.
- **Economy** – Sends messages to other voice-mail systems during the economy hours set up for the system. You can override the economy hours for individual network nodes if appropriate. For additional information, see Chapter 19, “Using Network Messaging.”
- **Standard** – Allows subscribers to send messages marked with either economy or standard dispatch. Messages sent to other voice-mail systems with standard dispatch are held in a queue for the maximum time set up for the system or until a defined number of messages accumulate in the same queue, whichever occurs first.
- **Priority** – Allows subscribers to send messages marked with economy, standard, or priority dispatch. Messages sent to other voice-mail systems with priority dispatch are sent to the remote address after a three-minute delay. Note that to use the future delivery feature to send a message to another system, a subscriber must be able to send priority messages.

Casual AMIS

Casual AMIS allows subscribers to send messages to other voice-mail systems that support the AMIS protocol. If Casual AMIS is the only Networking option activated in the mailbox’s Class of Service, the subscriber can only send messages to AMIS-compatible systems by entering the complete phone number of the system and the destination mailbox number. For additional information, see Chapter 19, “Using Network Messaging.”

The option selected under Delivery Options determines whether the subscriber can enter long-distance telephone numbers to access distant AMIS destinations. If Local Only is selected, subscribers cannot send messages to destinations that have long-distance telephone numbers.

Administered AMIS

Administered AMIS allows subscribers to send messages to defined AMIS nodes. Nodes allow subscribers to enter a short series of digits that represent the complete phone number of another voice-mail system instead of entering the entire phone number. If Administered AMIS is the only Networking option activated in the mailbox’s Class of Service, the subscriber can only send messages to sites designated as AMIS nodes. Administered AMIS must be selected here if a subscriber is to be permitted to use the Follow-Me-Forward feature to access AMIS destinations. For additional information, see Chapter 19, “Using Network Messaging.”

The option selected under Delivery Options does not affect a subscriber’s ability to specify Administered AMIS destinations, including those for Follow-Me-Forward.

OctelNet

OctelNet allows subscribers to send messages to defined OctelNet nodes. OctelNet nodes allow subscribers to enter a short series of digits that represent the complete phone number of another system that supports OctelNet. If OctelNet is the only Networking option activated in the mailbox’s Class of Service, the subscriber can only send messages to sites designated as OctelNet nodes. OctelNet must be selected here if a subscriber is to be permitted to use the Follow-Me-Forward feature to access OctelNet destinations. For additional information, see Chapter 19, “Using Network Messaging.”

The option selected under Delivery Options does not affect a subscriber’s ability to specify OctelNet destinations, including those for Follow-Me-Forward.

Follow-Me-Forward

Follow-Me-Forward allows subscribers to forward mailbox messages received from outside callers or internal subscribers automatically to a mailbox on another system. The Follow-Me-Forward feature is set up either by the system manager in the subscriber settings or by the mailbox subscriber through the mailbox. The Follow-Me-Forward feature is only available to subscribers on systems set up with AMIS and OctelNet nodes. For additional information, see the topic, "Auto-Forwarding Messages Between Mailboxes on Different Systems," earlier in this chapter.

Messages that are sent to a mailbox from another voice-mail system cannot be forwarded again using the Follow-Me-Forward feature. These messages must be accessed by logging into the original destination mailbox.

If you want to prohibit subscribers from changing the Follow-Me-Forward options for their mailbox, do not select the Follow-Me-Forward option in the mailbox’s Class of Service. Instead, select the appropriate Follow-Me-Forward options in the mailbox’s subscriber settings.

Network Reply

Network Reply permits subscribers to reply to messages sent from other voice-mail systems. Since the system stores the address of the other voice-mail system that sent the message, subscribers are not required to enter the recipient’s telephone and mailbox number.

Language

Language allows you to select the default language to use for the mailbox if your system is configured for multiple languages. The system can support as many as five languages. This feature only selects the language in which mailbox prompts are voiced after the mailbox is accessed. For additional information, see the topic, "Setting Up the Language Selection Prompt," in Chapter 15, “Setting Up System Prompts.”

Fax Options

Fax Options allows subscribers to use the Fax Solution module if it is installed on the system. The module allows subscribers to send and receive faxes in their mailboxes.

Send Faxes

Send Faxes allows subscribers to send fax messages, including copies of voice/fax messages, from their mailboxes to other system subscribers. Note that the Fax Solution module must be set up on the system to use this feature.

Faxes cannot be sent to other voice-mail systems. If a fax message is sent to a group list that contains both local subscribers and network destinations, only the local subscribers who are permitted to receive faxes receive the attached fax message. Recipients at the remote system only receive the voice portion of the message.

The Send Faxes option must be selected for subscribers to include fax capabilities in V-Trees they create for their mailboxes.

Receive Faxes

Receive Faxes allows subscribers to receive fax messages in their mailboxes from both subscribers and outside callers. This option must be selected for the primary fax destination and AutoPrint features to be available to subscribers over the phone. Note that the Fax Solution module must be set up on the system to use this feature.

Max Messages

Max Messages defines the maximum number of messages (both new and saved) permitted in the mailbox. This feature helps to manage the system's available disk space by limiting the amount of space mailbox messages can take up on the system. The functions of the mailbox should be considered when setting this value. For example, you may want to allow the sales department mailboxes to store more messages than mailboxes in other departments. Make sure that the operators' mailboxes are able to store enough messages to allow for high call volume. The maximum number of messages a mailbox can contain is 1,000. The recommended Max Messages value is under 70.

For subscribers using Visual Mailbox, set the Max Messages value to under 60 for the best system performance.

Msg Time

Msg Time defines the maximum length (in seconds) allowed for the following types of messages:

- Messages that subscribers record to send to other subscribers
- Messages sent from other voice-mail systems
- Messages sent to mailboxes from outside callers

This feature helps to manage the system's available disk space by limiting the amount of space mailbox messages can take up on the system. The functions of the mailbox should be considered when setting this value. For example, a customer service department may require a longer message time than an accounting department. The minimum message length is 30 seconds; the maximum message length is 6,000 seconds. If AMIS messaging is permitted, this value should be set to no more than 480 seconds (eight minutes) to accommodate the maximum AMIS message time.

Max Rings

Max Rings defines the number of rings before the M2000 system determines that there is no answer at a subscriber's extension.

The number entered in Max Rings overrides the number of rings specified on the Port Parameters tab in System Setup.

If you enter a zero (0), the system transfers and releases the call without determining if there is no answer or the extension is busy. If there is no answer, or if the mailbox is busy, the call does not go back to the system unless an integration feature is being used on the system, or the phone itself is forwarded to the voice-mail extension.

Make sure this number is at least one less than the number of rings set up on the system's telephone switch. If the number is not at least one less than the number of rings set up for the switch, calls are not routed to the M2000 system.

It is recommended that you do not set the ring count to less than 3, or more than 15. The system may not recognize less than three rings on some telephone switches, and more than 15 rings may produce unpredictable results.

On integrated systems, if Max Rings is set to 0, do *not* activate the call screening or announce subscriber name prompt features in a mailbox's subscriber settings. If either of these features is active and Max Rings is set to 0, M2000 does not integrate properly with the switch.

New Messages

The New Messages field specifies the number of days a message that has not been listened to can remain in the mailbox before it is automatically deleted by the system. To keep messages in the mailbox until they are either saved or deleted, enter 99. The system can also be set up to notify mailbox subscribers that a message has been deleted from their mailbox by the system.

Saved Messages

The Saved Messages field specifies the total number of days that a message can remain in the mailbox before it is automatically deleted by the system. The total number of days a message has been in a mailbox starts as soon as the mailbox receives the message. For example, if this field is set to 14 days, and a message was sent to the mailbox 4 days ago, it will only be saved for 10 more days, even though it was listened to and saved by the subscriber after 2 days. To save messages indefinitely, enter 99. The system can also be set up to notify mailbox subscribers that a message has been deleted from their mailbox by the system.

Make sure that the number of days entered in the Saved Messages field is always greater than the number of days entered in the New Message field. If New Messages is set to 99, Saved Messages should also be set to 99.

Using Dialing Codes

There are several places in M2000, such as Message Notification and personal fax number set up, that you may need to enter a dialing code in addition to the phone number to allow the system to dial the number correctly. For example, you may need to precede a beeper number with several commas for the system to effectively notify a beeper during Message Notification. These commas indicate pauses that allow the beeper notification service time to receive the number to display on the beeper.

Some codes are only meaningful if the system uses certain switches. Be sure to refer to the switch documentation or contact your Lucent Technologies representative before changing dialing codes currently set up on the system.

The following characters represent dialing codes that are used by the M2000 system.

Note that the H, X, C, W, B, -, and + codes can be used only for calls to internal extensions—number of digits is less than the Number of Digits in Local Phone Number parameter in System Setup. The remaining codes can be used for calls to internal or external destinations.

Code	Use
&	Represents a flash hook. A flash hook is similar to quickly depressing and releasing the buttons in the cradle of a telephone.
,	Represents a pause.
-	Signals the switch to go on hook. On hook indicates that the buttons in the cradle of the telephone are depressed.
+	Signals the switch to come off hook. Off hook indicates that the buttons in the cradle of the telephone are not depressed.
D	Instructs the switch to dial with call progress.
H	Instructs the switch to perform a hard hang-up. A hard hang-up causes the system to immediately end the call without communicating any additional information to the system.
N	Instructs the switch to dial without call progress.
R	For calls to internal extensions, this code signals the switch to release the call to M2000. For calls to outside numbers, this code instructs activates Earth Loop Recall.
X	Places the extension in the dialing string.
B	Aborts the transfer if a busy (or reorder) signal is received from the switch after the extension is dialed. Otherwise, the transfer is completed as an unsupervised transfer. This code should only be used on switches, such as the Lucent PARTNER®, that do not allow completion of transfers into busy or reorder tone. When using this code, Max Rings in the Class of Service **must** be set to 0; otherwise, this code is ignored.
W(Number)	Instructs the switch to wait the specified number of seconds for recognized dial tone. If dial tone is not detected, and an R is included in the string immediately following the W(number), a busy release code is sent if. The transfer is then reattempted starting at the beginning of the customer transfer code string. If it fails again, the caller hears the busy options. Valid settings are 0 – 9; 1 through 9 indicate the number of seconds to wait, and 0 indicates that the system should wait up to 60 seconds. The suggested setting is W5. Note that this code must be set higher than the DTONWAIT parameter because DTONWAIT determines the amount of continuous energy the system must detect to recognize it as dial tone.
C(Number)	Indicates that the system is to send a special feature code to the switch. The C is always followed by a number that defines how many characters are in the special feature code. For example, if 550 is the special feature code to activate intercom paging, a C3 would be entered in the dialing code string for intercom paging.

T	Instructs the switch to use DTMF dialing.
M	Instructs the switch to use Multi-Frequency (MF) dialing.
P	Instructs the switch to use Pulse dialing.

Do *not* use M or P unless required by the switch. Once used, all calls are dialed using multi-frequency or pulse dialing until you restart the M2000 system.

CHAPTER 18

Working with V-Trees

Procedures in this chapter will help you to:

- Understand V-Trees
- Create a V-Tree
- Define V-Tree actions
- Assign prompts to a V-Tree
- Activate and deactivate a V-Tree
- Open a V-Tree
- Save a V-Tree
- Edit a V-Tree
- Delete a V-Tree
- Print a V-Tree
- Change the V-Tree display
- Manage Fax Retrieval documents

Understanding V-Trees

V-Trees are menus that you can create to provide callers with options from which they can choose to perform actions on M2000. Callers use a V-Tree in the same way they use the system's Attendant menu; however, V-Trees are assigned to specific mailboxes, not to the entire M2000 system. If, for example, a caller selects an option from the Attendant menu to speak to the sales department, the call can be transferred to a mailbox where a V-Tree prompts the caller to choose to speak with the product A, product B, or product C sales group. Depending on the caller's selection, the call is then routed to an appropriate extension.

Each menu on a V-Tree can provide callers with up to nine options. Each option performs a certain action on the system, including advancing the caller to another menu that contains additional options. You can create as many menus as necessary. The actions you can assign to menu options are:

- Advance to another menu
- Return to the previous menu
- Record a message to a mailbox and return to the previous menu
- Record a message to a mailbox then advance to another menu
- Require the caller to enter a password to advance to another menu
- Allow the caller to review and rerecord a message
- Send a fax, which the caller selects from a voiced list
- Send a specified fax, for which the caller enters a fax document number
- Disconnect from the system
- Log into a mailbox
- Send a message to a mailbox
- Return the caller to the system's Automated Attendant
- Access the subscriber directory to use the Dial by Name feature
- Transfer the caller to a mailbox

For additional information on a specific action, refer to the topic, "Defining V-Tree Actions," later in this chapter.

A V-Tree assigned to a mailbox is called a mailbox V-Tree. You can edit a mailbox V-Tree only by accessing the mailbox to which the V-Tree is assigned.

If you have the Visual Architect Developer's Toolkit installed on the system, you can also create non-mailbox-associated V-Tree files. V-Tree files are "portable" V-Trees, which you can copy to other mailboxes and even other systems. The toolkit enables you to work with V-Tree files outside of M2000 without having to open a mailbox. V-Tree files, however, are not used by the system to perform any actions on the system until the V-Tree file is copied to a mailbox, making it a mailbox V-Tree. For additional information on the toolkit, refer to the topic, "Creating a V-Tree File with the Toolkit," later in this chapter.

Do not confuse the term *node*, which is used on several Visual Architect screens, with the term *network node*. In Visual Architect, the term *node* denotes an option available on a V-Tree menu and the options below it. In networking-related aspects, the term *node* denotes a connection to another system. To eliminate possible confusion, procedures in this chapter do not use *node* to describe V-Tree menu options, even though the word appears on several program screens.

Creating V-Trees

M2000 includes two tools for creating mailbox V-Trees:

- Visual Architect or Visual V-Tree
- Phone interface

Each M2000 system has either the Visual Architect feature or the Visual V-Tree feature. The V-Tree feature available is determined at the time of system purchase or upgrade.

Visual Architect and Visual V-Tree are graphical V-Tree generation tools, accessible only on the M2000 PC. The phone interface is an audio, prompt-driven interface, accessible from within a mailbox over the phone. Because they are graphical, Visual Architect and Visual V-Tree are much easier to use to create mailbox V-Trees than the phone interface.

To create a V-Tree file, you must have access to the Visual Architect Developer's Toolkit, an optional add-on module available for use with Visual Architect.

If you plan to create a V-Tree for use in a single mailbox, you need only create a mailbox V-Tree. If you plan to create a V-Tree for use in more that one mailbox, however, you should consider using the toolkit to create a V-Tree file, which enables you to create one V-Tree and then copy it to more than one mailbox or even mailboxes on other systems. Furthermore, you should use the toolkit to create a V-Tree file if you are currently unsure to which mailbox the V-Tree must be assigned.

Before you attempt to create a V-Tree on the system, it is recommended that you identify all of the options you want to make available to the caller on paper, in a graphical format, to help you build the actual V-Tree.

See Preinstallation Configuration Worksheets

When setting up V-Trees on the system, refer to information provided on the V-Tree Design Sheet(s).

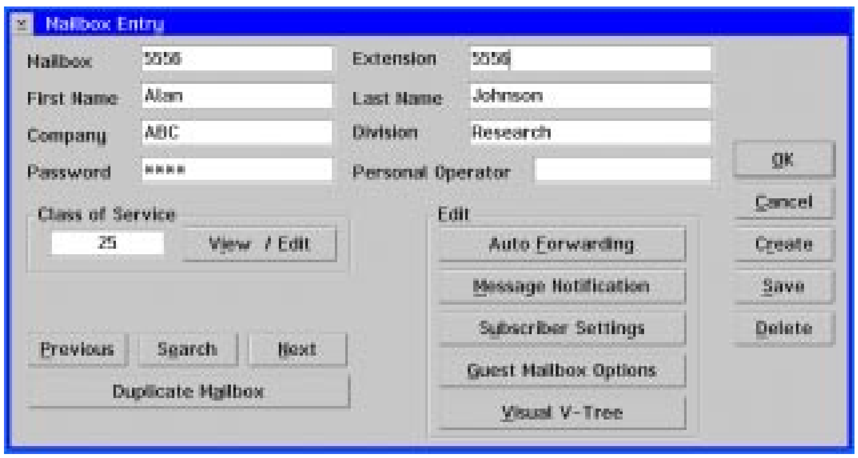
Creating a Mailbox V-Tree Using Visual Architect

Use the following procedure to create a V-Tree for a particular mailbox. This procedure assumes that the mailbox for which you want to create a V-Tree already exists.

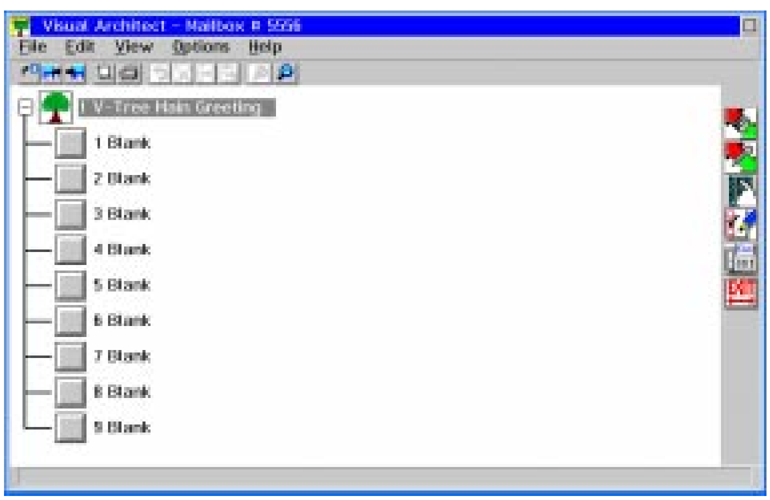
To create a mailbox V-Tree:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

3. Enter the mailbox number for the mailbox for which you want to create a V-Tree, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Under Edit, click Visual V-Tree. Visual Architect starts, and a blank V-Tree displays. Note that, if a V-Tree already exists for the mailbox, the V-Tree displays.



5. Double-click the V-Tree Main Greeting icon . The V-Tree Main Greeting dialog box displays.

6. In the Title field, enter a title for the V-Tree. The title displays next to the V-Tree Main Greeting icon to help you identify the V-Tree.

7. If a prompt has already been recorded for the V-Tree's main greeting, which is the first V-Tree menu the caller hears, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for the V-Tree's main greeting, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

8. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices, as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action's dialog box to help you define each action.

9. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:

   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.

   - To allow callers to press <#> to log into a mailbox:

     a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.

     b. Select the Functions for Special Keys option if it is not selected.

     c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.

     d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

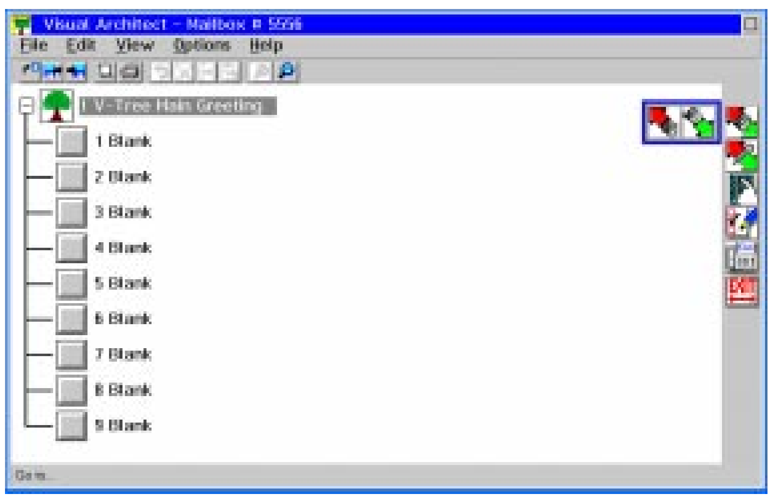
If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence, and the caller is unable to enter a password since the system interprets the password as a mailbox number.

10. To save the entered information, click Save. The main Visual Architect window displays.

Steps 11-14 describe how to select an action to assign to an option on the V-Tree. For additional information on each action that you can assign to an option, refer to the topic, "Defining V-Tree Actions," later in this chapter.

11. Click one of the toolbox buttons displayed on the right side of the window. The actions for that toolbox button display to the left of the toolbox button.



Each menu on the V-Tree can have a maximum of nine options, which are assigned to the keypresses 1-9. Note that you do not have to assign an option to each available keypress; you can skip keypresses on a menu.

12. Click the action to assign to the V-Tree option. A dark gray box displays around the selected action.

13. With the right mouse button, click the action and drag it to the appropriate menu option of the V-Tree. When the cursor is over the menu option, release the mouse button to assign the action to that menu option. When you "click and drag" the action, the cursor changes to resemble the action icon, and then changes again to display a hand with a pointed finger when the cursor is over a blank menu option of the V-Tree. If the action provides submenu options, nine blank options display beneath the action.

If a menu has nine or less options assigned to it and there are no blank options displayed to which to drag the action, expand the V-Tree options and display the blank options. Refer to the topics, "Hiding and Displaying Blank Options," and, "Expanding and Collapsing V-Tree Menus," later in this chapter.

14. Define the action for the V-Tree. For additional information, refer to the topic, "Defining V-Tree Actions," later in this chapter.
15. Repeat steps 11-14 until all of the menu and submenu options for the V-Tree are assigned and defined.
16. To close Visual Architect, select Exit from the File menu. The Mailbox Entry dialog box displays. Note that the Visual Architect automatically saves the V-Tree as you create it.
17. Activate the V-Tree for the mailbox. For additional information, refer to the topic, "Activating a V-Tree for a Mailbox," later in this chapter.
18. To close the Mailbox Entry dialog box, click OK. The main system window displays.
19. Call into the system and access the mailbox to verify that the V-Tree is activated correctly and that each prompt and option works appropriately. If the V-Tree is not functioning correctly, open the V-Tree and make the necessary changes.

Make sure that you disable the V-Tree in Call Handling before you edit it.

Creating a V-Tree File from a Mailbox V-Tree

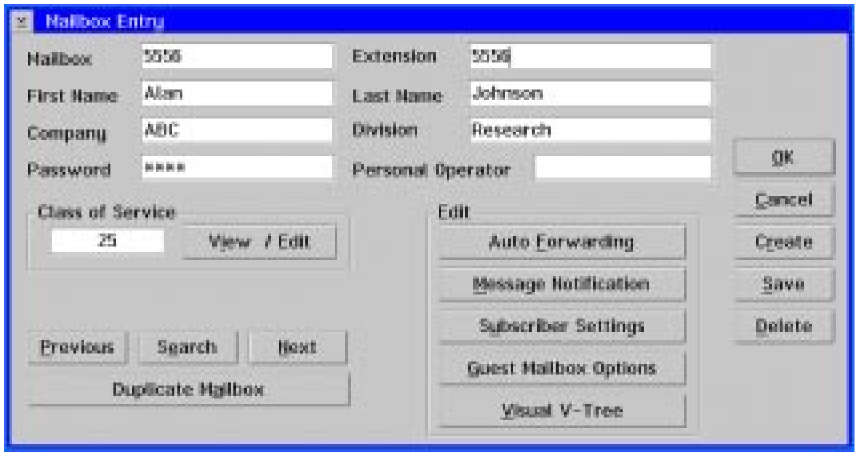
Use this procedure to create a V-Tree for use in a mailbox, then save the V-Tree to a file so it can be copied to other mailboxes. If the V-Tree already exists for a mailbox and you just want to copy it to a V-Tree file, refer to the topic, "Saving a Mailbox V-Tree to a V-Tree File," later in this chapter.

The Visual Architect Developer's Toolkit must be supported on the sentinel to generate V-Tree files.

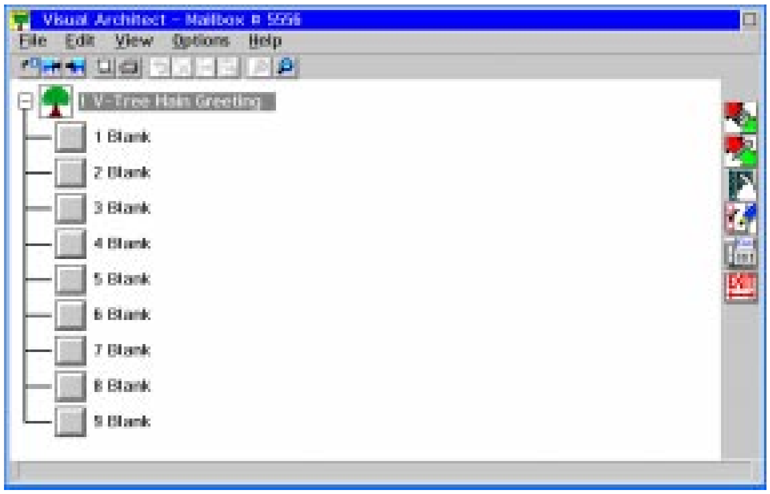
To create a V-Tree file from a mailbox V-Tree:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

3. Enter the mailbox number for the mailbox for which you want to create a V-Tree, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Under Edit, click Visual V-Tree. Visual Architect starts, and a blank V-Tree displays. Note that, if a V-Tree already exists for the mailbox, the V-Tree displays.



5. Double-click the V-Tree Main Greeting icon . The V-Tree Main Greeting dialog box displays.

6. In the Title field, enter a title for the V-Tree. The title displays next to the V-Tree Main Greeting icon to help you identify the V-Tree.

7. If a prompt has already been recorded for the V-Tree's main greeting, which is the first V-Tree menu the caller hears, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the

prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

If no prompt has been recorded for the V-Tree's main greeting, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

8. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices, as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action's dialog box to help you define each action.

9. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:

   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.
   - To allow callers to press <#> to log into a mailbox:

     a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.

     b. Select the Functions for Special Keys option if it is not selected.

     c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.

     d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence, and the caller is unable to enter a password since the system interprets the password as a mailbox number.

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10. To save the entered information, click Save. The main Visual Architect window displays.

Steps 11-14 describe how to select an action to assign to an option on the V-Tree. For additional information on each action that you can assign to an option, refer to the topic, "Defining V-Tree Actions," later in this chapter.

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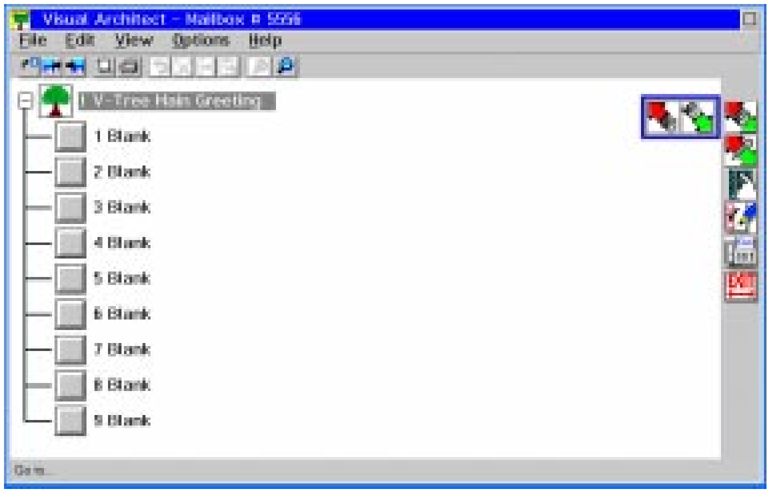
11. Click one of the toolbox buttons displayed on the right side of the window. The actions for that toolbox button display to the left of the toolbox button.



Each menu on the V-Tree can have a maximum of nine options, which are assigned to the keypresses 1-9. Note that you do not have to assign an option to each available keypress; you can skip keypresses on a menu.

12. Click the action to assign to the V-Tree option. A dark gray box displays around the selected action.

13. With the right mouse button, click the action and drag it to the appropriate menu option of the V-Tree. When the cursor is over the menu option, release the mouse button to assign the action to that menu option. When you click and drag the action, the cursor changes to resemble the action icon, and then changes again to display a hand with a pointed finger when the cursor is over a blank menu option of the V-Tree. If the action provides submenu options, nine blank options display beneath the action.

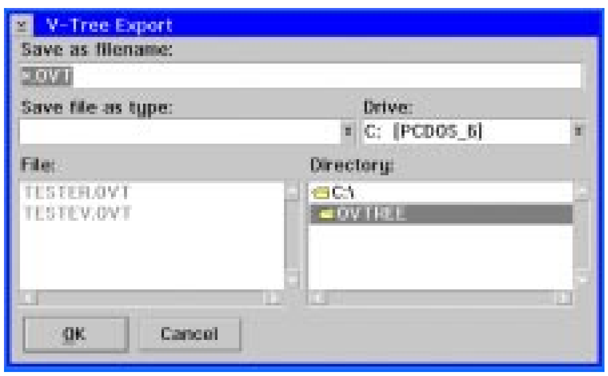
If a menu has nine or less options assigned to it and there are no blank options displayed to which to drag the action, expand the V-Tree options and display the blank options. Refer to the topics, "Hiding and Displaying Blank Options," and, "Expanding and Collapsing V-Tree Menus," later in this chapter.

14. Define the action for the V-Tree. For additional information, refer to the topic, "Defining V-Tree Actions," later in this chapter.

15. Repeat steps 11-14 until all of the menu and submenu options for the V-Tree are assigned and defined.

16. To create the V-Tree file, select Export from the File menu. The Export Options dialog box displays.

17. To save all of the comments added to the V-Tree actions in the V-Tree file, select the Copy V-Tree Comments option.
18. To save all of the prompts associated with the V-Tree in the V-Tree file, select the Copy V-Tree Prompts option.
19. To save all of the faxes assigned to the V-Tree in the V-Tree file, select the Copy V-Tree Fax Documents option.
20. To save the V-Tree with the selected options in the V-Tree file, click OK. The V-Tree Export dialog box displays.



21. In the Save as filename field, enter a name for the file followed by an .OVT file extension.
22. In the Drive field, select the drive on which you want to save the V-Tree.
23. In the Directory field, select the directory in which you want to save the V-Tree.
24. To save the V-Tree with the entered name, drive, and directory, click OK. The V-Tree is saved, and you can now copy it to another mailbox or copy it for use on another system. For additional information, refer to the topic, "Copying a V-Tree File to a Mailbox," later in this chapter.
25. To close Visual Architect, select Exit from the File menu. The Mailbox Entry dialog box displays. Note that the Visual Architect automatically saves the V-Tree in the mailbox as you create it.
26. Activate the V-Tree for the mailbox. For additional information, refer to the topic, "Activating a V-Tree for a Mailbox," later in this chapter.

27. To close the Mailbox Entry dialog box, click OK. The main system window displays.

28. Call into the system and access the mailbox to verify that the V-Tree is activated correctly and that each prompt and option works appropriately. If the V-Tree is not functioning correctly, open the V-Tree and make the necessary changes to the mailbox V-Tree, then resave the V-Tree file.

Creating a V-Tree File with the Toolkit

Use this procedure to create a V-Tree using the Visual Architect Developer’s Toolkit. This optional module allows you to create a V-Tree file without assigning the V-Tree to a mailbox. After creating the V-Tree file, you can copy the V-Tree file to a mailbox. For additional information, refer to the topic, "Copying a V-Tree File to a Mailbox," later in this chapter.

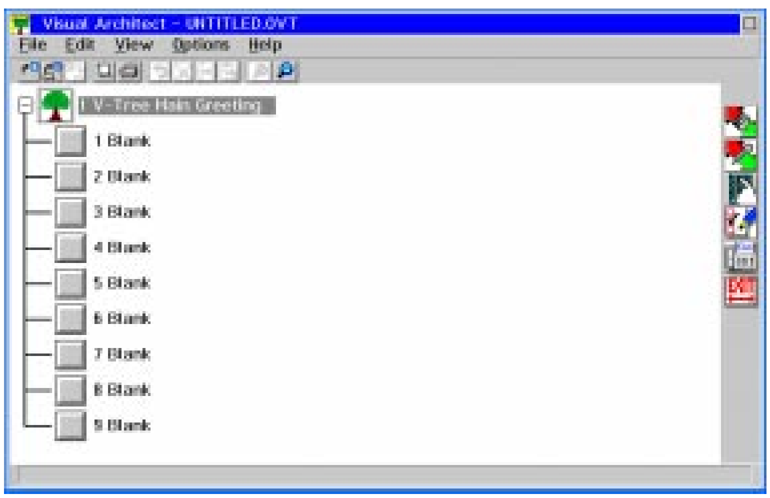
To create a V-Tree file with the toolkit:

1. Start M2000, if it is not running.

2. Open an OS/2 window.

3. From the C:\ prompt, type `CD CVR` then press <ENTER>.

4. From the \CVR prompt, type `VTREE` then press <ENTER>. Visual Architect starts, and a blank V-Tree displays.



5. Double-click the V-Tree Main Greeting icon . The V-Tree Main Greeting dialog box displays.

6. In the Title field, enter a title for the V-Tree. The title displays next to the V-Tree Main Greeting icon to help you identify the V-Tree.

7. If a prompt has already been recorded for the V-Tree's main greeting, which is the first V-Tree menu the caller hears, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for the V-Tree's main greeting, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

8. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices, as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action's dialog box to help you define each action.

9. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:

   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.
   - To allow callers to press <#> to log into a mailbox:

     a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.

     b. Select the Functions for Special Keys option if it is not selected.

     c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.

     d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence, and the caller is unable to enter a password since the system interprets the password as a mailbox number.

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10. To save the entered information, click Save. The main Visual Architect window displays.

Steps 11-14 describe how to select an action to assign to an option on the V-Tree. For additional information on each action that you can assign to an option, refer to the topic, "Defining V-Tree Actions," later in this chapter.

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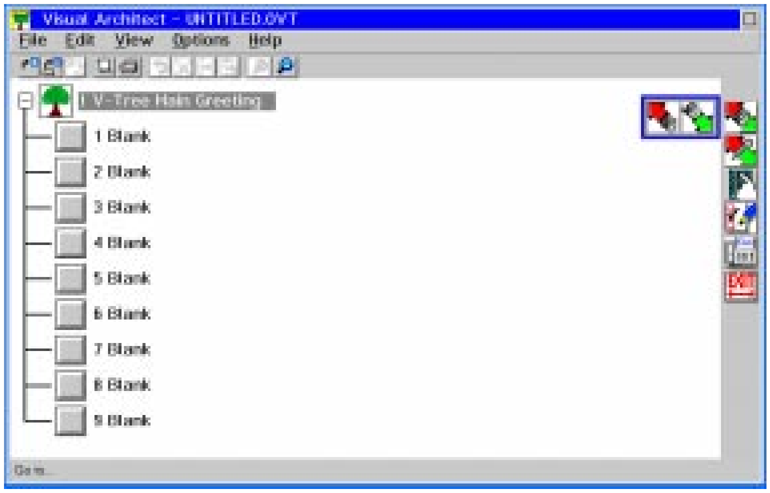
11. Click one of the toolbox buttons displayed on the right side of the window. The actions for that toolbox button display to the left of the toolbox button.



Each menu on the V-Tree can have a maximum of nine options, which are assigned to the keypresses 1-9. Note that you do not have to assign an option to each available keypress; you can skip keypresses on a menu.

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12. Click the action to assign to the V-Tree option. A dark gray box displays around the selected action.

13. With the right mouse button, click the action and drag it to the appropriate menu option of the V-Tree. When the cursor is over the menu option, release the mouse button to assign the action to that menu option. When you click and drag the action, the cursor changes to resemble the action icon, and then changes again to display a hand with a pointed finger when the cursor is over a blank menu option of the V-Tree. If the action provides submenu options, nine blank options display beneath the action.

If a menu has nine or less options assigned to it and there are no blank options displayed to which to drag the action, expand the V-Tree options and display the blank options. Refer to the topics, "Hiding and Displaying Blank Options," and, "Expanding and Collapsing V-Tree Menus," later in this chapter.

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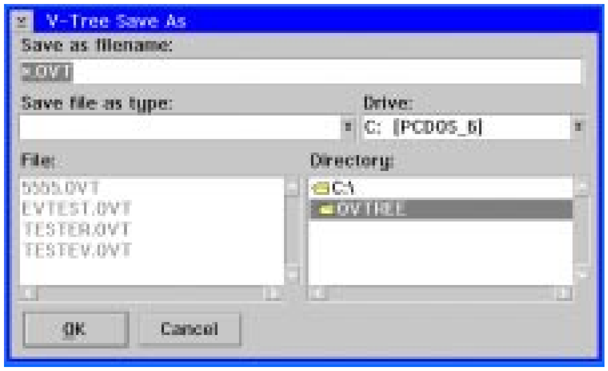
13. Define the action for the V-Tree. For additional information, refer to the topic, "Defining V-Tree Actions," later in this chapter.

14. Repeat steps 10-13 until all of the menu and submenu options for the V-Tree are assigned and defined.

15. To save the V-Tree file, select Save from the File menu. The V-Tree Save As dialog box displays.



16. In the Save as filename field, enter a name for the file followed by an .OVT file extension.

17. In the Drive field, select the drive on which you want to save the V-Tree.

18. In the Directory field, select the directory in which you want to save the V-Tree.

19. To save the V-Tree with the entered name, drive, and directory, click OK. The Export Options dialog box displays.

20. To save all of the comments added to the V-Tree actions in the V-Tree file, select the Copy V-Tree Comments option.

21. To save all of the prompts associated with the V-Tree in the V-Tree file, select the Copy V-Tree Prompts option.

22. To save all of the faxes assigned to the V-Tree in the V-Tree file, select the Copy V-Tree Fax Documents option.

23. To save the V-Tree with the selected options in the V-Tree file, click OK. The V-Tree is saved, and you can now copy it to another mailbox or copy it for use on another system. For additional information, refer to the topic, "Copying a V-Tree File to a Mailbox," later in this chapter.

24. To close Visual Architect, select Exit from the File menu. Visual Architect closes.

25. To test the V-Tree, copy the V-Tree to a mailbox, activate it for the mailbox, then call the mailbox on the system to verify that the V-Tree is activated correctly and that each prompt and option works appropriately. If the V-Tree is not functioning correctly, open the V-Tree and make the necessary changes.

Creating a V-Tree Using Visual V-Tree

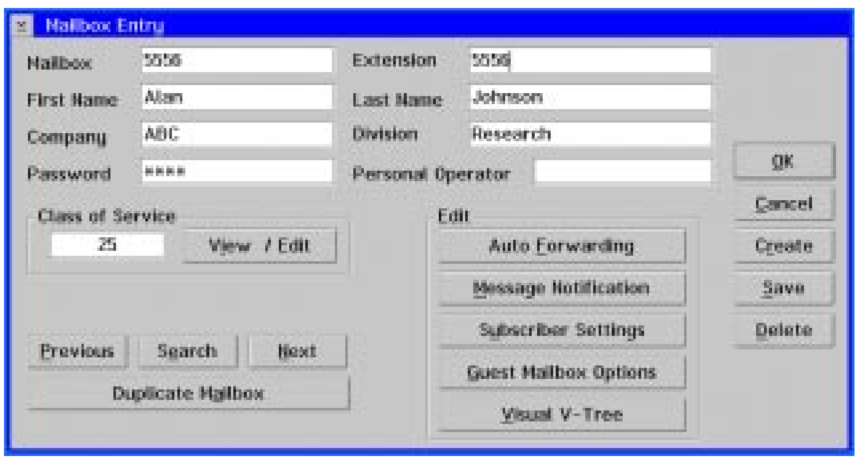
Use this procedure to create a V-Tree for a mailbox using the Visual V-Tree feature. This procedure assumes that the mailbox for which you want to create a V-Tree already exists.

For information on the actions you assign to options on the V-Tree (in step 6), refer to the topic, "Defining V-Tree Actions," later in this chapter. Also, be advised that at any level in a V-Tree created with Visual V-Tree, callers can be instructed to press <0> to transfer to the operator or to press <#> to return from a submenu to the previous V-Tree menu.

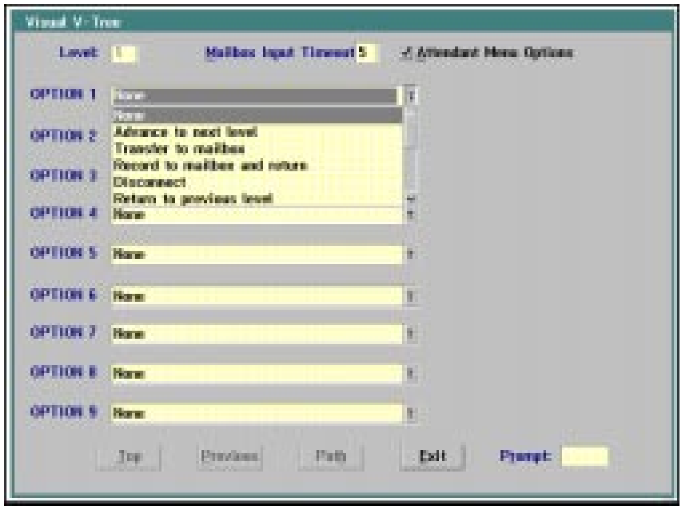
To create a V-Tree using Visual V-Tree:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

3. Enter the mailbox number for the mailbox for which you want to create a V-Tree, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Under Edit, click Visual V-Tree. The Visual V-Tree dialog box displays.



5. Click the arrow button to the right of the Option 1 field to display a menu of the available actions.

6. Select an action for Option 1. If the action you select requires you to define a variable, such as a mailbox number or fax document number, a field displays next to the option field. You must define the variable for the V-Tree to function properly. If the assigned action requires you to define a subsequent level, a Next button displays next to the option field. For additional information on V-Tree actions, refer to the topic, "Defining V-Tree Actions," later in this chapter.

7. Repeat step 6 for each option you want to define on the first level.

8. In the Prompt field, enter the number of the prompt you want the system to voice for that level. Note that this prompt should include the actions available at the current level.

9. If you want callers to be able either to enter an extension number at the current level or select a menu option, select Attendant Menu Options, then enter the number of seconds, in the Mailbox Input Timeout field, that callers have to enter an extension number.

10. For each option with a Next button displayed, click the Next button and repeat steps 5-9.

11. Click the appropriate button at the bottom of the Visual Mailbox dialog box:

    a. To display the sequence of keypresses required for a caller to advance to the current level of the V-Tree, click Path.

    b. To return to the previous level of the V-Tree, click Previous. To return to the first level of the V-Tree, click Top.

    c. To exit the V-Tree, click Exit. The Mailbox Entry dialog box displays. Note that the V-Tree is automatically saved as you create it.

12. Activate the V-Tree for the mailbox. For additional information, refer to the topic, "Activating a V-Tree for a Mailbox," later in this chapter.

13. To close the Mailbox Entry dialog box, click OK. The main system window displays.

14. Call into the system and access the mailbox to verify that the V-Tree is activated correctly and that each prompt and option works appropriately. If the V-Tree is not functioning correctly, open the V-Tree and make the necessary changes.

Creating V-Trees Through the Phone Interface

Use this procedure to create a V-Tree for a mailbox through the phone interface. Once a V-Tree is created through the phone interface, you can open it using Visual Architect or Visual V-Trees. Mailbox subscribers can also use this procedure to create V-Trees for their mailboxes.

If a mailbox does not have V-Trees selected in the Class of Service, you cannot create V-Trees through the phone interface.

To create a V-Tree through the phone interface:

1. Log into the mailbox for which you want to create a V-Tree.
2. From the Main menu, press <4> to access the Personal Options menu.
3. From the Personal Options menu, press <2> to access the Special Features menu.
4. From the Special Features menu, press <8> to access the V-Tree menu.
5. Follow the prompts to create and edit the V-Tree.
6. When you have finished creating the V-Tree, set the appropriate Call Handling features to allow callers to access the V-Tree.
7. Log out of the mailbox, then call into the system and access the mailbox to verify that the V-Tree is activated correctly and that each prompt and option works appropriately. If the V-Tree is not functioning correctly, open the V-Tree and make the necessary changes.

Defining V-Tree Actions

V-Tree actions determine what happens when a caller chooses an option from a V-Tree menu. There are 14 actions that you can assign to a V-Tree menu option:

- Advance to Next Menu
- Return to Previous Menu
- Record to Mailbox Return to Previous Level
- Record to Mailbox and Advance
- Require Password to Proceed to Next Level
- Review/Edit Message
- Send a Requested Fax and Advance
- Send a Predefined Fax and Advance
- Disconnect
- Go to Mailbox Login Point

- Go to Voice Mail
- Go to Extension Entry Point
- Go To Directory Services
- Transfer to a Mailbox

If you assign only one action to a V-Tree menu, the system automatically performs that action when the caller accesses that menu. For example, if you create a V-Tree that allows a caller to record a message then advance to another menu, you can assign the Disconnect action to this option's submenu to automatically disconnect the caller after recording a message.

The procedure following each V-Tree action description describes how to assign the action to a V-Tree using Visual Architect. For additional information on assigning actions to a V-Tree using Visual V-Tree, refer to the topic, "Creating a V-Tree Using Visual V-Tree," earlier in this chapter.

V-Tree Action Summary Table

The following table displays whether each action you can assign to an option on a V-Tree has a submenu that extends from the action and whether a prompt is voiced after the action is performed, as well as the variable you need to specify for the action, if necessary. For additional information, refer to details on each action that follow this table.

V-Tree Action	Submenu	Prompt Voiced	Variable
Advance to Next Menu	Yes	Yes	None
Return to Previous Menu	No	No	None
Record to Mailbox Return to Previous Level	No	No	Mailbox #
Record to Mailbox and Advance	Yes	Yes	Mailbox #
Require Password to Proceed to Next Level	Yes	Yes	None
Review/Edit Message	Yes	Yes	None
Send a Requested Fax and Advance	Yes	Yes	None
Send a Predefined Fax and Advance	Yes	Yes	Fax doc #
Disconnect	No	No	None
Go to Mailbox Login Point	No	No	None
Go to Voice Mail	No	No	None
Go to Extension Entry Point	No	No	None
Go To Directory Services	No	No	None
Transfer to a Mailbox	No	No	Mailbox #

Advance to Next Menu

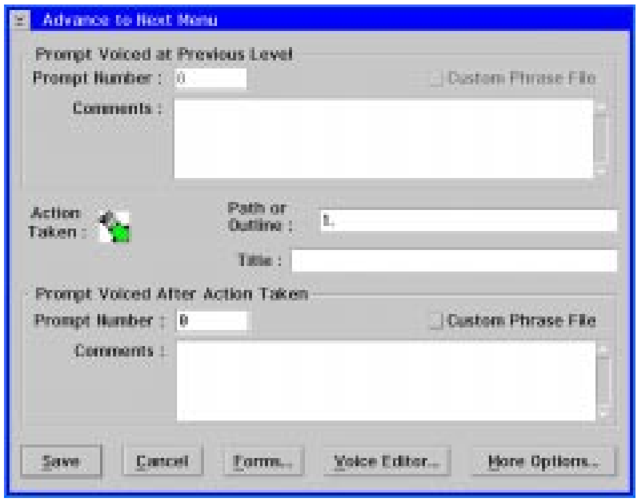
The Advance to Next Menu action allows callers to access a submenu. This action can provide a menu for the caller with additional options from which to choose, or it simply can voice a prompt to communicate specific information. For example, you can use this option to list all of the new products in a product line, along with their prices, then assign an action on the submenu to return the caller to the main V-Tree menu.

Note that there are other actions that also advance the caller to the next menu; this action, however, performs no action other than advancing the caller to the next menu and voicing a prompt.

To define the Advance to Next Menu action:

1. Assign the Advance to Next Menu action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.

2. Double-click the menu option that displays the Advance to Next Menu icon. The Advance to Next Menu dialog box displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.



The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

3. In the Title field, enter a title for the option. The title displays next to the action icon to help you identify the purpose of this option on the V-Tree.

Steps 4 specifies the prompt that the caller hears after this action is performed on the system. This prompt can voice the options available on the next menu, provide special instructions on using the next available menu options, or simply provide the caller with information.

4. If a prompt has already been recorded to voice after this action, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for this option, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

5. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices, as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action's dialog box to help you define each action.

6. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:

   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.

   - To allow callers to press <#> to log into a mailbox:

     a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.

     b. Select the Functions for Special Keys option if it is not selected.

     c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.

     d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence and the caller is unable to enter a password since the system interprets the password as a mailbox number.

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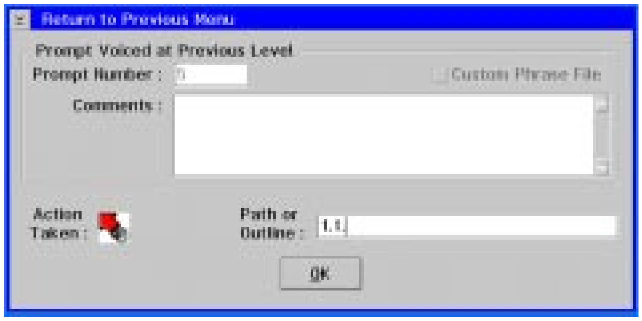
7. To save the entered information, click Save. The main Visual Architect window displays.

Return to Previous Menu

The Return to Previous Menu action allows callers to return to the last menu that had more than one option available. This feature allows the caller to perform an action on the system and then return to a previous menu to perform another action without having to call the mailbox again. For example, you can use this action to return to the beginning of a V-Tree that used single-option menus to record several messages on the system.

There are no prompts or variables that can be assigned to the Return to Previous Menu action, since this action only allows a caller to return to the previous menu. You can double-click the menu option to display the Return to Previous Menu dialog box, which displays the prompt number and comments from the previous menu and the sequence of options the caller selects to reach this action.



Instead of assigning this action to an option on the V-Tree, you can set up the More Options feature of the previous menu option to allow the caller to press <#> to return to the previous menu.

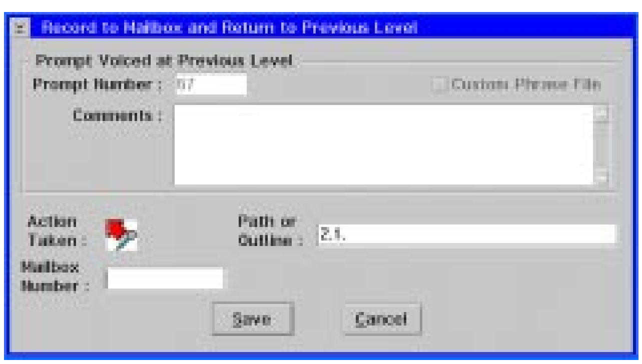
Record to Mailbox and Return to Previous Level

The Record to Mailbox and Return to Previous Level action allows callers to record a message in a mailbox, then return to the previous menu. This feature is useful when a caller wants to leave a message in a mailbox, yet wants to perform additional actions on the system before ending the call. Note that, when the caller selects this option, the caller hears a beep to begin recording a message. The prompt that voices this option to the caller should also instruct the caller to record a message.

To define the Record to Mailbox and Return to Previous Level action:

1. Assign the Record to Mailbox and Return to Previous Level action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.

2. Double-click the menu option that displays the Record to Mailbox and Return to Previous Level icon. The Record to Mailbox and Return to Previous Level dialog box displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.



The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

3. In the Mailbox Number field, enter the number of the mailbox in which you want the caller to record the message. Ensure that the mailbox has already been created before you enter the mailbox number for this action.

4. To save the entered information, click Save. The main Visual Architect window displays.

Record to Mailbox and Advance

The Record to Mailbox and Advance action allows callers to record a message in a mailbox, then advance to another menu in the V-Tree. For example, you can allow a caller to leave a message in a mailbox, then provide them with a new menu of options that allows them to leave additional messages in other mailboxes.

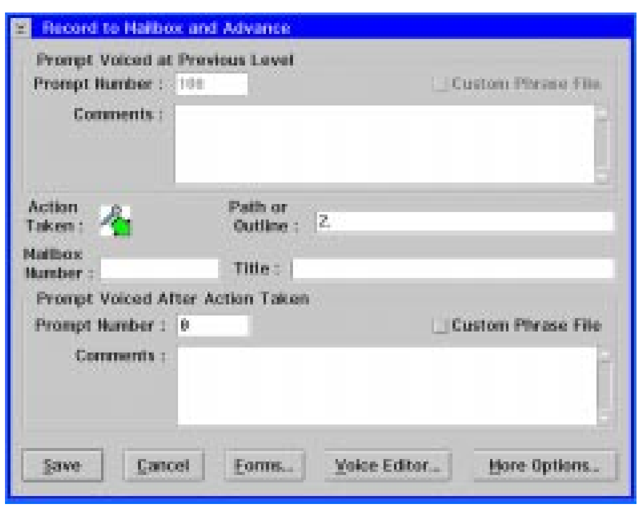
Note that you can assign this action to several menus on a V-Tree to allow callers to record a string of information to a mailbox, then use the Review/Edit Message action to edit all of the recorded information. This feature is available only if the Record to Mailbox and Advance actions are part of the same path of menus and all the messages are recorded to the same mailbox.

This option is useful in Form Filler V-Trees (Interview V-Trees).

To define the Record to Mailbox and Advance action:

1. Assign the Record to Mailbox and Advance action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.

2. Double-click the menu option that displays the Record to Mailbox and Advance icon. The Record to Mailbox and Advance dialog box displays the prompt number and comments from the previous menu as well as the sequence of options the caller selects to reach this action.



The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

3. In the Mailbox Number field, enter the number of the mailbox in which you want the caller to record the message. Ensure that the mailbox has already been created before you enter the mailbox number for this action.
4. In the Title field, enter a title for the option. The title displays next to the action icon to help you identify the purpose of this option on the V-Tree.

Steps 5 specifies the prompt that the caller hears after this action is performed on the system. This prompt can voice the options available on the next menu, provide special instructions on using the next available menu options, or simply provide the caller with information.

5. If a prompt has already been recorded to voice after this action, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for this option, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.
6. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action's dialog box to help you define each action.
7. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:
   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.
   - To allow callers to press <#> to log into a mailbox:
     a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.
     b. Select the Functions for Special Keys option if it is not selected.
     c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.
     d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence and the caller is unable to enter a password since the system interprets the password as a mailbox number.

8. To save the entered information, click Save. The main Visual Architect window displays.

Require Password to Proceed to Next Level

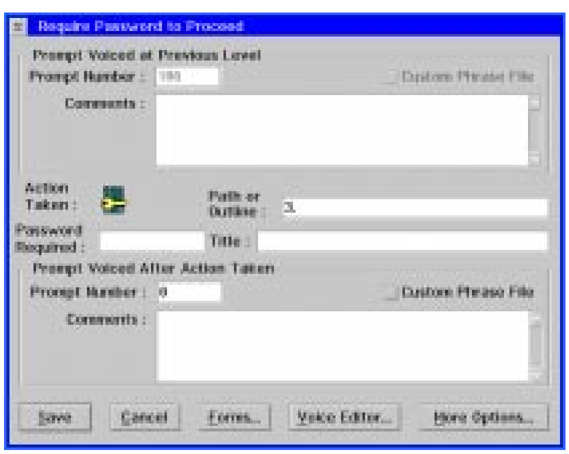
The Require Password to Proceed to Next Level action allows you to require callers to enter a password before they can advance to another menu. For example, you may want to use this action to allow only current customers to receive faxes from the system by requiring customers to enter a password before they can access the Fax Retrieval options of the V-Tree.

Note that, if a caller attempting to access a menu enters an incorrect password, the system handles the callers the same way as an incorrect password when logging into a mailbox. The way the incorrect password entry is handled depends on the how the system is set up.

To define the Require Password to Proceed to Next Level action:

1. Assign the Require Password to Proceed to Next Level action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.

2. Double-click the menu option that displays the Require Password to Proceed icon. The Require Password to Proceed dialog box displays the prompt number and comments from the previous menu, as well as and the sequence of options the caller selects to reach this action.



The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

3. In the Password Required field, enter the password the caller must enter to access the next menu.

Only one password can be assigned to the action. Each caller must enter the same password to access the next menu.

4. In the Title field, enter a title for the option. The title displays next to the action icon to help you identify the purpose of this option on the V-Tree.

Steps 5-6 specify the prompt that the caller hears after this action is performed on the system. This prompt can voice the options available on the next menu, provide special instructions on using the next available menu options, or simply provide the caller with information.

5. If a prompt has already been recorded to voice after this action, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for this option, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

6. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action’s dialog box to help you define each action.

7. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:

   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.

   - To allow callers to press <#> to log into a mailbox:

     a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.

     b. Select the Functions for Special Keys option if it is not selected.

     c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.

d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence and the caller is unable to enter a password since the system interprets the password as a mailbox number.

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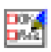
8. To save the entered information, click Save. The main Visual Architect window displays.



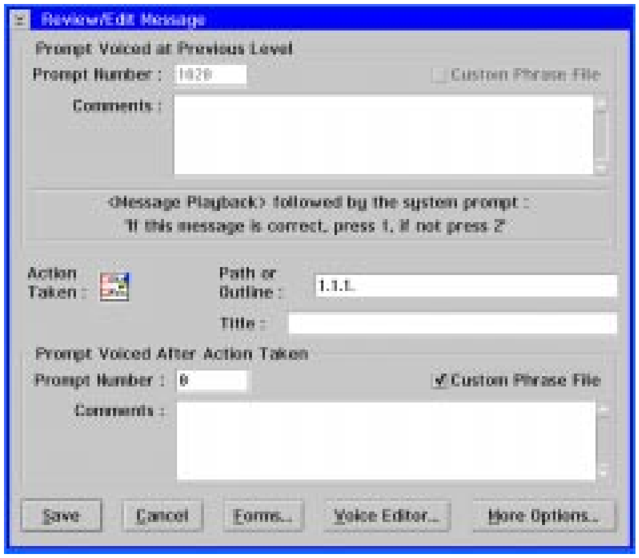
Review/Edit Message and Advance

The Review/Edit Message action allows callers who just recorded a message to review it and then either accept or rerecord it. The system automatically plays the recorded message, then voices, *"If this message is correct, press <1>, if not press <2>."* If the caller presses <1>, the message is saved and the caller is advanced to the next menu. If the caller presses <2>, the prompt for the previous option voices, prompting the caller to begin rerecording the message.

The Review/Edit action does not need to be assigned to each menu after a message is recorded to a mailbox. You can use one Review/Edit Message action at the end of several Record to Mailbox and Advance actions to allow callers to record a string of information to a mailbox, then edit all of the recorded information. This feature is only available if the Record to Mailbox and Advance actions are part of the same path of menus and all the messages are recorded to the same mailbox.

To define the Review/Edit Message action:

1. Assign the Review/Edit Message action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.
2. Double-click the menu option that displays the Review/Edit Message icon. The Review/Edit Message dialog box displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.



The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

3. In the Title field, enter a title for the option. The title displays next to the action icon to help you identify the purpose of this option on the V-Tree.

Steps 4 specifies the prompt that the caller hears after this action is performed on the system. This prompt can voice the options available on the next menu, provide special instructions on using the next available menu options, or simply provide the caller with information.

4. If a prompt has already been recorded to voice after this action, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for this option, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

5. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action’s dialog box to help you define each action.

6. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:

   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.

- To allow callers to press <#> to log into a mailbox:
  a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.
  b. Select the Functions for Special Keys option if it is not selected.
  c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.
  d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence and the caller is unable to enter a password since the system interprets the password as a mailbox number.

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7. To save the entered information, click Save. The main Visual Architect window displays.

Send a Requested Fax and Advance

The Send a Requested Fax and Advance action allows callers to select a fax to receive from the system by entering the corresponding fax document number. The system prompts the caller to enter the fax document number and the number to which the caller would like the fax to be sent. After the caller enters the requested information, the caller advances to the next option. For additional information, refer to the topic, "Managing Fax Retrieval Documents," later in this chapter.

This action requires that the caller know the fax document number. If the list of fax documents is extensive, you may want to send all callers a list of the fax documents and their numbers, or include an option that faxes the caller a list of the available fax documents and their corresponding numbers.

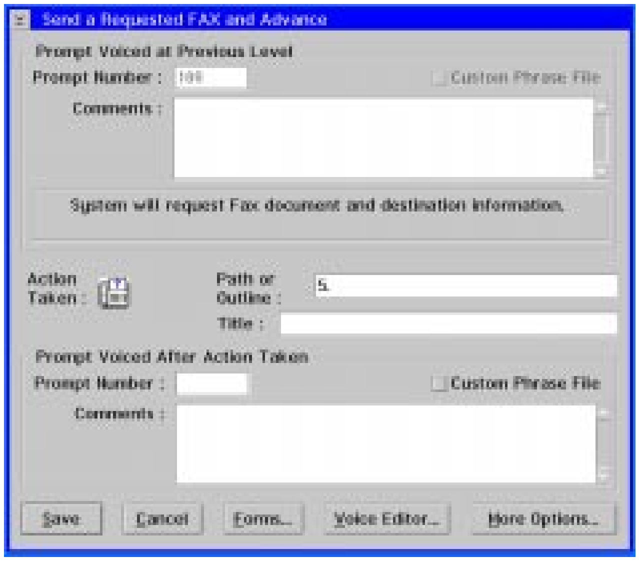
If you only have a few fax documents that a caller can retrieve, consider using the Send a Predefined Fax and Advance action so that the caller does not have to enter the fax document number.

This action is useful in Fax-on-Demand V-Trees.

To define the Send a Requested Fax and Advance action:

1. Assign the Send a Requested Fax and Advance action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.

2. Double-click the menu option that displays the Send a Requested Fax and Advance icon. The Send a Requested Fax and Advance dialog box displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.



The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

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3. In the Title field, enter a title for the option. The title displays next to the action icon to help you identify the purpose of this option on the V-Tree.

Steps 4 specifies the prompt that the caller hears after this action is performed on the system. This prompt can voice the options available on the next menu, provide special instructions on using the next available menu options, or simply provide the caller with information.

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4. If a prompt has already been recorded to voice after this action, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for this option, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

5. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options

the prompt voices as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action's dialog box to help you define each action.

6. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:
   - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.
   - To allow callers to press <#> to log into a mailbox:
     a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.
     b. Select the Functions for Special Keys option if it is not selected.
     c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.
     d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

   If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

   Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence and the caller is unable to enter a password since the system interprets the password as a mailbox number.

7. To save the entered information, click Save. The main Visual Architect window displays.

Send a Predefined Fax and Advance

The Send a Predefined Fax and Advance action allows callers to select a particular fax through a single keypress. For example, you can create a V-Tree that prompts the caller to, *"Press <1>to receive a fax on new products, press <2> to receive a fax on company locations, or press <3> to receive a fax on the company profile."* Note that the system automatically prompts the caller to enter the number to which the fax is to be sent. After doing so, the caller advances to the next menu. For additional information, refer to the topic, "Managing Fax Retrieval Documents," later in this chapter.

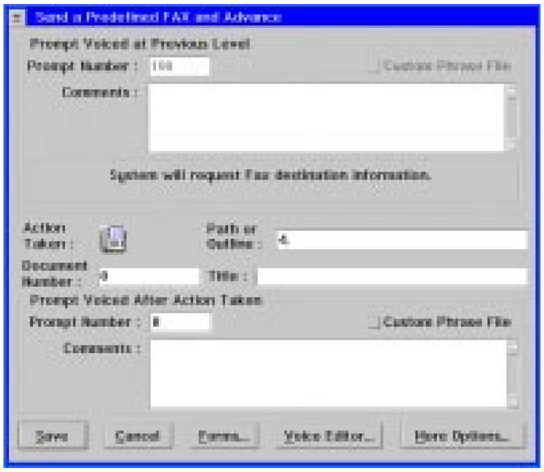
If the number of fax documents available is extensive, consider using the Send a Requested Fax and Advance action, which requires the caller to enter the fax document number.

This action is useful in Fax on Demand V-Trees.

To define the Send a Predefined Fax and Advance action:

1. Assign the Send a Predefined Fax and Advance action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.

2. Double-click the menu option that displays the Send a Predefined Fax and Advance icon. The Send a Predefined Fax and Advance dialog box displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.



The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

3. In the Document Number field, enter the fax document number of the fax to be sent when the caller selects this option.

4. In the Title field, enter a title for the option. The title displays next to the action icon to help you identify the purpose of this option on the V-Tree.

Steps 5 specifies the prompt that the caller hears after this action is performed on the system. This prompt can voice the options available on the next menu, provide special instructions on using the next available menu options, or simply provide the caller with information.

5. If a prompt has already been recorded to voice after this action, enter the prompt number in the Prompt Number field. If the prompt has been recorded and saved in the [Language]3 file with an .O32 file extension, where [Language] is the primary language on the system, enter the prompt number in the Prompt Number field and select the Custom Phrase File option to specify the location of the prompt. Otherwise, the system assumes the prompt is located in a \REC directory.

   If no prompt has been recorded for this option, click Voice Editor and record the prompt. For additional information, refer to the topic, "Recording a New Prompt for an Option on a V-Tree," later in this chapter.

6. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action's dialog box to help you define each action.

7. To specify V-Tree menu options, in addition to the nine options on the V-Tree menu, click More Options, then do either of the following:

    - To allow callers to press <#> to return to the previous menu or <0> to transfer to the operator, deselect the Functions for Special Keys option if it is selected, then click Save. The V-Tree Main Greeting dialog box displays.
    - To allow callers to press <#> to log into a mailbox:

        a. Press <0> to transfer to the operator, or enter a mailbox number to immediately transfer to that mailbox without selecting a V-Tree menu option.

        b. Select the Functions for Special Keys option if it is not selected.

        c. In the Dial Thru Timeout field, enter the number of seconds for the system to wait for a keypress. This enables the system to determine whether the caller is selecting a V-Tree menu option or entering a mailbox number.

        d. To save the value, click Save. The V-Tree Main Greeting dialog box displays.

    If you select the Functions for Special Keys option, you must enter a value other than zero in the Dial Thru Timeout field to provide callers with enough time to select a V-Tree option or to enter a mailbox number. It is recommended that you enter a value of only two or three seconds in the Dial Thru Timeout field to prevent the caller from having to wait too long after selecting an option.

    Dial Thru Timeout should not be activated for menus that include the Require Password to Proceed to Next Level action. When both the Dial Thru Timeout and the Require Password to Proceed to Next Level action are activated for a menu, the Dial Thru Timeout takes precedence and the caller is unable to enter a password since the system interprets the password as a mailbox number.

    ---

8. To save the entered information, click Save. The main Visual Architect window displays.

Disconnect

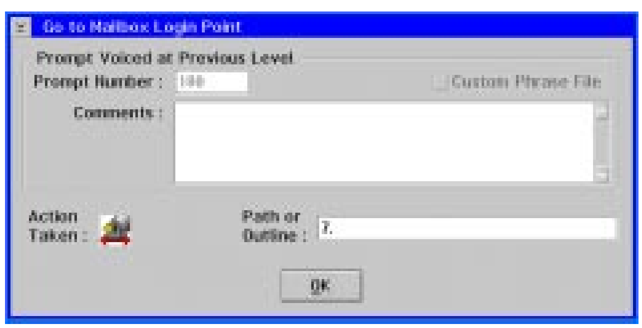
The Disconnect action allows callers to end calls to the system. When callers use this action to end a call, the system is able to free the port faster than if the caller were to simply hang up.

There are no prompts or variables to assign to the Disconnect action since it only allows a caller to disconnect from the system. You can double-click the menu option to display the Disconnect dialog box, which displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.

Go to Mailbox Login Point

The Go to Mailbox Login Point action allows callers to log into a mailbox as the mailbox subscriber. When a caller selects this action, the prompt, "*Please enter your mailbox number,*" voices, then prompts the caller to enter the mailbox password. This enables subscribers to quickly log into their mailbox from the V-Tree.

There are no prompts or variables to assign to the Go to Mailbox Login Point action, since it only allows a caller to log into their mailbox from the V-Tree by entering their mailbox number and password. You can double-click the menu option to display the Go to Mailbox Login Point dialog box, which displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.

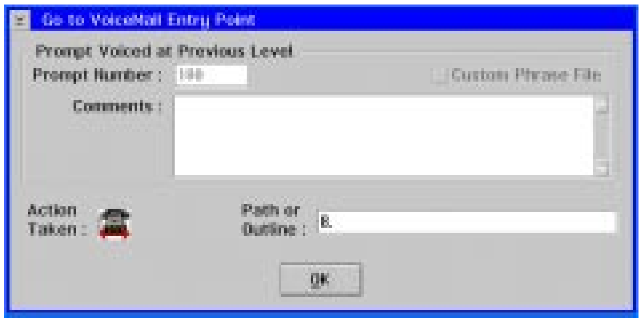


Instead of assigning this action to an option on the V-Tree, you can also set up the More Options feature of the previous menu option to allow the caller to press <#> to log into a mailbox.

Go to Voice Mail

The Go to Voice Mail action allows callers to enter a number for a mailbox in which they can record a message. Callers must know the mailbox number to record a message. Note that this action does not transfer the call to the mailbox's associated extension or allow the mailbox subscriber to log into the mailbox. This option only allows the caller to record a message in the entered mailbox.

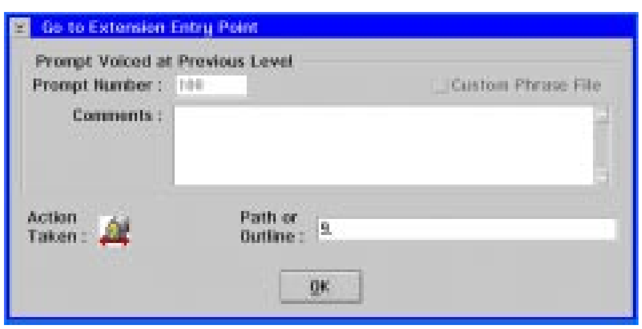
There are no prompts or variables to assign to the Go to Voice Mail action, since it allows a caller to record a message in a mailbox by entering the mailbox number. You can double-click the menu option to display the Go to Voice Mail dialog box, which displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.



Go to Extension Entry Point (Automated Attendant)

The Go to Extension Entry Point action allows callers to quickly return to the Automated Attendant for the system, no matter how many prior options or menus they have accessed. Note that the automated attendant feature should be set up on the system when you assign this action to a V-Tree.

There are no prompts or variables to assign to the Go to Extension Entry Point action since it only allows a caller to return to the automated attendant. You can double-click the menu option to display the Go to Extension Entry Point dialog box, which displays the prompt number and comments from the previous menu and the sequence of options the caller selects to reach this action.



 Go to Directory Services

The Go to Directory Services action allows callers to use the dial by name feature, which permits callers who do not know a subscriber's mailbox number to enter a subscriber name through the phone keypad. This action should only be used on systems that are set up to allow callers to access directory services.

There are no prompts or variables to assign to the Go to Directory Services action, since it only allows a caller to enter the subscriber's name rather than mailbox number to transfer to that subscriber's mailbox. You can double-click the menu option to display the Go to Directory Services dialog box, which displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.

 Transfer to a Mailbox

The Transfer to a Mailbox action allows callers to transfer to a specified mailbox. For example, you can use this action to transfer callers to a sales representative or to a mailbox that is blocked to another V-Tree.

To define the Transfer to a Mailbox action:

1. Assign the Transfer to a Mailbox action to a blank menu option. For additional information, refer to the topic, "Creating V-Trees," earlier in this chapter.
2. Double-click the menu option that displays the Transfer to a Mailbox icon. The Transfer to Mailbox dialog box displays the prompt number and comments from the previous menu, as well as the sequence of options the caller selects to reach this action.

The numbers in the Path or Outline field represent the keypresses the user must enter to access this option. The dots between the numbers signify a menu. For example, if the numbers in the field are 1.2.1, the caller must press <1>, then <2>, then <1> on the phone keypad to access this action after accessing this V-Tree.

3. In the Mailbox Number field, enter the number of the mailbox to which you want to transfer the caller. Ensure that the mailbox has already been created before you enter the mailbox number for this action.

