PanaVOICE™
S-SERIES
Voice Processing System

Technician's Guide

Contents

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Introduction

About the voice messaging system —————————

Installation is quick and easy

Installing the voice messaging system is quick and easy. Your customer does much of the system setup and customization, so you handle fewer details during installation.

The voice messaging system is simple to use, so minimal training is required. People introduce themselves to the system as they use it.

Understanding your customer's telephone system

You must be familiar with the basics of the telephone system that you are connecting to the voice messaging system, including how to program the available features. For information, refer to page 28.

Using the *Technician's Guide*

This *Technician's Guide* provides information essential to planning the system setup before you access the technician's conversation. The guide is organized in a series of easy-to-follow chapters:

- "Planning the application"
- "Installing the voice messaging system"
- "Setting up the application"
- "Training the system manager"

The System Setup Worksheet contained in the next chapter helps you obtain and organize all of the information you need before you begin the actual setup.

The system manager at your customer's site can perform most maintenance to the voice messaging system. If a problem occurs, however, this guide also includes the following troubleshooting information:

- Remote Maintenance

- Troubleshooting with the console

- Creating system reports

Planning the application

Identifying the system manager

The system manager is your liaison with the company and makes basic installation decisions. Identifying a system manager and giving that person the information necessary to make these decisions helps you complete the installation quickly and easily.

If the system manager has not already been selected, you need to recruit a person to take on the responsibilities.

Initial duties

- Help make decisions about how to set up the voice messaging system

- Configure and customize the system

- Provide minimal training to the operator and subscribers

- Answer coworkers' questions as they open their mailboxes

- Answer basic questions about the voice messaging system

Ongoing duties

- Verify that the voice messaging system is running normally

- Record holiday greetings; set holiday operation

- Add, delete, and reassign mailboxes

- Set up and maintain the menu keys

- Set up and maintain message groups

The *System Manager's Guide*

Being system manager is easy and takes very little time. Most of the system manager's time is spent during the start-up process immediately after installation. Complete, step-by-step instructions for all system manager duties are given in the *System Manager's Guide.*

Encourage the system manager to read Chapter 1, "System overview" and Chapter 2, "Planning your system" in the *System Manager's Guide* before you begin the installation.

If the system manager reads this material, he or she can better help you make installation decisions.

Before you connect the voice messaging system to the telephone system, you need to answer two questions:

- Will the operator answer all calls, with the voice messaging system being used for voice mail only, or will the system help answer calls and transfer them to internal extensions?

- If the system will help answer calls (the automated attendant feature), will it answer all calls or only overflow calls?

Deciding whether to use call transfer

Some customers want the operator to handle all incoming calls, using the voice messaging system primarily for its voice mail features. For these sites, you turn off the voice messaging system's call transfer feature. The voice messaging system then acts as a voice mail "post office," collecting and delivering voice mail messages but not transferring calls to other extensions.

Some customers want the voice messaging system to help the operator answer incoming calls and transfer calls to extensions. For these customers, you and the system manager need to determine how to set up the automated attendant.

If your customer wants the operator to handle all incoming calls, read "Using the voice messaging system for voice mail only." If your customer chooses to have the voice messaging system answer some or all calls, read "Using the voice messaging system's automated attendant," later in this chapter.

When you initialize the voice messaging system, you indicate the customer's choices about call transfer by selecting an application method. For details, see "Choosing how to handle calls."

Using the voice messaging system for voice mail only

Your customer may want the voice messaging system set up as an extension of the telephone system, with no external lines answered by the voice messaging system. Internal callers can check messages and leave messages by dialing the voice mail extension. Outside callers can reach voice mail during business hours.

- The operator can transfer the call to voice mail manually.

- If the telephone system supports call forwarding, callers can be transferred to voice mail automatically when an extension is busy or not answered.

Voice mail can also be available after business hours. If the telephone system has a "night ring" feature, you can program it to route incoming calls to the voice messaging system's extension.

Later in the installation process, the system conversation asks you to pick an application method. To turn off call transfer, choose "Application Method 3: Voice Mail Only."

Note When call transfer is turned off, your customer cannot use the fax detection or menu key features.

Using the voice messaging system's automated attendant

Your customer may want the voice messaging system to help the operator answer and transfer calls and to transfer callers to voice mail during nonbusiness hours. This is the automated attendant feature.

What is the automated attendant?

As an automated attendant, the voice messaging system answers, greets, and routes incoming calls. Callers hear an opening greeting that gives them instructions and options.

The automated attendant lets an external caller with a touchtone telephone reach a person directly by dialing an extension number. Callers who do not know the correct extension number can use the system's directory assistance feature.

The voice messaging system listens for touchtones while playing the opening greeting. If the caller dials a valid extension, the voice messaging system transfers the call, ringing that extension. A valid extension is one with a corresponding voice mailbox.

During business hours, callers who need personal assistance can dial 0 at any time to reach the operator. The voice messaging system even handles callers who are not using a touchtone telephone—for callers who do not respond during the opening greeting, the voice messaging system then transfers to the operator automatically.

Calls can route to voice mail

If the extension is busy or unanswered, the voice messaging system places the caller in the extension's voice mailbox. The caller hears a personal greeting from the subscriber ("Hi, this is Chris. I'm away from my phone right now..."). After the personal greeting plays, the caller can leave a message.

Automatic fax routing

If the voice messaging system hears a fax tone when it answers, it transfers the call to a fax machine connected to a specified fax extension. Callers can also dial the fax machine extension and then manually send a fax. Your customer does not need a separate fax telephone number or a dedicated external line.

Menu key shortcuts

The voice messaging system menu key feature lets the system manager create simple menus that callers can choose from during the opening greeting. With a single touchtone, callers can transfer to a specified extension ("For sales, press 1.") or hear a recorded message ("For product information, press 2.").

Menu keys are explained in detail in the *System Manager's Guide*, Chapter 5, "Maintaining your system."

The automated attendant does not replace an operator, of course, but it does streamline the routine.

You and the system manager must decide how to distribute the incoming call load between the automated attendant and the operator. The next topic, "Tailoring the automated attendant to your customer's site," helps you make this decision.

Tailoring the automated attendant to your customer's site

In programming the telephone system software and connecting the voice messaging system, you control three variables that determine when the automated attendant answers an outside line:

- Which external lines the voice messaging system answers

- How the external lines are grouped

- How many external lines the voice messaging system will handle at once

This flexibility lets you tailor the automated attendant operation to best suit your customer's needs.

Which external lines the voice messaging system will answer

The voice messaging system can answer the organization's lead telephone number (primary attendant), a secondary number (secondary attendant), or a line that is dedicated to the voice messaging system (private attendant).

How external lines are grouped
You can divide the external lines into two groups, and connect the voice messaging system to just one group. This isolates the voice messaging system from general calls and makes it available only to subscribers, callers who dial it directly, and callers transferred by the operator. In this case, the voice messaging system functions as a private attendant.

How many external lines the voice messaging system handles at once
As part of programming the telephone system, you determine how many external lines connect to the voice messaging system. You can allocate one line, several lines, or all available external lines.

When you consider what external lines to connect to the voice messaging system, keep these factors in mind:

Average and peak telephone traffic
If peak traffic ties up all of the voice messaging system ports with incoming calls, subscribers cannot call in to leave and receive messages.

The number of external lines available
If the number of external lines is limited, your customer must decide which has priority on incoming calls: the operator, the automated attendant, or voice mail operations.

The number of the voice messaging system ports available
A four-port system can handle more lines than a two-port system.

The speed of the telephone system in making transfers.
Telephone systems that allow the voice messaging system to release a call on transfer can handle higher automated attendant traffic than those that must wait for a ring or an answer.

Note If too many ports are answering calls, subscribers may experience delays when checking voice mail.

Deciding how to use the automated attendant

Automated attendant option	Role of automated attendant	Role of operator	Notes
No automated attendant	Not applicable	Handles all calls	The system does not use fax detection or menu keys.
Private attendant	Available only to subscribers and others who know the dedicated number for the voice messaging system	Handles all calls	The operator can provide personal assistance to all external callers; subscribers can access voice mail directly. This option works best when your customer does not have periods of heavy telephone traffic.
Secondary attendant	Used only during peak periods; takes overflow calls	Handles most calls	The operator handles most callers, and has backup support to ensure that all calls are answered promptly.
Primary attendant	Allows most callers to route themselves to the extension they want	Handles overflow calls when all of the voice messaging system ports are busy; helps callers seeking general information or needing special assistance	The operator can offer more personalized attention to callers who need it.

Completing the System Setup Worksheet —————

There are several additional factors that you and your customer must consider in planning the system setup. Each of the setup tasks is explained in Chapter 4, "Setting up the application." That chapter explains the decisions your customer must make about the site. As you and the system manager decide how to set up the voice messaging system, note the decisions on the System Setup Worksheet.

You must complete the System Setup Worksheet before accessing the technician's conversation for two reasons:

- The conversation asks you for codes that you must determine ahead of time.

- The worksheet provides a record of the choices you have made, in case you need to reinitialize the system.

When you complete the System Setup Worksheet, program the telephone system, and then set up the voice messaging system through the technician's telephone conversation. The technician's conversation guides you through all of the setup tasks with simple questions and instructions. The System Setup Worksheet reflects the structure of the technician's conversation.

System Setup Worksheet ———————————————

Press	For this option	To do this	See page	Your setting
4	Initialize the system	Enter the telephone system's code: DBS™ 40 5210 DBS 72 5230 DBS 96 5250 DBS 824 5260	38	_____
		Select application method	42	❏ 1 ❏ 2 ❏ 3
		Indicate mailbox extension numbers (for example, 200–220, 223, 230–242)	44	_____
		Indicate extension for operator calls	48	_____
		Indicate extension for Operator mailbox	48	_____
		Indicate fax extension	50	_____
		Set fax notification	51	❏ On ❏ Off
5	System options	Change system options	52	See Appendix A, page 137.
6	Technician's password	Change technician's password	58	_____

Installing the voice messaging system

Installing and setting up the voice messaging system are simple tasks because there are no components to install or configure. You simply connect the unit to your customer's telephone system, plug it in to an electrical outlet, and install the batteries.

Choosing a suitable location

The most efficient location for the voice messaging system meets the following conditions:

- The voice messaging system must be near the main unit of your customer's telephone system because the voice messaging system is wired directly to it.

- A short and neat wiring run is easiest to set up and maintain.

- The voice messaging system is hung on a wall so that the connectors are on the right side and the LEDs are clearly visible on the left.

- There is ample clearance between the voice messaging system and any other equipment so that you can easily reach the connectors.

- The voice messaging system is relatively undisturbed but accessible. Although the voice messaging system itself does not require any maintenance, there may be situations when you connect to it for backing up the system, viewing the system screens, or creating system reports.

Warning! Stacking anything on top of the voice messaging system may damage it and voids the warranty. It is strongly recommended that you hang the voice messaging system on a wall.

Avoid areas that are:

- Unusually cold (below 50°F/10°C).

- Unusually hot (above 90°F/28°C).

- Highly humid (above 80% relative humidity).

- Exposed to direct sunlight.

- Subject to heavy vibrations.

- Poorly ventilated. (The heat generated by the voice messaging system and other equipment can quickly raise the temperature of an enclosed space well above the voice messaging system's operating limits.)

The voice messaging system's power supply

The voice messaging system requires electrical power that is free from voltage drops, surges, and related problems. For this reason, avoid connecting the voice messaging system to an outlet on a circuit shared by equipment with large motors—especially motors that stop and start frequently. Circuits shared by refrigerators, heating and cooling equipment, or large photocopiers frequently interfere with the normal operation of telephone and computer systems. Always use a surge protector to connect the voice messaging system to the electrical circuit.

The voice messaging system has eight AA batteries to protect its database during a power outage. The voice messaging system automatically monitors battery voltage and sends a message to the system manager and Operator mailbox when batteries must be changed.

Warning! Power fluctuations can damage the voice messaging system. If your site is subject to power fluctuations, we recommend that you connect the voice messaging system to a dedicated circuit or a UPS (uninterruptible power supply).

Notes

• Both the voice messaging system and the modem use transformers to connect to electric power. Because of these transformers' size, we recommend that you connect them to a power strip.

• The voice messaging system's batteries do not keep the voice messaging system running, but they do prevent the loss of valuable database information during a power outage.

Telephone system requirements ─────────────

Preparing your customer's telephone system to support the voice messaging system is straightforward. To complete this step, you must know how to program the telephone to work with voice mail. For information, refer to page 28.

After ensuring that the customer's telephone system meets the voice messaging system's requirements, follow the instructions in "Preparing the telephone system" and "Testing the single-line ports" later in this chapter, before connecting the voice messaging system to the telephone system.

General telephone system requirements

The telephone system must be equipped with an SLT-Adapter. Each voice messaging system port connects and operates as a single-line telephone. A two-port system needs two, single-line telephone connections, and a four-port system needs four connections on the telephone system.

The single-line connection points on the telephone system are also called ports. In other words, a voice messaging system port connects to a single-line telephone port on the telephone system.

To work with the voice messaging system, each single-line telephone port must meet two requirements:

- 90 Volt AC ringing, the industry standard. The single-line port must generate this ring signal for the voice messaging system to recognize and answer an "incoming" call.

- DTMF (touchtone) signals must be passed to the voice messaging system ports through the single-line port. In addition, the telephone system must be able to receive and interpret the DTMF signals that the voice messaging system transmits.

Your customer's telephone system provides single-line support through the SLT-Adapter, a small box or cabinet that may be located near the telephone system cabinet. The module connects to and converts one or more electronic key telephone connections to single-line port service. The module's single lines terminate in standard modular jacks. The voice messaging system ports connect to the telephone system through leads connected to these single-line jacks.

External modules usually include AC ringing and DTMF signaling support.

Special telephone system capabilities

The voice messaging system offers several voice mail features that take advantage of special capabilities found on some telephone systems. The voice messaging system's feature and the corresponding telephone system capabilities are described as follows.

Message notification

The voice messaging system can notify a subscriber of new messages. It does this in one of the following ways:

- Activating a message waiting lamp at the extension telephone

- Activating a special dial tone at the extension telephone

- Calling the extension telephone at 30-minute intervals to deliver messages

- Announcing that messages are waiting when the subscriber calls the system

Call forward to personal greeting

When call forwarding is supported, the telephone system automatically forwards calls to the voice messaging system when an extension is busy or unanswered. When the telephone system forwards a call to the voice messaging system, it sends a follow-along ID. This ID identifies the extension the call was forwarded from. When the voice messaging system answers the forwarded call, it hears the follow-along ID information, and knows to transfer the call directly to the extension's voice mailbox.

Easy message access

This feature lets a subscriber check messages by pressing a single button on the telephone. To do this, the voice messaging system takes advantage of programmable speed dialing offered by some telephone systems. The speed dial key at each extension must be programmed to dial the voice messaging system, wait for an answer, then send the appropriate DTMF signals to identify the correct mailbox and retrieve messages.

Preparing the telephone system ——————————

To prepare the telephone system for the voice messaging system, follow these six steps. Depending on the telephone system you are connecting to, you may need to perform additional steps.

❑ **Install the hardware.**
Install the SLT-Adapter (refer to Section 300 of the DBS manual) on the telephone system to make it fully compatible with the voice messaging system.

❑ **Program the telephone system.**
Program the telephone system software to work with the voice messaging system. Refer to your telephone system documentation for more information.

❑ **Program individual extensions.**
On some telephone systems, you must enable call forwarding and easy message access at each extension.

❑ **Connect a fax machine for the voice messaging system service.**
To use the voice messaging system fax support features, connect a fax machine to a telephone system extension, not an incoming trunk line. The fax extension you use cannot have a voice mailbox.

If your customer has more than one fax machine and the telephone system supports hunt groups, create a hunt group for fax service and connect the fax machines accordingly. The voice messaging system transfers fax calls to the pilot extension number for the hunt group.

❏ **Install modular jacks for connecting the voice messaging system ports.**
After you have installed the hardware and completed telephone system programming, install standard modular jacks and connect them to the telephone system single-line ports. Through these jacks, you connect the telephone system to the voice messaging system with standard, four-conductor leads. These jacks will also serve as test connection points.

The voice messaging system voice ports use single-line modular RJ-11 jacks. Each single-line jack carries one voice mail port. Wire the modular jacks you install to match the voice port jacks.

The telephone system you connect to may require additional wiring. If so, complete the additional wiring before you proceed.

❏ **Test the single-line ports.**
Use a single-line telephone to test each of the single-line ports for correct operation. There are several basic tests in the following topic, "Testing the single-line ports."

Wiring a single-line jack
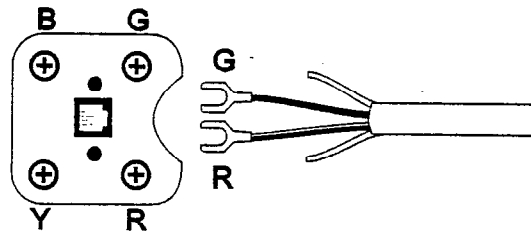
Installing the telephone system ——————

The following items are necessary to connect to the voice messaging system.

For the DBS 40, 72, or 96

❑ CPC-All Software (9.01 or later)

❑ SLT-Adapter

For the DBS 824

❑ CPC-S or M software (3.03 or later)

❑ SLT-Adapter

Preparatory programming requirements

The telephone system requires the following programming before connecting to the voice messaging system:

❑ **Definition of hardware**
Program the telephone system to identify the SLT-Adapter.

❑ **Hunt group ring assignments**
Program the hunt group assignments for all extension numbers that ring the voice messaging system. When programming, assign a "Hunt Group Pilot Number or Group Hunting Code" for the voice messaging system. This code is the extension number that rings the voice messaging system.

❑ **Program call overflow**
Program the options for busy voice port conditions. Incoming calls may be forwarded to an attendant or operator when the voice ports are busy.

Special programming requirements

The following procedures are the minimum required programming to ensure the proper functioning of the telephone system with the voice messaging system.

Caution When setting other telephone system options, be sure to avoid conflicts with the settings in these procedures. Conflicting options may affect the proper functioning of the voice messaging system.

To assign a terminal type to each voice port

1 Enter programming mode.

2 Press FF3.

3 Dial the first voice port extension number (for the DBS 40, 72, or 96, range: 9–72; for the DBS 824, range: 3–24) The display shows "EXT XXX PROGRAM."

4 Press 2#. The display shows "EXT XXX 002: XX" (the telephone type).

5 Do one of the following:

   • For the DBS 40, 72 or 96, press 15 (for third-party voice mail through OPX; this type includes the SLT-Adapter).

