

STARPLUS® AVP

(Automated Voice Processing)

TECHNICAL MANUAL



COMMUNICATIONS
STEMS

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STARPLUS[®] AVP Issue Control Sheet

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1	April 1992	Initial Release

SECTION 100

INTRODUCTION

100.1 INTRODUCTION

This manual is meant to be an instructional tool for system administrators and technicians. It describes how to install, program, and maintain the various **Starplus** AVP applications.

In this chapter we will discuss:

- **Starplus** AVP operational concepts
- The **Starplus** AVP component modules
- System configuration and sizing
- **Starplus** AVP hardware components
- Attaching **Starplus** AVP to your phone system

The **Starplus** AVP is a family of call processing products designed to increase the productivity of your telephone system. The **Starplus** AVP is comprised of independent software modules that perform separate and distinct functions. These functions are Voice Messaging, Auto Attendant, and Menu Routing. Voice Messaging allows users to send and receive messages. Auto Attendant allows callers to be directed to extensions without the need for a live operator. Menu Routing allows you to create custom mulatto level menus that allow callers to be routed based upon DTMF responses entered by the caller. All **Starplus** AVP systems, regardless of port/hour capacity provide these three features. The system can be set up so that callers may always have the option to go to a live operator. The **Starplus** AVP has predefined settings that enable it to integrate with the **Starplus** telephone systems quickly and easily. In addition, the **Starplus** AVP can integrate with other manufacturer's phone systems and PBX's.

The **Starplus** AVP is a microcomputer (PC) based product with special voice boards installed. The voice boards are specialized hardware items that digitize human speech, store and retrieve speech files from the hard disk, and provide the interface between the phone system and the computer. The voice boards enable **Starplus** AVP to answer the phone and play back recorded messages. A caller communicates with the **Starplus** AVP system by pressing keys on a touch-tone telephone. The **Starplus** AVP listens for this input and then makes an appropriate response.

In a typical configuration, the **Starplus** AVP is connected to a **Starplus** telephone system via the SLT or OPX ports which connect to the voice boards. When a call is sent from the phone system to the computer, the **Starplus** AVP will answer the phone and greet the caller. The call is then processed in terms of specific call handling procedures.

The **Starplus** phone system and the AVP integrate via In Band integration. This integration allows the phone system to send the extension number and other information to the AVP in the form of DTMF digits before the caller is connected to the AVP system. This allows callers to go directly to the called person's personal greeting without the caller having to enter the mailbox number. For system users, this means by dialing the voice mail group code they will be prompted to enter their password.

The **Starplus** AVP is made up of several programming components. Each component has a specific function. The first five components are located in the database administration program and are accessed through it. The last two are run time screens that are presented while the system is running. The programming mode does not have to be entered to view these last two items.

- Configuration - is used to set the various parameters that provide the interface between the phone system and the computer.
- Modules - define the type of telephone automation that **Starplus** AVP runs.
- Reports - provide complete administrative and management information that analyzes system performance and use.
- Utilities - are special functions that include a recording studio, diagnostics, screen color settings, and system upgrades.
- Housekeeping - controls various disk management functions.
- Run-Time Screens - show blockage, usage, and events in real-time.
- Multi-Tasking - allows other DOS programs to run on the same PC as **Starplus** AVP. This can only be utilized on 386 machines.

The **Starplus** AVP combines the best of two worlds. It has easy-to-use pull-down menus that provide a simple user interface. In addition, it has the underlying flexibility of a development language that provides a vehicle for the design and development of any telephone automation application you can imagine. **Starplus** AVP has been designed with the ability to grow and expand with your business.

100.2 MODULES

The Starplus AVP product line consists of software modules that are designed to perform specific functions. Modules are telephone automation applications that have been written in a high level development language. The Starplus AVP is a platform for running telephone automation applications. We refer to Starplus AVP as a platform because by itself it can do very little. It simply provides the foundation for running the Modules. The modules provided with each Starplus AVP system are the Voice Messaging, Auto Attendant, and Menu Routing modules.

Modules run as stand-alone applications or they can be combined to implement more sophisticated call processing routines. For example, Auto Attendant can answer a call and transfer it to the proper extension. If the called party is unavailable, the voice messaging module (Voice Messaging) can record the caller's message.

Menu Routing allows modules to be run from voice menus. A menu gives the caller a selection of choices to choose from. For example, the caller might hear the following:

"Thank you for calling, please ..."

"Dial 1 for sales.", "Dial 2 for customer support.", "Dial 3 for product information.", "Dial 4 to find a dealer in your area."

Menus can also be multi-leveled. To use the above example, if a customer dials 4 to find a dealer, he might hear the following:

"To locate a dealer, please ", "Dial 1 for retail dealers.", "Dial 2 for wholesale dealers."

The system takes action based upon the digits dialed and what that digit is programmed for.