4. To save the entered information, click Save. The main Visual Architect window displays.

Assigning Prompts to V-Trees

The following procedures assign prompts to options on a V-Tree created using Visual Architect. You can:

- Assign an existing prompt to an option on a V-Tree
- Record a new prompt for an option on a V-Tree

The prompts voiced by a V-Tree explain the options available from a menu and provide instructions on how to select them. For example, you may need to assign a prompt that explains how to enter a password or what information the caller should include in a message. It is extremely important that the prompts you record match the V-Tree options to prevent callers from becoming confused when choosing options. The prompts you record for a V-Tree should also sound similar and use the same syntax as the other prompts on the system.

Assigning an Existing Prompt to an Option on a V-Tree

Use this procedure to assign a prompt that has already been recorded to an option on the V-Tree. The prompt you use can be recorded using any of the recording tools provided on the system. For additional information, refer to Chapter 16, "Recording and Editing Prompts."

To assign an existing prompt to an option:

1. Double-click the option to which you want to assign a prompt. The dialog box displays.

2. If the prompt you want to assign is located in [Language]3.O32 file, where [Language] is the primary language on the system, select the Custom Phrase File option. Otherwise, the system assumes the prompt is located in a \REC directory.

3. Enter the prompt number for the prompt you want to assign to the option.

4. In the Comments field, enter a description of the prompt. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices, as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action’s dialog box to help you define each action.

5. To save the entered prompt and comments, click Save. The main Visual Architect window displays.

Recording a New Prompt for an Option on a V-Tree

Use this procedure to record a new prompt for an option on a V-Tree using Visual Architect. Visual Architect uses a limited version of Visual Voice Editor (V-Edit) to record prompts for V-Trees. Note that you can use any of the recording tools available on the system to record a new prompt, then simply assign the prompt to the option. For additional information, refer to Chapter 16, “Recording and Editing Prompts.”

To record a new prompt for an option:

1. Double-click the option for which you want to create a new prompt. The option’s dialog box displays.

2. In the Comments field, enter a description of the prompt you are recording. It is recommended that you enter an exact transcription of the prompt to provide a quick reference of what options the prompt voices, as well as any special instructions for selecting those options. Note that the comments you enter are displayed on each menu action’s dialog box to help you define each action.

Comments can also be entered directly on the Text window of V-Edit. Regardless of where the comments are entered, comments are saved with a .VXT file extension in the same directory and file as the prompt number.

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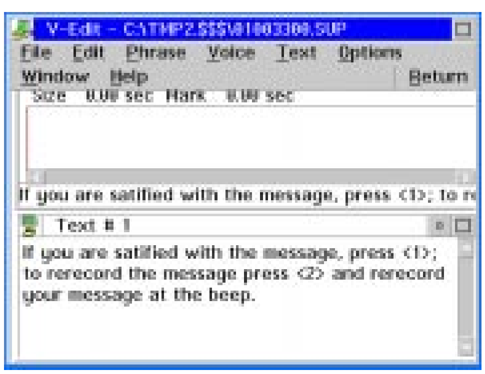
3. Click Voice Editor. V-Edit begins to run and the V-Edit Dialer dialog box displays.

4. Enter the extension for the phone from which you want to record the prompt, then click OK.

5. Answer the phone when it rings, then press <1> when prompted to continue logging into V-Edit. The main V-Edit window displays the comments that were entered for the option in the Text window.



6. From the Voice menu, select Record Phrase. The V-Editor # dialog box displays.

7. Click the Record button and begin recording the phrase when you hear the beep.
8. To end recording, click Stop. The phrase is saved and assigned the number displayed next to V-Editor # in the dialog box title bar. The Time field displays the length, in seconds, of the phrase you just recorded.
9. To listen to the phrase, click Play.
10. To rerecord the phrase, click Record. Begin recording the prompt when you hear the beep.
11. To close the V-Edit # dialog box, click OK. A graphical representation of the recording displays in the Voice window of the V-Editor main window.
12. To return to Visual Architect without closing V-Edit, click Return on the V-Edit window. This feature allows you to return to the V-Tree to record additional prompts without having to reenter V-Edit each time. To record another prompt, open the option's dialog box for which to record a prompt, click Voice Editor, then begin recording the prompt starting with step 6 of this procedure.
13. To close V-Edit, select Quit from the File menu, then hang up the phone. The option's dialog box displays the prompt number of the new phrase.
14. To save the new prompt and comments, click Save. The main Visual Architect window displays.

Activating and Deactivating the Call Handling for V-Trees

Use these procedures to activate or deactivate a V-Tree for a mailbox. When you activate a V-Tree for a mailbox, you specify conditions under which callers can access the V-Tree for the mailbox. If the V-Tree is not selected as one of the Call Handling options, callers cannot access the V-Tree. Using this technique, you can also deactivate a V-Tree to prevent callers from using a V-Tree without deleting the V-Tree.

The mailbox for which you want to activate the V-Tree must have the V-Trees and Call Handling options selected in its assigned class of service for a subscriber to be able to access and activate the V-Tree. The system manager can activate a V-Tree for a mailbox, even if the V-Trees and Call Handling options are not selected in the class of service, by setting the call handling in the subscriber settings. For additional information, refer to the topic, "Managing Subscriber Settings," in Chapter 17, "Managing System Mailboxes."

Activating a V-Tree for a Mailbox

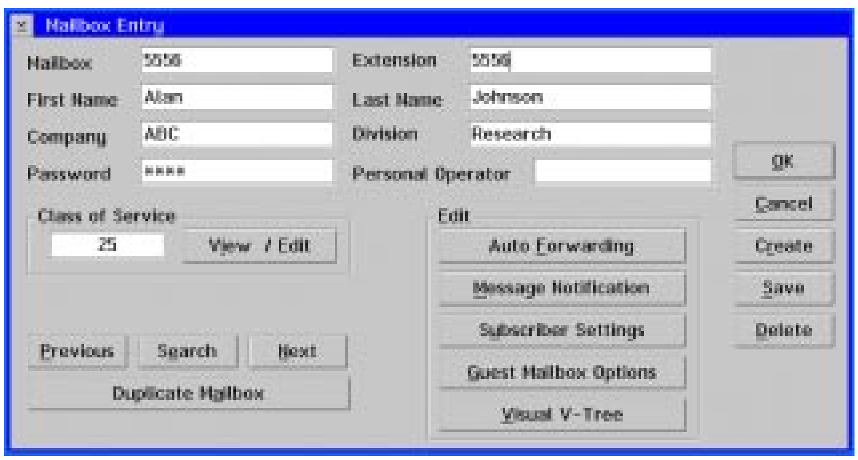
Use this procedure to activate a V-Tree for a mailbox. Once a V-Tree is activated, test the V-Tree to verify that it works appropriately and then callers can access it on the system. Note that the mailbox subscriber can also activate a V-Tree through the phone interface, if the V-Trees option is selected in the mailbox's assigned Class of Service.

Do not activate a V-Tree until you create a V-Tree for the mailbox. Callers cannot access the V-Tree on the system until it is created.

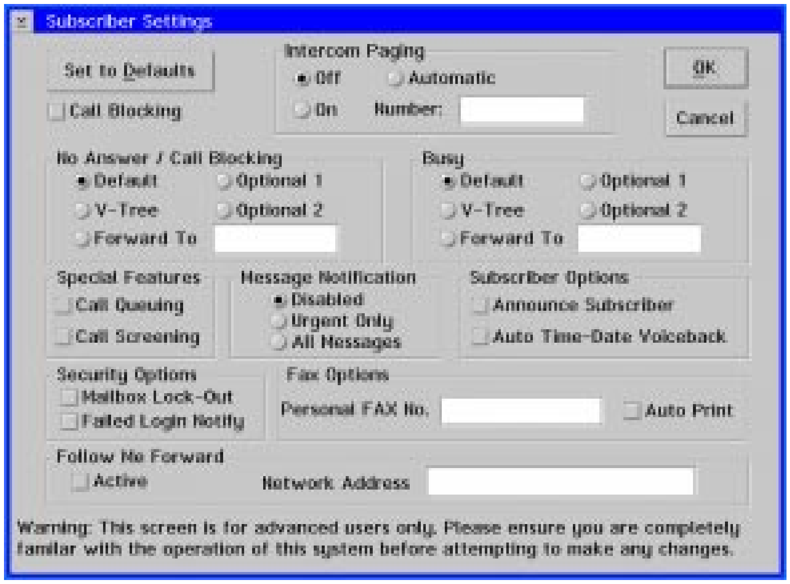
To activate a V-Tree for a mailbox:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

3. Enter the number of the mailbox for which you want to activate a V-Tree, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Click Subscriber Settings. The Subscriber Settings dialog box displays.



5. Select one of the following options:

   a. If you want calls to be immediately addressed by the V-Tree without having the system first ring the mailbox extension, select the Call Blocking option, then select the V-Tree option under No Answer/Call Blocking.

   b. If you want calls addressed by the V-Tree after there is no answer at the mailbox extension, do not select the Call Blocking option, then select the V-Tree option under No Answer/Call Blocking.

   c. If you want calls addressed by the V-Tree when the mailbox extension is busy, select the V-Tree option under Busy.

Only one V-Tree can be assigned to a mailbox, no matter which Call Handling options you select.

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6. To activate the V-Tree based on the entered subscriber settings, click OK. The Mailbox Entry dialog box displays.

7. To save all of the entered information, click Save.

8. To close the dialog box, click OK. The V-Tree is now active on the system and the main system window displays.

9. Call into the system and access the mailbox to verify that the V-Tree is activated correctly and that each prompt and option work appropriately. If the V-Tree is not functioning correctly, open the V-Tree and make the necessary changes.

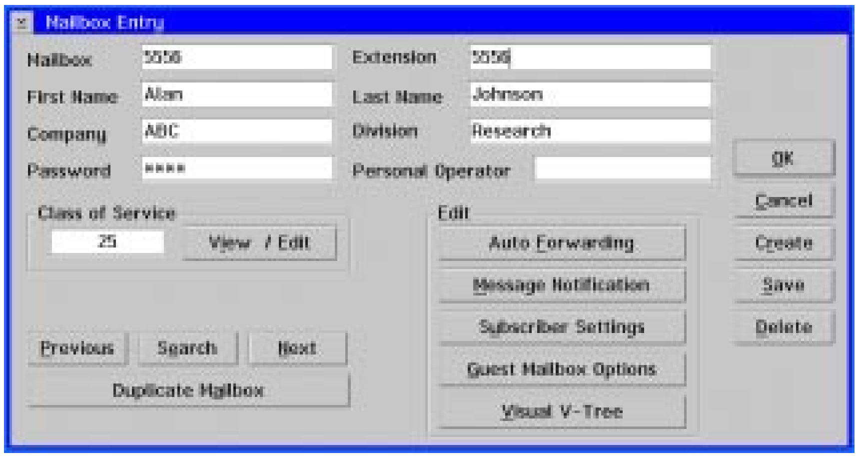
Deactivating a V-Tree for a Mailbox

Use this procedure to deactivate a V-Tree for a mailbox. This allows you to prevent callers to a mailbox from accessing the V-Tree without having to delete the mailbox V-Tree. Note that the mailbox subscriber can also deactivate a V-Tree even if the V-Trees option is not selected in the Class of Service assigned to the mailbox. The subscriber, however, cannot re-activate the V-Tree unless the V-Trees option in the Class of Service is selected.

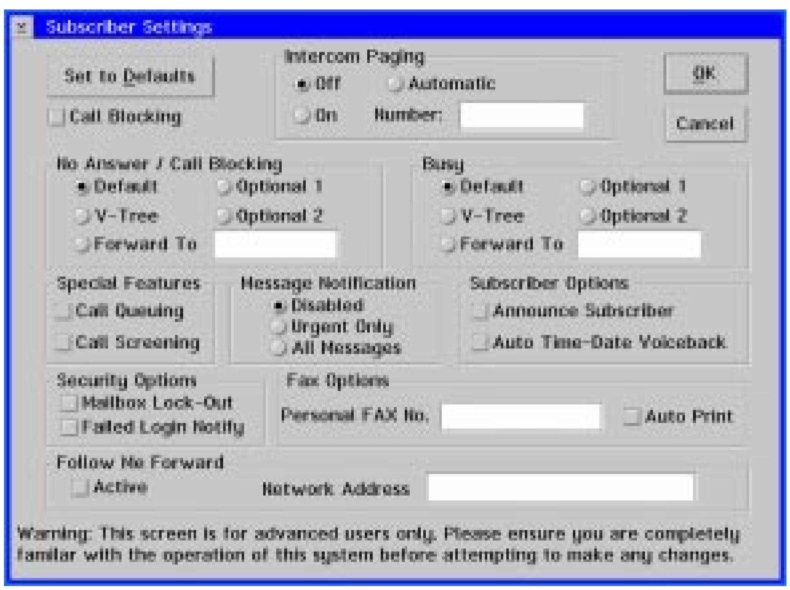
To deactivate a V-Tree for a mailbox:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

3. Enter the number of the mailbox for which you want to deactivate a V-Tree, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Click Subscriber Settings. The Subscriber Settings dialog box displays.



5. Select call handling options other than the V-Tree option. For additional information, refer to the topic, "Managing Subscriber Settings," in Chapter 17, “Managing System Mailboxes.”
6. To deactivate the V-Tree and assign the new call handling options to the mailbox, click OK. The Mailbox Entry dialog box displays.

7. To save all of the entered information, click Save.
8. To close the dialog box, click OK. The V-Tree is no longer active for the mailbox and the main system window displays.
9. Call into the system and access the mailbox to verify that calls to the mailbox are handled appropriately.

Opening a V-Tree

Use these procedures to open V-Trees to view or edit. You can:

- Open a mailbox V-Tree
- Copy a V-Tree file to a mailbox
- Open a V-Tree file from outside of a mailbox

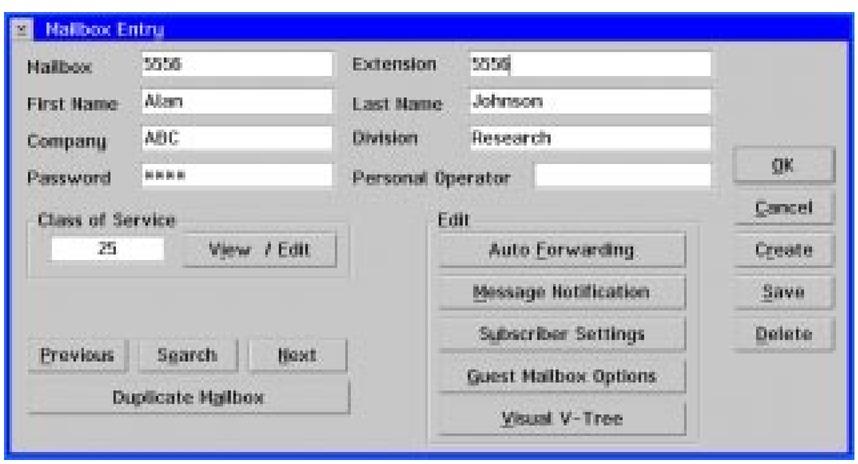
Opening a Mailbox V-Tree

Use this procedure to open a V-Tree that is assigned to a mailbox. You can open a mailbox V-Tree using Visual V-Tree or Visual Architect ,even if the V-Tree was created using the phone interface.

To open a mailbox V-Tree:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

3. Enter the number of the mailbox containing the V-Tree you want to open, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Under Edit, click Visual V-Tree. Visual V-Tree or Visual Architect starts, and the V-Tree assigned to the mailbox displays.

Copying a V-Tree File to a Mailbox

Use this procedure to copy a V-Tree file to a mailbox, using Visual Architect. This allows you to assign a V-Tree to a mailbox without having to create the V-Tree specifically for that mailbox. Once a V-Tree file is copied to a mailbox, you can edit the mailbox V-Tree.

Before you copy a V-Tree file to a mailbox, it is important to verify that the system does not already have prompts or fax documents with the same numbers as prompts or fax documents in the V-Tree you are copying. If duplicate numbers are found, the system automatically renames the prompt or fax document in the new V-Tree to the next available prompt or fax document number. You will then be required to edit the new V-Tree to specify the new prompt or fax document number. Note that this automatic renumbering occurs even if the two prompts or documents are the same.

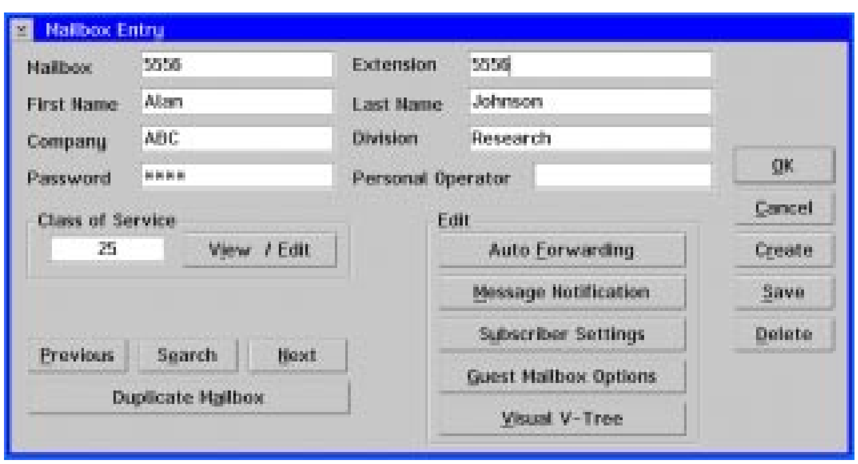
To verify that no prompts with the same number as prompts in the new V-Tree exist, compile a list of prompts used in the V-Tree you are copying and then check the prompts in the \REC01 - \REC09 directories to verify that there are no prompts with the same name. If there are, you should rename the prompt on the new V-Tree and modify the V Tree before copying it to the mailbox.

To verify that no fax documents with the same number as fax documents in the new V Tree exist, compile a list of fax documents used in the V-Tree you are copying and then check the files in the \FAX00 - \FAX09 directories to verify that there are no fax documents with the same name. If there are, you should rename the fax documents on the new V-Tree and modify the V-Tree before copying it to the mailbox.

To copy a V-Tree file to a mailbox:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

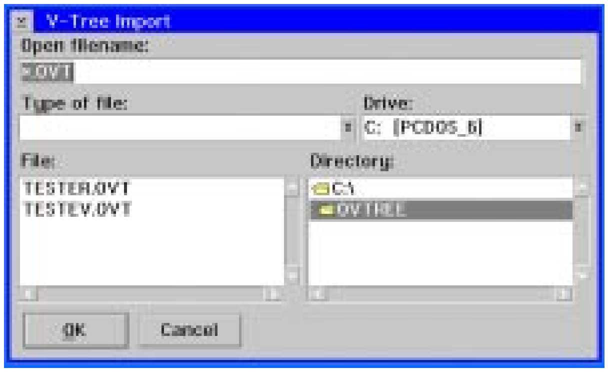
3. Enter the number of the mailbox to which you want to copy a V-Tree file, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Under Edit, click Visual V-Tree. Visual Architect starts, and the current V-Tree for the mailbox displays. If the mailbox does not currently have a V-Tree, a blank V-Tree displays.

5. From the File menu, select Import. A confirmation dialog box displays. Note that this dialog box displays even if a V-Tree has not been created for the mailbox.

6. To confirm that you want to replace the existing V-Tree with a V-Tree from a file, click Yes. The V-Tree Import dialog box displays.



7. Select the V-Tree file that you want to copy to the mailbox, then click OK. The V-Tree is copied from the V-Tree file to the mailbox.

8. To close Visual Architect, select Exit from the File menu. The Mailbox Entry dialog box displays. Note that Visual Architect automatically saves the V-Tree as you copy the V-Tree to the mailbox.

9. Activate the V-Tree for the mailbox. For additional information, refer to the topic, "Activating a V-Tree for a Mailbox," earlier in this chapter.

10. To close the Mailbox Entry dialog box, click OK. The V-Tree is active on the system and the main system window displays.

11. Call into the system and access the mailbox to verify that the V-Tree is activated correctly and each prompt and option work appropriately. If the V-Tree is not functioning correctly, open the V-Tree and make the necessary changes.

Opening a V-Tree File from Outside a Mailbox

Use this procedure to open a V-Tree file to view or edit. This feature allows you to edit a V-Tree without assigning it to a mailbox. You must have the Visual Architect Developer's Toolkit installed to open a V-Tree file.

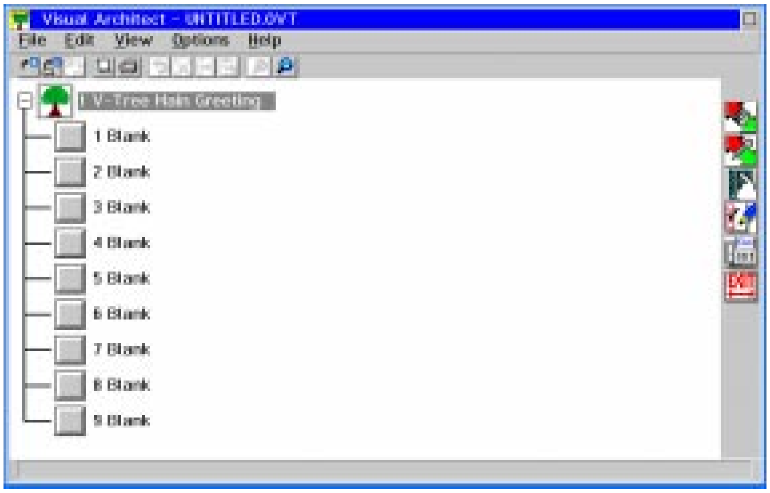
To open a V-Tree file from outside a mailbox:

1. Start M2000, if it is not running.

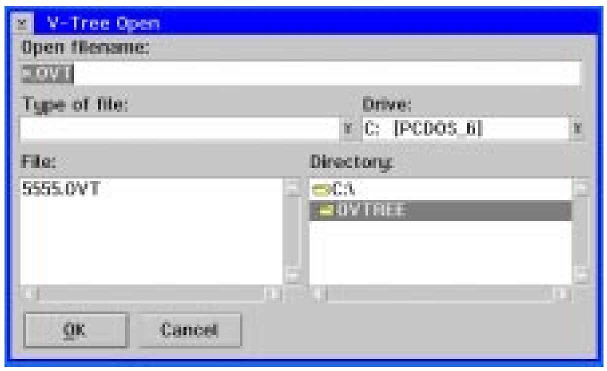
2. Open an OS/2 window.

3. From the C:\ prompt, type `CD CVR` then press <ENTER>.

4. From the \CVR prompt, type VTREE then press <ENTER>. Visual Architect starts, and a blank V-Tree displays.



5. From the File menu, select Open. The Open V-Tree dialog box displays.



6. Select the V-Tree file that you want to open, then click OK. The V-Tree displays.

Saving a V-Tree

The following procedures save V-Trees using Visual Architect. Mailbox V-Trees are automatically saved by the system as they are entered. V-Tree files, however, must be saved manually. You can:

- Save a mailbox V-Tree to a V-Tree file
- Save a V-Tree file
- Save a V-Tree file to another file

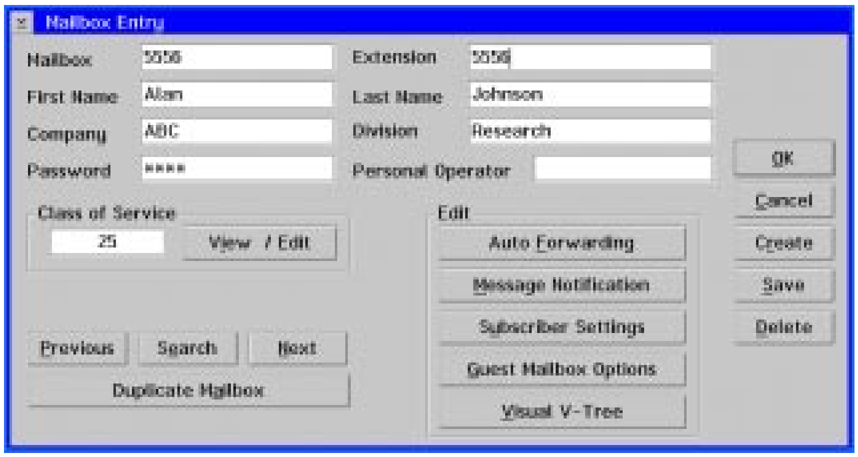
Saving a Mailbox V-Tree to a V-Tree File

Use this procedure to save a V-Tree assigned to a mailbox to a V-Tree file. This allows you to copy the V-Tree to another mailbox, so that you do not have to re-create the V-Tree in another mailbox.

To save a mailbox V-Tree to a V-Tree file:

1. Start M2000, if it is not running.
2. From the Mailbox menu, click Edit. The Edit Mailbox dialog box displays.

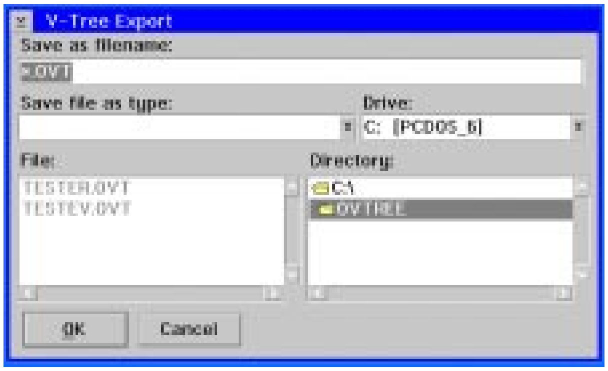
3. Enter the number of the mailbox for which you want to save a mailbox V-Tree to a V-Tree file, then click Edit. The Mailbox Entry dialog box displays the mailbox information.



4. Under Edit, click Visual V-Tree. Visual Architect starts, and the mailbox V-Tree displays.
5. To create the V-Tree file, select Export from the File menu. The Export Options dialog box displays.

6. Select the export option you want to use:
   a. To save all of the comments added to the V-Tree actions in the V-Tree file, select the Copy V-Tree Comments option.
   b. To save all of the prompts associated with the V-Tree in the V-Tree file, select the Copy V-Tree Prompts option.
   c. To save all of the faxes assigned to the V-Tree in the V-Tree file, select the Copy V-Tree Fax Documents option.

7. To save the V-Tree with the selected options in the V-Tree file, click OK. The V-Tree Export dialog box displays.



8. In the Save as filename field, enter a name for the file followed by an .OVT file extension.

9. In the Drive field, select the drive on which you want to save the V-Tree.

10. In the Directory field, select the directory in which you want to save the V-Tree.

11. To save the V-Tree with the entered name, drive, and directory, click OK. The V-Tree is saved, and you can now copy it to another mailbox or copy it for use on another system. For additional information, refer to the topic, "Copying a V-Tree File to a Mailbox," earlier in this chapter.

12. To close Visual Architect, select Exit from the File menu. The Mailbox Entry dialog box displays.

13. To close the Mailbox Entry dialog box, click OK. The main system window displays.

Saving a V-Tree File

Use this procedure to save a V-Tree file. V-Tree files are not automatically saved like mailbox V-Trees. You must manually save the V-Tree file to retain changes you make to the V-Tree.

To save a V-Tree file:

1. Open the V-Tree file, if it is not open.

2. Make the appropriate changes to the V-Tree.

3. From the File menu, select Save. The V-Tree file is saved with the new changes.

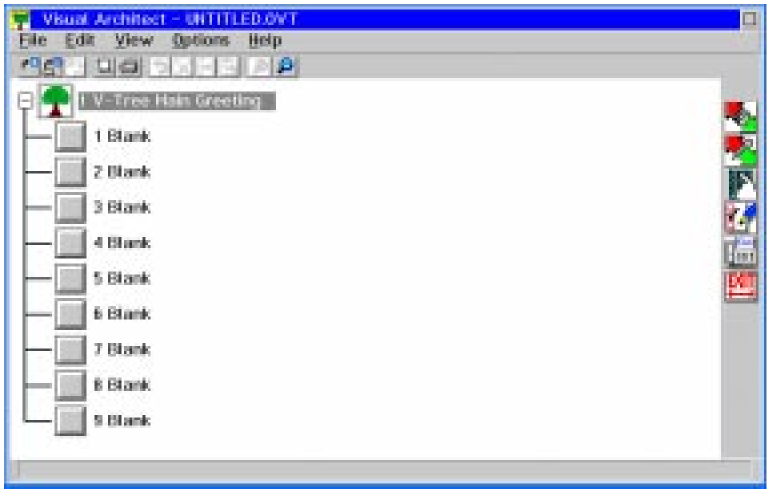
4. To close Visual Architect, select Exit from the File menu. Visual Architect closes.

Saving a V-Tree File to Another File

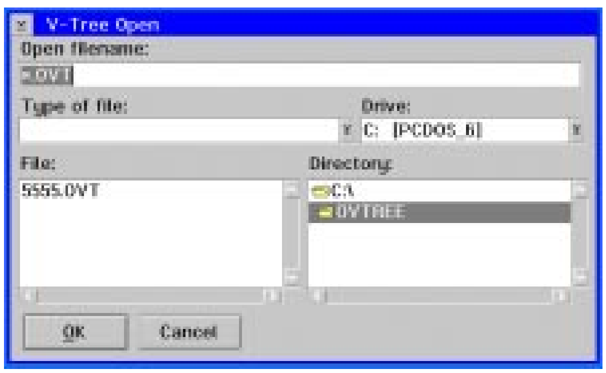
Use this procedure to save an existing V-Tree file to another V-Tree file. This allows you to quickly create a V-Tree file that is similar to an existing V-Tree, without having to create a new V-Tree (for example, if you only want to make slight modifications to the V-Tree without overwriting the original V-Tree file).

To save a V-Tree file to another file:

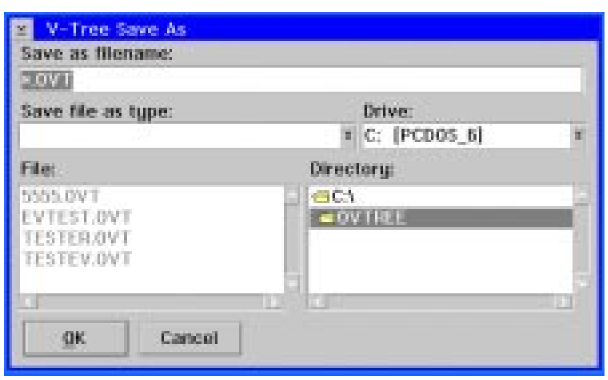
1. Start M2000, if it is not running.
2. Open an OS/2 window.
3. From the C:\ prompt, type `CD CVR` then press <ENTER>.
4. From the \CVR prompt, type `VTREE` then press <ENTER>. Visual Architect starts, and a blank V-Tree displays.



5. From the File menu, select Open. The Open V-Tree dialog box displays.



6. Select the V-Tree file that you want to open, then click OK. The V-Tree displays.
7. From the File menu, select Save As. The V-Tree Save As dialog box displays.



8. In the Save as filename field, enter a name for the file followed by an .OVT file extension.

9. In the Drive field, select the drive on which you want to save the V-Tree.

10. In the Directory field, select the directory in which you want to save the V-Tree.

11. To save the V-Tree with the entered name, drive, and directory, click OK. The Export Options dialog box displays.

12. Select one of the following export options:

    a. To save all of the comments added to the V-Tree actions in the V-Tree file, select the Copy V-Tree Comments option.

    b. To save all of the prompts associated with the V-Tree in the V-Tree file, select the Copy V-Tree Prompts option.

    c. To save all of the faxes assigned to the V-Tree in the V-Tree file, select the Copy V-Tree Fax Documents option.

11. To save the V-Tree with the selected options in the V-Tree file, click OK. The V-Tree file is now saved under a different name, and you can now modify it or copy it to another mailbox. For additional information, refer to the topic, "Copying a V-Tree File to a Mailbox," earlier in this chapter.

12. To close Visual Architect, select Exit from the File menu. Visual Architect closes.

Editing a V-Tree

Use these procedures to edit an existing V-Tree created using Visual Architect. You can:

- Edit action information
- Cut a menu option to the clipboard
- Copy a menu option to the clipboard
- Paste a menu option to the clipboard
- Delete a menu option

When editing V-Trees, ensure that the edits you make to the V-Tree are also reflected in the prompts voiced by the V-Tree. When you edit a menu option, all submenus under that option are also affected by the edit. For example, if you delete a menu option, all the submenus that extend from that option are also deleted.

It is recommended that you deactivate the call handling to the V-Tree for the mailbox before you edit the V-Tree to prevent callers from accessing a V-Tree that is being modified.

Editing V-Tree Action Information

Use this procedure to edit the information entered for an action in a V-Tree.

To edit action information:

1. Open the V-Tree you want to edit.
2. Double-click the action you want to edit. The corresponding action dialog box displays.
3. Make the changes necessary to the action. For additional information, refer to the topic, "Defining V-Tree Actions," earlier in this chapter.
4. To save the changes, click Save. The dialog box closes and the V-Tree changes are applied.

Cutting a V-Tree Menu Option to the Clipboard

Use this procedure to remove a menu option from a V-Tree menu and place it on the clipboard so you can paste the option in another location on the V-Tree. When you cut a menu option, all of the prompt numbers, comments, and variable information for the menu option and submenu options are also cut to the clipboard.

To cut a menu option:

1. Open the V-Tree you want to edit.
2. Click the menu option you want to cut from the V-Tree. A gray box displays around the option.
3. From the Edit menu, select Cut, or click the Cut toolbar button. A deletion confirmation dialog box displays.
4. To confirm that you want to cut the menu option and its submenu options and place it on the clipboard, click Yes. The menu option is cut from the V-Tree and placed on the clipboard, and a blank menu option displays.
5. If you close Visual Architect without pasting the cut menu option in the V-Tree, the menu option is deleted from the system. For additional information, refer to the topic, "Pasting a V-Tree Menu Option from the Clipboard," later in this chapter.

Copying a V-Tree Menu Option to the Clipboard

Copying a menu option on a V-Tree allows you to copy an option and all its submenus to the clipboard. Once copied you can paste this option and its menus in another part of the V-Tree. When you copy a menu option, all of the prompt numbers, comments, and variable information for the menu option and submenu options are also copied to the clipboard.

To copy a menu option:

1. Open the V-Tree you want to edit.
2. Click the menu option you want to copy. A gray box displays around the option.
3. From the Edit menu, select Copy, or click the Copy toolbar button. The menu option is copied to the clipboard.
4. If you close Visual Architect, the clipboard is automatically cleared of the copy of the menu option.

Pasting a V-Tree Menu Option from the Clipboard

Use this procedure to paste a menu option in a V-Tree from the clipboard.

To paste a menu option:

1. Open the V-Tree you want to edit.
2. Copy or cut the options you want to paste in the V-Tree, if you have not already done so.
3. Click the blank option to which you want to paste the contents from the clipboard. A gray box displays around the option.
4. From the Edit menu, select Paste, or click the Paste toolbar button. The menu options on the clipboard are pasted to the blank option.
5. Verify that each action that was pasted is defined appropriately in the V-Tree. For additional information, refer to the topic, "Defining V-Tree Actions," earlier in this chapter.

Deleting a V-Tree Option

Use the following procedure to delete a menu option from a V-Tree. Note that, when you select an option to delete, all actions on submenus under the option are also deleted.

To delete a V-Tree menu option:

1. Open the V-Tree you want to edit.
2. Click the menu option you want to delete. A gray box displays around the option.
3. From the Edit menu, select Delete, or press the Delete key. A deletion confirmation dialog box displays.
4. To delete the menu option, click Yes. The option is deleted from the V-Tree, and a blank option displays.
5. To undo the deletion of a menu option, you must immediately select Undo from the Edit menu. If you perform any action on the V-Tree after deleting a menu option, you cannot undo the deletion.

Deleting a V-Tree

Use these procedures to:

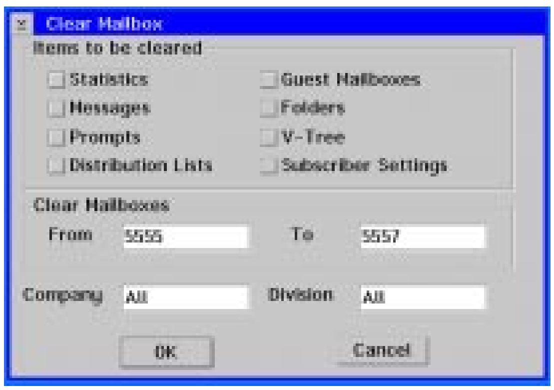
- Delete a mailbox V-Tree
- Delete a V-Tree file

Deleting a V-Tree from a Mailbox

Use this procedure to delete a V-Tree from a mailbox. If the system has the Visual Architect Developer's Toolkit installed and the V-Tree for the mailbox has also been saved to a V-Tree file, the file is not deleted when you complete this procedure. You must delete the file from the system using any of the file deletion features of OS/2.

To delete V-Trees from mailboxes:

1. From the Mailbox menu, select Clear. The Clear Mailbox dialog box displays.



2. Under Items to be cleared, select the V-Tree option.

To delete the V-Tree for a mailbox, the mailbox must be in the entered range of mailbox numbers, in the entered company, and in the entered division. If a mailbox only fits into one or two of the entered values, the mailbox V-Tree is not deleted. For example, if you include all mailbox numbers in the range of divisions and enter ABC for the company, only V-Trees in mailboxes in company ABC are deleted. V-Trees in mailboxes in all other companies, such as XYZ, are not deleted.

3. If you do not want to include all the system mailboxes in the range to delete, enter the number of the first mailbox number in the range you want to delete in the From field under Clear Mailboxes, and enter the last mailbox number in the range you want to delete in the To field. If you only want to delete a V-Tree for a single mailbox, enter that mailbox number in both the From and To fields.

The number entered in the From field must be equal to or smaller than the number entered in the To field.

4. In the Company field, enter the name of the company to clear or enter All to delete V-Trees for all companies on the system. If this field is left blank, the system includes all companies in the range.

5. In the Division field, enter the name of the division to clear or enter All to delete V-Trees for all divisions on the system. If this field is left blank, the system includes all divisions in the range.

6. To delete V-Trees based on the entered options, click OK. A clear mailbox confirmation dialog box displays.

7. Clear selected items as follows:

    a. To delete the V-Tree for only the displayed mailbox, click OK. The next mailbox in the range of mailboxes displays, or, if there are no more mailboxes in the range, the main system window displays.

    b. To retain the V-Tree for the displayed mailbox and continue with the next mailbox in the range, click Skip. The next mailbox in the range displays, or, if there are no more mailboxes in the range, the main system window displays.

    c. To delete all the V-Trees in the mailboxes in the range you specified without being prompted for each mailbox, click No Ask. All of the V-Trees in the mailboxes in the range are deleted and the main system window displays.

8. To cancel deleting any additional V-Trees in mailboxes, click Stop. No additional V-Trees in mailboxes in the range are deleted and the main system window displays. Note that all V-Trees in mailboxes that were deleted before you clicked Stop remain deleted.

Deleting a V-Tree File

To delete a V-Tree file from the system, use any of the deletion tools available in OS/2. A V-Tree file is deleted the same way as any other file in OS/2. Note that none of the mailbox V-Trees you created by copying this file to a mailbox are affected when you delete a V-Tree file.

Printing a V-Tree

Use this procedure to print a V-Tree created using Visual Architect. The M2000 PC must be attached and set up to use a printer to print a V-Tree. Note that Visual Architect automatically prints to the default printer for the PC.

To print a V-Tree:

1. Open the V-Tree you want to print.
2. From the File Menu, select Print. The Print dialog box displays.

3. To print the V-Tree as it appears on screen, select Graphical View under Print What, then click OK. A graphical representation of the report prints at a view of 100%.

   To quickly print a graphical view of the V-Tree, click the Graphical View toolbar button.

4. To print a text description of the V-Tree, select Report under Print What, then click OK. The report prints the title of each menu option, the prompt number voiced by that option, the comments entered for that option prompt, variable information, and the assigned actions. Note that blank menu options are not printed in the report.

   To quickly print a report for the V-Tree, click the Report toolbar button.

Changing the V-Tree Display

In Visual Architect, use these procedures to:

- Set display options
- Change the magnification of the displayed V-Tree
- Hide and display blank options on the V-Tree
- Expand and collapse menus

Setting V-Tree Display Options

Use this procedure to specify how V-Tree options are displayed. These options do not affect the V-Tree functions; they only change how options are displayed in Visual Architect.

To set display options:

1. Open the V-Tree you want to view.
2. From the Options menu, select Preferences. The Preferences dialog box displays.

3. Select display options as follows:
   a. To display the keypress that the caller must press to perform an action next to an option, select DTMF Selection for Option.
   b. To display the action name next to each menu option, select Action Name.
   c. To display the title for an action next to the menu option, select Node Title. Note that some actions, such as Disconnect, cannot have associated titles. If you do not enter a title for an option, the title for the option displays as Undefined.
   d. To display the action variables for the options that contain variables, select Action Variables. This displays the mailbox number or fax number that you enter for an action that requires a variable.
4. To save the entered options, click Save. The Visual Architect main window displays the V-Tree based on the display options selected.

Changing the V-Tree Magnification

Use this procedure to change the magnification of the displayed V-Tree. This feature enables you to view more or less of the V-Tree at one time by changing the magnification.

To change the magnification:

1. Open the V-Tree you want to view.
2. Select the desired V-Tree magnification as follows:
   a. To view the V-Tree at 50%, select Zoom, then 50% from the View menu.
   b. To view the V-Tree at 75%, select Zoom, then 75% from the View menu.
   c. To view the V-Tree at 100%, select Zoom, then 100% from the View menu. Note that the V-Tree is displayed at 100% by default.

You can also change the magnification by clicking the Zoom In or Zoom Out toolbar button to increase or decrease the magnification of the V-Tree by 25%, respectively.

Hiding and Displaying Blank V-Tree Options

Use this procedure to hide and display the blank options on a V-Tree. Blank options simply denote options that do not have actions assigned to them. To assign an action to a menu option, the blank options must be displayed so that you can drag actions to that menu option.

To hide and display blank options:

1. Open the V-Tree you want to view.
2. If the blank options are currently hidden, select Show Blank Nodes from the View menu to display the blank options. A check mark displays next to Show Blank Nodes and the blank options on the V-Tree display.

   If the blank options are currently displayed, select Show Blank Nodes from the View menu to hide the blank options. The check mark next to Show Blank Nodes is removed and the blank options on the V-Tree are hidden.

Expanding and Collapsing V-Tree Menus

You can control how much of a V-Tree displays at a time by expanding and collapsing options on the V-Tree. When you expand a portion of a V-Tree, you display all of the options available under another option. When you collapse a portion of the V-Tree, you hide all of the options under another option.

A plus sign icon next to an option on the V-Tree indicates that there are other options under that option. A minus sign icon denotes that all options under the option are displayed. If neither a plus or minus icon displays next to an option, there are no options under it.

To expand and collapse menus:

1. Open the V-Tree you want to view.
2. Specify how much of the V-Tree to display as follows:
   a. To collapse the entire V-Tree so that only the first menu of options display, select Collapse All from the View menu.
   b. To expand the entire V-Tree so that all menu options on all menus display, select Expand All from the View menu.
   c. To collapse only a portion of the V-Tree, click the option for which you want to hide all options under it, then click the minus sign icon ⊟ .
   d. To expand only a portion of the V-Tree, click the option for which you want to display options under it, then click the plus sign icon ⊞.

Managing Fax Retrieval Documents

The Fax Retrieval feature is available as part of the Fax Solution optional add-on module. Fax Retrieval allows you to set up the system to automatically fax documents to callers that request them from a V-Tree. With Fax Retrieval, people can call to request information quickly and easily by selecting from documents on frequently requested topics.

For example, you can instruct a caller to press <1> for a fax on the company's history, <2> for a fax on product information, or <3> for a fax of the product order form. Or, you can set up Fax Retrieval to provide callers with fact sheets on any product in the company's catalog simply by prompting the caller to enter a certain number, such as the catalog part number.

Using procedures provided in this chapter, you can:

- Add Fax Retrieval documents to the system
- Change the number of a Fax Retrieval document
- Update a Fax Retrieval document
- Set up a cover page for the fax documents
- Delete Fax Retrieval documents

For additional information on assigning the Fax Retrieval actions to a V-Tree, refer to the topics, "Send a Requested Fax and Advance," and, "Send a Predefined Fax and Advance," earlier in this chapter.

Before you can use the Fax Retrieval feature, you must:

- Install and configure the fax board on the M2000 PC.
- Set up the system to use the Fax Retrieval options.

- Create a mailbox to use as the storage location of documents for Fax Retrieval. In the Class of Service assigned to this mailbox, you must select the Fax Receive option and set the Days to Save a Saved Message option to 99 to save the faxes indefinitely. This mailbox number must also be specified in System Setup as the Fax Retrieval Storage Mailbox.
- Install and set up the FaxComm Fax Mail module to use Fax Retrieval to fax into the system.

Adding Fax Retrieval Documents

Use this procedure to add Fax Retrieval documents into the system. Fax documents are stored in a specified mailbox, with a storage capacity of 99,999 documents.

Before you begin to add Fax Retrieval documents, disable the header feature on the fax machine. Otherwise, the original header information will be transmitted every time that fax is retrieved. Fax machine header information includes the date and time the fax was originally faxed into the system, and should not be confused with the cover page that you can define. Refer to the fax machine documentation for information on disabling the fax machine header feature.

Note that every page of all documents prepared for use with Fax Retrieval should include identifying information on the sender (company name and phone number).

To add Fax Retrieval documents:

1. From a fax machine, load the first document in the fax machine’s tray as though you were faxing it, then dial the extension that connects to the system.
2. When the system answers, press <#> and log into a mailbox. You use the mailbox you log into to send fax documents from the fax machine to the fax storage mailbox. This mailbox must have the Fax Send feature available in its assigned Class of Service, so you can send faxes from the mailbox.
3. From the subscriber Main menu, press <2> to send a message.
4. When prompted, enter the number of the fax storage mailbox.
5. When prompted, record a short message describing the contents of the fax you are sending, then press <#> to end the recording. Note that this message is only used to help you identify fax documents in the fax storage mailbox. The message is not voiced to callers.
6. From the Delivery Options menu, press <*> to attach a fax to the message.
7. When prompted, press the <Start> button on your fax machine. The fax is sent to the mailbox.
8. Repeat steps 1-7 until the faxes have been sent to the mailbox storage mailbox, then log out of the mailbox.
9. From any extension, log into the fax storage mailbox, which now contains all of the documents you faxed to it.
10. Listen to the first message, then from the Message menu, press <0> for more options.

11. From the More Options menu, press <5> for Envelope Information. The system voices an 8-digit fax number.

The 8-digit fax number is only voiced as part of Envelope Information if the Fax V-Tree option is enabled in the mailbox's Class of Service. For more information on specifying class of service options, refer to the topic, "Class of Service Options," in Chapter 17, "Managing System Mailboxes."

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12. Record this number, along with a brief description of the fax or on a copy of the fax itself. This 8-digit number represents the fax document number and filename of the fax, which is what the system uses to retrieve the fax for a V-Tree. You will use the fax document number when assigning Fax Retrieval actions to a V-Tree. Keeping a record of the faxes and their fax document numbers is helpful should you decide to change the document numbers at a later time.

Do not specify the extra zeroes to the left of the fax document number when indicating fax document numbers in V-Trees. These extra zeroes are added by the system to create files with 8-digit filenames. A caller or the V-Tree creator does not need to enter these zeroes when specifying a fax.

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13. Repeat steps 10-12 until you have listened to all messages and recorded all the fax document numbers.
14. Log out of the mailbox. You can now assign Fax Retrieval actions to options on a V-Tree using the fax document numbers.

Changing the Number of a Fax Retrieval Document

Use this procedure to change the fax document number to a number you specify. For example, you can use this procedure to change the fax document numbers to match the catalog numbers of products, enabling customers using a V-Tree to receive a fax on a product by entering the product's catalog number.

If you do not know the document number of the fax you want to change, you can log into the Fax Retrieval storage mailbox, obtain envelope information for the first fax message and record the fax document number that is voiced, print the first fax message and record the fax document number on the printed fax, then repeat for each fax until the fax you want to change is printed.

To change the number of Fax Retrieval documents:

1. Identify the directory where the fax document file is stored on the system by recording the last digit of the fax document number. This number indicates the last number of the fax directories on the system.

   For example, if the fax document number is 00001005, the last digit of the fax document number is 5, and the file is stored in the \FAX05 directory as 00001005.TIF.

2. To change the number of the Fax Retrieval document, at the \CVR directory prompt, type `COPY \FAX0A\XXXXXXXA.TIF \FAX0B\YYYYYYYB.TIF`, where A is the last digit of the original fax document number, X is the original fax number, B is the fax

directory where you want to store the changed fax, and Y is the new fax document number.

For example, if you want to change the fax document numbered 0001005 to 00023456, type `COPY \FAX05\00001005.TIF \FAX06\00023456.TIF` at the \CVR directory prompt. Filenames must be 8 characters in length. If the filename is not 8 characters, it must be left-filled with zeros to fill 8 characters.

Do not specify the extra zeroes to the left of the fax document number when indicating fax document numbers in V-Trees. These extra zeroes are added by the system to create files with eight-digit filenames. A caller or the V-Tree creator does not need to enter these zeroes when specifying a fax.

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3. Press <ENTER>. The system changes the fax document number to the entered number.

Updating a Fax Retrieval Document

Use this procedure to replace an existing Fax Retrieval document with an updated version of the document. This procedure essentially involves deleting the old Fax Retrieval document that you want to replace, adding the new Fax Retrieval document on the system, then changing the number of the new document to the same number as the old Fax Retrieval document.

If you do not want to delete the old document from the system, you can simply add the new document to the system, then set the V-Tree options and the fax document numbers listed for callers to reflect the new fax document number.

If you do not know the document number of the fax you want to update, you can log into the Fax Retrieval Storage Mailbox, obtain envelope information for the first fax message and record the fax document number that is voiced, print the first fax message and record the fax document number on the printed fax, then repeat for each fax until the fax you want to update is printed.

To update a Fax Retrieval document:

1. Identify the directory where the old fax document file is stored on the system by recording the last digit of the fax document number. This number indicates the last number of the fax directories on the system.

   For example, if the fax document number is 00001005, the last digit of the fax document number is 5, and the file is stored in the \FAX05 directory where the system is installed as 00001005.TIF.

2. To delete the old Fax Retrieval document from the system, use any of the file deletion tools available in OS/2. A Fax Retrieval document file is deleted the same way as any other file in OS/2.

3. From a fax machine, load the document to be added to the system in the fax machine’s tray as though you were faxing it, then dial the extension that connects to the system.

4. When the system answers, press <#> and log into a mailbox. You use the mailbox you log into to send fax documents from the fax machine to the fax storage mailbox.

This mailbox must have the Fax Send feature available in its assigned class of service, so you can send faxes from the mailbox.

5. From the subscriber Main menu, press <2> to send a message.
6. When prompted, enter number of the fax storage mailbox.
7. When prompted, record a short message describing the contents of the fax you are sending, then press <#> to end the recording. Note that this message is only used to help you identify fax documents in the fax storage mailbox. The message is not voiced to callers.
8. From the Delivery Options menu, press <*> to attach a fax to the message.
9. When prompted, press the <Start> button on your fax machine. The fax is sent to the mailbox.
10. From any extension, log into the fax storage mailbox, which now contains the document you faxed to it.
11. Listen to the first message, then from the Message menu, press <0> for more options.
12. From the More Options menu, press <5> for Envelope Information. The system voices an 8-digit fax number.
13. Record this number. This 8-digit number represents the fax document number and filename of the fax, which is what the system uses to retrieve the fax for a V-Tree.

Do not specify the extra zeroes to the left of the fax document number when indicating fax document numbers in V-Trees. These extra zeroes are added by the system to create files with 8 digit filenames. A caller or the V-Tree creator does not need to enter these zeroes when specifying a fax.

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14. Log out of the mailbox.
15. To change the number of the new Fax Retrieval document to the old number, at the \CVR directory prompt, type `COPY \FAX0A\XXXXXXXA.TIF \FAX0B\YYYYYYYB.TIF`, where A is the last digit of the new fax document number, X is the new fax number, B is the fax directory where old fax document was stored, and Y is the old fax document number.

    For example, if you want to change the fax document numbered 0001005 to 00023456, type `COPY \FAX05\00001005.TIF \FAX06\00023456.TIF` at the \CVR directory prompt. Filenames must be 8 characters in length. If the filename is not 8 characters, it must be left-filled with zeros to fill 8 characters.
16. Press <ENTER>. The new fax document now has the same document number as the old fax document.

Setting Up a Cover Page for Faxes

Use this procedure to set up the system to automatically fax a cover page with every document. The cover page displays the number the caller entered as the destination for the fax and the caller's extension, if one was entered.

To set up a cover page:

1. Verify that the Use a Fax Cover Sheet option is selected on the Fax Parameters tab of System Setup. A cover page is now automatically sent with each fax.
2. If you want to add a logo or header to the top of the cover page, fax the logo or header into the system, then change the name of the fax document to HEADER.TIF and save it in the \CVR1 directory.

   Regardless of the size and contents of the header and footer files, the system always prints the information bar immediately after the header.

3. If you want to add a footer or logo to the bottom of the cover page, fax the logo or footer into the system, then change the name of the fax document to FOOTER.TIF and save it in the \CVR1 directory.

   You can also create a header or footer for the cover page by creating the file, saving it with a TIF/F format, then saving it as the HEADER.TIF file or FOOTER.TIF file in the \CVR1 directory. Note that the TIF/F format is not the same as the TIF format.

Deleting Fax Retrieval Documents

To delete a Fax Retrieval document from the system, use any of the file deletion tools available in OS/2. A Fax Retrieval document file is deleted the same way as any other file in OS/2 is deleted.

Notes:

CHAPTER 19

Using Network Messaging

One important feature of M2000 is its ability to communicate with other voice-mail systems. Procedures in this chapter will help you to:

- Send messages to other voice-mail systems
- Receive messages from other voice-mail systems
- Create network nodes
- Edit a network nodes
- Delete a network node
- Deactivate a node
- Activate a node
- Search for a network node
- Specify mailboxes on other voice-mail systems

Sending Messages to Other Voice Mail Systems

The Audio Messaging Interchange Specification (AMIS) and OctelNet are network protocols that allow M2000 to communicate with other voice-mail systems. Using AMIS or OctelNet, a M2000 subscriber can address and send voice-mail messages to a subscriber on another voice-mail system basically the same way the subscriber sends a message to another subscriber on the same system.

The AMIS protocol allows M2000 to communicate with virtually any other voice-mail system. Messages sent using AMIS can be Casual, meaning the sender addresses the message by specifying the entire phone number of the other voice-mail system and the destination mailbox number, or they can be Administered, meaning the sender specifies only the node number of the other voice-mail system and the destination mailbox number. A node number is simply a code that represents the complete phone number for another voice-mail system. You must set up node numbers in the M2000 system before subscribers attempt to use them to send messages to other voice-mail systems.

Though AMIS allows M2000 to communicate with other voice-mail systems, this protocol limits the options available to the subscriber sending the message. The subscriber cannot, for example, use the Message Confirmation or the Dial by Name features when sending AMIS messages.

The OctelNet protocol allows M2000 to communicate only with other systems that support OctelNet. This protocol, however, provides the subscriber with all of the options, except sending faxes, normally available when the message is sent to another subscriber on the same system, such as Message Confirmation and Dial by Name. As with Administered AMIS, subscribers using OctelNet need only enter node numbers and destination mailbox numbers when sending messages to other systems that support OctelNet.

To send a message to a voice-mail system that has no defined node number:

1. Log into the mailbox and record a message.

   If you hang up while recording, the message will *not* be sent because it has not been addressed.

2. At the prompt, *“Enter the destination...,”* press <#> <#>.
3. When prompted, enter the telephone number of the other voice-mail system, then press <#>.
4. When prompted, enter the destination mailbox number, then press <#>. A destination confirmation message voices.
5. To send the message using the Economy dispatch options set up for the mailbox, press <6>. Otherwise, the system automatically sends the message with the highest dispatch option available for the mailbox.
6. To send the message, press <#>. The message is sent to the entered destination.

Fax messages *cannot* be sent to another voice-mail system. If you attempt to send a message that includes a fax, only the voice message is sent to the other voice-mail system.

To send a message to a voice-mail system that has a defined node number:

1. Log into the mailbox and record a message.

   If you hang up while recording, the message will *not* be sent because it has not been addressed.

2. At the prompt, *"Enter the destination...,"* enter the destination node number and mailbox number. For example, to send a message to mailbox 1234 on the voice-mail system designated by node 324, enter 3241234.
3. When prompted, select the appropriate dispatch option. The message is sent based on the dispatch option you selected and the node setup.
4. To send the message using the Economy dispatch options set up for the mailbox, press <6>. Otherwise, the system automatically sends the message with the highest dispatch option available for the mailbox.
5. To send the message, press <#>. The message is sent to the entered destination.

Fax messages cannot be sent to another voice-mail system. If you attempt to send a message that includes a fax, only the voice message is sent to the other voice-mail system.

Receiving Messages from Other Voice Mail Systems

A message sent to a M2000 mailbox from another voice-mail system is received like any other message to the mailbox. The system manager on the other voice-mail system must simply set up a connection to M2000 to allow the two systems to communicate.

As long as M2000 is set up to receive network messages from other voice-mail systems, and the class of service enables a mailbox to receive messages, the mailbox can receive messages from all other voice-mail systems.

Creating a Network Node

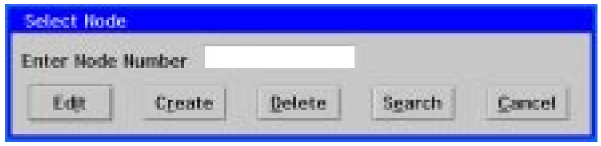
You can create two types of network nodes that allow the system to communicate with other voice-mail systems:

- AMIS nodes
- OctelNet nodes

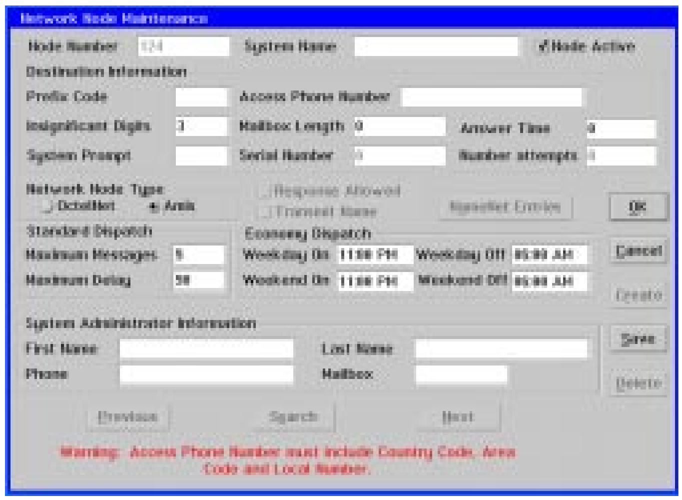
OctelNet nodes can only be created for use with another system that supports OctelNet. You can create multiple OctelNet nodes that use the same serial number. For additional information, see the topic, "Creating Multiple OctelNet Nodes for Another System," later in this chapter.

To create an AMIS node:

1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.



2. In the Enter Node Number field, enter the number of the node to create, then click Create. The Network Node Maintenance dialog box displays the node number in the Node Number field. Note that you must enter a number for the node in the Select Node dialog box since there is no default value, and it cannot begin with zero.



The number that a subscriber enters to send a message to another voice-mail system is comprised of the node number and the mailbox number on the other system. If the other system uses the same first number or numbers for all of the mailboxes, you can shorten the number the subscriber has to enter to send messages to the other system by including the common number(s) at the end of the node number you specify and changing the number of insignificant digits on the Network Node Maintenance dialog box. The insignificant digits value denotes the number of digits that are not part of the mailbox number.

For example, if all mailboxes on the other voice-mail system begin with a 7 and are four digits long, you can enter 347 as the node number, and specify that there are only two insignificant digits. To send a message to mailbox 7234 through that node, the subscriber enters 347234. If all the mailboxes on the other voice-mail system do not begin with a 7, however, the node number would be 347 and the insignificant digits would be the default value 3. To send a message to mailbox 7234 through the node, the subscriber must enter 3477234.

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3. In the System Name field, enter the name of the other voice-mail system. The system name is used to help locate a specific node using the search feature. If the system name is left blank, the Access Phone number is used for the system name.

The first eight characters of each system name *must be unique*.

---

4. To allow subscribers to use the node to send messages, select the Node Active option. This option enables you to turn a node on or off easily without deleting the node. When you turn the node off, subscribers cannot send messages to the other voice-mail system through the node, and all messages that were scheduled to be sent to that system are returned to the message sender with an appropriate message.

5. If there is an internal telephone network that allows users to call extensions on the other voice-mail system, enter the internal telephone network prefix for that location in the Prefix Code field. If there is not an internal telephone network set up for the other voice-mail system, do not change the default for the Prefix Code field. The prefix you enter can be up to three digits long.

6. In the Access Phone Number field, enter the number (up to 16 characters) to dial for the other voice-mail system. Note that this number must be unique on the system. Two AMIS nodes cannot be set up to dial the same phone number.

The access phone number *must* include the country code, area code, and local number of the other voice-mail system. For example, to create a node that has 1 for the country code, 941 as the area code, and 555-1234 for the local number, you must enter 19415551234 in the Access Phone Number field.

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7. If the node number includes the first number or numbers used for all the mailbox numbers on the other voice-mail system, enter the number of digits from the left before the common mailbox number(s) in the Insignificant Digits field. For example, if all mailboxes begin with a 7 and the node number is 347, enter 2 in the Insignificant Digits field to specify that the 7 in the node number is part of the mailbox number.

8. In the Mailbox Length field, enter the number of digits in the mailbox number on the other system. This value determines how many numbers the subscriber has to enter to specify the message destination mailbox. If the subscriber does not enter the correct number of digits for this voice-mail system’s mailboxes, the system prompts the subscriber to reenter the number.

The total number of digits the subscriber must enter to send a message to a node is determined by adding the number of insignificant digits to the number of digits in the mailbox number.

---

9. To override call progress when the system calls the other voice-mail system, enter the number of seconds the system should wait before messages are sent in the Answer Time field. It is recommended that you change this value from the default value of zero only when the system is unable to send messages to the system with call progress active.

Use caution when overriding call progress. The system calls the other voice-mail system and waits the number of seconds entered in the Answer Time field. If this value is set too high, such as the maximum 999, the system uses a port on the system for over 15 minutes, preventing the system from using that port for logging calls or performing system maintenance.

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10. In the System Prompt field, enter the number of the prompt that is voiced when subscribers send messages to this voice system. Note that this prompt must be recorded using SOLVE. For additional information, see the topic, "Recording and Editing Prompts Using SOLVE," in Chapter 16, “Recording and Editing Prompts.”

11. Under Network Node Type, select AMIS to specify that this is an AMIS node.

The Standard Dispatch and Economy Dispatch options on this dialog box allow you to override the dispatch options set up for the system. For example, you may alter the economy dispatch options to send messages to voice-mail systems in other time zones to enable subscribers to receive messages during normal business hours in their particular time zone.

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12. In the Maximum Messages field, enter the number of messages that should be marked for dispatch to this node before the system sends all the messages to the node. This allows the system to send multiple messages at one time, reducing long-distance fees.
13. In the Maximum Delay field, enter the number of minutes that should be marked for dispatch to this node before the system sends all the messages to the node. This allows you to set a maximum time limit on how long a message can wait before it is sent to the other voice-mail system.

All messages marked for standard dispatch through a node are sent when either the maximum number of messages is reached, or the first message marked for dispatch exceeds the maximum delay value, whichever occurs first.

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14. Under Economy Dispatch, in the Weekday On field, enter the time of day to begin the economy dispatch for weekdays. Economy dispatch options allow you to specify the time when it is most economical to send messages to other voice-mail systems, based on long distance fees.
15. Under Economy Dispatch, in the Weekday Off field, enter the time of day to end the economy dispatch for weekdays.
16. Under Economy Dispatch, in the Weekend On field, enter the time of day to begin economy dispatch on weekends.
17. Under Economy Dispatch, in the Weekend Off field, enter the time of day to end the economy dispatch on weekends.

If a weekday time frame extends past midnight, the economy dispatch extends to that time on Saturday morning. This also applies if the weekend time frame extends past midnight. The economy dispatch then extends into Monday morning.

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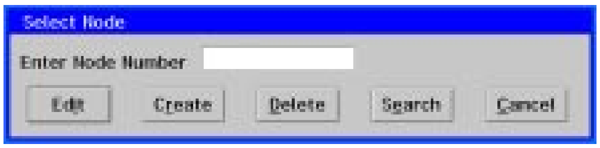
18. Under System Administrator Information, in the First Name field, enter the first name of the person responsible for maintaining the other voice-mail system.
19. Under System Administrator Information, in the Last Name field, enter the last name of the person responsible for maintaining the other voice-mail system.
20. Under System Administrator Information, in the Phone Number field, enter the phone number of the person responsible for maintaining the other voice-mail system.
21. Under System Administrator Information, in the Mailbox field, enter the mailbox number of the person responsible for maintaining the other voice-mail system.

The System Administrator Information is for your information only. By entering the appropriate information, you can keep a record of the person responsible for maintaining the other voice-mail system.

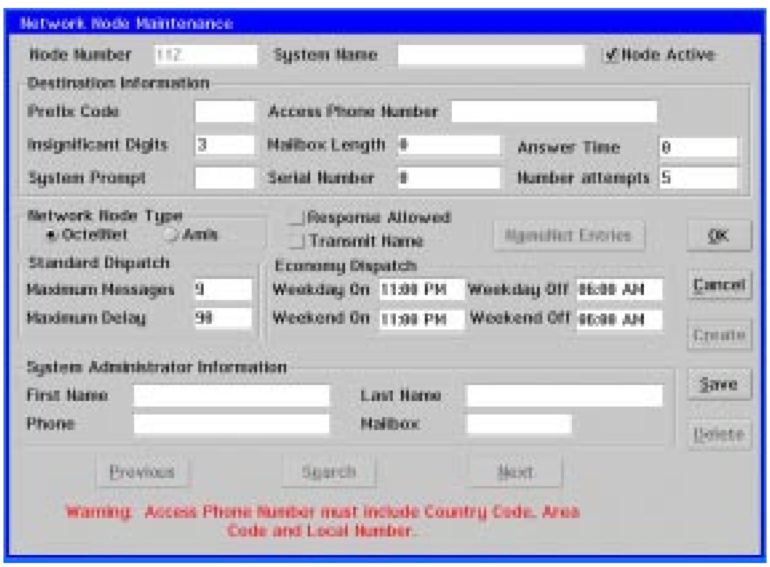
22. To save the node with the entered values, click Save. The node is created with the entered values.
23. To create another node, click Create, then when the Select Node dialog box displays, follow steps 2 – 22.
24. To view other nodes, click Previous or Next.
25. To close the dialog box, click OK. The main window displays.

To create an OctelNet node:

1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.



2. In the Enter Node Number field, enter the number of the node to create, then click Create. The Network Node Maintenance dialog box displays the node number in the Node Number field. Note that you must enter a number for the node since there is no default value, *this number must be unique and cannot begin with zero*.



The number that a subscriber enters to send a message to another voice-mail system is comprised of the node number and the mailbox number on the other system. If the other system uses the same first number or numbers for all of the mailboxes, you can shorten the number that the subscriber has to enter to send messages to the other system by including the repeated number at the end of the node number you specify and changing the number of insignificant digits on the Network Node Maintenance dialog box. The insignificant digits value denotes the number of digits that are not part of the mailbox number.

For example, if all mailboxes on the other voice-mail system begin with a 7 and are four digits long, you can enter 347 as the node number, and specify that there are only two insignificant digits. To send a message to mailbox 7234 through that node, the subscriber enters 347234. If all the mailboxes on the other voice-mail system do not begin with a 7, however, the node number would be 347, and the insignificant digits would be the default value 3. To send a message to mailbox 7234 through the node, the subscriber must enter 3477234.

3. In the System Name field, enter the name of the other voice-mail system. The system name is used to help locate a specific node using the search feature. If the system name is left blank, the Access Phone number is used for the system name.

The first eight characters of each system name must be unique.

4. To allow subscribers to use the node to send messages, select the Node Active option. This option enables you to turn a node on or off easily without deleting the node. When you turn the node off, subscribers cannot send messages to the other voice-mail system through the node, and all messages that were scheduled to be sent to that system are returned to the message sender with an appropriate message.
5. If there is an internal telephone network that allows users to call extensions on the other voice-mail system, enter the internal telephone network prefix for that location in the Prefix Code field. If there is not an internal telephone network set up for the other voice-mail system, do not change the default for the Prefix Code field. The prefix you enter can be up to three digits long.
6. In the Access Phone Number field, enter the number (up to 16 characters) to dial for the other voice-mail system.

The access phone number must include the country code, area code, and local number of the other voice-mail system. For example, to create a node that has 1 for the country code, 212 as the area code, and 555-1234 for the local number, you must enter 12125551234 in the Access Phone Number field.

7. If the node number includes the first number or numbers used for all the mailbox numbers on the other voice-mail system, enter the number of digits from the left before the common mailbox number(s) in the Insignificant Digits field. For example, if all mailboxes begin with a 7 and the node number is 347, enter 2 in the Insignificant Digits field to specify that the 7 in the node number is part of the mailbox number.
8. In the Mailbox Length field, enter the number of digits in the mailbox number on the other system. This value determines how many numbers the subscriber has to enter to specify the message destination mailbox. If the subscriber does not enter the

correct number of digits for this voice-mail system's mailboxes, the system prompts the subscriber to reenter the number.

The total number of digits the subscriber must enter to send a message to a node is determined by adding the number of insignificant digits to the number of digits in the mailbox number.

9. To override call progress when the system calls the other voice-mail system, enter the number of seconds the system should wait before messages are sent in the Answer Time field. It is recommended that you change this value from the default value of zero only when the system is unable to send messages to the system with call progress active.

   Use caution when overriding call progress. The system calls the other voice-mail system and waits the number of seconds entered in the Answer Time field. If this value is set too high, such as the maximum 999, the system uses a port on the system for over 15 minutes, preventing the system from using that port for logging calls or performing system maintenance.

10. In the System Prompt field, enter the number of the prompt that is voiced when subscribers send messages to the M2000 system. Note that this prompt must be recorded using SOLVE. For additional information, see the topic, "Recording and Editing Prompts Using SOLVE," in Chapter 16, “Recording and Editing Prompts.”

    The Serial Number for the node is only used for OctelNet nodes and is automatically retrieved by the system from the other voice-mail system the first time a message is sent. This number is simply used to identify the unique serial number of the sentinel used by the other voice-mail system.

11. In the Number Attempts field, enter the number of times the system should attempt to connect with the other voice-mail system to send a message. An unsuccessful attempt occurs when the necessary DTMF signal is not received from the other voice-mail system. If the system fails to connect with the other voice-mail system after the number of times specified in this field, any message that was scheduled to be sent to that system is returned to the message sender with an appropriate message, and the node is deactivated.
12. Under Network Node Type, select OctelNet to specify that this is an OctelNet node.
13. To facilitate the turnaround time of network message delivery, select the Response Allowed option. When the voice-mail system is dispatching messages to another voice-mail system, this option allows the sending system to collect any messages queued for dispatch to it during the same call. Note, however, that this option may lead to an increase in the toll charges incurred by the sending system.
14. To have the message sender's Name prompt voice to the message recipient during playback before each message that subscribers send, select the Transmit Name option.
15. To enter NameNet entries, which allow subscribers to hear mailbox Name prompts and use the Dial by Name feature to send messages to mailboxes on the other voice-mail system, you must first click Save, then click NameNet. When the NameNet dialog

box displays, enter the appropriate mailbox numbers. For additional information, see the topic, "Specifying Mailboxes on Other OctelNet Systems," later in this chapter.

The Standard Dispatch and Economy Dispatch options on this dialog box allow you to override the dispatch options set up for the system. For example, you may alter the economy dispatch options to send messages to voice-mail systems in other time zones to enable subscribers to receive messages during normal business hours in their particular time zone.