   • For the DBS 824, press 15 (for third-party voice mail through the SLT-Adapter).

6 Press HOLD to go to the next voice port extension number.

7 Repeat steps 5 and 6 for each voice port to be programmed.

To enable the disconnect signal on each voice port

1 Press FF3.

2 Dial the voice port extension numbers (for the DBS 40, 72, 96, range: 9–72; for the DBS 824, range: 3–24). The display shows "EXT XXX PROGRAM."

3 Do one of the following:

   • For the DBS 40, 72, or 96, press 46#. The display shows "EXT XXX 046: 0 (AEC DISCONNECT)."

   • For the DBS 824, press 45#. The display shows "EXT XXX 045: 0 (SLT DISCONNECT)."

4 Press 1 to enable sending the disconnect signal to the voice messaging system when the caller hangs up.

5 Press HOLD to go to the next voice port extension number.

6 Repeat steps 4 and 5 for each voice port extension number.

To set the duration of disconnect signal to 500 milliseconds

1 Press FF1.

2 Press 2#1#. The display shows "SYSTEM GENERAL."

3 Do one of the following:

- For the DBS 40, 72, or 96, press 35#. The display shows "SYSTEM 35 : (AEC DISCONNECT)."

- For the DBS 824, press 31#. The display shows "SYSTEM 031 : (SLT DISCONNECT)."

4 Press 5# (for 500 ms).

To set call forward ID codes for individual extensions

1 At any extension, enter:

   ON/OFF PROG AUTO *

2 Dial the extension number to be forwarded.

3 Dial the personal ID (voice mailbox number). The voice messaging system requires these digits to identify the telephone system extension and allow it to retrieve messages. The personal ID can contain up to 16 digits. Usually, the personal ID is the extension number followed by 2 to send the caller directly to the personal greeting of the voice mailbox. Press REDIAL to insert a pause between digits.

4 Press HOLD.

5 Repeat steps 1 through 4 for each extension to be programmed with call forward ID codes.

Testing the single-line ports

Perform the following tests before you connect the voice messaging system to the telephone system. These tests ensure that the telephone system single-line ports are functioning properly. You can then quickly isolate and troubleshoot any problems with the voice messaging system setup. For the tests, you need a standard, single-line, touchtone telephone with a ringer.

Where appropriate, repeat these tests for each telephone system single-line port that is used as a voice messaging system extension. To test a single-line port, plug the modular connector from the single-line telephone into the appropriate modular jack. You use the test telephone to simulate the voice messaging system activity.

❑ **Test for ringing.**
Call the test telephone from a regular extension. If you can ring the test telephone connected to the single-line port, then the port is recognized by the telephone system and is generating a ring signal.

❑ **Test for single-line port DTMF signaling.**
Use the test telephone to dial out to a regular extension. If you can reach the extension, then the telephone system is receiving and recognizing DTMF signaling from the single-line port.

❑ **Test for extension DTMF signaling.**
Use a regular extension to call the test telephone. Answer the test telephone and press digits on the regular extension's keypad. If you can hear touch-tones at the test telephone, the extension is able to send DTMF signals to the voice messaging system.

❏ **Test for external line access.**
Use the test telephone to dial an external number. The voice messaging system must be able to access external lines for its message delivery functions. If not, check the telephone system programming.

❏ **Test for external line ringing assignments.**
Use a regular extension to simulate incoming calls. Verify that each external call that you programmed to ring to the voice messaging system rings the test telephone.

❏ **Test for hookflash (timed-break recall) transfers.**
Use the test telephone to simulate a transfer of an external call through the voice messaging system. Have someone call the test telephone from an external line. Answer the telephone, then flash the test telephone switch hook, and initiate a transfer to an extension. If this test fails, check the telephone system programming.

❏ **Test for external line access at the fax extension.**
Go off-hook at the fax machine. Confirm that you hear the intercom dial tone. Access an external line. Confirm that you can reach an external number from the fax extension.

Connecting the voice messaging system to the —— telephone system

Before connecting the voice messaging system to your telephone system, confirm that the telephone system meets the voice messaging system's requirements, it is prepared, and it is tested.

To connect the voice messaging system to the telephone system

1 Connect each telephone system jack to a voice messaging system port jack by using a four-conductor lead.

2 If you are using a modem, connect it to the voice messaging system and then plug the modem in.

3 Plug in the voice messaging system to an electrical outlet, and wait a few minutes while it completes its start-up routine, which is indicated on the side of the voice messaging system by the LEDs lighting in a series of patterns.

4 Install the eight AA batteries in the voice messaging system.

If the LEDs do not light at all, change the batteries. If the LEDs remain unlit, contact Technical Support. If the system stops on one of the LED patterns, refer to Appendix E, "Using the voice messaging system's LED patterns for troubleshooting."

Notes

• The voice messaging system must have batteries installed to function properly. We recommend using Eveready Energizer batteries for best results.

• Always leave the voice messaging system plugged in when changing the batteries.

Setting up the application

Accessing the technician's conversation ————

The technician's conversation is used to set up and maintain the voice messaging system. Through this conversation, you specify the telephone system, identify extensions that will have voice mailboxes, indicate how the automated attendant will work, and set up several other options for your customer.

The System Setup Worksheet illustrates the structure of the technician's conversation.

Warning! The technician's conversation guides you through the entire setup and requires you to refer to your choices on the worksheet. Before accessing the technician's conversation, review the decisions you and the customer made in Chapter 2, "Planning the application" and the procedures in this chapter, determine all of the settings, and note them on the System Setup Worksheet.

See also ————

Logging in with the technician's password

You can access the voice messaging system from any telephone, either on-site or away from it. You identify yourself as the technician by entering a special technician's password. The technician's password is initially set to 8324 (TECH on keypads with letters). For the security of your customer's system, you must change the password regularly by using the technician's conversation.

To access the technician's conversation

1 Call the voice messaging system:

   • Internally, dial the extension.

   • From an external line, call the telephone number the voice messaging system is set to answer.

2 When the opening greeting begins, enter the technician's password.

Initializing the system

You use the system initialization part of the technician's conversation to indicate the settings that define basic system operations. You must indicate them before moving on to other parts of the conversation.

The specific tasks you do in the system initialization part of the conversation are:

- Identifying the telephone system

- Choosing how the system answers calls (the application method)

- Identifying extension numbers

- Identifying the operator's extension

- Identifying the fax machine extension

- Setting fax notification

Warning!

- Initializing the system deletes all current settings. The system reminds you of this when you select system initialization (option 4). Before initializing, listen to the system information (option 0) part of the conversation, and note the current settings.

- Severe shaking or jarring of the voice messaging system can also result in the loss of custom settings. It is recommended that you initialize the voice messaging system at the customer's site after you have installed it. If you set up the voice messaging system off-site and then move it to the customer's site, archive the database before moving the voice messaging system. After you have installed the voice messaging system, it automatically restores the archived information.

- Transporting the voice messaging system to the customer's site with the batteries installed can cause the batteries to drain quickly. Insert the voice messaging system's batteries only after you have installed it at the customer's site.

To initialize the system

1 Access the technician's conversation.

2 Select action 4 to initialize the system.

3 Press 1 to confirm that you want to initialize.

4 Using the System Setup Worksheet as a guide, answer the questions and select the actions to set up each part of the initialization.

Identifying the telephone system

The voice messaging system contains preconfigured parameters for working with the Panasonic® DBS. When you identify the telephone system, the voice messaging system uses the default parameters for the specified telephone system to ensure that the voice messaging system performs optimally.

The telephone system codes for the Pansonic DBS are available in the System Setup Worksheet on page 17. Before accessing the conversation to identify the telephone system, find the appropriate code and note it on the worksheet.

Warning! When you initialize the system, all current settings are deleted. The system reminds you of this when you select system initialization (option 4). Before initializing, listen to the system information (option 0) part of the conversation, and note the current settings.

To identify the telephone system

1 Access the technician's conversation.

2 Select action 4 to initialize the system.

3 Press 1 to confirm that you want to initialize.

4 When the system prompts you, enter the four-digit telephone system code.

5 The system asks you to confirm your selection. Press 1 to confirm.

Choosing how to handle calls

The voice messaging system supports three application methods, which tell the voice messaging system how to handle incoming calls.

The voice messaging system offers only the application methods supported by your customer's telephone system, as shown in the following table.

Application method	Automated attendant used?	Call transfer type	Note
1	Yes	Release	Use when call forwarding is enabled.
2	Yes	Await answer	Use when call forwarding is not enabled.
3	No	None	

If your customer wants to use the automated attendant and the telephone system supports call forwarding, you usually choose method 1. The exception is when the telephone system supports call forwarding, but the telephone extensions do not. Call forwarding usually requires both the action of the telephone system (to forward the call) and each extension telephone (to say "I'm busy" or "I haven't been answered"). So if your customer is using mixed models or brands of equipment, you might need to choose method 2, even though the voice messaging system offers method 1.

Make a note of your chosen application method on the System Setup Worksheet before accessing the conversation to indicate your choice.

Warning! When you access the initialization part of the conversation, all current settings are deleted. The system reminds you of this when you select system initialization (option 4). Before initializing, listen to the system information part (option 0) of the conversation, and note all of the current settings.

To choose the application method

1 Access the technician's conversation.

2 Select action 4 to initialize the system.

3 Press 1 to confirm that you want to initialize.

4 After you identify the telephone system, the system tells you what application methods your telephone system supports.

5 Press the appropriate digit to indicate your application method.

Creating voice mailboxes

The voice messaging system offers up to 50 subscriber voice mailboxes on a two-port system, and 100 mailboxes on a four-port system.

You set up the voice mailboxes in the technician's conversation by indicating the extension numbers for which mailboxes are being created. The conversation offers to set up a range of mailboxes based on default extension numbers (for example, 100–199). You can accept this default range or specify another range or a series of extension numbers.

Note The system directory is automatically set up during installation. Subscribers enter individual information while enrolling.

If the default extension numbering plan includes any extensions that your customer does not currently use, do not accept the system's offer to create mailboxes based on the default plan. Doing so makes the system manager's task of adding new subscribers more difficult.

Before accessing the conversation to identify the mailbox extension numbers, note them on the System Setup Worksheet.

Notes

- Do not include the operator's extension number in the extension list if the number is 0, because the voice messaging system creates a special mailbox "0" automatically. If the operator's extension has a different number, include it on your extension list on the System Setup Worksheet.

- Do not include the fax extension in the extension list because it cannot have a voice mailbox.

- The voice messaging system prevents the addition of an extension number that duplicates an existing system ID. The technician's conversation lists the mailboxes that cannot be added because of numbering conflicts. These conflicts can be caused by any of the following:

  - The automatic directory (800).

  - The group messaging ID (77). You can change this with system option 140.

  - Another mailbox ID.

  - Another subscriber ID (9+<extension>).

  - The technician's password.

  - The system manager's password.

  - The fax extension.

To add mailboxes for the default range of extensions

1   Access the system initialization part of the technician's conversation.

2   After selecting the application method, the voice messaging system offers to create mailboxes based on the default extension range. Press 1 for Yes to add these mailboxes. After a brief pause, the system confirms that the mailboxes have been added.

To add a new range of mailboxes

1   Follow step 1 of the preceding procedure.

2   When the voice messaging system offers to create mailboxes based on the default range, press 2 for No.

3   Indicate the starting extension number of the actual range, and then press ✳.

4   Indicate the ending extension number of the actual range, and then press ✳.

5   The voice messaging system asks you to confirm the range. Press 1 to confirm.

6   The voice messaging system then asks if you would like to add another range. Press 1 to add another range. Repeat until all mailboxes are added. After a brief pause, the system confirms that the mailboxes have been added.

To add individual mailboxes

1 Follow steps 1 and 2 for adding a new range of mailboxes.

2 Enter the extension number of the individual mailbox for the starting extension number, and then press ✳.

3 Enter the same extension number for the ending extension number, and then press ✳.

4 The system asks you to confirm the range. Press 1 to confirm.

5 The system then asks if you would like to add another range. Press 1 to add another range. Repeat until all mailboxes are added. After a brief pause, the system confirms that the mailboxes have been added.

Identifying the operator's extension and the ———— Operator mailbox

The voice messaging system needs to know the extension number of the operator's console. The actual extension might be 0 (zero) or another number. In either case, the voice messaging system transfers callers to this extension when:

- They press 0 during the opening greeting.

- They do not press any digits during the opening greeting.

If the operator's extension is a number other than 0, write this extension in the list of mailbox extensions on the System Setup Worksheet. If the operator's extension is 0, do not include it in the extension list because the voice messaging system automatically creates a special 0 mailbox. If you are unsure which extension to assign to the operator, ask the system manager.

See also ————————————

You also must indicate the Operator mailbox ID, which may or may not be the same as the extension that operator calls are transferred to. Callers are routed to the Operator mailbox when the operator is busy or unavailable.

If the same person answers operator calls and responds to messages in the Operator mailbox, then the Operator mailbox ID needs to be the same as the operator's extension. Otherwise, they need to be different.

To confirm or change the operator's extension and the Operator mailbox

1 Access the system initialization part of the technician's conversation.

2 After identifying the voice mailbox extensions, the voice messaging system tells you the current operator's extension setting. Press 1 to change it or 2 to keep the current setting.

3 Enter the correct extension number. The system confirms the number.

4 When the system tells you the current Operator mailbox ID, press 1 to change it or 2 to keep the current setting.

5 Enter the correct mailbox ID. The system confirms the number.

The voice messaging system's fax support requires that you connect your customer's fax machine to a telephone system extension, not an external line. The voice messaging system needs to know the number of the extension connected to the fax machine.

Before accessing the technician's conversation, note the fax extension on the System Setup Worksheet. If more than one fax machine is connected in a hunt group, use the pilot extension number.

Notes

- Omit the fax extension from the list of current extension numbers on the System Setup Worksheet, because the fax extension does not have a corresponding mailbox.

- To delete a voice mailbox created for the fax extension, use the system manager's conversation. For information on accessing the system manager's conversation, see "Training the system manager."

See also —————————————

Activating fax notification

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ation.

rator's exten-
g system tells
extension is.
o use the

on number, and
confirms the

If you turn on fax notification, the voice
messaging system asks callers who dial the
fax extension to leave a message describing
what they are faxing and for whom. This
message goes to the Operator mailbox. Fax
notification is initially set to "Off."

If you do not turn on fax notification, callers
can still send faxes to the fax extension, but
the voice messaging system does not ask
them to leave a message.

To activate fax notification

After identifying the fax extension, the voice
messaging system asks if you want fax
notification turned on. Press 1 for Yes.

Setting system options

Appendix A, "Changing system options," describes many system options that affect how the voice messaging system works. As technician, you can change these system options by telephone.

Many of these system options affect the way the voice messaging system works with the telephone system. In most cases, you do not need to change any system options related to the telephone system. The default values set for each telephone system are correct for most installation sites. In some cases, however, differences in telephone system programming or signal quality may require you to make minor adjustments to these options.

Other system options provide a way to further customize the voice messaging system by enabling additional features. Go over these features with your customer to determine how to set the options.

System Options Worksheet

The system options are described on the System Options Worksheet in Appendix B. Indicate your choices before accessing the technician's conversation. In the conversation, options are identified and confirmed by number rather than description, so you must record your decisions on the worksheet before accessing the conversation.

To change system options

1 Access the technician's conversation.

2 When asked to select an action, press 5 to change system options.

3 Enter the number of the first system option you want to change. The system tells you the current setting.

4 When the system asks you to confirm that you want to change the option, press 1 for Yes.

5 Enter the new value for the option and then press *. The system repeats the value you have entered.

Special dialing characters ———————————————

Some system options use special characters to control certain functions of the telephone system (for example, pause, hookswitch flash, and disconnect). Because your responses during the technician's conversation are limited to the keys on the touch-tone telephone, press the following digits to indicate the special dialing characters.

For example, to change the external line access string (system option 310) to 8 followed by a pause, you press 8#00.

Press these digits	To indicate these dialing characters	To represent
#00	(;)	A long pause (three seconds)
#01	(,)	A short pause (one second)
#02	(Q)	Disconnect
#03	#	
#04	*	
#05	(X)	The subscriber's extension
#06	(&)	Hookswitch flash
#07	(%)	Long hookswitch flash
#08	(P)	Pulse dialing
#09	(T)	Tone dialing

Setting the voice messaging system to perform ——— regular maintenance

To ensure optimum performance, the voice messaging system needs to shut down and restart regularly. You can instruct the voice messaging system to automatically shut down and restart once each day by specifying a scheduled maintenance time in the system options part of the technician's conversation. You need to schedule this maintenance during nonbusiness hours because the voice messaging system is unavailable for several minutes while it is shut down.

If you set the voice messaging system to perform database archives, it performs this task at the scheduled maintenance time as well.

See also —————————————————

To set a scheduled maintenance time

1   Access the technician's conversation.

2   When asked to select an action, press 5 to change system options.

3   When asked for the system option to change, press 241.

4   Enter the time that you want the voice messaging system to perform maintenance each day.

5   When asked, press 1 for A.M. or 2 for P.M. The voice messaging system confirms the time you have entered.

Protecting the voice messaging system's data —————

The voice messaging system's eight AA batteries provide the power to store the voice messaging system's files during a power outage. The voice messaging system automatically monitors battery voltage, and when the batteries need to be changed, it notifies the system manager in four ways:

- By emitting a short alarm every four seconds until the batteries are changed

- By flashing all of the voice messaging system's LEDs on and off in unison

- By warning the system manager at the beginning of the system manager's conversation

- By sending a message to the Operator mailbox

Change the batteries as soon as the voice messaging system indicates they are low to prevent the loss of valuable data.

The voice messaging system also provides a method to archive the database so that you can restore customized settings if there is a power outage and the batteries fail. You can set up the voice messaging system to check the database daily and archive it when either of the following conditions occurs:

- Any subscribers have been added or deleted.

- Any system options have been changed.

The voice messaging system automatically restores the archived database when it restarts. Restoring the database takes about five minutes.

See also ————————————

Not all data is saved in the archived database. When the database is restored:

- All menu keys are inactive.

- All nondefault voice fields are cleared.

- All mailboxes are reset to new, requiring subscribers to personalize their mailboxes again.

Use the system options part of the technician's conversation to set up the voice messaging system to archive the database. At the time you specify for regular maintenance, the voice messaging system archives the database.

Note To save everything in the system, perform a complete system backup.