100.3 HARDWARE

A. BASE UNITS

The Starplus AVP base hardware is offered in two (2) platforms, a three (3) hour base unit or a seven (7) hour base unit. These base units include the following components:

- AT 286 12 Mhz CPU card with two (2) megabytes RAM (random access memory)
- Six (6) slot PC enclosure
- 3.5" Floppy drive and diskette holder
- 40 Megabyte (3 hour) or 80 Megabyte (7 hour) SCSI hard drive
- Monochrome video card
- SCSI controller card
- Monochrome monitor

- 101 keyboard
- . DOS 4.01
- Documentation (1 Manual, 1 Administrators guide, 1 user guide, 1 quick reference card)

These base units form the platform for the **Starplus** AVP. They are high quality hardware components chosen for their trouble free performance.

In addition to the above sizes, the **Starplus** AVP can be configured as a custom unit. **Starplus** AVP custom units can be ordered in port sizes from two(2) to twenty-four(24) and storage sizes of three(3) to fifteen(15) hours. These units both hardware and software are configured individually.

B. VOICE BOARDS (PORTS)

The base units provide the basic platform and storage functions, however, the voice boards must then be added to the base unit to complete the hardware requirements. The voice boards are the interface between the computer and the telephone system. The port offerings for the **Starplus** AVP are:

- 2 ports
- 4 ports
- . 6 ports
- . 8 ports

Two types of voice boards are offered, a two (2) port version or a four (4) port version. To obtain a six (6) port system, a two port voice board as well as a four port voice board would be installed in the system. There are typically three (3) slots in the enclosure that may be used for voice boards. This means that a maximum of twelve (12) ports can be obtained in the six slot enclosure. Three voice boards each with four ports give a maximum of twelve ports.

C. SYSTEM SIZE

DISK STORAGE

The **Starplus** AVP is offered in three (3) or seven (7) hour storage capacities. In addition, there is a 15 hour storage device available also. The size of your disk drive is determined by the type of application you are running. Applications involving voice messaging and voice recording generally require the most disk storage space. The storage time in the **Starplus** AVP takes into consideration the drive space needed by the system software and DOS. Specific factors that effect the amount of required storage include:

- Number of users
- Number of messages per day
- Average length of messages
- Retention period for each message

Starplus AVP can format about 55 minutes of voice recording per 10 meg of available disk space.

A good rule of thumb for applications involving voice messaging is to allow 1 hour of storage (about 10 meg) for each 25 users.

NUMBER OF PORTS

The Starplus AVP is offered in two (2), four (4), six (6), or eight (8) port versions. The number of ports that your Starplus AVP system needs can be estimated but not guaranteed. The number depends on several factors. These include:

- The Starplus AVP applications being run
- Time of day
- Average length of call transaction
- Average and peak traffic load
- Probability of a busy signal

A conservative rule of thumb for voice messaging applications is to estimate that each port supports 20 users.

There are, however, installations that support 75 users per port. In environments where call routing is the primary operation, you can estimate the amount of time needed to complete an average transfer. If we assume that the amount of time to make a call transfer is 30 seconds, then a 4 port Starplus AVP system will be able to route 8 calls per minute or about 480 per hour.

SOFTWARE

The standard software/hardware configurations for the Starplus AVP are:

- 2 port, 3 hour
- 4 port, 3 hour
- 4 port, 7 hour
- 6 port, 7 hour
- 8 port, 7 hour

The Starplus AVP is not limited to the configurations listed above. A custom system (both hardware and software) can be ordered. This system can range from two to twenty-four ports and from 3 to 15 hours of storage.

D. OPTIONAL EQUIPMENT PRINTER

It is recommended that you use a parallel printer for your Starplus AVP application. Connect the printer to the software key on the CPU board. Remember not to remove the software key or the printer while the system is running.

POWER SUPPLY AND POWER SURGE PROTECTOR

For protection against transmission line fluctuations and power failures, install a power surge protector and UPS power supply. These can be purchased from most computer dealers.

REMOTE PROGRAMMING OPTION

This allows remote programming of the Starplus AVP. The option consists of a 2400 baud modem and the host end of Carbon Copy communications software.

E. LOCATING THE SYSTEM

When choosing the location for the system consider such factors as convenience, security, and environment. It is probably best to place the system in the same room or close to the area where the phone system is located. Provide a clean, relatively dust free space with adequate ventilation. The room should have a stable temperature and comply with the computer manufacturer's specifications.

The computer needs to be connected to a reliable source of power. Fluctuations in line voltage and power surges can impede operation as well as damage the PC or its components.

F. INSTALLATION

There are several ways the **Starplus** AVP can be configured. Its intended function will determine where it is installed in the telephone network. The following are the most common installation techniques.

BEHIND A STARPLUS PBX OR KEY TELEPHONE SYSTEM

This is the most common configuration. The **Starplus** AVP is installed behind the telephone system using single line (analog) extensions. These terminate at the voice boards on the back of your **Starplus** AVP computer. The number of lines is dependent on the size of your installation. All calls from the Central Office route through the PBX first and then to **Starplus** AVP. When configured in this manner, **Starplus** AVP supports the following:

- The caller can be answered by a live operator and transferred to **Starplus** AVP for appropriate routing.
- All calls can be answered directly by **Starplus** AVP for appropriate routing.
- The call is first directed to a live operator, but if the call is not answered after a set number of rings the PBX can send the call to **Starplus** AVP.