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16. In the Maximum Messages field, enter the number of messages that should be marked for dispatch to this node before the system sends all the messages to the node. This allows the system to send multiple messages at one time, reducing long-distance fees.
17. In the Maximum Delay field, enter the number of minutes that should be marked for dispatch to this node before the system sends all the messages to the node. This allows you to set a maximum time limit on how long a message can wait before it is sent to the other voice-mail system.

All messages marked for standard dispatch through a node are sent when either the maximum number of messages is reached, or the first message marked for dispatch exceeds the maximum delay value, whichever occurs first.

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18. Under Economy Dispatch, in the Weekday On field, enter the time of day to begin the economy dispatch for weekdays. Economy dispatch options allow you to specify the time when it is most economical to send messages to other voice-mail systems, based on long distance fees.
19. Under Economy Dispatch, in the Weekday Off field, enter the time of day to end the economy dispatch for weekdays.
20. Under Economy Dispatch, in the Weekend On field, enter the time of day to begin economy dispatch on weekends.
21. Under Economy Dispatch, in the Weekend Off field, enter the time of day to end the economy dispatch on weekends.

If a weekday time frame extends past midnight, the economy dispatch extends to that time on Saturday morning. This also applies if the weekend time frame extends past midnight. The economy dispatch then extends into Monday morning.

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22. Under System Administrator Information, in the First Name field, enter the first name of the person responsible for maintaining the other voice-mail system.
23. Under System Administrator Information, in the Last Name field, enter the last name of the person responsible for maintaining the other voice-mail system.
24. Under System Administrator Information, in the Phone Number field, enter the phone number of the person responsible for maintaining the other voice-mail system.
25. Under System Administrator Information, in the Mailbox field, enter the mailbox number of the person responsible for maintaining the other voice-mail system.

The System Administrator Information is for your information only. By entering the appropriate information, you can keep a record of the person responsible for maintaining the other voice-mail system.

26. To save the node with the entered values, click Save. The node is created with the entered values.
27. To create another node, click Create, then when the Select Node dialog box displays, follow steps 2 – 26.
28. To view other nodes, click Previous or Next.
29. To close the dialog box, click OK. The main system window displays.

Creating Multiple OctelNet Nodes for Another System

Each M2000 system is assigned a unique serial number, stored on the sentinel that identifies the system. You can create multiple OctelNet nodes for each serial number. This is useful if another system has more than one telephone access number, and you want to create a node for each of the numbers.

Consider the following points before assigning the same serial number to multiple OctelNet nodes:

- On the Network Node Maintenance dialog box, you must configure all nodes assigned the same serial number with the same Network Node Type, Network Prefix, Standard Dispatch, and Number Attempts settings.

  This is necessary because the M2000 system places messages in dispatch queues based on the Access Phone Number and the dispatch method. For each Access Phone Number, there are three possible dispatch queues: economy, queued, and priority. When the M2000 system dispatches the messages, it uses the node information for the first node that matches the access phone number. Therefore, if each node is configured differently, the system may use incorrect information to send to the other nodes, and the dispatch attempt to those nodes may not be successful.

- You must assign the same System Prompt number to each node associated with a particular serial number. During message receipt or reply, the system voices the prompt for the first node it finds that matches the serial number. If there are multiple nodes assigned to the serial number, and there are different System Prompts assigned, the wrong prompt may be voiced.

  Also, there will be multiple NameNet entries for each mailbox on remote systems for which you create multiple nodes because NameNet entries are based on node numbers instead of serial numbers. When a subscriber sends a message to a mailbox at one of the nodes, the system voices the destination confirmation information for the first match of the entry that it locates, even if it is for a different node from the one to which the subscriber is sending the message.

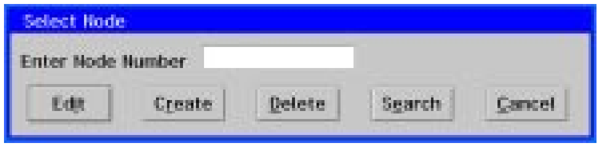
- When sorting network reports, you can obtain a complete list of nodes by sorting by Node Number. When sorting AMIS or OctelNet reports by Access Number or System Name, the system only includes the first occurrence of each Access Phone Number or System Name. Other nodes assigned the same Access Phone Number are not included.

Editing a Node

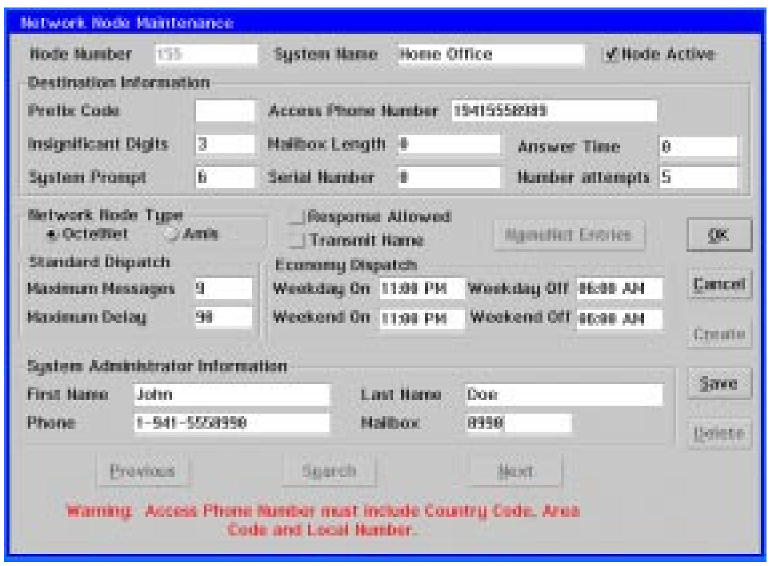
Use this procedure to view and edit node information. The information entered for a node specifies how a subscriber can send messages to the voice-mail system connected through the node.

To edit a node:

1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.



2. In the Enter Node Number field, enter the number of the node you want to edit, then click Edit. The Network Node Maintenance dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," later in this chapter.



3. Make the changes to the node information. For additional information on specific fields, see one of the procedures under the topic, "Creating a Network Node," earlier in this chapter.
4. To save your changes, click Save. The changes are saved, and the new node settings are active for subscribers.
5. To close the dialog box, click OK. The main system window displays.

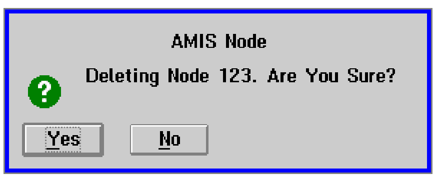
Deleting a Node

Use this procedure to delete a node from the system. Note that you can also simply deactivate a node without deleting it. Deactivating a node prevents subscribers from sending messages to that voice-mail system through the node until you reactivate the node. For additional information, see the topic, "Deactivating a Node," later in this chapter.

To delete a node:

1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.

2. In the Enter Node Number field, enter the number of the node you want to delete, then click Delete. A deletion confirmation dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," later in this chapter.



3. To confirm that you want to delete the node, click Yes. The node is deleted from the system, and the main system window displays.

Deactivating a Node

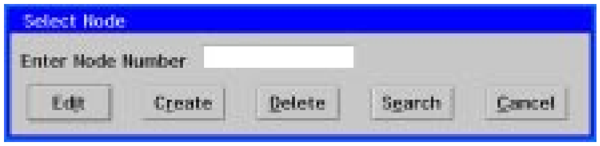
Use this procedure to turn off a node, preventing subscribers from sending messages to that voice-mail system through the node. This feature allows you to retain all of the node information while preventing subscribers from using it. To remove a node permanently from the system, you can use the network maintenance delete feature. For additional information, see the topic, "Deleting a Node," earlier in this chapter.

Even though a node is deactivated, subscribers can still send messages to the voice-mail system by manually entering the entire telephone and mailbox number.

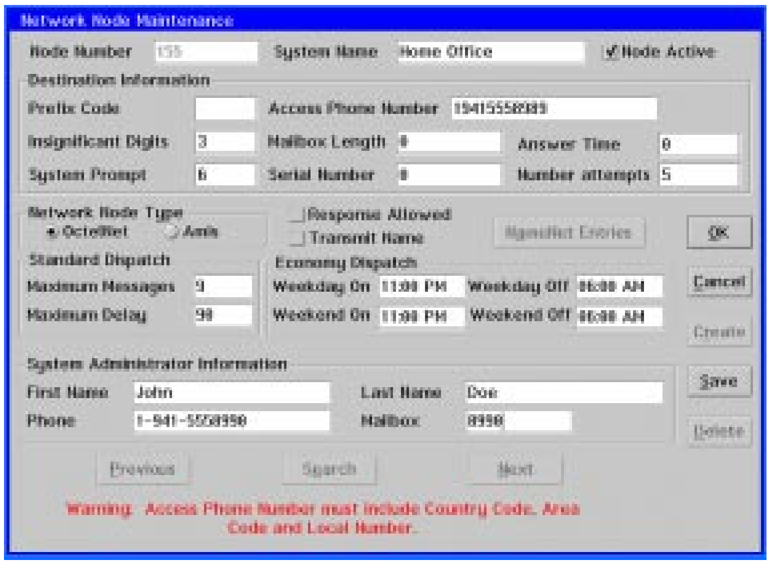
Nodes can be deactivated automatically by the system when repeated attempts to send messages to a voice-mail system are unsuccessful.

To deactivate a node:

1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.



2. In the Enter Node Number field, enter the number of the node you want to deactivate, then click Edit. The Network Node Maintenance dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," later in this chapter.



3. Deselect the Node Active option in the upper-right-hand corner of the dialog box. The check mark is removed from the option.

4. To deactivate the node, click Save. The node is deactivated.

To reactivate the node, follow this procedure and select the Node Active option. A check mark displays next to the option.

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5. To close the dialog box, click OK. The main system window displays.

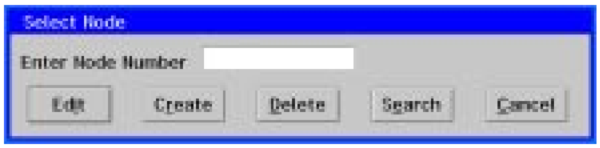
Activating a Node

Use this procedure to turn a deactivated node back on, allowing subscribers to send messages to that voice-mail system through the node. This feature allows you to turn nodes back on that were either manually deactivated or automatically deactivated by the system when repeated attempts to send messages to a voice-mail system were unsuccessful.

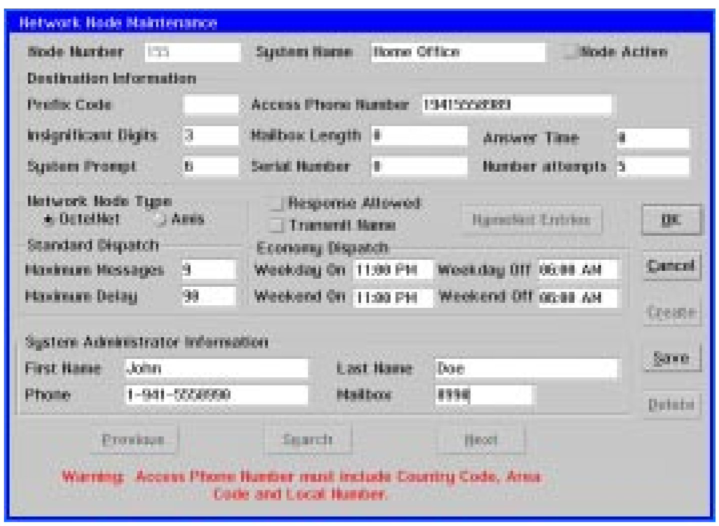
Even though a node is deactivated, subscribers can still send messages to the voice-mail system by manually entering the entire telephone and mailbox number.

To activate a node:

1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.



2. In the Enter Node Number field, enter the number of the node you want to activate, then click Edit. The Network Node Maintenance dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," later in this chapter.



3. Select the Node Active option in the upper-right-hand corner of the dialog box. A check mark displays in the option.
4. To activate the node, click Save. The node is activated.
5. To close the dialog box, click OK. The main system window displays.

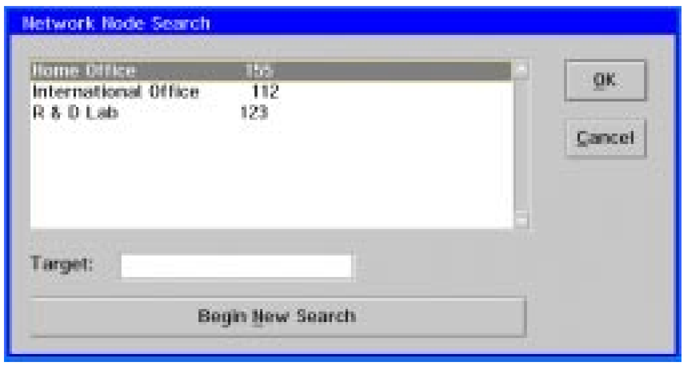
Searching for a Node

Use this procedure to locate a node by the system name. Depending on how you access the search feature, you can view, edit, or delete a node after locating it.

To search for a node:

1. To search for a node, do one of the following:
   - From the Options menu, click Network Maintenance, then when the Select Node dialog box displays, click Search.
   - From the Network Node Maintenance dialog box, click Search.

   The Search dialog box displays all of the nodes alphabetically by system name.

2. Use the scroll bar to display additional nodes that are not displayed in the window.
3. To search for a node by entering the system name, enter the name to search for in the Target field, then click Begin New Search. The system displays the node name at the top of the list if a match was found. If a match of the name was not found, the next closest name alphabetically displays.
4. Click OK to select the node. If you searched for a node from the Select Node dialog box, the node number displays in the Enter Node Number field. If you searched for a node from the Network Node Maintenance dialog box, the node information displays.

Specifying Mailboxes on Other OctelNet Systems

NameNet allows subscribers to use the Dial by Name feature when sending messages to systems defined as OctelNet nodes and allows subscribers to hear the Name prompt of the entered mailbox to verify that the message is addressed to the appropriate subscriber on the other voice-mail system.

A NameNet entry is automatically recorded by the system the first time a message is sent to a subscriber on the other system. You can also manually create a NameNet entry for a mailbox on an OctelNet system through the Network Node Maintenance screen.

Once a NameNet entry is entered on the system either automatically or manually, it can be defined as permanent or usage-based. Usage-based NameNet entries are deleted from the system when new messages are not sent to the mailbox after a period of time set up on the system. When a NameNet entry is marked permanent, it is stored by the system until it is manually deleted, or the system runs low on disk space. By default, all NameNet entries are classified as usage-based unless manually specified as permanent.

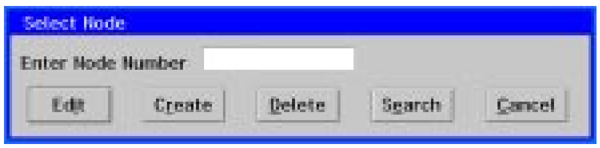
NameNet entries are automatically deleted by the system when the system reaches 90% storage capacity. When this occurs, the system begins deleting usage-based entries, followed by permanent entries until the system reaches 80% storage capacity.

Use the following procedures to:

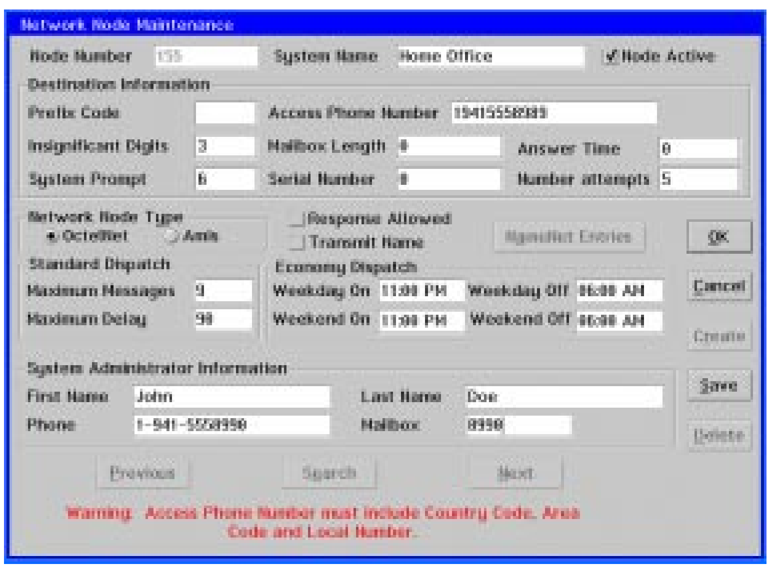
- Enter a new NameNet entry for a node
- Mark a NameNet entry as a permanent entry
- Delete a NameNet entry

To enter a New NameNet entry for a node:

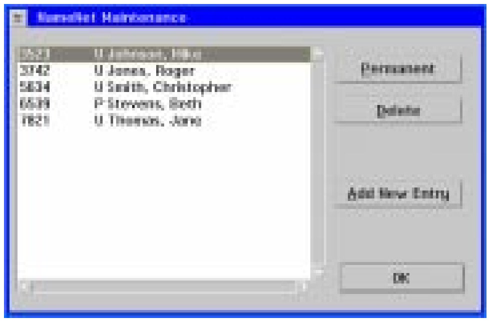
1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.



2. In the Enter Node Number field, enter the number of the node you want to edit, then click Edit. The Network Node Maintenance dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," earlier in this chapter.



3. Click NameNet Entries. The NameNet Maintenance dialog box displays the current NameNet entries for the node.

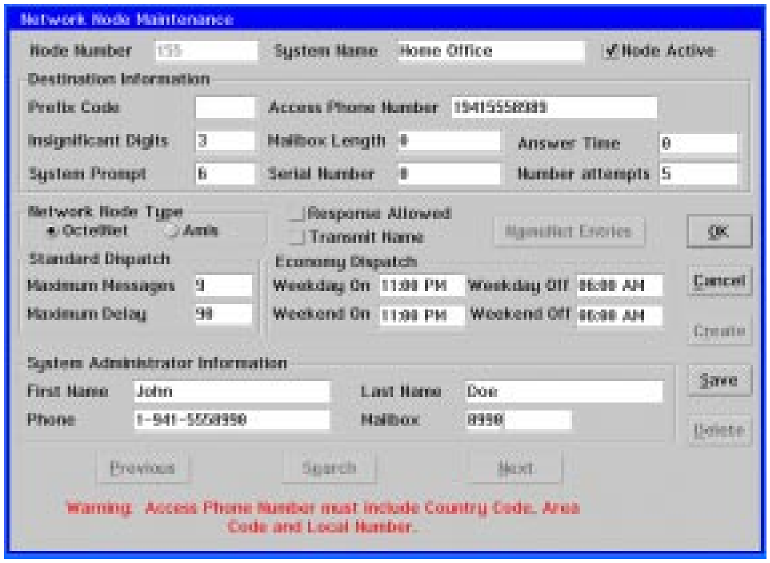


4. To add a new NameNet entry, click Add New Entry. The NameNet entry dialog box displays.
5. In the Mailbox field, enter the number of the mailbox you want to add.
6. To mark this entry as a permanent NameNet entry, select the Permanent option.
7. To create the NameNet entry for the entered mailbox number, click OK. The new entry displays on the NameNet Maintenance dialog box. Note that the mailbox subscriber's name is not displayed until the system sends an administrative message to the other voice-mail system to retrieve the mailbox subscriber's name and Name prompt.
8. To close the NameNet Maintenance dialog box, click OK. The Network Node Maintenance dialog box displays.
9. To close the Network Node Maintenance dialog box, click OK. The main system window displays.

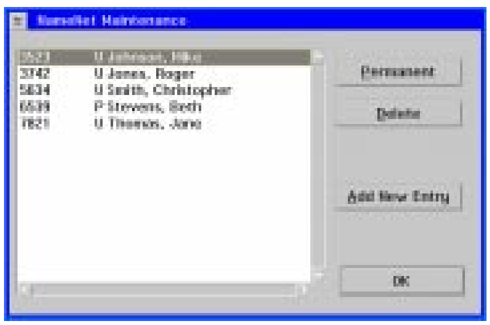
To mark a NameNet entry as a permanent entry:

1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.

2. In the Enter Node Number field, enter the number of the node you want to edit, then click Edit. The Network Node Maintenance dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," earlier in this chapter.



3. Click NameNet Entries. The NameNet Maintenance dialog box displays the current NameNet entries for the node.



4. Highlight the NameNet entry you want to mark as permanent, then click Permanent. The letter "P" displays before the subscriber name.

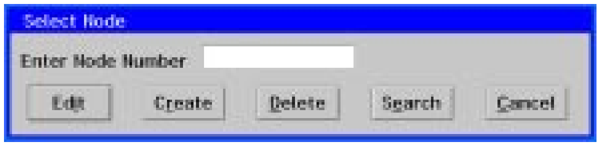
5. To mark a permanent NameNet entry as usage-based, select the entry, then click Permanent. The letter "U" displays next to the subscriber’s name.

6. To close the NameNet Maintenance dialog box, click OK. The Network Node Maintenance dialog box displays.

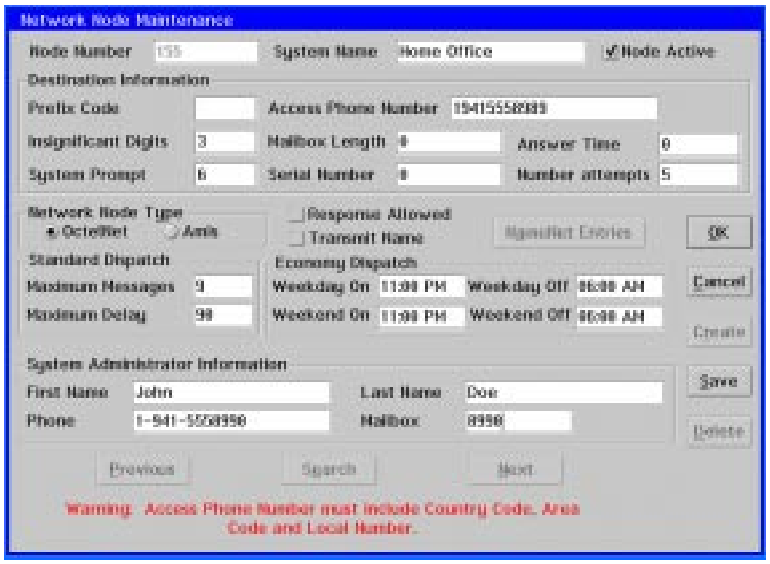
7. To close the Network Node Maintenance dialog box, click OK. The main system window displays.

To delete a NameNet entry:

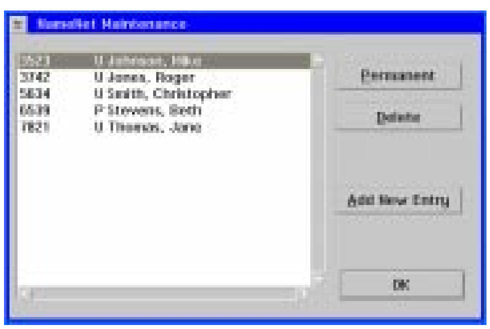
1. From the Options menu, click Network Maintenance. The Select Node dialog box displays.



2. In the Enter Node Number field, enter the number of the node you want to edit, then click Edit. The Network Node Maintenance dialog box displays. If you do not know the node number, use the search feature to help locate the appropriate node. For additional information, see the topic, "Searching for a Node," earlier in this chapter.



3. Click NameNet Entries. The NameNet Maintenance dialog box displays the current NameNet entries for the node.



4. Highlight the NameNet entry you want to delete, then click Delete. The entry is deleted.

5. To close the NameNet Maintenance dialog box, click OK. The Network Node Maintenance dialog box displays.

6. To close the Network Node Maintenance dialog box, click OK. The main system window displays.

CHAPTER 20

Installing and Configuring Visual Mailbox

Visual Mailbox is an optional add-on module that provides M2000 subscribers with a visual interface to their voice mailboxes over an installed network. With Visual Mailbox, subscribers can control many of the features available in their voice mailbox, such as listening to and sending messages, with the point-and-click abilities of their PC's mouse.

Visual Mailbox may not be available on all M2000 systems. Contact your Lucent Technologies representative for more information.

This chapter provides steps for installing and implementing Visual Mailbox. In some cases, Visual Mailbox is preinstalled on the M2000 system. If so, you do not have to complete all of the procedures provided in this chapter.

This chapter will help you to:

- Understand the Visual Mailbox components
- Understand the Visual Mailbox requirements
- Plan for Visual Mailbox implementation
- Work with the LAN Administrator to configure the LAN
- Install and configure the network interface card
- Install IBM Peer for OS/2 (for NT Server implementations)
- Install the Voice Fax Server
- Configure the M2000 Software
- Perform Visual Mailbox maintenance
- Install the client software on the LAN server
- Install Visual Mailbox on client (subscriber) PCs

Procedures in this chapter assume that the hard drive on which the system is installed is drive C, that any additional hard drive that may be installed is D, that the disk drive is A, and that the CD-ROM drive, if installed, is E. Drive designations on the specific PC on which you are working may vary. Confirm the appropriate drive letters, when necessary, in procedures provided in this chapter.

Understanding the Visual Mailbox Components

Visual Mailbox software depends on several components to perform the necessary communication functions:

- LAN and LAN Server
- M2000 and the Voice Fax Server
- Private Branch Exchange (PBX)
- Client (subscriber) PC
- Client software setup

Local Area Network and LAN Server

The LAN is the communication vehicle from each subscriber's desktop to the Voice Fax Server on the M2000 system. Physically, the LAN is represented by a LAN server and a network of PCs connected by cables to Network Interface Cards (NICs) at each PC or workstation.

A LAN server is the PC through which all network communications are controlled. The M2000 PC, which contains the Voice Fax Server, and all PCs attached to the LAN communicate with the LAN server via a network interface card in each PC.

M2000 and Voice Fax Server

M2000 and the Visual Mailbox Voice Fax Server reside on the same PC. M2000 provides the Automated Attendant/voice and fax mail capabilities. The Voice Fax Server is the portion of Visual Mailbox that sends and receives commands to subscriber PCs. M2000 and Voice Fax Server communicate with each other to perform functions for subscribers who access their mailboxes visually on their desktops.

When subscribers want to visually interface with their voice mailbox, they actually communicate with the Voice Fax Server on the M2000 PC. The Voice Fax Server sends and receives commands for the subscriber across the LAN via the network card. The Voice Fax Server interprets requests received from subscribers across the LAN and passes information back and forth to M2000.

It is important to note that M2000 functionality does not change in any way with the addition of Visual Mailbox; M2000 system capabilities are actually enhanced by the addition of a visual interface. Subscribers now have two methods of accessing and controlling their voice mailboxes.

PBX

The PBX establishes a voice path between the subscriber's workstation and the Voice Fax Server on the M2000 system to allow subscribers to listen to and send messages to other subscribers or to record greetings for their mailboxes. When a subscriber wants to perform one of these functions, the Voice Fax Server requests an available line from M2000. The Voice Fax Server then calls the subscriber to establish a voice path.

Client PC

In networking terms, a client is an entity that is connected to a LAN and requests or receives information from a server. With Visual Mailbox, the requests made on a client PC are passed to the Voice Fax Server via the LAN server.

Client Software

In addition to the files that must be installed on the computer housing M2000, Visual Mailbox includes files that must be installed on each client PC that will be running Visual Mailbox. These files, collectively referred to as *client software*, allow individual subscribers to access and operate Visual Mailbox from their desktops.

Understanding Visual Mailbox Requirements

The following list represents the minimum hardware and software requirements necessary to configure Visual Mailbox.

LAN

Visual Mailbox currently supports:

- **Novell NetWare versions 3.11, 3.12, and 4.1** – Ensure that all the latest updates are installed on the NetWare LAN. Several LAN software revisions have been released to correct problems. Contact a Novell distributor to confirm you have the latest updates for the supported versions.
- **Peer OS/2** – Peer OS/2 provides a communication vehicle between the Visual Mailbox Voice Fax Server and the LAN. The Voice Fax Server communicates with Peer OS/2, which in turn can communicate with Windows NT. If you are using Peer OS/2, you must install and configure IBM Peer for OS/2, if it is not already installed.
- **Local Files** – Local Files allows the Voice Fax Server to access a network other than Novell NetWare or Windows NT. In a Local Files implementation, the mapping between the Voice Fax Server and the network must be set up by the LAN administrator. If you are using Local Files, you must install and configure IBM Peer for OS/2, if it is not already configured.

The Shared Files network protocol is the protocol supported for Visual Mailbox. When using the Shared Files protocol, the Voice Fax Server creates two files on the LAN server:

- W2S.DAT – Records requests from the client PC to the server
- S2W.DAT – Stores server to client PC responses

Both files are created in the directory specified in the Path to Server listbox, which you complete when installing the VFS.

Under the Shared Files protocol, the VFS periodically scans the W2S.DAT file, looking for client PC requests. Each individual client PC is identified by its mailbox and application ID. When the VFS finds a request, it processes the request and places a response in the S2W.DAT file, which is systematically scanned by each client PC.

LAN Server

The LAN server is the PC that processes requests and supplies connectivity to users on the LAN who are attached to it. The LAN server controls client PC access to other LAN applications, such as word processing, database, or accounting programs. Visual Mailbox requires that the LAN server has a directory available to all users of the Voice Fax Server, so that files and requests can be transferred between the Voice Fax Server and the client PCs. Details on configuring the LAN server are provided in this chapter.

Many LANs use several servers to accommodate users' needs. Be aware that the Visual Mailbox software will access only one LAN server. Any potential Visual Mailbox users must be attached and mapped to this server.

It is recommended that there be sufficient hard drive space on the LAN to accommodate the necessary data files and client software files. While the amount of disk space will vary based on the number of users and the volume of call traffic on Visual Mailbox, a minimum of 10 MB is recommended for small, low-traffic systems.

M2000/Voice Fax Server

To use Visual Mailbox on M2000, there are several hardware and software requirements that must be met.

Hardware

Although there are hardware requirements defined for M2000, there are additional requirements for using Visual Mailbox. The Voice Fax Server will, in many cases, require a higher performance PC than that required by the system alone. All turnkey systems meet the respective requirements:

- **CPU and Memory** – For CPU and memory requirements for systems using Visual Mailbox, see Chapter 2, "Determining the Customer's System Needs."
- **NIC and LAN Connection** – The M2000 PC must have a NIC. The Voice Fax Server must be physically connected to the LAN by attaching a LAN cable to the NIC.
- **Expansion Slots** – An expansion slot is required for the NIC.
- **Hard Drive** – Chapter 2, "Determining the Customer's System Needs," describes the method used to calculate the size of the hard drive required to support the user's application. In addition to the size needed for M2000, the PC's hard drive should be large enough to accommodate the Visual Mailbox software and its associated databases. Contact a Lucent technical support representative for details.
- **Sentinel** – Like other optional M2000 utilities, Visual Mailbox access is controlled by the sentinel, which must be programmed to allow the system to use it. The

sentinel also controls the maximum number of licensed users who can be logged into the Voice Fax Server at one time.

- **Fax Board** – A fax board is required *only* if you want to utilize the Fax Viewer feature of Voice Mailbox. The Fax Viewer allows subscribers to view faxes sent to their mailboxes on their PCs, rather than retrieving them at a fax machine, as in the voice-only system. Note that the Fax Viewer icon displays in the Visual Mailbox folder on client PCs whether the system supports it or not.

Software

In addition to the required hardware, different software utilities may be required:

- **Visual Mailbox** – Contains the files necessary to run Visual Mailbox.
- **Optional Utilities** – Optional utilities permit subscribers to use additional features in Visual Mailbox, including sending messages to subscribers of remote voice-mail systems and sending fax messages to subscriber mailboxes.

Private Branch Exchange

There should be no changes required to PBX programming when adding Visual Mailbox to an existing M2000 system. As always, be sure that the switch is configured as described in the appropriate Configuration Note. In most cases, the features supported by the switch are available with Visual Mailbox.

The PBX must support third-party transfer capabilities for the Dialer and Immediate Call features to be available. If the Integrator utility supports the customer’s switch, the required codes are automatically configured when you run the Integrator utility during M2000 installation. Again, be sure to consult the switch’s Configuration Note.

Client PC

The client PCs must also meet minimum hardware and software requirements to use Visual Mailbox.

Hardware

- **CPU and Memory** – All client systems must be a minimum 386-SX/16 MHz with 4 MB RAM.
- **NIC** – The Visual Mailbox client PCs must have a NIC. The clients must be physically connected to the LAN by attaching a LAN cable to the NIC.
- **Hard drive** – The hard drive in the client PC must have space available for loading fax files and adding the files necessary for Visual Mailbox installation. Space requirements are still under consideration. Contact a Lucent technical support representative for more information.
- **Mouse** – A mouse is required on each client PC for point-and-click control of a visual mailbox. Some functionality of the desktop interface is available only with a mouse.

Software

- **DOS 5.0 or higher** – Each client PC must have DOS version 5.0 or higher installed.
- **Windows 3.x or Windows 95** – Access to Microsoft Windows version 3.x or Windows 95 is required for each client PC to access the Visual Mailbox interface. Windows can be accessed from the local hard drive or from a network drive. At this time, client software is not certified under Windows NT.

Additional Client Requirements for PC Audio Features

If a client (subscriber) PC is equipped with a sound card and all the necessary device drivers for the sound card are correctly installed, Visual Mailbox's PC audio features allow the subscriber to use speakers or headphones attached to the PC to play messages and greetings—instead of using the telephone. If the subscriber plugs a microphone into the sound card or the PC has a built-in microphone, it can be used to record new messages and greetings.

If a client PC is not equipped with a sound card, Visual Mailbox detects this and disables all of the PC audio features of Visual Mailbox.

Be advised of the following additional considerations:

- The sound card installed in any PC using PC audio features must be Sound Blaster-compatible (MPC-compliant).
- Each PC using the PC audio features must have hard drive space available to temporarily store WAV files. A WAV file is downloaded to the client PC hard drive each time a subscriber plays a message using PC audio features. A downloaded WAV file is automatically deleted when the subscriber deletes the associated message or logs out of Visual Mailbox.

  The amount of hard drive space required for WAV files depends on the length of messages downloaded (played) by subscribers. A subscriber running PC audio features in 8-bit mode requires 8,000 bytes of space to play one second of a recorded message (or .5 MB for every minute of play). A subscriber running PC audio in 16-bit mode requires 16,000 bytes of space to play one second of a recorded message (or 1 MB for every minute of play).
- Subscribers using a microphone to record messages and greetings should activate the multimedia Automatic Gain Control option, if it is available on the PC. Consult the PC's documentation for instructions on activating this option.
- PC audio users must be assigned all network rights (read, write, create, erase, modify, and scan) to the ...\DATA\BIN directory on the LAN server.
- Be advised that PC audio features have not been fully tested and are not certified for operation under Windows NT.

The playback sound quality of greetings and messages may vary, depending on factors including the quality of the sound card and microphone, a subscriber's recording techniques, and the level of background noise. Also, certain hardware setups (including some laptops), sound card setups, and operating system anomalies may impair the ability of the PC audio features to function as they should. If you encounter issues or problems, report them immediately to a Lucent technical support representative.

Planning for Visual Mailbox Implementation

To effectively install Visual Mailbox, it is important that you know the customer's expectation of the application before you begin. To accomplish this, work closely with the customer's Information Services (IS) and telecommunications representatives. In addition, carefully assess the existing system to determine whether additional hardware (such as NICs, cabling, and memory) and software (such as Microsoft Windows and optional system utilities) must be installed before you attempt to install Visual Mailbox. A Visual Mailbox Implementations Considerations Worksheet is provided behind the Worksheets tab. Make sure it is completed by the site's LAN Administrator before you attempt Visual Mailbox installation.

Evaluating M2000 and the LAN

When including installation of Visual Mailbox as part of an initial M2000 installation, ensure that the Automated Attendant and voice-mail software is functioning properly before installing the Visual Mailbox software. This includes all integration features, such as message indicators, call forward to a personal greeting, and automatic station login, as well as other utilities, such as network messaging and Fax Solution. Also, be sure that the desired outside caller call flow has been established for the integration type.

It is also assumed that the LAN is installed and functioning properly and that all potential client PCs are attached and functioning before the Visual Mailbox installation is started. It is important that you and the customer's IS representative address the following considerations before you begin installation.

LAN Considerations

With the assistance of the customer's IS representative, sketch a diagram of the customer's existing network, displaying the configuration topology and the number of servers. At this time, you should also gather a list of all subscribers who will be attached to the Voice Fax Server.

Because a LAN contains information of a vital and sensitive nature, you must be certain that the LAN server is available and ready for the installation.

It is recommended that the site's authorized LAN administrator prepare the LAN for the installation of Visual Mailbox and be present for Visual Mailbox installation and configuration. If you are using IBM Peer for OS/2 to communicate with a non-Novell LAN, such as Windows NT, make sure that the LAN has been installed and configured before you begin Visual Mailbox installation. Be sure that the LAN administrator completes the listed actions before you install Visual Mailbox.

M2000 Considerations

Because the Voice Fax Server resides on the same PC as M2000, the voice-mail software must be shut down to install Visual Mailbox. It is recommended, therefore, that you install Visual Mailbox during off-peak hours. Also, be sure that all users who will access Visual Mailbox have existing M2000 voice mailboxes.

System Security Considerations

It is important to discuss security issues with the customer. First, is the LAN server in a secure environment? Next, is the PC in a secure environment? This is important, since an unsecure environment allows unauthorized individuals to alter settings or turn off power to both the LAN server and M2000.

If the LAN server is configured to automatically log out all users at a defined time to perform a network backup, it is recommended that you ensure it does not log out the Voice Fax Server. Instead, back up Visual Mailbox software on a regular basis using a third-party utility that is initiated in the RUNVM.CMD file.

Also, recommend to the customer that subscribers use a password-protected screen saver on their PCs, since anyone with access to a client PC keyboard can access a user's voice and fax messages if Visual Mailbox is running on the PC.

Client Software Setup Considerations

If individual subscribers are responsible for installing the client software portion of Visual Mailbox on their PCs, be sure to provide them with instructions. These instructions must include the drive and directory path to the server containing Visual Mailbox, which will vary from site to site. A Client Software Installation Template is provided at the end of this chapter. This template should be completed and distributed to all subscribers who are installing the client software on their PCs.

Subscriber Training Considerations

A plan for training the Visual Mailbox users should also be in place before the installation begins.

Working with the LAN Administrator to Configure the LAN

Before you install Visual Mailbox, the LAN server must be properly configured. It is strongly recommended that the LAN administrator at the customer site or the LAN service provider make the necessary changes. All LAN configuration should be completed before installing Visual Mailbox. If you do not provide LAN support for the site, contact an authorized LAN representative to assist you.

The tasks involved in configuring the LAN depend on the type of network installed at the customer site. Three worksheets are provided behind the Worksheets tab that list the requirements for Novell NetWare, Windows NT, and Local Files implementations. Make sure the LAN Administrator completes the appropriate worksheet before you attempt OS/2 Warp Connect or Visual Mailbox installation.

Installing and Configuring the Network Interface Card

The network interface card must be installed and configured in the M2000 PC to provide a communications path with the network.

If Visual Mailbox was preinstalled on the M2000 PC, the network interface card is already installed and configured.

Two types of network interface cards are certified for use in the Voice Fax Server:

- EtherLink by 3COM
- Token-Ring 16/4 Adapter by IBM

3COM EtherLink Card

The 3COM EtherLink card provides the communication path between the Visual Mailbox Voice Fax Server and the LAN.

You will need the following materials to complete the ethernet card configuration and installation:

- NIC
- Appropriate hand tools
- DOS-bootable disk
- RJ-45 network cable

Installing the 3COM Ethernet Card

When handling the NIC, be sure to wear a grounding wrist strap to control static electricity. If you do not wear a grounding strap, you may damage the card.

To install the NIC into the M2000 PC:

1. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad:
   a. Press <CTRL+ESC> to open the Window menu.
   b. Highlight any application you see with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the highlighted application.
   d. Select Close.
   e. Repeat steps 1a – d for each open application.
2. Select Shut down from the LaunchPad.
3. Remove the cover from the PC.
4. Select a 16-bit expansion slot for installing the network card. Unscrew the cover on the slot (located at the rear of the PC chassis, top center) and remove it.
5. Apply equal pressure to both ends of the board and push down firmly to seat the board in the slot. The board should slide down easily most of the way. If you feel any resistance, check the alignment of the board. Make sure the board is properly seated in the slot.
6. Fasten the board's metal bracket with the retaining screw. Make sure the connection on the back of the board is accessible from the rear of the PC chassis before securing the screw.
7. Replace the PC's cover.
8. Secure the network connection cable or jack into the network card.

Configuring the 3COM Ethernet Card

The 3COM card is preconfigured in most cases and you are not required to complete this procedure.

These steps require use of a DOS boot disk. If you do not have access to a DOS boot disk, contact a Lucent Technologies technical support representative.

To configure the 3COM EtherLink card:

1. Insert a DOS boot disk in the PC's disk drive.
2. Turn on the PC. The PC boots under DOS and the C:\ prompt displays.
3. Remove the DOS boot disk from the disk drive.
4. Insert the EtherDisk in the PC's disk drive, and make the disk drive the current drive.
5. Type `3C5X9CFG` from the prompt, and press <ENTER>. The Configuration and Diagnostic Program dialog box displays with Configure Adapter highlighted.
6. Record the Ethernet Address that displays in the Selected Adapter box:

   ____

7. Press <ENTER>. The Adapter Configuration dialog box displays.
8. Use the Tab key to highlight the I/O Base Address option on the Adapter Configuration dialog box, and press <ENTER>. A dialog box listing the available settings displays.
9. Use the arrow keys to select 340h, and press <ENTER>. The Adapter Configuration dialog box displays.
10. Use the arrow key to select Interrupt Request Level, and press <ENTER>. A dialog box listing the available settings displays.
11. Use the arrow keys to select 11, and press <ENTER>. The Adapter Configuration dialog box displays.
12. Use the arrow keys to select Maximum Modem Speed, and press <ENTER>. A dialog box listing the available settings displays.
13. Use the arrow keys to select 9600, and press <ENTER>. The Adapter Configuration dialog box displays.
14. Use the arrow keys to select Plug and Play, and press <ENTER>. A dialog box displays.
15. Use the arrow keys to select Disabled, and press <ENTER>.

You must use a modem speed no greater than 9600 and disable the Plug and Play option, due to a known IBM issue. If you attempt to use a modem speed greater than 9600 and use the Plug and Play option, you may encounter an error during bootup.

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16. Configure the remaining options on the Adapter Configuration dialog box as required for the client's system. To change an option, use the arrow keys to highlight it, press <ENTER> to display a dialog box of available options, use the arrow keys to highlight

the option you want to select, then press <ENTER> to select the option and return to the Adapter Configuration dialog box.

17. Use the Tab key to highlight OK, and press <ENTER>. The specified adapter is configured, and the Configuration and Diagnostic Program dialog box displays with the Run Tests option under the Test menu highlighted.
18. Press <ENTER>. The test dialog box displays with Start highlighted.
19. Press <ENTER> to start testing. Ten test runs are performed.
20. When testing is complete, Cancel is highlighted. Press <ENTER>. The Configuration and Diagnostic Program dialog box displays with the Exit option under the Quit menu highlighted.
21. Press <ENTER> to exit the software.
22. Remove the disk from the drive.
23. Turn off the PC then turn it back on. The PC boots under OS/2, and the OS/2 desktop displays.

If Visual Mailbox is being installed in a Windows NT implementation, 3COM Ethernet card installation and configuration are complete.

Installing the NetWare Requester

If Visual Mailbox is being installed in a Novell NetWare implementation, complete the following steps to install the NetWare requester.

If Visual Mailbox is being installed in a Windows NT or Local Files implementation, do not install a NetWare Requester.

To install the NetWare Requester:

1. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad (some systems will not include a LaunchPad):
   a. To open the Window menu, press <CTRL+ESC>.
   b. Highlight any application you see, with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the highlighted application.
   d. Select Close.
   e. Repeat steps 1a – d for each open application.
2. If you are installing from disk, skip to step 3. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `E:` and press <ENTER>.
   d. From the E:\ prompt, type `CD NETWARE` and press <ENTER>.

e. From the \NETWARE directory prompt, type `INSTALL` and press <ENTER>. The NetWare Workstation for OS/2 Installation Utility window displays.

f. Skip to step 4.

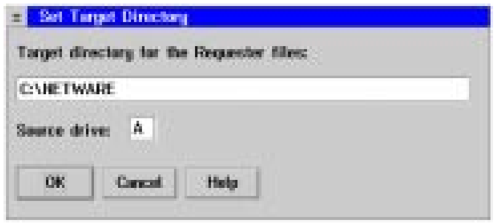
3. If you are installing from disk:

   a. Insert the disk labeled WSOS2_1 in the disk drive.

   b. Open an OS/2 window.

   c. From the C:\ prompt, type `A:INSTALL` then press <ENTER>. The NetWare Workstation for OS/2 Installation Utility window displays.

4. Select the Requester for Workstation option from the Installation menu. The Set Target Directory dialog box displays.



5. In the Target directory for the Requester files field, enter the directory to which you want to install the files.

6. In the Source drive field, enter the letter of the disk drive from which you are installing.

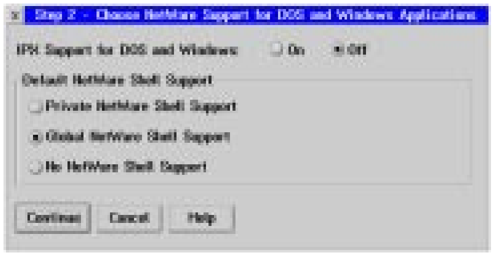
7. Click OK. The Requester Installation dialog box displays.

8. Select the Edit CONFIG.SYS and Copy All Files option, then click OK. The Step 1 - Choose the ODI LAN Driver dialog box displays. This dialog box allows you to specify the LAN driver for the installed NIC.

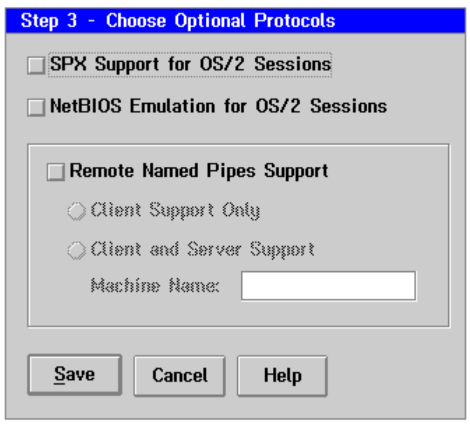
9. Leave the Do NOT upgrade the currently installed LAN driver checkbox blank.

10. For first-time installations, the Choose from the list or type in the drive name field is blank. Click the arrow to the right of the blank field. You are prompted to insert the disk labeled WSDRV_1.

11. Insert the WSDRV_1 disk in the disk drive, then click OK. A menu of driver options displays.
12. Select the 3C5X9.SYS option.
13. Click Continue. You are prompted to insert the disk labeled WSOS2_1.
14. Insert the WSOS2_1 disk in the disk drive, then click OK. The Step 2 - Choose NetWare Support for DOS and Windows Applications dialog box displays.



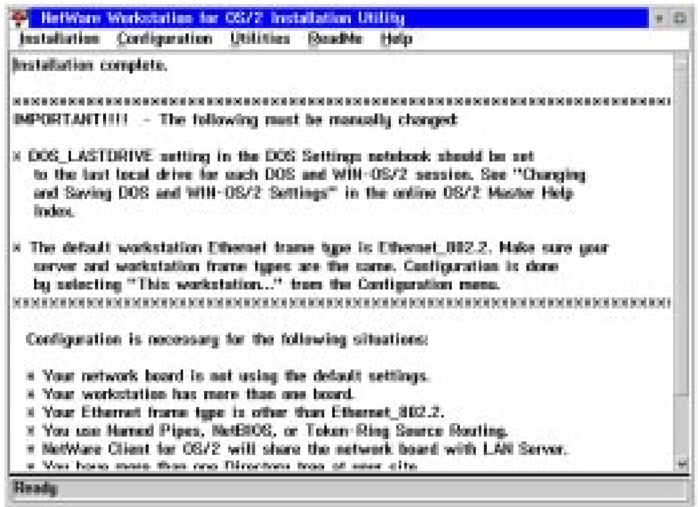
15. Under IPX Support for DOS and Windows, select the Off option, then click Continue. The Step 3 - Choose Optional Protocols dialog box displays.



16. You do not need to select any optional protocols. Click Save. The Save Changes to CONFIG.SYS dialog box displays.

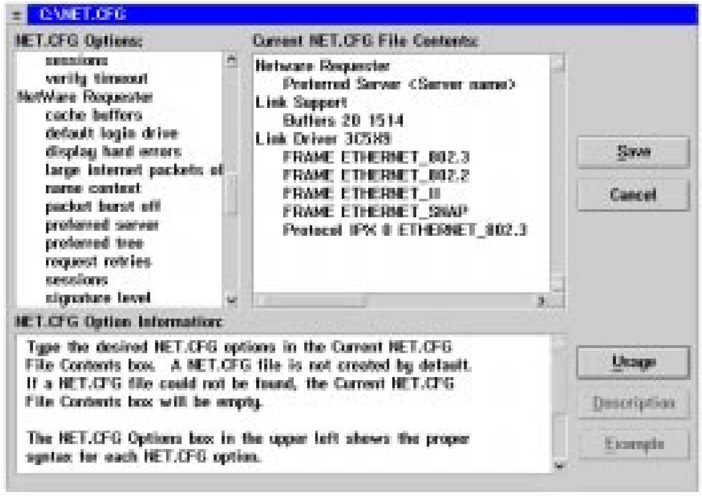
17. In the Save File as field, enter the path and filename to which you want to save the CONFIG.SYS file, then click OK. The Copy Requester Files dialog box displays.
18. Click Copy to copy the file to the specified location.
19. When prompted, insert the disk labeled WSOS2_2, then click OK.
20. When prompted, insert the disk labeled WSOS2_3, then click OK.
21. When prompted, insert the disk labeled WSDRV_1, then click OK.
22. When prompted, insert the disk labeled OS2UTIL, then click OK. The Copy ODI LAN Driver Files dialog box displays. The Default ODI LAN Driver reflects the driver you selected in step 12.

23. Select the Copy only the default driver option, then click OK.
24. When prompted, insert the disk labeled OS2DOC_1.
25. When the installation is complete, the NetWare Workstation for OS/2 Installation Utility window displays. Read the text that appears on the window.



26. Select the This workstation option from the Configuration menu. The Default Location for NET.CFG dialog box displays.

27. In the Default Location for NET.CFG File field, specify the path and filename to which you want the NET.CFG file saved, then click Edit. The C:\NET.CFG dialog box displays.



28. In the Current NET.CFG File Contents box, type Netware Requester and press <ENTER>.
29. Enter 3 spaces, type `Preferred Server` followed by the name of the server and press <ENTER>.
30. Type `Link Support` and press <ENTER>.
31. Enter 3 spaces, type `Buffers 20 1514` and press <ENTER>.
32. Type `Link Driver 3C5X9` and press <ENTER>.
33. Enter 3 spaces, type `FRAME ETHERNET_802.3` and press <ENTER>.
34. Enter 3 spaces, type `FRAME ETHERNET_802.2` and press <ENTER>.
35. Enter 3 spaces, type `FRAME ETHERNET_II` and press <ENTER>.
36. Enter 3 spaces, type `FRAME ETHERNET_SNAP` and press <ENTER>.
37. Enter 3 spaces, type `Protocol IPX 0 ETHERNET_802.3`.
38. Click Save.
39. When installation is complete, select the Close option from the menu in the upper-left corner of the window. A dialog box prompts you to reboot after exiting. Do not reboot at this time.
40. Click OK. The OS/2 window displays. Change to C:\ prompt if it is not the active drive.
41. From the C:\ prompt, type `CD NETWARE` and press <ENTER>. The \NETWARE directory prompt displays.
42. From the \NETWARE directory prompt, type `MD INSTALL$.NEW` and press <ENTER>. A new subdirectory named INSTALL$.NEW is created in the NETWARE directory.
43. You must now install an update to the NetWare Requester. If you are installing from disk, skip to step 44. If you are installing from CD-ROM:
    a. In the OS/2 window, from the C:\ prompt, type `E:` and press <ENTER>.
    b. From the E: prompt, type `CD NETWARE` and press <ENTER>. The \NETWARE directory prompt displays.

   c. From the \NETWARE directory prompt, type `COPY OS2C1.EXE C:\NETWARE\INSTALL$.NEW` and press <ENTER>. The OS2C1.EXE file is copied to the specified directory.

   d. From the \NETWARE directory, type `C:` and press <ENTER> to change to the C:\ prompt.

   e. Skip to step 45.

44. If you are installing from disk:

   a. Remove the disk in the disk drive and insert the disk labeled Novell NetWare Requester Patch in the disk drive.

   b. In the OS/2 window, from the C:\ prompt, type `COPY A:\OS2C1.EXE C:\NETWARE\INSTALL$.NEW` then press <ENTER>. The OS2C1.EXE file is copied from the disk to the specified directory on the C drive.

45. From the C:\ prompt, type `CD INSTALL$.NEW` and press <ENTER>. The \INSTALL$.NEW directory prompt displays.

46. From the \INSTALL$.NEW directory prompt, type `OS2C1` and press <ENTER>. The OS2C1.EXE file runs, extracting the necessary files.

47. Remove the disk or CD-ROM.

48. Shut down OS/2 and restart the PC.

IBM 16/4 Token Ring Card

The IBM 16/4 Auto Token Ring card provides the communication path between the Visual Mailbox Voice Fax Server and the LAN.

You will need the following materials to complete the token-ring card configuration and installation:

- NIC
- Appropriate hand tools
- DOS-bootable disk
- IBM token ring disks
- RJ-45 network cable

Installing the IBM 16/4 Auto Token Ring Card

When handling the NIC, be sure to wear a grounding wrist strap to control static electricity. If you do not wear a grounding strap, you may damage the card.

To install the NIC into the M2000 PC:

1. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad:

   a. Press <CTRL+ESC> to open the Window menu.

   b. Highlight any application you see with the exception of the OS/2 desktop or the LaunchPad.

   c. Click the right mouse button once on the highlighted application.

   d. Select Close.
   e. Repeat steps 1a – d for each open application.
2. Select Shut down from the LaunchPad.
3. Remove the cover from the PC.
4. Select a 16-bit expansion slot for installing the network card. Unscrew the cover on the slot (located at the rear of the PC chassis, top center) and remove it.
5. Apply equal pressure to both ends of the board and push down firmly to seat the board in the slot. The board should slide down easily most of the way. If you feel any resistance, check the alignment of the board. Make sure the board is properly seated in the slot.
6. Fasten the board's metal bracket with the retaining screw. Make sure the connection on the back of the board is accessible from the rear of the PC chassis before securing the screw.
7. Replace the PC's cover.
8. Secure the network connection cable or jack into the network card.

Configuring the IBM 16/4 Auto Token Ring Card

Complete the following steps to configure the IBM 16/4 Auto Token Ring Card.

To configure the IBM 16/4 Auto Token Ring card:

1. Insert the IBM Auto 16/4 Token-Ring ISA Adapter Disk 1 disk in the PC's disk drive.
2. Turn on the PC. The PC boots and an introductory dialog box displays.
3. Select Continue. The system configuration is queried, and the Installation Options dialog box displays.
4. Click Standard Install and press <ENTER>. The Standard Installation Options dialog box displays with the Configuration option highlighted.
5. Press <ENTER>. The program queries the selected adapter. The Configuration Parameters dialog box displays.
6. Click Manual Configuration.
7. Click the arrow button to the right of the Interrupt field, and select interrupt 11 from the menu that displays. Leave the I/O Address and RAM Size at the default.

If the system has an additional COM port board installed, the COM port board is usually configured for IRQ11 so you will need to use another IRQ.

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8. Click the arrow button to the right of the RAM Address field, and select D8000-DBFFF from the menu that displays.
9. Click the arrow button to the right of the ROM Address field, and select DC000-DDFFF.
10. Disable the Remote IPL setting.
11. Set the Adapter Bus to 16 Bit.

12. Click Store. Once the system saves the configuration, the Configuration Settings Applied dialog box displays.
13. Click OK. The Configuration Parameter dialog box displays.
14. Click Done. The Standard Installation Options dialog box displays.
15. Click Quick Test to test the adapter.
16. Once the test is complete, click Cancel. The Standard Installation dialog box displays.
17. Click Exit. The program prompts you for confirmation.
18. Click OK to exit LanAid.
19. Turn off the PC.
20. Turn on the PC. During the memory check, press <F1> to access the CMOS setup.
21. Check the Flash EEPROM level to make sure it is higher than LTDE65AUS. If not, the token ring card may not work. Call IBM's BBS at (919) 517-0001 for the latest Flash BIOS upgrade.
22. Set IRQ 11 (or the IRQ to which you set the token ring card if it is not 11) to USED BY ISA ADAPTER.
23. Set Memory Spaces at D8000-D9FFF, DA000-DBFFF, and DC000-DDFFF to USED BY ISA ADAPTER.
24. Save and exit the CMOS setup utility.
25. The PC boots under OS/2, and the OS/2 desktop displays.

If Visual Mailbox is being installed in a Windows NT implementation, IBM 16/4 token ring installation and configuration are complete.

Installing the NetWare Requester

If Visual Mailbox is being installed in a Windows NT implementation, do not install a NetWare Requester.

To install the NetWare Requester:

1. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad:
   a. To open the Window menu, press <CTRL+ESC>.
   b. Highlight any application you see, with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the highlighted application.
   d. Select Close.
   e. Repeat steps 1a – d for each open application.
2. If you are installing from disk, skip to step 3. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.

b. Open an OS/2 window.

c. From the C:\ prompt, type `E:` and press <ENTER>.

d. From the E:\ prompt, type `CD NETWARE` and press <ENTER>.

e. From the \NETWARE directory prompt, type `INSTALL` and press <ENTER>. The NetWare Workstation for OS/2 Installation Utility window displays.

f. Skip to step 4.

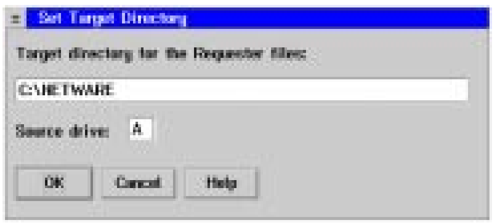
3. If you are installing from disk:

a. Insert the disk labeled WSOS2_1 in the disk drive.

b. Open an OS/2 window.

c. From the C:\ prompt, type `A:INSTALL` then press <ENTER>. The NetWare Workstation for OS/2 Installation Utility window displays.

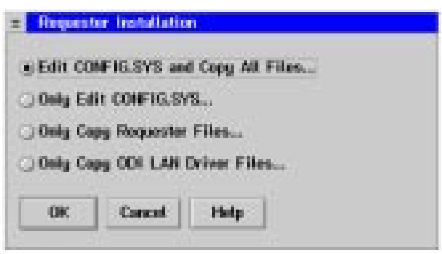
4. Select the Requester for Workstation option from the Installation menu. The Set Target Directory dialog box displays.



5. In the Target directory for the Requester files field, enter the directory to which you want to install the files.

6. In the Source drive field, enter the letter of the disk drive from which you are installing.

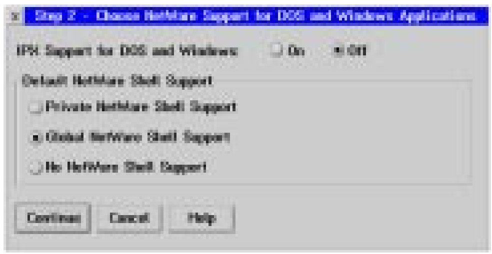
7. Click OK. The Requester Installation dialog box displays.



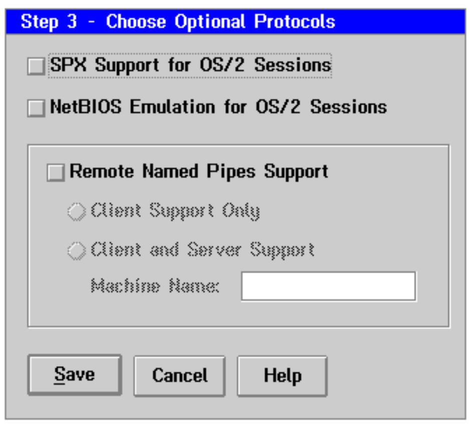
8. Select the Edit CONFIG.SYS and Copy All Files option, then click OK. The Step 1 - Choose the ODI LAN Driver dialog box displays. This dialog box allows you to specify the LAN driver for the installed NIC.

9. Leave the Do NOT upgrade the currently installed LAN driver checkbox blank.

10. For first-time installations, the Choose from the list or type in the drive name field is blank. Click the arrow to the right of the blank field. You are prompted to insert the disk labeled WSDRV_1.
11. Insert the WSDRV_1 disk in the disk drive, then click OK. A menu of driver options displays.
12. Select the NTR2000 option, or the token-ring driver supplied with your token-ring card.
13. Click Continue. You are prompted to insert the disk labeled WSOS2_1.
14. Insert the WSOS2_1 disk in the disk drive, then click OK. The Step 2 - Choose NetWare Support for DOS and Windows Applications dialog box displays.



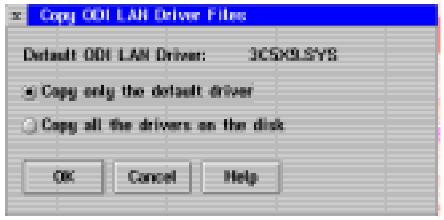
15. Under IPX Support for DOS and Windows, select the Off option, then click Continue. The Step 3 - Choose Optional Protocols dialog box displays.



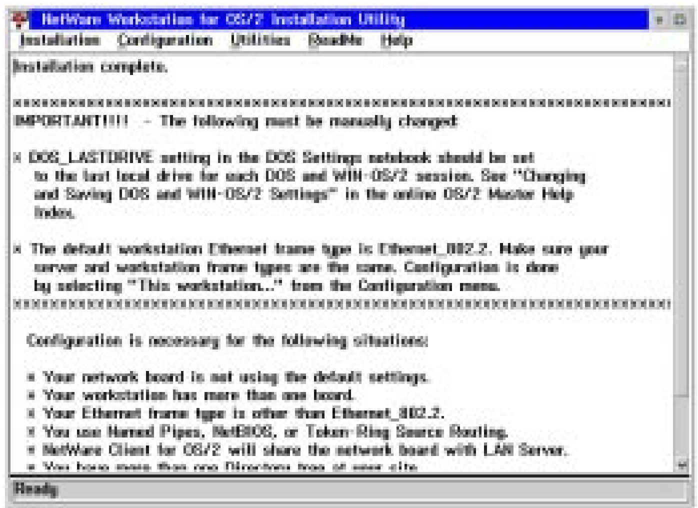
16. You do not need to select any optional protocols. Click Save. The Save Changes to CONFIG.SYS dialog box displays.

17. In the Save File as field, enter the path and filename to which you want to save the CONFIG.SYS file, then click OK. The Copy Requester Files dialog box displays.
18. Click Copy to copy the file to the specified location.
19. When prompted, insert the disk labeled WSOS2_2, then click OK.
20. When prompted, insert the disk labeled WSOS2_3, then click OK.

21. When prompted, insert the disk labeled WSDRV_1, then click OK.
22. When prompted, insert the disk labeled OS2UTIL, then click OK. The Copy ODI LAN Driver Files dialog box displays. The Default ODI LAN Driver reflects the driver you selected in step 12.

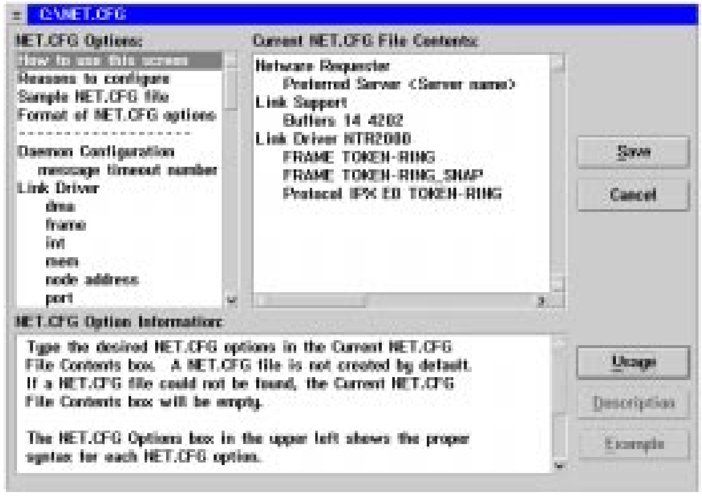


23. Select the Copy only the default driver option, then click OK.
24. When prompted, insert the disk labeled OS2DOC_1.
25. When the installation is complete, the NetWare Workstation for OS/2 Installation Utility window displays. Read the text that appears on the window.



26. Select the This workstation option from the Configuration menu. The Default Location for NET.CFG dialog box displays.

27. In the Default Location for NET.CFG File field, specify the path and filename to which you want the NET.CFG file saved, then click Edit. The C:\NET.CFG dialog box displays.



28. In the Current NET.CFG File Contents box, type Netware Requester and press <ENTER>.

29. Enter 3 spaces, type `Preferred Server` followed by the name of the server and press <ENTER>.

30. Type `DIRECTORY SERVICES OFF` and press <ENTER>.

31. Type `Link Support` and press <ENTER>.

32. Enter 3 spaces, type `Buffers 20 4202` and press <ENTER>.

33. Type `Link Driver NTR2000` (or the name of the driver supplied with the token-ring card) and press <ENTER>.

34. Enter 3 spaces, type `FRAME TOKEN-RING` and press <ENTER>.

35. Enter 3 spaces, type `Protocol IPX E0 TOKEN-RING`.

36. Click Save.

37. When installation is complete, select the Close option from the menu in the upper-left corner of the window. A dialog box prompts you to reboot after exiting. Do not reboot at this time.

38. Click OK. The OS/2 window displays. Change to C:\ prompt if it is not the active drive.

39. From the C:\ prompt, type `CD NETWARE` and press <ENTER>. The \NETWARE directory prompt displays.

40. From the \NETWARE directory prompt, type `MD INSTALL$.NEW` and press <ENTER>. A new subdirectory named INSTALL$.NEW is created in the NETWARE directory.

41. You must now install an update to the NetWare Requester. If you are installing from disk, skip to step 42. If you are installing from CD-ROM:
    a. In the OS/2 window, from the C:\ prompt, type `E:` and press <ENTER>.
    b. From the E: prompt, type `CD NETWARE` and press <ENTER>. The \NETWARE directory prompt displays.
    c. From the \NETWARE directory prompt, type `COPY OS2C1.EXE C:\NETWARE\INSTALL$.NEW` and press <ENTER>. The OS2C1.EXE file is copied to the specified directory.
    d. From the \NETWARE directory, type `C:` and press <ENTER> to change to the C:\ prompt.
    e. Skip to step 43.
42. If you are installing from disk:
    a. Remove the disk in the disk drive and insert the disk labeled Novell NetWare Requester Patch in the disk drive.
    b. In the OS/2 window, from the C:\ prompt, type `COPY A:\OS2C1.EXE C:\NETWARE\INSTALL$.NEW` then press <ENTER>. The OS2C1.EXE file is copied from the disk to the specified directory on the C drive.
43. From the C:\ prompt, type `CD INSTALL$.NEW` and press <ENTER>. The \INSTALL$.NEW directory prompt displays.
44. From the \INSTALL$.NEW directory prompt, type `OS2C1` and press <ENTER>. The OS2C1.EXE file runs, extracting the necessary files.
45. Remove the disk or CD-ROM.
46. If you used the NTR2000 driver, proceed to step 47. If you used another driver, you must edit the CONFIG.SYS file to recognize the card correctly. See the card or driver documentation for instructions.
47. Shut down OS/2 and restart the PC.

Installing IBM Peer for OS/2

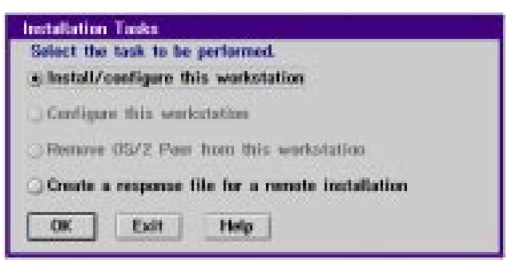
If the site is using a Windows NT server or the Local Files file server implementation, you must install IBM Peer for OS/2, once OS/2 Warp Connect 3.0 is installed and the NIC is installed and configured. If the site is using a Novell NetWare implementation, you do not have to install the IBM Peer for OS/2 and should skip this procedure.

If OS/2 Warp Connect is not already installed, see the topic, “Installing OS/2 Warp Connect 3.0,” in Chapter 7, “Installing the Software.” If the NIC is not already installed and configured, see the topic, “Installing and Configuring the Network Interface Card,” earlier in this chapter.

If you are using the Local Files implementation for the Voice Fax Server, the LAN administrator must map or path the Voice Fax Server to the directory on the LAN server that was created for Visual Mailbox.

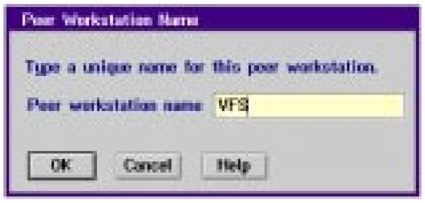
Complete the following steps to install IBM Peer for OS/2:

1. Shut down any open applications (for example, UPS, SMDI) and windows except the OS/2 desktop and the LaunchPad (some systems will not include a LaunchPad):
   a. To open the Window menu, press <CTRL+ESC>.
   b. Highlight any application you see, with the exception of the OS/2 desktop or the LaunchPad.
   c. Click the right mouse button once on the highlighted application.
   d. Select Close.
   e. Repeat steps 1a – d for each open application.
2. If you are installing from disk, skip to step 3. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `E:` and press <ENTER>.
   d. From the E:\ prompt, type `CD CID\IMG` and press <ENTER>.
   e. From the \CID\IMG directory prompt, type `INSTALL` and press <ENTER>. A welcome screen displays.
   f. Click OK. The Installation Options dialog box displays.
   g. Select Install OS/2 Peer and click OK. The IBM Peer for OS/2 Installation/Configuration dialog box displays.
   h. Skip to step 4.
3. If you are installing from disk:
   a. Insert the disk labeled OS/2 Peer Disk 1 in the disk drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `A:INSTALL` and press <ENTER>. A welcome screen displays.
4. Click OK. Wait while the system checks for files. The Installation Tasks dialog box displays.



5. Verify that the Install/Configure this workstation option is selected and click OK. If you are installing from disk, replace disks as prompted. If the Hard Drive dialog box displays, verify that the drive specified in the Hard drive field is correct, and click OK. Once the system copies the files, the Adapter Confirmation dialog box displays.

6. Verify that the adapter displayed is correct. If the correct adapter is displayed, click OK. If the adapter displayed is not correct, click Change Adapter, select the correct adapter from the list on the Select Network Adapter dialog box, then click OK. The Peer Workstation Name dialog box displays. This field identifies the workstation to other network users.



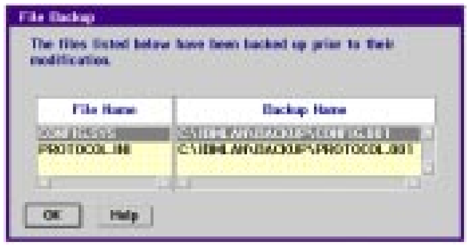
7. In the field, enter VFS and click OK. The Peer Workstation Description dialog box displays.

8. In the field, enter a description of the workstation on which Warp Connect is installed; for example, Voice Fax Server. The Domain Name dialog box displays.