To set up database archiving

1 Access the technician's conversation.

2 When asked to select an action, press 5 to change system options.

3 When asked for the system option to change, press 240.

4 When asked whether to turn system option 240 on or off, press 1 to turn it on or 2 to turn it off. Turning option 240 on enables the voice messaging system to archive the database at the scheduled maintenance time you specify for system option 241.

Changing the technician's password

The technician's password identifies you as the technician and gives you access to the technician's conversation. Because all system setup and maintenance is done in this conversation, it is essential not only that you remember the technician's password, but also that you prevent others from learning it.

The password is initially set to 8324, (TECH on keypads with letters). For the security of your customer's system, you must change the password regularly. Choose a password that you will not forget.

Tip To help you remember your password, use the same one on each voice messaging system you install or use a word that you associate with the customer.

See also

echnician's password

echnician's conversation.

d to select an action, press 6.

sword between four and ten
hen press ✳.

d to confirm the password,
password, followed by ✳.

If you forget your password

If you change your technician's password
and then forget it, you can reset it to 8324
(TECH) by accessing the voice messaging
system through the console.

To reset the technician's password to 8324 (TECH)

1 Connect to the voice messaging system
   by using Remote Maintenance.

2 At the Banner screen, press ESC.

3 Type Y to exit and disconnect all lines.

4 At the C:\VMAIL command prompt,
   type:

   VM TECHPASS

   and press ENTER.

5 To restart the voice messaging system,
   type:

   D:\START_VM.BAT

Learning call progress tones

The tones used to identify the status of a call vary from one telephone system to another. These tones include dial tone, busy tone, and ring back tone. Some telephone systems also provide disconnect (or reorder) tone and do-not-disturb tone. For the voice messaging system to correctly handle calls, it must recognize how each of these tones sounds with your telephone system. The voice messaging system learns these tones when you use the learn call progress tones feature.

The voice messaging system is preconfigured to understand all call progress tones with the DBS products. Normally there is no need for the voice messaging system to learn call progress tones. However, this information may be useful for troubleshooting purposes.

To learn call progress tones

1 Confirm that the transfer and recall sequences are indicated correctly in the system options.

2 Analyze tone delays by using the Tone Analysis Worksheet.

3 Adjust the tone delay system options if indicated by the worksheet.

4 Conduct the tests to learn call progress tones on the voice messaging system.

Note To program your telephone system, refer to the telephone system documentation.

Confirming transfer and recall sequences

For the voice messaging system to learn tones correctly, it must know the correct dialing sequences for these two functions.

To confirm the transfer and recall sequences

1 Determine the transfer and recall sequences for your telephone system. Your telephone system documentation provides this information.

2 Using three single-line telephones, verify that these sequences work correctly by simulating a transfer and a recall.

3 Access the technician's conversation.

4 Select action 5 to change system options.

5 Press 370 to confirm or change the transfer sequence.

6 Press 372 to confirm or change the recall sequence.

Analyzing tone delays

Different telephone systems vary in the length of time elapsed before providing a tone, as well as the duration of the tone itself. To ensure that the voice messaging system learns the correct tone and that it has enough time to learn it completely, you must first simulate each tone and then answer the questions in the Tone Analysis Worksheet.

Complete the worksheet before initiating the call progress tone tests on the voice messaging system.

To complete the worksheet, you need:

• Two analog extensions from the telephone system

• Two single-line sets with no forwarding, second-line ringing, or camp-on enabled

• A clock or watch that can measure seconds

Tone Analysis Worksheet

Task	Result
Simulate dial tone.	
1 Go off-hook on a single-line set.	
2 Note how long before the dial tone begins.	❑ Dial tone begins immediately. ❑ Dial tone begins after _____ seconds. Adjust system option 570.
3 Note whether you hear dial tone for a minimum of five seconds.	❑ Dial tone lasts five seconds. ❑ Dial tone lasts less than five seconds. Adjust the telephone system programming.
Simulate ring back tone.	
1 Go off-hook on a single-line set.	
2 Dial the other telephone.	
3 Note how long before the ring back tone begins.	❑ Ring back tone begins immediately. ❑ Ring back tone begins after _____ seconds. Adjust system option 571.
4 Note whether you hear the ring back tone for a minimum of six rings.	❑ Ring back tone lasts six rings. ❑ Ring back tone lasts fewer than six rings. Adjust the telephone system programming.
Simulate busy tone.	
1 Go off-hook on a single-line set. Leave it off-hook.	
2 Go off-hook on the second single-line set, and dial the busy extension.	
3 Note how long before the busy tone begins.	❑ Busy tone begins immediately. ❑ Busy tone begins after _____ seconds. Adjust system option 572.
4 Note whether you hear the busy tone for a minimum of six tones.	❑ Busy tone lasts six tones. ❑ Busy tone lasts fewer than six tones. Adjust the telephone system programming.

Task	Result
Simulate disconnect tone.	

1 Go off-hook on a single-line set and dial the other extension.

2 Answer the ringing set, and then immediately go on-hook.

3 Note how long before the disconnect tone begins.
   ❏ Disconnect tone begins immediately.
   ❏ Disconnect tone begins after _____ seconds. Adjust system option 573.

4 Note whether you hear the disconnect tone for a minimum of five seconds or six tones.
   ❏ Disconnect tone lasts five seconds or six tones.
   ❏ Disconnect tone lasts less than five seconds or fewer than six tones. Adjust the telephone system programming.

| **Simulate do-not-disturb tone.** | |

1 Activate the do-not-disturb mode on the first single-line set and leave it on hook.

2 From the second single-line set, dial the first extension.

3 Note how long before the do-not-disturb tone begins.
   ❏ Do-not-disturb tone begins immediately.
   ❏ Do-not-disturb tone begins after _____ seconds. Adjust system option 574.

4 Note whether you hear the do-not-disturb tone for a minimum of six tones.
   ❏ Do-not-disturb tone lasts six tones.
   ❏ Do-not-disturb tone lasts fewer than six tones. Adjust the telephone system programming.

Tip If you will be setting up the voice messaging system for other sites with the same telephone system, programmed identically, you can reuse the results recorded on the Tone Analysis Worksheet.

Adjusting tone delay system options

If there is a delay before any of the tones, you must adjust the appropriate system option so that the voice messaging system waits before learning the tone.

After you adjust these system options, you can initiate the learn call progress tone tests.

To adjust tone delays

1 Access the technician's conversation.

2 Select action 5 to change system options.

3 Enter the three-digit system option number indicated on the Tone Analysis Worksheet. The system tells you the current setting.

4 To confirm that you want to change the option, press 1 for Yes.

5 Enter the number of seconds of delay before the tone begins and then press *. The system repeats the value you have entered.

Conducting the tests to learn call progress tones

After completing the Tone Analysis Worksheet and, if necessary, adjusting the tone delays, you can initiate the call progress tone tests. There are two modes: manual and automatic.

Whether you use the manual mode or automatic mode, it takes only a few minutes and does not require you to exit the voice messaging system.

Notes

• While the tests are in progress, the voice messaging system does not answer any calls. The operator must answer all calls during the test.

• If you adjust any parameters during the test, the technician's conversation allows you to reset them to the defaults.

Two modes for testing

Mode	Advantages and disadvantages
Manual	The tests must be run on-site, using two extensions.
	The tests are not affected by telephone system programming.
Automatic	The tests can be run from off-site.
	The tests do not work with some telephone system programming, such as call forwarding and camp-on options. You must disable these settings before conducting the tests.
	The do-not-disturb tone cannot be learned.

Using manual mode

To use the manual mode, you need access to two telephone extensions of the telephone system. You call the voice messaging system from one extension—the "first telephone"— and the tests use it and the other extension—the "second telephone"— to learn each tone.

To use manual mode

1 From the first telephone, access the technician's conversation.

2 Select action 7 (learn call progress tones).

3 Select action 3 to use manual mode.

4 The voice messaging system tells you if any voice mail ports are active, and you can either try again later or tell the voice messaging system to disconnect all calls.

   When all voice mail ports are clear, the voice messaging system begins the test.

5 When prompted, select action 4 (dial tone), 5 (ring back tone), 6 (busy tone), 7 (disconnect tone), or 8 (do-not-disturb tone), and then follow the appropriate procedure below.

To learn the dial tone

Wait while the voice messaging system learns the dial tone.

To learn the ring back tone

1 When prompted, enter the extension of the second telephone, and then press ✳. The voice messaging system confirms the extension.

2 Do not answer the second telephone when it rings.

3 Wait while the system learns the ring back tone.

To learn the busy tone

1 When prompted, enter the extension number of the telephone you are using, and then press ✳. The voice messaging system confirms the extension.

2 Wait while the system learns the busy tone.

To learn the disconnect tone

1 When prompted, enter the extension of the second telephone, and then press ✳. The voice messaging system confirms the extension.

2 Answer the second telephone when it rings.

3 Wait two seconds.

4 Disconnect the second telephone, and press 1 on the first telephone.

5 Repeat steps 2 through 4 twice, as prompted.

To learn the do-not-disturb tone

1 On the second telephone, activate the do-not-disturb mode.

2 On the first telephone, select the do-not-disturb test.

3 When prompted, enter the extension of the second telephone and then press ✳.

4 Confirm the extension.

5 Press 1 to indicate that the second telephone is in do-not-disturb mode.

6 Wait while the voice messaging system learns the do-not-disturb tone.

Note Your customer's telephone system may not provide a do-not-disturb tone.

Using automatic mode

To use automatic mode, you indicate the extensions of the voice mail ports, and the voice messaging system runs each test, informing you as tests begin and end.

Notes

- Do not use a hunt group pilot extension for the tests. Use the actual voice mail port extensions instead.

- Your telephone system may not provide a disconnect tone. If not, the voice messaging system will report that the disconnect tone could not be learned. You can ignore this message.

To use automatic mode

1 Access the technician's conversation.

2 Select action 7 (learn call progress tones).

3 Select action 2 to use automatic mode.

4 Confirm the current voice mail extensions. If they are incorrect or haven't been entered, enter each extension, followed by *.

5 The voice messaging system tells you if any voice mail ports are active, and you can either try again later or tell the voice messaging system to disconnect all calls.

   When all voice mail ports are clear, the voice messaging system begins the test.

6 To skip any one of the tests, press * as the conversation announces that the test is beginning.

Handling unlearned tones

If any of the tones cannot be learned, check
the following:

- Verify that you have indicated actual
  extensions, and not a hunt group pilot
  number.

- For automatic mode, verify that you
  have identified the extensions correctly
  and that they correspond to the correct
  port.

- For automatic mode, verify that the
  telephone system does not have call
  forwarding enabled.

g system information ——————————

the setup and maintenance
form through the technician's
you can also check important
bout the system.

The system information summary gives you
the following information:

- Software version

- System manager's password

- Telephone system code

- Application method

- Number of mailboxes

- Operator's extension

- Operator mailbox ID

- Fax extension

- Fax notification status (on or off)

Tip The System Setup Worksheet indicates all of the current settings. The "Check system information" action lets you confirm the settings listed on your worksheet.

To check system information

1   Access the technician's conversation.

2   When asked to select an action, press 0 to listen to the summary information.

Testing the voice messaging system ——————

Now that you have initialized the system, you must test it for proper operation. Use any extension connected to the telephone system to perform the following eight tests:

Test	Correct result	Solution for incorrect result
Answering		
Call the voice messaging system extension from another extension. Then call the voice messaging system's telephone number from an external line.	The voice messaging system answers on the first ring and plays the opening greeting.	• Verify that the telephone system is providing line voltage. (Test by hooking up a telephone to the voice mail port and dialing that extension.) Adjust the telephone system programming, if necessary. • Verify that system option 120 (rings to answer) is set to answer on the first ring. • Adjust the lengths of ring-on and ring-off settings with system options 381 and 382.
Automated attendant		
Call the voice messaging system. During the opening greeting, enter a valid extension number. Check several extensions.	The extension rings.	• Verify that call transfer is turned on by checking system option 170. • Verify the transfer initiate sequence by checking system option 370. • Adjust the hookflash time with system option 320.

Test	Correct result	Solution for incorrect result
Port hunting		
Using two or three people, call the voice messaging system from two or three extensions simultaneously. Have callers hang up during the greeting.	Each caller reaches the voice messaging system.	If the answering test is successful, check the telephone system programming. If the answering test is not successful, follow the solutions for that test.
Operator transfers		
Call the voice messaging system. During the greeting, press 0.	The operator's console rings regardless of the actual physical extension number used by the telephone system.	• Confirm that the operator's extension is set correctly. • Follow the solutions for the automated attendant test.
Disconnect		
Call the voice messaging system. During the greeting, enter a valid extension number. Let the extension ring.	If the automated attendant is enabled, the voice messaging system places you in the voice mailbox after ringing the extension. If the automated attendant is not enabled, the voice messaging system places you in the voice mailbox immediately. In both cases, you hear "Extension <number> is not available." Hang up while the voice messaging system is speaking.	Reinitiate the test to learn the disconnect tone.

Test	Correct result	Solution for incorrect result
Message notification		
Call the voice messaging system. Enter the system manager's extension. When you are transferred to the voice mailbox, leave a message that is longer than six seconds.	If your customer's telephone system supports message waiting indicators or message delivery to the extension, the extension receives message notification within one minute.	• Verify that you have a dial-out port by checking system option 130. • Verify that the owner of the test mailbox has completed the enrollment conversation. (The voice messaging system does not send message notification until the enrollment conversation has been completed.) • Verify that you have set the correct message indication on and off codes by checking system options 330 and 331.
Call forwarding		
• Simulate call forwarding on no answer by calling another extension and not answering it. • Simulate call forwarding on busy by taking an extension off hook and then calling it.	The voice messaging system forwards the call to the voice mailbox after a few rings or a busy signal. You hear "Extension <number> is not available" on no answer or busy as appropriate for the telephone system.	Check both the telephone system and the extension programming.

st	Correct result	Solution for incorrect result
x detection		
sing a second fax machine, nd a two-page test cument to the voice essaging system. The ding fax machine must in "automatic" mode so t it begins transmitting a tone as soon as the ice messaging system wers.	The voice messaging system recognizes the fax tone from the sending machine and automatically transfers the call to the fax extension.	• Verify that you have designated the correct fax extension. • Adjust CNG tones with system options 480 through 492.

Enhancing the voice messaging system's performance

The voice messaging system comes with either two or four hours of available recording space and either two or four ports connected to the telephone system. You can upgrade the voice messaging system to four hours of recording time and to four ports without changing equipment.

Note Four-port systems require four hours of recording space. If your customer's system is set up for two hours of recording space and you upgrade to four ports, you must also upgrade to four hours of recording space.

To upgrade the voice messaging system to four hours of recording space or four ports

1 Determine the system identification number for the voice messaging system unit. You can do this in two ways:

- Refer to the FCC/UL sticker on the back of the voice messaging system. The serial number is the system identification number.

- Access the system options part of the technician's conversation and select option 600. The voice messaging system gives the system identification number.

2 Contact Sales Support and arrange the terms of the upgrade. Give Sales Support the system identification number.

3 Record the system upgrade number Sales Support provides. If you upgrade both recording space and number of ports, Sales Support provides two numbers.

4 Access the system options part of the technician's conversation.

5 Do one or both of the following:

- To increase recording space, enter 601 to indicate the option to change.

- To increase the number of ports, enter 602 to indicate the option to change.

6 Enter the system upgrade number when prompted.

Note After you enter a system port upgrade number for system option 602, the voice messaging system restarts automatically when you exit the technician's conversation or the technician's screen.

Training the
system manager

Training the system manager ─────────

You need the following items for system manager training:

❏ Copies of the completed Setup Information Record (in the *System Manager's Guide*) and System Options Worksheet (from Appendix A, "Changing system options" of this guide). If you made changes to the call progress settings, you also need a copy of the completed Call Progress Options Worksheet from Appendix A.

❏ The voice messaging system unit with two voice mailboxes set up for the training session.

❏ A working telephone set for the operator.

❏ A working extension telephone dedicated to the training session.

❏ The *System Manager's Guide*.

The system manager needs to understand telephone system and voice messaging system concepts, terminology, and procedures. Pace your training session according to the needs and experience of the system manager. Keep in mind that successful completion of the training session instills confidence in the system manager and ensures the success of the installation. Include the following topics in the training session.

❏ **System orientation**
Plug in the voice messaging system. Familiarize the system manager with the voice messaging system, pointing out the major visible system components. If the site uses the automated attendant, have the system manager call the voice messaging system to hear it answer.

stem power

plain that the voice messaging system
s no on/off switch. If the site uses the
itomated attendant, have the system
anager unplug the voice messaging
stem and leave it unplugged until he
she is ready to record an opening
eting. Show the battery compartment
he system manager. Explain that the
ce messaging system automatically
onitors battery voltage and notifies
e system manager and the Operator
ilbox when the batteries must be
inged. The voice messaging system
s eight AA batteries to store the voice
essaging system's files during a power
ure. Remind the system manager to
e the voice messaging system
ged in while changing the batteries.

**ap ...formation Record and System
ions Worksheet**

iew the completed Setup Informa-
1 Record and the System Options
ksheet with the system manager.
lain key concepts such as personal
s and valid extension numbers.

❏ **Easy message access**
If the telephone system supports easy
message access, explain how to activate
it at individual telephones. Let the sys-
tem manager practice activating easy
message access.

❏ **Call forward to personal greeting**
If the telephone system supports call
forward to personal greeting, explain
how to activate it at individual tele-
phones. Let the system manager prac-
tice activating this feature at the
demonstration extension.

Note If applicable to the telephone
system, mention that a power failure or
unplugging an extension may deactivate
easy message access or call forwarding.
Explain that the system manager needs
to restore these features in these two
cases.

❏ **Subscriber-to-subscriber messaging**
If you have configured the voice messag-
ing system for subscriber-to-subscriber
messaging, explain that subscribers
can leave two-way messages without
entering a personal ID. The voice
messaging system automatically identi-
fies the sender of the message.

❑ **Manual transfer to voice mail**
Ask the system manager to plug in the voice messaging system. Explain the manual transfer procedure both from the operator's telephone set and the demonstration extension. Let the system manager practice manual transfers.

Note If the site uses the automated attendant, unplug the voice messaging system when transfer training is complete. Instruct the system manager to leave the voice messaging system unplugged until he or she is ready to record a company greeting and customize the system.

❑ **Database archiving and system backup**
Explain the database archiving and system backup:

- Tell the system manager what is archived and how often, and that the voice messaging system automatically restores the archived database if power is lost. Explain to the system manager the benefits of an archived database when recovering system data.

- Explain that the system backup provides a more complete backup, but requires more time to complete.