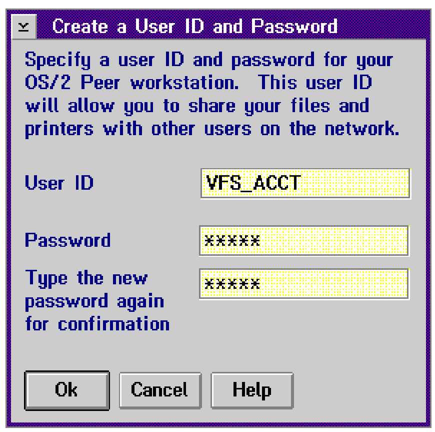
9. In the field, enter one of the following:
   - If the Voice Fax Server is connected to a Windows NT network, enter the name of the domain server for the Voice Fax Server workstation. See step 2 on the Windows NT Configuration Worksheet for the appropriate entry.

- If a Local Files implementation is being used, enter the name of the Voice Fax Server's assigned network workgroup. See step 1 on the Local Files Configuration Worksheet for the appropriate entry.

10. Click OK. Wait while the system copies files. If you are installing from disk, replace disks as prompted. The File Backup dialog box displays.



11. Click OK. The OS/2 window displays. Three new icons display on the desktop (MPTS, UPM Services, and OS/2 Peer).
12. Type `EXIT` and press <ENTER> to close the OS/2 window.
13. Remove the disk or CD-ROM from the drive.
14. Select Shut down from the LaunchPad.
15. When prompted to shut down or reboot, press <CTRL+ALT+DEL>. When the PC reboots, the Create a User ID and Password dialog box displays.



16. Enter the following information to create an account on the VFS. This is the same information the LAN Administrator entered on the Windows NT or Local Files Configuration Worksheet when an account was created for the VFS on the NT Server:

    a. In the User ID field, enter VFS_ACCT, the name of the account the LAN Administrator was instructed to create for the Voice Fax Server.

    b. In the Password field, enter OCTEL, the password the LAN Administrator was instructed to assign to the Voice Fax Server's account on the NT Server.

    c. Type the OCTEL password again for confirmation.

    d. Click OK. The OS/2 window displays.

    e. Type `EXIT` and press <ENTER> to close the OS/2 window.

Installing the Voice Fax Server

Once the LAN is configured for Visual Mailbox, IBM Peer for OS/2 is installed, if required, and the network interface card is installed and configured, install the Voice Fax Server software onto the PC housing the M2000 system.

Before attempting to install the Voice Fax Server software, verify with the LAN Administrator that the Voice Fax Server can log into the LAN. Also, verify that the sentinel supports Visual Mailbox for the appropriate number of users. If it does not, you must swap the sentinel or use the Sentinel Upgrade utility to enable Visual Mailbox. Contact your Lucent Technologies representative to obtain a new sentinel or a sentinel upgrade utility, if required.

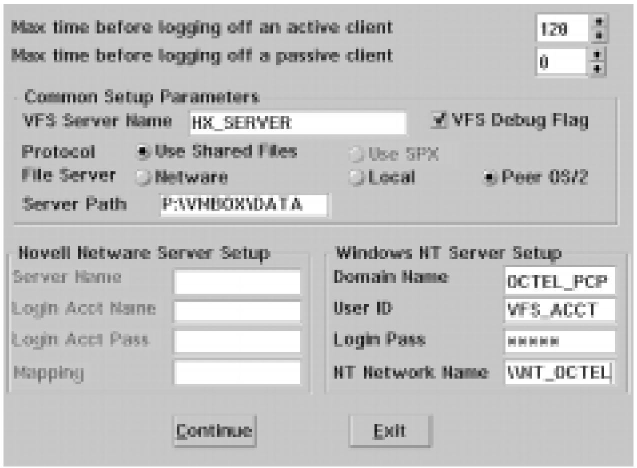
The Visual Mailbox software is preinstalled on new M2000 systems. You must, however, still enter the system-specific information required for a successful Visual Mailbox installation. To specify this information after Visual Mailbox software installation, run System Setup and scroll down to the Server tab. Enter the information on the Server tab for the system. Steps 8 through 16 in the following procedure and the Visual Mailbox Configuration worksheets provide information on completing the Server tab screen. For information on running the System Setup utility, see Chapter 14, “Setting Up the System.”

The Visual Mailbox files must be installed using the installation program provided for you; they cannot simply be copied onto the hard drive.

To install the Voice Fax Server Software:

1. Shut down M2000, if it is running.
2. If you are installing from disk, skip to step 3. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `E:` and press <ENTER>.
   d. From the E:\ prompt, type `CD VMBOX` and press <ENTER>.
   e. From the \VMBOX directory prompt, type `CD SERVER` and press <ENTER>.
   f. From the \SERVER directory prompt, type `SETUP` and press <ENTER>. The Visual Mailbox Server Installation dialog box displays.
   g. Skip to step 4.
3. If you are installing from disk:
   a. Insert Lucent Technologies Messaging 2000 Installation Disk 1 into the A: drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `A: SETUP` and press <ENTER>. The Visual Mailbox Server Installation dialog box displays.
4. Click Continue. The Visual Mailbox Installation Directory dialog box displays.
5. By default, the Visual Mailbox files are installed in the same directory as the M2000 files, \CVR. If M2000 is stored in a different location on the PC, change the path to reflect the current location.

6. Click Continue. The installation program verifies that you have sufficient available disk space on the drive that you have specified. If enough disk space is available, the program displays the Voice Fax Server Parameters dialog box. If there is not enough disk space, select Exit and free additional space on the hard drive before continuing.



7. In the Max time before logging off an active client field, enter the number of seconds before an active client PC connection (a connection to a port), where no user actions are being detected, is returned to passive status (the phone connection with the port is terminated). When determining this value, consider that you want to allow enough time to allow subscribers to perform and move between different tasks, but do not want a subscriber to occupy a voice port for an excessive amount of time. Though the default for this parameter is 120, set it to a value of 35 or less, unless you contact a Lucent technical support representative (Default=120; Minimum=10; Maximum=999).

8. In the Max time before logging off a passive client field, enter the number of minutes that subscribers can be logged into Visual Mailbox on their desktops before being logged out by the application. When determining this value, consider the convenience of having the Visual Mailbox desktop interface active all day to notify users of new messages versus the number of users permitted on the system (Minimum=0 (the default, which disables log off and allows for passive subscribers to be logged in indefinitely); Maximum=999).

9. Under Common Setup Parameters, in the VFS Server Name field, enter HX_SERVER.

10. Select the VFS Debug option, if you want the Voice Fax Server to track system usage at a detailed level. Note that enabling this feature can result in large log files (Default=No).

    It is recommended that you enable the VFS Debug Flag option during installation so you can test the installation. After you verify that the Voice Fax Server is properly installed, however, you should disable this option.

11. Under Protocol, verify that the Use Shared Files option is selected.

12. Under File Server, select the Netware, Local, or Peer OS/2 option.

13. In the Server Path field, enter `P:\VMBOX\DATA` where `P` is a currently unassigned network drive on the Voice Fax Server PC.

14. If you selected Netware in step 12, enter the following information under Novell NetWare Server Setup:

    - **Server Name** – Enter the name of the LAN server where the \VMBOX directory is located. See the Novell NetWare Configuration Worksheet for the appropriate entry.
    - **Login Acct Name** – Enter `VFS_ACCT`, the account name the LAN Administrator was instructed to assign to the account.
    - **Login Acct Pass** – Enter `OCTEL`, the password the LAN Administrator was instructed to assign to the VFS_ACCT account.
    - **Mapping** – Enter the volume where Visual Mailbox is installed. See the Novell NetWare Configuration Worksheet for the appropriate entry.

    If you selected Peer OS/2 in step 12, enter the following information under Windows NT Server Setup:

    - **Domain Name** – Enter the name of the domain to which the Voice Fax Server PC is assigned. See Item 1 under Record the Following Required Information on the Windows NT Configuration Worksheet for the appropriate entry.
    - **User ID** – Enter `VFS_ACCT`, the name the LAN Administrator was instructed to assign to the account.
    - **Login Pass** – Enter `OCTEL`, the password the LAN Administrator was instructed to assign to the VFS_ACCT account.
    - **NT Network Name** – Enter the NT Server name and the name of the share assigned to the \VISMAIL directory. See Item 2 under Record the Following Required Information on the Windows NT Configuration Worksheet for the appropriate entry.

15. To save the entered information, click Continue. These parameters are also accessible through the Server tab in System Setup. By accessing the parameters in System Setup, you can change them later without running the Visual Mailbox installation program again. When the necessary files have been copied, the Path for NET.CFG dialog box displays. This dialog box allows you to verify the NET.CFG file to be updated by the system.

    If the system cannot locate a NET.CFG file, a dialog box displays to notify you that the system automatically creates a NET.CFG file and places it in the root directory of the C:\ drive. Click OK to continue.

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16. If the system locates more than one NET.CFG file, you must specify the file to be updated by the system. To specify the NET.CFG file, click the arrow button to the right of the field and then select the correct NET.CFG file from the displayed list. The field on the right displays the path of the selected NET.CFG file.
17. Click Continue. A dialog box displays notifying you that the system modified the NET.CFG file.
18. Click OK. The Visual Mailbox Server Installation Completion dialog box displays.
19. Click Exit to return to the OS/2 desktop.
20. Remove the disk or CD-ROM.
21. Select Shut Down from the LaunchPad.

22. When prompted, press <CTRL+ALT+DEL> to restart the computer.
23. As the Voice Fax Server PC boots, verify that it is logged into the network and that the system and the Voice Fax Server load.
24. To verify that the Voice Fax Server software was properly installed:
    a. Press <CTRL+ESC> to display the Window List.
    b. Double-click VFSLOG in the list. The VFS Log utility displays.
    c. Use the scroll bars to scroll to the end of the file. If the messages "Updating system directory lists" and "System directory lists complete" display, the Voice Fax Server has been properly installed. If these messages do not appear in the log file, contact a Lucent technical support representative.
    d. When you finish viewing the file, minimize the window.

If the Voice Fax Server does not load when you restart the PC, use the following procedure to attempt to manually load the software.

To attempt to manually load the software if the Voice Fax Server does not load:

1. Open an OS/2 window.
2. From the \CVR directory prompt, type `START VFSLOG` and press <ENTER>. This command manually loads the Voice Fax Server's log utility, which monitors Voice Fax Server activity.
3. From the \CVR directory prompt, type `VFS` and press <ENTER>.

Configuring the M2000 Software

To configure Visual Mailbox to function properly on the M2000 system:

1. For each subscriber who will be using the visual interface, modify the Class of Service to permit Visual Mailbox access. You can edit each of the defined or custom classes of service to enable this feature for each subscriber. See Chapter 17, "Managing System Mailboxes," for information on creating and modifying subscriber classes of service.
2. Verify that the parameter settings on the Server tab in System Setup match the settings you entered during Voice Fax Server installation. For information on running the System Setup utility, see Chapter 14, "Setting Up the System."
3. Ensure that at least one port is enabled for Applications on the Port Parameters tab in System Setup. Otherwise, the Voice Fax Server cannot access system ports to use them with Visual Mailbox. See Chapter 14, "Setting Up the System," for information on running the Setup utility.
4. There are two parameters, accessible on the Switch Settings tab in the Integrator utility and on the Call Transfer tab in System Setup; these allow subscribers to use the Dialer and Immediate Call features of Visual Mailbox:
    - **Third-Party Transfer (Start) Code** (called Vis. Mail Conf. Hold in System Setup) – Enables the Voice Fax Server to place the subscriber's desktop extension on hold when performing an unsupervised transfer using the Dialer or Immediate Call.

- **Third-Party Transfer (End) Code** (called Vis. Mail Conf. Cancel in System Setup) – Releases the Voice Fax Server from the conference after the transfer is initiated.

Most switches use the M2000 default of an ampersand (flash hook) for these parameters. In this case, the fields are blank. If the customer's switch is supported by the Integrator utility and it requires a code other than an ampersand for these parameters, the required code is automatically specified when you run the Integrator utility during M2000 installation. See Chapter 8, "Integrating with the Phone System," for information on the Integrator utility.

5. Departmental directories are available to all Visual Mailbox users, based on Division field specifications made on each Mailbox Entry dialog box. A directory is automatically created for each Division that has been defined. See Chapter 17, "Managing System Mailboxes," for information on editing a mailbox.

Once you are sure that the Voice Fax Server is running properly, disable the VFS Debug Flag option on the Server tab in System Setup, which you enabled during Voice Fax Server installation.

Performing Visual Mailbox Maintenance

This topic discusses Visual Mailbox maintenance, including viewing the activity log file, shutting down the Voice Fax Server, generating a listing and descriptions of Visual Mailbox system files, modifying the VMXGATE.INI file, and troubleshooting networking problems reported by Visual Mailbox users.

Viewing the Voice Fax Server Log File

When the Visual Mailbox Voice Fax Server program starts, the VFSLOG.EXE file automatically launches. This Log utility, which runs in the background, records Voice Fax Server activity.

To view the VFS log file:

1. From the OS/2 LaunchPad, select Window List .

   From the menu, select VFSLOG. The VFS Log utility displays. Use the scroll bars to view the entire contents of the file. The maximum size of the VFS log file is 500 K by default; however, you can limit the file size.

   Do not exit this window unless you want to shut down the VFS Log utility.

2. When you finish viewing the file, minimize the window.

To specify a maximum VFS log file size:

1. From the VFS Log Utility window File menu, select Log File Settings. The Log File Settings dialog box displays.
2. In the field, enter the maximum size of the file, in kilobytes. The minimum is 500 K; the maximum is 9999 K.

3. Click OK. If the file reaches the maximum size, the system purges the oldest data in the file.

Do not attempt to use VFS Log Utility menu options other than Log File Settings and Shutdown VFS without consulting a Lucent technical support representative.

Shutting Down and Restarting the Voice Fax Server

The Voice Fax Server is automatically shut down each time you exit M2000. If you need to shut down the Voice Fax Server while M2000 is running (to upgrade the system, for example), you can exit it manually from the VFS Log Utility window.

To shut down the Voice Fax Server manually:

1. From the OS/2 LaunchPad, select Window List.
2. From the menu, select VFSLOG. The VFS Log Utility displays.
3. From the VFS Log Utility window Send Command menu, select Shutdown VFS. The Voice Fax Server is shut down.

You can restart the Voice Fax Server manually, if M2000 is already running, by completing steps 1 through 3 in the procedure To attempt to manually load the software if the Voice Fax Server does not load.

Visual Mailbox File System

Several VFS and client software files are accessed and updated as Visual Mailbox runs.

Voice Fax Server Files

While the Voice Fax Server performs its messaging tasks, it accesses the following files stored on the system:

- **DIRECTRY.EXE** – A utility for copying system personal distribution lists for use in Visual Mailbox.
- **OCAPI.DLL** – A .DLL file for the system.
- **PR2FILE.DLL** – A file that receives POSTROOM information from the client software on a LAN using the shared files protocol.
- **RUNVFS.CMD** – An OS/2 command file that starts the Voice Fax Server.
- **SETUP.EXE** – An executable file that installs the Voice Fax Server software.
- **SETUP.INS** – A script file containing installation instructions used during installation of the Voice Fax Server.
- **SLEEP.EXE** – A utility that allows delays in OS/2 command scripts.
- **VFS.EXE** – The Voice Fax Server executable file.
- **VFSLOG.EXE** – A file that invokes the Voice Fax Server graphical user interface (GUI) and logging tool for troubleshooting.
- **WAITVM.EXE** – A utility for pausing OS/2 command scripts until the system is running.

Client PC Files

While Visual Mailbox performs its messaging tasks for the user, it accesses the following files:

- **CLIENT.DLL** – A file used during the installation procedure.
- **CLIENT.INS** – An installation file for the client software housed on the network.
- **IMGVIEW.EXE** – An executable file that runs the Visual Fax feature.
- **POST2.DLL** – A file that directly communicates POSTROOM information from the client PC to the server.
- **POSTMAST.EXE** – An executable file for POSTROOM error reporting.
- **PR2FILE.DLL** – A file used to communicate POSTROOM information on a LAN using the shared files protocol.
- **SETUP.EXE** – An executable file that installs the Visual Mailbox client software.
- **SETUP.INS** – A script file containing installation instructions used when installing client software to the LAN or client PC.
- **THREED.VBX** – A file containing graphical objects used to create Visual Mailbox's graphical application.
- **VMXBMP.DLL** – A file containing bitmaps for the graphical interface.
- **VMXDESK.EXE** – An executable file for the client software.
- **VMXDESK.HLP** – A help file for the client software.
- **VMXDESK.INI** – A client software setup file resident on the client PC hard drive.
- **VMXGATE.INI** – A file allowing communication between the client PC and the server.
- **VMXLISTB.DLL** – A file containing message list information in the Visual Mailbox application.

Troubleshooting Visual Mailbox

The following guidelines are provided to aid in troubleshooting networking problems reported by Visual Mailbox users.

Installation Errors

The following error may occur during installation:

```
All client PCs must be logged off before a reinstallation
```

When this error occurs, make sure all users are logged off Visual Mailbox. If no users are logged on, check that the installer is logged on with Supervisor or Supervisor Equivalent rights. Re-install the software.

Visual Mailbox POSTROOM Errors

POSTROOM is the name for the networking level. Error messages referring to POSTROOM are considered networking problems.

In the event of a POSTROOM error, Visual Mailbox displays an error dialog box. The dialog box includes an error name. To help solve errors, ask users receiving POSTROOM errors to write down the error message.

Connectivity Errors

The most common networking problems in a client/server application occur when establishing a network connection between the client PC and server. The following error messages indicate that a connection was not made:

- “Server Could not be found – <Server Name>”
- “Invalid Connection Handle Error”
- “Cannot read file due to factor error – <Full path to server>s2w.dat”

To correct these errors, check the following:

- Ensure the Voice Fax Server application is running.
- Ensure the server name in the VMXGATE.INI file matches the VFS server name indicated on the Server tab in System Setup.
- Ensure the user’s network drive mapping is correct.
- Ensure the voice-mail computer has the correct network drive mapping.
- Ensure the user’s desktop computer is on the same network as the voice-mail system.
- For systems running under the shared files protocol, ensure the server and client PC have read, write, create, modify, and erase rights to the directory where the S2W.DAT and W2S.DAT files reside (by default, the \VMBOX\DATA directory). Also ensure that the client PC and Voice Fax Server are connected to the correct file server.

System Problem Errors

The following errors are due to hardware problems or improper installation. These error messages are displayed on the last line of the error dialog box next to “Specific Error.” To correct these errors, check that the appropriate files are present and follow any suggestions in the description under the error name.

- “Library File cannot be loaded – Subsystem DLL”

  The PR2FILE.DLL, PR2SPX.DLL, or the POST2.DLL files are missing from the client PC directory.

- “Library File cannot be loaded – Can’t execute POSTMAST”

  The POSTMAST.EXE program is missing from the client PC directory.

- “Library File cannot be loaded – POSTMAST window disappeared”

  A system or memory problem caused the POSTMAST executable program to terminate. To correct this problem, restart Visual Mailbox.

- “Insufficient memory to complete request”

  The user’s computer desktop has too many windows open for the amount of memory in the computer.

- “Connection broken or not made”

  A network fault has occurred. To correct this problem, restart Visual Mailbox.

- “Connection aborted”

  A network fault has occurred, or the VFS application terminated abnormally.

- “Server stopped”

  The VFS application has terminated.

Network Fault Errors

The following error messages are due to network errors, overload, or missing files. Contact the network administrator for information regarding network status.

- “Cannot read file due to fatal error”
- “Cannot write file due to fatal error”
- “Cannot read file due to sharing violation”
- “Cannot write file due to sharing violation”
- “Null connection handle”

  These errors indicate a problem with network rights assignments. Request that the network administrator verify that the correct network rights have been assigned. Restart the Visual Mailbox software when the network problem is corrected.

- “Invalid connection handle”

  This error usually indicates that the wrong name has been specified for the voice fax server. Verify that the name is correct and restart the Visual Mailbox software when the network problem is corrected.

- “Server present but not listening”

  All connections to the server are in use. Wait for an available connection, then try again.

- “Settings file cannot be read (access denied)”
- “Settings file cannot be read (does not exist)”
- “Settings file missing or incomplete”

  These errors indicate the VMXGATE.INI file in the desktop directory is corrupt or missing. Re-install the file.

Internal Software Errors

The following error messages relate to software errors in Visual Mailbox used to indicate failures external to the Visual Mailbox software. If these error messages appear, contact the customer’s IS representative to investigate network or hardware faults:

- “Message longer than permitted maximum”
- “Malformed message”
- “Internal error detected”
- “Error code not available”
- “Task switch not possible”
- “Client operation not available in this library”
- “Server operation not available in this library”

Visual Fax Warning

Ensure that the AUTOEXEC.BAT file contains a \TEMP directory. If you do not have this directory, a warning box may appear and Visual Fax will not run.

Channel Status Error

If the system Channel Status window displays the status EXTERNAL APPLICATION on a port for an excessive amount of time, and you determine that the call must be dropped from the port, contact a Lucent technical support representative.

Inactive Client Polling Problems

The Voice Fax Server polls inactive client PCs every 30 minutes. When polled, the client PC must respond within 10 minutes, or it is automatically logged out. Polling ensures that client PCs that are still logged into Visual Mailbox, but no longer running, do not continue to take up a client license that may be needed by another PC.

Client PCs running DOS applications may be unable to respond to Voice Fax Server polling due to an active DOS application. You can prevent this by lowering the Foreground Priority of the DOS prompt.

To lower the foreground priority of the DOS prompt on a client PC:

1. On the client PC, run PIFEDIT.
2. Open DOSPRMPT.PIF.
3. On the Advanced Settings window, set Foreground Priority lower than 100%. This allows other applications to run, but has no noticeable effect on DOS application performance.
4. Save the settings and exit.

Insufficient Timeouts for Active Login and Message Playback

If Visual Mailbox users are consistently being logged out of active logins and message playback, you can modify the VMXGATE.INI file to increase the timeouts:

- To specify an active login timeout, insert the following line in VMXGATE.INI, where *nnn* represents the number of seconds:

  `Idle Offhook TMO=`*`nnn`*

- To specify a message playback timeout, insert the following line in VMXGATE.INI, where *nnn* represents the number of seconds:

  `Play Pause TMO=`*`nnn`*

The position in which you place these lines in VMXGATE.INI determines the servers to which the specified timeouts apply:

- To apply the timeouts to all servers, insert the lines under [GATEWAY].
- To apply the timeouts to a specific server, insert the lines under [GATEWAY *x*], where *x* is the number of the gateway. You can use different timeouts for different servers by placing the lines under each gateway for which you want to override the default.

If you modify VMXGATE.INI, make sure that you back up the file before installing any updates to Visual Mailbox, as the file is overwritten during installation.

Installing the Client Software on the LAN Server

Visual Mailbox must access certain files to operate successfully on a client PC desktop. These files are collectively referred to as *client software*. You can set up Visual Mailbox to access client software files either of two ways:

- Install the client software files on the LAN server
- Install the client software files on the client PC's hard drive

The steps provided install the client software files on the LAN server, so they can be accessed by client PCs.

It is strongly recommended that the customer site's LAN Administrator install the client software on the LAN server.

When you install client software on the LAN server, files are placed in the \VMBOX\CLIENT directory, unless you specify otherwise. Also, a VMGATE.INI file is created in the \VMBOX directory. When Visual Mailbox is set up on a client PC, a VMDESK.INI file is created in the \WINDOWS directory on the client PC's hard drive.

To install the client software on the LAN server:

1. As a supervisor, log into the LAN server from a client PC.
2. If you are installing from disk, skip to step 3. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 3.0 CD-ROM in the CD-ROM drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `E:` and press <ENTER>.
   d. From the E:\ prompt, type `CD VMBOX` and press <ENTER>.
   e. From the \VMBOX directory prompt, type `CD CLIENT` and press <ENTER>.
   f. From the \CLIENT directory prompt, type `SETUP` and press <ENTER>. The Client Installation introductory dialog box is displayed.
   g. Skip to step 4.
3. If you are installing from disk:
   a. Insert the Client Installation disk into the A: drive.
   b. Open an OS/2 window.
   c. From the C:\ prompt, type `A: SETUP` and press <ENTER>. The Client Installation introductory dialog box is displayed.
4. Verify that Install Client/Installation software on the LAN Server is selected and click Continue. The Client Installation dialog box displays.
5. Verify that the Use Shared Files option is selected.
6. Enter the LAN server data directory where the Visual Mailbox shared files are stored. By default this is the \VMBOX\DATA directory. (The directory path must match that entered on the Server Parameters dialog box.)

7. Enter the Voice Fax Server name. This name is broadcast by the Voice Fax Server to alert the network that it is still accepting service requests. The default is HX_SERVER.
8. Click Continue to proceed. The Visual Mailbox Installation Directory dialog box is displayed.
9. Enter the LAN Server Directory where the Visual Mailbox files are stored. By default this is the \VMBOX\CLIENT directory. When you finish, click Continue. The client software files are copied to the LAN server. When installation is complete, the Client Installation Complete dialog box displays.
10. Click Exit to close the Client Installation Complete dialog box.

Installing Visual Mailbox on Client PCs

To run the Visual Mailbox interface on subscriber PCs, each PC must be set up to access the Visual Mailbox client software. You can set up each PC to access client software files from their location on the LAN, or you can install the client software files directly on each PC's hard drive.

It is recommended that you set up the subscriber PCs to access client software files over the network, since this eliminates the need for subscribers to free hard disk space on their PCs.

You may prefer to have new Visual Mailbox users set up their own PCs to run Visual Mailbox client software. A Client Software Installation Template, designed to walk subscribers through the process, is provided at the end of this chapter.

Subscribers can access extensive online help on using Visual Mailbox features by selecting the Help drop-down menu from the Visual Mailbox main window.

Subscriber PC Considerations

Before you set up subscriber PCs to use Visual Mailbox, note that each PC should have the following hardware and software installed:

- Minimum of a 386SX processor with 4 MB RAM running Windows 3.x (this includes Windows for Workgroups) or Windows 95.
- A network interface card and the ability to attach and log into the file server where Visual Mailbox is installed. Also, the PC must be mapped to the correct path where the \VMBOX directory resides on the LAN server.

Also, subscriber mailboxes must have the Visual Mailbox feature enabled in their Classes of Service. Make this adjustment before setting up the client software on the subscriber's PC desktop.

Setting Up Subscriber PCs to Use Visual Mailbox

Use the following procedure to install the Visual Mailbox client software from the network.

To set up subscriber PCs to use Visual Mailbox:

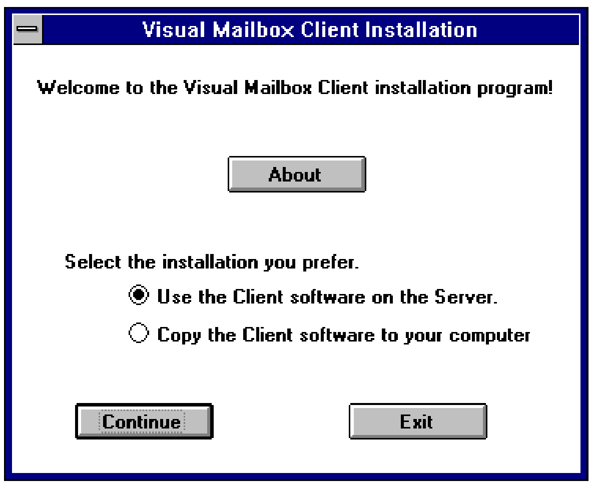
1. If Windows 3.x is installed on the client PC, from the Program Manager in Windows at the subscriber PC, select Run from the File menu. The Run dialog box displays.

   If Windows 95 is installed on the client PC, from the Windows 95 desktop on the client PC, click the Start button and select Run from the menu that displays. The Run dialog box displays.

2. Click Browse. The Browse dialog box displays.

3. Select the network drive and directories where Visual Mailbox is installed. If the default directory was not changed during the initial installation, it is the \VMBOX\CLIENT directory.

4. To begin installing the client software on the PC, click the SETUP.EXE file, then click OK. The Visual Mailbox Select Client Installation dialog box displays.

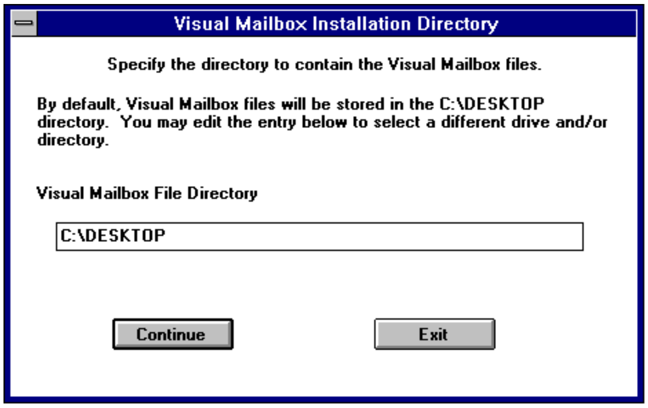


5. Select an installation option, then click Continue:

   - **Use the Client software on the Server** – Select this option to access and use the Visual Mailbox client software files housed on the LAN server, instead of copying the files to this PC’s hard drive. Choose this option only if client software files have been installed on the LAN.
   - **Copy the Client software to your computer** – Select this option to copy Visual Mailbox client software files to the PC’s hard drive.

6. If you selected Use the Client software on the Server, Visual Mailbox begins installing. When the installation is complete, the Installation Complete dialog box displays. Skip to step 9 to continue the installation.

7. If you selected Copy the Client software to your computer, the Installation Directory dialog box displays.



8. Enter the directory in which you want to store the client software files you are downloading from the LAN server or disk, then click Continue. Visual Mailbox begins installing. When the installation is complete, the Visual Mailbox Installation Complete dialog box displays.

9. To close this dialog box, click Exit. The Visual Mailbox client software is installed and a Lucent Technologies group window with the Visual Mailbox and Visual Fax icons is created on the client PC desktop.

Using the Client Software Installation Template

You can save time setting up subscriber PCs to use the Visual Mailbox interface by using the following template to guide subscribers through completing the setup procedure themselves. By following the steps on this template, subscribers set up their PCs to access the client software over the LAN. Note that, in step 3 of the template, you must provide the drive and directory information subscribers will need to indicate during the setup process.

Client Software Installation Template

To Install the client software from the LAN

1. If Windows 3.x is installed on the client PC, select Run from the File menu. The Run dialog box displays.

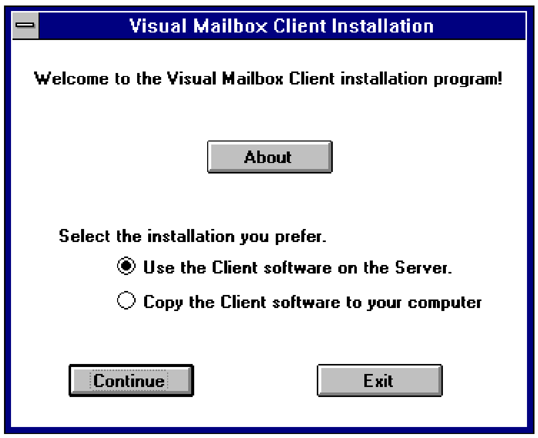
   If Windows 95 is installed on the client PC, click the Start button and select Run from the menu. The Run dialog box displays.

2. Click Browse. The Browse dialog box displays.

3. Under Directories, select the Visual Mailbox network directory specified below:

   ____

4. Click the SETUP.EXE file, then click OK. The Visual Mailbox Client Installation dialog box displays.



5. Select Use the Client software on the Server option, then click Continue. Visual Mailbox begins installing. When the installation is complete, the Visual Mailbox Installation Complete dialog box displays.

6. To close this dialog box, click Exit. The Visual Mailbox client software is installed and a Lucent Technologies group window with the Visual Mailbox and Visual Fax icons is created on the client PC desktop.

Subscribers can access extensive online help on using Visual Mailbox features by selecting the Help drop-down menu from the Visual Mailbox main window.

Notes:

CHAPTER 21

Starting, Logging Into, and Shutting Down the System

Occasionally, you may be required to shut down and restart the M2000 system if maintenance tasks must be performed or if the system stops for some reason, such as a power failure. For security, the system requires you to enter a password before you can access shutdown, maintenance, or setup functions. The procedures provided in this chapter will help you to:

- Start the system
- Log into the system using a password
- Shut down the system
- Disable ports

Starting the System

During installation, your Lucent Technologies representative may have configured M2000 to start automatically any time the PC is restarted. If M2000 is not configured to start automatically after a restart, you can use the following procedure to restart it.

To start the system:

1. Turn on the M2000 PC if not already running.
2. To open the program folder, double-click the Lucent Technologies icon on the OS/2 desktop. The folder contents display.
3. To start M2000, double-click the Lucent Technologies Messaging 2000 icon. The main system window displays and the system is ready to answer calls.

Understanding System Security

M2000 controls access to system maintenance and setup functions by requiring passwords to perform supervisor tasks. There are two levels of supervisor passwords:

- **Level 2** – Level 2 access allows a supervisor to create, edit, and delete mailboxes; access reports and system statistics; create and specify prompts; maintain network nodes; and create V-Trees. The default Level 2 password is 12345.
- **Level 3** – Level 3 access allows a supervisor to perform all Level 2 tasks, to set system parameters using the System Setup module, configure greetings by port, modify classes of service, and configure multilingual M2000 systems. The default Level 3 password is 67890.

You can define only one Level 2 password and one Level 3 password on the system.

When giving the Level 2 or Level 3 password to supervisors, keep in mind that the more people who have a password, the greater the possibility for problems to occur. However, there should be more than one individual who knows the passwords for the system so that when one supervisor is away from the office, another is available to maintain the system.

Logging Into the System

You can access system setup and maintenance features either through the phone interface or by using the M2000 PC screen interface. Using the phone interface, you can create and edit mailboxes, record system prompts, and update distribution lists. To access supervisor functions over the phone, at least one mailbox must exist on the system with the supervisor feature enabled in that mailbox's class of service.

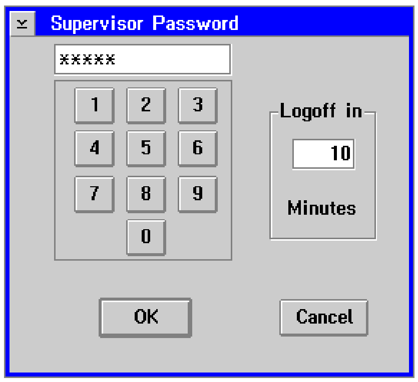
Using the M2000 screen interface, you can perform the functions available through the phone interface (with the exception of creating and editing distribution lists) as well as access and modify network nodes, set up and record system prompts, and view system reports and statistics.

To log into M2000 through the phone interface:

1. Pick up the handset and dial the system access number.
2. Access a mailbox that has been assigned supervisor rights. The subscriber main menu voices.
3. From the subscriber main menu, press <9> to access the supervisor functions.
4. When prompted, enter the supervisor password. The system voices the supervisor main menu.

To log into M2000 using the screen interface:

1. From the File menu, select the Password option. The Supervisor Password dialog box displays.



2. Enter the password in the field by either typing in the numbers using the M2000 PC keyboard or use the mouse to click the onscreen button keypad. For additional security, the password displays in the field as a series of asterisks (*).
3. Under Logoff In_____ Minutes, enter the maximum amount of time after supervisor inactivity before the system automatically logs out of the security access. In most cases, the default, 10 minutes, should be sufficient.
4. Click OK. The Password Accepted dialog box displays. Click OK to close the dialog box. You are logged in and the main system window displays.

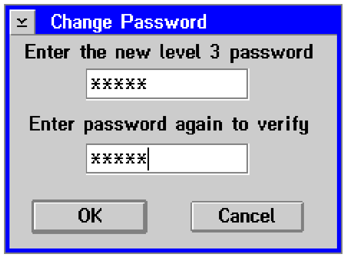
Changing Passwords

For additional security, it is recommended you change supervisor passwords from their default settings. Note that if you change the Level 2 and Level 3 passwords to the same password, you will only be able to access Level 2 features; therefore, the two passwords must be different. Though the passwords can be alphanumeric, it is recommended you assign passwords that contain only numeric characters, so you can access supervisor functions through the phone interface.

If you change the Level 3 password, be sure to notify the representative who installed the M2000 system of the new password.

To change a supervisor password:

1. To change the Level 2 password, log into M2000 as a Level 2 supervisor. To change the Level 3 password, log into M2000 as a Level 3 supervisor.
2. From the File menu, select Change Password. The Change Password dialog box displays. The dialog box displays the password level that can be changed.



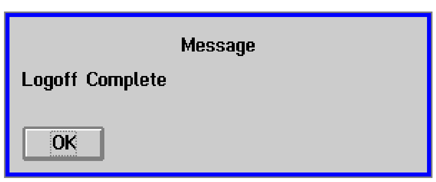
3. Enter the new password in the first field using the M2000 PC keyboard. The new password must be between two and nine characters in length. For security, the password displays in the field as a series of asterisks (*).
4. Verify the password by reentering it in the second field. For security, the password displays in the field as a series of asterisks (*).
5. To accept the new password, click OK. The Change Password dialog box closes and the main system window displays. The new password is in effect the next time you log in.

Logging Off the System

When you finish performing supervisor tasks on the M2000 PC, be sure to log off from the system. This reduces the possibility of an unauthorized person gaining access to the system when you leave the M2000 PC.

To log off the system:

1. From the File menu, select the Logoff option. A Message dialog box displays informing you that you are logged off.



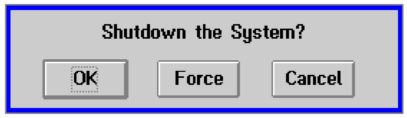
2. To close the Message dialog box, click OK. The main system window displays.

Shutting Down the System

You must exit M2000 to use certain utilities such as V-Edit, Quick Assist, or Dial Plan and to install system updates or upgrades. When you exit M2000 using the procedure below, the system disables ports as soon as they become inactive. When all the ports are inactive and disabled, the main system window closes, and the system software shuts down.

To shut down the system:

1. Log into M2000 as a Level 2 or 3 supervisor. For additional information, refer to the topic, "Logging Into the System," earlier in this chapter.
2. To shut down the system, select Exit from the File menu. A dialog box displays a message prompting you to indicate how to shut down the system.



3. Click OK to perform the shutdown. A dialog box displays a message asking if you want to wait for channel activity to cease. Wait for channel activity to cease. Do not click Force. When all the ports are inactive, the system shuts down.

If the M2000 system does not shut down in a few minutes, you may perform the procedure to shut down the system again, and click Force when the Shutdown the System dialog box displays. However, Force causes the system to issue a drop command to the remaining active ports, which terminates calls. Selecting Force is not recommended since callers are dropped without warning. If the M2000 system does not shut down within a few minutes after you select Force, contact a Lucent Technologies technical support representative.

Never shut down the M2000 system by turning off the PC or pressing <CTRL+ALT+DEL> to restart, as this could cause severe data corruption.

Disabling Ports and Dropping Calls

M2000 allows you to shut down ports temporarily if phone lines connected to the system are temporarily out of service. This prevents the port from trying to send calls or messages when the line is not available. Disabling a port using the procedure below is only temporary, and the system will enable the port if the system restarts.

M2000 also allows you to drop a call on a port. You should only use this option when you receive reports that a port is constantly busy, or you see that the status line next to the channel number button in the Channel Status window displays a status other than Waiting for Ring for an excessive amount of time.

If you determine that you need to drop a call on a port, and the status in the Channel Status window displays EXTERNAL APPLICATION, contact a Lucent Technologies technical support representative.

To disable a port:

1. Log into M2000 as a Level 3 supervisor. For additional information, refer to the topic, "Logging Into the System," earlier in this chapter.

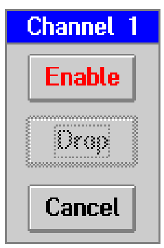
2. In the Channel Status window, click the Channel number button for the port you want to disable. The Channel (number) pop-up menu displays.

3. Click Disable. If there is a call on the port, the port is disabled when the call ends. The Channel Status window displays the status Disabled next to the Channel number button.

To enable a port:

1. Log into M2000 as a Level 3 supervisor.

2. In the Channel Status window, click the Channel number button for the port you want to enable. The Channel (number) pop-up menu displays.



3. Click Enable. The Channel Status displays the status Waiting for Call or Waiting for DID next to the Channel number button.

To drop a call from a port:

1. Log into M2000 as a Level 3 supervisor.

2. In the Channel Status window, click the Channel number for the port you want to drop. The Channel (number) pop-up menu displays.

3. Click Drop. The call is terminated, and the Channel Status window displays the status Waiting for Call or Waiting for DID next to the Channel number button.

CHAPTER 22

Generating and Interpreting Reports

This chapter provides information on generating nine different reports on M2000 to help you monitor subscriber mailboxes, system configuration, and network messaging. You can generate the following reports:

- Mailbox Quick List report
- Mailbox Usage report
- Mailbox Information report
- Login Failures report
- Uninitialized Mailboxes report
- Port Assignments report
- Class of Service report
- Prompt Assignments report
- Network Statistics report

Printing, Saving, and Displaying Reports

When you generate a report, you can either print it, save it to disk, or display it onscreen. Printing a report allows you to print the report to a printer. Saving a report to disk allows you to save the report electronically so you can easily store it or send it to someone else. Displaying a report on screen allows you to view report information quickly. No matter which report you want to generate, you follow the same general steps to print the report, save it to a file, or display it on screen.

Printing a Report

To print a report:

1. Verify that the M2000 PC is attached to a printer either directly or over a network.

   Contact the LAN administrator if you want to configure the M2000 PC to print over a network.

2. Log into M2000 as a Level 2 or 3 supervisor.
3. From the Reports menu, select the name of the report you want to print. The Reports dialog box displays.
4. Complete the dialog box by entering the appropriate information. For details on completing dialog box options for a specific report, see the appropriate topic that follows.
5. To print the report, click Printer. The report prints and the main system window displays.

Saving a Report to Disk

You can save the report to a hard drive, diskette drive, network drive, or any other storage location available on the M2000 PC.

To save the report to disk:

1. Log into M2000 as a Level 2 or 3 supervisor.
2. From the Reports menu, select the name of the report you want to generate and save to disk. The Reports dialog box displays.
3. Complete the dialog box by entering the appropriate information. For details on completing specific dialog box options for a report, see the section on that report.

4. To save the report to disk, click Disk. A file destination dialog box displays.

5. Enter the drive and destination where you want to save the report. If you want to save the report on diskette, place the diskette into the diskette drive. For example, if you want to save the report as REPORT1.TXT on the A: diskette drive, type `A:\REPORT1.TXT`.

6. To save the report, click OK. The report is saved to the drive and directory you specified, and the main system window displays.

Displaying a Report Onscreen

To display a report onscreen:

1. Log into M2000 as a Level 2 or 3 supervisor.

2. From the Reports menu, select the name of the report you want to display. The Reports dialog box displays.

3. Complete the dialog box by entering the appropriate information. For details on completing dialog box options for a specific report, see the appropriate section that follows.

4. To display the report on screen, click Screen. The report displays.

5. To close the report, double-click the upper-left corner of the report title bar. The report closes, and the main system window displays.

If you accidentally minimize or hide a report onscreen, the report menu will be dimmed. Press <CTRL+ESC> to display the Window menu, double-click Lister to restore the report window, then close the report window. You can then access the Report menu options.

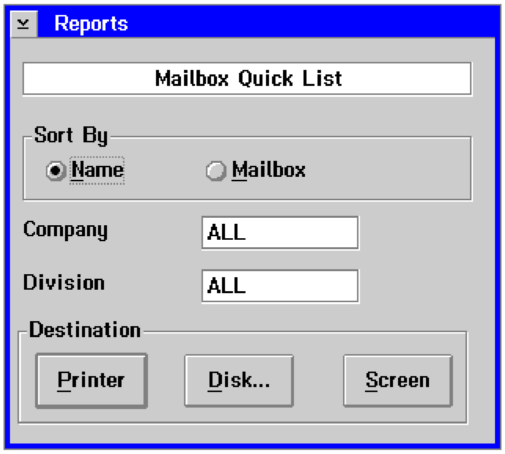
Mailbox Quick List Report

The Mailbox Quick List report provides general information about all system mailboxes, as follows:

- Mailbox number
- Mailbox subscriber’s name
- Mailbox subscriber’s extension
- Mailbox subscriber’s company
- Mailbox subscriber’s division

Generating the Mailbox Quick List Report

To generate the Mailbox Quick List report, select Mailbox Quick List from the Reports menu. When the Reports dialog box displays, select the appropriate options, then click Printer, Disk, or Screen.



Sort By Name – Sorts the report alphabetically by mailbox subscriber's last name.

Sort By Mailbox – Sorts the report by mailbox number in ascending order.

Company – Identifies the companies to be included in the report. Enter the name of a company whose mailboxes you want to display, or type `ALL` to display mailboxes for all companies.

Division – Identifies the divisions to be included in the report. Enter the name of a division whose mailboxes you want to display, or type `ALL` to display mailboxes for all divisions.

Interpreting the Mailbox Quick List Report

When you generate the Mailbox Quick List report, the report displays the following information:

Name – Displays the mailbox subscriber's last name, then first name, separated by a comma.

Box # – Displays the system mailbox number.

Extension – Displays the mailbox subscriber's telephone extension.

Company – Displays the mailbox subscriber's company.

Division – Displays the mailbox subscriber's division.

```
MAILBOXES - QUICK LIST          11/01/97     11:03 AM      Page 1

Name                    Box #        Extension  Company    Division
Williams,Jane           1000         1000       ABC        Sales
Feather,Heidi           1100         1100       ABC        Sales
Fulton,John             1200         1200       ABC        Sales
Teller,Susan            1300         1300       ABC        Sales
Hunter,Beth             1400         1400       ABC        Sales
Kessle,Joan             1500         1500       ABC        Sales
Pattser,Amber           1600         1600       ABC        Sales
Robinson,Kim            1700         1700       ABC        Sales
Green,Emily             1800         1800       ABC        Sales
Brown,Daniel            1900         1900       ABC        Sales
Winters,Robert          2000         2000       ABC        Support
Graham,Ellen            2100         2100       ABC        Support
```

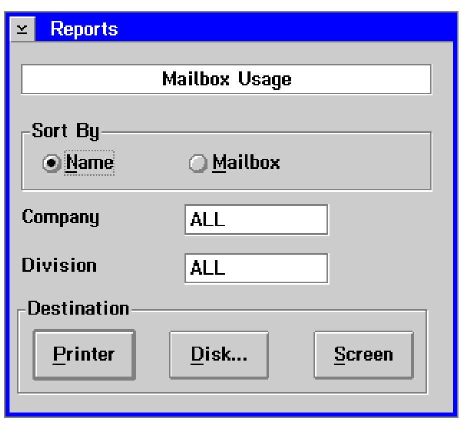
Mailbox Usage Report

The Mailbox Usage report provides information on system mailbox activity, as follows:

- Number of messages that have been sent to the mailbox during the current month.
- Total amount of time callers spent logged into the mailbox during the current month.
- Number of calls that have accessed the mailbox during the current month.

Generating the Mailbox Usage Report

To generate the Mailbox Usage report, select Mailbox Usage from the Reports menu. When the Reports dialog box displays, select the appropriate options, then click Printer, Disk, or Screen.



Sort By Name – Sorts the report alphabetically by mailbox subscriber's last name.

Sort By Mailbox – Sorts the report by mailbox number in ascending order.

Company – Identifies the companies to be included in the report. Enter the name of a company whose mailboxes you want to display, or type `ALL` to display mailboxes for all companies.

Division – Identifies the divisions to be included in the report. Enter the name of a division whose mailboxes you want to display, or type `ALL` to display mailboxes for all divisions.

Interpreting the Mailbox Usage Report

When you generate the Mailbox Usage report, the report displays the following information:

Mailbox – Displays the system mailbox number.

Name – Displays the mailbox subscriber's name.

Company – Displays the mailbox subscriber's company.

Division – Displays the mailbox subscriber's division.

Msgs – Displays the total number of messages that have been sent to the mailbox during the current month, or since the mailbox statistics were cleared.

Sub – Displays the total amount of time, in minutes, that the subscriber spent logged into the mailbox during the current month, or since the mailbox statistics were cleared.

NonSub – Displays the total amount of time, in minutes, that non-subscribers spent in the mailbox during the current month or since the mailbox statistics were cleared. This includes the time a non-subscriber spent using a V-Tree in a mailbox if the mailbox uses a V-Tree.

In – Displays the total number of calls transferred to the mailbox from the automated attendant during the current month or since the mailbox statistics were cleared.

Out – Displays the total number of times the mailbox used an outbound port for calls. This includes sending message notifications, sending faxes, autoprinting faxes, lighting message indicators, or delivering wake-up calls during the current month, or since the mailbox statistics were reset using Clear Mailbox under the Mailbox menu.

```
MAILBOXES - USAGE            11/01/97         11:03 AM          Page 1

Mailbox    Name              Company  Division   Msgs   Sub  NonSub    In    Out

1000       Williams,Jane       ABC     Sales       49   57m     20m    27      5
1100       Feather,Heidi       ABC     Sales      139  176m     87m    74     31
1200       Fulton,John         ABC     Sales       80  128m     39m    75      0
1300       Teller,Susan        ABC     Sales      124  339m     58m    68     23
1400       Hunter,Beth         ABC     Sales       99  167m     60m   105    126
1500       Kessle,Joan         ABC     Sales      177  273m    168m   286    109
1600       Pattser,Amber       ABC     Sales       76   84m     56m    51      3
1700       Robinson,Kim        ABC     Sales      147  145m     49m    39     12
1800       Green,Emily         ABC     Sales       39   60m     25m    26      0
1900       Brown,Daniel        ABC     Sales      107  173m     94m   133     10
2000       Winters,Robert      ABC     Support     78  112m    385m    25     31
2100       Graham,Ellen        ABC     Support     63   95m     87m    56     64
2200       Sanders,Gary        ABC     Support    129  268m     96m    56    122
2300       Toth,Frank          ABC     Support     90  146m    187m    40     20
```

Mailbox Information Report

The Mailbox Information report provides detailed information about system mailboxes, as follows:

- Mailbox's class of service number
- Mailbox's personal operator
- Total time the mailbox was used during the current and previous months
- Total time the mailbox was used since its creation

Generating the Mailbox Information Report

To generate the Mailbox Information report, select Mailbox Information from the Reports menu. When the Reports dialog box displays, select the appropriate options, then click Printer, Disk, or Screen.

Sort By Name – Sorts the report alphabetically by mailbox subscriber's last name.

Sort By Mailbox – Sorts the report by mailbox number in ascending order.

Company – Identifies the companies to be included in the report. Enter the name of a company whose mailboxes you want to display, or type `ALL` to display mailboxes for all companies.

Division – Identifies the divisions to be included in the report. Enter the name of a division whose mailboxes you want to display, or type `ALL` to display mailboxes for all divisions.

Interpreting the Mailbox Information Report

When you generate the Mailbox Information report, the report displays the following information:

Mailbox Number – Displays the system mailbox number.

Extension – Displays the mailbox subscriber's extension number.

Class of Service – Displays the Class of Service number assigned to the mailbox.

Subscriber – Displays the mailbox subscriber's name.

Date Last Use – Displays the date the last time the mailbox was accessed.

Personal Operator – Displays the personal operator mailbox number where callers are routed when they request to speak to an operator when the extension is busy or not answered.

Cur Column – Displays mailbox usage for the current month, or since the mailbox statistics were cleared.

Last Column – Displays mailbox usage for the previous month, or since the mailbox statistics were cleared.

Total – Displays the total mailbox usage since the mailbox was created, or since the mailbox statistics were cleared.

Calls Received – Displays the total number of times the extension has been dialed by internal or external callers during the current month, or since the mailbox statistics were cleared.

Mailbox Used – Displays the number of times the subscriber successfully logged into the mailbox during the current month or since the mailbox statistics were cleared.

Messages – Displays the number of messages sent to the mailbox during the current month, or since the mailbox statistics were cleared.

Message Time – Displays the total length of time, in minutes, of the messages in the mailbox during the current month, or since the mailbox statistics were cleared.

Subscriber Time – Displays the total amount of time, in minutes, that the subscriber spent logged into the mailbox during the current month, or since the mailbox statistics were cleared.

NonSubscriber Time – Displays the length of time, in minutes, that a nonsubscriber accessed the mailbox.

Outcalls – Displays the total number of times the mailbox placed a call during the current month, or since the mailbox statistics were cleared. This includes sending message notifications, sending faxes, autoprinting faxes, lighting message indicators, or delivering wake-up calls.

Outcall Time – Displays the total amount of time, in minutes, used for the outcalls.

Transfers (Busy) – Displays the number transfers from the automated attendant to the mailbox extension when the extension was busy.

Transfers (NOAN) – Displays the number of calls transferred from the automated attendant to the mailbox extension when the extension was not answered.

Transfers (To Ext.) – Displays the number of calls transferred from the automated attendant to the mailbox extension that were successfully connected.

Faxes Received – Displays the number of faxes received by the mailbox during the current month, or since the mailbox statistics were cleared.

Faxes Sent – Displays the total number of faxes sent from this mailbox during the current month, or since the mailbox statistics were cleared.

Network Admin Outbound – Displays the number of administered network messages sent from the mailbox during the current month, or since the mailbox statistics were cleared.

Network Inbound – Displays the number of network messages sent to the mailbox during the current month, or since the mailbox statistics were cleared.

Network Casual Outbound – Displays the number of casual AMIS messages sent from the mailbox during the current month, or since the mailbox statistics were cleared.

```
MAILBOXES-INFORMATION   11/01/97     11:38 AM                              Page 1

Mailbox number:   1400      Ext: 1400   COS: 1

Subscriber: Adams,Tom       ABC Sales

Date of last use:    10/28/97    Personal Operator:

                        Cur   Last   Total                          Cur    Last   Total
Calls Received:         112   130    242     Mailbox Used           68     83     151
Messages:               68    79     147     Message Time (m)       70     88     158
Subscriber Time(m):     129   157    286     NonSubscriber          45     57     102
                                             Time:
Outcalls:               22    30     52      Outcall Time (m):      13     20     33
Transfers (BUSY):       24    32     56      Transfers (NOAN):      32     45     77
Transfers (To Ext.):    18    12     30
Faxes Received:         12    21     33      Faxes Sent:            41     52     93
Network Admin Out:      5     8      13      Network Inbound:       3      8      11
Network Casual Out:     6     5      11
```

Login Failure Report

The Login Failure report provides a list of all unsuccessful login attempts to system mailboxes. An unsuccessful login attempt occurs when a subscriber enters a mailbox number but fails to enter the valid password. For each mailbox to which an unsuccessful login attempt was made, the report displays the following information:

- Mailbox number
- Mailbox subscriber's name
- Mailbox subscriber's company
- Mailbox subscriber's division
- Date and time of the failed login

Generating the Login Failure Report

To generate the Login Failure report, select Failed Logins from the Reports menu. When the Reports dialog box displays, select the appropriate options, then click Printer, Disk, or Screen.

Sort By Last Name – Sorts the report alphabetically by mailbox subscriber's last name.

Sort By Mailbox Number – Sorts the report by mailbox number in ascending order.

Sort by Date – Sorts the report by date of failed login in ascending order.

Company – Identifies the companies to be included in the report. Enter the name of a company whose mailboxes you want to display, or type ALL to display mailboxes for all companies on the system.

Division – Identifies the divisions to be included in the report. Enter the name of a division whose mailboxes you want to display, or type ALL to display mailboxes for all divisions in the company.

Date Range Options – Identifies a range of days to include in the report.

Interpreting the Login Failure Report

When you generate the Login Failure report, the report displays the following information:

Sorted By – Displays how the report is sorted.

Mailbox Range – Displays the range of the mailbox numbers included in the report.

Date Range – Displays the range of days included in the report.

Total Recorded – Displays total number of failed login attempts on the M2000.

Total Displayed – Displays the total number of failed login attempts included in the report.

Mailbox Number – Displays the mailbox number that experienced the failed login.

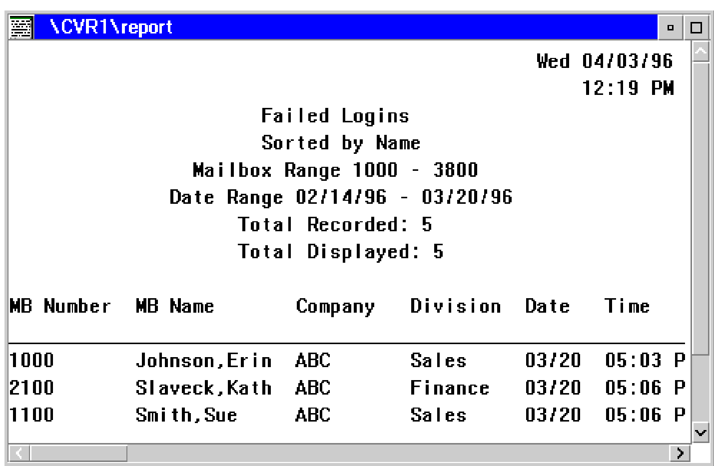
Mailbox Name – Displays the mailbox subscriber's name.

Company – Displays the mailbox subscriber's company.

Division – Displays the mailbox subscriber's division.

Date – Displays the date of the failed login attempt.

Time – Displays the time of the failed login attempt.


\CVR1\report

Wed 04/03/96
12:19 PM

Failed Logins
Sorted by Name
Mailbox Range 1000 - 3800
Date Range 02/14/96 - 03/20/96
Total Recorded: 5
Total Displayed: 5

MB Number	MB Name	Company	Division	Date	Time
1000	Johnson,Erin	ABC	Sales	03/20	05:03 P
2100	Slaveck,Kath	ABC	Finance	03/20	05:06 P
1100	Smith,Sue	ABC	Sales	03/20	05:06 P

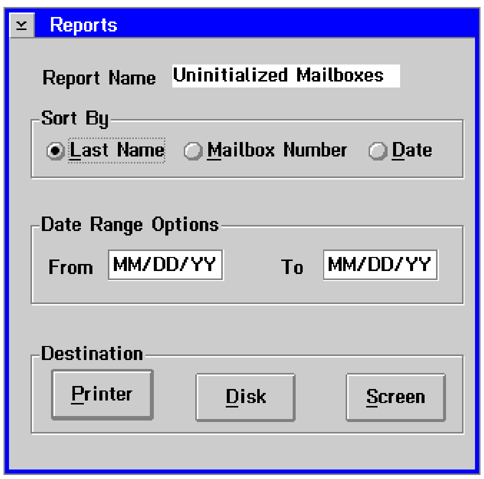
Uninitialized Mailboxes Report

The Uninitialized Mailboxes report provides information about mailboxes whose subscribers have not changed their passwords since the mailbox was created or reassigned. The report displays:

- Mailbox number.
- Mailbox subscriber's name.
- Mailbox's initial password.
- Date the mailbox subscriber last logged into the mailbox.

Generating the Uninitialized Mailboxes Report

To generate the Uninitialized Mailboxes report, you must be logged in as a Level 3 Supervisor. To display the Uninitialized Mailboxes report, select Uninitialized Mailboxes from the Reports menu. When the Reports dialog box displays, select the appropriate options, then click Printer, Disk, or Screen.



Sort By Last Name – Sorts the report alphabetically by mailbox subscriber's last name.

Sort By Mailbox Number – Sorts the report by mailbox number in ascending order.

Sort By Date – Sorts the report by date of the last login.

Date Range Options – Identifies a range of days to include in the report.

Interpreting the Uninitialized Mailboxes Report

When you generate the Uninitialized Mailboxes report, the report displays the following information:

Sorted By – Displays how the report is sorted.

Mailbox Range – Displays the range of the mailbox numbers included in the report.

Date Range – Displays the range of days included in the Reports dialog box.

Total Recorded – Displays total number of uninitialized mailboxes on M2000.

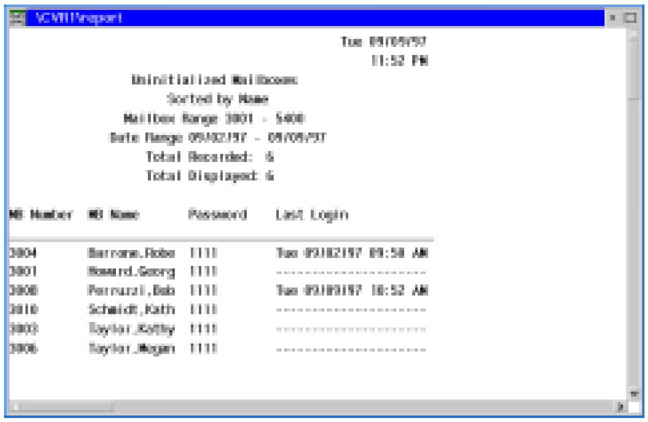
Total Displayed – Displays the total number of uninitialized mailboxes included in the report.

Mailbox Number – Displays the uninitialized mailbox's number.

Mailbox Name – Displays the mailbox subscriber's name.

Password – Displays the mailbox's initial password.

Date Last Login – Displays the date the mailbox subscriber last logged into the mailbox.



Port Assignments Report

The Port Assignments report provides information on how the system voice ports are used in conjunction with the Greeting by Port feature. The Greeting by Port feature allows more than one company or unique organization to share the M2000 system by voicing a unique greeting for calls to each company.

The Port Assignments Report displays the following information:

- Port number
- Whether the port is active or inactive for greeting by port
- Mailbox assigned to answer the port during business hours
- Mailbox assigned to answer the port after business hours
- Business hours specified for each day

Generating the Port Assignments Report

To generate the Port Assignments report, select Port Assignments from the Reports menu. When the Reports dialog box displays, click Printer, Disk, or Screen.

Interpreting the Port Assignments Report

When you generate the Port Assignments report, the report displays the following information:

Port – Displays the number of the voice port on the system.

Active – Displays whether the port is enabled for greeting by port.

During Hours – Displays the mailbox that answers calls for that port during business hours.

After Hours – Displays the mailbox that answers calls for that port after business hours.

Day – Displays the days of the week for each port.

Open – Displays the beginning of business hours for each day of the week.

Close – Displays the end of business hours for each day of the week.

```
PORT ASSIGNMENTS        11/01/97      03:57 PM              Page 1

Port     Active      During Hours      After Hours     Day   Open  Close

0        Yes            1000              1200         Sun   Open all day
                                                       Mon   Open all day
                                                       Tue   Open all day
                                                       Wed   Open all day
                                                       Thu   Open all day
                                                       Fri   Open all day
                                                       Sat   Open all day
1        Yes            1100              1300         Sun   Closed all day
                                                       Mon   800   1700
                                                       Tue   800   1700
                                                       Wed   800   1700
                                                       Thu   800   2000
                                                       Fri   800   1500
                                                       Sat   1200  1700
2        Yes            1400              1400         Sun   1200  1800
                                                       Mon   1000  1800
                                                       Tue   1000  1800
                                                       Wed   1000  1800
                                                       Thu   1000  1800
                                                       Fri   1000  1800
                                                       Sat   1000  1800
3        Yes            1500              1500         Sun   Closed all day
                                                       Mon   Open all day
                                                       Tue   Open all day
                                                       Wed   Open all day
                                                       Thu   Open all day
                                                       Fri   Open all day
                                                       Sat   Open all day
```

Class of Service Report

The Class of Service report displays the current setting for each feature included in each of the 25 default Classes of Service available on the system.

Generating the Class of Service Report

To generate the Class of Service report, select Class of Service from the Reports menu. When the Reports dialog box displays, click Printer, Disk, or Screen.

Interpreting the Class of Service Report

When you generate the Class of Service report, the report displays the following information:

Features Column – Displays the features available on the Class of Service screen.

COS Number Column – Displays the setting of each feature for the class of service number specified.

CLASS OF SERVICE REPORT 11/01/97 11:14 AM Page 1

	COS Number								
	1	2	3	4	5	6	7	8	9
Call Screening	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Msg Confirmation	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Voice Folders	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Call Queuing	Yes	No	Yes	Yes	Yes	Yes	No	No	No
Msg Indicators	Yes	No	No	No	Yes	Yes	Yes	Yes	No
Intercom Paging	No	No	No	No	No	No	No	No	Yes
Personal Lists	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Global Lists	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dial By Name	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Call Handling	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
V-Trees allowed	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
V-Tree Fax Support	No	No	No	No	No	No	No	No	No
Send Messages	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Receive Messages	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Archive Messages	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Undelete Messages	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Record Prompts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operator Access	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Failed Login Notify	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mailbox Lock-Out	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Auto Time Stamp	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Visual Mailbox	No	No	No	No	No	No	No	No	No
Multilingual Support	No	No	No	No	No	No	No	No	No
Supervisor Mailbox	No	No	No	No	No	No	No	No	No
Delivery Options	(All)	No	No	No	No	No	No	No	No
Outcalling Type	Local	None	Local	Long	Long	Local	Local	Local	Local
Batch Mode	No	No	No	No	No	No	No	No	No
Network Method	None	None	None	None	None	None	None	None	None
Amis Casual	No	No	No	No	No	No	No	No	No
Amis Administered	No	No	No	No	No	No	No	No	No
OctelNet	No	No	No	No	No	No	No	No	No
Follow-Me-Forward	No	No	No	No	No	No	No	No	No
Network Replies	No	No	No	No	No	No	No	No	No
Language	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.	Eng.
Send Faxes	No	No	No	No	No	No	No	No	No
Receive Faxes	No	No	No	No	No	No	No	No	No
Max. # of Messages	30	30	30	30	30	1000	30	30	300
Max Rings	5	5	5	5	5	5	5	5	5
Max. Single Msg	300	300	300	300	300	590	300	300	300
Days for New Msg.	7	7	7	7	7	7	7	7	7
Days for Arch. Msg.	14	14	14	14	14	14	14	14	14

Prompt Assignments Report

The Prompt Assignments report provides a list of the system greetings and the prompt number currently assigned to each prompt. The report displays:

- Standard office greetings
- Call Queuing prompts

- Language option prompts
- Holiday prompts

Generating the Prompt Assignments Report

To generate the Prompt Assignments report, select Prompt Assignments from the Report menu. When the Reports dialog box displays, click Printer, Disk, or Screen.

Interpreting the Prompt Assignments Report

When you generate the Prompt Assignments report, the report displays the following:

Area of Use – Displays the names of all the system greetings.

Prompt # – Displays the prompt numbers associated with greetings. A dot indicates that no prompt is assigned for the greeting. If no prompt is recorded for the system greetings prompts (Morning, Afternoon, Evening, and Closed greetings), the system voices a default prompt.

```
SYSTEM PROMPT ASSIGNMENTS     11/01/97    11:14 AM

Area Of Use                       Prompt #

Morning Greeting                     D34
Afternoon Greeting                   D35
Evening Greeting                     D36
Closed Greeting                      D37
Multilingual Selection               .

Call Transfer Phrase                 50
Call Queuing Phrase #1               51
Call Queuing Phrase #2               52
Call Queuing Phrase #3               53
Call Queuing Phrase #4               54
Call Queuing Phrase #5               55
Call Queuing Phrase #6               56
Call Queuing Phrase #7               57
Call Queuing Phrase #8               .
Call Queuing Phrase #9               .

Attendant Menu #1                    40
Attendant Menu #2                    .
Attendant Menu #3                    .
Attendant Menu #4                    .
Attendant Menu #5                    .

Message Notification Language #1     42
Message Notification Language #2     .
Message Notification Language #3     .
Message Notification Language #4     .
Message Notification Language #5     .

Holiday #1 12/25 Save                100
Holiday #2 11/26                     101
Holiday #3 04/22                     102
Holiday #4 01/01 Save                110
Holiday #5                           .
Holiday #6     .                     .
```

Prompt numbers with a D prefix are prompts stored in the [Language]3.O32 phrase file, where [Language] is the primary language on the system. This file generally contains prompts that are professionally recorded or prompts recorded using V-Edit. Other prompt numbers are phrases recorded using SOLVE or the supervisor keypad functions. For additional information, see Chapter 16, “Recording and Editing Prompts.”

Network Statistics Report

The Network Statistics report provides information on network events, which are messages sent or received using the OctelNet and AMIS protocols. In addition to the message activity, you can select whether this report is to display node information and network statistics on a node-by-node basis. For additional information, see Chapter 19, “Communicating Outside the System.”

Generating the Network Statistics Report

To generate the Network Statistics report, select Network Statistics from the Reports menu. When the Networking Report dialog box displays, select the appropriate options, then click Printer, Disk, or Screen.

Tracking Reports Options

List Errors Only – Displays only the network events that encountered errors.

Inbound – Displays a record of messages received from other voice-mail systems.

Outbound – Displays a record of messages sent to other voice-mail systems.

OctelNet – Displays messages sent or received using the OctelNet protocol.

Amis – Displays messages sent or received using the AMIS protocol.

Node Information Report Options

None – Does not display any node information.

Sort by Node Number – Displays the Node Information report sorted by node number.

Sort by Access Phone Number – Displays the Node Information report sorted by the phone number the system dials to send messages to another voice-mail system.

Sort by System Name – Displays the Node Information report sorted by system name in alphabetical order.

Interpreting the Network Statistics Report

When you generate the Network Statistics report, the report displays the following information:

Access Number – Displays the phone number the system dials to send messages to another voice-mail system. The word "Local" indicates the call was received by the system.

Date – Displays the date the message was sent or received.

Time – Displays the time when the message was sent or received.

Method – Displays the dispatch option selected for the mailbox.

Connect Status – Displays whether or not a connection was established with the other voice-mail system and the networking protocol used to send the message. The message n/a indicates the call was received by the system.

Channel – Displays the port on which the message was sent or received.

Box ID – Displays the number of the mailbox to which the message was sent.

Duration – Displays the total length of the message in seconds.

Origination – Displays the system where the message originated. If the message was sent from the system, the column displays the word "Local." If the message was sent from another voice-mail system, the column displays the access phone number.

Message Status – Displays whether the message was received. If the message was not received, the column displays the error. For additional information on network message errors, contact your Lucent Technologies technical support representative.

Retry – Displays the number of times the system attempted to send the message to another voice-mail system.

```
 INBOUND ERROR TRACKING - AUDIT TRAIL            09/10/97     04:26 PM                                          Page 1

ACCESS NUMBER  BOX ID    DATE    TIME     DURATION(sec.)   METHOD-MSGS   ORIGINATION   CONNECT STATUS   MESSAGE STATUS CHANNEL

LOCAL           1005    09/06/97 04:01 PM       1              n/a       14055693        n/a            Bad connection    2

LOCAL           2060    09/07/97 04:07 PM       1              n/a       14055693        n/a            Node deleted      9

LOCAL           3000    09/07/97 08:49 PM       23             n/a       14055693        n/a            Rejected call     3

LOCAL           1000    09/08/97 09:01 AM       1              n/a       14055693        n/a            Bad line          2

*** End of Report ***

OUTBOUND ERROR TRACKING - AUDIT TRAIL          09/10/97  04:26 PM                       Page 1

ACCESS NUMBER  BOX ID    DATE    TIME     METHOD-MSGS      ORIGINATION   CONNECT STATUS      MESSAGE STATUS      CHANNEL   RETRY

44555           1042    09/06/97 04:01 PM        IMMEDIATE-0   LOCAL       OCTELNET          NODE DISABLE        2       0

44555           2060    09/07/97 04:07 PM        IMMEDIATE-0   LOCAL       OCTELNET          NODE DISABLE        2       0

44555           1838    09/07/97 08:49 PM        IMMEDIATE-0   LOCAL       OCTELNET          NODE DISABLE        2       0

44555           1045    09/08/97 09:01 AM        IMMEDIATE-0   LOCAL       OCTELNET          NODE DISABLE        2       0

*** End of Report ***

INBOUND CHECKING - AUDIT TRAIL      09/17/97  03:00 PM                      Page 1

ACCESS NUMBER  BOX ID    DATE    TIME     DURATION(sec.)   METHOD-MSGS   ORIGINATION   CONNECT STATUS   MESSAGE STATUS CHANNEL


LOCAL           1000    09/06/97 04:01 PM       1              n/a       14055693        n/a            Delivered         2

LOCAL           2000    09/07/97 04:07 PM       1              n/a       14055693        n/a            Bad line          9

LOCAL           1000    09/07/97 08:49 PM       23             n/a       14055693        n/a            Mailbox Full      3

LOCAL           1000    09/08/97 09:01 AM       1              n/a       14055693        n/a            Delivered         2

*** End of Report ***

OUTBOUND CHECKING - AUDIT TRAIL  08/15/97  06:54 PM                       Page 1

ACCESS NUMBER  BOX ID    DATE    TIME     METHOD-MSGS      ORIGINATION   CONNECT STATUS      MESSAGE STATUS      CHANNEL   RETRY

44555           1002    09/06/97 04:01 PM        IMMEDIATE-0   LOCAL       OCTELNET          Delivered           2       0

44555           2000    09/07/97 04:07 PM        IMMEDIATE-0   LOCAL       OCTELNET          NODE DISABLE        2       0

44555           1834    09/07/97 08:49 PM        IMMEDIATE-0   LOCAL       OCTELNET          Delivered           2       0

44555           1000    09/08/97 09:01 AM        IMMEDIATE-0   LOCAL       OCTELNET          NODE DISABLE        2       0

*** End of Report ***
```

If on the Networking Reports dialog box you chose to generate a Node Information report, the report displays the following information:

Node Number – Displays the node number on the system.

Status – Displays whether the node is active or inactive for network events. The status may be inactive either if the system manager deactivated the node, or if the system deactivated the node due to an excessive number of errors.

Access Number – Displays the phone number the system dials to send messages to the other voice-mail system associated with the node.

System Name – Displays the name of the site or company for the other voice-mail system.

Supervisor Name – Displays the name of the system manager for the other voice-mail system.

Prompt Number – Displays the number assigned to the prompt that the system plays when the system voices the destination of a network message for confirmation.

Supervisor's Box – Displays the mailbox number of the system manager on the other voice-mail system.

Maximum Messages – Displays the maximum number of messages allowed in a queue before the system sends the messages.

Maximum Delay – Displays the maximum amount of time the system allows messages to wait in a queue before sending them.

Weekdays On – Displays the hour that begins the weekday economy hours.

Weekdays Off – Displays the hour that ends the weekday economy hours.

Weekends On – Displays the hour that begins the weekend economy hours.

Weekends Off – Displays the hour that ends the weekend economy hours.

Maximum Delay – Displays the maximum amount of time the system allows messages to wait in a queue before sending them.

Outbound Attempts – Displays the number of messages the system attempted to send.

Attempts Complete – Displays the number of outbound events successfully completed.

Message Attempts – Displays the number of messages the system attempted to deliver.

Messages Complete – Displays the number of messages successfully delivered.

Total Outcall Time – Displays the total length of time, in seconds, of all messages sent.

Total Message Time – Displays the total length of time, in seconds, of all messages sent or received.

Failed (Busy) – Displays the total number of times the system encountered a busy condition at the other voice-mail system.

Failed (No Answer) – Displays the total number of times the system encountered a no answer at the other voice-mail system.

```
NETWORK NODE - INFORMATION      11/10/97    04:26PM                        Page 1

Node Number: 111                            Status: Active
Access Number:             18135551234
System Name: Lab 1                          Supervisor Name: Ellen Gray
Prompt Number: 20                           Supervisors Box: 555
Maximum Msgs: 9                             Maximum Delay: 90
Weekdays On: 2300                           Weekdays Off: 0600
Weekends On: 2300                           Weekends Off: 0600

OUTCALL Statistics:     Cur  Last   Total     MESSAGE Statistics:    Cur    Last   Total
Outbound Attempts:       13    16   29          Message Attempts:     10       8   18
Attempts Complete:       10    14   24         Messages Complete:     10       8   18
Total Outcall Time:     234   349   583       Total Message Time:    325     113   438
Failed (Busy):            2     0   2         Failed (No Answer):      1       2   3
*** End of Report ***
```

Notes:

CHAPTER 23

Displaying System Statistics

This chapter provides information on displaying seven different kinds of system statistics screens on the M2000 PC to help you monitor system usage. You can display the following:

- Channel Status window
- Mailbox Status screen
- Calls per Hour screen
- System Usage screen
- 50% Contention screen
- 100% Contention screen
- System Status dialog box

You can press <CTRL+M> to toggle between window displays. This is especially useful if the Activate Digit Grabber (DIGRAB) and Debug Mode options are enabled in System Setup.

Channel Status Window

The Channel Status window displays the status of each port on the system. You can also choose to display the number of internal and external calls handled by each port followed by the average length of the calls. The Channel Status window displays in the top half of the screen by default when you first start M2000.

Displaying the Channel Status Window

To display the Channel Status window, select Channel Status from the Window menu. The Channel Status window displays directly below the menu bar.

From the Display menu of the Channel Status window, select Status to display the status of each port, or select Statistics to display the total number of calls to each port and the average length of each call.

Interpreting the Channel Status Window

The Channel Status window displays information for four ports at a time. If the system has more than four ports, use the scroll bars on the right side of the window to display information for the other ports.

Status view – Displays the call activity for each port. When a call comes into a port, the status for the port changes as the caller performs actions on the system.

Statistics view – Displays the number of incoming calls handled by the port since the system was installed.

Mailbox Status Screen

The Mailbox Status screen displays each mailbox on the system and identifies whether each box contains new and/or saved messages. You can also choose to display general information about the mailboxes on the system. The Mailbox Status screen displays in the bottom half of the screen by default when you first start M2000.

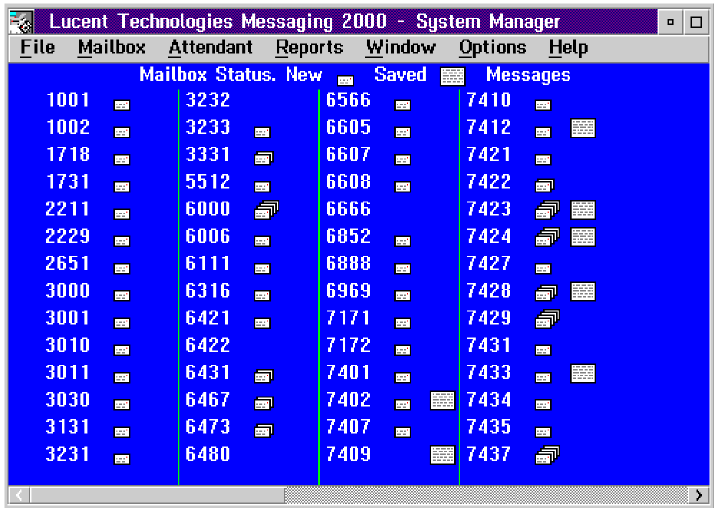
Displaying the Mailbox Status Screen

To display the Mailbox Status screen, select Mailbox Status from the Window menu. The Mailbox Status screen displays directly below the menu bar. If the Channel Status window is displayed, the Mailbox Status screen displays directly below the Channel Status window. The Mailbox Status screen displays in the bottom half of the screen by default when you first start M2000.

Interpreting the Mailbox Status Screen

The Mailbox Status screen displays all M2000 system mailboxes in columns across the screen. If necessary, use the scroll bars on the right side and bottom of the screen to display any mailboxes currently hidden from view.

Next to each mailbox number, the Mailbox Status screen displays whether the mailbox contains new and/or saved messages. Each new message is represented by an envelope icon. Multiple icons represent multiple new messages. A maximum of four envelope icons will display. Saved messages are represented by a letter icon. M2000 displays one letter icon per mailbox, regardless of the number of saved messages in the mailbox.



You can view general information about a mailbox by clicking on the mailbox number. The following mailbox information displays:

Mailbox – Displays the M2000 mailbox number.

Extension – Displays the mailbox subscriber's telephone extension.

Name – Displays the mailbox subscriber's name with the last name first.

Company – Displays the mailbox subscriber's company.

Division – Displays the mailbox subscriber's division.

Messages, New – Displays the number of new messages in the mailbox.

Messages, Saved – Displays the number of saved messages in the mailbox.

Calls per Hour Screen

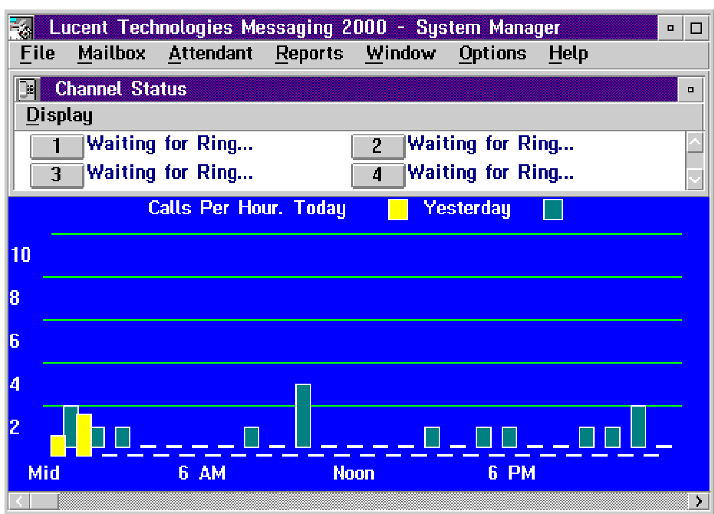
The Calls per Hour screen displays a bar graph depicting the number of calls to the system per hour during the current day and previous days.

Displaying the Calls per Hour Screen

To display the Calls per Hour screen, select Calls per Hour from the Window menu. The Calls per Hour screen displays directly below the menu bar. If the Channel Status window is displayed, the Calls per Hour screen displays below the Channel Status window.

Interpreting the Calls per Hour Screen

The Calls per Hour screen displays as a bar graph depicting the number of internal and external calls that accessed either system mailboxes or the automated attendant each hour during the current day or previous days. The left side of the graph displays the number of calls. The bottom of the graph displays the time of day in six-hour segments starting at midnight. Each bar identifies the call activity during a given hour. If M2000 did not receive any calls during a particular hour, the graph displays a dash. Note that the horizontal lines across the bar graph do *not* reflect specific call figures; they are designed to assist you in interpreting the bars.



System Usage Screen

The System Usage screen displays as a bar graph depicting the percentage of available system time that was used handling calls during each hour for the current day and previous days.

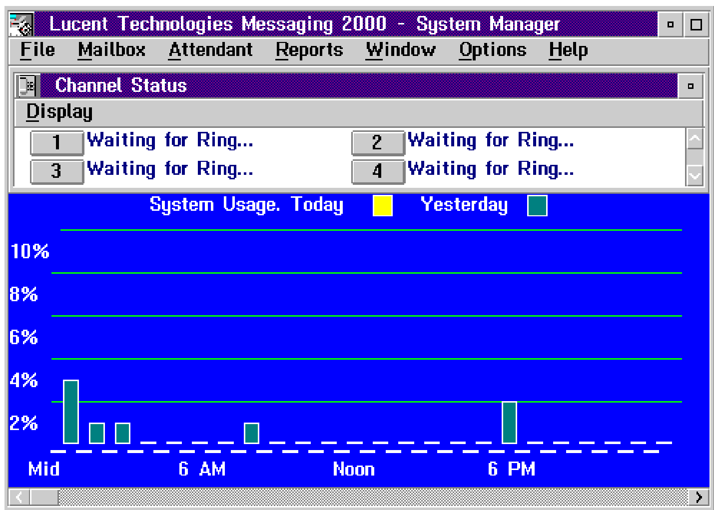
Displaying the System Usage Screen

To display the System Usage screen, select System Usage from the Window menu. The System Usage screen displays directly below the menu bar. If the Channel Status window is displayed, the System Usage screen displays below the Channel Status window.

Interpreting the System Usage Screen

Available system time is calculated by multiplying the number of ports installed on the system by 60 minutes. For example, if the system has four ports, the available system time in one hour for the system is 240 minutes (60 x 4). Usage is the percentage of the available system time in an hour that the system handled calls.

The left side of the System Usage screen displays the percentage of system usage. The bottom of the graph displays the time of day in six-hour segments starting at midnight. Each bar identifies the percentage of available system time the system handled calls during a given hour. If the system did not receive any calls during a particular hour, the graph displays a dash. Note that the horizontal lines across the bar graph do *not* reflect specific usage figures; they are designed to assist you in interpreting the bars.



50% Contention Screen

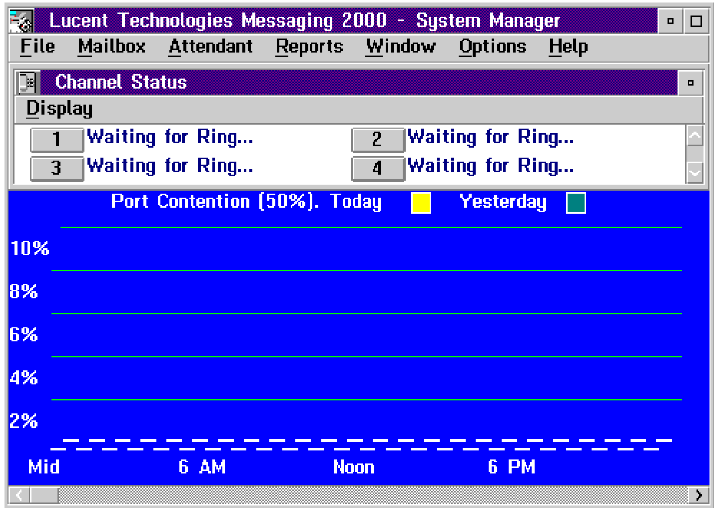
The 50% Contention screen displays the percentage of an hour that half of the ports installed on the system were handling calls at the same time for the current day and previous days.

Displaying the 50% Contention Screen

To select the 50% Contention screen, select 50% Contention from the Window menu. The 50% Contention screen displays directly below the menu bar. If the Channel Status window is displayed, the 50% Contention screen displays below the Channel Status window.

Interpreting the 50% Contention Screen

The left side of the 50% Contention screen displays the percentage of 50% port contention. The bottom of the graph displays the time of day in six-hour segments starting at midnight. Each bar identifies the percentage of available time the system handled calls during a given hour. If the system did not receive any calls during a particular hour, the graph displays a dash. Note that the lines across the bar graph do *not* indicate exact contention figures, they are designed to assist you with interpreting the bars.



100% Contention Screen

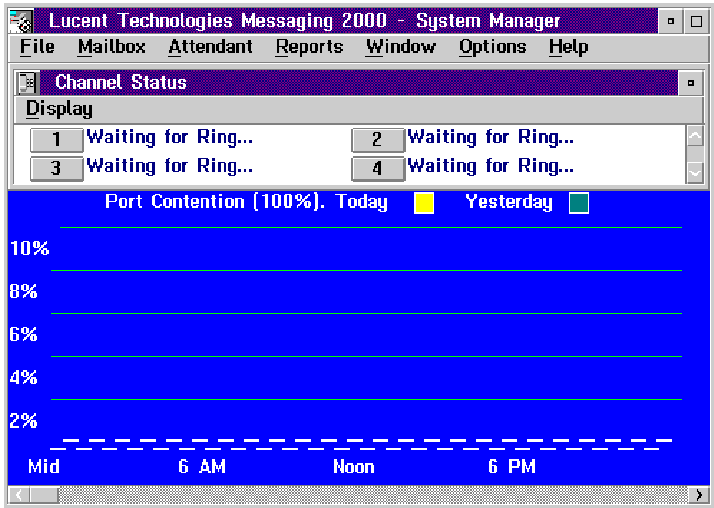
The 100% Contention screen displays the percentage of an hour that all the ports installed on the system were occupied at the same time for the current day and previous days. If M2000 repeatedly experiences 100% contention for two to five percent of any particular hour, it is recommended that you install more ports on the system, to accommodate the call traffic.

Displaying the 100% Contention Screen

To select the 100% Contention screen, select 100% Contention from the Window menu. The 100% Contention screen displays directly below the menu bar. If the Channel Status window is displayed, the 100% Contention screen displays below the Channel Status window.

Interpreting the 100% Contention Screen

The left side of the graph displays the percentage of the hour that the system experienced 100% contention. The bottom of the graph displays the time of day in six-hour segments starting at midnight. Each bar identifies the percentage of available time the system handled calls during a given hour. If the system did not receive any calls during a particular hour, the graph displays a dash. Note that the lines across the bar graph do *not* indicate exact contention figures, they are designed to assist you with interpreting the bars.



System Status Dialog Box

The System Status dialog box displays general information about call activity handled by the system.

Displaying the System Status Dialog Box

To display the Status dialog box, select System Status from the Options menu. The Status dialog box displays. To close the dialog box, click OK. The main system window displays.

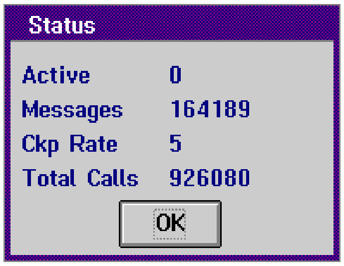
Interpreting the System Status Dialog Box

Active – Displays the number of live calls currently using the system.

Messages – Displays the total number of messages sent to system mailboxes since the system was installed.

Ckp Rate – Displays the number of calls received before the system saves the Checkpoint file. The Checkpoint file stores critical system settings information and allows the system to resume operation after a failure, such as a power loss. The Checkpoint rate value is specified in System Setup.

Total Calls – Displays the total number of calls handled by the ports on the system since the system was installed.



CHAPTER 24

Maintaining the System

This chapter provides steps that will help you to perform the following maintenance functions:

- Performing system file maintenance
- Viewing file contents
- Setting up an alternative drive for file storage
- Adding ports and modules
- Verifying file versions
- Maintaining system security
- Installing and configure Remote Services Management software
- Installing and configure Graham Utilities software

Procedures in this chapter assume that the hard drive on which the system is installed is drive C, that any additional hard drive that may be installed is D, that the disk drive is A, and that the CD-ROM drive, if installed, is E. Drive designations on the specific PC on which you are working may vary. Confirm the appropriate drive letters, when necessary, in procedures provided in this chapter.

Performing System File Maintenance

M2000 includes a file maintenance program called Quick Assist that enables you to back up, restore, and recover files in the \CVR1, REC0*n*, and FAX0*n* directories. You can use Quick Assist to:

- Back up system files
- Restore backed up system files
- Verify system file integrity
- Recover system files

You can also configure the M2000 system to run Quick Assist as part of routine system maintenance.

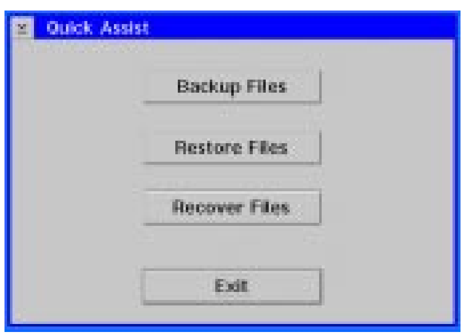
Using Quick Assist to Back Up System Files

The Backup feature of Quick Assist allows you to archive system files. You can choose to archive all site-specific files or only certain files (such as supervisor prompts, subscriber greetings and messages, or mailbox configuration files).

Depending on the data files you choose to back up and the size of the M2000 system, you may need a large number of blank disks.

To back up system files:

1. Shut down M2000, if it is running.
2. Double-click the QASSIST icon in the Lucent Technologies folder. The Quick Assist dialog box displays.



3. Click Backup Files. The Backup Files dialog box displays.

4. Under Data Files to be Backed Up, select the files you want to back up:

   - **Mailbox Database Files** – Creates a backup of all files in the \CVR1 directory. These files contain information pertaining to system mailboxes, including subscribers' new and saved message counts.
   - **Subscriber Greeting Files** – Creates a backup of all .GRT files in the \REC0*n* directories that contain prompts recorded by subscribers. The system only backs up \REC0*n* directories (if stored on the C: drive) that contain subscriber greetings.
   - **Message Files** – Creates a backup of all .MSG and .TIF files in the \REC0*n* and \FAX0*n* directories that contain voice and fax messages left for subscribers. The system only backs up REC0*n* (if stored on the C: drive) and \FAX0*n* directories that contain subscriber messages.
   - **Supervisor Prompt Files** – Creates a backup of all .SUP and .VXT files stored in the \REC00 directories that contain prompts recorded by system managers. The system only backs up \REC00 directories (if stored on the C: drive) that contain prompts.

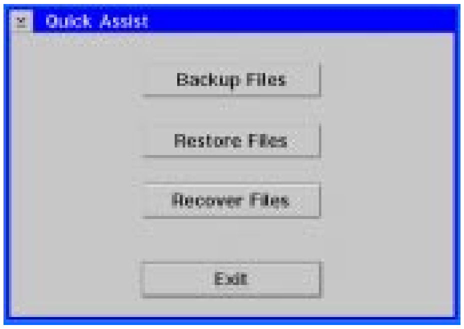
5. Under Destination Drive, select the drive to which you want the system to back up the files.
6. To begin the backup, click OK. The system prompts you to label a disk and insert the disk in the disk drive.
7. Insert the blank, labeled disk in the drive you selected in step 5. If you use a disk with information on it, that information is overwritten during the backup.
8. When prompted, press any key to initialize the disk. The OS/2 backup program launches.
9. When prompted, press <ENTER> to continue.
10. As prompted by the system, label and insert a new disk to make a separate backup of each directory in which the selected files are stored. For example, if you are backing up subscriber greetings, the system prompts you to insert a new disk for each REC0*n* directory in which .GRT files are stored. The system also prompts you to insert a new disk for each different type of file you selected or if the current disk becomes full.
11. When the backup is complete, the Quick Assist dialog box displays.
12. Click Exit to close Quick Assist.

Using Quick Assist to Restore System Files

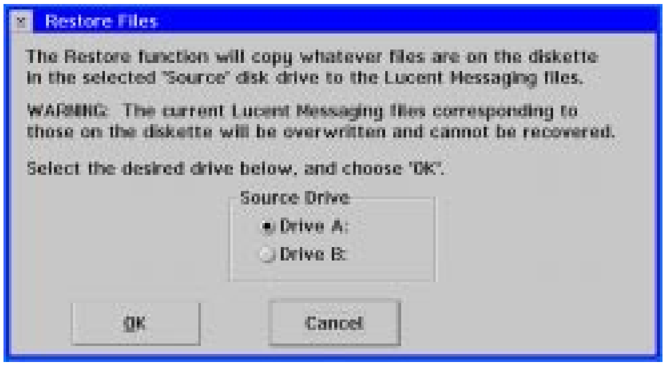
The Restore feature allows you to restore backup files you created with Quick Assist to the M2000 PC.

To restore system files:

1. Shut down M2000, if it is running.
2. Double-click the QASSIST icon in the Lucent Technologies folder. The Quick Assist dialog box displays.



3. Click Restore File. The Restore Files dialog box displays.



4. Under Source Drive, select the drive from which you want to restore the Quick Assist backup files.

Use caution when restoring files to the system. The backup files you restore from the disk overwrite existing files with the same filename.

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5. To restore the files, click OK.
6. When prompted by the system, insert the first backup disk in the selected disk drive, then press any key to continue.
7. When OS/2 prompts you to insert the disk in the disk drive, verify that it is inserted and press <ENTER> to continue.

   The system automatically restores all of the files on the disk to the directory from which they were originally backed up. You cannot restore individual files. The system displays the date the backup file was created and the drive to which the files are being restored and lists each file as it is restored.

8. If the backup was stored on multiple disks, the system prompts you to insert the remaining backup disks, as necessary.
9. When the system displays a message that the restore is complete, press any key to return to the Quick Assist dialog box.
10. To close Quick Assist, click Exit.

Using Quick Assist to Recover System Files

The Recover feature allows you to verify system file integrity and to rebuild certain files if they become damaged. Recoverable files are those that contain important site-specific information concerning system mailboxes, subscriber greetings and messages, and supervisor prompts.

Use recover whenever you want to check site-specific system file integrity or whenever you suspect file damage. There are four recovery mode options based on problem severity:

- Verify
- Update partial
- Update all boxes
- Rebuild all boxes

It is recommended that you always run the Verify feature first to ensure that an update or rebuild is warranted.

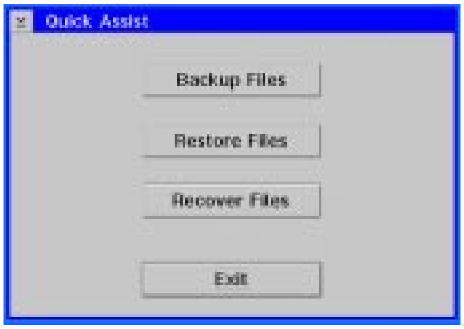
Verifying File Integrity

The Verify feature allows you to ensure the integrity of the site-specific system files. When you run Quick Assist Verify, the system searches the system's \CVR1 directory to verify that:

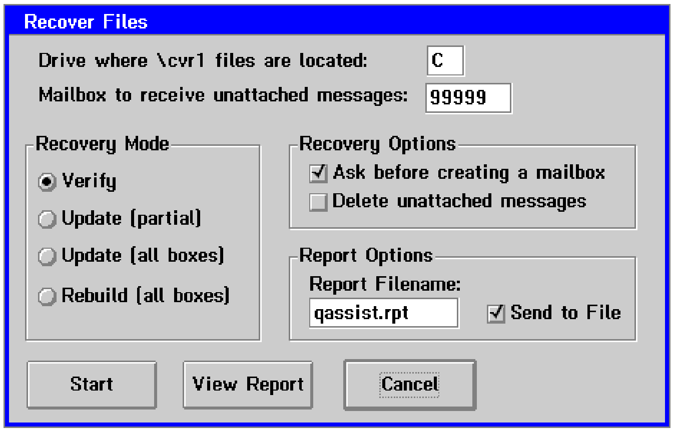
- All messages and greetings indexed to system mailboxes actually exist in the appropriate \REC0*n* and \FAX0*n* directories.
- System prompts and scheduled events are accessible.
- Mailboxes specified in the Attendant Menu dialog box exist on the system.

To verify system file integrity:

1. Shut down M2000, if it is running.
2. Double-click the QASSIST icon in the Lucent Technologies folder. The Quick Assist dialog box displays.

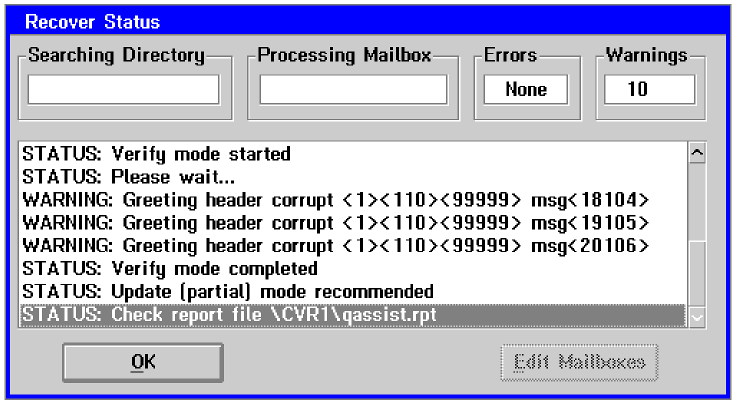


3. Click Recover Files. The Recover Files dialog box displays.



4. In the Drive where \cvr1 files are located field, verify the drive displayed in the field is the drive where the \CVR1 directory is located.
5. Under Recovery Mode, select the Verify option. When you run Verify, you do not need to select Recovery Options or specify a mailbox to receive unattached messages.
6. Under Report Options, enter the name of the report you want the system to generate, if you do not want to accept the default QASSIST.RPT.
7. Under Report Options, select the Send to File option if you want to create a report file. When you select this option, the system creates a report with the specified filename in the \CVR1 directory. If you deselect this option, the report is only available by selecting the View Report option.

8. To begin the verification, click Start. The Recover Status dialog box displays.



The system copies the files in the \CVR1 directory into a directory named \~REPAIR~. Do not delete the files from the \~REPAIR~ directory until you are confident the system has corrected any file damage.

The Searching Directory and Processing Mailbox fields display the directory and mailbox currently being verified. The Errors and Warnings fields reflect the respective number of errors and warnings the system encounters during verification.

9. When verify is complete, click OK then click View Report on the Recover Files dialog box to display the report. If the system detected errors or warnings during verification, the appropriate corrective action is suggested in the report.

10. Click the icon in the upper-left corner of the window and select Close to return to the Recover Files dialog box.

11. To return to the Quick Assist dialog box, click Cancel.

12. To close Quick Assist, click Exit.

Running a Partial Mailbox Update

The Update (partial) feature allows you to update only those mailboxes that may be corrupt and to locate any unattached messages. When you run Quick Assist in Update Partial mode, the system:

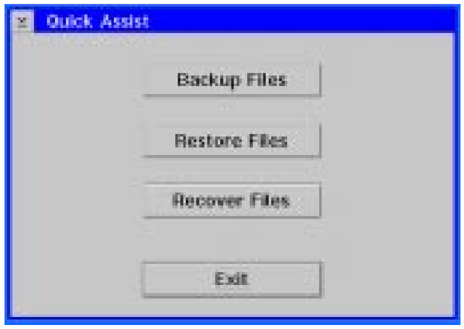
- Deletes and rebuilds the index file used for reports by name, search lists, and directories for system mailboxes.
- Verifies group distribution lists and V-Trees.
- Verifies that mailboxes specified in the Attendant Menu dialog box exist on the system.
- Creates mailboxes that do not currently exist, but that have messages or greetings indexed to them.
- Re-establishes links that have been broken between subscriber greetings and mailboxes.
- Resets subscriber settings for mailboxes (such as extension number and personal operator) and message notification entries to default values, if the mailbox setting information is damaged.
- Scans the \REC0*n* directories and indexes messages and greetings that are not already indexed to a mailbox. These messages, as well as comments formerly

attached to the messages, become new individual messages in the mailbox. Unattached messages are assigned to a default mailbox you specify, unless you choose to have the system delete them.

- Reschedules stranded network messages.

To perform a partial system mailbox update:

1. Shut down M2000, if it is running.
2. Double-click the QASSIST icon in the Lucent Technologies folder. The Quick Assist dialog box displays.



3. Click Recover Files. The Recover Files dialog box displays.

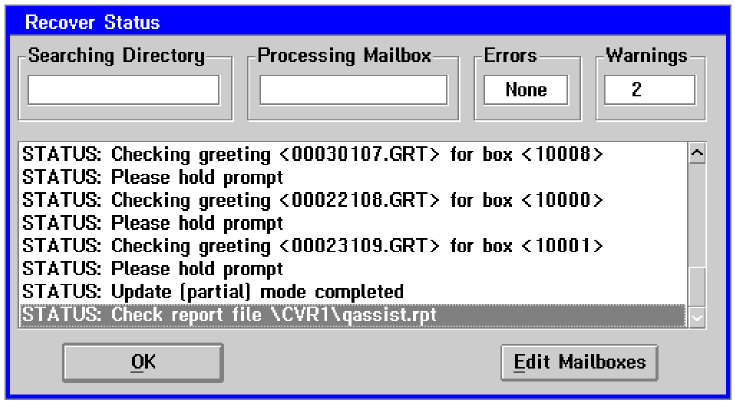
4. In the Drive where \cvr1 files are located field, verify that the displayed drive is the drive where the \CVR1 directory is located.
5. In the Mailbox to receive unattached messages field, enter the mailbox in which you want the system to place messages with invalid header information. (Unattached messages with valid header information are placed in the new message queue of the receiving mailbox.) Messages are only put in this mailbox if the Delete unattached messages option is disabled.
6. Under Recovery Mode, select the Update (partial) option.
7. Under Recovery Options, select the Ask before creating a mailbox option if you want the system to prompt you for confirmation before it creates mailboxes. The system creates mailboxes when it finds messages or greetings that are linked to a mailbox number that does not exist. If you deselect this option, the system automatically creates the mailboxes indicated by the message or greeting links.
8. Under Recovery Options, select the Delete unattached messages option if you want the system to automatically delete unattached messages. If you disable this option,

unattached messages with valid header information are placed in the mailbox in the message header, and unattached messages with invalid header information are placed in the mailbox you specified in step 5.

9. In the Report Filename field, enter the name of the report you want the system to generate, if you do not want to accept the default QASSIST.RPT.

10. Under Report Options, select the Send to File option if you want to create a report file. When you select this option, the system creates a report with the specified filename in the \CVR1 directory. If you deselect this option, the report is only available by selecting the View Report option.

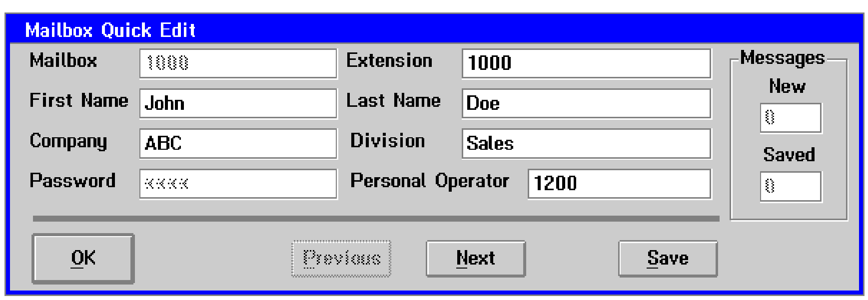
11. To begin the update, click Start. The Recover Status dialog box displays.



The system copies the files in the \CVR1 directory into a directory named \~REPAIR~. Do not delete the files from the \~REPAIR~ directory until you are confident the system has corrected any file damage.

The Searching Directory and Processing Mailbox fields display the directory and mailbox currently being processed. The Errors and Warnings fields reflect the respective number of errors and warnings the system encounters during the update.

12. When the partial update is complete, you can click Edit Mailboxes to reenter or modify information that may have been lost. The Mailbox Quick Edit dialog box displays with information for the first mailbox.



This dialog box includes general identification information about each system mailbox, including the First and Last Name, Company, and Division. The Messages box displays the number of recovered New and Saved messages.

You can click the Next and Previous buttons to move through the mailboxes. Click Save to save any edits you make. When you finish making any edits, click OK to return to the Recover Status dialog box.

13. Click OK. The Recover Files dialog box displays.
14. To display the report, click View Report. If the system detected errors or warnings during the update, the appropriate corrective action is suggested in the report.
15. When you finish viewing the report, click the window icon in the upper-left corner and select Close. The Recover Files dialog box displays.
16. Click Cancel. The Quick Assist dialog box displays.
17. To close Quick Assist, click Exit.

Running an Update on All Mailboxes

The Update (all boxes) feature allows you to update all system mailboxes.

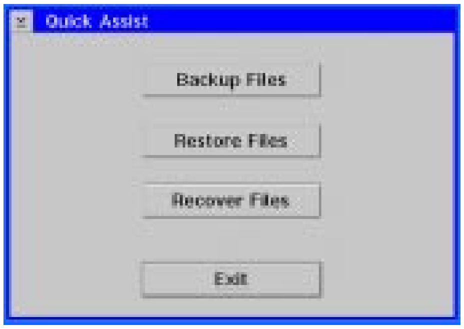
Use this feature only when recommended during Verify or Update (partial) and only under the guidance of a Lucent Technologies technical support representative.

When you run Quick Assist in Update (all boxes) mode, the system:

- Deletes and rebuilds the index file used for reports by name, search lists, and directories for system mailboxes.
- Verifies distribution lists and V-Trees.
- Creates mailboxes that do not currently exist but that have messages or greetings indexed to them.
- Re-establishes links that have been broken between subscriber greetings and mailboxes.
- Resets subscriber settings for mailboxes (such as extension number and personal operator) to default values, if the mailbox setting information is damaged.
- Attempts to re-index all scheduled outbound network messages.
- Deletes non-network outbound events (message notification, message indicators) and message confirmation data.
- All messages in mailboxes’ saved queues are returned to the new message queues.

To perform an update on all system mailboxes:

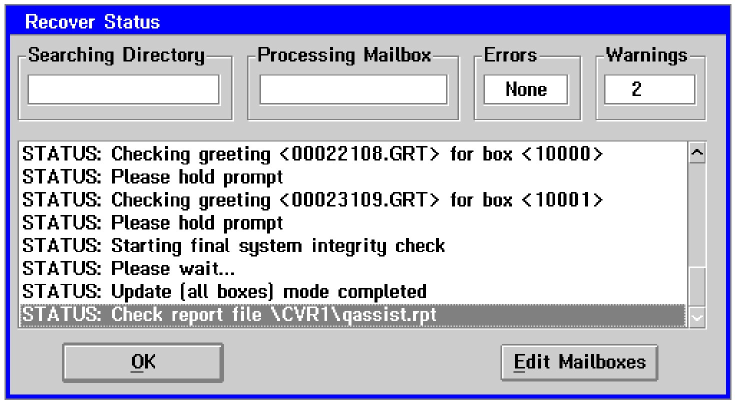
1. Shut down M2000, if it is running.
2. Double-click the QASSIST icon in the Lucent Technologies folder. The Quick Assist dialog box displays.



3. Click the Recover File button. The Recover Files dialog box displays.

4. In the Drive where \cvr1 files are located field, verify that the displayed drive is the drive where the \CVR1 directory is located.
5. Under Recovery Mode, select the Update (all boxes) option.
6. In the Mailbox to receive unattached messages field, enter the mailbox in which you want the system to place messages with invalid header information. Unattached messages with valid header information are placed in the new message queue of the receiving mailbox.
7. Under Recovery Options, select the Ask before creating a mailbox option if you want the system to prompt you for confirmation before it creates mailboxes. The system creates mailboxes when it finds messages or greetings that are linked to a mailbox number that does not exist. If you deselect this option, the system automatically creates the mailboxes indicated by the message or greeting links.
8. In the Report Filename field, enter the name of the report you want the system to generate, if you do not want to accept the default QASSIST.RPT.
9. Under Report Options, select the Send to File option if you want to create a report file. When you select this option, the system creates a report with the specified filename in the \CVR1 directory. If you deselect this option, the report is only available by selecting the View Report option.
10. To begin the update, click Start. A confirmation dialog box displays.

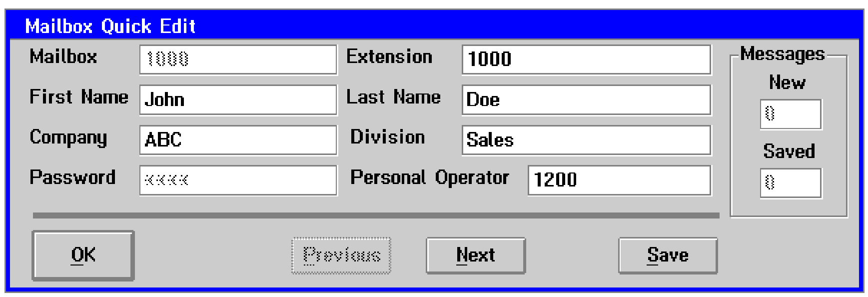
11. To confirm that you want to start the update, click OK. The Recover Status dialog box displays.



The system copies the files in the \CVR1 directory into a directory named \~REPAIR~. Do not delete the files from the \~REPAIR~ directory until you are confident the system has corrected any file damage.

The Searching Directory and Processing Mailbox fields display the directory and mailbox currently being processed. The Errors and Warnings fields reflect the respective number of errors and warnings the system encounters during the update.

12. When the update is complete, you can click Edit Mailboxes to reenter or modify information that may have been lost. The Mailbox Quick Edit dialog box displays with information for the first mailbox.



This dialog box includes general identification information about each system mailbox, including the First and Last Name, Company, and Division. The Messages box displays the number of recovered New and Saved messages.

You can click the Next and Previous buttons to move through the mailboxes. Click Save to save any edits you make. When you finish making any edits, click OK to return to the Recover Status dialog box.

13. Click OK. The Recover Files dialog box displays.
14. To display the report, click View Report. If the system detected errors or warnings during the update, the appropriate corrective action is suggested in the report.
15. When you finish viewing the report, click the window icon in the upper-left corner and select Close. The Recover Files dialog box displays.
16. Click Cancel. The Quick Assist dialog box displays.
17. To close Quick Assist, click Exit.

Rebuilding All Mailboxes

The Rebuild (all boxes) feature allows you to rebuild all system mailboxes.

Use this feature only if the system encounters a problem during an update and only under the guidance of a Lucent Technologies technical support representative.

When you run Quick Assist in Rebuild (all boxes) mode, the system:

- Deletes all system mailboxes; you cannot select individual mailboxes for rebuilding.
- Searches the \REC0*n* directories for messages and greetings.
- Rebuilds those mailboxes for which at least one message or greeting is found in the REC0*n* directories; the system does not rebuild mailboxes that have no messages or greetings indexed to them.

V-Tree mailboxes that do not have greetings or messages associates with them will not be rebuilt.

If possible, the system restores the following information to the rebuilt mailboxes:

- **Greetings** – name prompt, optional prompts, personal greeting.
- **Mailbox information** – first and last name, extension, company, division, class of service number or custom class of service, personal operator.
- **Mailbox settings** – active call-handling options, message notification entries, primary fax destination, follow-me-forward destination, V-Tree, folders.

If the system cannot restore this information, it returns the mailboxes to the system defaults, and you must manually edit the mailboxes to reenter the settings.

Messages are affected as follows:

- All message pointers are re-indexed and placed in their respective mailboxes' new message queue.
- Messages sent to a group list are only retained in the first recipient's mailbox.
- Messages that were copies of messages sent from another subscriber are not replaced.
- Comments attached to messages are treated as separate messages.

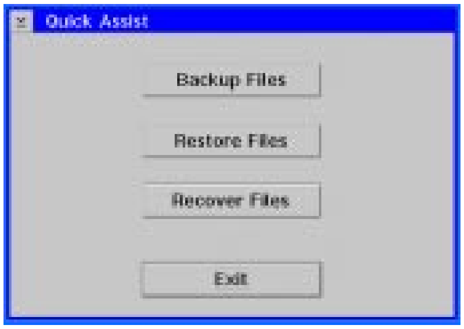
The following information is not restored during a rebuild all operation:

- Outbound events, such as message notification events and message indicator events.
- Distribution lists.
- Message confirmation data.

If a mailbox's message indicator is on when rebuild mode is run, the mailbox must go through a complete message cycle (indicator activation and deactivation) before the indicator is synchronized.

To rebuild system mailboxes:

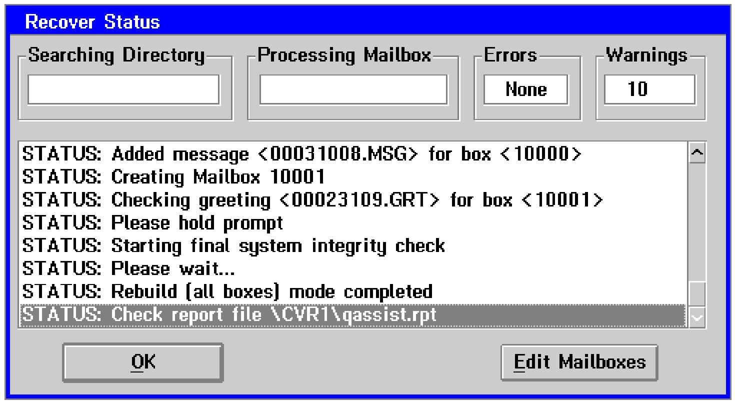
1. Shut down M2000, if it is running.
2. Double-click the QASSIST icon in the Lucent Technologies folder. The Quick Assist dialog box displays.



3. Click Recover Files. The Recover Files dialog box displays.

4. In the Drive where \cvr1 files are located field, verify the drive displayed in the field is the drive where the \CVR1 directory is located.
5. Under Recovery Mode, select the Rebuild (all boxes) option.
6. In the Mailbox to receive unattached messages field, enter the mailbox in which you want the system to place messages with invalid header information. Unattached messages with valid header information are placed in the new message queue of the receiving mailbox.
7. Under Recovery Options, select the Ask before creating a mailbox option if you want the system to prompt you for confirmation before it creates mailboxes. The system creates mailboxes when it finds messages or greetings that are linked to a mailbox number that does not exist. If you deselect this option, the system automatically creates the mailboxes indicated by the message or greeting links.
8. In the Report Filename field, enter the name of the report you want the system to generate, if you do not want to accept the default QASSIST.RPT.
9. Under Report Options, select the Send to File option if you want to create a report file. When you select this option, the system creates a report with the specified filename in the \CVR1 directory. If you deselect this option, the report is only available by selecting the View Report option.
10. To begin the rebuild, click Start. A confirmation dialog box displays.

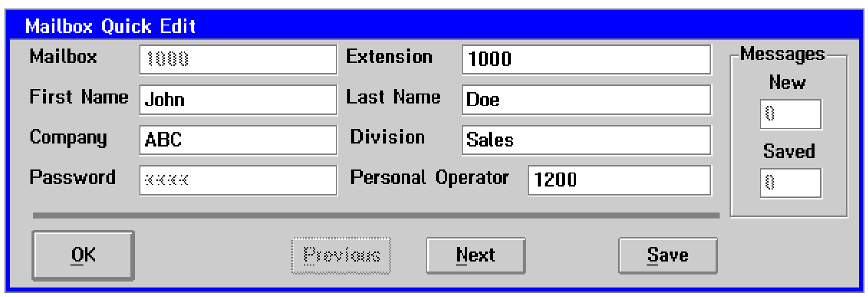
11. To confirm that you want to start the rebuild, click OK. The Recover Status dialog box displays.



The system copies the \CVR1 directory into a directory named \~REPAIR~. Do not delete the files from the \~REPAIR~ directory until you are confident the system has corrected any file damage.

12. The Searching Directory and Processing Mailbox fields display the directory and mailbox currently being processed. The Errors and Warnings fields reflect the respective number of errors and warnings the system encounters during the update.

13. When the rebuild is complete, you can click Edit Mailboxes to reenter or modify information that may have been lost. The Mailbox Quick Edit dialog box displays with information for the first mailbox.



This dialog box includes general identification information about each system mailbox, including the First and Last Name, Company, and Division. The Messages box displays the number of recovered New and Saved messages.

You can click the Next and Previous buttons to move through the mailboxes. Click Save to save any edits you make. When you finish making any edits, click OK to return to the Recover Status dialog box.

14. Click OK. The Recover Files dialog box displays.

15. To display the report, click View Report. If the system detected errors or warnings during the update, the appropriate corrective action is suggested in the report.

16. When you finish viewing the report, click the window icon in the upper-left corner and select Close. The Recover Files dialog box displays.

17. Click Cancel. The Quick Assist dialog box displays.

18. To close Quick Assist, click Exit.

Running Quick Assist as Part of Routine System Maintenance

A Quick Assist execute command is located in the STARTUP.CMD file. The STARTUP.CMD file is run each time the system is launched if, during system installation, you selected the option to launch the system automatically upon bootup.

When included in a batch file such as STARTUP.CMD, Quick Assist checks the PLUS.CKP to determine if an abnormal program termination, such as a power failure, has occurred:

- If no abnormal termination occurred, Quick Assist does not run.
- If an abnormal termination is detected, the specified Quick Assist mode runs.

The default Quick Assist execute command in the STARTUP.CMD file (`QASSIST -A -D`) runs the following automatic power failure recovery procedures:

1. Quick Assist runs in Update (partial) mode. If successful, the system is launched.
2. If there are problems that Update (partial) cannot correct, a dialog box displays prompting whether you want to continue. To abort the recovery procedure, click No. To proceed with the recovery procedure, click Yes. If a selection is not made within one minute, the recovery procedures automatically begin.
3. During recovery, the contents of the \BACKUP1 directory are copied to the \CVR1 directory. The backup database directories are created during the shutdown for daily maintenance. If the Shutdown System After Daily Maintenance parameter on the General Parameters tab in System Setup is disabled, or the files in the \BACKUP1 directory are more than two days old, the contents are not copied to the \CVR1 directory, the recovery process halts, and the system launches using the existing database.

Note that changes made to the database since the last backup, such as class of service modifications, are not retained.

4. Quick Assist is then run again in Update Partial mode with the backup database. If successful, the system is launched using the restored database.
5. If the detected problems are not corrected, Quick Assist is run in Update All mode. If the Update All is successful, the system is launched using the restored database.
6. If the detected problems cannot be corrected automatically, the system relaunches using the restored database, and an entry is written to the log file. You must manually run Quick Assist in Rebuild (all boxes) mode to attempt to correct the detected problems.

If the voice mail system does not start automatically upon bootup, you can modify the RUNVM.CMD file to include a Quick Assist execute command. For further information, contact a Lucent Technologies technical support representative.

You can edit the STARTUP.CMD file to specify the Quick Assist mode you want to run if the system detects an abnormal termination. The following parameters determine the Quick Assist mode:

`-B0`	Verify
`-B1`	Update (Partial)
`-B2`	Update (All Boxes)
`-B3`	Rebuild (All Boxes)
`-A`	Automatic Power Failure Recovery

You may also include the following Quick Assist command line options when specifying the repair method:

`-D`	Delete unattached messages
`-I`	Always run the specified Quick Assist mode on bootup, regardless of whether a power failure is detected
`-M`*n*	Specifies the mailbox to receive unattached messages

For example, the command `QASSIST-A -D` (which is the default Quick Assist command used in the STARTUP.CMD file) instructs the system to run Quick Assist in Update (partial) mode when a power failure has occurred and to delete any unattached messages. The sample command `C:\QASSIST -B1 -I -M2500` instructs the system to run Quick Assist in Update (partial) mode at every bootup and to place any unattached messages in mailbox 2500. Make sure that the mailbox you specify to receive unattached messages exists. If you do not specify a mailbox in which to place unattached messages, the system creates a mailbox and assigns it the last available mailbox number. For example, on a system with three-digit mailboxes, the last mailbox is 999. For security reasons, it is recommended that you always use the M*n* parameter for running Quick Assist in a batch file.

To modify the Quick Assist command in the STARTUP.CMD file:

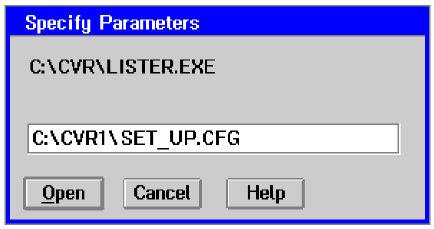
1. Shut down M2000, if it is running.
2. Open an OS/2 window.
3. From the \CVR directory, type `E STARTUP.CMD.` and press <ENTER>. An OS/2 editor window containing the STARTUP.CMD file displays.
4. Move to the line that includes the Quick Assist execute command `QASSIST -A -D`. Modify the line to include the repair mode and any options that you want Quick Assist to run.
5. From the File menu, select Save.
6. If you made any changes, select Save from the File menu. If this is the first time you have saved the file, the Save Notification dialog box displays.
7. Click Type. The Type dialog displays.
8. Click Plain Text, then click Set. The file is saved.
9. Double-click the icon in the upper-left corner of the window to close the editor.
10. Type `EXIT` and press <ENTER> to close the OS/2 window.

Running the Lister Utility

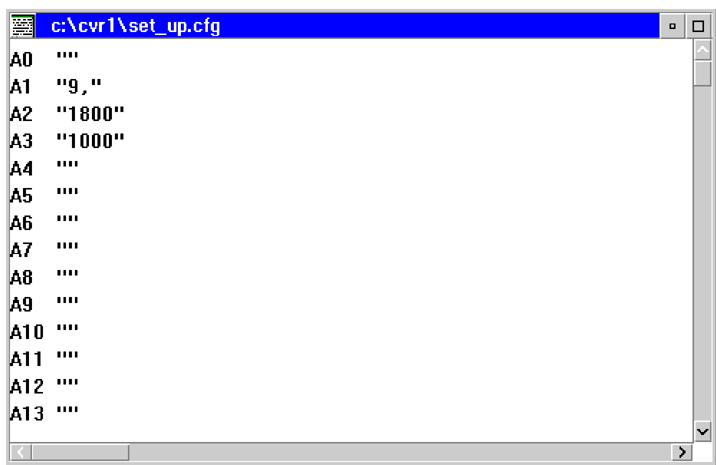
The Lister utility allows you to view the contents of files on the PC. This utility is useful for reviewing system files, such as RUNVM.CMD or SET_UP.CFG.

To run the Lister utility to view the contents of a file:

1. Shut down M2000, if it is running.
2. Double-click the Listen icon in the Lucent Technologies folder. The Specify Parameters dialog box displays.



3. In the field, enter the path, filename, and extension of the file you want to view. For example, to view the SET_UP.CFG file, type `C:\CVR1\SET_UP.CFG`.
4. Click Open. The system displays a window containing the specified file. Use the scroll bars if necessary to view the entire contents.



5. When you finish viewing the file, double-click the icon in the upper-left corner of the window.

Configuring an Alternate Storage Drive

Depending on the size of the PC's hard drive, you may choose to install an additional hard drive for expanded storage of messages. Follow the instructions that came with the hard drive for installing it and configuring the PC to recognize it.

After the additional drive is installed, you must create the required storage directories on the drive and configure the system to recognize it.

To create the required storage directories on the alternate drive:

1. Open an OS/2 window.
2. At the root prompt of the alternate drive, type `MD REC0`*n* and press <ENTER>, where *n* represents the REC directory you are creating.
3. Repeat step 2 for each directory \REC00 through \REC09.
4. From the \CVR prompt, type `EXIT` and press <ENTER> to close the OS/2 window.

To configure the system to recognize an alternate storage drive:

1. Open an OS/2 window.
2. From the \CVR1 prompt, type `E PLUS.SYS` and press <ENTER>. An OS/2 editor window displays.
3. Change the path of the \REC0*n* directories to the new hard drive's letter designation.
4. From the File menu, select Save. If this is the first time you have saved the file, the Save Notification dialog box displays.
5. Click Type. The Type dialog displays.
6. Click Plain Text, then click Set. The file is saved.
7. Double-click the icon in the upper-left corner of the window to close the editor.
8. Type `EXIT` and press <ENTER> to close the OS/2 window.

These steps may also be used to change the location of fax messages stored in the \FAX0*n* directories.

Adding Modules and Ports to a System

You can purchase optional modules and additional ports to upgrade a system at any time. The sentinel unit attached to the PC's parallel port controls access to port licenses and optional modules (Fax Solution, Serial Integrations, AMIS, OctelNet, Multilingual support, Visual Mailbox, and the Visual Architect Developer's Kit).

When you purchase additional port licenses or optional modules, you receive a disk containing a utility that upgrades the system's sentinel protection device to support the utilities or ports purchased. This sentinel upgrade utility eliminates the need for you to RMA the current sentinel in exchange for a new one each time you purchase an upgrade.

Be aware of the following issues before installing the upgrade disk:

- The data file provided in the sentinel upgrade is keyed to work exclusively on the system sentinel assigned the serial number specified when you ordered the upgrade. A separate sentinel upgrade disk, therefore, must be used for each system.
- When the upgrade utility executes, it reads the system's sentinel. It then checks both the serial number and the current sentinel settings against the data file on the disk. If the settings do not match, the error message, "Invalid data file for this sentinel," is written to a file named ERROR.LOG on the disk and the upgrade process is terminated. If this occurs, call a Lucent Technologies technical support

representative immediately. If the upgrade process is terminated, you will still be able to run the system using the previous version—neither the sentinel nor the system is disabled.

- The sentinel for which the upgrade was ordered should be the only sentinel attached to the system. Any attempt to upgrade multiple sentinels at the same time will result in the additional sentinels being disabled.

To perform the sentinel upgrade:

1. Shut down M2000, if it is running.
2. Insert the upgrade disk in the A: drive.
3. Open an OS/2 window.
4. At the C:\ prompt, type `A:` and press <ENTER>.
5. At the A:\ prompt, type `SUU` and press <ENTER>.
6. When the upgrade procedure is finished, the message, “Sentinel upgrade complete,” displays. Restart the software and test the new features or ports to ensure they are available.

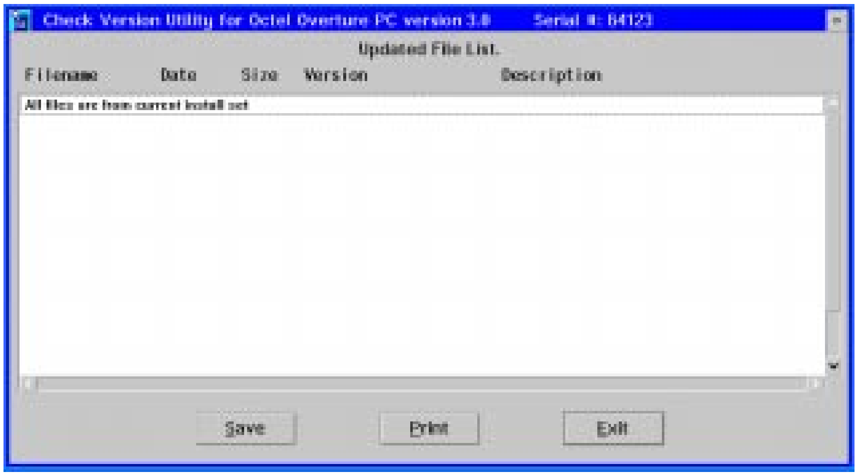
Verifying File Version Information

The Check Version utility provides a convenient method of determining the exact version number and date of any of the voice mail system’s *.EXE, *.DLL, or *.P files. Knowing which file versions the system is running allows you to determine whether newer files are available and helps Lucent Technologies technical support representatives serve you more efficiently. Check Version can only be used for modules developed for the system; it cannot be used on third-party utilities such as RSM.

To run the Check Version utility:

1. Double-click the Check Version icon in the Lucent Technologies folder. The utility reads the ORIGINAL.REG file from the \CVR directory. This file contains information such as last modified date, size, description on the voice mail system’s *.EXE, *.DLL, and *.P files as they were when you originally purchased the system.
2. If this file is not found, the utility displays an error message informing you that it cannot open the ORIGINAL.REG file, and the utility is not run. Click OK to close the dialog box. If you encounter this error message, contact a Lucent Technologies technical support representative.
3. The utility checks each of the files listed in the ORIGINAL.REG file to the files in the \CVR directory. If a file listed in ORIGINAL.REG cannot be found, a dialog box displays the name of the missing file. Click OK to continue or Cancel to abort the utility. If you encounter a missing file error, contact a Lucent Technologies technical support representative.

4. The utility obtains the system's serial number from the sentinel. If a sentinel is not found, an error message displays. Click OK to continue the Check Version utility. The Check Version dialog box displays.



   Any updated files the utility found are listed, along with each file's last modified date, file size, version number, and description.

5. If updated files are found and you want to save the report to a file, click Save. A dialog box displays for you to specify a destination to which to save the file. Specify a destination for the file, then click OK.

6. If updated files are found and you want to print the report to the system PC's attached printer, click Print. **Do not click Print if there is not a printer attached to the system PC.** A dialog box displays confirming that the file has been sent to the printer. Click OK to close the dialog box.

   The Save and Print options are only available if updated files are found.

7. Click Exit to close the Check Version utility.

Maintaining System Security

The security features outlined in this chapter will help to prevent unauthorized access to the system and mailboxes, to substantially reduce the risk of fraudulent long distance charges, and to limit access to system information and applications.

Please review and implement, as appropriate, the following security measures to:

- Prevent callers from transferring to extensions not assigned system mailboxes
- Impede callers from gaining access to the Quick Assist maintenance mailbox
- Assign randomly generated passwords to system mailboxes
- Require passwords at least one digit longer than mailbox numbers
- Require subscribers to regularly change their passwords
- Monitor uninitialized mailboxes
- Use extended password security

- Provide notification of unsuccessful mailbox login attempts
- Lock subscriber mailboxes after unsuccessful login attempts
- Monitor unsuccessful login attempts
- Have subscribers record their Name prompts
- Delete unused mailboxes immediately
- Require callers to enter passwords to proceed in V-Trees
- Secure the system PC
- Utilize phone system security features
- Use supervisor passwords to restrict system management access
- Use the Auto Logoff feature to restrict system management access

Preventing Callers from Transferring to Extensions Not Assigned System Mailboxes

On some phone systems, callers can transfer to a system extension and then use that extension to access an outside line. This is most relevant for system ports used for outcalls for networking or message notification to a beeper. By preventing callers from accessing system extensions not assigned system mailboxes, you can substantially reduce the risk of outside callers accessing an outside line. The parameters on the Invalid Mailbox tab in System Setup can prevent callers from accessing non-assigned extensions for this purpose:

- Transfer Invalid Mailboxes During Hours
- Transfer Invalid Mailboxes After Hours

When these parameters are disabled, callers dialing an extension that has not been assigned a mailbox hear, *“<Mailbox number> is not valid. Please redial the number of the person you are calling.”*

For additional information on these parameters, see Chapter 14, “Setting Up the System.”

Impeding Callers from Accessing the Quick Assist Maintenance Mailbox

When you run Quick Assist in a recover mode, the system can automatically assign messages with invalid header information to a default mailbox. This allows the system manager to then copy the messages to the correct subscriber mailbox. The default for this maintenance mailbox is the last mailbox number available on the system. For example, on a system with four-digit mailboxes, mailbox 9999 is used.

Since it is easier for an outside caller attempting to gain unauthorized mailbox access to guess a mailbox number such as 9999, it is recommended that you specify a system mailbox in which you want unattached messages to be placed. In addition, it is strongly recommended that this mailbox be assigned a long password that cannot easily be guessed by an outside caller attempting to access the system.

When you run Quick Assist in recover mode from the Quick Assist icon in the Lucent Technologies folder, use the Mailbox to Receive Unattached Messages field on the Recover Files dialog box to specify a mailbox in which to place messages with invalid header information. When you run Quick Assist from the \CVR prompt or in batch mode as part of regular system maintenance, specify this mailbox by including the -M*n* parameter, where *n* indicates the number of the mailbox to be used, in the Quick Assist command line.

For additional information on using the -M*n* command, see the topic, "Running Quick Assist as Part of Routine System Maintenance," earlier in this chapter.

Assigning Randomly Generated Passwords to System Mailboxes

In System Setup, the system allows you to select the type of password assigned to new system mailboxes. You can assign the same default password to all new mailboxes, not require a password, or you can have the system automatically assign a random password to each new mailbox. For security purposes, it is recommended that you use random password assignment.

When you use random password assignment, the system displays the passwords assigned to the new mailboxes when they are created.

For additional information on using randomly generated passwords, see Chapter 14, “Setting Up the System.”

Requiring Passwords at Least One Digit Longer than Mailbox Numbers

The longer the passwords assigned to system mailboxes, the harder it is for a caller to guess them. The Minimum Length of Password parameter on the Subscriber tab in the System Setup utility allows you to set the least number of digits required in a mailbox password. It is recommended that you set this parameter at least one digit higher than the length of the system’s mailbox numbers. For example, if the system uses four-digit mailboxes, it is recommended that the Minimum Length of Password parameter be set to at least 5. Remember when setting this parameter to balance system security against ease of use for the subscribers. Setting this parameter too high may make it difficult for system subscribers to remember their passwords.

For additional information on using this parameter, see Chapter 14, “Setting Up the System.”

Requiring Subscribers to Regularly Change Their Passwords

Requiring subscribers to regularly change their passwords helps prevent outside callers from determining subscriber passwords and gaining unauthorized access to system mailboxes. Use the Days Before Forced Password Change parameter on the Subscriber tab in System Setup to specify the required interim before subscribers are required to change their mailbox passwords. When you enable this parameter, subscribers must change their password the first time they log into their mailboxes and each time after the number of specified days expires before they can proceed to the main menu.

For additional information on using this parameter, see Chapter 14, “Setting Up the System.”

Monitoring Uninitialized Mailboxes

If you disable the Days Before Forced Password Change parameter on the Subscriber tab in System Setup, subscribers are not required to change their passwords. This can make it easier for a caller to guess a subscriber's password, especially if a default password is used for all mailboxes instead of randomly assigned passwords for each mailbox.

The Uninitialized Mailboxes report lists all mailboxes for which the password has not yet been changed from the initially assigned password. It is recommended that you check this report regularly to determine which subscribers have not yet changed their passwords. Remind subscribers that they should change their passwords regularly to prevent anyone from accessing their mailboxes. If you find that many subscribers are not changing their passwords, you can enable the Days Before Forced Password Change parameter in the System Setup utility to require them to change their passwords.

Using Extended Password Security

Extended password security requires subscribers to press <#> after entering their passwords to access their mailboxes. If subscribers do not press <#>, the system pauses before allowing mailbox access. The Enable Extended Password Security parameter on the Subscriber tab in System Setup determines whether the system waits for the subscriber to press <#> or allows immediate mailbox access after successful password entry.

This parameter helps prevent unauthorized users from determining the number of digits in system mailbox passwords.

For additional information on using this parameter, see Chapter 14, "Setting Up the System."

Providing Notification of Unsuccessful Mailbox Login Attempts

The system can voice notification to subscribers when one or more unsuccessful login attempts have been made to their mailboxes. This feature informs subscribers that someone may have attempted to gain unauthorized access to their mailboxes.

The Failed Login Notification option on the Class of Service dialog box determines whether this feature is enabled. The Failed Login Notify option on the Subscriber Settings dialog box controls this feature by individual mailbox.

When an unsuccessful login attempt occurs, it is recommended that the subscriber change their mailbox password immediately and notify the system manager of the attempted login.

For additional information on using this feature, see Chapter 17, "Managing System Mailboxes."

Locking Subscriber Mailboxes After Unsuccessful Login Attempts

The system can lock a mailbox when a caller attempting to log into the mailbox has been disconnected after entering the incorrect password a specified number of times. A locked mailbox prevents *any* caller, including the subscriber, from logging into the mailbox until the system manager manually unlocks the mailbox.

Mailbox Lock-Out Option on the Class of Service dialog box determines whether this feature is enabled. The Mailbox Lock-Out option on the Subscriber Settings dialog box controls this feature by individual mailbox. The Consecutive Login Failures Before Lock-Out parameter on the Subscriber Parameters tab in System Setup determines the number of failed login attempts allowed before the mailbox is locked, if the Mailbox Lock-Out option is enabled for the mailbox.

For additional information on using the Mailbox Lock-Out feature, see Chapter 17, "Managing System Mailboxes."

Monitoring Failed Login Attempts

The Login Failure report provides a list of all unsuccessful login attempts to system mailboxes. You should monitor this report regularly to determine if there are a lot of failed login attempts to a particular mailbox and when the failed attempts occurred. A high number of failed login attempts could indicate the mailbox owner requires additional training or that an unauthorized user is attempting to gain access to the mailbox.

Having Subscribers Record Their Name Prompts

When subscribers record their Name prompts, those prompts are voiced as confirmation to callers sending messages to system mailboxes. This ensures that messages will be sent to the correct mailboxes. If a Name prompt is not recorded for a subscriber mailbox, only the mailbox number is voiced to callers sending messages to that mailbox.

Deleting Unused Mailboxes Immediately

If a mailbox is no longer being used, it is recommended that you immediately delete that mailbox from the system. This prevents anyone from gaining unauthorized system access through the mailbox. If a mailbox is being reassigned to a new mailbox owner, it is strongly recommended that you delete, then re-create the mailbox.

For additional information on deleting system mailboxes, see the topic, "Deleting Mailboxes," in Chapter 17, "Managing System Mailboxes."

Requiring Callers to Enter Passwords to Proceed in V-Trees

If V-Trees are used to distribute or collect sensitive information, such as pricing data or customer data, it is strongly recommended that you use the Require Password to Proceed to Next Level option. This option requires callers to a V-Tree to correctly enter a predefined password before they are allowed to proceed in the V-Tree. You can use this option on multiple levels to protect individual options, or you can use it on the first level of the V-Tree to limit access to the entire V-Tree. This ensures that only authorized callers can gain access to the V-Tree information.

For additional information on using the Require Password to Proceed to Next Level option in V-Trees, see Chapter 18, "Working with V-Trees."

Securing the System PC

It is very important the system PC be protected from unauthorized system management access. Unauthorized access to the system PC could result in system setup changes, loss of mailboxes and messages, and database corruption. The best way to prevent unauthorized system management access to the system PC is to store the PC in a secure area, such as a locked room.

If you cannot store the system PC in a secure area, consider using security features of the PC, such as passwords, to provide a degree of protection. See the PC documentation for information on available security features.

Before implementing security features on the PC, contact a Lucent Technologies technical support representative to review the security features you intend to use to ensure they will not disrupt system performance in any way.

Utilizing Phone System Security Features

Most phone systems have security features that help prevent unauthorized access to system ports. Contact your phone system representative to determine what security features are available and how to implement them.

Before implementing security features on the phone system, contact a Lucent Technologies technical support representative to review the security features you intend to use to ensure they will not disrupt system performance in any way.

Using Supervisor Passwords to Restrict System Management Access

Access to system management features is password-protected. There are two levels of system manager passwords. Level 2 access allows a system manager to create, edit, and delete mailboxes; to access reports and system statistics; to create and specify prompts; maintain network nodes; and to create V-Trees. Level 3 access allows a system manager to perform all Level 2 tasks, to set system parameters using the System Setup utility, to configure greeting by port, to modify classes of service, and to configure multilingual systems.

It is recommended that you use at least a six-digit password for both the Level 2 and Level 3 passwords. The longer the Level 2 and Level 3 passwords, the more difficult it is for someone to guess them. It is also recommended that the supervisor passwords be changed on a regular basis to further protect against unauthorized system manager access.

When giving the Level 2 or Level 3 password to system managers, keep in mind that the more people who have a password, the greater the possibility for problems to occur. There should be more than one individual who knows the passwords for the system, however, so when one system manager is away from the office, another is available to maintain the system.

For additional information on supervisor passwords, see Chapter 21, “Starting, Logging Into, and Shutting Down the System.”

Using the Auto Logoff Feature to Restrict System Management Access

The system's Auto Logoff feature allows you to specify the maximum amount of onscreen supervisor inactivity allowed before the security level automatically returns to Level 1. This feature helps prevent unauthorized access to system manager functions. To set the Auto Logoff, enter the number of minutes of onscreen inactivity allowed before logoff in the Logoff In__ Minutes field on the Supervisor Password dialog box.

For additional information on logging into the system, see Chapter 21, "Starting, Logging Into, and Shutting Down the System."

Installing and Configuring Remote Services Management

Remote Services Management (RSM) - Professional Edition is the recommended OS/2 remote maintenance package for use with systems. It allows you to call into a site to either monitor or change the system. To use RSM, you must have both a Manager (your site— the remote site), and a Client (the system PC).

Considerations for Using Remote Services Management

Before using this OEM version of RSM with a system, note the following considerations:

- PCs on which the Manager software is installed can share a common license number. Therefore, you can install the Manager software on as many PCs as you want. Your Manager license number is unique to you.
- The OEM version of RSM Manager software only recognizes OEM versions of the Client software. You cannot use the OEM Manager software to communicate with non-OEM Client software at customer sites. Be sure to maintain both the OEM Professional Edition of RSM and the Advanced Edition of RSM on your system until all Client sites you are servicing are upgraded to the OEM Client software.
- Though you must purchase one license per Client PC, all OEM Client PCs share the same product license number (p31b7ooct00000199991jpm), easing your administration of the Manager Database of Clients. (Note that this license number is case-sensitive.) Also, the same license number can be associated with several Managers in the Client Database of Managers, again easing administration of the database. Exercise care with login name and password assignments. Note that as an added measure of security, PCs running Advanced Edition (non-OEM) Manager software cannot connect to PCs running Professional Edition (OEM) Client software.
- OEM Client software will not operate on a PC that does not contain a system. Be sure that the system software is installed *before* you install RSM Client software on a PC. If you do not, RSM will not operate properly.
- If the OS/2 screen saver is being used on the system PC, note the following:
  - If the screen saver is on at the remote site, you must enter its password, just as you would at a local site.
  - If the dim display is active in the screen saver (indicated by a floating lock on the screen), you must press <ENTER> or you will be unable to deactivate the lock.

– You may download files while the screen is locked.

– You can select the OS/2 Window icon after you type the screen saver password. After the password has been entered, an OS/2 window opens each time you select the icon.