❑ **System handoff**
Answer any questions the system manager may have. Conclude the training session by emphasizing that The voice messaging system is quick to set up and easy to use. Make sure the system manager knows who to call if he or she has questions during the customization or activation process.

Remote Maintenance

Remote Maintenance overview

The Remote Maintenance software allows you to troubleshoot and maintain a customer's the voice messaging system from a second, support computer. On the support computer's monitor, you can see the voice messaging system screens that show how the system was set up through the technician's and system manager's conversations. You can connect the voice messaging system to the support computer in one of two ways:

- Direct Connect, connecting the support computer directly to the voice messaging system with a serial cable

- Modem connection, allowing you to connect from a remote site

With either type of connection between the voice messaging system and the support computer, you can perform the following tasks by using Remote Maintenance:

- View and update the voice messaging system

- View and download the voice messaging system's files

- Create reports

Roles of the support computer and the voice messaging system in Remote Maintenance

Support computer

- Used to troubleshoot problems on the voice messaging system

- Has the remote version of the Remote Maintenance software installed

- Cannot have voice messaging software loaded

The voice messaging system

- Runs the voice messaging system

- Has the necessary Remote Maintenance software already installed

Overview of tasks to use Remote Maintenance

1 Connect to the voice messaging system, by using either Direct Connect or a modem.

2 Install the Remote Maintenance software on the support computer.

3 Set up the support computer's phone book.

4 Conduct the Remote Maintenance session.

Connecting to the voice messaging system by ——— using Direct Connect

Requirements for connecting by using Direct Connect
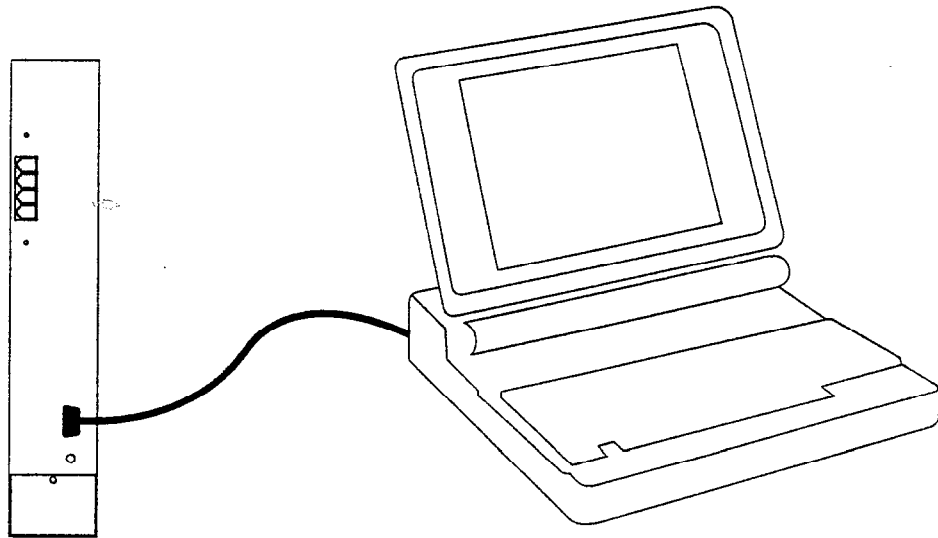
The voice messaging system

- ❏ Serial cable

- ❏ Null modem adapter

- ❏ 9-to-25 pin adapters, as needed for the serial connection

Support computer

- ❏ One available serial port

- ❏ VGA monitor

- ❏ Remote version of Remote Maintenance 6.1j installed

- ❏ Direct Connect phone book entry

Connecting to the voice messaging system —— with a modem

Requirements for connecting with a modem

The voice messaging system

❏ A 100% Hayes-compatible external modem, 9,600 baud or faster connected to the voice messaging system through a serial cable

❏ An analog telephone line connected to the modem

Support Computer

❏ A 100% Hayes-compatible modem, 9,600 baud or faster installed

❏ An analog telephone line connected to the modem

❏ A VGA monitor

❏ Remote version of Remote Maintenance 6.1j installed

❏ Remote Maintenance phone book set up for the voice messaging system

Notes

• MS-DOS with no mouse driver installed is the most reliable operating system configuration for the support computer.

• If the voice messaging system is accessed sometimes by modem and sometimes by Direct Connect, restart the voice messaging system after connecting and disconnecting the modem. At startup, the voice messaging system looks for a modem and, if none is found, it initializes for Direct Connect.

• Industry standard modems are not compatible with all telephone systems (PBXs). If you experience difficulty establishing a connection, connect the modem to a direct public telephone network line.

Warning! Using the wrong transformer damages the modem. Connect only the transformer supplied with the modem.

See also ——

To connect an external modem to the voice messaging system

1 Mount the modem bracket on the wall next to the voice messaging system.

2 Insert the modem into the bracket, so that the connections face the voice messaging system.

3 Connect the serial cable to the modem and the voice messaging system.

4 Connect the telephone line to the modem and the telephone system.

5 Plug in the modem to an electrical outlet.

6 Turn on the modem.

7 Plug in the voice messaging system to an electrical outlet.
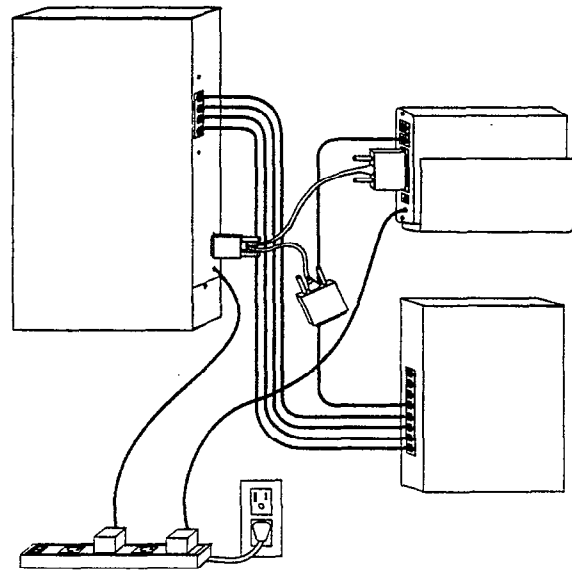
Installing the Remote Maintenance software on ──── the support computer

Before installing the Remote Maintenance software, make sure the support computer meets the requirements described on pages 84 and 85.

Note The voice messaging system uses version 6.1j of Remote Maintenance. The support computer can use version 6.1j or higher.

1 Determine which COM port the modem uses. You supply this information during the installation.

2 At the command prompt, go to the drive where you want to install the Remote Maintenance software (for example, C:\).

3 Insert the Remote/Dealer Disk in drive A and type A:INSTALL. Press ENTER.

4 Follow the on-screen prompts.

The installation process creates a REMOTE directory (for example, C:\REMOTE). Remote Maintenance is installed in this directory.

See also ────────────

Disabling the mouse

You cannot use a mouse on the support computer during Remote Maintenance sessions on the voice messaging system. Disable the mouse by using the following procedure.

Note If you installed Q release version Q20272 (Dealer Remote Maintenance 6.1j) on the support computer, Remote Mouse Operation is already set to "No." The Q release number appears on the disk.

To disable the mouse

1 From the Main menu, press F9 to choose "Options Menu."

2 Press F1 to choose "Hardware Menu."

3 Press the SPACEBAR to change "Remote Mouse Operation" to "No."

4 Press F10 to save your changes.

The remote version of Remote Maintenance is a terminate-and-stay-resident (TSR) program. You must load it into the support computer's memory before you can use it. You can run other programs on the computer when you are not using Remote Maintenance and access it as needed by pressing a simple key combination.

You do not need to reload Remote Maintenance unless you restart the computer or use the SUNLOAD command.

Actions for loading, unloading, accessing, and exiting Remote Maintenance

To do this	Place the cursor here	Perform this action
Load the program	The root directory of drive C	Type RR. Press ENTER.
Access the Main menu	Any operating system directory Or Any screen in Remote Maintenance	Press ALT+LEFT SHIFT.
Exit to the operating system	Any screen in Remote Maintenance	Press F10.
Unload the program from the computer's memory	The directory where the Remote Maintenance software is located; usually this is C:\REMOTE	Type SUNLOAD, and press ENTER. Or Turn off the computer.

Setting up the support computer's phone book

Before making a connection, you must create a phone book entry for the support computer. This phone book entry stores information you need to connect to each voice messaging system site that you support.

Information needed to make a connection

- The COM port, baud, and modem type settings used by the support computer

- The modem phone number (for modem connections only), login, and password

Overview

The following steps describe the general procedure for setting up a support computer's phone book. Step 1 is required. Step 2 is optional.

1 **Set up the default phone book entry.**
   This entry stores the basic communications settings used by the support computer. When you create a new entry, all settings in the default phone book entry are copied to the new entry.

2 **Create a phone book entry for each voice messaging system site.**
   For each voice messaging system site, create a phone book entry that stores the information needed to connect with that voice messaging system site.

To configure the default phone book entry

1 From the Main menu, press F2 to choose "Call Menu."

2 Press F3 to choose "Phone Book Menu."

3 Select "Default" from the Phone Book menu and press F3.

4 Press PAGE DOWN to move to the COM port section of the screen.

5 Verify that the number in the "Port" field is the same as the COM port you specified during the software installation. To change the value, press P.

6 To choose the modem speed (baud), press B until the correct modem speed appears.

- If you are using a modem, choose "9,600."

- If you are using Direct Connect, choose "19,200."

7 To move to the modem section, press M.

8 Select the modem type the support computer uses.

- If your modem is not listed, select "Hayes Extended."

- If you are using Direct Connect, select "Direct Connect."

Press ENTER.

9 Press F10 to save your changes.

To create a phone book entry for the voice messaging system

1 From the Main menu, press F2 to choose "Call Menu."

2 Press F3 to choose "Phone Book Menu."

3 Press F1 to begin adding an entry.

4 Type the name for this entry and press ENTER.

5 Change any information that is specific to the voice messaging system site.

6 Press F10 to save your changes.

Note The "Login" and "Password" fields must be identical to those on the voice messaging system's phone book entry. These are set to "support" and "voice" respectively (all lower case) by default.

Conducting a Remote Maintenance session ──────

Decide which of the methods below best supports your situation. Then follow the related procedure to make a connection.

Three methods for connecting with the host computer

Call menu
Use this method if you connect to multiple voice messaging systems and have configured a separate phone book entry for each.

Voice switch
Use this method when the voice messaging system's modem cannot be dialed directly (for example, if an operator must transfer the call to the modem's extension). A telephone handset must be connected to the support computer's modem. This option is not available with Direct Connect.

Quick connect
Use this method if you are supporting only one voice messaging system or if you prefer to type a telephone number each time you connect.

Note If the voice messaging system is sometimes accessed by modem and sometimes by Direct Connect, you must restart the voice messaging system after connecting or disconnecting the modem. As part of start-up, the voice messaging system looks for a modem and, if none is found, it initializes for Direct Connect.

──────────────────────────

To call the voice messaging system by using the Call menu method

1 From the Main menu, press F2 to choose "Call menu."

2 Select the phone book entry of the host computer you want to call and press F1.

3 Wait about 30 seconds for a connection. The voice messaging system's Banner screen appears.

See also ─────────────────────

To call the voice messaging system by using the Voice switch method

1 Using a telephone connected to the support computer, dial the company telephone number for the voice messaging system you are connecting with.

2 When you have connected, ask to be transferred to the modem extension and press F7 immediately (do not wait for modem tone) to prepare your computer's modem to communicate with the voice messaging system's modem.

3 Wait about 30 seconds for a connection. The voice messaging system's Banner screen appears.

To call the voice messaging system by using the Quick connect method

1 From the Main menu, press F1 to select "Quick connect."

2 Type the voice messaging system's telephone number in the "Enter telephone number" field. Include any special dialing characters. For Direct Connect, leave this field blank. Press ENTER.

3 Wait about 30 seconds for a connection. The voice messaging system's Banner screen appears.

Suspending and resuming a Remote Maintenance session

Suspending a Remote Maintenance session allows you to use other programs on the support computer without disconnecting from the voice messaging system. For example, during a Remote Maintenance session, you might want to view files on the support computer's hard drive, and then resume the session.

Important points about suspending a session

- Always remember to resume a suspended session and properly disconnect from the voice messaging system. Failing to do so might cause the voice messaging system to restart abruptly.

- You continue to incur long-distance charges if connected by a long-distance call.

- During a suspended session, the support computer no longer controls the voice messaging system.

To suspend or resume a Remote Maintenance session

1 From the Main menu, press F8 to choose "Support menu."

2 Press F1 to choose "Suspend/Resume."

See also ————————————

Ending a connection

You must disconnect properly from the voice messaging system. If you do not disconnect by using the procedure below, one of the following occurs:

- The voice messaging system's telephone line is not released.

- The voice messaging system abruptly restarts. Callers using the voice messaging system are disconnected.

To disconnect from the voice messaging system

From the Main menu, press F6 to choose "Hangup."

Backing up and restoring the voice messaging system

The voice messaging system's backup utility provides a way to store the entire voice messaging system, including all messages, greetings, and menu keys. This is a complete backup, different from the database archive. It takes as much as two hours to complete at a 9600-baud rate and requires a support computer connected to the voice messaging system unit. So you might do complete backups less frequently.

It is recommended that you back up the system completely after greetings are recorded, menu keys are set up, and subscribers are enrolled. Thereafter, perform backups after making significant changes to any of these parts of the system. Perform database archives on a more regular basis to save other custom settings, such as system options.

See also

king up and

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Remote

ook entry.

ging system.

iging system.

To start the voice messaging system's backup utility

1 Connect to the voice messaging system using Remote Maintenance.

2 At the Banner screen, press ESC.

3 Type Y to exit and disconnect all lines.

4 To return to Remote Maintenance, press ALT+LEFT SHIFT.

5 To hang up, press F6.

6 To exit Remote Maintenance, press F10.

7 At the support computer's command prompt in the directory where Remote Maintenance is installed, type:

BACKUP.BAT

8 Choose a command from the Backup and Restore menu:

- For "Backup system," press 1, then press ENTER.

- For "Restore system," press 2, then press ENTER.

- For "Configure," press 3, then press ENTER.

- For "Exit," press X, then press ENTER.

To create a backup phone book entry

1 Access the backup utility.

2 From the backup utility's Main menu, type 3 to select "Configure" and press ENTER.

3 The current phone book entry settings appear, and you are asked if you would like to change them. If yes, type Y and press ENTER.

4 Each setting is presented with on-screen Help about choosing the correct setting. For each setting, type the correct value or, if you do not want to change it, type N and press ENTER.

5 Confirm your new settings as prompted. You are returned to the utility's Main menu.

Note You only need to create a backup phone book entry before you back up the voice messaging system the first time and if you need to make changes to any phone book settings.

To perform a system backup

1 Access the backup utility.

2 From the backup utility's Main menu, type 1 to select "Backup System" and press ENTER.

3 When prompted, type the complete path of the directory on the support computer into which the system will be backed up and press ENTER.

4 When asked to confirm, type Y if the path for the backup directory on the support computer is correct, and press ENTER. The backup utility connects to the voice messaging system and copies all voice messaging system files to the backup directory.

To restore a system backup

1   Access the backup utility.

2   From the backup utility's Main menu,
    type 2 to select "Restore System" and
    press ENTER.

3   When prompted, type the complete
    path of the directory where the backup
    voice messaging system files are saved
    on the support computer and press
    ENTER.

4   When asked to confirm, type Y if the
    path for the backup directory is correct
    and press ENTER. All voice messaging
    system files are then copied from the
    backup directory to the voice messaging
    system.

Transferring files ———————————

You can transfer a copy of a file from the voice messaging system to the support computer during a Remote Maintenance session. The original file remains on the voice messaging system.

During most file transfers, the voice messaging system continues to answer calls. However, to transfer or view any of the following files, shut down the voice messaging software and go to the command prompt:

- Database files (AV*.* files)

- Executable files (*.EXE)

- The current day's REPLOG file (REPLOG.PRN)

Warning! If changes are made to any of the voice messaging system's files, the system will not restart unless the system's file list is updated. If you edit a file on the voice messaging system, go to the command prompt and type D:\ and press ENTER. Then type VMUTIL MAKELIST and press ENTER.

Tip To edit a file, use the voice messaging system's TED utility rather than transferring the file to the support computer. For details on the TED utility, see Appendix C, "TED Utility."

When you might transfer files

Direction of transfer	Purpose
From the voice messaging system to the support computer	To print reports
From the support computer to the voice messaging system	• To replace a file containing a defect with one that corrects the defect • To install custom recordings

Task overview

1 Set the file transfer options.

2 Change the directory.
If necessary, change the directory on the support computer or the voice messaging system.

3 Transfer the files at the File Menu screen.
Use the File Menu screen to transfer the files from the voice messaging system to the support computer.

Setting the file transfer options

There are three file transfer options that affect how file transfers are conducted.

File compression
Set this option to "Off" because the modem already compresses the files.

Overwrite verify
When this option is set to "On," you are prompted to confirm a file transfer if the transferred file replaces an existing file with the same name.

Overwrite duplicate files
This option allows you to control whether the system replaces an existing file with a transferred file that has the same name. The possible settings are "Always" (always replaces an existing file with a transferred file), "Older" (only replaces an existing file if it is older than the transferred file), and "Never" (never replaces the existing file).

To set the file transfer options

1 From the Main menu, press F3 to view the list of all files.

2 Press F2 to choose "File Menu."

3 Press F8 to choose "Options."

4 Set each file transfer option as needed by selecting it and pressing the SPACE BAR.

5 Press F10 to save your changes.

To change the directory

1 Place the cursor on the side of the File Menu screen where you want to change the directory.

2 Press F2 to choose "Menu."

3 Press F3 to choose "Change Drive/ Directory."

4 Type the name of the drive and directory you want to change to. Press ENTER.

To transfer files

1 From the Main menu, press F3.

2 Go to the directory where the source files exist.

3 Place the cursor on the side of the screen where the source files appear.

4 Select each file to be transferred by placing the cursor on the file name and pressing the SPACEBAR.

5 Verify that the arrow centered between the two sides is pointing toward the destination side.

6 Verify that the directory displayed on the destination side is where you want to transfer the files.

7 Verify that the "Files selected" field at the bottom of the screen displays the correct number of files to be transferred.

8 Press F1 to start the transfer.

9 Verify that the transfer is complete by confirming that the "Percent complete" field displays "100%."

The File Menu screen is where you initiate file transfers.

```
| VM/Remote  6.1j                    COPYRIGHT 1986,93 TRITON TECHNOLOGIES,INC. |
| Remote              ACTIVE-FSP    JOHNSON CORP.              4:36:09 PM  0:00:00 |
```

A ——— Local: D:\REMOTE*.*   ← Host: C:\VMAIL*.*

```
| ^ | .                <DIR>    9-05-97 16:32 | ^ | .                <DIR>    7-05-96 16:32 |
|   | ..               <DIR>    9-05-97 16:32 |   | ..               <DIR>    7-05-96 16:32 |
|   | AVENTK1 .AVK     24576    9-06-97  8:48 |   | HOSTMENU EXE     152560  10-27-97 11:53 |
|   | AVENTK2 .AVK     24576    9-06-97  8:48 |   | OPTIONS  EXE      28016  10-05-97 11:54 |
|   | AVENTK3 .AVK      6656    9-06-97  8:48 |   | PHONE    EXE      39024   7-24-97 11:55 |
|   | AVENTK4 .AVK       512    9-06-97  8:48 |   | PRINTO   EXE      22208  10-03-97 14:09 |
|   | AVMSGK1 .AVK      4608    9-06-97  8:48 |   | REPLOG6  .9       15335   9-06-97 16:34« |
|   | AVMSGK2 .AVK      4096    9-06-97  8:48 |   | SESSION  CFG        126   7-23-97 11:58 |
|   | AVGOGMK .AVK      1024    9-06-97  8:48 |   | SESSION  KM0        880   7-18-97 11:37 |
|   | REPLOG28.8        5221    8-28-97  8:48 |   | SESSION  KM1        880   7-22-97 17:39 |
|   | REPLOG5 .9       15335    9-05-97 15:38 |   | SESSION  MDM      39600   9-04-97 10:51 |
|   | DEBUG              670    9-06-97  8:49 |   | SESSION  RMP        146   3-22-97 15:43 |
|   | REPLOG  .PRN     14925    9-05-97 15:19 |   | SESSION  UKS      16800   8-27-97 11:55 |
| U | AVMEMK  .AVK      7168    9-06-97  8:49 | U | SUNLOAD  EXE      16304   8-27-97 11:25 |
```

```
Free Space:  26189824
Files Selected:      0 Bytes:          0
F1 Transfer F2 Menu F10 Exit      ↑ ↓→←      Tag=⌐      Search = Insert
```

A Local side
The left side of the File Menu screen lists the directory and files on the support computer.

B Host side
The right side of the File Menu screen lists the directory and files on the voice messaging system.

C The destination arrow
This arrow points to the destination side of the screen. The arrow changes direction depending on the side of the screen where you place the cursor.

D The source files
The source files are always on the side of the screen where you place the cursor. This list contains the files you want to transfer. In this example, the source files are on the right because the destination arrow points to the left.

E The destination files
This is the directory where the files are being transferred to. Do not place the cursor here. In this example, the destination files are on the left.

Managing files

From the File Menu screen, you can do the following tasks for either the support computer or the voice messaging system:

- Delete files
- View files
- Make new directories

To delete files

1 At the File Menu screen, place the cursor on the name of the file you want to delete and press ENTER.

2 Press F2 to display the File menu.

3 Press F6 to choose "Delete files."

4 Follow the on-screen prompts to delete the file.

See also

View files

At the File Menu screen, place the cursor on the name of the file you want to view and press ENTER.

Press F2 to display the File menu.

Press F5 to choose "View files." The contents of the file scroll. Press the SPACEBAR to pause or restart scrolling.

To make a new directory

1 At the File Menu screen, place the cursor on the side of the screen where you want to create a new directory.

2 Verify that the drive and directory displayed is where you want to create a new directory.

3 Press F2 to display the File menu.

4 Press F4 to choose "New directory."

5 Type the name of the new directory and press ENTER.

6 Press F10 to exit the file.

Restarting the voice messaging system remotely

At times, you may need to restart the voice messaging system during a Remote Maintenance session. For example, if the voice messaging system is not answering calls, and no one is available to restart the voice messaging system, you can use Remote Maintenance to bring the system back on line.

When you restart the voice messaging system remotely, the Remote Maintenance connection is ended. Wait about two minutes for the voice messaging system to restart before reestablishing a connection.

Note These steps are necessary only if you are not at the site where the voice messaging system is located. To restart the voice messaging system locally, simply unplug it, wait ten seconds, and plug it back in.

To restart the voice messaging system from the support computer

1 Shut down the voice messaging system and go to the voice messaging system's command prompt.

2 Press ALT+LEFT SHIFT to access the Remote Maintenance Main menu.

3 Press F8 to choose "Support Menu."

4 Press F3 to choose "Host Reboot."

5 Type Y and press ENTER to confirm. The voice messaging system restarts and the connection is ended.

6 Press F10 to exit.

Tracking Remote Maintenance sessions with the ——— billing log

You can track information about Remote Maintenance sessions by using the billing log feature. The billing log stores the following information about each connection:

- The name and telephone number of the voice messaging system

- The identification code of the person who conducted the session

- Comments about the session

- The date the call occurred

- The start time, end time, and elapsed time of the connection

Tip Since the billing log is a text file, you can import this file into database, spreadsheet, or word processing programs to format or examine the data.

Characteristics of the billing log file

- The file is a text file consisting of fixed-length records.

- Each record contains ten fields that store information about a single Remote Maintenance connection.

- Each record is separated by a carriage return.

- The file is stored in the Remote Maintenance directory.

Fields in each billing log record

Field	Description
Operator ID	Three alphanumeric characters that identify who conducted the Remote Maintenance session.
Name	The name of the voice messaging system as it appears in the support computer's phone book entry.
Description	The field used to keep notes about the session. You can type up to 27 characters.
Telephone number	The voice messaging system's telephone number as it appears in the support computer's phone book entry.
Direction of the connection	The entry "ORIG," indicating that the support computer made the call.
Date	The date the call was made in mmddyy format.
Day of week	The weekday the call was made: 1 = Monday, 2 = Tuesday, and so on.
Start time	The time the connection was made.
End time	The time the connection ended.
Elapsed time	The total time of the Remote Maintenance connection.

Task overview

The following explains the general procedure for tracking Remote Maintenance sessions with the billing log. Refer to the detailed procedures for specific instructions on how to use the billing log.

1 Turn on the billing log.
While the billing log is on, a new record is added to the billing log each time you make a connection with the voice messaging system.

2 Update the billing log file when you disconnect from the voice messaging system.
Each time you disconnect from the voice messaging system, you are prompted to update the record that contains information about that connection.

3 Turn off the billing log.

4 View the billing log or copy it to the support computer for viewing in another program.
Remote Maintenance can display the billing log or copy the file to the support computer for viewing in a database, spreadsheet, or word processing program.

To turn on the billing log

1 From the Main menu, press F8 to choose "Support menu."

2 Press F2 to choose "Billing log."

3 Type a name or use the default name, SESSION.LOG, for the billing log file. Then press ENTER.

4 Type a three-character operator ID.

5 Make a connection with the voice messaging system.

To update the billing log when you end a connection

1 Press F6 to disconnect from the voice messaging system.

2 When prompted, update the "Operator ID," "Name," and "Description" fields as needed.

Tip You can type comments about the session in the "Description" field.

To turn off the billing log

1 From the Main menu, press F8 to choose "Support menu."

2 Press F2 to choose "Billing log."

3 When you see the message "Billing LOG is Active! Turn it off[Y/N]?" press Y.

To view the billing log

1 From the Main menu, press F3, to view the list of all files.

2 On the local side of the File Menu screen, select the billing log, and press the SPACEBAR.

3 Press F2 to display the File menu.

4 Press F5 to choose "View file(s)." The contents of the billing log scrolls. Press the SPACEBAR to pause or restart scrolling.

Tip Import the billing log into a database, spreadsheet, or word processing program to format or examine the data.

Troubleshooting with the console

Console overview

The voice messaging system screens show all of the settings you have configured through the technician's and system manager's conversations. If your customer's system behaves unexpectedly, it might be easier to identify the reason for the unexpected behavior when you view the entire system configuration.

The Banner screen is the first screen that you see when you access the voice messaging system. From the Banner screen, you can view system status and access the system manager's and technician's screens.

```
» 1. Ans     2. Ans     3. Ans     4. Ans        09:00am  DAY  Mar-02-98
              P A N A V O I C E   S - S E R I E S
 F2 LogIn  F3 Port   F4 Local  F5 Vers                ESC System Shutdown


                       Copyright  (c) 1998

          Matsushita Communication Industrial Corp. of America




                       PanaVOICE   S-SERIES







Enter any character.
```
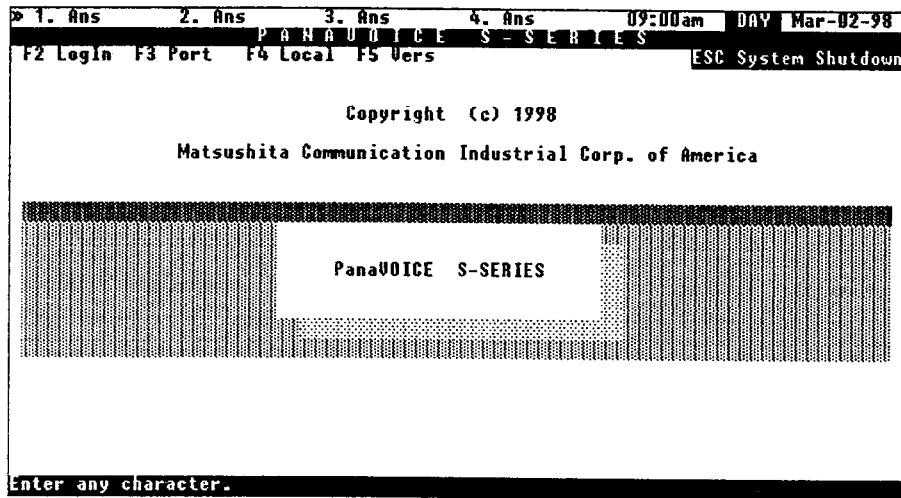
System status

You find system status information on the first line of the Banner screen. Available ports and port status appear on the left side of the line. The system time, schedule mode, and date are on the right side.

The second line displays the function keys that are active on this screen.

Troubleshooting system settings

To view each of the settings for the site, you log in from the Banner screen. The password that you enter when you log in (the technician's or system manager's) determines which screen appears.

To log in to the voice messaging system

1 From the Banner screen, press F2.

2 Type the technician's password (initially 8324) to view the technician's screen, or the system manager's password (initially 797647) to view the system manager's screen.

Tip If you log in using the technician's password, you can toggle between the technician's and system manager's screens by pressing CTRL+LEFT ARROW and CTRL+RIGHT ARROW.

Screen navigation

You can navigate the system manager's screen and the technician's screen by using the indicated keys.

Navigating with keys

Key	Effect
F1	Access the Reports menu.
F2	From the Banner screen, sign in. From any voice field, display the copy options.
F3	Select the port from which you want to establish a local connection.
F4	Establish a local connection.
F5	Expand the field to enter data.
F6	Move from the first field in one section to the first field in the next section.
F8	Expands the "Mailbox maintenance" area so you can add mailboxes.
TAB	Move forward to the next field displayed on the screen.
SHIFT+TAB	Move backward to the prior field displayed on the screen.
LEFT ARROW	Move to the left one character. If you are at the beginning of a field, it moves the cursor backward to the prior field.
RIGHT ARROW	Move to the right one character. If you are at the end of a field, it moves the cursor forward to the next field.
UP ARROW	Move to the closest field above the current field.
DOWN ARROW	Move to the closest field below the current field.
ESC	Exit the current field without saving the change. Or Return to the banner screen.
CTRL+LEFT ARROW and CTRL+RIGHT ARROW	If logged in with the technician's password, toggle between technician's screen and system manager's screen.

System manager's screen

The system manager's screen allows you to review and change mailboxes, message groups, greetings and menus, the system schedule, the system manager's password, operator settings, and fax settings.

The *System Manager's Guide* provides complete information on configuring each of the settings on this screen. Viewing the system setup might help identify the reason for unexpected system behavior with, for example, mailbox maintenance and menu keys.

```
» 1. Ans        2. H/O                              8:01am   DAY  Mar-02-98
                    P A N A V O I C E   S - S E R I E S
F1 Report F3 Port   F4 Local  F5 Expand F6 Next   F7 Del   F8 Add   ESC Exit
Mailbox Maintenance                        Press Ctrl-PgDn for expanded list
 100   Name: 100              NO SECURITY CODE   Msgs: 0   =0:00


Message Groups                             Press Ctrl-PgDn for expanded list
 Number: 100              Voice name:  0:00
         101                           0:00
         102                           0:00
Greetings and Menus
Opening Greetings:    Day: 0:14      Night: 0:15       Holiday: 0:00
Menus:   1+Inactive       2+Inactive       3+Inactive       4+Inactive
System Schedule
Today's date: Mar-02-98       Time Now:  8:01am
1> 8:00am- 5:00pm MTWHF   2>        -                3>        -
System Password
System Manager Password: 797647
Operator Settings
Transfer Ext: 100       Mailbox: 100       Fax Ext:        Fax Notify? No
System Information
Software Version:        Switch: PANASONIC DEFAULTS   Default parameters
Available Recording Time:  1:35           Operator Msgs: 0   =0:00
Enter any character.
```

Mailboxes

If the system is nearing its storage capacity, you can review the number and length of messages for each subscriber from this section of the system manager's screen.

Notes

- For organizations using a first-name directory, follow this special procedure for entering mailbox information at the console.

- When prompted for a subscriber's name, enter the first name in the last name field and the last name in the first name field.

Menus

If a problem occurs with a system menu, it is helpful to view the menu structure from this screen. You can ensure that the menus are linked correctly and that menu keys set up for routing go to the intended mailbox ID.

Technician's screen ────────────────

The technician's screen allows you to review and change the telephone system code, operator settings, fax settings, system options, and the technician's password. You can also instruct the voice messaging system to learn call progress tones.

System options

One area where viewing the system setup can be very helpful in identifying reasons for unexpected behavior is the system option area. Appendix A, "Changing system options" describes system options and includes a worksheet, allowing the technician to document the option settings at time of installation.

```
» 1. Ans        2. A/D                          8:00am   DAY  Mar-02-98
                    P A N A V O I C E   S - S E R I E S
F1 Report F3 Port  F4 Local          F6 Next              ESC Exit
 System Initialization
Telephone System:5210 PANASONIC DEFAU Default parameters
Application Methods Supported:          Default extension range:100-149
    1. Automated attendant and voice mail, with call forwarding
    2. Automated attendant and voice mail, without call forwarding
    3. Voice mail only
Application Method: 0
 Operator Ext: 100      Mailbox: 100      Fax Ext:      Fax Notify? No
 System Options
100  On     Fax Detect (On/Off)
110  1      One Key pause time (seconds)
120  0      Rings to answer on
130  1      Number of dial-out ports at initialization
131  1      Port 1 Wait Status (1=Ans, 2=A/D, 3=A/L, 4=A/M)
132  2      Port 2 Wait Status (1=Ans, 2=A/D, 3=A/L, 4=A/M)
133  N/A    Port 3 Wait Status (1=Ans, 2=A/D, 3=A/L, 4=A/M)
134  N/A    Port 4 Wait Status (1=Ans, 2=A/D, 3=A/L, 4=A/M)
 Technician Password
Technician's password: 8324
 Learn Tones
 Learn Tones Now: No      Voice mail exts:        Reset Tones Now: No
Enter the 4-digit Telephone System Code.
```

See also ──────────────────────

Call progress options

Each time the voice messaging system places a call, it listens for a ring back or busy signal to monitor the progress of the call. If you need to troubleshoot a call progress problem, the call progress section of Appendix A, "Changing system options" gives you a complete list of the options that control this process.

Other settings on the technician's screens

For information about changing the telephone system code, operator settings, the system schedule, fax settings, or the technician's and system manager's passwords, see Chapter 4, "Setting up the application."

Creating system reports

The voice messaging system can provide a lot of information about your customer's incoming and outgoing telephone calls. Using a computer with a keyboard, monitor, and Remote Maintenance, you can create three different types of reports:

- Usage reports
- Subscriber reports
- Call log

Note A fourth report option, "Previous report," allows you to view or copy reports created earlier, as well as .TXT files such as AUTOEXEC.BAT.

Each day, the voice messaging system creates a file to store data about its actions and call traffic. The system uses this file to create your reports.

You can use the information from these reports to help identify the voice messaging and telephone system needs of the organization.

You can view reports or copy them to a file and then print them.

See also ──────────────────────

To create a report

1 From the technician's or system manager's screen, press F1 to access the Reports menu.

2 Choose a report from the menu: Usage, Directory, Call log, or Previous report.

3 Indicate any special parameters as prompted, such as subscriber's name, system ID, or starting and ending date for the report.

4 Select the form of the report; for example, usage graph or table.

5 Select the report output: display on the screen or copy to a file.

Warning! Each time you exit to the Banner screen, the voice messaging system deletes any reports that you have generated, unless you save them with new file names.

Tip You can view a graph or table for a previous day by indicating the appropriate date when creating the report.

To save a report with a new file name

1 From the Output menu, select "Copy" and press ENTER.

2 Change the file name that appears. For example, change SUBSCRIB.RPT to SUB6597.RPT. Press ENTER.

To print a report

1 From the Remote Maintenance Main menu, press F4 for the Print menu.

2 Press F1 for "Remote print options."

3 Press F4 for "Output spool file."

4 Type the file name of the report you want to print and press ENTER.

Viewing earlier reports ——————————

The "Previous report" command enables you to view three types of files:

- You can display or copy a report you created earlier and saved with a new file name.

- You can display or copy other ASCII text files, such as README and AUTOEXEC.BAT files.

- You can recreate a Call log for an earlier date, within the number of days specified in system option 220.

Note You can also recreate a Call log, as well as any other report, for an earlier date, by following the steps in "To create a report" earlier in this chapter, and specifying an earlier date.

To view an earlier report

1 From the Reports menu, select "Previous report" and press ENTER.

2 When prompted, type the file name for the report or text file you want to display and press ENTER.

   To request a Call log for an earlier date, use the following file name format: REPLOG<day of month>.<month of year>.

3 Select the output and press ENTER.

Usage reports

Usage reports show you how much the voice messaging system is being used over time. When you create the report, you specify a range of days to be included. You also have the following options:

- You can create a Usage report for an individual subscriber, extension ID, system ID, or the entire voice messaging system.

- You can format the report as a bar graph or a table.

Tip You can create a Usage report that shows message box usage only (calls from outside callers) by creating the report for extension IDs.