Installing Remote Services Management Software

The following procedures provide the steps to:

- Install and configure the RSM Client software on the system PC
- Install and configure the RSM Manager software on the PC from which you want to monitor the system. If you do not have an RSM Manager license, do not complete this procedure.

To install and configure the RSM client on the system PC:

1. Shut down M2000 if it is running.
2. Open an OS/2 window.
3. If you are installing from CD-ROM, skip to step 4. If you are installing from disk:
   a. Insert the RSM Install Disk in the disk drive.
   b. From the C:\ prompt, type `A:` and press <ENTER>.
   c. From the A:\ prompt, type `INSTALL` and press <ENTER>. The Language dialog box displays.
   d. Skip to step 5.
4. If you are installing from CD-ROM:
   a. Insert the Lucent Technologies Messaging 2000 v.3.0 CD-ROM in the CD-ROM drive.
   b. From the C:\ prompt, type E: and press <Enter>.
   c. From the E:\ prompt, type `CD RSM` and press <Enter>.
   d. From the \RSM directory prompt, type `INSTALL` and press <Enter>, The Language dialog box displays.
5. Verify that American English is selected, then click OK.
6. If a dialog box displays prompting you to specify a temporary drive, verify that the Temporary Drive field specifies C, then click OK. After a short delay, a group of icons displays.
7. Click the Install icon. The Product Number dialog box displays.
8. In the field, enter `p31b7ooct00000199991jpm` then click OK.
9. In the User Name field, enter a name for the user site. Leave the Installation Directory at the default.
10. Next to Client, click the checkboxes under Install and Start at Boot.
11. Click Install. The Remote Services Management Progress dialog box displays.

12. If you are installing from disk, replace disks as prompted and click OK.
13. When the installation is complete, click Quit. The group of icons displays.
14. Click the Exit icon. The OS/2 window displays.
15. To close the OS/2 window, type `EXIT` then press <ENTER>.
16. Remove the disk or CD-ROM.
17. Select Shut Down from the LaunchPad.
18. When prompted to shut down or reboot, press <CTRL+ALT+DEL>.
19. When the system restarts, the RSM software displays a dialog box stating that the Client Setup is not defined.

   If the M2000 system is configured to launch on startup, the main system window will display in the foreground. Click on the dialog box to bring it to the front.

20. Click OK. The Settings dialog box displays the Communications Setup.
21. Under Type, select Modem.
22. Under Device Name, select COM2.
23. Under Baud Rate, select 19200.
24. Under Modem, leave at Default.
25. Select Close. A dialog box displays informing you that no managers are defined.
26. Click OK. The Manager List displays.
27. Click New. The Manager Properties - New dialog box displays.
28. In the Title field, enter OPCPD.
29. In the License field, enter `ooct000001`.
30. Click the tab with two keys. The Logon Properties screen displays.
31. In the Manager Id field, enter OPCPD. Do not define any passwords in the password fields.
32. Click the tab with a traffic light. The Authorization screen displays.
33. In the Control box, select Mouse, Keyboard.
34. In the File Transfer box, select Manager Upload Files and Manager Download Files.
35. In the Reboot box, select Manager Can Reboot this Machine.
36. Click Close.
37. Click New. The Manager Properties - New dialog box displays.
38. In the Title field, enter Octel CSC.
39. In the License field, enter `ooct000033`.

40. Click the tab with two keys. The Logon Properties screen displays.
41. In the Manager Id field, enter Octel CSC. Do not define any passwords in the password fields.
42. Click the tab with a traffic light. The Authorization screen displays.
43. In the Control box, select Mouse, Keyboard.
44. In the File Transfer box, select Manager Upload Files and Manager Download Files.
45. In the Reboot box, select Manager Can Reboot this Machine.
46. Click Close.
47. Click New. The Manager Properties - New dialog box displays.
48. In the Title field, enter Octel Direct.
49. In the License field, enter `ooct000034`.
50. Click the tab with two keys. The Logon Properties screen displays.
51. In the Manager Id field, enter Octel Direct. Do not define any passwords in the password fields.
52. Click the tab with a traffic light. The Authorization screen displays.
53. In the Control box, select Mouse, Keyboard.
54. In the File Transfer box, select Manager Upload Files and Manager Download Files.
55. In the Reboot box, select Manager Can Reboot this Machine.
56. Click Close. The Manager List displays the defined managers.
57. If the person or group who will be maintaining the M2000 system does not own an RSM Manager license, skip to step 58. If the person or group who will be maintaining the M2000 system owns an RSM Manager license, you must set up the manager to access the client PC:
    a. Click New. The Manager Properties - New dialog box displays.
    b. In the Title field, identify the person or group who will be maintaining the M2000 system remotely.
    c. In the License field, enter your manager license number. If you do not know your license number, contact your Lucent Technologies sales representative.
    d. Click the tab with two keys. The Logon Properties screen displays.
    e. In the Manager Id field, identify the person or group who will be maintaining the M2000 system remotely. You can define a password for the manager if you want to restrict access.
    f. Click the tab with a traffic light. The Authorization screen displays.
    g. In the Control box, select Mouse, Keyboard.
    h. In the File Transfer box, select Manager Upload Files and Manager Download Files.

i. In the Reboot box, select Manager Can Reboot this Machine.

j. Click Close. The Manager List displays the defined managers.

58. Click Close. The Client window displays.

To install and configure the RSM Manager software:

The following steps require you to refer to the *RSM Professional Edition Manual*. If you did not receive a copy of this manual, contact a Lucent Technologies technical support representative.

1. Install and set up the Manager software following the instructions in Chapter 11 of the *RSM Professional Edition Manual*. Perform the installation as described, entering a User Name and using the default drive and directory. There is no need to select Start at Boot for the Manager, since you will probably not need to dial remotely each time you restart your PC.
2. After installing the Manager software, shut down and restart the PC.
3. To configure the Manager, open the RSM folder and double-click the Manager icon.
4. Choose the Setup pull-down menu, followed by Parameters.
5. Configure the modem as Ready to Go; then, select the Modem Settings button, and confirm that the dialing string is defined.
6. Press the Save button to save your settings.
7. If you want to password-protect the Manager, from the Manager Utility Setup screen, select Password and check the Password Enabled checkbox. Then, enter the password that must be used each time the Manager software is started.
8. Activate the Tool Box from the Manager Utility Setup screen.
9. If a Client is not connected, select the List tool to define all Clients that you want to support.
10. Add New Clients by pressing the New button and entering the name of the Clients and the Client license number.
11. Select the second page of the Client Properties notebook, the Connection Properties, and select a modem for each of the defined Clients.
12. To take control of a Client, follow the instructions in Chapter 11 of the *RSM Professional Edition Manual* to make a connection to a Client. From the Manager's Main menu, select Client followed by Dial. Select the Client to whom you want to connect from the Client List. Then, press the Dial button.

There is a reported problem when using Cardinal 9600 v.42 modems that occurs when the Manager cuts the connection and the Client starts the recycle procedure. A hang-up is sent to the Client modem too quickly, the modem does not see it, and, therefore, does not respond to the next command, an ATZ reset. The Client software sends a warning to the screen and does not recycle the modem until you select the Retry button. To correct this problem, edit the Cardinal Modem Entry for the initialization string, which was set to ATZ. Enter the string ~~+++~~ ATH<CR> ATZ. Note that this entry must be in uppercase.

Installing and Configuring Graham Utilities

Graham Utilities is the recommended OS/2 disk utilities package for the system. Though this package includes several utilities, it is recommended that you use the HPFS Defragment utility to perform weekly hard drive defragmentations on the system PC. Graham Utilities' HPFS disk defragmentation utility, HPFSDfrg, enhances the PC's speed and performance by optimizing the arrangement of data stored on PC's hard drive. Note that you cannot use this utility to defragment a non-HPFS drive.

Detailed information on using all utilities available with the Graham Utilities package is available through an interactive and printable online help file. To view the file after Graham Utilities is installed, access the \GU20 directory then type `VIEW GRAHAM20.INF` and press <ENTER>.

Installing Graham Utilities

1. Shut down M2000 if it is running.
2. Open an OS/2 window.
3. Place the Graham Utilities installation disk into the A: drive.
4. From the A: prompt, type `INSTALL` and press <ENTER>. An introductory screen displays. To continue, press <ENTER>. The Graham Utilities for OS/2 screen displays.
5. In the Source Drive field, verify the drive displayed is the disk drive in which you inserted the installation disk. Press <down-arrow> to move to the next field.
6. In the Install Path field, verify the path indicated represents the drive and directory into which you want to install the Graham Utilities files. (It is recommended that you do not modify the directory name indicated.) Press <down-arrow>.
7. In the Modify CONFIG.SYS field, type `Y` then press <down-arrow>.
8. In the Install a PM group field, type `N`.
9. To accept the screen entries and continue, press <ENTER>. The program copies files from the disk to the hard drive. When the process is completed, an information screen displays.
10. Press <ENTER>. A second information screen displays identifying the installed Graham Utilities software version and other information. Press <ESC>. An Installation Complete screen displays. Press <ENTER>.
11. Type `EXIT` then press <ENTER>.
12. Remove the installation disk from the disk drive.
13. Click the right mouse button on an empty area of the desktop and select Shutdown from the menu that displays. When prompted, restart the PC by pressing <CTRL+ALT+DEL>.

Setting Up the System to Run HPFSDfrg Automatically During System Maintenance

It is recommended that you run HPFSDfrg weekly to defragment the hard drive of the system PC. Use the following procedure to set up the system to run the utility on a weekly basis during the system shutdown period after the daily maintenance routine runs:

1. Access the contents of the RUNVM.CMD file by typing `E RUNVM.CMD` then pressing <ENTER> from the \CVR directory on the drive on which the system is installed.
2. Select the day of the week on which you want the system to run HPFSDfrg.
3. Under the Echo statement for the day on which you want the HPFSDfrg program to run ("Echo Today is Sunday," for example) type `CALL C:\GU20\GU.CMD`

You can set up the system to run HPFSDfrg more frequently by entering the Call command under additional days of the week.

if the system is currently set up to run another utilities package, such as GammaTech Utilities, you need to delete references to the other utilities package from the RUNVM.CMD file. In the case of GammaTech Utilities, the reference to delete is the `HPFSOPT` command. Also, to clear disk space, you may want to delete the directory and files for the other utilities package from the PC's hard drive. If you decide to do this, first edit the CONFIG.SYS file to remove any references to directories you will be deleting. Also, be sure to delete the desktop icon, if appropriate, for any program you remove.

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4. To save the changes press <ALT+F> then <S>. If you are prompted for a file type, select Plain Text File.
5. To close the OS/2 window, double-click the icon in the upper-left corner of the window.
6. Access the System Setup utility and verify that the Shutdown System after Daily Maintenance parameter on the General tab is set to Yes. For information on running System Setup, see Chapter 14, "Setting Up the System."

Notes:

CHAPTER 25

Testing and Troubleshooting the System

After you install and set up the M2000 system, you should test the integration with the phone system and the software features to ensure that the entire system works properly. The topics included in this chapter will help you to:

- Test the M2000 system to ensure that it is correctly installed and configured
- Troubleshoot possible program problems you may encounter
- Determine a switch's disconnect signal
- Display the features enabled on the sentinel
- View the PLUS.LOG file
- Verify that the appropriate prompts are voiced by the system under certain Call Handling conditions

Some information provided in this chapter is highly technical. Your level of knowledge on general telephony and the switch being used, as well as your access to tools such as digit grabbers will dictate how effectively you can interpret some of this information. If you have any questions, be sure to contact a Lucent Technologies technical support representative.

Testing and Troubleshooting the System

After you install and set up the M2000 system and optional add-on modules at the customer site, it is essential that you test the software to ensure that it is correctly configured and functioning as intended. To thoroughly test the software, you must exercise all Automated Attendant and Voice/Fax Mail features to confirm that all calls handled by M2000 are properly answered, routed, and messaged.

This chapter provides a test plan you can use to help you exercise M2000 features and options to confirm they are functioning appropriately. Depending on the features used for individual applications of the system, you may not need to complete every part of the test plan. For your convenience, the test plan is separated into two parts. The first part covers basic integration, system greeting, and messaging functionality. The second part covers the special features available on the system, such as Call Queuing, Call Screening, and V-Trees.

If, while performing the steps outlined in this test plan, you encounter unexpected results, refer to the System Troubleshooting Table in this chapter for information that may help you resolve the issue. The System Troubleshooting Table is organized alphabetically by problem area in a format that describes possible problems and potential resolutions.

This chapter also includes troubleshooting procedures to help you to confirm that the M2000 system is configured to recognize the appropriate switch disconnect signal and that the M2000 sentinel permits features in question, and to identify system errors written to the PLUS.LOG file.

If, after referring to this information, you are unable to resolve specific issues, contact a Lucent Technologies technical support representative.

Understanding Prompts Voiced Under Specific Call Handling Conditions

The prompts voiced and keypress options available to callers when they are transferred to a mailbox depend on the type of system integration and Call Handling settings that are selected for the mailbox. Four tables are included in this chapter, located after the troubleshooting table, to help you determine the prompts and options the system voices under various integrations and Call Handling conditions. You can use these tables in conjunction with the test plan to verify that calls are greeted with the expected prompts under specific Call Handling conditions.

Installation Test Plan

To prepare to use the test plan:

1. Record the personal greetings to be used for at least three test mailboxes on the M2000 system. You will place calls to and from these mailboxes during these tests.
2. Attach a digit grabber to the M2000 system.
3. Activate the Activate Digit Grabber (DIGRAB) parameter on the Inband Page 1 tab in System Setup.
4. Activate the Debug Mode parameter on the Voice System tab in System Setup.

To troubleshoot certain integration problems you may uncover, you will need to consult the Configuration Note for the switch and possibly the switch documentation.

Part 1—Integration, Greeting, and Messaging Testing

Test Voice Mail Ports

This section tests the ports to verify that they are initialized properly.

Test Port Initialization

Test:

1. Verify the correct status message for each port displayed in the Channel Status window.

Expected Outcome:

The Channel Status window should display one of the following messages for each channel:

- For SMDI integration – Waiting for Data
- For Inband integration – Waiting for Ring
- For DID integration – Waiting for DID

If this test fails, see the appropriate integration section of the System Troubleshooting Table for possible resolutions.

Test Voice Mail Extensions

Test:

1. From any station set, dial each extension number connected to a port.

Expected Outcome:

Each should port go off hook as it is dialed. The Channel Status window should display the following status for each port as it goes off hook:

- For SMDI integration – Querying Integration Server
- For Inband integration – Answering
- For DID integration – Answering

If this test fails, see the appropriate integration section of the System Troubleshooting Table for possible resolutions.

Pilot Number (Hunt Group)

This section tests the pilot number to verify the ports answer as expected when the pilot number is dialed.

Serial Integrations (SMDI, Voicebridge, DMID)

Test:

1. Call into M2000 using the internal pilot number.
2. Note the hunt group method, linear or circular (rotary), used. Test all M2000 ports to verify that ports answer calls in order.
3. For a linear hunt group, test channel 1 then disable it; test channel 2 then disable it; and so on until all ports are verified. When you are finished, enable all the ports.
4. Repeat the steps using the external pilot number.

Expected Outcome:

The ports should answer as expected and the Channel Status window should display the status Querying Integration Server for the port.

If this test fails, see the "Serial Integration (SMDI) does not work" section of the System Troubleshooting Table for possible resolutions.

Inband/DID Integrations

Test:

1. Call into M2000 using the internal pilot number.
2. Note which hunt group method, linear or circular (rotary), is used. Test all the ports on M2000 to verify each port answers calls in order.
3. For a linear hunt group, test channel 1 then disable it, test channel 2 then disable it, and so on until all ports are verified. When you are finished, enable all ports.
4. Repeat the steps using the external pilot number.

Expected Outcome:

Verify that the ports answer as expected and the Channel Status window displays the status Answering for the port.

If this test fails, see the “Integration does not work” section of the System Troubleshooting Table for possible resolutions.

Call Analysis (Supervised)

This section tests call analysis/supervised transfers to verify M2000 correctly recognizes ring-no-answer and busy conditions.

Ring-No-Answer

Test:

1. Turn off the station forwarding features on a phone set used for testing.
2. In a test mailbox, set the No Answer/Call Blocking feature to Default on the Subscriber Settings dialog box.
3. In the same test mailbox, set the Max Rings on the Class of Service dialog box to 3 or greater.
4. Call into M2000 and dial the mailbox number. Do not answer the phone.

Expected Outcome:

The system should voice, *“That extension does not answer.”*

The Channel Status window should display the status Ring/No Answer for the port.

If this test fails, see the "Call analysis does not work" section of the System Troubleshooting Table for possible resolutions.

Busy

Test:

1. Turn off the station forwarding features on a phone set used for testing.
2. In a test mailbox, set the Busy feature to Default on the Subscriber Settings dialog box.
3. In the same test mailbox, set the Max Rings on the Class of Service dialog box to 3 or greater.
4. Make the extension associated with the test mailbox busy.
5. Call into M2000 and dial the mailbox number.

Expected Outcome:

Verify the system voices, *“That extension is busy.”*

Verify the Channel Status window displays the status Extension Busy for the port.

If this test fails, see the Call analysis does not work section of the System Troubleshooting Table for possible resolutions.

Connect

Test:

1. Call into M2000 and dial a mailbox number. Answer the extension when it rings.

Expected Outcome:

The Channel Status window should display the status Connected for the port.

If this test fails, see the "Call analysis does not work" section of the System Troubleshooting Table for possible resolutions.

Integrated/Serial SMDI (Unsupervised)

This section tests serial integration to verify M2000 correctly recognizes ring-no-answer and busy conditions.

Blind Transfer

Test:

1. For a test mailbox, set the Max Rings field in the Class of Service dialog box to 0.
2. Call M2000's pilot number.
3. If M2000 is set up for automatic station login, press <0> to go to the Attendant menu.
4. At the Attendant menu prompt, dial the mailbox number.

Expected Outcome:

The Channel Status window should display the following messages:

- Transfer <mailbox number>
- Dialing <extension number>
- Waiting for Ring (or Data, or DID, depending on integration)

Note that ,if station set forwarding is on, the call will be returned to M2000 in a busy or no answer situation.

If this test fails, see the "Serial Integration (SMDI) does not work" section of the System Troubleshooting Table for possible resolutions.

Ring-No-Answer

Test:

1. Set the phone to forward to M2000 in ring and no-answer conditions.
2. In a test mailbox, set the No Answer/Call Blocking feature to Default on the Subscriber Settings dialog box.
3. For the same mailbox, set the Maximum Rings on the Class of Service dialog box to 0.
4. Call into M2000 and dial the mailbox number.
5. Do not answer the extension.

Expected Outcome:

The system should voice, *"That extension does not answer."*

The Channel Status window should display the status Ring/No Answer for the port.

If this test fails, see the "Serial Integration (SMDI) does not work" section of the System Troubleshooting Table for possible resolutions.

Busy

Test:

1. Set the phone to forward to M2000 in ring-no-answer conditions.
2. In a test mailbox, set the Busy feature to Default on the Subscriber Settings dialog box.
3. For the same mailbox, set the Maximum Rings on the Class of Service dialog box to 0.
4. Make the extension associated with the test mailbox busy.
5. Call into M2000 and dial the mailbox number.

Expected Outcome:

The system should voice, *“That extension is busy.”*

The Channel Status window should display the status Extension Busy for the port.

If this test fails, see the "Serial Integration (SMDI) does not work" section of the System Troubleshooting Table for possible resolutions.

Automatic station Login (Direct Dial)

Test:

1. From an integrated set, dial M2000’s pilot number.

Expected Outcome:

The system should voice the mailbox owner’s name prompt or default mailbox number prompt followed by, *“Please enter your password.”*

Note that this feature is switch-dependent.

If this test fails, see the "Serial Integration (SMDI) does not work" section of the System Troubleshooting Table for possible resolutions.

Message Indicators

This section tests the message indicator feature to verify that Message Indicators turn on to signal new messages, then off, as expected. Be sure to note the method the phone set uses to indicate messages.

Turn Message Indicator On

Test:

1. Clear all messages from a test mailbox by logging in over the phone and deleting the messages. Exit the mailbox by pressing <*> until you hear, *“Thank you. Good-bye.”*
2. Close the Mailbox status screen so the debug information displays.
3. From a phone other than the one for which you want to test the message indicator, call into M2000 and leave a message for the test mailbox.

Expected Outcome:

The message indicator for the phone set associated with the mailbox should turn on.

Debug should display the following lines:

```
AP2:MWL EVENT
MWL ON
TONEOUT <EXTENSION NUMBER>
AP2:TERMINATED
```

If this test fails, see the "Message Indicators do not work" section of the System Troubleshooting Table for possible resolutions.

Turn Message Indicator Off

Test:

1. Call into M2000 and log into a test mailbox with the message indicator on and select to listen to new messages. Save or delete the message.
2. Exit the mailbox by pressing <*> until you hear, *“Thank you. Good-bye.”*

Expected Outcome:

The message indicator for the phone set associated with the mailbox should turn off when you exit the mailbox.

Debug should display the following lines:

```
AP2:MWL EVENT
MWL OFF
TONEOUT <EXTENSION NUMBER>
AP2:TERMINATED
```

If this test fails, see the "Message Indicators do not work" section of the System Troubleshooting Table for possible resolutions.

Hang-Up Detection

This section tests M2000’s ability to recognize the hang-up signal from the switch.

Test:

1. From an internal line, call into M2000.
2. Hang up at the greeting.
3. Repeat the test using an external line.

Expected Outcome:

In the Channel Status window, the port should disconnect in less than three seconds and display one of the following status messages:

- For SMDI integration – Waiting for Data
- For Inband integration – Waiting for Ring
- For DID integration – Waiting for DID

If this test fails, see the "Disconnects are not recognized properly" section of the System Troubleshooting Table for possible resolutions.

Greetings

This section tests the greetings to verify that M2000 voices the appropriate greetings at various times.

Note that the Time/Greeting parameters in System Setup and Business Hours settings under the Attendant menu determine when greetings are voiced. To efficiently test the system greetings, change the time on the computer running the system to morning, afternoon, evening, and after hours, as needed.

If these tests fail, see the "Greetings do not voice properly" section of the System Troubleshooting Table for possible resolutions.

Morning Greeting

Test:

1. From an external line, dial into M2000 during morning hours.

Expected Outcome:

The system should voice the morning greeting.

Afternoon Greeting

Test:	Expected Outcome:
1. From an external line, dial into M2000 during afternoon hours.	The system should voice the afternoon greeting.

Evening Greeting

Test:	Expected Outcome:
1. From an external line, dial into M2000 during evening hours.	The system should voice the evening greeting.

Closed Greeting

Test:	Expected Outcome:
1. From an external line, dial into M2000 during hours the office is closed.	The system should voice the after hours greeting.

Attendant Menu Prompt

Test:	Expected Outcome:
1. From a non-integrated station set, dial into M2000. The Attendant Menu prompt voices after the system greeting prompt. 2. Test each option voiced in the Attendant Menu prompt.	Each option voiced by the Attendant Menu prompt should route the call as expected. Note that this prompt does not play during days specified as holidays or after office hours.

Holiday Greetings

Test:	Expected Outcome:
1. From a non-integrated station set, dial into M2000 during a holiday date.	The holiday greeting should voice.

Messaging

This section tests the messaging feature to verify that messages can be sent and reviewed as expected.

See the "Special Features Testing" section in this table to test the destinations for messages sent using the Auto Forwarding, OctelNet/AMIS, Follow-Me-Forward, and V-Tree features.

Send Messages

Test:

1. Verify that test mailboxes have Send Message enabled on the Class of Service dialog box.
2. Log into a test mailbox and send messages to other mailboxes.
3. From an outside line, call into M2000 and leave a message for a test mailbox.

Expected Outcome:

View the Mailbox Status screen to verify the messages are sent to the expected mailboxes.

Receive Messages

Test:

1. Verify that a test mailbox has Receive Message enabled on the Class of Service dialog box.
2. Log into a test mailbox that contains messages and review them.

Expected Outcome:

The messages from both internal and external callers can be reviewed as expected.

Distribution Lists

This section tests the Distribution List features to verify that messages are received in all mailboxes included in distribution lists.

Personal Distribution Lists

Test:

1. Using the distribution list feature in a test mailbox, create a distribution list.
2. Send messages to the distribution list.

Expected Outcome:

All the mailboxes included in the list should receive the messages.

If this test fails, see the "Distribution lists do not work" section of the System Troubleshooting Table for possible resolutions.

Company-Wide and Division-Wide (Global) Distribution Lists

Test:

1. For several test mailboxes, enter matching company and division names on the Mailbox Entry dialog box.
2. Log into one of these mailboxes and send messages to company-wide and division-wide distribution lists (98 and 99).

Expected Outcome:

All the mailboxes with the same company and/or division as the sending mailbox should receive the messages.

If this test fails, see the "Distribution lists do not work" section of the System Troubleshooting Table for possible resolutions.

Group Distribution Lists

Test:

1. Using the supervisor menu functions over the phone interface, create a system distribution list.
2. Log into a mailbox and send messages to the system distribution list.

Expected Outcome:

All the mailboxes included in the lists should receive the messages.

If this test fails, see the "Distribution lists do not work" section of the System Troubleshooting Table for possible resolutions.

Part 2—Special Feature Testing

Greeting by Port

This section tests the greeting by port feature to verify that M2000 answers calls to different ports with the appropriate greetings.

Test:

1. From an external line, dial the phone number for each port set up for greeting by port.

Expected Outcome:

Each call should be answered with the expected greeting.

If this test fails, see the "Greeting by port does not work” section of the System Troubleshooting Table for possible resolutions.

Call Queuing

This section tests the Call Queuing feature to verify that the appropriate prompts are voiced to callers waiting on hold in a call queue.

Test:

1. Make an extension busy.
2. From an external line, call into M2000 and dial the busy extension.
3. Listen to the prompts voiced for the first call position, then remain on the line.
4. Using a second line, call into M2000 and dial the busy mailbox.
5. Listen to the prompts voiced for the second call position.

Expected Outcome:

The prompts specified on the Call Queuing tab in System Setup should be voiced for the first and second call queue positions, as appropriate.

Custom Call Queuing prompts should be voiced, if they are recorded.

If this test fails, see the "Call Queuing does not work" section of the System Troubleshooting Table for possible resolutions.

Call Screening

This section tests the Call Screening feature to verify that subscribers can accept, reject, and reroute callers.

Call Screening Accept

Test:

1. In a test mailbox, activate the Call Screening feature. Call M2000 and dial the mailbox number.
2. Answer the mailbox’s extension when it rings and press <#> at the call-screening prompt to accept the call.

Expected Outcome:

The system should voice to the caller, *“Please speak your name at the tone, so I may say who is calling.”*

The caller should be transferred and connected to the extension.

If this test fails, see the "Call Screening does not work" section of the System Troubleshooting Table for possible resolutions.

Call Screening Reject

Test:

1. In a test mailbox, activate the Call Screening feature. Call M2000 and dial the mailbox number.
2. Answer the mailbox’s extension when it rings and press <1> at the call-screening prompt to reject the call.

Expected Outcome:

The system should voice to the caller, *“Please speak your name at the tone so I may say who is calling.”*

The system should voice to the caller, *“That extension does not answer. To enter another number, press <1>. To leave a voice or fax mail message, press <2>. If you need assistance, press <3>.”*

If this test fails, see the "Call Screening does not work" section of the System Troubleshooting Table for possible resolutions.

Call Screening Reroute

Test:

1. In a test mailbox, activate the Call Screening feature. Call M2000 and dial the mailbox number.
2. Answer the mailbox’s extension when it rings, press <*> at the Call Screening prompt to transfer the call, then enter the new destination mailbox number.

Expected Outcome:

The system should voice to the caller, *“Please speak your name at the tone so I may say who is calling.”*

The caller should be connect to the new destination mailbox.

If this test fails, see the "Call Screening does not work" section of the System Troubleshooting Table for possible resolutions.

Call Handling

This section tests to verify that call-handling options are voiced and work properly for subscriber mailboxes. For more information on prompt voicing using Call Handling, see the topic, "Prompts Voiced Under Specific Call Handling Conditions."

Call Blocking

Test:

1. In a test mailbox, set the No Answer/Call Blocking feature to Default on the Subscriber Settings dialog box.
2. From a non-integrated station set, call into M2000 and dial the mailbox number.

Expected Outcome:

The call should be transferred to voice mail and you hear the personal greeting recorded for the mailbox.

If this test fails, see the "Call Handling does not work" section of the System Troubleshooting Table for possible resolutions.

No Answer

Test:

1. In a test mailbox, set the No Answer/Call Blocking feature to Default on the Subscriber Settings dialog box.
2. From a non-integrated station set, call into M2000 and dial the extension associated with the mailbox.
3. Do not answer the extension.

Expected Outcome:

The system should voice to the caller, *“That extension does not answer.”*

If this test fails, see the "Call Handling does not work" section of the System Troubleshooting Table for possible resolutions.

If the system uses blind transfers, you may not hear the prompt unless the phone system provides distinct busy and no answer codes. These codes must be entered in the Inband template information.

Busy

Test:

1. In a test mailbox, set the Busy Call Handling feature to Default.
2. Make the extension associated with the test mailbox busy.
3. From a non-integrated station set, call into M2000 and dial the extension associated with the mailbox.

Expected Outcome:

The system should voice to the caller, *“That extension is busy.”*

If this test fails, see the "Call Handling does not work" section of the System Troubleshooting Table for possible resolutions.

If M2000 is configured to use blind transfers, you may not hear the prompt unless the phone system is able to provide distinct busy and no answer codes. These codes must be entered in the Inband template information.

V-Trees

This section tests system V-Trees to verify that they are accessible and that the options work appropriately.

Automated Attendant V-Tree

Test:

1. From a non-integrated station set, call into M2000 and select the keypress to access the V-Tree.

Expected Outcome:

Each option voiced by the V-Tree should be performed as expected.

If this test fails, see the "V-Trees do not work section" of the System Troubleshooting Table for possible resolutions.

Integrated Station Set V-Tree

Test:

1. Set up a mailbox's Call Handling for busy and no answer for a V-Tree:
   a. From an integrated station set, dial the pilot number of M2000 and dial the extension for the mailbox. Do not answer the phone.
   b. Make the extension associated with the test mailbox busy.
2. From an integrated station set, dial the pilot number of M2000 and dial the extension for the mailbox.

Expected Outcome:

Under both busy and no answer conditions, the call should be transferred to the V-Tree and the options should be perform as expected.

If this test fails, see the "V-Trees do not work" section of the System Troubleshooting Table for possible resolutions.

Supervised Transfers V-Tree

Test:

1. Set up a mailbox's Call Handling for busy and no answer for a V-Tree:
   a. From an integrated station set, dial the pilot number of M2000 and dial the extension for the mailbox. Do not answer the phone.
   b. Make the extension associated with the test mailbox busy.
2. From an integrated station set, dial the pilot number of M2000 and dial the extension for the mailbox.

Expected Outcome:

Verify that under both busy and no answer conditions, the call is transferred to the V-Tree and that the options perform as expected.

If this test fails, see the "V-Trees do not work section" of the System Troubleshooting Table for possible resolutions.

V-Tree Fax Retrieval

This section tests the V-Tree Fax Retrieval feature to verify that faxes stored in the V-Tree can be retrieved. Note that the availability of the V-Tree Fax Retrieval feature is controlled by the sentinel.

Automated Attendant V-Tree

Test:

1. From a non-integrated station set, call into M2000 and select the keypress to access the V-Tree.

Expected Outcome:

Follow the V-Tree prompts that you created to access Fax Retrieval.

You should receive the fax you requested.

If this test fails, see the "Fax features do not work" section of the System Troubleshooting Table for possible resolutions.

Message Notification (Outcall Notification)

This section tests the Message Notification feature to verify that message notifications are delivered as expected to phone numbers or beepers.

Message Notification to a Phone

Test:

1. In a test mailbox, set up the Message Notification feature to call a phone number.
2. Delete any messages from the test mailbox.
3. From another extension, call M2000 during the day of week and time of day window specified for Message Notification and leave a message for the test mailbox.

Expected Outcome:

The M2000 system should call the specified phone number, voice that there are messages, and request the password. The message should be available for review.

Debug should display the message TONEOUT followed by the phone number.

Note that you must press <#> after you enter the password.

If this test fails, see the "Message Notification does not work for a phone" section of the System Troubleshooting Table for possible resolutions.

Message Notification to a Beeper

Test:

1. In a test mailbox, set up the Message Notification feature to call a beeper number.
2. Delete any messages from the test mailbox.
3. From another extension, call M2000 during the day of week and time of day window specified for Message Notification and leave a message for the test mailbox.

Expected Outcome:

The system should call the specified beeper number and the beeper should display the specified phone number.

Debug should display the message TONEOUT followed by the pager phone number.

If this test fails, see the "Message Notification does not work for a beeper" section of the System Troubleshooting Table for possible resolutions.

Auto Forwarding

This section tests the Auto Forwarding feature to verify that messages left in mailboxes configured for auto forwarding are actually forwarded to the specified mailbox.

Test:

1. In a test mailbox, set up the Auto Forwarding feature.
2. Call into M2000 and leave a message for the test mailbox.

Expected Outcome:

The message should be forwarded to the appropriate mailbox according to the specified delay.

If this test fails, see the "Auto forwarding does not work" section of the System Troubleshooting Table for possible resolutions.

Network Messaging

This section tests network messaging to verify that messages sent to and received from remote voice mail systems are delivered as expected.

Note that the availability of AMIS and OctelNet features is controlled by the sentinel.

Send

Test:

1. Log into a subscriber mailbox. At the main menu, choose to send a message. After recording the message, choose one of the following destinations:
   - OctelNet node – Dial the node number, followed by the mailbox number.
   - Casual AMIS node – Press <#><#>, dial the other voice mail system's access number, followed by <#>, and the mailbox number, followed by <#>.
   - Administered AMIS node – Dial the AMIS node number, followed by the mailbox number.

Expected Outcome:

The messages should be received at the remote voice mail systems.

If this test fails, see the "OctelNet/AMIS messages are returned to mailboxes" section of the System Troubleshooting Table for possible resolutions.

Receive

Test:

1. Send messages from other voice mail systems to mailboxes on M2000.

Expected Outcome:

The messages should be received in the expected mailboxes.

Follow-Me-Forward

Test:

1. In a test mailbox, set up the Follow-Me-Forward feature.
2. Call into M2000 and leave a message for the test mailbox.

Expected Outcome:

The message should be forwarded based on the dispatch options in the Class of Service.

If this test fails, see the "OctelNet/AMIS messages are returned to mailboxes" section of the System Troubleshooting Table for possible resolutions.

Language Selection

This section tests the Language Selection feature to verify that callers can select a preferred language.

Note that the availability of the Language Selection feature is controlled by the sentinel.

Test:

1. From a non-integrated station set, call M2000.

Expected Outcome:

The expected language selection prompt should be voiced.

The prompts should be voiced in the expected language for each language option.

If this test fails, see the "Greetings do not voice properly" section of the System Troubleshooting Table for possible resolutions.

Intercom Paging

This section tests the Intercom Paging feature to verify that callers can page the desired parties.

Note that you can only use this feature if M2000 uses supervised transfers or the switch provides a unique code for busy and no-answer.

Test:

1. In a test mailbox, set up the Intercom Paging feature.
2. Call into M2000 and dial the mailbox number.
3. Do not answer the extension.
4. After the no answer prompt voices, choose to page the subscriber.

Expected Outcome:

The system should voice the page over the station set or over the external paging system as expected.

The paged subscriber should be able to connect with the caller who placed the page.

If this test fails, see the "Intercom paging does not work" section of the System Troubleshooting Table for possible resolutions.

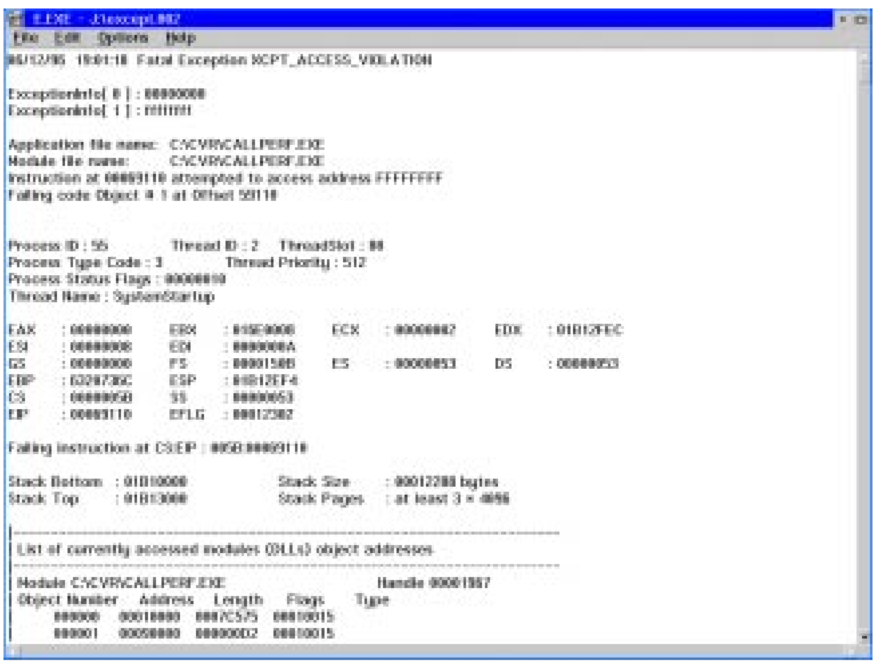
System Troubleshooting Table

If you encounter a problem with M2000, refer to this table for possible resolutions before contacting a Lucent Technologies technical support representative. By following the guidelines in this table, you may be able to solve the problem independently or if not, at least gather information the Lucent Technologies technical support representative can use to assist you more effectively.

For easy reference, this troubleshooting table lists problem areas and their possible resolutions alphabetically. Note that some problem areas are very broad, with subtopics listed below the main heading. For example, if you encounter a problem where subscribers cannot log into their mailboxes, look under *Mailboxes are not functioning properly* to locate the subtopic *Cannot log into a mailbox*.

When you encounter a problem with M2000, be sure the Activate Digit Grabber (DIGRAB) parameter on the Inband Page 1 tab and the Debug Mode parameter on the Voice System tab are activated in System Setup. These parameters instruct the system to log system activity and incoming digit strings to the system log files. This information helps Lucent Technologies technical support representatives solve the problems you encounter.

Remember that when certain system errors occur during system operation, an error file is created and displayed in an OS/2 editor window to provide information about the error. M2000 then shuts down and immediately restarts. When an error file displays, immediately contact a Lucent Technologies technical support representative. A sample error file appears below.



Cannot access system fields, buttons, checkboxes, or menus on-screen

Resolution Possibilities:

- Verify that you are logged in at the appropriate security level to access the feature associated with the fields.
- Verify that the M2000 sentinel permits the features associated with the fields you want to access. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this chapter.
- Verify that the field you want to access is available. If the field is dimmed, it cannot be accessed.
- Log out of supervisor access, then log back in.
- Use the mouse to place the cursor in a field, button, or checkbox, then click the left mouse button to select the option.
- Use <Tab> and <Shift-Tab> to move the cursor through the options.
- Note that you can only select one item from a set of radio buttons. However, in a set of checkboxes, you can select any number (including all or none) of the options.
- To select menus, use the mouse or <Tab>, <Shift-Tab>, or the right or left arrow keys to move the highlighted bar. Click or press <ENTER> to select a highlighted menu.
- To select menu options, hold down <Alt> and type the first highlighted character of the menu name.

Auto forwarding does not work

Resolution Possibilities:

Mailbox Entry dialog box:

- Verify that the Follow-Me-Forward checkbox is *not* enabled on the Subscriber Settings dialog box.
- Verify that the Auto Forwarding checkbox is enabled on the Auto Forwarding dialog box for the mailbox.
- Verify that the Delay field on the Auto Forwarding dialog box is set to the default (three minutes) or greater value. Allow enough time for the caller to review and/or rerecord the message.

System Setup parameters:

- Verify that at least one port is enabled for outbound calls on the Port Parameters tab.

Auto time-date does not work

Resolution Possibilities:

- Verify that the Class of Service assigned to the mailbox permits the subscriber to activate the auto time-date feature over the phone. This feature can also be activated by a system manager on the Subscriber Settings dialog box.
- Verify that the correct date and time are set on the PC clock.

Call analysis does not work

Resolution Possibilities:

- Re-run the Call Analysis utility. Be sure to delete the existing tone table when you run Call Analysis. For more information on running the Call Analysis utility, refer to Chapter 10, "Defining Phone System Signals."
- If you re-run Call Analysis and problems persist, contact a Lucent Technologies technical support representative for information on using Advanced Call Analysis.

Callers are disconnected

Resolution Possibilities:

- Verify that the method the switch uses for a disconnect. Verify that the appropriate hang-up detection parameters are configured. For information on verifying a switch's disconnect signal, see the topic, "Determining a Switch's Disconnect Signal," later in this section.
- Note under what conditions callers are being disconnected.
- Verify that call analysis was run and that M2000 correctly interprets signals from the switch. If call analysis was run and M2000 still cannot correctly interpret signals from the switch, contact a Lucent Technologies technical support representative for information on using Advanced Call Analysis.

System Setup parameters:

- Turn off all System Setup parameters that cause disconnects to help determine if the problem is caused by the phone system or M2000:
  - Set Minimum Message Length in Seconds on the Message Timing tab to 0.
  - Make sure Maximum Silence on the Hangup tab is set to at least the default, 2000.
  - Set DTONDET on the Hangup tab to 0 if your switch uses the BellCore tone table.
- Set HANGUPDLY on the Hangup tab to 0.

Callers cannot transfer

Resolution Possibilities:

- See the Configuration Note for the switch for the proper transfer and release codes. If you do not have the Configuration Note for the switch, you can determine the switch code by replacing the voice-mail port with a 2500 set—or the proprietary telephone instrument if using a D/42D NS, D/42D SX, or D/42D SL integration—and transferring a caller to an extension in a busy state, then pulling the call back. Do the same for the no-answer state.
- Verify that call analysis was run and that M2000 correctly interprets signals from the switch. If call analysis was run and M2000 still cannot correctly interpret signals from the switch, contact a Lucent Technologies technical support representative for information on using Advanced Call Analysis.

System Setup parameters:

- Verify that the Custom Transfer Code on the Call Transfer tab is entered correctly.
- Verify that the Transfer Release Code for Busy on the Call Transfer tab is entered correctly.
- Verify that the Transfer Release Code for No Answer on the Call Transfer tab is entered correctly.
- Verify that the FLINTVL parameter on the Call Transfer tab matches the hook flash time of the switch.
- Verify that the TONEDLY parameter on the Call Transfer tab is set high enough for M2000 to distinguish the time between DTMFs. If this parameter is set to 8 and callers still cannot transfer, contact a Lucent Technologies technical support representative.
- Verify that the TONELEN on the Call Transfer tab parameter is high enough so M2000 can distinguish DTMFs. If this parameter is set to 8 and callers still cannot transfer, contact a Lucent Technologies technical support representative.

Call Forwarding does not work

Resolution Possibilities:

- Verify that the correct call condition is being satisfied for the call forwarding option to work properly: busy, no answer, busy or no answer, or all calls.

System Setup parameters:

- Verify that the Maximum Number of Forwarded Extensions parameter on the Subscriber tab is not being exceeded.

Class of Service dialog box:

- Verify that the Call Handling checkbox is enabled.

Mailbox Entry dialog box:

- Verify that call forwarding is activated for the mailbox by either the subscriber over the phone or the system manager through the Subscriber Settings dialog box.
- Verify that a valid mailbox number is entered in the Forward field on the Subscriber Settings dialog box.

Call Handling does not work

Resolution Possibilities:

- Verify that the correct call condition is being satisfied for the Call Handling option selected: busy, no-answer, busy or no-answer, or all calls.
- Verify that the mailbox has Call Handling enabled on the Class of Service dialog box.
- Verify that the subscriber enabled the Call Handling option over the phone or the system manager enabled it on the Subscriber Settings dialog box.
- Note that if call paging is active for the mailbox, the subscriber is paged on a no answer condition before the Call Handling options are available.
- For more information on the conditions that affect Call Handling, see the topic, "Prompts Voiced Under Specific Call Handling Conditions," later in this chapter.

Call Queuing does not work

Resolution Possibilities:

- Verify that the phone system switch is configured for supervised transfers.
- Verify that the PBX does not forward calls back to M2000 on a busy condition.

System Setup parameters:

- Verify that the correct code is entered for the Release Code on Busy parameter on the Call Transfer tab.

Class of Service dialog box:

- Verify that the Call Queuing checkbox is enabled.
- Verify that the Max Rings parameter is set to 3 or greater.

Subscriber Settings dialog box:

- Verify that the Call Queuing checkbox is enabled under Special Features.

Call Screening does not work

Resolution Possibilities:

- Disconnect a line from M2000 and attach a single-line phone. Attempt to use Call Screening manually to verify that the switch supports Call Screening.
- Verify that call analysis recognizes no answer and busy conditions properly.

Class of Service dialog box:

- Verify that the appropriate Call Screening Busy, No Answer, Transfer, and Reject codes are entered on the Call Screening tab.

Class of Service dialog box:

- Verify that Maximum Rings is set to 3 or greater.
- Verify that the Call Screening checkbox is enabled.

Subscriber Settings dialog box:

- Verify that Call Screening under Special Features is enabled.

Daylight Savings Time does not set correctly

Resolution Possibilities:

- Determine whether another application on the PC has a Daylight Savings Time feature that may conflict with M2000’s.

System Setup parameters:

- If the time changes by two hours, disable the Automatic System Clock Reset for Daylight Savings Time parameter on the General tab.
- If the time did not change, enable the Automatic System Clock Reset for Daylight Savings Time parameter on the General tab.
- Verify that the PC clock is set to the correct date and time. Note that there is no timing mechanism in M2000.

Disconnects are not recognized properly

Resolution Possibilities:

- See the Configuration note for the switch to determine the type of disconnect supervision the PBX provides. For information on verifying a switch's disconnect signal, see the topic, "Determining a Switch's Disconnect Signal," later in this chapter.

For Dial Tone detection

- Verify that the value entered for DTONDET on the Hangup tab of System Setup is not set too low. If it is, M2000 disconnects prematurely. This parameter is set by the Integrator utility.
- If the switch does not return dial tone, set this value to 0 to disable it. If the switch does not use dial tone for disconnect detection, and you want to keep DTONDET enabled but inactive, set it to 1200 (12 seconds).

For Hangup String detection

- Verify that the correct string is entered in the HANGUPSTR parameter on the Hangup tab of System Setup. It should be blank if the switch does not use a hangup string.
- Verify that the HANGUPDLY parameter on the Hangup tab is correct for the switch. To calculate this value:
  1. Multiply the number of digits in the switch's hangup string by 40 milliseconds.
  2. Multiply the number of pauses between digits in the string by 20 milliseconds.
  3. Add the results from steps 1 and 2 to determine the minimum amount of delay that should be entered in this field.
  4. If M2000 still does not recognize the hangup string, keep increasing this value by 20 milliseconds until it does.

For Drop in Loop Current Detection

- If the ports do not disconnect, set LCDTIME on the Hangup tab in System Setup to 6 and restart M2000.
- If ports drop the call, immediately go back off-hook and increase the value of LCDTIME on the Hangup tab in System Setup. If you have an AT&T Legend with the new 012 card, set this parameter to 75.

For systems using blind transfers

- Use the following procedure to improve hangup detection for systems using blind transfers:

  1. Shut down M2000, if it is running.
  2. To open Call Analysis, double-click the Call Analysis icon in the Lucent Technologies Folder. The Call Analysis for OS/2 dialog box displays.
  3. If Call Analysis was run previously, clear the previous Call Analysis results by clicking on Clear CA.
  4. When prompted, click OK to delete the tone table. The Call analysis for OS/2 dialog box displays.
  5. Click Set Defaults. The Call Analysis Default Parameters dialog box displays.
  6. Select Load Default Tone Table. Make sure Enable Fastbusy Testing, Enable Dialtone Selection, and Load Tone Tables are selected.
  7. To close the dialog box, click OK. The Call Analysis for OS/2 dialog box displays.
  8. Click Continue. The Call Analysis dialog box displays.
  9. To close Call Analysis, click Exit.
  10. Shut down OS/2 and reboot the PC.

Supervised transfers do not work

Resolution Possibilities:

- Run Call Analysis again and delete the tone table by clicking on Clear CA. For more information on running Call Analysis, refer to Chapter 10, “Defining Phone System Signals.”

Distribution lists do not work

Group distribution lists do not work

Resolution Possibilities:

- Verify that Global Distribution List checkbox on the Class of Service dialog box is enabled. The distribution lists feature provides access to lists 11 through 20, which can be created by the mailbox owner for that individual mailbox.
- Verify that a distribution list is created.

Global distribution lists do not work

Resolution Possibilities:

- Verify that Global Distribution List checkbox on the Class of Service dialog box is enabled. This feature provides access to system distribution lists 26 through 35, which can be created by a system manager, and company-wide and division-wide lists (98 and 99), which are automatically created by the system.
- Note that system distribution lists (26 – 35) can only be created using the supervisor’s main menu available through the phone interface.
- Note that there must be more than one mailbox with entries in the Company and Division fields on the Mailbox Entry dialog box to create company-wide and division-wide distribution lists (98 and 99).
- Verify that a system distribution list is created.

DTMFs are not recognized properly

Resolution Possibilities:

System Setup parameters:

- Verify that the PLAYDTMF parameter on the Voice System tab is set to the default.
- If the system experiences talkoff (when a recording session is interrupted by the system voicing prompts), increase the RECDTMF parameter setting on the Voice System tab.
- Verify that the TONEDLY parameter on the Call Transfer tab is set high enough for the system to distinguish the time between DTMFs. If this parameter is set to 8 and DTMFs still are not recognized, contact a Lucent Technologies technical support representative.
- Verify that the TONELEN parameter on the Call Transfer tab is high enough so the system can distinguish DTMFs. If this parameter is set to 8 and DTMFs still are not recognized, contact a Lucent Technologies technical support representative.

Fax Features do not work

Fax AutoPrint does not work

Resolution Possibilities:

- Verify that the M2000 sentinel permits fax mail. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this chapter.
- Verify that the wiring to the fax card is set up correctly for the wiring method used (transfer or non-transfer).
- Verify that the fax was not deleted. If a fax scheduled for printing is deleted before it is printed, M2000 still attempts to print it. When the fax is not found, the system logs an error.
- Verify that Configure utility has been set up properly for Brooktrout fax boards. If you use this utility, you must shut down and restart M2000 for the changes to take effect. Do not use the Restart option under the Options menu.

Subscriber Settings dialog box:

- Verify that AutoPrint is enabled under Fax Options.

Class of Service dialog box:

- Verify that the Send Faxes and Receive Faxes checkboxes are enabled.

System Setup parameters:

- Verify that the parameters on the Fax tab are configured properly.
- Verify that the parameters on the Fax Extensions tab are configured properly.

Fax Retrieval does not work

Resolution Possibilities:

- Verify that the wiring to the fax card is set up correctly for the wiring method used (transfer or non-transfer).
- Verify that faxes have been loaded onto M2000 and are ready to be sent.
- Verify that a V-Tree has been created, includes the fax option, and is activated.
- Verify that Configure utility has been set up properly for Brooktrout fax boards. If you use this utility, you must shut down and restart M2000 for the changes to take effect. Do not use the Restart option under the Options menu.
- Verify that the M2000 sentinel allows Fax Retrieval. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this chapter.

Class of Service dialog box:

- Verify that the Send Faxes and Receive Faxes checkboxes are enabled.
- Verify that Fax V-Trees checkbox is enabled.

System Setup parameters:

- Verify that the entries on the Fax Extensions tab in System Setup are configured properly if using the transfer method.
- Verify that at least one outbound port is enabled for Fax on the Port Parameters tab in System Setup.

Folders do not work

Resolution Possibilities:

- Verify that the Folders checkbox is enabled on the Class of Service dialog box.
- Verify that folders are created in the subscriber’s mailbox and that label names are recorded.
- Verify that messages are being saved to the proper folder.

Class of Service dialog box:

- Verify that the Save Messages checkbox is enabled.
- Verify that the Days to Save messages has not been exceeded.

Follow-Me-Forward does not work

Resolution Possibilities:

- Verify that other messages sent via OctelNet are sent and received as expected.
- Note that the destination must be predefined as an administered AMIS or OctelNet node.
- Verify that the M2000 sentinel allows analog networking. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this chapter.
- Verify that the auto forwarding feature is not active on the Auto Forwarding dialog box accessible from the Mailbox Entry dialog box.

System Setup parameters:

- Verify that M2000 is configured with networking parameters on the Networking tab.
- Verify that Dial Plan is properly configured and that the Use Dial Plan parameter on the Outbound Dialing tab is enabled. Dial Plan ensures that network node destinations are dialed properly.
- Verify that at least one port on the Port Parameters tab is enabled for outbound analog network events.

Class of Service dialog box:

- Verify that the Follow-Me-Forward checkbox is enabled and a Networking Option is selected.
- Verify that an option other than Not Allowed is enabled under Highest Outgoing Dispatch.
- Verify that at least one Network Options checkbox is enabled.
- Verify that an option other than Not Allowed is enabled under Delivery Options.

Greetings do not voice properly

Holiday Greetings do not voice

Resolution Possibilities:

- Verify that the date in question is specified as a holiday on the Holiday dialog box and that a prompt for the holiday has been recorded and specified on the dialog box, which is accessible from the Attendant menu, Holidays option.
- Note that Holiday greetings do not voice if greeting by port is configured.
- Verify that the PC clock is set to the correct date and time.
- If a holiday greeting voices on a non-holiday date, access the Holiday dialog box and check to see if the Retain field is selected for the date in question. If so, this date was specified as a holiday in a previous year and retained for use in the current year.

Multilingual greetings do not voice

Resolution Possibilities:

- Verify that the sentinel supports the multiple languages. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this chapter.
- Verify that the primary and secondary languages are defined on the Language Selection dialog box, which is accessible from the Options menu, Language Selection option.
- Verify that a Language Select prompt is recorded and specified on the System Prompts dialog box, which is accessible from the Attendant menu, System Prompts option.

- Listen to the Attendant Menu prompts and the Message Notification prompts using SOLVE, or over the supervisor's menu phone interface to verify that they are correct.
- Note that Holiday greetings can only be voiced in one language.
- Verify that the Attendant Menu and Message Notification prompts are recorded in each language being used. Specify the appropriate prompt numbers on the System Prompts dialog box for each language listed in the Language Select prompt.
- Verify that the correct language is specified in the Language field on the Class of Service dialog box.

Greeting by port does not work

Resolution Possibilities:

- Verify that the appropriate trunks are routed to the correct ports. This allows the system to voice the correct greetings when the phone number is called.
- Verify that the port is active for greeting by port on the Greeting by Port dialog box.
- Verify that the correct mailboxes are assigned on the Greeting by Port dialog box and that the Personal Greetings for the mailboxes are recorded with an appropriate greeting.

Mailbox Entry dialog box:

- Verify that the correct company and division information is entered on the Mailbox Entry dialog box. Note that these fields are case-sensitive.
- Verify that the correct Call Handling option is selected for the mailboxes handling calls for ports active for greeting by port.

Integration does not work

Resolution Possibilities:

- Attach a digit grabber to a line and verify that the switch is sending the appropriate inband signaling digits.

System Setup parameters:

- Verify that the following Inband Parameters:
  - The Total Number of Inband Signaling Digits (DIDCOUNT) is set equal to or higher than the total number of digits in the inband signaling string.
  - If the switch requires a * or # to signify the end of an inband code, verify that it is entered in the DID Terminating Character (DIDTERM) parameter.
  - No spacer characters are entered in the DID Terminating Character (DIDTERM) parameter.

  - Seconds to Wait for DID (DIDTIME) is set to 5.

- If the beginning of the inband signaling string is missing, verify that the Offhook Delay parameter is set to 25. If not, change it to 25, then shut down and restart M2000.
- If the end of the inband signaling string is missing, increase the value for the Total number of DID digits parameter on the Inband tab.
- If changing the Total number of DID digits parameter on the Inband tab in System Setup did not work, increase the Number of Milliseconds to Wait parameter on the Inband tab by 500 units.

Intercom paging does not work

Resolution Possibilities:

- Note that a paging system (external or extension) must be available on the switch for the intercom paging feature to be used.
- Note that there must be at least two ports available on the system to complete a page cycle.
- Note that paging works on systems using supervised transfers or a switch that uses a unique code for busy and no-answer.
- If there is a problem with intercom redirect, verify that the sentinel allows intercom redirect feature. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this chapter.
- Verify that call analysis recognizes ring-no-answer and busy conditions accurately.

System Setup parameters:

- Verify that an Intercom Paging Code is specified on the Intercom Paging tab in System Setup.
- Verify that the Release Code for Intercom Paging is specified on the Intercom Paging tab.

Class of Service dialog box:

- Verify that the Intercom Paging checkbox is enabled.

Subscriber Settings dialog box:

- If intercom paging was activated by the subscriber over the phone, verify that the system manager did not override the setting on the Subscriber Settings dialog box.
- Verify that No Answer/Call Blocking is set to Default.

Callers hear, “There is a line problem. Please try again later,” when they access a mailbox

Resolution Possibilities:

- This prompt indicates a possible file problem. Use the following procedure:
  1. Exit M2000 by selecting Exit from the File menu.
  2. View the PLUS.LOG file for any errors indicating power failures. For more information on viewing the log file, see the topic, "Viewing the PLUS.LOG File," later in this chapter.
  3. Run Quick Assist using the Verify Recovery Mode and the Delete Unattached Messages Recovery Option.
  4. If Quick Assist does not report any errors, restart M2000. If Quick Assist does report errors, it instructs you as to which recovery options to run. Note that if Quick Assist recommends using the Update All option, contact a Lucent Technologies technical support representative for assistance.
  5. Reboot the PC and restart M2000. If the problem persists, contact a Lucent Technologies technical support representative for information.

Mailboxes are not functioning properly

Cannot edit a mailbox

Resolution Possibilities:

- Verify that you have logged in at the necessary level of security. To access all functions except a few on the Options menu, enter the Level 2 security password (default = 12345). To access all functions, including all those on the Options menu, enter the Level 3 security password (default = 67890).
- Note that a guest mailbox cannot be edited, nor can a mailbox that is in use.
- Note that when using greeting by port, the supervisor mailbox must have either the same company entry as the subscriber’s mailbox or no company entry to edit the mailbox using the supervisor main menu functions over the phone.

Cannot change class of service

Resolution Possibilities:

- Verify that you have logged in at a Level 3 security level.
- Note that a security Level 3 supervisor can change a class of service for an individual mailbox by 1) selecting the View/Edit push button on the Mailbox Entry dialog box, 2) adjusting (if necessary) and applying a default class of service, or 3) designing and applying a custom class of service.

Cannot access mailbox features

Resolution Possibilities:

- Verify that the feature in question is enabled on the Class of Service dialog box.
- Verify that the M2000 sentinel permits the feature. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this section.
- Verify that the feature in question is permitted in the class of service assigned to the mailbox.
- Verify that the feature is active in the Subscriber Settings dialog box.
- Note that a guest mailbox can only send and receive messages.

Cannot log into a mailbox

Resolution Possibilities:

- Dial M2000’s extension or phone number and press <#> after the system greeting. Enter the mailbox number and, when prompted, the mailbox’s password.
- Do not log in using a speakerphone.
- If M2000 is on an integrated system using automatic station login, verify that the Inband Signaling code is correct.
- Note that you must enter <#> after the password if the extended security feature is active. Otherwise, the system pauses after you finish entering the password before accessing the mailbox.
- Attempt to log in again. You may have entered an invalid password.
- Verify that the password contains the minimum number of digits specified in the Minimum Length of Password field on the Subscriber tab in System Setup.
- Note that a guest mailbox is deleted with its sponsor mailbox.
- Note that the system manager can assign a new password either through the Edit Mailbox dialog box or over the phone if the subscriber cannot remember the password.
- Run Quick Assist using the Update Partial option. For information on running the Quick Assist utility, refer to Chapter 24, “Maintaining the System.”

Cannot record mailbox prompts

Resolution Possibilities:

- Verify that the class of service assigned to the mailbox permits recording prompts.
- Verify that the Maximum Time to Record Mailbox Prompts parameter is not set to zero on the Message Timing tab in System Setup.

Mailbox is full

Resolution Possibilities:

- The value specified in the Max Messages field in the class of service assigned to the mailbox has been reached. Delete messages to allow for more recording time in the mailbox or increase the limits.
- Assign a new class of service to the mailbox.
- Run Quick Assist using the Update Partial option. For information on running the Quick Assist utility, refer to Chapter 24, “Maintaining the System.”

Messages

Cannot edit a sent message

Resolution Possibilities:

- Verify that the Locate Messages Sent checkbox is enabled on the Class of Service dialog box.
- Note that a sent message cannot be edited if it does not reside in the recipient’s new message queue.
- Note that a message that is in the new message queue cannot be edited if it has been reviewed or skipped.
- Note that messages scheduled for dispatch over a network (OctelNet and AMIS) cannot be edited.

Cannot save messages

Resolution Possibilities:

- Verify that the Save Messages checkbox is enabled on the Class of Service dialog box.
- Note that listen-only messages cannot be saved.

Messages include a clicking noise at the end

Resolution Possibilities:

- By setting the environment variable DIALTONETRIM to the number of seconds the clicking is typically recorded, you can prevent the clicking from being included in messages. To set the DIALTONETRIM variable, type the following line at the end of the CONFIG.SYS file on the M2000 PC:

  ```
  SET DIALTONETRIM=#
  ```

  where # is the number of seconds of clicking that is typically heard. The DIALTONETRIM variable removes the last number of seconds (specified as #) from the message when the message is not terminated by a DTMF.

Messages vanishing from mailboxes

Resolution Possibilities:

- Verify that the correct date and time are set on the PC clock.

Mailbox Entry dialog box:

- Deactivate the Auto Forwarding feature if is active.
- Note that the number of days to save messages can be set to 99, allowing saved messages to remain on M2000 indefinitely.

Class of Service dialog box:

- Note that a message will be removed from the saved message queue when its age is equal to the days to save saved messages value in the Class of Service. The age is calculated from the time a message was first received in a mailbox.

System Setup parameters:

- When the number of days to save messages has expired, messages are automatically deleted. To warn subscribers of deleted messages, activate the Voice Warning When Messages Expire parameter on the Subscriber tab.

Message confirmation does not work

Resolution Possibilities:

- Verify that the Message Confirmation checkbox is enabled on the Class of Service dialog box.
- Note that OctelNet confirmations are dispatched during the next connection after the message is initially delivered. Therefore, if no messages have been sent to that node since the original message was sent, the confirmation has not had a chance to be delivered to the sender.
- Note that confirmations are only generated for messages tagged for confirmation when they are sent.
- Note that subscribers must check message confirmations through the message locator feature.
- Note that messages dispatched to remote sites using AMIS cannot be sent with message confirmation activated. This includes messages to mailboxes active for Follow-Me-Forward.

Message Indicators do not work

Message Indicators do not work for Inband

Resolution Possibilities:

- Disconnect a voice-mail port and attach a 2500 set or the proprietary telephone instrument if using a D/42D NS, D/42D SX, or D/42D SL integration. Go off hook and manually test the message indicator by entering the codes specified on the MI tab in System Setup.

System Setup parameters:

- Verify that the Port Parameters tab has at least one port enabled for outbound and that the same port is also enabled for Message Indicators.
- Verify that the Permit Message Indicators parameter on the MI tab is enabled.
- Verify that the MI prefix and suffix on and off codes are entered in the fields on the MI tab. If using the Dialogic SX or SL integration, see the appropriate Configuration Note for the correct codes to enter in these fields.
- Some PBXs require M2000 to wait for a confirmation tone to complete the message indicator event. For these systems, enter a comma (,) at the end of the MI Suffix OFF or ON code.
- Verify that the value for DTONDET is greater than the value for DTONWAIT, unless DTONDET is set to 0.
- Verify that the values for DTONWAIT and DTONDET are at least 400 units apart, unless DTONDET is set to 0.

Class of Service dialog box:

- Verify that the Message Indicator checkbox is enabled.

Message Indicators do not work for SMDI

Resolution Possibilities:

- Place a breakout box on the line and verify that message indicator information is being sent over the SMDI link.

System Setup parameters:

- Verify that COMMWL is enabled on the SMDI tab.
- Verify that the Port Parameters tab has at least one port enabled for outbound and that the same port is also enabled for Message Indicators.
- Verify that the Permit Message Indicators parameter on the MI tab is enabled.
- Verify that the value for DTONDET is greater than the value for DTONWAIT, unless DTONDET is set to 0.
- Verify that the values for DTONWAIT and DTONDET are at least 400 units apart, unless DTONDET is set to 0.

Class of Service dialog box:

- Verify that the Message Indicator checkbox is enabled.

Message Indicators do not work for Centrex

Resolution Possibilities:

- Verify that the codes in the SMDI.PFX file in the \CVR directory are correct.

System Setup parameters:

- Verify that the message indicator prefix is entered correctly on the MI tab.
- Verify that the Permit Message Indicators parameter on the MI tab is enabled.
- Verify that COMMMWL is enabled on the Simplified Message Desk Interface tab.
- Verify that the Port Parameters tab has at least one port enabled for outbound and that the same port is also enabled for Message Indicators.
- Verify that the value for DTONDET is greater than the value for DTONWAIT, unless DTONDET is set to 0.
- Verify that the values for DTONWAIT and DTONDET are at least 400 units apart, unless DTONDET is set to 0.

Class of Service dialog box:

- Verify that the Message Indicator checkbox is enabled.

Message Indicators do not work for DID

Resolution Possibilities:

- Unplug the port from the voice board and attach an analog phone to the port. Verify that the message indicator can be lit.

System Setup parameters:

- Verify that the Port Parameters tab has at least one port enabled for outbound.
- Verify that the MI tab allows Message Indicators and the correct codes are entered in the fields.

Class of Service dialog box:

- Verify that the Message Indicator checkbox is enabled.

Message Notification does not work for a phone

Resolution Possibilities:

- Attach a digit grabber to monitor a line. Verify that M2000 can access the line and connect to the phone number.
- If Debug displays the error, “WARNING 18 No Dial tone Detected,” all outbound ports were busy when notification was attempted. You may want to enable more outbound ports on M2000.

System Setup parameters:

- Verify that at least one port is enabled for Outbound and Message Notification in the Port Parameters tab.
- Verify that the values entered for DTONWAIT on the Message Delivery tab and DTONDET on the Hangup tab are set at least 400 units apart, unless DTONDET is set to 0.
- Verify that the value for DTONDET is greater than the value for

DTONWAIT, unless DTONDET is set to 0.

- The value for DTONDET may be set too low. If it is, M2000 may hang up prematurely. Adjust this parameter only if instructed to by a Lucent Technologies technical support representative.
- The value for SCHDWAIT on the Outbound Calls tab may be set too low. If it is, M2000 may not detect a dial tone on an outbound line and must reschedule the event. Adjust this parameter only if instructed to by a Lucent Technologies technical support representative.

Subscriber Settings dialog box:

- Verify that the Message Notification feature is enabled.

Message Notification dialog box:

- Verify that the time blocks are configured
- Verify that PHONE is entered in the Call Back field.

Class of Service dialog box:

- Verify that the Message Notification checkbox is enabled.
- Verify that the Local or Long Distance option under Delivery Options is selected.

Message Notification does not work for a beeper

Resolution Possibilities:

- Attach a digit grabber to monitor a line. Verify that M2000 can access the line and connect to the phone number.
- If Debug displays the error “WARNING 18 No Dial tone Detected,” all outbound ports were busy when notification was attempted. You may want to enable more outbound ports on M2000.
- Some pager companies use three beep tones to indicate a connect. If M2000 does not recognize this connect signal, configure notification with no call progress:
    1. Call the paging company and determine the number of seconds after the digits are dialed and the call is connected. Write this number down for use in step 3.
    2. Remove all data from the call back field on the Mailbox Entry/Message Notification dialog box.
    3. In the Phone # field, enter an N followed by a 1, if required, followed by the area code and pager company’s phone number. Insert a comma for every two seconds of time it took to connect that you found in step 1, then enter the call back number. For a company that took ten seconds to connect, a phone number would look like:

       N+1+Area Code+Pager Company’s #+,,,,,+Callback #
    4. Verify the entire callback number displays on the pager. If not, adjust the number of commas in the Phone # field.

System Setup Parameters:

- Verify that at least one port is enabled for Outbound and Message Notification in the Port Parameters tab.
- Verify that the values entered for DTONWAIT on the Message Delivery tab and DTONDET on the Hangup tab are set at least 400 units apart, unless DTONDET is 0.
- Verify that the value for DTONDET is greater than the value for DTONWAIT, unless DTONDET is 0.
- The value for DTONDET on the Hangup Detection tab may be set too low. If it is, M2000 may hang up prematurely. Adjust this parameter only if instructed to by a Lucent Technologies technical support representative.
- The value for SCHDWAIT on the Outbound Calls tab may be set too low. If it is, M2000 may not detect dial tone on an outbound line and must reschedule the event.

Subscriber Settings dialog box:

- Verify that the Message Notification feature is enabled.

Message Notification dialog box:

- Verify that the time blocks are configured.
- Verify that the proper phone number for the subscriber to return the call in the Call Back field.
- Verify that the Phone # field contains the pager company’s phone number. If it is a long-distance call, verify that a 1 precedes the area code.

Class of Service dialog box:

- Verify that the Message Notification checkbox is enabled.
- Verify that the Long Distance option under Delivery Options is selected.

NameNet information is not voiced

Resolution Possibilities:

- The system may not yet have retrieved the NameNet information from the remote site.
- Verify that the node exists on M2000.

System Setup parameters:

- Increase the value for the Maximum Number of Idle Days for NameNet Records parameter. Records that have exceeded this value are automatically purged.
- Increase the value for the Maximum Number of NameNet Entries parameter on the NameNet tab. NameNet does not retrieve information for new entries if the NameNet list is full.

OctelNet/AMIS messages are returned to mailboxes

Resolution Possibilities:

- Verify that OctelNet is enabled on the sentinel. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this chapter.
- Verify that the access number on the Network Maintenance dialog box is correct.
- If using Dial Plan, verify that the Dial Plan database is set up correctly.
- Dedicate a line for testing the networking feature and attach a digit grabber. Verify that M2000 can access the line and connect to the remote site.
- If the switch requires a suffix code to access an outside line, add the suffix code to the SET_UP.CFG A-69 bucket.
- Note that OctelNet does not work if the greeting by port feature is used.

Class of Service dialog box:

- Verify that the Networking Options are set to access the appropriate nodes.
- Verify that Dispatch Options are not set to Not Allowed.

System Setup parameters:

- Verify that the Outbound parameter on the Networking tab is enabled.

Operator or subscriber gets blank messages

Resolution Possibilities:

- Verify that the method the switch uses for a disconnect and verify that the appropriate parameters are configured properly. For more information, see the topic, "Determining a Switch's Disconnect Signal," later in this section.
- If the blank messages are recorded noise, check the phone system for the following problems:
  - Noisy phone lines.
  - RF interference.
  - Ground problems.
  - Cross talk/wiring problems.
  - Tip and ring reversed.

System Setup parameters:

- Verify that the Minimum Message Length parameter on the Message Timing tab is set to the recommended setting, 2 seconds. Note that any message shorter in length than two seconds is automatically deleted.
- If setting the Minimum Message Length parameter on the Message Timing tab to 2 seconds does not correct the problem, set the parameter to 4 seconds and set the Maximum Silence parameter on the Hangup Detection tab to 350.