Usage report bar graph

A Usage report bar graph for a subscriber shows all usage for that mailbox.

The Usage report bar graph for the entire voice messaging system shows the percentage of each hour that the voice messaging system's ports were in use. This percentage equals the number of minutes the ports were busy, divided by the number of minutes they could have been busy (the number of ports times 60 minutes).

Usage report table

The Usage report table for a subscriber, extension ID, system ID, or the entire voice messaging system shows the number of calls by port and the number of minutes each call lasted.

Note "Day" refers to the hours between 6:00 A.M. and 6:00 P.M., and "Night" refers the hours between 6:00 P.M. and 6:00 A.M.

```
SYSTEM CONNECTION USAGE REPORT FOR 01/19 TO 02/03 CREATED:03/03/98 AT 10:57AM
                 FOR: WHISTLE, PENNY
              10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
         ___|___|___|___|___|___|___|___|___|___|___
  6A- 7A:  (0%)
  7A- 8A:  (0%)
  8A- 9A: ▄ (2%)
  9A-10A: ▄▄▄▄ (11%)
 10A-11A: ▄▄▄▄▄▄ (16%)
 11A-12P: ▄▄▄▄▄ (14%)
 12P- 1P: ▄▄▄▄▄▄▄ (22%)
  1P- 2P: ▄▄▄ (8%)
  2P- 3P: ▄▄ (3%)
  3P- 4P: ▄ (2%)
  4P- 5P:  (0%)
  5P- 6P:  (0%)
```

Sample subscriber Usage report bar graph

```
SYSTEM CONNECTION USAGE REPORT FOR 01/19 TO 02/03 CREATED:03/03/98 AT 10:57AM

              10%  20%  30%  40%  50%  60%  70%  80%  90%  100%
         ___|___|___|___|___|___|___|___|___|___|___
  6A- 7A:  (0%)
  7A- 8A: ▄ (2%)
  8A- 9A: ▄ (2%)        +
  9A-10A: ▄▄▄▄▄▄ (22%)
 10A-11A: ▄▄▄▄▄▄▄▄ (29%)
 11A-12P: ▄▄▄▄▄▄▄▄▄ (35%)
 12P- 1P: ▄▄▄▄▄▄ (22%)
  1P- 2P: ▄▄▄▄▄▄▄▄▄▄▄▄▄▄ (53%)
  2P- 3P: ▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄ (78%)
  3P- 4P: ▄▄▄▄▄▄▄▄ (31%)
  4P- 5P: ▄▄▄▄ (17%)
  5P- 6P:  (0%)
```
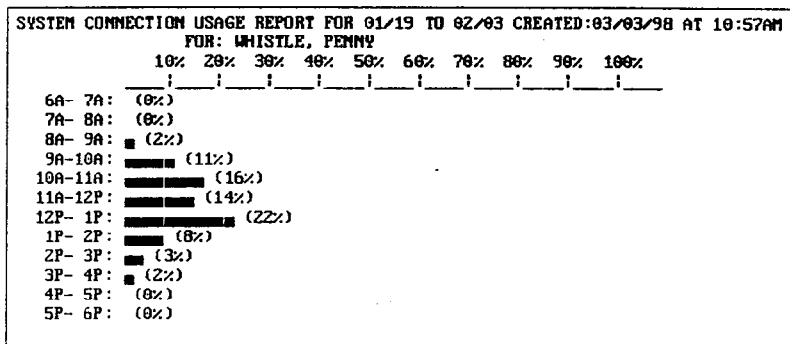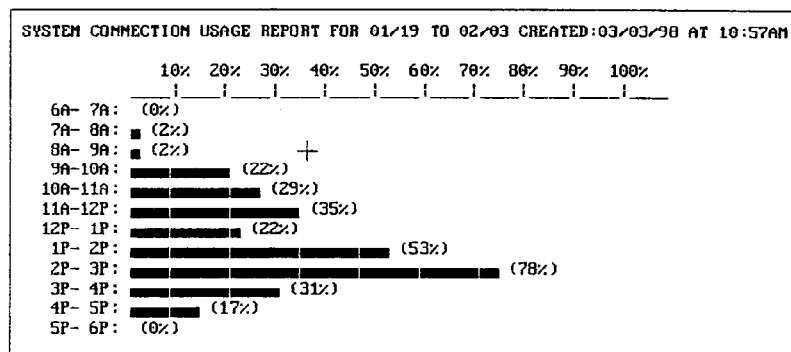
Sample system Usage report bar graph

```
TOTAL CALLS/TIME USAGE REPORT FOR 02/11 TO 02/25 CREATED:03/03/98 AT  3:10PM
                 FOR: Box of WHISTLE, PENNY
              TOTAL        PORT 1        PORT 2        PORT 3        PORT 4
         Calls  HH:MM  Calls  HH:MM  Calls  HH:MM  Calls  HH:MM  Calls HH:MM

  6A- 7A:   0    0:00    0    0:00    0    0:00    0    0:00    0    0:00
  7A- 8A:   1    0:02    0    0:00    1    0:00    0    0:00    0    0:00
  8A- 9A:   2    0:03    0    0:00    1    0:01    1    0:02    0    0:00
  9A-10A:  11    0:31    1    0:02    4    0:09    3    0:15    3    0:05
 10A-11A:   8    0:16    2    0:04    4    0:10    1    0:01    1    0:01
 11A-12P:   6    0:14    1    0:01    4    0:09    0    0:00    1    0:04
 12P- 1P:  12    0:22    3    0:05    6    0:11    1    0:03    1    0:02
  1P- 2P:   5    0:08    0    0:00    3    0:05    1    0:01    1    0:02
  2P- 3P:   9    0:16    1    0:01    4    0:09    3    0:04    1    0:02
  3P- 4P:   2    0:08    1    0:05    0    0:00    0    0:00    1    0:03
  4P- 5P:   4    0:10    1    0:02    2    0:05    0    0:00    1    0:03
  5P- 6P:   0    0:00    0    0:00    0    0:00    0    0:00    0    0:00
```

Sample subscriber Usage report table

Call log

The Call log gives you a record of every call the voice messaging system answers, dials, or transfers. You can create the Call log for the entire system, an individual subscriber, or an individual system ID. When you create the Call log, the voice messaging system creates an ASCII file called REPLOG.PRN.

Tip You can transfer the ASCII file to the support computer by using Remote Maintenance and then import the file into a database or spreadsheet program for further analysis.

```
:41",   42,"A","Msgbox    ","Complete","156      ","Box of St"
:33",   84,"A","Msgbox    ","Complete","$PM      ","Public In"
:59",   57,"A","Owner     ","Complete","43164    ","Yeoman Mi"
:57",    4,"D",","#16,164","Complete","43164    ","Yeoman Mi"
:09",   25,"A","Owner     ","Complete","4191     ","Zink Jay "
:51",  171,"A","Owner     ","Complete","45198    ","Xavier Ja"
58",    30,"A","Owner     ","Complete","4178     ","Zaftig Pa"
29",    19,"A","Msgbox    ","Complete","174      ","Box of Ph"
58",    39,"A","Owner     ","Complete","43155    ","Ying Sue "
37",     4,"D",","#16,155","Complete","43155    ","Ying Sue "
2",     44,"A","Owner     ","Complete","43164    ","Yeoman Mi"
2",     15,"A","Msgbox    ","Complete","$1800    ","TS -Open "
2",     98,"A","Owner     ","Complete","4142     ","Zeller Ne"
9",      9,"C","Msgbox    ","Complete","158      ","Box of Xa"
3",     12,"A","Bad ID    ","No msg  ","62       ","         "
2",      7,"A","Xfer id   ","Complete","0        ","System Op"


        |        |         |          |            |          |
        |  Origin|         |  Status  |  System ID |  Name of
  Length |     Tyne         |    of                  | mailbox owner
    of          of              call                    or box
   call         call
```

og is divided into fields of data separated by commas.

Field name	Description
Port	The voice messaging system port answering this call
Date	Date of call in yy/mm/dd format
Time	Time of call in hh:mm:ss format
Length of call	Duration of call in seconds
Origin	Origin of call: A—Answered incoming call/Collision C—Continued (call restarted) D—Dialed out
Type of call	How call originated: Owner—Call from a subscriber Msgbox—Call for a message box Public—Public call Xfer op—Transfer to operator Xfer id—Operator ID transfer Bad ID—Caller entered an invalid ID Bad SC—Subscriber entered an invalid security code Restart—Voice messaging system restarted Shutdown—Voice messaging system stopped <Phone #>—Voice messaging system placed a call but did not contact anyone, or dialed out to light a message waiting lamp FAILURE—System failure occurred; failure codes in following format: (Mn-c) (Et-s) (Dd). Contact Active Voice Technical Support.

Field name	Description
Status of call	Busy—Dial-out reached a busy tone
	Complete—Call completed successfully
	Transfer—Caller transferred successfully
	Locked—Caller ID locked out
	No answer—Dial-out resulted in no answer
	No connect—Dial-out resulted in no connection
	Intercept—Dial-out resulted in intercept tone
	No ID—Dial-out resulted in answer but no ID
	No msg—Outside caller hung up
	Error—Error during call, or ✻✻ pressed
	Bad ID—Caller entered an invalid ID
	Bad SC—Subscriber entered an invalid security code
System ID	ID of caller (blank if unidentified caller)
Name	Name of caller (blank if unidentified caller or if transferred to operator)

Subscriber report

The Subscriber report lists each subscriber and shows:

- The number of new and old messages.

- The total recording time of those messages.

- Each subscriber's personal ID.

- Each subscriber's extension ID.

- Whether call transfer is turned on.

- Where calls are transferred.

Tip This report can be helpful in trouble-shooting a shortage of message space.

```
SUBSCRIB.RPT
        SUBSCRIBER REPORT CREATED  3/03/98 AT 10:59AM
                                Messages        Last
  NAME                Pers ID   New     Total   Contact   Ext    Transfer

  BEAR, COLORADO      COLO      2=0:01  3=0:02  3/03/98   142    Y->X
  BRONSON, DENISE     9DEN      3=0:03  8=0:04  3/03/98   136    Y->X
  DONALDSON, RAY      9RAY      1=0:01  3=0:02  3/03/98   134    Y->X
  DUCKWORTH, DAN      DUCK      2=0:02  4=0:04  3/03/98   137    Y->X
  FULLER, ROGER       9ROG      1=0:01  2=0:02  3/03/98   138    Y->X
  NGUYEN, BRENDA      9BREN     1=0:01  3=0:04  3/03/98   139    Y->X
  SIMMONS, SANDY      SANDY     1=0:01  2=0:02  3/03/98   140    Y->X
  WHISTLE, PENNY      9PEN      1=0:01  6=0:08  3/03/98   141    Y->X
```

Changing system options

As a technician, you can change the default system options to control how the voice messaging system works with the telephone system. Record your option settings at installation on the System Options Worksheet. Give a copy of this worksheet to the system manager during the training session. The System Options Worksheet also provides valid ranges and suggested values for the options where applicable. If you need to change any of the Call Progress Options settings, record your settings on the Call Progress Options Worksheet. A list of system options by option number is also included as a reference guide.

System Options Worksheet ———————————

Use this worksheet to record system option
settings at installation.

Option name	Description
Adjustment for automatic gain control	Loudness of recording playback.
Archive time for Operator mailbox messages	Number of days an Operator mailbox message is saved if the operator archives it.
Archive time for sub-scriber messages	Number of days a subscriber message is saved if the subscriber archives it.
Busy recall	Sequence the voice messaging system dials to return to the external caller if an extension is busy.
Call analysis delay	Length of time the voice messaging system waits after dialing and before starting call analysis.
Call progress options	See the Call Progress Options Worksheet for details.
Call report aging	Number of days that a daily Call log is stored. When a Call log is older than this value, it is deleted at midnight.
Connect	Sequence the voice messaging system dials to complete a transfer to an extension.
Database archive activation	Whether the voice messaging system archives the data-base at the scheduled maintenance time.
Database trace	*Do not turn on this option unless asked to do so by Technical Support.*
Date format	The date format that the system uses in the conversation.
Delete messages	If enabled, offers subscriber the option of deleting messages after they have been heard.

Option number	Valid setting	Suggested setting	Your setting
260	0–40 in .5 db units	12	
163	0–255 days	14 days	
166	0–99 days	60 days	
373	0–26 digits (any dialing character)	&,	
350	25–10,000 centiseconds	25	
400–590			Use the Call Progress Options Worksheet.
220	0–60 days	5 days	
371	0–26 digits (any dialing character)	Q	
240	On/Off	Off	
920	0–3	0	
230	1 = mm/dd/yy 2 = dd/mm/yy 3 = yy/mm/dd	1 or 2 for U.S. and Canada 2 for International 3 for most Asian countries	
270	On/Off	On, if experiencing problems with short-age of message space	

Option name	Description
Dial-out DTMF duration	Length of time the voice messaging system plays a touchtone in a dialing sequence.
Dial-out pause— comma	Length of a pause—represented by a comma (,)—in a dialing sequence.
Dial-out pause— semicolon	Alternate length of a pause—represented by a semicolon (;)— in a dialing sequence.
Disconnect detection	Hang-up detection. When this option is turned on, the voice messaging system assumes a caller has hung up if it detects telephone system disconnect tone, telephone system dial tone, public network disconnect tone, or public network dial tone.
Dial-tone check at dial-out	Dial tone check before dialing out to deliver messages. When this option is turned on, the voice messaging system does not attempt dial out unless it hears dial tone; if it doesn't hear dial tone, it assumes there is an incoming call and will play the opening greeting.
DTMF inter-digit delay	Length of time between each touchtone the voice messaging system plays in a dialing sequence.
DTMF Call Progress (on/off) - DTMFCP	DTMF call progress detection. When this option is turned on, the voice messaging system recognizes tones on telephone systems that provide DTMFCP.
F delay time before opening greeting	Number of seconds to wait for "follow-along ID" information before beginning the opening greeting message. This option is only applicable to telephone systems that use exact station ID.
Fax detect	Fax detection. When this option is turned on, the voice messaging system recognizes incoming fax tones.
Group message ID	System ID subscribers use to send messages to numbered groups.
Hang up tone	Allows the voice messaging system to recognize and hang up on fourth column tones.

alid setting	Suggested setting	Your setting
–10 centiseconds	10	
)–10,000 centiseconds	100	
)–10,000 centiseconds	DBS 40, 72, and 96: 300 DBS 824: 900	
)n/Off	On	
)n/Off	On	
–.)00 centiseconds	5	
)n/Off	Off	
–9 seconds	0	
n/Off	On	
:y valid system ID	77	
= a 2 = b = c 4 = d = Disabled	0	

Option name	Description
Hold sequence without transfer	Sequence the voice messaging system dials to place a caller on hold without transferring the caller. The voice messaging system must do this to learn call progress automatically on a two-port system.
Hold time for Operator mailbox messages	Number of days the voice messaging system saves an Operator mailbox message if the operator listens to it but does not archive it.
Hold time for subscriber messages	Number of days the voice messaging system saves a subscriber message if the subscriber listens to it but does not archive it.
Hookflash percent timer	Alternate length of the on-hook period—represented by a percent sign (%)—in a dialing sequence.
Hookflash timer	Length of the on-hook period—represented by an ampersand (&)—in a dialing sequence.
Log size control	Maximum number of lines in the Call log. *Do not change this option unless asked to do so by Technical Support.*
Mailbox activate message waiting lamp	Message waiting lamp activation. When this option is turned on, a lighted lamp indicates a message is waiting for the subscriber.
Mailbox lamp on now	Synchronization of a lighted message lamp and waiting messages.
Mailbox transfer rings	Number of rings that the voice messaging system waits before it transfers the call for an individual mailbox. This option allows you to change the number of rings for one subscriber's mailbox at a time.
Mailbox transfer type	Transfer type for an individual mailbox. If you select "Await answer" or "Wait ring," you must specify the number of rings that the voice messaging system waits before it transfers the call.

Option number	Valid setting	Suggested setting	Your setting
374	Any dialing character	&,,,,, (or same as transfer initiate without indicating an extension)	
162	0–255 days	0 days	
165	0–99 days	0 days	
321	0–10,000 centiseconds	200	
320	0–10,000 centiseconds	50	
960	0–5000 (0 disables Call log.)	0–2000	
180	Off/On		
181	Off/On		
171	0–15 rings		
170	1 = Release 2 = Await answer 3 = Wait ring 4 = Off		

Option name	Description
Maximum mailbox recording	Maximum length of a message from an unidentified caller.
Maximum message life for Operator mailbox messages	Maximum number of days that the voice messaging system stores new (unheard) Operator mailbox messages. The voice messaging system deletes messages older than this value.
Maximum message life for subscriber messages	Maximum number of days that the voice messaging system stores new (unheard) subscriber messages. The voice messaging system deletes messages older than this value.
Maximum person-to-person recording	Maximum length of a message that is sent from one subscriber to another.
Message waiting lamp interval	Number of minutes to wait between dial-out attempts to light a subscriber's message waiting lamp.
Message waiting lamp off	Code to turn message waiting lamps off for all subscribers. This code is required for telephone systems that do not have a default lamp code.
Message waiting lamp on	Code to turn message waiting lamps on for all subscribers. This code is required for telephone systems that do not have a default lamp code.
Message waiting lamp retries	Number of times the voice messaging system dials "Message waiting lamp on" and "Message waiting lamp off" to make sure the option takes effect.
Number of dial-out ports at initialization	Total number of ports configured to dial out to deliver messages or to light message waiting lamps. The value specified for this option always applies to the last ports. For example, if you have a four-port system and set this option to 2, the last two ports will be set to dial out.
Off-hook delay	Length of time the voice messaging system waits after answering the telephone before speaking or recognizing touchtones.

Option number	Valid setting	Suggested setting	Your setting
161	0–999 seconds	180 seconds	
164	0–365 days	14 days	
167	0–365 days	60 days	
160	30–9999 seconds	90–300 seconds	
333	0–60 minutes	5	
331	0–26 digits (any dialing character)	,*5X	
330	0–26 digits (any dialing character)	,*4X	
332	0–100 times	1	
130	0–2 ports (2-port systems) 0–4 ports (4-port systems)	1 or 2 ports	
340	0–10,000 centiseconds	25	

Option name	Description
One-key pause time	Number of seconds the voice messaging system waits between touchtones to decide whether to interpret the touchtones as an extension or a menu key. If the pause between touchtones is equal to or greater than this value, the voice messaging system interprets the touchtones as a menu choice. This option applies to touchtones pressed during transaction box greetings.
Operator transfer rings	Number of rings that the voice messaging system waits before it transfers the call to the Operator mailbox.
Operator transfer type	Transfer type for the Operator mailbox. If you choose "Await answer" or "Wait ring," you must specify the number of rings that the voice messaging system waits before it transfers the call.
Operator voice detect	Voice detection for the opening greeting. When "Operator voice detect" is turned on, callers who do not press touchtone keys during the opening greeting are asked to say "Yes" to transfer to the operator. When the option is turned off, callers are not given the option to say "Yes" to transfer to the operator. Use this option to accommodate callers without touchtone phones.
Outdial access sequence	Dialing sequence to reach an external line.
Outdial access trigger length	Minimum number of digits (in a dialing string) treated as an external phone number. This option tells the voice messaging system when to treat the dialing string as an external phone number. If the number of digits is equal to or greater than the "Outdial access trigger length" option setting, the voice messaging system treats the phone number as an external number and automatically dials the "Outdial access sequence" option setting first. If the number of digits is less than the "Outdial access trigger length," the voice messaging system does not include the "Outdial access sequence."

Option number	Valid setting	Suggested setting	Your setting
110	0–9 seconds	0, 1, or 2 seconds	
191	0–15 rings	4 rings	
190	1 = Release 2 = Await answer 3 = Wait ring	2	
200	Off/On	On	
310	1–26 digits (valid digits are 0–9, the comma (,), and the # sign)	9,	
311	4–10 digits	5	

Option name	Description
Pause-out timer	Number of seconds the voice messaging system listens for silence after a caller leaves a message or the system manager records an audio message or opening greeting, before assuming the message is complete. This option also applies to pauses when you record a personal greeting.
Phone trace	*Do not turn on this option unless asked to do so by Technical Support.*
Pooled delay	Length of time the voice messaging system waits after a ring signal is detected.
Port waiting status	Whether each port is set to only answer calls, to answer and dial out, to answer and activate message waiting indicators, or to answer and deliver messages.
Prompt volume adjustment	Controls the volume of system conversation prompts.
RDMR—Direct message retrieval	Special features for analog integrations.
Recall	Sequence the voice messaging system dials to return to an outside caller if an extension does not answer.
Release on loop current reversal	Controls whether the voice messaging system assumes, with a loop current open signal, that the caller has hung up.
Ring-off time	The length of the off period in an incoming ring cycle.
Ring-on time	The length of the on period in an incoming ring cycle.

setting	Suggested setting	Your setting
seconds	2–30 seconds	
	0	
,000 centiseconds	45	
nswer only		
nswer and dial out		
nswer and activate mes- age waiting indication		
nswer and deliver lessages		
) in 1 db units. In the ersation, a negative value umed unless the number ceded by a # sign.	0	
ff irect message retrieval rect message retrieval d subscriber-to- bscriber messaging	1	
digits (any dialing cter)	&,	
ff	On	
00 centiseconds ments of 10)	40	
00 centiseconds ements of 10)	20	

Option name	Description
Rings to answer on	Number of rings before the voice messaging system answers the call. Use zero (0) to activate pooled ringing for telephone systems that cannot hunt.
Scheduled maintenance time	Time of day that the voice messaging system restarts and, if enabled, archives the database.
Skip Yes/No prompt	If enabled, the conversation does not prompt subscribers to enter 1 for Yes and 2 for No.
Silence detection level	The level below which voices are detected as silence. Increase this value if recordings are cut short.
System hours upgrade number (SHUN)	The number provided by Sales Support to enable an hours upgrade.
System identification number (SIN)	The serial number of the voice messaging system unit.
System ports upgrade number (SPUN)	The number provided by Sales Support to enable a port upgrade.
Telephone system code	Four-digit code that defines the telephone system. If you change this option, the system does not automatically reinitialize all option settings.
Time to wait for voice on voice detect	Number of seconds the voice messaging system waits to detect a voice before responding.
Transfer initiate	Sequence the voice messaging system dials to put an outside caller on hold and ring an extension.

Option number	Valid setting	Suggested setting		Your setting
120	0–9 rings	0 or 1		
241	Time of day (either 12-hour or 24-hour format)	2:00 A.M.		
271	On/Off			
265	24–60 in –1 db units	42		
601	Determined by Sales Support			
600	Cannot be changed			
602	Determined by Sales Support			
300	4 digits	DBS 40 5210 DBS 72 5230 DBS 96 5250 DBS 824 5260		
201	0–60 seconds	5 seconds		
370	0–26 digits (any dialing character)	&,X1		

Option name	Description
Troubleshooting diagnostics	*Do not turn on this option unless asked to do so by Technical Support.*
Use first names to identify subscribers	Outside callers are offered a subscriber directory by first name (option turned on) or last name (option turned off).
Voice mail ports	Voice mail port identification. You must specify the actual extension numbers that are connected to the voice messaging system's ports.
Voice trace	*Do not turn on this option unless asked to do so by Technical Support.*

Option number	Valid setting	Suggested setting	Your setting
900	On/Off	Off	
250	On/Off	Off	
210	Extension numbers of the voice messaging system's ports		
940	0–3	0	

Call Progress Options Worksheet ——————

The following options affect how the voice messaging system interprets tones used for call progress and hang up supervision.

Option name	Option number	Your setting
Delay before learning busy tone	572	
Delay before learning dial tone	570	
Delay before learning disconnect tone	573	
Delay before learning do-not-disturb tone	574	
Delay before learning ring back tone	571	
Fax CNG cycles	492	
Fax CNG frequency 1	480	
Fax CNG frequency 1 deviation	481	
Fax CNG frequency 2	482	
Fax CNG frequency 2 deviation	483	
Fax CNG time-off 1	486	
Fax CNG time-off 1 deviation	487	
Fax CNG time-off 2	490	
Fax CNG time-off 2 deviation	491	
Fax CNG time-on 1	484	

Option name	Option number	Your setting
Fax CNG time-on 1 deviation	485	
Fax CNG time-on 2	488	
Fax CNG time-on 2 deviation	489	
Learn samples—busy tone	562	
Learn samples—dial tone	560	
Learn samples—disconnect tone	563	
Learn samples—do-not-disturb tone	564	
Learn samples—ring back tone	561	
Minimum cadence deviation for learning call progress tones	585	
Minimum continuous tone on-time for learning call progress tones	580	
Switch busy cycles	412	
Switch busy frequency 1	400	
Switch busy frequency 1 deviation	401	
Switch busy frequency 2	402	
Switch busy frequency 2 deviation	403	
Switch busy time-off 1	406	
Switch busy time-off 1 deviation	407	

Option name	Option number	Your setting
Switch busy time-off 2	410	
Switch busy time-off 2 deviation	411	
Switch busy time-on 1	404	
Switch busy time-on 1 deviation	405	
Switch busy time-on 2	408	
Switch busy time-on 2 deviation	409	
Switch dial-tone cycles	452	
Switch dial-tone frequency 1	440	
Switch dial-tone frequency 1 deviation	441	
Switch dial-tone frequency 2	442	
Switch dial-tone frequency 2 deviation	443	
Switch dial-tone time-off 1	446	
Switch dial-tone time-off 1 deviation	447	
Switch dial-tone time-off 2	450	
Switch dial-tone time-off 2 deviation	451	
Switch dial-tone time-on 1	444	

Option name	Option number	Your setting
Switch dial-tone time-on 1 deviation	445	
Switch dial-tone time-on 2	448	
Switch dial-tone time-on 2 deviation	449	
Switch disconnect cycles	432	
Switch disconnect frequency 1	420	
Switch disconnect frequency 1 deviation	421	
Switch disconnect frequency 2	422	
Switch disconnect frequency 2 deviation	423	
Switch disconnect time-off 1	426	
Switch disconnect time-off 1 deviation	427	
Switch disconnect time-off 2	430	
Switch disconnect time-off 2 deviation	431	
Switch disconnect time-on 1	424	
Switch disconnect time-on 1 deviation	425	
Switch disconnect time-on 2	428	
Switch disconnect time-on 2 deviation	429	

Option name	Option number	Your setting
Switch do-not-disturb cycles	512	
Switch do-not-disturb frequency 1	500	
Switch do-not-disturb frequency 1 deviation	501	
Switch do-not-disturb frequency 2	502	
Switch do-not-disturb frequency 2 deviation	503	
Switch do-not-disturb time off 1	506	
Switch do-not-disturb time off 1 deviation	507	
Switch do-not-disturb time off 2	510	
Switch do-not-disturb time off 2 deviation	511	
Switch do-not-disturb time on 1	504	
Switch do-not-disturb time on 1 deviation	505	
Switch do-not-disturb time on 2	508	
Switch do-not-disturb time on 2 deviation	509	
Switch ring-back cycles	472	

Option name	Option number	Your setting
Switch ring-back frequency 1	460	
Switch ring-back frequency 1 deviation	461	
Switch ring-back frequency 2	462	
Switch ring-back frequency 2 deviation	463	
Switch ring-back time-off 1	466	
Switch ring-back time-off 1 deviation	467	
Switch ring-back time-off 2	470	
Switch ring-back time-off 2 deviation	471	
Switch ring-back time-on 1	464	
Switch ring-back time-on 1 deviation	465	
Switch ring-back time-on 2	468	
Switch ring-back time-on 2 deviation	469	
Tone sanity check bypass	590	

System options by option number ———————————————

The following list can be used as a cross-reference tool to locate a system option by its number. This list includes all system and call progress options.

Option number	Option name
100	Fax detect
110	One-key pause time
120	Rings to answer on
130	Number of dial-out ports at initialization
131	Port waiting status (port 1)
132	Port waiting status (port 2)
133	Port waiting status (port 3)
134	Port waiting status (port 4)
140	Group message ID
150	Pause-out timer
160	Maximum person-to-person recording
161	Maximum mailbox recording

Option number	Option name
162	Hold time for Operator mailbox messages
163	Archive time for Operator mailbox messages
164	Maximum message life for Operator mailbox messages
165	Hold time for subscriber messages
166	Archive time for subscriber messages
167	Maximum message life for subscriber messages
170	Mailbox transfer type
171	Mailbox transfer rings
180	Mailbox activate message waiting lamp
181	Mailbox lamp on now
190	Operator transfer type
191	Operator transfer rings
200	Operator voice detect
201	Time to wait for voice on voice detect
210	Voice mail ports
220	Call report aging

Option number	Option name
230	Date format
240	Database archive activation
241	Scheduled maintenance time
250	Use first names to identify subscribers
260	Adjustment for automatic gain control
261	Prompt volume adjustment
265	Silence detection level
270	Delete messages
271	Skip the Yes/No prompt
300	Telephone system code
310	Outdial access sequence
311	Outdial access trigger length
320	Hookflash timer
321	Hookflash percent timer
322	Dial-out pause—comma
323	Dial-out pause—semicolon
330	Message waiting lamp on
331	Message waiting lamp off

Option number	Option name
332	Message waiting lamp retries
333	Message waiting lamp interval
340	Off-hook delay
341	DTMF inter-digit delay
342	Dial-out DTMF duration
350	Call analysis delay
355	Release on loop current reversal
360	Analog integration
361	Analog integration—minimum extension length
362	Analog integration—maximum extension length
363	Analog integration—time to wait for first digit
365	RDMR—Direct message retrieval
366	Confirm return sequence
367	Hang up tone
368	DTMF Call Progress (on/off) - DTMFCP
370	Transfer initiate
371	Connect
372	Recall
373	Busy recall

Option number	Option name
374	Hold sequence without transfer
380	Pooled delay
381	Ring-on time
382	Ring-off time
383	F delay time before opening greeting
390	Disconnect detection
391	Dial-tone check at dial-out
400	Switch busy frequency 1
401	Switch busy frequency 1 deviation
402	Switch busy frequency 2
403	Switch busy frequency 2 deviation
404	Switch busy time-on 1
405	Switch busy time-on 1 deviation
406	Switch busy time-off 1
407	Switch busy time-off 1 deviation
408	Switch busy time-on 2
409	Switch busy time-on 2 deviation

Option number	Option name
410	Switch busy time-off 2
411	Switch busy time-off 2 deviation
412	Switch busy cycles
420	Switch disconnect frequency 1
421	Switch disconnect frequency 1 deviation
422	Switch disconnect frequency 2
423	Switch disconnect frequency 2 deviation
424	Switch disconnect time-on 1
425	Switch disconnect time-on 1 deviation
426	Switch disconnect time-off 1
427	Switch disconnect time-off 1 deviation
428	Switch disconnect time-on 2
429	Switch disconnect time-on 2 deviation
430	Switch disconnect time-off 2
431	Switch disconnect time-off 2 deviation
432	Switch disconnect cycles

Option number	Option name
440	Switch dial-tone frequency 1
441	Switch dial-tone frequency 1 deviation
442	Switch dial-tone frequency 2
443	Switch dial-tone frequency 2 deviation
444	Switch dial-tone time-on 1
445	Switch dial-tone time-on 1 deviation
446	Switch dial-tone time-off 1
447	Switch dial-tone time-off 1 deviation
448	Switch dial-tone time-on 2
449	Switch dial-tone time-off 2 deviation
450	Switch dial-tone time-off 2
451	Switch dial-tone time-off 2 deviation
452	Switch dial-tone cycles
460	Switch ring-back frequency 1
461	Switch ring-back frequency 1 deviation
462	Switch ring-back frequency 2
463	Switch ring-back frequency 2 deviation

Option number	Option name
464	Switch ring-back time-on 1
465	Switch ring-back time-on 1 deviation
466	Switch ring-back time-off 1
467	Switch ring-back time-off 1 deviation
468	Switch ring-back time-on 2
469	Switch ring-back time-on 2 deviation
470	Switch ring-back time-off 2
471	Switch ring-back time-off 2 deviation
472	Switch ring-back cycles
480	Fax CNG frequency 1
481	Fax CNG frequency 1 deviation
482	Fax CNG frequency 2
483	Fax CNG frequency 2 deviation
484	Fax CNG time-on 1
485	Fax CNG time-on 1 deviation
486	Fax CNG time-off 1
487	Fax CNG time-off 1 deviation

Option number	Option name
488	Fax CNG time-on 2
489	Fax CNG time-on 2 deviation
490	Fax CNG time-off 2
491	Fax CNG time-off 2 deviation
492	Fax CNG cycles
500	Switch do-not-disturb frequency 1
501	Switch do-not-disturb frequency 1 deviation
502	Switch do-not-disturb frequency 2
503	Switch do-not-disturb frequency 2 deviation
504	Switch do-not-disturb time on 1
505	Switch do-not-disturb time on 1 deviation
506	Switch do-not-disturb time off 1
507	Switch do-not-disturb time off 1 deviation
508	Switch do-not-disturb time on 2
509	Switch do-not-disturb time on 2 deviation
510	Switch do-not-disturb time off 2
511	Switch do-not-disturb time off 2 deviation

Option number	Option name
512	Switch do-not-disturb cycles
560	Learn samples—dial tone
561	Learn samples—ring back tone
562	Learn samples—busy tone
563	Learn samples—disconnect tone
564	Learn samples—do-not-disturb tone
570	Delay before learning dial tone
571	Delay before learning ring back tone
572	Delay before learning busy tone
573	Delay before learning disconnect tone
574	Delay before learning do-not-disturb tone
580	Minimum continuous tone on-time for learning call progress tones
585	Minimum cadence deviation for learning call progress tones
590	Tone sanity check bypass
600	System identification number (SIN)
601	System hours upgrade number (SHUN)
602	System ports upgrade number (SPUN)

Option number	Option name
900	Troubleshooting diagnostics
920	Database trace
940	Voice trace
950	Phone trace
960	Log size control

Troubleshooting system options

You may need to change the system options to resolve telephone system problems. This Quick Diagnostic Guide is designed to help you identify voice messaging system option settings that are related to some common telephone system problems. The voice messaging system options can be changed by telephone or at the Technician's screen by using Remote Maintenance.

Quick Diagnostic Guide ────────────

This guide cross-references some possible
unexpected behavior related to the voice
messaging system's system options and
suggests possible solutions.

Problem description	Related option name	Option number	Suggested action
Caller experiences a long delay before hearing a voice on an incoming call.	F delay time before opening greeting	383	Decrease the delay time.
Caller hears DTMF during attempted transfer.	Hookflash timer	320	Increase the setting.
Caller is disconnected during an attempted transfer.	Hookflash timer Transfer initiate	320 370	Decrease the setting. Determine the correct system sequence.
Caller is given insufficient time to answer the system conversation question.	Time to wait for voice on voice detect	201	Increase the setting to between five and seven seconds.
Database backup does not contain the expected data.	Database archive activation	240	Set to a time after the midnight purge runs and before the morning incoming calls begin.
Dates are not displayed in the needed format on the console.	Date format	230	Change after determining the needed format with the system manager.

Problem description	Related option name	Option number	Suggested action
Faxes are not received due to inability to detect CNG.	Fax detect	100	Set to "On."
	Fax tone parameters	480–492	Adjust the settings.
The voice messaging system is out of recording space.	Archive time for Operator mailbox messages	163	Set to 0 (Operator mailbox messages cannot be archived).
	Archive time for subscriber messages	166	Reduce the setting after discussing with the system manager.
	Call report aging	220	Set to not fewer than five days.
	Hold time for Operator mailbox messages	162	Set to 0 (Operator mailbox messages, once heard, are deleted at the end of the day).
	Hold time for sub-scriber messages	165	Reduce the setting after discussing with the system manager.
	Maximum message life for subscriber messages	167	Reduce the setting after discussing with the system manager.
	Maximum life for Operator mailbox messages	164	Reduce the setting after discussing with the system manager.
	Maximum person-to-person recording	160	Reduce the setting to not fewer than 30 seconds.
	Delete messages	270	Set to "On" (subscribers can delete messages immediately after hearing them).

Problem description	Related option name	Option number	Suggested action
Message waiting lamp is illuminated after message retrieval is complete.	Message waiting lamp off	331	Determine the correct system code and change the setting.
Message waiting lamp illumination is delayed.	Message waiting lamp retries	332	Decrease the setting to 2 or 1.
	Number of dial-out ports at initialization	130	Increase the number of dial-out ports.
Message waiting lamp is lit without the arrival of a message.	Message waiting lamp off	331	Enter the system code: ,*5X
Message waiting lamp is intermittently inoperative.	Message waiting lamp interval	333	Increase the setting to 2 or more.
	Message waiting lamp retries	332	Increase the setting to 2 or more.