PC is locked up

Resolution Possibilities:

- Press <CTRL+ESC> and hold them down for a few seconds. OS/2 may indicate that an executable file is not responding and prompt you to end it. End the file. If this does not work the first time, hold down <CTRL+ESC> again for a longer period of time.
- Press <CTRL+ALT+DEL>. The PC will restart, and you can restart M2000.
- If the previous two procedures do not work, the last resort is to turn off power to the PC. If you must turn off the PC, use the following procedure:
  1. Turn off the power to the PC. Wait 30 seconds, then turn power back on.
  2. After M2000 has restarted, view the PLUS.LOG file for an error that might have caused the lockup. Report this error to a Lucent Technologies technical support representative. For more information on viewing the log file, see the topic, "Viewing the PLUS.LOG File," later in this chapter.
  3. Log in as a Level 2 or Level 3 supervisor and shut down M2000 by selecting Exit from the File menu.
  4. Run the Quick Assist utility using the Verify option.
  5. If Quick Assist does not report any errors, restart M2000. If Quick Assist detects errors, it instructs you on which recovery options to run. Contact a Lucent Technologies technical support representative if Quick Assist recommends you use the Update All or Rebuild All options.

Ports come off hook when there are no calls

Resolution Possibilities:

System Setup parameters:

- Verify that all ports enabled for outbound calls on the Port Parameters tab have a dial tone. If M2000 does not detect a dial tone, it assumes there is an incoming call and attempts to answer it.
- Verify that DTONDET on the Hangup tab and DTONWAIT on the Message Delivery tab are set to values at least 400 units apart, unless DTONDET is set to 0.
- Verify that the value for DTONDET is greater than the value for DTONWAIT, unless DTONDET is set to 0.

Reports are not functioning properly

Reports menu options are dimmed

Resolution Possibilities:

- A report window may be minimized instead of closed. Use this procedure to access the Reports menu:
    1. Press <CTRL-ESC>. The OS/2 Window List displays.
    2. Select Lister and press <ENTER>. A report window displays.
    3. Close the report window by double-clicking on the upper-left-hand corner of the window.

Cannot save reports to disk

Resolution Possibilities:

- Verify that you are selecting to save the report to a disk on the Reports dialog box.
- Verify that the drive name and directory is specified and a filename is entered in the Report Filename dialog box.
- Verify that a formatted diskette is in a valid PC diskette drive and that the drive door is closed properly.
- Attempt to save a file from another application on the M2000 PC to determine if there is a problem with the diskette drive.
- Verify that the correct LPT port is selected for the printer.

Cannot print reports

Resolution Possibilities:

- Verify that the user is selecting to print the report to a printer (not to a disk or screen) on the Reports dialog box.
- Verify that the printer was plugged in and turned on when M2000 was started.
- Attempt to print a document from another application on the PC to isolate the problem to M2000 or OS/2.
- Verify that the printer is ready to print (power is on, printer is on-line, printer contains paper).
- Verify that the printer is attached to the M2000 PC or accessible through the network.

Cannot delete statistical information from reports

Resolution Possibilities:

- Use the Clear Mailbox/Statistics option on the Mailbox menu to clear a specific mailbox or a range of mailboxes.
- Reset the Mailbox by using the supervisor main menu functions over the phone. After logging in, press <1> from the supervisor menu for mailbox functions and select <4> to reset a mailbox.
- Note that when you use the clear statistics option, the statistics are deleted permanently.

Some mailboxes are not included in reports

Resolution Possibilities:

- The entry in mailbox’s Company or Division field is incorrect or missing. Check the field for spelling errors or extra spaces. Note that this field is case-sensitive.
- Use the Mailbox Quick List report to display the information entered in the Company and Division fields for the mailboxes.
- Verify that the mailbox owner’s name was specified on the Mailbox Entry dialog box during mailbox creation. Select the Edit option from the Mailbox menu. Enter the mailbox number when prompted, then type an entry in the First and Last Name fields of the dialog box.

Serial Integration (SMDI) does not work

Resolution Possibilities:

- Verify that incoming data packets use the appropriate protocol, and the data being sent contains the proper codes for the integration device.
- Verify that the sentinel allows Serial Integration. For information on verifying the features enabled on a sentinel, see the topic, "Displaying Features Enabled on the Sentinel," later in this section.
- Double-click the ICONFIG icon in the Lucent Technologies folder to open the ICONFIG dialog box. Verify that the baud rate entered on the ICONFIG dialog box for the Serial Integration utility is the correct value for the serial integration device.
- Verify that the PARITY value selected on the ICONFIG dialog box in the Serial Integration utility is the correct value for the serial integration device.
- Verify that the STOPBITS value selected on the ICONFIG dialog box for the Serial Integration utility is the correct value for the serial integration device.
- Verify the DESKID number entered on the ICONFIG Port ID dialog box for the Serial Integration utility is the correct number. Verify this number with the central office.
- Verify that the port numbers are entered on the ICONFIG Port ID dialog box.

System Setup parameters:

- Verify that Use SMDI is enabled on the Simplified Message Desk Interface Parameters tab.
- Verify that Init Mode on the Port Parameters tab is set to C for all serial integrations ports.
- Verify that the Inband Templates on the Inband Parameters Page 2 tab are correct.

Visual Architect V-Trees do not print

Resolution Possibilities:

- Verify that the printer was plugged in and turned on when M2000 was started.
- Verify that the correct LPT port is specified for the printer.
- Attempt to print a document from another application on the M2000 system PC to isolate the problem to M2000 or OS/2.
- Verify that the printer is ready to print (power is on, printer is on-line, printer contains paper).
- Verify that the printer is attached to the M2000 PC or accessible through the network.

V-Trees do not work

Resolution Possibilities:

- Verify that V-Trees are permitted in the mailbox's class of service.
- Verify that the V-Tree is created and has been activated through Call Handling.
- Verify that the correct Call Handling condition is being satisfied: busy, no-answer, busy or no-answer, or all calls.
- Listen to the V-Tree over the phone interface to verify that the V-Tree is complete.

Determining a Switch’s Disconnect Signal

When you are troubleshooting certain integration issues, you are instructed to confirm that M2000 is configured to detect the appropriate disconnect signal from the switch. When possible, consult the Configuration Note and the switch documentation for this information. If you do not have access to this information, you can use the procedure below to determine the switch’s disconnect signal.

To determine a switch’s disconnect signal:

1. Disconnect a voice-mail port and attach a 2500 set (or the proprietary telephone instrument if using a D/42D NS, D/42D SX, or D/42D SL integration) and a digit grabber.
2. Call the port, from another phone.
3. Answer the phone connected to the port and listen over the handset.
4. Hang up the calling phone.
5. Use the following table to determine the disconnect signal:

Volt Meter Reading	Audible Signals	Disconnect Signal
drops to 0 V	silence	loop current drop
no change	DTMF tones	hangup string
no change	dial tone	dial tone
no change	silence	silence

Displaying Features Enabled on the Sentinel

An improperly programmed sentinel can inhibit the functionality of certain system features. To confirm the sentinel is programmed appropriately, you can use the View Sentinel program to display a list of enabled features.

To display features enabled on the Sentinel:

1. Open an OS/2 window.
2. At the command prompt, type `VIEWSENT` and press <ENTER>.
3. The sentinel information displays.

Interpreting the View Sentinel Information

The following information displays when you run the View Sentinel program:

- **Serial Number** – Identifies the sentinel unit’s serial number. You may be asked to provide this number when you contact a Lucent Technologies technical support representative.
- **Product Code** – Indicates the product the sentinel is programmed to run.
- **Max Ports** – Indicates the maximum number of channels M2000 is allowed to use.

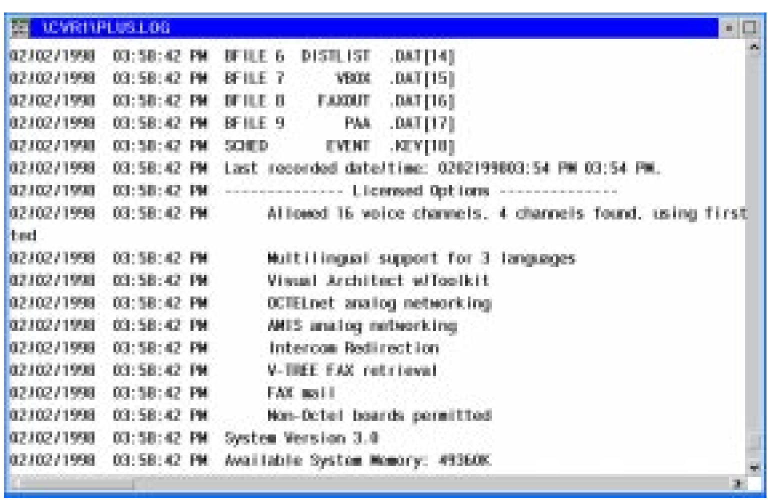
- **Max Mailboxes** – This feature is not used for products running under OS/2.
- **Revision** – Identifies the software version number the sentinel is programmed to use.
- **Max Visual Mailboxes** – Identifies the maximum number of Visual Mailbox logins allowed on M2000 at one time.
- **Max Languages** – Identifies the maximum number of languages allowed on M2000.
- **Fax Retrieval** – Indicates whether the Fax Retrieval feature is enabled.
- **Fax Mail** – Indicates whether the fax mail feature is enabled.
- **SMDI** – Indicates whether SMDI Integration is allowed on M2000.
- **AMIS** – Indicates whether the AMIS analog protocol for networking is enabled.
- **ONet** – Indicates whether the OctelNet protocol for networking is enabled.
- **Intercom Redirect** – Indicates whether the intercom redirect feature is enabled.
- **Octel Board Required** – Indicates whether M2000 must use voice and fax boards with the proper signature.
- **Visual Architect Version** – Identifies whether the sentinel is programmed to run Visual Architect or Visual V-Tree.

Viewing the PLUS.LOG File

System events and errors are recorded in the PLUS.LOG file located in the \CVR directory. When troubleshooting an issue, it helps to view the log file to determine any error messages recorded during a failure. Be prepared to provide these error messages to a Lucent Technologies technical support representative.

To view the PLUS.LOG file:

1. Log into M2000 as a Level 2 or 3 supervisor.
2. From the File menu, select View Log File. A window containing log file information displays.



3. To close the PLUS.LOG file, double-click the upper-left-hand corner of the window.

Prompts Voiced Under Specific Call Handling Conditions

When M2000 transfers a call to a mailbox, the prompt the caller hears and the associated options offered to the caller depend on:

- The combination of Call Handling settings defined in the Subscriber Settings dialog box for the particular mailbox.
- Specific interface and integration factors, such as whether the call is supervised and the functions set up in inband templates.

By manipulating Call Handling settings, which include the settings indicated in the Call Blocking field, the No Answer/Call Blocking area, and the Busy area, and by considering interface and integration factors, you can set up M2000 to voice different prompts and provide callers with different options when they reach a specific mailbox.

The Call Handling tables define what prompts callers hear and what options are available to them when subscriber settings are activated in certain ways under certain conditions. The first table identifies prompts voiced to calls that are supervised transfers. (A call is a supervised transfer if the Max Rings setting in the mailbox's class of service is 1 or above. A call is a blind transfer if the Max Rings setting is 0.)

The next three tables identify prompts voiced to calls on systems that are integrated using inband templates defined in System Setup. Each of the three tables identify system responses for each function defined by a template.

Use this information to set up a mailbox to respond to transferred callers in the manner best suited to your needs. Begin by selecting the prompt(s) you want the system to voice and the associated options you want callers to have when a call reaches a mailbox. Scan the available combinations in the Prompt Played and Caller's Available DTMF Options columns of the appropriate table. Next, follow the table to the right to identify whether Call Blocking must be activated and to see which options should be selected in the No Answer/Call Blocking area (N/CB columns) and the Busy area (Busy columns) on the Subscriber Settings dialog box.

Interpreting the Call Handling Tables

Use the following key to interpret information provided in the Call Handling tables:

RNA = Ring No Answer condition (the extension rang, but was not answered).
Busy = Busy condition (the extension was in use).
N/CB columns = No Answer/Call Blocking area of Subscriber Settings dialog box.
Busy columns = Busy area of Subscriber Settings dialog box.
Def. = Default.
Opt. 1 = Optional Prompt 1.
Opt. 2 = Optional Prompt 2.

RNA/Busy Menu = The following options are voiced to callers by system prompts:

Caller can press...	To...
<1>	Enter another extension.
<2>	Leave a voice or fax mail message (fax mail is available only if the optional Fax Solutions module is installed and enabled).
<3>	Transfer to the personal operator (or system operator if a personal operator is not defined).

Optional Set 1 = The following options are provided to callers. Note that these options are not voiced by system prompts and should be voiced by subscribers in the Personal Greeting prompt:

Caller can press...	To...
<*>	Disconnect.
<#>, <2 – 9>	Leave a voice- or fax-mail message (fax mail is available only if the optional Fax Solutions module is installed and enabled).
<1>	Enter another extension.
<0>	Transfer to the personal operator (or system operator if a personal operator is not defined).

Optional Set 2 = The following options are provided to callers. Note that these options are not voiced by system prompts and should be voiced by subscribers in the Personal Greeting prompt:

Caller can press...	To...
<*>, <#>, <1 – 9>	Leave a voice- or fax-mail message (fax mail is available only if the optional Fax Solutions module is installed and enabled).
<0>	Transfer to the personal operator (or system operator if a personal operator is not defined).

Optional Set 3 = The following options are provided to callers. Note that these options are not voiced by system prompts and should be voiced by subscribers in the Personal Greeting prompt:

Caller can press...	To...
<*>	Initiate mailbox login (caller is prompted to enter the mailbox password).
<#>, <2 – 9>	Leave a voice- or fax-mail message (fax mail is available only if the optional Fax Solutions module is installed and enabled).
<1>	Enter another extension.
<0>	Transfer to the personal operator (or system operator if a personal operator is not defined).

Supervised Call Handling Table

Call Blocking	N/CB Def.	N/CB Opt. 1	N/CB Opt. 2	Busy Def.	Busy Opt. 1	Busy Opt. 2	Prompt Played	Caller's Available DTMF Options
x	x			x			Personal Greeting	Option Set 2
x		x		x			Optional Prompt 1	Option Set 1
x			x	x			Optional Prompt 2	Option Set 1
x	x			x			Personal Greeting	Option Set 2
x	x				x		Personal Greeting	Option Set 2
x	x					x	Personal Greeting	Option Set 2
	x			x			RNA = RNA/Busy Menu Busy = RNA/Busy Menu	RNA = Option Set 2 Busy = Option Set 2
		x		x			RNA = Optional Prompt 1 Busy = RNA/Busy Menu	RNA = Option Set 1 Busy = Option Set 2
			x	x			RNA = Optional Prompt 2 Busy = RNA/Busy Menu	RNA = Option Set 1 Busy = Option Set 2
	x				x		RNA = RNA/Busy Menu Busy = Optional Prompt 1	RNA = Option Set 2 Busy = Option Set 1
	x					x	RNA = RNA/Busy Menu Busy = Optional Prompt 2	RNA = Option Set 2 Busy = Option Set 1
		x			x		RNA = Optional Prompt 1 Busy = Optional Prompt 1	Option Set 1
			x			x	RNA = Optional Prompt 2 Busy = Optional Prompt 2	Option Set 1
		x				x	RNA = Optional Prompt 1 Busy = Optional Prompt 2	Option Set 1
			x		x		RNA = Optional Prompt 2 Busy = Optional Prompt 1	Option Set 1

Integrations with Inband Templates Call Handling Tables

Go to Voice Mail (Call Forward to Personal Greeting) Function Table

Call Blocking	N/CB Def.	N/CB Opt. 1	N/CB Opt. 2	Busy Def.	Busy Opt. 1	Busy Opt. 2	Prompt Played	Caller's Available DTMF Options
x	x			x			Personal Greeting	Option Set 3
x		x		x			Optional Prompt 1	Option Set 3
x			x	x			Optional Prompt 2	Option Set 3
x	x			x			Personal Greeting	Option Set 3
x	x				x		Personal Greeting	Option Set 3
x	x					x	Personal Greeting	Option Set 3
	x			x			RNA = Personal Greeting Busy = Personal Greeting	Option Set 3
		x		x			RNA = Personal Greeting Busy = Personal Greeting	Option Set 3
			x	x			RNA = Personal Greeting Busy = Personal Greeting	Option Set 3
	x				x		RNA = Personal Greeting Busy = Personal Greeting	Option Set 3
	x					x	RNA = Personal Greeting Busy = Personal Greeting	Option Set 3
		x			x		RNA = Optional Prompt 1 Busy = Optional Prompt 1	Option Set 3
			x			x	RNA = Optional Prompt 2 Busy = Optional Prompt 2	Option Set 3
		x				x	RNA = Personal Greeting Busy = Personal Greeting	Option Set 3
			x		x		RNA = Personal Greeting Busy = Personal Greeting	Option Set 3

Go to Voice Mail Function Table Notes:

If the Call Blocking checkbox is inactive (an "x" does not display in the Call Blocking column), and the options selected in the No Answer/Call Blocking area (N/CB columns) and the Busy area (Busy columns) are the same, the option selected (Optional Prompt, V-Tree, Call Forward, etc.) automatically executes. If, however, the options selected are different, the caller hears the personal greeting recorded for the mailbox.

If the Call Blocking checkbox is active (an "x" displays in the Call Blocking column), and Default is selected in the No Answer/Call Blocking area on the Subscriber Settings dialog box (an "x" displays in the N/CB Def. column), the system voices the personal greeting when it receives a Go to Voice Mail code.

Busy Function Table

Call Blocking	N/CB Def.	N/CB Opt. 1	N/CB Opt. 2	Busy Def.	Busy Opt. 1	Busy Opt. 2	Prompt Played	Caller's Available DTMF Options
x	x			x			RNA/Busy Menu	Option Set 2
x		x		x			Optional Prompt 1	Option Set 1
x			x	x			Optional Prompt 2	Option Set 1
x	x			x			RNA/Busy Menu	Option Set 2
x	x				x		RNA/Busy Menu	Option Set 2
x	x					x	RNA/Busy Menu	Option Set 2
	x			x			Busy = RNA/Busy Menu RNA = Not applicable	Option Set 2
		x		x			Busy = RNA/Busy Menu RNA = Not applicable	Option Set 2
			x	x			Busy = RNA/Busy Menu RNA = Not applicable	Option Set 2
	x				x		Busy = Optional Prompt 1 RNA = Not applicable	Option Set 1
	x					x	Busy = Optional Prompt 2 RNA = Not applicable	Option Set 1
		x			x		Busy = Optional Prompt 1 RNA = Not applicable	Option Set 1
			x			x	Busy = Optional Prompt 2 RNA = Not applicable	Option Set 1
		x				x	Busy = Optional Prompt 2 RNA = Not applicable	Option Set 1
			x		x		Busy = Optional Prompt 1 RNA = Not applicable	Option Set 1

Busy Function Table Notes:

If the Call Blocking checkbox is active (an "x" displays in the Call Blocking column), and Default is selected in the No Answer/Call Blocking area on the Subscriber Settings dialog box (an "x" displays in the N/CB Def. column), the system voices the RNA/Busy menu when it receives a Busy Code.

Ring No Answer Function Table

Call Blocking	N/CB Def.	N/CB Opt. 1	N/CB Opt. 2	Busy Def.	Busy Opt. 1	Busy Opt. 2	Prompt Played	Caller's Available DTMF Options
x	x			x			RNA/Busy Menu	Option Set 2
x		x		x			Optional Prompt 1	Option Set 1
x			x	x			Optional Prompt 2	Option Set 1
x	x			x			RNA/Busy Menu	Option Set 2
x	x				x		RNA/Busy Menu	Option Set 2
x	x					x	RNA/Busy Menu	Option Set 2
	x			x			RNA = RNA/Busy Menu Busy = Not applicable	Option Set 2
		x		x			RNA = RNA/Busy Menu Busy = Not applicable	Option Set 1
			x	x			RNA = RNA/Busy Menu Busy = Not applicable	Option Set 1
	x				x		RNA = Optional Prompt 1 Busy = Not applicable	Option Set 2
	x					x	RNA = Optional Prompt 2 Busy = Not applicable	Option Set 2
		x			x		RNA = Optional Prompt 1 Busy = Not applicable	Option Set 1
			x			x	RNA = Optional Prompt 2 Busy = Not applicable	Option Set 1
			x		x		RNA = Optional Prompt 2 Busy = Not applicable	Option Set 1
		x				x	RNA = Optional Prompt 1 Busy = Not applicable	Option Set 1

Notes:

APPENDIX A

System Security and Toll Fraud

Telecommunications fraud is the unauthorized use of another company's telecommunications service. This type of fraud has been in existence since the 1950's with the introduction of Direct Distance Dialing (DDD).

Twenty years later, Remote Access became a target of individuals seeking unauthorized network access. Now, with the added capabilities of voice mail and automated attendant services, customer premises equipment-based toll fraud has expanded as a new type of communications abuse. With its subculture of "hackers" and "phreakers," telecommunications fraud has rapidly become a highly profitable criminal activity.

Protecting Your System

Voice messaging toll fraud has risen dramatically in recent years. Now more than ever, it is imperative that you take steps to secure your system. Callers into the voice messaging/automated attendant system may transfer to an outgoing trunk if adequate security measures are not implemented. Callers who have unauthorized access to a voice mailbox can use it as a message drop for communications at your expense on your 800 numbers. Securing your system means protecting the switch, protecting the voice messaging system, and protecting any automated attendant applications.

Switch Security

The only tool a criminal needs to breach an inadequately secured system is a touch-tone telephone. If criminals can gain access to an inside dial tone, they will attempt to gain access to an outside line by using normal switch functions such as:

- Automatic Routing System (ARS) access codes
- Pool Access Codes

Security Tips

To help prevent toll fraud at the switch, follow these guidelines:

- Assign toll restrictions to voice messaging system and automated attendant ports.
- If you do not to use the outcalling features of the voice messaging system, restrict the outward calling capability of all voice ports.
- Use a dial plan that does not allow extensions beginning with the same digits as ARS, TAC, or verification and test codes.
- Inform all system operators that they are not to dial outside calls. Request that operators report all attempts to bypass switch restrictions to the telecommunications department for repairs or to the corporate security office for investigation.
- Restrict the numbers for outcalling and AMIS with a disallowed list.

Voice Messaging System Security

With regard to toll fraud, voice messaging systems have two areas of weakness:

- Codes that transfer to inside or outside dial tone
- Mailboxes that can be used as message drops

Once thieves transfer to inside dial tone, they have access to any unprotected switch features. Preventing this type of abuse requires security at both the switch and at the voice messaging system.

Once thieves break into a mailbox, they can use it as a message drop for untraceable calls or for illegal activities. If you have 800 lines that can connect to your voice messaging system, they can use them to pass stolen information around at your expense. If you have user-administrated outcalling, they can pass stolen information around at your expense automatically. Preventing this type of abuse requires security at the voice messaging system and on the part of your subscribers.

Cellular telephones can be monitored. If a subscriber enters a mailbox number and a password on a cellular telephone, the mailbox number and the password will be known to anyone listening.

To break a password, every word in a computerized 100,000 word-processor spelling checker or dictionary can be tried in just a few minutes. In a slightly longer time, every digit combination from 1 to 100,000 can be tried.

Security Tips

To help prevent toll fraud at the voice messaging system, follow these guidelines:

- Do not create voice mailboxes before they are needed.
- Deactivate unassigned mailboxes. When an employee leaves the company, close or reassign the mailbox.
- Do not have permanent "guest" mailboxes (mailboxes without a physical extension that are loaned to outsiders for the duration of a project). If you need a guest mailbox, assign it when it is needed and deactivate or change its password immediately after it is no longer needed. Do not reassign a guest mailbox without changing the password.
- Lock out multiple unsuccessful attempts to enter a voice mailbox on a single call. (Allow no more than two or three attempts on the same call.)
- Do not use default initial passwords that follow any scheme. Have a list of random passwords and select one when you create the mailbox. Require that the mailbox owner personally appear at the corporate security office or telecommunications office to obtain the initial password. Go over the subscriber password guidelines with the user when you give out the initial password.
- Make sure user change the initial password the first time they log in to the system by making the initial password shorter than the minimum password length.
- Use the password-aging feature so that users must change their passwords monthly.
- Discourage the practice of writing down passwords, storing them, or sharing them with others.
- Restrict the use of outcalling to personnel who actually need it.
- Inform all system operators that they are not to dial outside calls. Request that operators report all attempts to bypass switch restrictions to the telecommunications department for repairs or to the corporate security office for investigation.
- Inform users that programming passwords onto auto-dial buttons is a breach of corporate security.
- Inform employees on how to report suspected toll fraud to the corporate security office.
- Monitor call detail recording (SMDR) reports, call traffic reports, Lucent Messaging 2000 reports, and other available reports regularly.

Automated Attendant System Security

Automated attendants are used by many companies to augment or replace a switchboard operator. When an automated attendant answers, the caller is generally given several options that are appropriate to the company's business.

- There may be other unstated options such as a code for dial tone or a code for transfers that allow criminals to access unanticipated parts of the telecommunications system.
- Pressing # will cause a transfer from the automated attendant to the voice messaging service.
- Even anticipated transfers may cause problems if they are not well thought out.
- Naive operators may dial an outside call for someone who has dialed 0 and complains of trouble making a call.

Security Tips

To help prevent toll fraud at the automated attendant, follow these guidelines:

- Do not allow transfers to inside or outside dial tone.
- Restrict transfers to subscribers only. See Chapter 14, "Setting Up the System," topic "Invalid Mailbox Parameters."
- Inform all system operators that they are not to dial outside calls. Request that operators report all attempts to bypass switch restrictions to the telecommunications department for repairs or to the corporate security office for investigation.
- Inform employees on how to report suspected toll fraud to the System Administrator.
- Monitor call detail recording (SMDR) reports, call traffic reports, Lucent Messaging 2000 reports, and other available reports regularly.

Password Guidelines

To minimize the risk of unauthorized persons accessing subscriber mailboxes and using them for toll fraud, inform all system users of these guidelines for voice messaging system passwords.

- Mailbox passwords are required.
- Require that passwords be as long as feasible, with a minimum of five digits, and a length that is at least one digit longer than the maximum extension length.
- System users must change the initial password the first time they log in to the voice messaging system.
- Never have greetings that state you will accept third party billed calls. A greeting like this allows unauthorized individuals to charge calls to your company. If a user calls somebody within the company and receives a greeting like this, they should point out the vulnerability to the person and recommend that they change the greeting immediately.
- Never use obvious or trivial passwords such as your telephone extension, room number, employee identification number, social security number, or the birthday of any family member. Also avoid easily guessed numeric combinations such as 1,3,9,7

and 2,4,8,6 (geometric pattern on the dial 9,9,9,9,9,9 (repeated digits), and 7,2,7,7,9,6,7,3 (“password” spelled out on the dial).

- Passwords should not be written down, stored, or shared with others.
- Passwords must not be programmed into auto-dial buttons.
- If subscribers receive any strange voice mail messages, find that their greeting or password has been changed, or suspect for any reason that their voice mailbox is being used by someone else, they should contact the System Administrator immediately.

Switch Administration

The measures you can take to minimize the security risk of owning a telecommunications system depend on how the telecommunications system and any associated voice messaging or automated attendant system is used.

To minimize the risk of unauthorized persons using the voice messaging or automated attendant systems to make toll calls, administer the voice ports on your switch in any of the following ways:

Restrict Outward Dialing

A voice port with outward restriction cannot make any outside calls unless an allowed number list is used for specific area codes and/or exchanges that can be called. Outward restriction prevents or limits outcalling and AMIS networking. All ports should be toll restricted. If the Outcalling feature will not be used, outward restrict all voice messaging system ports. If Outcalling will be used, ports not used for Outcalling should be outward restricted.

Restrict Toll Areas

A voice port with toll restriction cannot make toll calls, but it can still make local calls. If supported by the telecommunications system, toll restriction may prevent or limit outcalling and AMIS networking. An allowed number list can be used for specific area codes and/or exchanges that can be called.

Create Disallowed Number Lists

When a voice port is unrestricted or has toll restriction, a disallowed number list can be used to prevent calls to specific numbers, specific exchanges within all area codes, or specific numbers, if supported by the telecommunications system.

Create Allowed Number Lists

When a voice port is outward or toll restricted, an allowed number list can be used to allow calls to specific area codes and/or exchanges, if supported by the telecommunications system. When outcalling or AMIS networking is required, using outward or toll restriction in combination with an allowed number list limits the risk of unauthorized persons using the voice messaging or automated attendant systems to make toll calls because calls can only be made to the specified area codes and/or exchanges.

Restrict AMIS Networking Number Ranges

To increase security for AMIS analog networking, including the Message Delivery service, restrict the number ranges that may be used to address messages. If possible, also place outward or toll restriction on the voice ports and use an allowed number list.

Lucent Messaging 2000 Administration

To minimize the risk of unauthorized persons using the Lucent Messaging 2000 system to make toll calls, administer the system in any of the following ways:

Outcalling

Outcalling uses the voice messaging ports. If mailbox security is broken, unauthorized persons can use outcalling to transfer messages or gain access to an outside line at your expense. If you need outcalling, restrict it as much as possible to prevent unauthorized use of the Lucent Messaging 2000 system. See Chapter 14, “Setting Up the System” and Chapter 24, “Maintaining the System”, topic “Maintaining System Security.”

Mailbox Administration

Proper administration of Lucent Messaging 2000 mailboxes can help reduce the risk of unauthorized use of mailboxes.

- Use the Minimum Length of Password parameter in System Setup to require that passwords be a minimum length of 5 digits and at least one digit longer than the mailbox numbers.
- Use the Consecutive Login Failures Before Lockout parameter in System Setup to lock subscriber mailboxes after unsuccessful login attempts.
- Delete unused mailboxes.
- Avoid or closely monitor the use of “guest” mailboxes.

See Chapter 14, “Setting Up the System,” and Chapter 24, “Maintaining System,” topic “Maintaining System Security.”

Call Transfer

When a caller enters an extension, M2000 performs the following validation:

- The M2000 system verifies that the digits entered contain the same number of digits as system mailbox numbers, as specified in the Number of Digits in a Mailbox parameter in System Setup.
- If the Transfer to Invalid Extension parameters in System Setup are disabled, M2000 verifies that the digits match an existing system mailbox number and sends the digits to the switch.

Phone system extensions assigned M2000 mailboxes should not allow access to trunk facilities or to specific dial-out codes for the switch.

Detecting Toll Fraud

Some of the Lucent Messaging 2000 system reports are valuable in determining if your voice messaging or automated attendant systems are being used for fraudulent purposes.

Call Detail Recording

With Station Message Detail Recording (SMDR) activated for incoming calls, you can check the calls in to your voice mail ports. A series of short holding times may indicate repeated attempts to enter voice mailbox passwords.

Review SMDR reports for the following symptoms of voice messaging abuse:

- Short holding times on calls where voice messaging is the originating or terminating endpoint
- Calls to international locations not normal for your business
- Calls to suspicious destinations
- Numerous calls to the same number
- Undefined account codes

Lucent Messaging 2000 Reports

The system tracks traffic data over various time spans. Reviewing these reports on a regular basis helps to establish traffic trends. If increased activity or unusual usage patterns occur, such as heavy call volume on ports assigned to outcalling, they can be investigated immediately.

Lucent Technologies Statement of Direction

The telecommunications industry is faced with a significant and growing problem of theft of customer services. To aid in combating these crimes, Lucent intends to strengthen relationships with its customers and its support of law enforcement officials in apprehending and successfully prosecuting those responsible.

No telecommunications system can be entirely free from risk of unauthorized use. But diligent attention to system management and to security can reduce that risk considerably. Often a tradeoff is required between reduced risk and ease of use and flexibility. Customers who use and administer their systems make this tradeoff decision. They know best how to tailor the system to meet their unique needs and, necessarily, are in the best position to protect the system from unauthorized use.

Because the customer has ultimate control over the configuration and use of Lucent services and products it purchases, the customer properly bears responsibility for fraudulent uses of those services and products.

To help customers use and manage their systems in light of the tradeoff decisions they make and to ensure the greatest security possible, Lucent commits to the following:

Lucent products and services will offer the widest range of options available in the industry to help customers secure their communications systems in ways consistent with their telecommunications needs.

Lucent is committed to develop and offer services that, for a fee, reduce or eliminate customer liability for PBX toll fraud, provided the customer implements prescribed security requirements in its telecommunications systems.

Lucent's product and service literature, marketing information and contractual documents will address, wherever practical, the security features of our offerings and their limitations, and the responsibility our customers have for preventing fraudulent use of their Lucent products and services.

Lucent sales and service people will be the best informed in the industry on how to help customers manage their systems securely. In their continuing contacts with customers, they will provide the latest information on how to do that most effectively.

Lucent will train its sales, installation and maintenance, and technical support people to focus customers on known toll fraud risks; to describe mechanisms that reduce those risks; to discuss the tradeoffs between enhanced security and diminished ease of use and flexibility; and to ensure that customers understand their role in the decision-making process and their corresponding financial responsibility for fraudulent use of their telecommunications system.

Lucent will provide education programs for customers and our own people to keep them apprised of emerging technologies, trends, and options in the area of telecommunications fraud.

As new fraudulent schemes develop, we will promptly initiate ways to impede those schemes, share our learning with our customers, and work with law enforcement officials to identify and prosecute fraudulent users whenever possible.

We are committed to meeting and exceeding our customer's expectations, and to providing services and products that are easy to use and are of high value. This fundamental principle drives our renewed assault on the fraudulent use by third parties of our customers' communications services and products.

Lucent's Security Offerings

Lucent has developed a variety of offerings to assist in maximizing the security of your system. These offerings include:

- Security Audit Service of your installed systems.
- Fraud Intervention Service.
- Individualized Learning Program, a self-paced text that uses diagrams of system administration screens to help customers design security into their systems. The program also includes a videotape and the *BCS Products Security Handbook*.
- Call Accounting package that calls you when preset types and thresholds of calls are established.
- Remote Port Security Device that makes it difficult for computer hackers to access the remote maintenance ports.
- Software that can identify the exact digits passed through the voice mail system.

For more information about these services, see the *BCS Products Security Handbook*.

Lucent Toll Fraud Crisis Intervention

If you suspect you are being victimized by toll fraud or theft of service and need technical support or assistance, call the Lucent National Service Assistance Center (NSAC) at 800-628-2888 immediately.

These services are available 24 hours a day, 365 days a year. Consultation charges may apply.

Lucent Corporate Security

Whether or not immediate support is required, please report all toll fraud incidents perpetrated on Lucent services to Lucent Technologies National Service Assistance Center (NSAC) at 800-628-2888. In addition to recording the incident, Lucent services are available for consultation on product issues, investigative support, law enforcement, and education programs.

Notes:

WORKSHEETS CN

Customer Needs Worksheets

Use these worksheets to introduce the customer to system features and functionality and to help you identify the hardware and software necessary to build the type of Automated Attendant and Voice/Fax Mail system best suited for the customer.

Notes:

Feature Selection Sheet

Refer to the Feature and Functionality Introduction for information on each of the features listed below. Indicate on this sheet all features you feel are integral to meeting your system needs.

Note that, though many of the features listed below are available with all Lucent Messaging 2000 systems, some are optional add-on modules and some are available only with certain types of phone systems and software release versions. Using the information you provide on this sheet, you and your Lucent representative can discuss each feature, to ensure you understand its functionality and to identify any implementation implications.

Company Name:______________________________

Automated Attendant Features:

_____Call Blocking
_____Call Forwarding
_____Call Queuing
_____Call Screening[s]
_____Intercom Paging[s]
_____Intercom Redirect[s]

_____Extension Directory
_____Fax Tone Transfer
_____Greeting by Port
_____Holiday/Time of Day Messages
_____Name Prompt on Transfer
_____Multilingual Prompts

Voice/Fax Mail Features:

_____Visual Mailbox[os]
_____Default Operators
_____Busy and No Answer Greetings[s]
_____Personalized Prompts
_____Message Notification/Multiple Add. Delivery[s]
_____Future Delivery
_____Message Confirmation
_____Message Sending Options
_____Multiple Message Capability
_____Sent Message Editing
_____Wake-up Messages[s]
_____Automatic Date Time
_____Automatic Station Login and Password[s]
_____Message Deletion Notification
_____Message Information
_____Message Rewind/Hold/Fast Forward
_____Locate Messages
_____Message Speed and Volume Control
_____Message Indicators[s]
_____Saved Messages
_____Recover Deleted Messages
_____Skip Messages
_____Auto Forward

_____Distribution Lists
_____Integrated Telephone Answering[s]
_____Network Message Forwarding[os]
_____Online System Displays and Reports
_____Send Copy of Message
_____Transfer or Reply to Sender[s]
_____Voice Folders
_____Guest Mailboxes
_____Receive-Only Mailboxes
_____Voice-Only Mailboxes
_____Password Protection
_____Forced Password Change
_____Fax Mail[o]
_____Personal Default Fax Number
_____Fax AutoPrint
_____Voice Message Cover Sheets
_____Interview V-Trees
_____Call Routing V-Trees
_____Information on Demand V-Trees
    _____AudioText
    _____Fax Retrieval[o]
_____AMIS Interface Module[os]
_____OctelNet[os]

The coding shown after some features ([s], [o], and [os]) is for Lucent representative use.

Notes:

Feature and Functionality Introduction

The Lucent Messaging 2000 system provides two general feature sets: an Automated Attendant and a Voice/Fax Mail system. The Automated Attendant routes internal and external callers to phone extensions or subscriber voice mailboxes. The attendant feature includes a variety of options for controlling the exact conditions under which, and techniques with which, calls are addressed and moved throughout a company's phone system.

The system's Voice/Fax Mail features allow callers and subscribers to send and receive both voice and fax messages in system mailboxes. An array of available mail options put callers and subscribers in complete control of their communications.

You can choose to use either or both Automated Attendant and Voice/Fax Mail features when implementing a system. Note, however, that voice-mail only systems cannot transfer callers to extensions or to subscriber mailboxes. These tasks must be done by an operator if the Automated Attendant feature is not active.

Also note that though many of the features listed below are available with all systems, some are optional add-on modules and some are available only with certain types of phone systems. Consult your Lucent Technologies representative for details.

Understanding Automated Attendant Capabilities

The system's Automated Attendant can be programmed easily to meet any organization's unique needs and preferences. While it is perfectly capable of answering all incoming calls, you may elect to have it handle only those the live operator is unable to take. This can include overflow calls during peak hours or calls that come in after hours, on weekends, or during holidays. The Automated Attendant assures that callers are never lost, forgotten on hold, or left listening to an unanswered phone's eternal ring.

The system's Automated Attendant saves money by controlling the number of people an organization must assign to call-answering duties and gives existing phone receptionists time to handle more important duties.

Call Handling

The system provides flexible Call Handling options that can be easily customized to meet the exact needs of an organization.

Call Blocking

Call Blocking routes calls directly to a voice mailbox without ringing a phone. This feature helps to limit work interruptions, and callers are extended the courtesy of the quickest possible transfer.

Call Forwarding

Call Forwarding routes a call to ring an extension other than that originally entered. A subscriber can use this feature to have another subscriber handle important calls when the first is unavailable or to receive calls when in another subscriber's office. Call Forwarding improves customer service by ensuring that important incoming calls are handled personally.

Call Queuing

Call queuing allows callers to hold if an extension is busy. The system can be set up to periodically announce holding callers' positions in the queue and offer them options to leave a voice-mail message, speak to an operator or transfer to another extension. Prerecorded music or informative messages can be played to callers in queue. Since queuing reduces hang-ups by easing the discomfort callers experience on hold, it saves money by minimizing potentially expensive long-distance callbacks.

Call Screening

When Call Screening is activated, the system asks for the caller's name and announces it to the subscriber being phoned. The subscriber can accept or reject the call, or have it redirected to another extension. If the call is rejected, the system informs the caller there was no answer at the extension and offers options to leave a message, transfer to another extension, or speak with an operator. With Call Screening, subscribers can choose when they are to be interrupted, accepting important calls and redirecting those that can be handled later or by someone else.

Intercom Paging

If the telephone system is equipped with a supported Intercom Paging feature, callers can be offered the option of paging a subscriber when there is no answer at an extension. After paging the subscriber, the system re-rings the extension to deliver the call. Intercom Paging helps assure that subscribers are made aware of incoming calls when they are in the office, but away from their phones.

Intercom Redirect

Intercom Redirect gives subscribers with properly equipped telephone systems the ability to respond to an intercom page from any extension—not just their own. When subscribers are paged (*"There is a call for <subscriber's name>"*), they need only dial into the system from the nearest extension, enter their mailbox number, and enter the extension number of the telephone they are using. The system then routes the call to that extension. The mailbox owner's name prompt is automatically voiced when calls are transferred by intercom redirect, helping ensure the call is being transferred to the appropriate subscriber.

Extension Directory

Callers who do not know the mailbox number of the subscriber or department they are trying to reach can press a specified key to access the system's employee or departmental directory. Callers transfer to subscriber extensions by entering the first few letters of the subscriber's last name on the phone keypad.

Fax Tone Transfer

The system can transfer calls automatically to a fax machine when it detects a fax tone during the Automated Attendant's greeting.

Greeting By Port

Different greetings can be designated for various system ports. In such scenarios, each port is totally partitioned from—and transparent to—the rest, ensuring independence regardless of system configuration, subscriber Call Handling selections, or directory use. Using greeting by port, several businesses in an office (or several divisions within a company) can share a single system.

Holiday / Time of Day Programmable Messages

On select dates, the system can play holiday greetings to callers. Greetings can be prerecorded, covering up to 18 national, state, and/or local holidays. Personalized holiday greetings can be retained, allowing their re-use in subsequent years. The system can also answer calls with separate greetings for morning, afternoon, evening, and after hours.

Name Prompt on Transfer

Name Prompt on Transfer is invaluable when two subscribers share a single phone or when a single subscriber performs more than one job. If this option is activated, the subscriber hears, *"There is a call for <subscriber's name>,"* instead of, *"One moment, you have a call,"* when the auto attendant transfers calls. If, for example, the Automated Attendant says*, "For accounting, press 1; For customer billing, press 2...,"* and both actions ring the same extension, subscribers will be prompted as to which department's phone they are answering (for example*, "There is a call for accounting..."* or *"There is a call for billing..."*).

Multilingual Prompts

The system can be equipped with an optional module that allows it to offer callers and subscribers syntactically correct prompts in languages other than English. Language library modules include prerecorded phrase files and syntax tables custom designed for the selected language.

Understanding Voice/Fax Mail Features

By eliminating the need for the simultaneous presence of both parties when important information must be conveyed, voice mail maximizes the opportunity for every telephone call to communicate effectively. With voice mail, messages are never lost, garbled, or only partially delivered.

Systems equipped with the optional Fax Solution™ module allow subscribers to apply the same power to fax communications. By shifting control of the fax machine to its users, Fax Mail allows printed information to be more easily exchanged.

With voice mail and Fax Mail, information—both spoken and written—can be placed in a mailbox at any time, from any location, using standard Touch-Tone phones and fax machines. A subscriber's access to this information is the same any time, from any location, with just a telephone and a fax machine.

Mailbox Interfaces

The system's mailbox interfaces allow subscribers to personalize, utilize, and easily maintain their mailboxes.

Telephone Interface

With the telephone interface, subscribers use simple keystroke responses to system prompts to access full system functionality from any Touch-Tone phone.

Visual Mailbox™

Visual Mailbox ties the subscriber's computer to the telephone, thus allowing the subscriber to take advantage of the features provided with each communication medium.

With Visual Mailbox, a glance at the monitor relays how many messages a subscriber has, who they are from, the day and time they were delivered, and their length. Icons indicate whether the messages are voice or fax (or voice *and* fax), their delivery type (Normal, Urgent, Private, etc.), and whether they have been forwarded by another subscriber. Space is provided for subscribers to add textual notes, helping them recognize and/or categorize their messages for future reference.

Subscribers can listen to, save, or delete messages by simply pointing and clicking the mouse. Icons indicate that messages have been saved or deleted—subscribers can change their mind at any time during the current session. Clicking a fax message activates the Fax Viewer, which allows subscribers to read, print, save, and/or export faxes. A unique fax rotation option allows subscribers to properly view faxes in both the portrait (standard letter) or landscape (spreadsheet) orientations.

To copy, forward, or broadcast a message, subscribers need only request a mailbox directory and click the name of the intended recipient or list of recipients.

Mouse-driven "tape deck" controls make recording messages and greetings simpler and more precise than ever. While recording, subscribers can pause, start over, or cancel the message, and an append button lets subscribers continue recording or add more to the end of a message. A confirmation message, similar to those provided by most e-mail packages, can be generated when messages that subscribers send are received.

A Call Handling screen provides a graphical interface with which subscribers can activate Call Blocking and pick specific handling options for incoming calls. Subscribers may, alternately, select handling options for ring-no-answer and busy conditions when their extension is not blocked.

Mailbox Personalization

The system provides a number of features that allow subscribers to personalize their mailboxes, making caller interactions comfortable.

Mailbox Default Operators

The system manager can assign a different default operator to each mailbox on the system. When a caller presses <0> for an operator, the system transfers the caller to that mailbox's default operator instead of the regular operator. This allows separate departments or subscribers to have calls taken by their own receptionist when callers request an operator.

Mailbox-Specific Busy and No Answer Greetings

The optional personal prompts, when activated, replace the standard system prompt telling callers that an extension is busy or that there is no answer. Unique (and frequently updated) busy and no answer greetings allow subscribers to further personalize their voice mailboxes.

Personalized Prompts

Personalized voice prompts, in the subscriber's own voice and tone, inform callers immediately if they have reached the correct extension or mailbox. Available personalized prompts include the subscriber's name and directory listing, a please hold prompt, a personal greeting prompt, and two optional prompts.

Leaving Messages

A large percentage of voice information management technology's success lies in the ease with which it allows its users to leave messages for each other.

Message Notification / Multiple Address Message Delivery

The system can dial up to eight different telephone or beeper numbers when messages are received in a mailbox. Subscribers select the days and time frames they want to be notified (for example, Monday through Friday, 10:00 AM to 8:00 PM), and the number at which they want to be called. They can also choose whether they want to be notified upon receipt of all messages or only when their callers have marked their messages "urgent."

When subscribers are not sure where they will be, the system can be set to call a series of numbers sequentially. This capability, called cascade outcalling, can be a particularly valuable communication tool for companies with subscribers who work outside the office.

Future Delivery

Subscribers can place a message in the system to be delivered to themselves or another subscriber at any time, on any specified date, up to a year in advance.

Message Confirmation

Message Confirmation allows subscribers to check the date and time a message sent to another subscriber was received. When subscribers request message confirmation, the system announces the recipient's name, the date and time the subscriber sent the message, and the date and time the message was received, as well as the duration of the message.

Message Sending Options

Subscribers can assign conditions to voice and fax messages they leave in another subscriber's mailbox, restricting or prioritizing their handling. Messages to local subscribers can be marked "Normal," "Listen-Only," "Private," or "Urgent."

Voice messages marked "Listen-Only" cannot be saved, skipped, or transferred—only listened to and deleted. This capability provides extra security and reduces demand on the system's message file memory space.

Messages marked “Private” cannot be forwarded or copied by the recipient. This measure helps assure confidentiality.

Both outside callers and subscribers have the option of marking their messages “Urgent.” “Urgent” messages are placed at the top of the subscriber’s new message queue and are always voiced first.

Multiple Message Capability

Callers who want to leave messages for more than one subscriber may do so without redialing.

Sent Message Editing

As long as a subscriber receiving a message has not listened to or skipped the message, the sending subscriber can delete, rerecord, review, or append additional information to a previously sent message.

Wake-Up Messages

The system can be programmed to deliver wake-up calls at any time, to any phone number. Once called, subscribers may reschedule the wake-up, with options to retain or change the time and phone number.

Message Retrieval

The system provides an assortment of features that pertain to retrieving and listening to messages.

Automatic Date and Time

The system can be set to voice automatically the day and time each message was received when subscribers listen to messages.

Automatic Station Login and Password

If the phone system is so equipped, subscribers can save time by directly accessing their mailbox when calling from their own extensions. While the use of password security is highly recommended, the system can also be configured to allow subscribers to access their mailboxes without entering their passwords when they call from their own extensions.

Message Deletion Notification

Saved messages are deleted automatically when they remain in subscribers’ mailboxes for the maximum number of days the system manager has specified. When message deletion notification is enabled, the system will alert subscribers before it deletes expired saved messages. This keeps subscribers from inadvertently losing important information when expired messages are deleted.

Message Information

Message information provides the date and time a message was received, the length of the message and, if it was sent by another subscriber, that person’s name.

Message Rewind / Hold / Fast Forward

Subscribers can rewind, pause, or skip ahead in a message being played. These functions improve productivity by helping subscribers harvest the important information from messages as quickly and easily as possible.

Message Scanning

Subscribers can scan their mailboxes for new messages from a particular subscriber. Other messages are skipped for later review.

Message Speed and Volume Control

Depending on the voice boards, Touch-Tone commands can allow subscribers to increase the speed and/or volume of messages upon playback. The caller's original pitch is maintained, even when message speed is altered.

Message Indicators

Depending on the type of phone system, the system can notify subscribers when voice or fax messages are placed in their mailboxes. If the phone has a message indicator, a glance provides visual notification that a message is waiting. Otherwise, the system can be programmed to ring the subscriber's extension periodically when messages are waiting.

Saved Messages

Subscribers can save new voice and fax messages for reference at a later time, helping assure their content is preserved and fully understood.

Recover Deleted Messages

Subscribers can recover messages they accidentally delete during the current call. Upon request, the system plays back all messages deleted during that call. Subscribers can press <1> to restore the message to the queue from which it came (new or saved) or <2> to leave the message deleted.

Skip Messages

A subscriber can skip a message while listening to it, leaving it in the new message queue to review later. This allows subscribers to conserve time by listening only to messages they need at the moment, saving personal or other non-critical messages for review when time permits.

Message Management

The system's message management functions help subscribers digest, store, and disseminate information with unprecedented efficiency.

Auto Forward

The system manager can have messages that have not been listened to within a specified time automatically forwarded to a preselected mailbox. This feature helps to ensure prompt action, an absolute necessity in efficient customer service.

Distribution Lists

Subscribers can send the same voice or fax message to a number of subscribers with a single call. Distribution Lists can contain any combination of destination mailboxes (local and/or networked) or other Distribution Lists. Subscribers can also use global Distribution Lists to reach every mailbox in a company or division.

Integrated Telephone Answering

When one subscriber leaves a voice-mail message for another subscriber, the second subscriber can reply to the message or transfer to the subscriber who left the message with one or two keypresses.

Network Message Forwarding

With Network Message Forwarding (also known as Follow-Me-Forward) subscribers on systems equipped with the optional Network Interface Module can elect to have messages received in their mailboxes automatically forwarded to a destination mailbox on another (Network-equipped) system. By centralizing messages in a single mailbox, network message forwarding helps busy subscribers eliminate the need to check mailboxes on multiple voice-mail systems.

Online System Displays and Reports

Data on the usage of all mailboxes is recorded and made available to the system manager through a selection of system displays and reports. Online system displays and reports, including port contention, mailbox status, and hourly statistics, can be viewed onscreen, saved to disk, or printed.

Send Copy of Message

Subscribers can send a copy of a message they receive to one or more subscribers or network destinations, and preface the message with comments. Subscribers can access directories directly from their mailboxes if they do not know the extensions of other subscribers to whom they want to direct the message.

Transfer or Reply to Sender

When subscribers receive voice-mail messages from other subscribers, they can either transfer to the sender's extension or send a reply message with just one keypress.

Folders

Subscribers can create up to nine folders in their mailboxes to organize saved voice and fax messages. Voice folders can, for example, be created for individual callers, projects, or dates. Messages received on these topics can then be saved in the appropriate folder. When subscribers create new folders, they are prompted to record a descriptive folder label. This label is voiced each time they choose the folder. The system is also equipped to play for the subscriber a directory of all currently defined folders.

Specialty Mailboxes

The system supports the creation and maintenance of several types of specialty mailboxes for unique business needs.

Guest Mailboxes

Visitors, clients, and VIPs can be granted limited access to system features temporarily with guest mailboxes. Guest mailboxes improve the ability to work with important outside contacts.

Receive-Only Mailboxes

Receive only mailboxes can be set up to collect information such as names, addresses, and phone numbers from individuals who call the company. This feature can serve as an important aid to customer service and/or marketing, by allowing representatives to address inquiries in the most timely and efficient manner possible.

Voice-Only Mailboxes

A system manager can set up announcement mailboxes that play prerecorded voice information to callers. Voice only mailboxes are beneficial in advertising, marketing, public relations, and many other "call for more information" applications.

Mailbox Security

A carefully designed array of mailbox security features protect the system and the information it contains.

Password Protection

Individuals can access voice and fax messages in mailboxes only after entering a user-defined password. For additional security, the system manager can impose a minimum password length default. The system can also be set to require subscribers to press the <#> key after entering a password.

Forced Password Change

Subscribers can be forced to change their passwords at system-manager-selected intervals. When a subscriber changes a password (either voluntarily or due to the forced change feature), the system will not accept a new password that matches the current password.

Mailbox Passwords

When creating mailboxes, the system manager can either enter a default password or have the system generate random passwords for each new mailbox.

V-Tree Password

The system can be programmed to require users to correctly enter a password (up to 11 characters) to progress from level to level within custom applications generated using V-Trees. Placing password security at strategic levels within V-Trees, gives callers measured access to custom applications. For additional information on the V-Tree feature, refer to V-Trees, below.

Fax Solution Fax Mail

Fax Mail

Subscribers can receive faxes regardless of the state of the fax machine—whether it's busy, out of paper, or even out of order. Like voice messages, a subscriber can retrieve faxes in their mailbox at their convenience. When in the office, a subscriber can make a single keypress to direct the fax messages to the default fax machine. Faxes retrieved through Visual Mailbox can also be directed to print on a printer attached to the subscriber's PC. When out of the office, the subscriber can enter the telephone number of the nearest fax machine and receive fax messages immediately, regardless of location, time of day, time zone, etc. The system manager can set FaxComm hardcopies to include a cover sheet, indicating the receiving subscriber's name or extension number, division, and company name.

Access to fax communications is password-protected, and hardcopies of faxed communications are only produced when a subscriber requests them.

Personal Default Fax Number

Subscribers who receive Fax Mail can specify fax machine numbers that override the system default. A single keypress directs faxes to a departmental (or personal) machine.

Fax AutoPrint

Subscribers with Fax Mail may elect to have all new faxes sent directly to a fax machine (either system or personal default). In situations where security is less of an issue than speed and accessibility, fax AutoPrint can significantly enhance productivity.

Voice Message Cover Sheets

Senders can preface their FaxComm faxes with voice messages, which is faster, more effective, and less expensive than the traditional cover sheet.

V-Trees

Tools provided with the system allow system managers and subscribers to build unique menus called V-Trees within mailboxes on the system. A V-Tree in a mailbox can perform functions similar to those that the Automated Attendant performs on a system-wide basis—the V-Tree can route calls reaching the mailbox to different extensions or mailboxes, prompt the caller to answer a series of questions, voice information (such as product information) to the caller, even fax information to the caller—all depending on the caller's keypress selections. When you create a V-Tree, you record prompts for the V-Tree that voice all the options available to callers when they reach the V-Tree.

V-Trees can significantly reduce the time employees spend performing basic, repetitive tasks. A simple V-Tree can, for example, provide callers with options to obtain answers to common product questions, transfer callers to a specific department in the company, or leave product orders. The optional Fax Solution module provides capabilities for setting up a V-Tree to automatically fax certain documents to callers who request them.

Interview V-Trees (Forms Filler V-Trees)

An interview-oriented V-Tree requests and collects information from callers. This type of V-Tree can survey for customer satisfaction, for example, requesting callers' names, the products and/or services they use, their impressions of the products, and their suggestions for improvements. All responses to an interview V-Tree are grouped in a single message for playback by the mailbox owner.

Call Routing V-Trees

A call-routing-oriented V-Tree provides callers with easy touch-tone phone access to any department or subscriber in the company. By giving callers quick, simple, and unassisted access to the exact subscriber or department they need in a given situation, call routing can be the heart of a number of productivity- and customer service-enhancing V-Trees.

Information-on-Demand V-Trees

An information-on-demand-oriented V-Tree provides multilevel menus of information in a mailbox. These menus can give callers access to spoken (audiotext) and written (Fax Retrieval) information, 24 hours a day. Information-on-demand can significantly reduce the time personnel spend answering routine questions.

Audiotext

Audiotext gives callers answers to frequently asked questions without requiring the intervention of busy employees. Prerecorded messages placed in the system can, for example, give callers directions to the company's office or information on special sales promotions. Such information can be placed in easily updated announcements, accessible 24 hours a day. Audiotext boosts productivity while improving customer service by providing callers with Touch-Tone access to frequently requested information. Callers get the facts they need quickly, and employees are free to handle more valuable tasks with fewer interruptions.

Fax Retrieval

With Fax Retrieval, the company, its departments, or even individual subscribers can offer callers the opportunity to request and receive faxed copies of documents stored in the system. Once requested (via the keypad), documents are transmitted automatically, any time of day or night, to the fax machine of the caller's choice. Frequently requested documents, such as credit applications or order forms, are ideal candidates for Fax Retrieval. Other productivity-enhancing possibilities include customer service documents, maps, legal documents, and sales promotions.

V-Tree Generation Interfaces

The system offers graphical and non-graphical V-Tree generation tools:

Generation with Visual V-Tree™ or Visual Architect™

Visual V-Tree and Visual Architect are graphical interfaces for creating V-Trees in system and subscriber mailboxes. By incorporating today's most effective software tools, like drop-down menus, toolbars, and point-and-click mouse operations, Visual V-Tree and Visual Architect make it extremely easy for system managers to build intricate V-Trees. Prompts to accompany the V-Tree can be recorded using V-Edit™, the system's powerful integrated voice editor.

Note that access to Visual Architect or Visual V-Tree depends on which feature was purchased with the system.

Generation with the Telephone Interface

Subscribers can create custom V-Trees for their own mailboxes, using the system's telephone V-Tree capabilities.

Enterprise-wide Communications

AMIS Interface Module (AIM™)

Using the internationally recognized Audio Messaging Interchange Specification (AMIS), the optional AMIS Interface Module allows the system to exchange voice information with AMIS-compatible voice-processing systems in satellite offices, vendor locations, or other remote sites.

Using AMIS's administered networking capabilities, the system manager can assign a node number to each of the AMIS-compliant systems with which messages will be exchanged. The node number serves as a code that represents the complete phone number one must traditionally dial to access the remote system. When remote sites have assigned node numbers, subscriber's who want to send messages to mailboxes at those sites must enter only the node number and the destination mailbox number.

OctelNet™

Similar in nature to the AMIS Interface Module, the optional OctelNet module allows the system to exchange voice information with other OctelNet-compatible voice processing systems in satellite, offices, vendor locations, and other remote sites. Unlike AMIS, however, OctelNet provides subscribers communicating with remote systems with access to all the message processing options (except Fax Mail) normally available during inter-site communication, such as message confirmation, dial by name, and more. As with AMIS's administered networking capabilities, subscribers using OctelNet need only enter node numbers and destination mailbox numbers when sending messages to remote systems.

System Sizing Sheet

Starting in the left-most column, list each typical group of Lucent Messaging 2000 users (subscribers); the highest number of people you project will be in each group over the next 24 months (if more than one company or unique organization will be sharing the Lucent Messaging 2000 system, include information to cover *all* companies and organizations); the estimated average daily minutes of direct and indirect mailbox usage for each subscriber group; and the average number of messages stored, message length, number of faxes stored, and pages in each fax.

Use the averages shown in the example at the bottom of the page as a guideline. "Direct" mailbox usage includes all time that the subscriber spends accessing the system. "Indirect" includes all time callers to the subscriber spend accessing the system and all time that the system spends servicing the subscriber. To ensure proper system sizing, classify *each* potential system subscriber over the next 24 months into one of the Subscriber groups you list. Your Lucent representative will complete the fields in ***italics***.

Group of Subscriber	**Highest No. in Group**	**Average Daily Minutes of Usage: Direct**	**Average Daily Minutes of Usage: Indirect**	***Lucent Use 1***	***Lucent Use 2***	**Avg. No. of Msgs Stored**	**Avg. Lgth. of a Msg. (Seconds)**	**Avg. No. of Faxes Stored**	**Avg. No. of Pages per Fax**	***Lucent Use 3***	***Lucent Use 4***
Totals:											

Weighted Average Minutes/Day/Mailbox: ______ ***Minutes of Disk Space Storage Required:*** _____ ***Minimum Total Megabytes Required:*** _____

Example:

Group of Subscriber	**Highest No. in Group**	**Average Daily Minutes of Usage: Direct**	**Average Daily Minutes of Usage: Indirect**	***Lucent Use 1***	***Lucent Use 2***	**Avg. No. of Msgs Stored**	**Avg. Lgth. of a Msg. (Seconds)**	**Avg. No. of Faxes Stored**	**Avg. No. of Pages Per Fax**	***Lucent Use 3***	***Lucent Use 4***
Executive		5	2			6	45	8	10		
Manager		6	4			6	30	5	8		
Gen. Professional		4	2			5	30	5	5		
Service Tech.		5	0			7	20	4	3		
Order Entry Clerk		2	8			5	30	2	2		
Other Clerks		2	1			3	30	2	2		
Secretary		3	1			2	30	3	4		

Notes:

Phone Usage Sheet

Use this sheet to provide information on the average number of internal and external calls your phone system processes.

Complete either the top or bottom portion of this sheet, depending on whether actual phone statistics are available. If more than one company or unique organization will be sharing the system, include information to cover all companies. Your Lucent representative will complete the fields in *italics.*

Whether providing statistical information or formulating estimates, do not include or consider statistics for days the company experiences substantially lower call volume, such as days the company is typically closed (weekends, for example). By including statistics for these days, you will lower call volume averages calculated to determine the hardware your system will require.

If phone system statistics are kept, complete the following table:

			Average Number of Calls						
			Mon	**Tue**	**Wed**	**Thur**	**Fri**	**Sat**	**Sun**
Midnight	**-**	**1:00 AM**	_____	_____	_____	_____	_____	_____	_____
01:00	**-**	**02:00 AM**	_____	_____	_____	_____	_____	_____	_____
02:00	**-**	**03:00 AM**	_____	_____	_____	_____	_____	_____	_____
03:00	**-**	**04:00 AM**	_____	_____	_____	_____	_____	_____	_____
04:00	**-**	**05:00 AM**	_____	_____	_____	_____	_____	_____	_____
05:00	**-**	**06:00 AM**	_____	_____	_____	_____	_____	_____	_____
06:00	**-**	**07:00 AM**	_____	_____	_____	_____	_____	_____	_____
07:00	**-**	**08:00 AM**	_____	_____	_____	_____	_____	_____	_____
08:00	**-**	**09:00 AM**	_____	_____	_____	_____	_____	_____	_____
09:00	**-**	**10:00 AM**	_____	_____	_____	_____	_____	_____	_____
10:00	**-**	**11:00 AM**	_____	_____	_____	_____	_____	_____	_____
11:00	**-**	**Noon**	_____	_____	_____	_____	_____	_____	_____
Noon	**-**	**01:00 PM**	_____	_____	_____	_____	_____	_____	_____
01:00	**-**	**02:00 PM**	_____	_____	_____	_____	_____	_____	_____
02:00	**-**	**03:00 PM**	_____	_____	_____	_____	_____	_____	_____
03:00	**-**	**04:00 PM**	_____	_____	_____	_____	_____	_____	_____
04:00	**-**	**05:00 PM**	_____	_____	_____	_____	_____	_____	_____
05:00	**-**	**06:00 PM**	_____	_____	_____	_____	_____	_____	_____
06:00	**-**	**07:00 PM**	_____	_____	_____	_____	_____	_____	_____
07:00	**-**	**08:00 PM**	_____	_____	_____	_____	_____	_____	_____
08:00	**-**	**09:00 PM**	_____	_____	_____	_____	_____	_____	_____
09:00	**-**	**10:00 PM**	_____	_____	_____	_____	_____	_____	_____
10:00	**-**	**11:00 PM**	_____	_____	_____	_____	_____	_____	_____
11:00	**-**	**Midnight**	_____	_____	_____	_____	_____	_____	_____
		Totals:	_____	_____	_____	_____	_____	_____	_____

Sum of Totals: _______ *Avg. No. of Calls per Business Day:* _____

If phone system statistics are not kept, provide the following estimates:

Number of calls on an average business day: _______

Number of calls on the busiest day of the week: _______

Number of calls on the busiest hour of that day: _______

Busiest Hour % of Calls: ______

Notes:

WORKSHEETS PI

Preinstallation Configuration Worksheets

Use these worksheets to determine which features should be activated during Lucent Messaging 2000 installation and which, if any, can be set up before installation.

When asking customers to complete these sheets, inform them that Prompt # and Mailbox # fields that display in *italics* on many of the sheets will be completed by the installer when Lucent Messaging 2000 is implemented at the site.

Notes:

Company Profile Sheet (Sheet No. ___ of___)

If more than one company or unique organization will be sharing the Lucent Messaging 2000 system, complete one Company Profile Sheet for each company or organization.

Company Name ____

No. of Employees: Current: ______ Projected Over 24 Months (Total): ______

No. of Extensions: Current: ______ Projected Over 24 Months (Total): ______

Range of Extension No. From: ______ To: ______

Is there a company operator (or receptionist/operator)? (Y/N) ______

Primary Operator's Name: ____ Extension: ______

After Hours Operator's Name: ____ Extension: ______

Business Hours: (If closed all day, write "Closed" in either of the fields.)

Monday	From: __________	To: __________
Tuesday	From: __________	To: __________
Wednesday	From: __________	To: __________
Thursday	From: __________	To: __________
Friday	From: __________	To: __________
Saturday	From: __________	To: __________
Sunday	From: __________	To: __________

Languages to be supported on the system: ____ Primary Language: _________________

Secondary Languages: 1 ____________ 2 ____________ 3 ____________ 4 ____________

Prefixes:

List all three-digit prefixes in telephone numbers used to access company phones by outside callers. For example, if callers can dial 449-5905 to access one phone in the company and 756-8876 to access another phone, enter 449 and 756 in the space provided below.

______ ______ ______ ______ ______ ______ ______

______ ______ ______ ______ ______ ______ ______

Notes:

Call Flow Sheet

Should the Automated Attendant (Check one):

Not be used? ____

Answer all incoming calls? ____

Answer incoming calls when operator lines are busy?* ____

Answer incoming calls only after normal business hours?* ____

Other: ____

____

____

If answering all incoming calls, when lines to the Automated Attendant are busy, should the incoming calls be (Check one):*

Given a busy signal? ____

Transferred to an operator? ____

Operator's Ext:______ Operator's Name:________________________________ (optional)

If answering all incoming calls, should incoming calls from non-Touch-Tone phones be (Check one):

Politely disconnected? ____

Provided an alternate number and politely disconnected? ____

Alternate Number:_______________

Transferred to an operator?* ____

Operator's Ext:______ Operator's Name:________________________________ (optional)

If more than one company or organization is being supported by the system, should the system (Check one):

Provide individualized greetings for each company/organization? ____

Provide the same greeting for all companies/organizations? ____

Other (describe): ____

____

____

* *Lucent Representative Note:* To set up the phone system to operate in this manner, you must program the phone switch accordingly. Refer to the switch documentation for details.

Notes:

Single-Company Greetings Sheet

Complete this sheet if only one company or unique organization will be using the Lucent Messaging 2000 system.

When the Automated Attendant answers an incoming call, it voices a main greeting, followed by an Attendant Menu prompt. If only one company or unique organization is using the system, the main greeting can differ depending on the time of day and whether the day is a designated holiday. Complete this sheet to indicate the text to be voiced as the main greeting at each of the times of day indicated. After voicing the main greeting, the system will voice the Attendant Menu prompt, which you define on the Attendant Menu Prompt Sheet.

If more than one language will be supported on the system, complete a Single-Company Greetings Sheet for each language, and identify the language in the space provided.

Language:_____________ (___ of ___)

Also, indicate the name of the individual who will be recording the greetings on the system:

Recorded by:__________________________________ Ext:_______

Greeting	**Greeting Text**	***Prompt #***
Morning	____	_______
	____	
	____	
	____	
	____	
Afternoon	____	_______
	____	
	____	
	____	
	____	
Evening	____	_______
	____	
	____	
	____	
	____	

The Attendant Menu prompt is *not* voiced following the Closed greeting. Instead, callers only have the option to leave a message in the default receptionist mailbox. A sample Closed greeting is provided below.

Example: Thank you for calling Premiere Pictures Corporation. Our regular business hours are nine to five, Monday through Friday. If you would like to leave a message, including your name and telephone number so that we can get back to you, please press one. Otherwise, we look forward to hearing from you again during our normal business hours.

Closed	____	_______
	____	
	____	
	____	
	____	

Notes:

Multiple-Company Greetings Sheet
(Sheet No. ___ of___)

If more than one company or unique organization will be sharing the Lucent Messaging 2000 system, complete one Multiple-Company Greetings Sheet for each company/organization.

When the Automated Attendant answers an incoming call, it voices a main greeting, followed by an Attendant Menu prompt. When more than one company or unique organization shares the system, you can designate a different main greeting to voice for each company/organization, both during and after designated business hours.

Complete this sheet to indicate the text to be voiced as the main greeting both during and after business hours for the corresponding company. The Automated Attendant voices this greeting and follows it with the default Attendant Menu prompt, *"Please enter the extension number of the person you would like to speak with."*

Company:____

If more than one language will be supported on the system, complete a Multiple-Company Greetings Sheet for each language, and identify the language in the space provided.

Language:_____________ **(___ of ___)**

Also, indicate the name of the individual who will be recording the greetings for the system:

Recorded by:__________________________________ Ext:_______

Greeting	**Greeting Text**	***Mailbox #***
During Business Hours	____	_______
	____	
	____	
	____	
	____	
	____	
	____	
	____	
	____	
	____	
	____	
After Business Hours	____	_______
	____	
	____	
	____	
	____	
	____	
	____	
	____	
	____	
	____	
	____	

Notes:

Attendant Menu Prompt Sheet

Complete this sheet only if one company or unique organization will be using the Lucent Messaging 2000 system.

When the Automated Attendant answers an incoming call, it voices a main greeting, followed by an Attendant Menu prompt. The Attendant Menu prompt instructs the caller on how to proceed. You indicate the main greeting the attendant is to voice on the Single- or Multiple-Company Greetings worksheets. Use the Attendant Menu Prompt Sheet to indicate the instructions the attendant is to voice after it voices the main greeting.

In the Ext. field to the right of each prompt you indicate, identify the extension to which the call should be routed, or use a code from the following list to identify another action that should be taken:

Code:	**Action:**
EXT	Caller enters an extension number and is transferred to it.
MSG	Caller enters an extension number and leaves a voice mail or fax message.
FAX	Caller enters an extension number and leaves a fax message only.
DIR	A directory of subscribers is voiced to the caller.

Example:	For sales information, press one.	124
	For technical support, press two.	125
	To ring an extension, enter the extension number.	EXT
	To leave a voice message, press three followed by the extension number.	MSG
	To leave a fax, press four followed by the extension number.	FAX
	If you need directory assistance, press six.	DIR

If more than one language will be supported on the system, complete an Attendant Menu Prompt Sheet for each language, and identify the language in the space provided.

Language:_____________ (___ of ___)

Attendant Prompt	**Ext.**
______________________________	_____
______________________________	
______________________________	
______________________________	_____
______________________________	
______________________________	
______________________________	_____
______________________________	
______________________________	
______________________________	_____
______________________________	
______________________________	
______________________________	_____
______________________________	
______________________________	
______________________________	_____
______________________________	
______________________________	

Prompt #: _____

Notes:

Call Queuing Prompts Sheet

Call Queuing provides callers the option to hold when the extension they are calling is busy. Lucent Messaging 2000 can voice up to nine messages (verbal or music) to callers holding in the queue. You may, for example, choose to provide product information messages to callers in the queue.