Problem description	Related option name	Option number	Suggested action
Message waiting lamp is not lit by the arrival of a message. **Note** Message waiting lamps cannot light until the subscriber completes the enrollment conversation.	Mailbox activate message waiting lamp	180	Set to "On."
	Message waiting lamp interval	333	Increase the setting to 2 or more.
	Message waiting lamp on	330	Enter the system code: ,✳4X
	Message waiting lamp retries	332	Increase the setting to 2 or more.
Pagers are not receiving calls. **Note** Verify the pager dial string by calling the pager.	Port waiting status	131–134	Increase the number of dial-out ports.
Recorded message volume is too low.	Adjustment for automatic gain control	260	Increase the negative half-decibel units. 1 = loudest 40 = quietest
Subscriber hears a long silence after a message ends.	Pause-out timer	150	Reduce the setting to not fewer than five seconds.

Problem description	Related option name	Option number	Suggested action
Subscriber is given insufficient time to finish recording a personal greeting.	Maximum person-to-person recording	160	Increase the setting to not more than 300 seconds.
	Pause-out timer	150	Increase the setting to between five and seven seconds.
Subscriber is given insufficient time to leave a message.	Maximum person-to-person recording	160	Increase the setting with attention to available recording space.
Subscriber is unable to access an external line for message delivery.	Outdial access sequence	310	Verify the setting.
	Outdial access trigger length	311	Set to greater than the number of digits in extensions.
Subscriber wants fewer rings before a call is transferred to a voice mailbox (with option 170 "Mailbox transfer type" set to "Await answer").	Mailbox transfer rings	171	Reduce the setting to no fewer than 3.
Subscriber wants more rings before a call is transferred to a voice mailbox (with option 170 "Mailbox transfer type" set to "Await answer").	Mailbox transfer rings	171	Increase the setting to no more than 15.

Problem description	Related option name	Option number	Suggested action
System times out while a caller is leaving a message.	Pause-out timer	150	Increase the setting to between five and seven seconds.
	Silence detection level	265	Increase the negative decibel units. 60 = lowest 24 = highest
Transfer fails due to doubled digit.	Dial-out DTMF duration	342	Decrease the duration.
Transfer fails due to missed digit.	Dial-out DTMF duration	342	Increase the duration.
Transfer goes to an external line.	Outdial access trigger length	311	Increase the setting to five or more digits.

TED Utility

Using the TED Utility

You can use TED to view and edit files.

TED is a full-screen editor for text files of up to 64K in length. It supports scrolling, editing functions (cut, copy, paste, and print), and the entire ASCII character set.

TED configures itself to your monitor, supporting EGA and VGA text modes other than the standard 80 columns by 25 rows. You can enter any character in the ASCII character set by pressing ALT+<the ASCII character code>.

To view or edit a file using TED

At the host computer's command prompt, type:

TED <file name>.<extension>

Replace <file name>.<extension> with the name and extension of the file you wish to view or edit. If you do not specify a file name, TED opens a new file and prompts you for a file name when you select the "Save" or "Exit" command.

Warning! If changes are made to any of the voice messaging system's files, the system will not restart unless the system's file list is updated. If you edit a file on the voice messaging system, go to the command prompt and type D:\ and press ENTER. Then type VMUTIL MAKELIST and press ENTER.

The command reference on the next page provides a list of TED's function key and keyboard features.

TED commands

Key	Description
CTRL+LEFT ARROW	View off-screen characters to the left of the screen (up to 248 columns).
CTRL+RIGHT ARROW	View off-screen characters to the right of the screen (up to 248 columns).
CTRL+PAGE DOWN	Move the cursor to the bottom of the file.
CTRL+PAGE UP	Move the cursor to the top of the file.
DELETE	Delete individual characters at the cursor position. Combines adjacent lines into a single line.
END	Move the cursor to the end of the current screen line.
ENTER	Begin a new line. Lines longer than the screen width display a diamond in the rightmost column.
F1	Abandon any modifications and leave the original file unchanged.
F2	Restore characters deleted by pressing DELETE (but not by pressing BACKSPACE) if the cursor has not been moved.
F3	Print a block of text.
F4	Define a block of text. Toggle on and move the cursor with the arrow keys. The block appears in inverse screen mode.
F5	Cut a block of text and copy it to the buffer.
F6	Paste the contents of the buffer at the cursor position. The paste buffer remains intact until another block of text is marked and copied or cut.

Key	Description
F7	Save the file and exit TED.
F8	Delete to the end of a line (the paste buffer contents are unchanged).
F9	Delete the entire line (the paste buffer contents are unchanged).
F10	Undo the most recent deletion made by pressing F8 or F9.
HOME	Move the cursor to the beginning of the current screen line.
INSERT	Toggle between the insert (the default) and overwrite modes.
PAGE DOWN	Display the next five rows.
PAGE UP	Display the preceding five rows.
TAB	Move the cursor and the following text on the line eight columns to the right.

Using the voice messaging system's LED patterns for troubleshooting

Normal operation

When the voice messaging system is operating normally, you can determine certain status information by observing the LED patterns on the side of the unit.

LED pattern		Meaning
○	(An LED is not lit.)	The port is not available.
●	(An LED is lit.)	The port is available but idle.
○–●	(An LED is flashing.)	The port is active (off-hook).
○–●	(All LEDs are flashing, descending from top to bottom.)	The recording space is full.
○–●	(All LEDs are flashing, ascending from bottom to top.)	System error. Contact your dealer.
○○○○–●●●●	(All LEDs are flashing together.)	Change the batteries.

Startup sequence

Occasionally the voice messaging system must restart. During the startup process, the voice messaging system goes through several steps to check the status of various parts of the system. As it goes through these steps, you will see three phases of LED activity:

- LEDs flash for eight to nine seconds. If any LEDs remain lit after the flashing stops, contact Technical Support.

- LEDs remain off for about two seconds.

- LEDs again begin flashing, briefly displaying a series of patterns. If one of these LED patterns remains lit after the flashing stops, find the pattern in the following table and follow the corresponding instructions. Your customer may indicate the number corresponding to the pattern.

Note Some of the conditions indicated by LED patterns require the assistance of Technical Support to correct the problem. For these conditions, the steps in the troubleshooting procedure direct you to gather information that Technical Support needs.

LED patterns and corresponding troubleshooting steps

Pattern number	LED pattern	Problem indicated	Troubleshooting procedure
0	(LEDs do not flash at all.)	Certain utility programs are not found during startup.	1 At the customer's site, connect directly to the voice messaging system with a terminal emulation program. If you are unable to connect, call Technical Support.
			2 Attempt to restart the voice messaging system by plugging it in to the power strip. The voice messaging system will exit to the command prompt.
			3 At the command prompt, type DIR A:\ and press ENTER.
			4 Record the list of files and the file sizes that appears.
			5 Call Technical Support.

● = Lit   O = Not lit

Pattern number	LED pattern	Problem indicated	Troubleshooting procedure
1	● ○ ○ ○	ROM files do not match the file list.	1 At the customer's site, connect directly to the voice messaging system with a terminal emulation program. If you are unable to connect, call Technical Support. 2 Attempt to restart the voice messaging system by unplugging and plugging it in to the power strip. The voice messaging system will exit to the command prompt. 3 At the command prompt, type VMUTIL CKLIST A:\ and press ENTER. 4 Record the list of files that appears. 5 Type VMUTIL CKLIST A:\DIRECT and press ENTER. 6 Record the list of files that appears. 7 Type VMUTIL CKLIST A:\MODEM and press ENTER. 8 Record the list of files that appears. 9 Call Technical Support.

● = Lit   ○ = Not lit

Pattern number	LED pattern	Problem indicated	Troubleshooting procedure
2	○ ● ○ ○	CHKDSK reports uncorrectable problems on drive C. **Note** The voice messaging system exits the startup procedure and tries to start the Remote Maintenance software.	Restart the voice messaging system several times. If the LED pattern appears repeatedly, call Technical Support.
3	● ● ○ ○	CHKDSK reports file corruption on drive D. **Note** The voice messaging system exits the startup procedure and tries to start the Remote Maintenance software.	1 Do one of the following: • If the Remote Maintenance software starts, connect to the voice messaging system, and follow the remaining steps for this pattern. • If the Remote Maintenance software does not start, follow the steps for pattern 9. 2 At the command prompt, type VMUTIL CKLIST D:\ and press ENTER. The voice messaging system lists any files that have been corrupted and need replacing. 3 Call Technical Support.

● = Lit   ○ = Not lit

Pattern number	LED pattern	Problem indicated	Troubleshooting procedure
4	○ ○ ● ○	One or more files on drive D have a file size or checksum not matching the recorded file size or checksum in FILELIST.	**Warning!** Following the steps below might mask a different problem. Follow the steps below only if you know you have made changes to a file on drive D or have used the TED utility. If you are unsure, call Technical Support before proceeding. 1 Connect to the voice messaging system with the Remote Maintenance software. 2 At the command prompt, type D:\ and press ENTER. 3 Type VMUTIL MAKELIST and press ENTER. 4 Restart the voice messaging system. If the LED pattern appears repeatedly, call Technical Support.
5	● ○ ● ○	No tests are being performed.	Call Technical Support.
6	○ ● ● ○	No tests are being performed. The voice messaging system is checking for a modem or direct connection.	Call Technical Support.

● = Lit   ○ = Not lit

Pattern number	LED pattern	Problem indicated	Troubleshooting procedure
7	● ● ● ○	No tests are being performed. The voice messaging system detects a direct connection.	Call Technical Support.
8	○ ○ ○ ●	No tests are being performed. The voice messaging system detects a modem.	Call Technical Support.
9	● ○ ○ ●	The Remote Maintenance software did not start.	1 Unplug the voice messaging system. 2 Turn the modem off and on. 3 Plug in the voice messaging system. 4 Connect directly to the voice messaging system with a terminal emulation program. 5 Call Technical Support.
10	○ ● ○ ●	CHKDSK reports uncorrectable problems on drive C.	Restart the voice messaging system several times. If the LED pattern appears repeatedly, call Technical Support.

● = Lit   ○ = Not lit

Pattern number	LED pattern	Problem indicated	Troubleshooting procedure
11	● ● ○ ●	The DSP firmware did not load correctly.	**1** Connect to the voice messaging system with the Remote Maintenance software. **2** At the command prompt, type LOADDSP -V D:\ EVP.BIN and press ENTER. **3** Determine whether an error message is displayed: • If no error messages are displayed, type START_VM and press ENTER. • If an error message is displayed, call Technical Support.
12	○ ○ ● ●	DBFIX reported errors. There is database corruption.	Call Technical Support.
13	● ○ ● ●	An attempt to remove unneeded files from drive C failed.	Call Technical Support.

● = Lit   ○ = Not lit

Pattern number	LED pattern	Problem indicated	Troubleshooting procedure
14	○ ● ● ●	The voice messaging application did not start, (the file CPS.EXE did not load).	**1** Connect to the voice messaging system with the Remote Maintenance software. **2** At the command prompt, type VM INIT and press ENTER. **3** Determine whether an error message is displayed: • If no error message is displayed, type START_VM and press ENTER. • If an error message is displayed, call Technical Support. **4** If the problem recurs, call Technical Support.

● = Lit   ○ = Not lit

Glossary

Glossary

A–B

ARCHIVED MESSAGE

Any message a subscriber listens to and then saves for a number of days. You set the number of days that messages are archived. All old or archived messages must be saved each time they are heard or they are deleted. *See also* new message; old message.

AUDIOTEXT

Recorded information that is available to callers 24 hours a day about whatever your customer's organization wants callers to hear. You can provide menus of information or other messages, and you can use audiotext messages in menu keys.

AUTOMATED ATTENDANT

A way of setting up the voice messaging system so that the voice messaging system acts as a receptionist, answering and routing incoming calls.

AUTOMATIC DIRECTORY ASSISTANCE

A directory of subscriber extension IDs that is available to callers when they spell the first three letters of the subscriber's last or first name, depending on your setup, on the telephone keypad.

AWAIT ANSWER

One of three types of call transfer in which the voice messaging system waits for the extension to be answered before completing a transfer to that extension. *See also* release; wait for ringback.

C

CALL FORWARDING TO A PERSONAL GREETING

The ability of some telephone systems to automatically forward calls to the voice messaging system when an extension is busy or unanswered. The telephone system sends a follow-along ID with the forwarded call. This ID identifies for the voice messaging system the extension the call was forwarded from.

CALL ROUTING

The processing of calls through the voice messaging system without being transferred to the telephone system. *See also* await answer; call transfer; release; wait for ringback.

CALL TRANSFER

The transfer of calls from the voice messaging system to the telephone system, which takes control of connecting the call to an extension. You can turn call transfer on and off. *See also* await answer; release; wait for ringback.

CONVERSATION

The collection of prerecorded questions, choices, and responses that the voice messaging system plays to guide callers through the voice messaging system. The conversation consists of greetings and prompts. Greetings can be changed over the telephone.

D

DAY GREETING
The greeting that plays during the days and times you have designated as normal business hours. *See also* night greeting.

DAY MODE
The voice messaging system's operating mode during normal business hours. You can set up the voice messaging system to function differently during day mode and night mode hours. You define what days of the week and hours of the day are day mode. All other hours are assigned to night mode. *See also* holiday mode; schedule.

DEFAULT
The option the system uses if you do not select another option.

DIRECTORY ASSISTANCE
A directory of subscribers' extension IDs that is available to callers with lettered keypads. Callers can use directory assistance to reach a subscriber's extension ID without speaking to an operator.

E

EASY MESSAGE ACCESS
A function enabling subscribers to check messages by pressing a single button on their telephones. The availability of this function depends on the capabilities of the telephone system.

EXTENSION
The actual telephone number of a telephone in your customer's system.

F

FAX DETECT
A function that allows the voice messaging system to detect an incoming fax tone and automatically deliver faxes to the Operator mailbox.

FAX NOTIFICATION
A function that allows the voice messaging system to notify the operator each time it delivers a fax. When this function is enabled, the fax sender is given the opportunity to record a message describing the fax and who it is for.

G

GREETING
A recording that gives information, welcomes callers to the system, offers menu options, or offers a chance to leave a message. If your customer's organization uses the automated attendant, the opening greeting is what callers hear when they dial the main telephone number for the organization. A subscriber's personal greeting is what callers hear when they reach a subscriber's voice mailbox.

GROUP
See message group.

H–L

HOLIDAY MODE

A special schedule mode that overrides the normal schedule. The system manager activates holiday mode and records a holiday greeting in the greetings part of the system manager's conversation.

M

MAILBOX

The location where the voice messaging system stores messages from callers. For example, the voice messaging system keeps messages for a subscriber in that subscriber's mailbox.

MENU KEYS

The organization of menus, audio messages, and call routing choices, which the system manager designs and sets up, that provides callers with easy access to frequently requested departments and information.

MESSAGE GROUP

A list of subscribers to whom a subscriber can send the same message at once. Any subscriber can be a member of any message group. The system manager assigns subscribers to groups in the system manager's conversation.

MESSAGE NOTIFICATION

The voice messaging system's ability to call subscribers at any telephone number they specify when they have new messages. The system can also activate pagers and message waiting indicators.

MESSAGE WAITING INDICATOR

A feature on a telephone, such as an indication light, a distinctive dial tone, or an LCD display, that lets subscribers know when they have messages waiting.

N

NEW MESSAGE

A message that has not yet been heard by the recipient. *See also* archived message; old message.

NIGHT GREETING

The greeting that plays during all days and times except those specified in day mode.

NIGHT MODE

The voice messaging system's operation mode outside of normal business hours. You can set up the voice messaging system to handle calls differently during day mode and night mode hours. You define what days and hours are day mode. All other hours are assigned to night mode. *See also* holiday mode; schedule.

O

OLD MESSAGE
A message that has been heard, but not deleted or archived. You and the system manager decide how long old messages are saved. *See also* archived message; new message.

OPENING GREETING
The greeting that callers hear when they call your customer's main telephone number, if the organization uses the automated attendant.

OPERATOR MAILBOX
A mailbox used exclusively for storing calls that go to the person with operator responsibilities at your customer's organization.

OUTSIDE CALLER
See unidentified caller.

P

PERSONAL ID
A unique system ID that identifies a subscriber to the system.

PORT
The standard modular telephone jacks located on the side of the voice messaging system unit that the system uses to connect to and communicate with the telephone system.

PROMPT
A recording that is played at specific places in the system conversation.

PUBLIC MESSAGES
Messages collected in the Operator mailbox. The operator screens these messages and routes them to the appropriate subscribers.

Q

QUICK OPTION MENU
An alternative to the Yes-and-No conversation, in which subscribers select menu options by pressing digits.

R

RECORDED NAME
The audio recording of the subscriber's name that the voice messaging system plays in prompts requiring identification of the source or destination of a message or call. This may also be referred to as the voice name.

RELEASE
One of the three types of call transfer, in which the voice messaging system completes the transfer without checking whether the call is answered or whether there is a busy signal. *See also* await answer; call transfer; wait for ringback.

S

SCHEDULE
The method for determining how calls are handled at different times and/or different days. You can define up to three different schedules for the system. *See also* day mode; holiday mode; night mode.

SECURITY CODE
A series of characters that subscribers set so that no one else can access their voice mailboxes.

SUBSCRIBER
Anyone who is enrolled in the voice messaging system. The system identifies a caller as a subscriber when the subscriber enters a personal ID.

SUBSCRIBER'S PERSONAL GREETING
The greeting callers hear when they reach a subscriber's voice mailbox.

SWITCH
The telephone system.

SYSTEM GREETINGS
See opening greeting.

SYSTEM ID
A unique system ID that you assign to each subscriber.

SYSTEM MANAGER
The individual in an organization who sets up and maintains the voice messaging system.

SYSTEM MANAGER CONVERSATION
The collection of prerecorded prompts, questions, choices, and menus that the system plays to the system manager to allow the system manager to maintain the voice messaging system.

T

TOUCHTONES
The sounds made by pressing the keys on touchtone telephones.

TRANSFER
See call transfer.

U

UNIDENTIFIED CALLER
An individual calling from outside the voice messaging system. If a subscriber calls the system and does not enter a personal ID, that subscriber is treated as an unidentified caller.

V

VOICE MAILBOX
The location where the voice messaging system stores messages. The voice messaging system gives each extension on the telephone system a separate voice mailbox.

VOICE NAME
The recorded name of a subscriber. The voice messaging system plays the voice name in prompts that require identification of the source or destination of a message or call. *See also* recorded name.

W–Z

WAIT FOR RINGBACK
One of three types of call transfer, in which the voice messaging system waits for an extension to ring a certain number of times before transferring the call. *See also* await answer; release.

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