Use this form to define the content of each Call Queuing message you want the system to voice and to indicate how other Call Queuing options are to be set.

If more than one language will be supported on the Lucent Messaging 2000 system, complete a Call Queuing Prompts Sheet for each language, and identify the language in the space provided.

Language:_____________ (___ of ___)

Call Queuing Setup Options: (check those you want to activate)

____ Provide the caller keypress options while in the queue (such as trying another extension or transferring to the operator).

_____ Periodically voice a "still busy" message to callers in the queue.

_____ Periodically voice the caller's position in the queue.

_____ Require the caller to press [*] periodically to stay in queue (can apply only if the keypress option is also selected).

_____ Upon transfer from the queue, voice, *"Please hold while your call is being transferred."*

Prompt	**Prompt Text**	***Prompt #***
Call Transfer Prompt	________________________________	___93__
Queuing Prompt 1	________________________________	_______
Queuing Prompt 2	________________________________	_______
Queuing Prompt 3	________________________________	_______
Queuing Prompt 4	________________________________	_______
Queuing Prompt 5	________________________________	_______
Queuing Prompt 6	________________________________	_______
Queuing Prompt 7	________________________________	_______
Queuing Prompt 8	________________________________	_______
Queuing Prompt 9	________________________________	_______

Notes:

Holiday Greetings Sheet

You can specify up to 18 holidays as days on which the office is closed. On days designated as holidays, the Automated Attendant answers incoming calls with a specified greeting. Use this sheet to indicate the dates of upcoming holidays and the associated greeting that should be voiced on those days. Messages left by holiday callers are recorded to a default receptionist mailbox. Check the Retain column if the holiday will be on the same date next year.

If more than one language will be supported on the Lucent Messaging 2000 system, complete a Holiday Greetings Sheet for each language, and identify the language in the space provided.

Language:_____________ (___ of ___)

	Date	**Retain?**	**Greeting Text**	***Prompt #***
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				

Notes:

Class of Service Sheet (Sheet No. ___ of___)

Lucent Messaging 2000 includes a variety of features and options. As a system manager, you need to decide which subscribers should have access to using which features and options. You can do this on a subscriber-by-subscriber basis when you set up each subscriber's mailbox; however, this can be quite time-consuming. Instead, group subscribers that should have the same feature-access privileges and assign each group a Class of Service (COS). Each COS activates a specific list of features and options for the subscribers assigned to that class. By simply specifying a COS number for each subscriber when you set up mailboxes, you eliminate the steps necessary for enabling or disabling all the individual features and options that can be available to the subscriber.

Lucent Messaging 2000 provides 25 predefined COSs. You can assign each group of subscribers one of these default COSs, or, if necessary, you can modify a default COS to better fit your needs. Furthermore, if there are a few specific individuals who do not fit into any one of the COSs you define, you can create custom COSs, which you usually assign just to one or two individuals.

Use this sheet in conjunction with the Predefined COS Table, the COS Redefinition Table, and the Custom COS Table to identify the groups of individuals that should be assigned a specific COS on your system and to select the COS feature and option set that should be available to each group.

1. Group the departments, levels, and/or subscribers who are to share identical feature and option access privileges.
2. Refer to the Predefined COS Table, and enter the COS number (1-25) of the feature set that is to be activated for each group's mailboxes. If you want to adjust one of the 25 predefined COSs for a group of subscribers, indicate the adjustments you would like to make on the COS Redefinition Sheet. If there are a few subscribers for whom you need to define unique Custom COSs (because the features and options each of these individuals need access to are different than those for any of the groups you defined), define the custom COS for each of these individuals on the Custom COS Definition Sheet.

Check if you made adjustments to the default COS setups on the COS Redefinition Sheet: _______

Departments, Groups, Levels, or Subscriber Names	COS No.

Complete the COS Redefinition Sheet for every Class of Service you adjust.
Complete the Custom COS Definition Sheet for every custom Class of Service you define.

Notes:

Class of Service Information Sheet

The descriptions below provide a high-level explanation of each feature that can be activated, deactivated, or adjusted for each Class of Service setting. Use this information as you complete the COS Sheet, COS Redefinition Sheet, and Custom COS Definition Sheet.

Call Screening

Call Screening allows a subscriber to accept, reject, or redirect a call. When Call Screening is activated, the system instructs callers requesting an extension to, *"Please speak your name at the tone, so I may say who is calling."* Before the call is transferred to the subscriber's extension, the subscriber hears, *"You have a call from <caller's name>. To take this call, press pound. To reject the call, press one. Or to redirect the call, press star."* If the subscriber wants to take the call, the subscriber presses <#>, and the caller is transferred to the extension. If the subscriber wants to reject the call, s/he presses <1> and immediately hangs up the phone. The caller is then told there was no answer at the extension and is given the choice of trying another extension, leaving a voice-mail message, transferring to the operator's extension, or disconnecting. If a call is rejected by the subscriber, the caller is not given the option to page. The subscriber may also choose to redirect the call by pressing <*>, followed by the destination mailbox number. The subscriber must then immediately hang up the phone so the caller can be transferred to the specified extension.

If you want to prohibit subscribers from changing the Call Screening for their mailboxes, do not select the Call Screening option in the mailbox's Class of Service, and instead select the Call Screening option in the mailbox's subscriber settings.

Message Confirmation

Message Confirmation allows the subscriber to review the date and time a message was sent, to whom it was sent, and, if applicable, the date and time the recipient listened to or skipped the message. This feature helps the sender of a message determine if and when another subscriber received the message. This feature is not supported by the AMIS protocol—only messages sent to local subscribers or OctelNet destinations may be sent with confirmation.

Folders

The Folders feature allows a subscriber to organize messages and faxes by storing them in "folders" in the mailbox. A subscriber can create up to nine folders to store messages. The subscriber records a label for each folder, which is voiced when the subscriber accesses the mailbox. For example, if a subscriber regularly receives messages that are either technical or administrative, the subscriber can create two folders with the labels *"Technical"* and *"Administration"* to save and organize the messages.

Call Queuing

Call Queuing allows callers either to hold for a specific extension or leave a voice message when an extension is busy. Depending on how the Call Queuing is set up on the system, callers may be informed of their status in the queue, including their position (the number of calls ahead of them), while they hold for that extension. Call queuing may also give callers periodic opportunities to leave a voice message, continue to hold, or disconnect. The caller on hold may be provided with prerecorded music or messages, such as product information.

You may record up to nine verbal or music messages for callers to listen to while holding in the queue. For example, the messages could provide new product information or sales promotions to callers in the queue. The system voices each of the nine messages to each caller in the queue. After voicing each recorded message, the system voices the caller's status followed by the available options. Once the system plays all the recorded messages, it returns to the first message and begins voicing the messages again. All mailboxes on a system that have Call Queuing activated in the Class of Service use the same nine prompts. The first caller in the queue hears a prompt before the call is transferred to the extension.

If you want to prohibit subscribers from changing the Call Queuing for their mailboxes, do not select the Call Queuing option in the mailbox's Class of Service, and instead, select the Call Queuing option in the mailbox's subscriber settings.

Message Indicator

Message Indicators, such as lights and LEDs, can be used to notify subscribers of new messages in their mailboxes. Once a subscriber listens to or skips a message in a mailbox, the Message Indicator on the phone is turned off. Note that Message Indicators only work if the phone system supports the feature and the system has been set up to use the Message Indicators.

Intercom Paging

Intercom Paging allows a caller to page a subscriber who does not answer the mailbox extension. When a subscriber is paged, the system announces over the paging system, *"There is a call for <subscriber's name>."* The subscriber can then either retrieve the call from the subscriber's extension or use the intercom redirect feature to access the call from another extension by rerouting the call. If the subscriber does not respond to the page, the caller is given the option to try another extension, leave a voice message in the subscriber's mailbox, transfer to the operator, or disconnect. If the caller retries to call the original extension, the system waits approximately one minute before redialing that extension.

Paging may be set to Off, On, or Automatic. When paging is off, callers cannot page subscribers. When paging is on, the caller is given the option to page when there is no answer at the subscriber's extension. When paging is set to automatic, the subscriber is always paged once before the system performs the Call Handling options that are set up for the mailbox.

If you want to prohibit subscribers from changing the selected Intercom Paging option for their mailbox, do not select the Intercom Paging option in the mailbox's Class of Service, and, instead, select the appropriate Intercom Paging option in the mailbox's subscriber settings.

Personal Group List

Personal Group Lists allows subscribers to create lists of mailboxes, so that one message can be sent to multiple recipients in one step. For example, a subscriber can create a personal Group List of all subscribers working on a particular project. The subscriber can then send a message to all subscribers on the project by entering a single number. Subscribers can create up to 10 personal Group Lists in their mailboxes, numbered 11 – 20 (unless the system is set up to use different numbers). Each of the personal Group Lists can contain up to 50 destinations, which can include local subscriber mailboxes, destinations on other voice-mail systems through network nodes, or other Group List numbers, including global Group Lists (if available in the mailbox's Class of Service). Each Group List included as a destination on a personal Group List counts as one destination. To include destinations on other voice-mail systems, the subscriber must also be permitted access to network message features in the mailbox's Class of Service.

Global Group Lists

Global Group Lists allow subscribers to send messages to system Group Lists, numbered 26-35 (unless the system is set up with different numbers), and the global Group Lists, numbered 98 and 99. Each Group List can contain up to 50 destinations, which can include local subscriber mailboxes, destinations on other voice-mail systems through network nodes, or other Group List numbers. System Group Lists 26 – 35, which are created by the system manager over the phone in a supervisor mailbox by following the prompts, allow subscribers to send messages to mailboxes defined by the system manager. Global Group Lists 98 and 99, which are created automatically by the system, allow subscribers to send messages to all mailboxes in the subscriber's division and company, respectively. Subscribers cannot include these lists in their own personal Group Lists unless Global Group List is selected for the mailbox's Class of Service.

Dial by Name

Dial by Name allows subscribers to enter a subscriber name through the phone keypad to dial a mailbox number, which allows subscribers to send messages to other subscribers without requiring them to know the subscriber's mailbox number. If there are multiple subscribers with the same or similar names, the system voices those names, then allows the subscriber to choose from the available names. This feature can also be used to send messages to other systems that support OctelNet through the NameNet feature.

In some instances, subscribers may belong to a voice-mail service bureau, where they do not need to know the mailbox numbers of other system subscribers. In this case, this feature should be disabled. If the system is set up to use Greeting by Port, only mailboxes with the same company or with no assigned company are voiced when a directory is requested.

Call Handling

Call Handling allows subscribers to control how calls to their mailboxes are routed. For example, a subscriber can set up a mailbox to block all calls to a prompt that requests the caller to leave a message while the subscriber is on vacation. The mailbox can be set up to voice an optional prompt, forward the call to another extension, or route the call to a V-Tree. The mailbox can also be set up to perform one of these actions for either all calls to the mailbox, calls that are not answered, or calls that receive a busy signal.

If you want to prohibit subscribers from changing the selected Call Handling option for their mailboxes, do not select the Call Handling option in the mailbox's Class of Service, and instead, select the appropriate Call Handling option in the mailbox's subscriber settings. This is especially useful when mailboxes are blocked to V-Trees because it prevents the feature from being accidentally deactivated by a subscriber.

V-Tree

V-Trees allow subscribers to create custom voice menus in their mailboxes. V-Trees can route calls, provide information to callers, or collect information from callers. For example, a mailbox for a sales department can contain a V-Tree that allows callers to press <1> for information on product A, press <2> for information on product B, or press <3> to talk to a sales representative.

If you want to prohibit subscribers from changing the selected V-Tree options for their mailboxes, do not select the V-Tree option in the mailbox's Class of Service, and, instead, select the appropriate V-Tree options in the mailbox's subscriber settings.

Fax V-Tree

Fax V-Tree allows subscribers to create V-Trees in their mailboxes that have fax options. For example, a mailbox for a sales department can contain a V-Tree that allows callers to press <1> for information on product A, press <2> for information on product B, press <3> to talk to a sales representative, or press <4> to have information on all products faxed to them. Note that the system must have the Fax Solution module set up, and it must have both the Fax V-Tree and V-Tree options selected in the mailbox's Class of Service to allow the subscriber to include fax features in a V-Tree.

Send Messages

Send Messages allows subscribers to send messages from their mailboxes to other system subscribers or subscribers on other voice-mail systems, if networking options are set up for the system.

Receive Messages

Receive Messages allows subscribers to receive messages in their mailboxes from both subscribers and outside callers (non-subscribers). When both this feature is selected and the system is set up to receive messages from other voice-mail systems, subscribers can receive messages from remote subscribers whose voice-mail systems support AMIS or OctelNet.

Save Messages

Save Messages allows subscribers to save messages sent to their mailboxes. The values entered in the Days to Save section of the Class of Service dialog box determine how long the mailbox subscriber can save a messages in the mailbox before the system deletes them.

Undelete Messages

Undelete Messages allows subscribers to recover either new or saved messages deleted from their mailboxes. This feature helps prevent subscribers from accidentally deleting a message in the mailbox. Subscribers can only undelete the messages that they deleted during the current session. Once a subscriber exits a mailbox by hanging up or backing out of the mailbox, the messages are permanently deleted.

Locate Messages Received

Locate Messages Received allows subscribers to scan their new messages for messages sent from a particular subscriber. This feature only allows subscribers to scan for a message from another subscriber on the system. Subscribers cannot locate messages from another voice-mail system or an outside caller.

Locate Messages Sent

Locate Messages Sent allows subscribers to search for and edit messages they have already sent from their mailboxes to other mailboxes that are still in the mailbox's new message queue. Subscribers can only use this feature to locate and edit messages sent to other subscribers on the system. Messages designated for dispatch to other voice-mail systems, including those scheduled for Follow-Me-Forward, cannot be edited.

Record Prompts

Record Prompts allows mailbox subscribers to record their own mailbox prompts. These prompts include the Please Hold prompt, Name prompt, Personal Greeting prompt, Optional 1 prompt, and Optional 2 prompt. If prompts are not recorded for a mailbox, the system default prompts are used. It is recommended that subscribers be allowed to record their own prompts to add a personal touch to the system.

Operator Access

Operator Access allows callers to the mailbox to transfer to the mailbox's operator. This operator can be the default operator set up for the system or a personal operator specified on the Mailbox Entry dialog box.

Failed Login Notification

Failed Login Notification allows the system to notify the subscriber logging into the mailbox that a caller to the system has attempted to access the mailbox by entering an incorrect password. Once the subscriber is notified, the subscriber can review the failed login message or delete it.

If you want to prohibit subscribers from changing the Failed Login Notification feature for their mailboxes, do not select the Failed Login Notification option in the mailbox's Class of Service, and instead, select the Failed Login Notification option in the mailbox's subscriber settings.

Mailbox Lock-Out Option

Mailbox Lock-Out Option allows the system to lock a mailbox when a caller attempts to log into the mailbox and is disconnected after failing to enter the correct password for the mailbox after a specified number of attempts. A locked mailbox prevents any caller, including the subscriber, from gaining access to the mailbox other than to leave messages. The system manager must manually unlock the mailbox before the subscriber can access the mailbox.

If you want to prohibit subscribers from changing the mailbox lock-out feature for their mailboxes, do not select the Mailbox Lock-Out Option in the mailbox's Class of Service, and instead, select the Mailbox Lock-Out Option in the mailbox's subscriber settings.

Auto Time-Date Voiceback

Auto Time-Date Voiceback configures the system to automatically voice the time and date a message was received in a subscriber mailbox when the subscriber listens to a message. When activated in a mailbox, the time and date information is voiced first for each message sent to the mailbox. This feature differs from the Envelope Information feature in three ways:

- Auto Time-Date Voiceback, when selected, is voiced for every message. Message information is only voiced when selected for an individual message.
- Auto Time-Date Voiceback is voiced before the message. Message information is voiced only after the message has been voiced and the subscriber has selected Message Information from the Message menu.
- Auto Time-Date Voiceback is selected in a mailbox's Class of Service and must be turned on or off either by the system manager in the mailbox's subscriber settings or by the mailbox subscriber. The Envelope Information feature is always available to the subscriber from the Message menu.

Visual Mailbox

Visual Mailbox is an add-on module available with certain release versions that allows subscribers to access their mailbox using a visual interface on their PC. For additional information on using Visual Mailbox, refer to the Visual Mailbox documentation, online help, or your Lucent representative.

Multilingual Support

Multilingual Support allows callers to the mailbox to choose the language in which they want the prompts to voice when they perform actions in the mailbox, if a language has not already been selected at some point during the call. For example, if a caller dials an extension without accessing the Automated Attendant, a prompt is voiced that allows the caller to select the language in which system prompts are to be voiced. From that point on, all system prompts are voiced in the selected language.

If a language has already been selected at some point during the call, no language prompt is voiced when the caller accesses the mailbox.

Note that this feature only selects the language for system prompts. The prompts associated with personal prompts or V-Trees voice in the language in which they were recorded.

Supervisor

Supervisor allows a subscriber to access the Supervisor menu over the phone by logging into the mailbox, pressing <9> at the Main menu, and entering the system's Level 2 or 3 supervisor password. This allows the subscriber to perform a number of supervisor functions though the phone, including creating, editing, and deleting mailboxes; recording system and personalized prompts; maintaining system Group Lists; and using SOLVE, the Supervisor Online Voice Editor. Although the system allows any number of supervisors, only a few subscribers should have the Supervisor feature selected in their mailbox's Class of Service to limit the control of Supervisor functions. It is recommended that one subscriber in each company be authorized to use supervisor features, if the system is set up to use Greeting by Port.

Delivery Options

Delivery Options control whether subscribers can use the Message Notification, Wake-Up Call, Casual AMIS, and primary fax destination features in the mailbox, and whether they can call local and long distance numbers.

Not Allowed

Not Allowed prevents subscribers from using the Message Notification, Wake-Up Calls, Casual AMIS, and Primary Fax Destination features.

Local Only

Local Only allows subscribers to enter only numbers defined as local numbers. The number of characters a subscriber can enter for a local number is limited by values entered during the set up of the system.

Long Distance

Long Distance allows subscribers to enter up to 16 numbers to call numbers for the Message Notification, Wake-Up Calls, Casual AMIS, and Primary Fax Destination features.

Batch Mode

Batch Mode, if selected, specifies that when the system performs Message Notification, it should only consider the subscriber successfully notified of the message when the message is either listened to or skipped by the subscriber. For example, if the system calls the number specified for Message Notification and an answering machine answers the call, the system interprets the attempt as a failure and attempts to notify the subscriber again according to the Message Notification setup. The subscriber must listen to or skip the message before the Message Notification is successful. If the subscriber only logs into the mailbox and does not listen to or skip the message, the system continues to call the subscriber according to the Message Notification setup.

If the Batch Mode option is not selected, the system interprets a Message Notification attempt successful when either someone or something, such as an answering machine, answers the phone. The system does not re-attempt to call the subscriber.

The Batch Mode feature does not affect Message Notification through a beeper. Batch mode is only used with Message Notification and has no effect on the Wake-Up Calls, Casual AMIS, and Primary Fax Destination features.

Networking Options

Networking Options determine subscriber ability to send messages to other voice-mail systems.

Highest Outgoing Dispatch

Highest Outgoing Dispatch defines how messages are sent from the mailbox.

- **Not Allowed** – Does not allow the mailbox subscriber to send any messages to other voice-mail systems.
- **Economy** – Sends messages to other voice-mail systems during the economy hours set up for the system. You can override the economy hours for individual network nodes if appropriate.
- **Standard** – Allows subscribers to send messages marked with either economy or standard dispatch. Messages sent to other voice-mail systems with standard dispatch are held in a queue for the maximum time set up for the system or until a defined number of messages accumulate in the same queue, whichever occurs first.
- **Priority** – Allows subscribers to send messages marked with Economy, Standard, or Priority dispatch. Messages sent to other voice-mail systems with priority dispatch are sent to the remote address after a three-minute delay. Note that, to use the future delivery feature to send a message to another system, a subscriber must be able to send priority messages.

Casual AMIS

Casual AMIS allows subscribers to send messages to other voice-mail systems that support the AMIS protocol. If Casual AMIS is the only Networking option activated in the mailbox's Class of Service, the subscriber can only send messages to AMIS-compatible systems by entering the complete phone number of the system and the destination mailbox number.

The option selected under Delivery Options determines whether the subscriber can enter long distance telephone numbers to access distant AMIS destinations. If Local Only is selected, subscribers cannot send messages to destinations that require long distance telephone numbers.

Administered AMIS

Administered AMIS allows subscribers to send messages to defined AMIS nodes. Nodes allow subscribers to enter a short series of digits that represent the complete phone number of another voice-mail system, instead of entering the entire phone number. If Administered AMIS is the only Networking option activated in the mailbox's Class of Service, the subscriber can only send messages to sites designated as AMIS nodes. Administered AMIS must be selected here if a subscriber is to be permitted to use the Follow-Me-Forward feature to access AMIS destinations.

OctelNet

OctelNet allows subscribers to send messages to defined OctelNet nodes. OctelNet nodes allow subscribers to enter a short series of digits that represent the complete phone number of another system that supports OctelNet. If OctelNet is the only Networking option activated in the mailbox's Class of Service, the subscriber can only send messages to sites designated as OctelNet nodes. OctelNet must be selected here if a subscriber is to be permitted to use the Follow-Me-Forward feature to access OctelNet destinations.

Follow-Me-Forward

Follow-Me-Forward allows subscribers to automatically forward mailbox messages received from outside callers or internal subscribers to a mailbox on another system. The Follow-Me-Forward feature is set up either by the system manager in the subscriber settings or by the mailbox subscriber through the mailbox. The Follow-Me-Forward feature is only available to subscribers on systems set up with AMIS and OctelNet nodes.

Messages that are sent to a mailbox from another voice-mail system cannot be forwarded again using the Follow-Me-Forward feature. These messages must be accessed by logging into the original destination mailbox.

If you want to prohibit subscribers from changing the Follow-Me-Forward options for their mailboxes, do not select the Follow-Me-Forward option in the mailbox's Class of Service, and instead, select the appropriate Follow-Me-Forward options in the mailbox's subscriber settings.

Network Reply

Network Reply permits subscribers to reply to messages sent from other voice-mail systems. Since the system stores the address of the other voice-mail system that sent the message, subscribers are not required to enter the recipient's telephone and mailbox number.

Language

Language allows you to select the default language to use for the mailbox, if your system is configured for multiple languages. The system can support as many as five languages. This feature only selects the language in which mailbox prompts are voiced once the mailbox is accessed.

Fax Options

Fax Options allows subscribers to use the Fax Solution module, if installed on the system. The module allows subscribers to send and receive faxes in their mailboxes.

Send Faxes

Send Faxes allows subscribers to send fax messages, including copies of voice/fax messages, from their mailboxes to other system subscribers. Note that the Fax Solution module must be set up on the system to use this feature.

Faxes cannot be sent to other voice-mail systems. If a fax message is sent to a Group List that contains both local subscribers and network destinations, only the local subscribers who are permitted to receive faxes receive the attached fax message. Recipients at the remote system only receive the voice portion of the message.

The Send Faxes option must be selected for subscribers to include fax capabilities in V-Trees that they create for their mailboxes.

Receive Faxes

Receive Faxes allows subscribers to receive fax messages in their mailboxes from both subscribers and outside callers. This option must be selected for the primary fax destination and AutoPrint features to be available to subscribers over the phone. Note that the Fax Solution module must be set up on the system to use this feature.

Max Messages

Max Messages defines the maximum number of messages (both new and saved) permitted in the mailbox. This feature helps to manage the system's available disk space by limiting the amount of space mailbox messages can take up on the system. The functions of the mailbox should be considered when setting this value. For example, you may want to allow the sales department mailboxes to store more messages than mailboxes in other departments. Make sure that the operators' mailboxes are able to store enough messages to allow for high call volume. The maximum number of messages a mailbox can contain is 1m000. The recommended Max Messages value is under 70.

Msg Time

Msg Time defines the maximum length (in seconds) allowed for the following types of messages:

- Messages that subscribers record to send to other subscribers.
- Messages sent from other voice-mail systems.
- Messages sent to mailboxes from outside callers.

This feature helps to manage the system's available disk space by limiting the amount of space mailbox messages can take up on the system. The functions of the mailbox should be considered when setting this value. For example, a customer service department may require a longer message time than an accounting department. The minimum for this option is 30 seconds; the maximum message length is 6,000 seconds. If AMIS messaging is permitted, this value should be set to no more than 480 seconds (eight minutes) to accommodate the maximum AMIS message time.

Max Rings

Max Rings defines the number of rings before the Lucent Messaging 2000 system determines that there is no answer at a subscriber's extension.

If you enter a zero (0), the system transfers and releases the call without determining if there is no answer or the extension is busy. If there is no answer or if the mailbox is busy, the call does not go back to the system, unless an integration feature is being used on the system, or the phone itself is forwarded to the voice-mail extension.

It is recommended that you do not set the ring count to less than 3, or more than 15. The system may not recognize less than 3 rings on some telephone switches, and more than 15 rings may produce unpredictable results.

New Messages

The New Messages field specifies the number of days a message that has not been listened to can remain in the mailbox before it is automatically deleted by the system. To keep messages in the mailbox until they are either saved or deleted, enter 99. The system can also be set up to notify mailbox subscribers that a message has been deleted from their mailbox by the system.

Saved Messages

The Saved Messages field specifies the total number of days that a message can remain in the mailbox before it is automatically deleted by the system. The total number of days a message has been in a mailbox starts as soon as the mailbox receives the message. For example, if this field is set to 14 days and a message was sent to the mailbox 4 days ago, it will only be saved for 10 more days, even though it was listened to and saved by the subscriber after 2 days. To save messages indefinitely, enter 99. The system can also be set up to notify mailbox subscribers that a message has been deleted from their mailbox by the system.

Predefined COS Sheet

This form identifies the predefined class of services. Refer to the Class of Service Information Sheet for more information.

Features	Class of Service Number																							
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Call Screening	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Msg. Confirmation	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Voice Folders	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Call Queuing	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Msg. Indicator	N	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
Intercom Paging	N	N	N	N	N	N	N	N	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
Personal Group Lists	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Global Group Lists	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dial by Name	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Call Handling	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
V-Trees Allowed	N	N	Y	N	N	Y	N	Y	N	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	Y	Y
V-Tree Fax Supported	N	N	N	N	N	N	N	Y	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N
Send Messages	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Receive Messages	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Save Messages	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Undelete Messages	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Locate Messages Rec'd.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Locate Messages Sent	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Record Prompts	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Operator Access	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Failed Login Notification	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Mailbox Lock-Out	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Auto Timestamp	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Visual Mailbox	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Enable Multilingual Sup.	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Supervisor Mailbox	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y
Delivery Options	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Outcalling Type	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Batch Mode	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Network Method (Disp.)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Casual AMIS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Administered AMIS	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
OctelNet	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Follow-Me-Forward	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Network Replies	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Language	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Send Faxes	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Receive Faxes	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Max.. # of Messages	30	30	30	30	30	1000	30	30	30	30	30	1000	30	100	30	30	30	30	30	30	30	50	50	30	50
Max. Rings	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Max. Single Msg. Time	300	300	300	300	300	300	300	300	300	300	300	6000	300	1800	300	300	300	300	300	300	300	300	300	300	300
Days for New Messages	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
Days for Saved Messages	14	14	14	14	14	14	14	14	14	14	14	14	30	14	14	14	14	14	14	14	14	14	14	14	14

Abbreviations

Y=Feature Access is Activated   N=Feature Access is Not Activated

Msg Delivery Notification**:** L=Local Only   Default Language**:** E=English

Notes:

COS Redefinition Sheet

Use this form in conjunction with the COS Sheet and the Predefined COS Sheet. Refer to the Class of Service Information Sheet for more information.

Features	**Class of Service Number**																								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Call Screening	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Msg. Confirmation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Voice Folders	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Call Queuing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Msg. Indicator	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Intercom Paging	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Personal Group Lists	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Global Group Lists	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dial by Name	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Call Handling	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V-Trees Allowed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V-Tree Fax Supported	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Send Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Receive Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Save Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Undelete Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locate Messages Rec'd.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locate Messages Sent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Record Prompts	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Operator Access	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Failed Login Notification	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mailbox Lock-Out	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Auto Timestamp	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Visual Mailbox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enable Multilingual Sup.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supervisor Mailbox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Delivery Options	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Outcalling Type	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Batch Mode	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Network Method (Disp.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Casual AMIS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Administered AMIS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
OctelNet	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Follow-Me-Forward	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Network Replies	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Language	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Send Faxes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Receive Faxes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Max.. # of Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Max. Rings	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Max. Single Msg. Time	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Days for New Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Days for Saved Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Abbreviations to Use

Msg Delivery Notification: N=Not Allowed, L=Local Only, D=Long Distance, B=Batch Mode

Network Method: N=Not Allowed, E=Economy, S=Standard, P=Priority

Notes:

Custom COS Definition Sheet

Use this form in conjunction with the COS Sheet. Refer to the Class of Service Information Sheet for more information.

Features	Class of Service Number																								
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16	C17	C18	C19	C20	C21	C22	C23	C24	C25
Call Screening	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Msg. Confirmation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Voice Folders	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Call Queuing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Msg. Indicator	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Intercom Paging	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Personal Group Lists	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Global Group Lists	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dial by Name	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Call Handling	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V-Trees Allowed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
V-Tree Fax Supported	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Send Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Receive Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Save Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Undelete Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locate Messages Rec'd.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Locate Messages Sent	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Record Prompts	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Operator Access	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Failed Login Notification	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mailbox Lock-Out	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Auto Timestamp	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Visual Mailbox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enable Multilingual Sup.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Supervisor Mailbox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Delivery Options	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Outcalling Type	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Batch Mode	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Network Method (Disp.)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Casual AMIS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Administered AMIS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
OctelNet	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Follow-Me-Forward	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Network Replies	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Language	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Send Faxes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Receive Faxes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Max.. # of Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Max. Rings	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Max. Single Msg. Time	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Days for New Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Days for Saved Messages	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Abbreviations to Use

Msg Delivery Notification: N=Not Allowed, L=Local Only, D=Long Distance, B=Batch Mode

Network Method: N=Not Allowed, E=Economy, S=Standard, P=Priority

Notes:

Mailbox Assignment Sheet (Sheet No. __ of__)

Use this form to identify each subscriber to be assigned a mailbox on the Lucent Messaging 2000 system, and identify the subscriber's extension, Class of Service, department, and associated operator's (department secretary's) extension. To facilitate the mailbox setup process, group subscribers by department.

If more than one company or unique organization will be sharing the Lucent Messaging 2000 system, complete one (set of) Mailbox Assignment Sheet(s) for each company or organization.

Company:__________________________ (___ of ___)

Department/Division	Operator Ext.	Subscriber Name	Ext.	Class of Service

Notes:

Auto Forward Sheet

Auto Forwarding sends messages that have not been listened to within a specified amount of time to another mailbox. Use this form to indicate any mailboxes for which Auto Forwarding should be activated, and specify the activation parameters in the spaces provided.

		– After –			
Mailbox	**Forward to Mailbox**	**Hours**	**and**	**Minutes**	**Delete from Original Mailbox after Forwarding**
__________	__________	__________		__________	__________ (Y/N)
__________	__________	__________		__________	__________ (Y/N)
__________	__________	__________		__________	__________ (Y/N)
__________	__________	__________		__________	__________ (Y/N)
__________	__________	__________		__________	__________ (Y/N)
__________	__________	__________		__________	__________ (Y/N)
__________	__________	__________		__________	__________ (Y/N)
__________	__________	__________		__________	__________ (Y/N)

Notes:

Message Notification Sheet (Sheet No. ___ of___)

Message Notification instructs Lucent Messaging 2000 to call the subscriber at a specified phone or beeper number, based on the time and day when messages are received. List the mailboxes for which Message Notification should be activated, and specify the activation parameters in the spaces provided. (No more than eight delivery specifications can be entered per mailbox.) In the Retry Max column, specify the number of times that message notification should be attempted in the event the destination number is not answered or is busy. In the No Answer Delay and Busy Delay columns, specify the length of time, in minutes, that the system should wait between retry attempts.

	Delivery Schedule									
Mailbox	**Between hh:mm**	**and hh:mm**	**on day**	**thru day**	**Dial Phone No.**	**Phone Type**	**Display Phone No. ***	**Retry Max**	**No Ans Delay**	**Busy Delay**

<u>Abbreviations to Use:</u>

hh:mm: = hour (1-24):minute(0-59)

Phone Type: O = Operator   P = Phone   B = Beeper

Day: Mon.   Tue.   Wed.   Thu.   Fri.   Sat.   Sun.

* Only applies when Phone Type is Beeper.

Notes:

V-Tree Design Sheet Instructions

V-Trees can significantly reduce the time employees spend performing basic, repetitive tasks. A simple V-Tree can, for example, provide callers with options that answer common questions, direct phone calls, and take orders from field representatives. The optional Fax Solution module provides capabilities that allow you to set up a V-Tree to automatically fax certain documents to callers who request them.

The V-Tree Design Sheet allows you to outline the sequence of prompts and actions to be performed by a V-Tree in a particular mailbox. This information provides you and your Lucent representative with a high-level guide of how a V-Tree is to function. Complete one (set of) V-Tree Design Sheets for each mailbox to be serviced by a V-Tree.

In the Item column, indicate the keypress(es) a caller will need to make to access the corresponding prompt. The first prompt voiced will have no keypresses indicated in the Item column, since the caller automatically hears that prompt when accessing the mailbox containing the V-Tree. If a caller needs to press <1> at the first prompt then <4> at the second prompt to hear a third prompt, you should write "1 – 4" in the Item column to the left of that third prompt.

In the Prompt column, indicate the prompt that should be voiced by the system.

In the Next Item column, identify the number of the Item that should be invoked next or indicate the action that should be taken by the system. Available actions include:

Action	**Description**
Login	Transfers caller to the mailbox's, *"Please enter your mailbox number…,"* prompt.
Attendant	Transfers caller to the attendant's, *"Please enter the extension number...,"* prompt.
Directory	Transfers caller to directory services.
MB *xxxx*	Transfers caller to the mailbox number you specify, shown as *xxxx,* where *xxxx* is the mailbox number .
Ext. *xxxx*	Transfers caller to an extension you specify, shown as *xxxx*, where *xxxx* is the extension number.
Record	Records a message from the caller in the current mailbox.
Fax	Transmits a fax to the caller.
Disconnect	Politely ends the call.

Refer to the example V-Tree Design Sheet to see how a sample V-Tree is documented.

Notes:

V-Tree Design Sheet (Sheet No. ___ of___)

Mailbox No:____________ ***Prompt #:***______

Item	Prompt [...Action to Take...]	Next Item

Notes:

V-Tree Design Sheet (Sheet No. _1_ of_1_)

Example

Mailbox No:___9876_____ ***Prompt #:***______

Item	Prompt [...Action to Take...]	Next Item
_______	*For technical support, press 1.*	*_Ext 1234*
_______	*For ordering information, press 2.*	*____2___*
_______	*To receive a specific product information sheet via fax, press 3.*	*____3___*
_______	*To return to our Automated Attendant, press 4.*	*Attendant*
_______	*For directory services, press 0.*	*Directory_*
_______	*Or to disconnect, press 9.*	*Disconnect*
_______		________
___2___	*To receive our company catalog in the mail, press 1.*	*___2 -1__*
_______	*To speak with a sales representative, press 2.*	*_Ext 1237*
_______	*To place an order at this time by simply recording your*	________
_______	*order information, press 3.*	*___2-3__*
_______	*For shipping and delivery information, press 4.*	*___2-4__*
_______		________
___3___	*Please enter the number of the Product Information Sheet you would like*	________
_______	*to be Faxed, and terminate the number with the pound key. For the*	________
________	*Widget 1000 product sheet, enter 1234.*	*___Fax__*
________	*For Widget 2000 product sheet, enter 1235.*	*___Fax__*
_______		________
__2-1__	*At the tone, state that you would like to receive our catalog*	________
_______	*and provide your name and the address to which you would like*	________
_______	*the catalog to be sent.*	*_Record_*
_______		________
__2-3__	*At the tone, state that you are placing a new order and*	________
_______	*provide your name, your customer number, and the part number*	________
_______	*and quantity of each item you would like to order.*	*_Record_*
_______		________
__2-4__	*In-stock items are shipped using second-day priority mail within*	________
_______	*24-hours of order placement. If items are temporarily out of*	________
_______	*stock, you are notified immediately by a sales representative.*	________
_______	*To return to the previous menu, press 1.*	*____2___*
_______	*To disconnect, press 2.*	*Disconnect*
_______		________

Notes:

WORKSHEETS SI

Site Information Worksheets

Use the System Configuration Record to retain a written transcript of how the customer's System Setup screens are completed during the Lucent Messaging 2000 installation process. Use the Site Contact Information Sheet to obtain customer information for your permanent records.

Notes:

Site Contact Information Sheet

Customer Information

Customer name: ______________________________
System type: ______________________________
System serial number: ______________________________
Customer address: ______________________________
Telephone: ______________________________
System manager (contact person): ______________________________
System manager phone: ______________________________
Backup system manager: ______________________________
Backup system manager phone: ______________________________
Primary technician servicing site: ______________________________
Backup technician: ______________________________
Salesperson: ______________________________

System Access Information

System access phone number: ______________________________
Modem phone number: ______________________________
Modem password: ______________________________

System Information

PBX: ______________________________
PBX software: ______________________________
PBX vendor: ______________________________
Integration (circle or indicate): Inband ES232 DID E&M Emulation VTG Supervised Other:______
Hardware configuration: ______________________________
No. ports/type: ______________________________
No. drivers/type: ______________________________
System manager mailbox: ______________________________
System manager password: ______________________________
Backup system manager mailbox: ______________________________
Backup system manager password: ______________________________
Switch room phone: ______________________________
Fax machine phone: ______________________________
Automated attendant phone: ______________________________
No. of subscribers: ______________________________

Implementation Information

System installation date: ______________________________
System software version: ______________________________

Notes:

System Configuration Record
Setup Parameters

Feature		Value Set	Default Value
General Parameters (General tab)			
	Enable Automated Attendant		Yes
	Number of Digits in a Mailbox		4
	# of Calls Between Checkpoint File Updates (CKPRATE)		5
	Tutor for New Mailboxes		Yes
	Daily Maintenance Hour (0=midnight)		2
	Shutdown System after Daily Maintenance		Yes
	Automatic Clock Reset for Daylight Saving Time		No
	First Personal Group List Number		11
	First System Group List Number		26
Operator Parameters (Operator tab)			
	Default Operator Mailbox Number		1000
	After Hours Operator Mailbox Number		1000
	Inform Subscriber Transfer is from Attendant		Yes
	Disconnect all Rotary Callers		No
	Number Attempts Rotary Transfer to Busy Operator		3
	Maximum Number of Errors		3
	Maximum Number of No Entries		3
	Transfer Calls to Operator after Max. Errors		Yes
General Transfer Parameters (Invalid Mbox tab)			
	Transfer Invalid Mailboxes during Business Hours		No
	Transfer Invalid Mailboxes after Business Hours		No
Time/Date Parameters (Time/Greetings tab)			
	Start of Morning Hours		6:00 AM
	Start of Afternoon Hours		12:00 PM
	Start of Evening Hours		6:00 PM
	Enable Chinese Date		No
Message Timing Parameters (Message Timing tab)			
	Number Seconds to Rewind Message		5
	Number Seconds to Pause Message		5
	No. Seconds to Fast Forward Message		5
	Maximum Time to Record Mailbox Prompts		90
	Minimum Message Length in Seconds		2
Subscriber Parameters (Subscriber tab)			
	Permit Subscribers to Leave Messages to Themselves		Yes
	Permit Listen-Only Messages to be Reviewed		No
	Enable Confirmation of Deleted Messages		Yes
	Voice Warning when Messages Expire		No
	Voice Warning Msg Time is Less Than 2 Min.		Yes
	Maximum Number of Forwarded Extensions		10
	Consecutive Login Failures before Lock-Out		0

Feature		Value Set	Default Value
	Enable Extended Password Security		Yes
	Minimum Length of Password		4
	Days Before Forced Password Change		28
	Set Initial Password to Default (Default 1111)		Yes
	Set Initial Password to None Required		No
	Set Initial Password to Random Generator Method		No
Caller Parameters (Caller tab)			
	Permit Caller to Leave Multiple Messages		Yes
	Permit Caller Access to Directory Services		Yes
Networking Parameters (Networking tab)			
	System Telephone Access Number		
	Network Prefix		9,
	International Access Code		011
	Country Code		1
	Long Distance Access Code		1
	Dispatch Options – Permit Inbound		Yes
	Dispatch Options – Permit Outbound		Yes
	Economy Hours – Starting Weekday Time		11:00 PM
	Economy Hours – Ending Weekday Time		6:00 AM
	Economy Hours – Starting Weekend Time		11:00 PM
	Economy Hours – Ending Weekend Time		6:00 AM
	Maximum Number of Attempts Before Failure		5
	Maximum Delay For Queued Dispatch in Minutes		15
	Maximum Number of Queued Messages		3
	No Answer – Number of Retries		5
	No Answer – Delay (In Minutes)		5
	Busy – Number of Retries		5
	Busy – Delay (In Minutes)		5
NameNet Parameters (NameNet tab)			
	Maximum Number of NameNet Records		1000
	Maximum Number of Idle Days for NameNet Records		180
	Interval for Notification of Non-Receipt for OctelNet Messages		5
Fax Parameters (Fax tab)			
	Local Fax Machine Telephone Number		
	Fax Board Type		None
	V-Tree Fax Retrieval		No
	Use Immediate Fax Delivery Mode in V-Trees		No
	Fax Retrieval Storage Mailbox		1000
	Fax Mail Allowed		No
	Use a Fax Cover Sheet		No
	Number Attempts when Sending a Fax		9
	Fax Delivery Retry Delay (Minutes)		2
	Fax Prefix Code		9,

Feature		Value Set	Default Value
Fax Extensions (Fax Extensions tab)			
	Transfer to Extensions (Requires SHUTDOWN)		No
	Extension Connected to Fax Channel 0		
	Extension Connected to Fax Channel 1		
	Extension Connected to Fax Channel 2		
	Extension Connected to Fax Channel 3		
	Extension Connected to Fax Channel 4		
	Extension Connected to Fax Channel 5		
	Extension Connected to Fax Channel 6		
	Extension Connected to Fax Channel 7		
	Extension Connected to Fax Channel 8		
	Extension Connected to Fax Channel 9		
	Extension Connected to Fax Channel 10		
	Extension Connected to Fax Channel 11		
Call Queuing Parameters (Call Queuing tab)			
	Maximum Number of Callers Allowed in Queue		5
	Voice "Extension is (still) busy" while in Queue		Yes
	Voice Caller's Position in Queue		Yes
	Voice "Please Hold while Call is Transferred"		Yes
	Voice and Accept Keypress Options while in Queue		Yes
	Custom Call Queuing Phrase for Operator		No
	Require Caller to Press Star to Stay in Queue		No
	Number of Seconds for First Caller in Queue to Wait		1
Intercom Paging Parameters (Paging tab)			
	Intercom Paging Code		
	Release Code for Intercom Paging		
	Repeat Intercom Paging Phrase		No
	Number Retries when Paging is Busy		3
	Max Number of Retries in Paging (Intercom Redirect)		3
	Paging Wait Time (Intercom Redirect)		90
Call Transfer Parameters (Call Transfer tab)			
	Transfer Prefix Code		
	Custom Transfer Code		&,XDR
	Number Seconds to Delay before Transfering		0
	Transfer Release Code when Busy		&,
	Transfer Release Code when No Answer		&,
	Permit Voice Mail After Busy or No Answer		Yes
	Flash Time Interval (FLINTVL)		50
	Pause Interval for Comma in Dial String (PAINTVL)		200
	Inter-Digit Delay Time (TONEDLY)		8
	Duration Time of Valid DTMF (TONELEN)		8
	Third Party Transfer (Start) Code		
	Third Party Transfer (End) Code		

Feature		Value Set	Default Value
Call Screening Parameters (Call Screening tab)			
	Call Screening Release Code when Busy		&,
	Call Screening Release Code when No Answer		&,
	Call Screening Release Code when Reject		&,
	Call Screening Release Code when Transfer		&,
Call Waiting Parameters (Call Waiting tab)			
	Call Waiting Code		
	Number Attempts for Call Waiting		0
	Release Code for Call Waiting		
Outbound Dialing Parameters (Outbound Calls tab)			
	Code Accessing an Outside Line		9,
	Number of Digits in Local Telephone Number		7
	Maximum Rings before No Answer (RINGS)		5
	Use DialPlan database		No
	Time to wait for possible incoming call (SCHDWAIT)		500
Message Delivery Parameters (Msg Delivery tab)			
	Custom Message Delivery Code		
	Number of Seconds to Wait before Message Delivery		1
	Dial Tone Timeout During Message Delivery (DTONWAIT)		200
Message Indicator Parameters (MI tab)			
	Permit Message Indicators		No
	Message Indicator Prefix ON Code		
	Message Indicator Prefix OFF Code		
	Message Indicator Suffix ON Code		
	Message Indicator Suffix OFF Code		
	Message Indicator Supervised		No
	Light Message Indicator for Every Msg.		No
	Message Indicator Dials Number On Hook		No
Inband Signaling Parameters Page 1 (Inband Page 1 tab)			
	Total Number of Inband digits (DIDCOUNT)		0
	Inband Terminating Character (DIDTERM)		
	Seconds to Wait for DID (DIDTIME)		1
	Number of Milliseconds Wait for Digits		0
	Off Hook Delay Time (OFFHDLY)		25
	Activate Digit Grabber (DIGRAB)		Yes
Inband Signaling Parameters Page 2 (Inband Page 2 tab)			
Hangup Detection Parameters (Hangup tab)			
	Dial Tone Detection Time (DTONDET)		0
	Hangup String (HANGUPSTR)		
	Hangup String Timeout (HANGUPDLY)		0
	Minimum Duration for Drop in Loop Current (LCDTIME)		30
	Maximum Silence Before Hanging Up (MAXSIL)		2000

Feature		Value Set	Default Value
Port Parameters (Port Parameters tab)			
Voice System Parameters (Voice System tab)			
	Go Off Hook when Port Disabled (OFFHDIS)		Yes
	Maximum Call Duration (PROGTIME)		0
	DTMF Length to Interrupt a Prompt (PLAYDTMF)		5 (Dialogic) 1 (Rhetorex)
	DTMF Duration to Interrupt Record (RECDTMF)		5 (Dialogic) 0 (Rhetorex)
	Default Input Timeout (TIMEOUT)		20
	Duration of Ring Off (RINGOFF)		5
	Duration of Ring On (RINGON)		3
	Sound Tone on Answer (ANSTONE)		No
	Debug Mode		No
Simplified Message Desk Interface Parameters (SMDI tab)			
	Use SMDI (SMDIUSED)		No
	Use Communications Message Indicator Software (COMMWL)		No
Server tab			
	Maximum time before logging off an active client		120
	Maximum time before logging off a passive client		0
	Common Setup Parameters – VFS Server Name		
	Common Setup Parameters – VFS Debug Flag		No
	Common Setup Parameters – Protocol – Use Shared Files		Yes
	Common Setup Parameters – Protocol – Use SPX		No
	Common Setup Parameters – File Server – Netware		Yes
	Common Setup Parameters – File Server – Local		No
	Common Setup Parameters – File Server – Peer OS/2		No
	Common Setup Parameters – Server Path		
	Novell Netware Server Setup – Server Name		
	Novell Netware Server Setup – Login Acct Name		VFS_ACCT
	Novell Netware Server Setup – Login Acct Pass		
	Novell Netware Server Setup – Mapping		
	Windows NT Server Setup – Domain Name		
	Windows NT Server Setup – User ID		
	Windows NT Server Setup – Login Pass		
	Windows NT Server Setup – NT Network Name		

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WORKSHEETS VM

Visual Mailbox Configuration Worksheets

Use these worksheets to collect and record the information necessary to successfully implement Visual Mailbox for Lucent Messaging 2000. You should work with the network administrator at the customer site to complete the appropriate worksheets.

Notes:

Visual Mailbox Implementation Considerations Worksheet

The following list of considerations are designed to ensure a smooth Visual Mailbox installation. Make sure you and the site's LAN Administrator complete this worksheet before you attempt Visual Mailbox installation.

Setting Up the LAN

____ Does the LAN meet the necessary requirements:

- ____ Novell NetWare 3.11, 3.12, or 4.1 or NT Server
- ____ Shared file configuration
- ____ Does the LAN server have enough hard drive space to add a directory that all clients can access?
- ____ Is the LAN installed and functioning properly?
- ____ Have the groups for LAN users who will be accessing Visual Mailbox been created?
- ____ If using a Windows NT implementation, does the NT Server support the NetBUIE protocol (NetBUIE support is currently required for Visual Mailbox)?

Hardware Requirements

____ Does the system hardware meet the requirements for Visual Mailbox installation:

- ____ Does it meet the minimum requirements for CPU and memory?
- ____ Does it have enough slots to accommodate the NIC as well as the necessary number of voice and fax ports?
- ____ Number of voice ports on the system/type of voice board: ________________________________
- ____ Number of fax ports on the system/type of Brooktrout board: ______________________________

____ Is a network card installed?

- ____ The interrupt/address of the NIC: ____
- ____ Is there a cabled connection for attachment to the LAN?

____ Does the hard drive have enough available disk space to install the Voice Fax Server software and databases?

- ____ Size of hard drive: ____
- ____ Amount of available space on hard drive: ____

____ If the customer wants the clients to use the fax viewer, is a fax board installed?

____ Does the sentinel allow Visual Mailbox?

- ____ Does it allow any other utilities required by the application (Fax Solution, AMIS, Serial Integration)?
- ____ Does the sentinel have rights for the necessary number of users?

Software Requirements

____ Do you have Visual Mailbox software?

____ Is the Lucent Messaging 2000 software ready for the installation?

- ____ Is the Lucent Messaging 2000 system up and running properly?
- ____ Are all integration features functioning properly?
- ____ If the customer wants to use Fax Solution or network messaging in Visual Mailbox, has it been configured and tested?
- ____ Do future Visual Mailbox users all have Lucent Messaging 2000 mailboxes?

____ Is the PBX ready for Visual Mailbox installation?

- ____ Check the Configuration Note to ensure that third-party transfers are supported on the switch.
- ____ Is the switch configured as described in the Configuration Note?
- ____ If required, is Lucent Messaging 2000 integrated with the switch?

Client PC Requirements

____ Are all client PCs ready for installing the interface:

- ____ Does each client PC meet the minimum requirements for CPU and memory?
- ____ Is a network card installed in each client PC?
- ____ Record the interrupts and addresses of each client PC network card.

____ Does each client PC have a connection for attachment to the LAN?

____ Does the client PC have a login script that attaches to the LAN server and makes login available?

____ Does the hard drive have enough available disk space to install the Visual Mailbox client software?

____ Is each client PC running DOS 5.0 or higher?

____ Is each client PC running Microsoft Windows 3.x or Windows 95?

Novell NetWare Configuration Worksheet

If the Visual Mailbox Voice Fax Server is being connected to a Novell network, use this worksheet to properly configure the Novell network for Visual Mailbox installation and to provide to the Lucent Technologies representative the information required for a successful Visual Mailbox implemention.

Perform the Following Tasks Before Visual Mailbox Installation:

Place a check to each task as you complete it:

____ Create the following three directories on the LAN server:

- ____ \VMBOX\DATA–contains the communication data files for the client PCs and the server as well as the directory lists and names
- ____ \VMBOX\DATA\BIN–a temporary directory that collects message information for specific mailboxes before it is sent to client PCs
- ____ \VMBOX\CLIENT–contains the Visual Mailbox client software

____ Once a directory on the LAN is created for Visual Mailbox, create an account on the appropriate server for the Voice Fax Server to log into. This provides the system with a channel for communicating with the client PCs on the network. The following tasks are involved in this procedure:

- ____ Create a new account named `VFS_ACCT` on the network file server and assign the login password `OCTEL` to the account.
- ____ Assign the following account restrictions to the account:

Account Disabled	No
Account has expiration date	No
Allow user to change password	No
Require Password	Yes
Minimum Password Length	5
Require Unique Password	No

All other parameters should be disabled.

- ____ Select the file server and assign the `VMBOX` directory.
- ____ Assign the following privileges to the \VMBOX directory: Create, Write, Read, Erase, Modify, and File Scan.
- ____ Verify the account has 24-hour, 7-days per week access to the network file server.

____ Once the Voice Fax Server account is created, the subscribers who will be using Visual Mailbox must be identified by creating a “group” of subscribers. By creating a group, you can administrate Visual Mailbox access more easily, since you can assign rights to read, write, create, and erase files in the \VMBOX\DATA directory to groups of subscribers instead of on a subscriber-by-subscriber basis. The following procedures are involved in this task:

- ____ Create a user group or select an existing user group.
- ṚṚṚṚ Select the file server and directory (VMBOX) on which Visual Mailbox will be installed.
- ṚṚṚṚ Assign network rights to the subscriber group. Note that PC audio users must be assigned all network rights (read, write, create, erase, modify, and scan) to the ...\DATA\BIN directory on the LAN server.
- ____ Activate the member list.
- ____ Select subscribers to be added to the group.
- ____ Map the subscribers in the group to the appropriate drive and directory on the voice fax server by adding the following statements to the LAN login script. In the example, the name of the group is GROUP1, the mapped drive letter is P, and the network volume name is VOL1:

```
IF MEMBER OF ‘‘GROUP1’’ BEGIN
  MAP P:=VOL1:VMBOX
```

```
END
```

Record the Following Required Information:

1. Record the Novell server that stores the \VMBOX directory: ______________________________
2. Record the volume under the specified server and the directory structure that contains the \VMBOX directory: __
____

Windows NT Configuration Worksheet

If the Visual Mailbox Voice Fax Server is being connected to a Windows NT network, use this worksheet to properly configure the NT network for Visual Mailbox installation and to provide to the Lucent Technologies representative the information required for a successful OS/2 Warp Connect installation and Visual Mailbox implemention.

Perform the Following Tasks Before Visual Mailbox Installation:

____ Create the following three directories on the NT server:

- ____ VISMAIL\VMBOX\DATA–contains the communication data files for the client PCs and the server as well as the directory lists and names
- ____ VISMAIL\VMBOX\DATA\BIN–a temporary directory that collects message information for specific mailboxes before it is sent to client PCs
- ____ VISMAIL\VMBOX\CLIENT–contains the Visual Mailbox client software

____ From the NT server, create a share for the \\VISMAIL directory that provides Full Control access for Visual Mailbox users.

____ Create a new account with the user ID VFS_ACCT for the Voice Fax Server and assign the login password OCTEL to the account.

____ Verify that the NT Server and the Voice Fax Server are on the same LAN segment (there are no routers in between).

Record the Following Required Information:

1. Record the Voice Fax Server's assigned NT domain or network workgroup: ______________________________

   ____

   (This information is entered in the Domain Name field during IBM Peer for OS/2 installation.)

2. Record the NT Server name and the name of the share assigned to the \VISMAIL directory (\\<NT Server Name>\<Share Name>): ____

   ____

   (This information is entered in the NT Network Name field during IBM Peer for OS/2 installation.)

Notes:

Local Files Configuration Worksheet

If Visual Mailbox is being installed using the local files implementation, use this worksheet to properly configure the network for Visual Mailbox installation and to provide to the Lucent Technologies representative the information required for a successful Visual Mailbox implemention.

Perform the Following Tasks Before Visual Mailbox Installation:

____ Create the following three directories on the LAN server:

- ____ \VMBOX\DATA–contains the communication data files for the client PCs and the server as well as the directory lists and names
- ____ \VMBOX\DATA\BIN–a temporary directory that collects message information for specific mailboxes before it is sent to client PCs
- ____ \VMBOX\CLIENT–contains the Visual Mailbox client software

____ Make sure the Voice Fax Server can access the \VMBOX directory and can read, write, edit, erase, modify, and scan files.

____ Create a new account named VFS_ACCT on the LAN server and assign the password OCTEL to the account.

____ Map or path the Voice Fax Server to the directory on the LAN server that was created for Visual Mailbox.

Record the Following Required Information:

1. Record the Voice Fax Server's assigned network workgroup: ____________________
2. Record the network drive and path of the \VMBOX\DATA directory: ____________________

   ____

Notes:

GLOSSARY G

Glossary

The following glossary definitions will help you to understand the terminology used in this manual.

After Hours Greeting

A message that greets a caller during non-business hours.

AMIS (Audio Messaging Interchange Specification)

.A voice-mail system communication protocol that allows two voice-mail systems to communicate with each other.

AMIS, Administered

A method of addressing an AMIS message that requires a subscriber to enter only the predefined node number of the other voice-mail system, along with the destination mailbox number. *See also Node.*

AMIS, Casual

A method of addressing an AMIS message that requires a subscriber to manually enter the complete telephone number of the other voice-mail system, along with the destination mailbox number.

AMIS Interface Module

An optional module that allows subscribers to send and receive messages to and from subscribers on other voice-mail systems that support the AMIS protocol.

Archived Message

A message saved by a subscriber in the subscriber's mailbox.

Audiotext

A communications product that enables users to send or receive information via a telephone connection by using audio input (either voice or DTMF) with a voice processing system.

Auto Date and Time Voiceback

A system feature that automatically voices the time and date when each new and saved message is received in a subscriber's mailbox.

Auto Forwarding

A system feature that automatically forwards a message that has not been listened to after a predetermined amount of time to another specified mailbox.

Automated Attendant

A system feature that routes phone calls in a manner similar to a receptionist.

AutoPrint

A system feature that directs fax messages received in a mailbox to the mailbox's default fax machine for immediate printing.

Automatic Station Login

A system feature that allows subscribers immediate access to their mailboxes when they dial into Lucent Messaging 2000 from their own extensions. This feature is switch-dependent and is not available on all Lucent Messaging 2000 systems.

Beeper Notification

A system feature that instructs Lucent Messaging 2000 to dial a subscriber's beeper when a message is received in the subscriber's mailbox. *See also Message Notification.*

Business Hours

The hours a company is open for business. Lucent Messaging 2000 references the business hours specified to determine when to voice the during- and after-hours greetings.

Busy Signal

A tone that signals that a phone is in use.

Call Blocking

A system feature that allows subscribers to route calls directly to their mailboxes without ringing the extensions.

Call Forwarding

A system feature that routes a call to ring an extension other than that originally entered. A subscriber can use this feature to assure that another subscriber will handle important calls when the original subscriber is unavailable.

Call Handling

A system feature that allows subscribers to use default or optional prompts, a V-Tree, or Call Forwarding to route calls to a mailbox immediately, or if the extension is busy and/or not answered.

Call Paging

See Intercom Paging.

Call Progress

See Supervised Call.

Call Queuing

A system feature that allows a caller to hold for a specific extension when that extension is busy. The Call Queuing feature can be set up to inform a caller on hold of their status in the queue and to provide the caller with prerecorded music or messages.

Call Screening

A system feature that allows subscribers to choose whether or not they want to take calls. A caller is prompted to voice their name, which the system then announces to the subscriber, who can take or refuse the call. If refused, the caller is told there was no answer at that extension and is given the option to leave a message, to transfer to another extension, to transfer to the operator, or to disconnect.

Channel Status

The activity of each port or line; this status displays whether a port is in use or waiting for a ring.

Class of Service (COS)

A group of system features that is activated for one mailbox, or a set of mailboxes. The feature settings within a Class of Service determine a mailbox owner's access to system options and features (such as long distance outcalling and call screening). There are 25 predefined Classes of Service set up on the system. You can also set up custom Classes of Service.

Default Operator

See Personal Operator.

Delivery Options

System options that allow a message sender to designate a message for future delivery or as a private, urgent, or listen-only message.

Destination System

A remote AMIS- or OctelNet-compatible voice-mail system to which an AMIS or OctelNet message is to be delivered.

Dial by Name

A system feature that allows a caller to access a subscriber's extension by entering the letters in the subscriber's last name.

Dial Tone

A constant tone used on telephones as a signal that the equipment is ready to accept a phone number pulse or DTMF information.

DID

A PBX feature that allows an outside caller to dial a specific extension within the phone system without the assistance of an attendant.

Dispatch

The action of sending a message to an AMIS- or OctelNet-compatible voice-mail system. A subscriber can assign a message to one of three dispatch options: Economy, Standard, and Priority. These options dictate when messages queued for dispatch are sent to destination systems.

Distribution List

A group of mailbox numbers collectively identified by one, unique number. By using this feature, subscribers can send messages to multiple mailboxes at once by simply entering one distribution list number, instead of the mailbox number of each intended recipient. A Distribution List may include, as an entry, another distribution list number. *See also Global Group List and Personal Group List.*

DTMF

Dual Tone Modulated Frequency—"Touch-Tone." The two distinct frequencies emitted when a digit on a push-button phone is pressed.

Economy Dispatch

A dispatch option provided to subscribers sending messages to AMIS- or OctelNet-compatible voice-mail systems. A message marked Economy is held in an Economy queue and dispatched during a time frame that is usually an off-peak phone rate period.

Envelope Information

A system feature that provides a message recipient with the date and time a message was sent, who sent it, the length of the message, and whether the message was designated for future delivery or as a listen-only, private, or urgent message.

Extended Password Security

A system security feature used with variable-length passwords that requires a subscriber to press the <#> key after entering the mailbox password.

Failed Login Notification

A system feature that notifies the subscriber when one or more unsuccessful attempts are made to log into the mailbox.

Fax Mail

A system feature that allows a caller accessing a subscriber mailbox to send a fax to that mailbox. The caller must be placing the call from a fax machine. The subscriber can view and print the fax using a variety of system options.

Fax Retrieval

A system feature that allows callers accessing a V-Tree to request that available documents be faxed to them at the fax machine of their choice.

Fax Solution

An optional module that equips the system with fax-retrieval and fax-mail capabilities.

Folders

Subscriber-defined headings in a mailbox under which a subscriber can efficiently classify and save voice and fax messages.

Follow-Me-Forward

A system feature that allows subscribers to forward messages received in their mailboxes to a mailbox on an AMIS- or OctelNet-compatible voice mail system. *Also referred to as Network Message Forwarding.*

Force Shutdown

A method of shutting down Lucent Messaging 2000 by which all ports, both idle and occupied, are immediately disabled and active calls are terminated.

Future Delivery

A system feature that saves a recorded message for delivery at a subscriber-specified future time.

Global Group List

A system feature that provides each subscriber with two system-generated distribution lists (one containing all mailboxes assigned to the same company as the subscriber, and the other containing all mailboxes assigned to the same division as the subscriber). Up to ten additional distribution lists can be defined by the system manager.

Greeting

An announcement that a caller hears after dialing the company’s phone number or a subscriber’s extension.

Greeting by Port

A system feature that plays specific greetings for incoming calls to certain ports. This feature enables several businesses in an office complex to share one Lucent Messaging 2000 system and still greet calls with unique office greetings.

Guest Mailbox

A mailbox, created under the sponsorship of a system subscriber, that allows non-subscribers limited system access.

Holiday Greeting

A message that greets callers on dates specified as holidays—i.e., days the office is closed.

Inbound Port

A port defined in System Setup to accept incoming calls.

Integration

The ability to link a voice-mail environment to a PBX.

Intercom Paging

A system feature that allows a caller to page a subscriber who does not answer at their extension. Intercom Paging is not available to callers reaching an extension that is busy. *Also referred to as Call Paging.*

Intercom Redirect

A system feature that allows a paged subscriber to alert the system of an alternate extension or mailbox number to which the call should be transferred.

Keypad Prompt Recording Functions

A technique by which a system manager can record prompts to be voiced by the system.

Language Selection

A system feature that allows callers to a multilingual Lucent Messaging 2000 to select their language choice for system prompts.

Listen-Only Message

A message that can only be listened to and possibly reviewed, depending on System Setup settings. A listen-only message cannot be saved, skipped, copied, or auto-forwarded to another subscriber.

Log In

To enter a password to access a Lucent Messaging 2000 mailbox, or to access menus and features available through the system's PC screen interface.

M2000

The Lucent Technologies Messaging 2000 system.

Mailbox

A system destination from which a subscriber can access many Lucent Messaging 2000 functions, and store new and saved messages sent to the subscriber. A mailbox number may or may not be the same as the corresponding extension number.

Mailbox Lock-Out

A system feature that locks a subscriber's mailbox when a specified number of consecutive login attempts fail.

Message

A vocal communication recorded into a subscriber's mailbox by another subscriber or an outside caller. Messages can also include faxes.

Message Confirmation

A system feature that enables a subscriber to determine if another subscriber has received a certain message. A message is considered "confirmed" when the intended recipient has listened to or skipped it. Message confirmation information includes the recipient's name, the date and time the message was sent, and when the subscriber listened to or skipped it.

Message Indicator

The indicator (such as a light or LED display) on a telephone that notifies a subscriber of a message. A message indicator turns off as soon as a subscriber accesses the new message queue, even if the subscriber does not listen to messages in the queue.

Message Locator

A system feature that allows a mailbox owner to scan messages in the new message queue for entries from a particular local subscriber.

Message Notification

A system feature that instructs Lucent Messaging 2000 to call a subscriber at a specified number when a message is received in the subscriber's mailbox. Message notification attempts are halted as soon as the subscriber accesses the new message queue in the mailbox, even if the subscriber does not listen to messages in the queue.

Message Recovery

A system feature that allows subscribers to recover messages they accidentally delete during the current call to the system.

Multiple Message Capability

A system feature that allows an outside caller to leave more than one voice message per call.

Name Prompt

A prompt, containing only a subscriber's name, that the system inserts into many of its voice phrases—for example, *"John Smith."*

Network Message Forwarding

See Follow-Me-Forward.

Node

A number assigned to represent the telephone number of a remote site supporting OctelNet or AMIS. To dispatch a message to a site with an assigned node number, a subscriber enters both the node number and the destination mailbox number after pressing <2> to record and send a message.

Non-Subscriber

A person who calls into Lucent Messaging 2000 and does not have an assigned mailbox.

OctelNet

A full-feature voice-mail system communication protocol that allows two voice-mail systems that support OctelNet to communicate with each other.

Operator

The person, usually the receptionist, to whom the system defaults certain calls.

Optional Prompts

A prompt that a subscriber can record and activate at any time to answer the subscriber's extension and forward callers directly to their mailbox—for example, *"Hi. You have reached John Smith. I'm in a meeting right now; please press two to leave a message, or press zero to speak to the operator."*

Outbound Port

A port defined in System Setup to be used for outcalling.

Outcall/Outdial

A term used when the system places a call. A system outcalls to deliver OctelNet and AMIS messages, message notification, wake-up calls, etc.

Password

A group of characters that uniquely identifies a user who wants to gain access to a mailbox or to options available through Lucent Messaging 2000's PC screen interface.

PBX

A telephone system.

Personal Fax Number

A system feature that allows subscribers to retrieve faxes at their personal or departmental fax machine or at a fax machine at another location.

Personal Greeting Prompt

A prompt that can be recorded and used by a subscriber to add a personal touch when callers request to be transferred to the subscriber's mailbox—for example, *"Hi. This is John. I'm sorry I cannot take your call right now. Please leave a message, and I'll return your call as soon as possible."*

Personal Group List

A system feature that provides each subscriber with the ability to create up to 10 Distribution Lists, which they can use when sending messages to other subscribers.

Personal Operator

The extension to which a call defaults when the caller is transferred to an operator.

Personalized Prompts

Five prompts that can be recorded by a subscriber to personalize a mailbox (Name, Please Hold, Optional Prompts 1 and 2, and Personal Greeting).

Phrase Files

Files containing recorded phrases that automatically voice or that can be set up to be voiced by the system.

Playback Controls

Keys a subscriber presses to control the volume and speed of message playback.

Please Hold Prompt

The prompt that a caller hears when transferred to the requested extension—for example, *“Please hold for John Smith.”*

Port

A telephone voice circuit connection on a voice-processing system.

Port Statistics

Data for each line or port that displays the number of calls, number of failed calls, and average length of calls.

Port Status

See Channel Status.

Priority Dispatch

A message marked for delivery, at the earliest opportunity, to an address at an AMIS- or OctelNet-compatible voice mail system.

Private Message

A message that is intended for one subscriber only. A private message cannot be forwarded.

Prompts

Audio information from a voice system that guides the user’s interaction with the system.

Queued Dispatch

See Standard Dispatch.

Recipient

The person who receives a message.

Recording Controls

Keys a subscriber can press to pause, replay, or rerecord some or all of a message or prompt being recorded.

Regular Message

A message sent without any special delivery functions.

Search

A system feature that allows a system manager to view a list of mailbox owners' names and corresponding mailbox numbers, so they can locate a particular subscriber's mailbox number.

Security Access Levels

Three levels that control a system manager's access to different System Setup and configuration parameters. Levels 2 and 3 require password entry.

Sent Message Editing

A system feature that allows a subscriber to edit a message previously sent to another Lucent Messaging 2000 subscriber, as long as that message has not been skipped or listened to by the recipient.

SOLVE (Supervisor Online Voice Editor)

A tool that allows a system manager to record and specify prompts to be played by the system.

Standard Dispatch

A message placed in a queue for a period of time established by the system manager. The message is delivered to the specified AMIS- or OctelNet-compatible voice-mail system when a defined number of messages are queued for the same remote-access telephone number, or when the maximum period of time has expired, whichever occurs first. The maximum time is based on the earliest message placed in the queue. All messages in the queue are delivered during the same outcall.

Subscriber

A person to whom a Lucent Messaging 2000 mailbox is assigned.

Supervised Call

A call monitored by the system to determine if the requested line returns a busy or ring-no-answer condition. If it does, the call is not transferred to the line, and the caller is given other options. *The call monitoring function is also referred to as Call Progress.*

Supervisor Mailbox

A Lucent Messaging 2000 mailbox that allows a system manager to access the supervisor functions through the phone keypad.

Supervisor Password

The password used by the system manager to access supervisor functions either on the Lucent Messaging 2000 PC or in a supervisor mailbox.

Switch

A telephone system.

System Manager

The person responsible for the day-to-day maintenance of the Lucent Messaging 2000 system at the site. The system manager authorizes subscriber use of special system features.

System Prompts

Prompts voiced by the system to callers.

System Setup

A Lucent Messaging 2000 utility that allows a user to customize the system to best meet user needs.

Transmission Failure

A term used when a message dispatched to an AMIS- or OctelNet-compatible voice-mail system cannot be delivered to its intended recipient.

Undelete Messages

A system feature that allows subscribers to restore messages mistakenly deleted from a new or saved message queue.

Uninitialized Mailbox

A mailbox still using the system default password.

Urgent Message

A message sending option that places the message at the top of a subscriber’s new message queue.

Visual Architect

A system feature that provides a visual, onscreen interface for creating and editing V-Trees. *See also Visual V-Tree.*

Visual Architect Developer’s Toolkit

An add-on module that allows users to create V-Trees that can be used for multiple mailboxes, or for mailboxes on multiple systems.

Visual Mailbox

An optional module that allows subscribers to access Lucent Messaging 2000's onscreen mailbox interface through a Windows desktop.

Visual V-Tree

A system feature that provides a visual, on-screen interface for creating and editing V-Trees. *See also Visual Architect.*

Voice Mail

A system that uses telephone equipment and a computer program to allow callers and subscribers to send voice communications to mailboxes set up on the Lucent Messaging 2000 system. Subscribers can retrieve, store, delete, forward, and obtain information on messages sent to their mailboxes.

V-Tree

A built-in, touch-tone-programmable audiotext/call-routing application generator for individual mailboxes. V-Trees allow users to create multi-level voice menus within Lucent Messaging 2000 mailboxes.

V-Tree File

A V-Tree storage vehicle that allows a user to move a V-Tree from one mailbox on the Lucent Messaging 2000 system to another.

Wake-Up Call

A system feature that allows a subscriber to enter a date and time that Lucent Messaging 2000 is to place a call to a specified phone number.

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