To help insure a smooth integration, the **Starplus** AVP contains pre-defined settings for each of the **Starplus** phone systems. The systems are the **2448Ex**, **96EX**, **SPD1428**, **SPD2856**, and the **SPX**. When connecting the **Starplus** AVP to a **Starplus** phone system selecting one of these will load the correct interface settings. Loading these settings automatically creates a list of mailboxes and extensions to match the phone systems default programming (**SPX** matches the default data disk shipped with the manual). The correct feature prefixes and four (4) pre-defined class of services, as well as loading the correct tone cadences for call analysis functions.

DIRECTLY TO THE PHONE LINE

The **Starplus** AVP can be connected to the phone lines directly, if desired. This method is not as flexible as behind a phone system but it is possible. The caller will have to manually enter the mailbox number. Also, call transfers are not possible unless the lines are **centrex** lines in which case transfers to other **centrex** lines is possible.

SECTION 200

FEATURE DESCRIPTION

200.1 INTRODUCTION

Starplus AVP is a powerful tool for telephone automation. The AVP is capable of Voice Messaging, Auto Attendant, or Menu Routing operation or any combination of these features.

200.2 VOICE MESSAGING

Voice Messaging allows users to send and receive voice messages. The following features are available with the Voice Mail Module on the **Starplus AVP**.

A. PASSWORD

To prevent unauthorized access to mailbox feature settings, each mailbox can have its' own password. The password can be changed as often as you like. It is a four digit number unless you are told otherwise by the system administrator. If you forget the code, the administrator can reset it.

B. GREETING

The greeting is a personal message that a caller hears when they dial your mailbox. The greeting usually tells the caller that you are not available, when you can be reached, and how to record a message. If you do not record a personal message, the system plays a default greeting.

C. RETRIEVING MESSAGES

When messages are retrieved, new messages are played back before previously saved messages, and they are played in the order they were received. The oldest message is played first. Features can be accessed at any time. It is not necessary, to wait until the end of the message. Note that if you hang up without doing a delete or save, your messages are automatically saved in the same state as they were when you accessed the mailbox.

After you have finished listening to the message the following options are available:

- **Forward** - Allows you to pass the message along to another mailbox owner. To use this feature you must know the mailbox number of the person you want to forward the message to. An option of this is the ability to pass the message along to another mailbox owner adding your own comments (pre-amble) in front of the message. The person receiving the forwarded message will hear your pre-amble followed by the forwarded message.
- **Reply** - Is used to respond directly to the person who left you the message without having to enter a mailbox number. To use this feature, the message must have been sent from another mailbox owner.
- **Date/Time** - Gives you the date and time that the message was sent. The system automatically attaches this information to each message.

D. SENDING A MESSAGE

This allows users to record and send messages to other mailbox users in the AVP system. The following features are available when sending messages:

- Replay the message, allows you to listen to the message you just recorded.
- Cancel the message, allows you to terminate the send operation.
- Re record the message, allows you to record the message over again if you are not satisfied with the current one.

Messages may be sent to other mailboxes in the system or a list of mailboxes called a distribution list.

E. STATE

The mailbox State determines how the system handles a call when someone tries to leave a message. Usually, this means playing the called party's personal greeting and then prompting the caller to leave a message. However, several other feature selections allow the call to be handled differently. The mailbox user may change this through their mailbox access. This allows each mailbox user to set up and maintain their own state preferences. Below are the selections available and a description of what they are used for:

- Normal - Plays personal greeting and then takes the caller's message.
- Off - disables the mailbox and caller hears, "This mailbox is not available. Press 1 to try another mailbox or 0 for an operator."
- Greeting only - plays the personal greeting only and then, "Press 1 to try another extension or 0 for an operator."
- Forward to an extension - transfers the call to an extension instead of taking a message.
- Forward to a mailbox - transfers the call to another mailbox instead of this one. For example, in the evening a sales department might want messages left in a generic mailbox with common password access.
- Forward to a menu - transfers the caller to a custom designed menu with a number of selections.

F. MESSAGE NOTIFICATION

This instructs the system to contact you on receipt of a message by dialing an alternate phone number or activating a paging device. This allows you to receive your messages immediately or at some set time when you are away from your office. The settings may be changed by the user in their mailbox. This allows the user to customize their notification schedule for maximum flexibility.

The following selections are available with notification:

- Play - is used to hear the current settings.
- Off/On - turns this feature off/on.
- Immediate/Timed - toggles the type of notification you want.
- Timed - is used to set the reminder time.
- Number - is used to set the number where you can be reached. This number can be an internal extension, outside phone number, or digital pager.

When the system calls you it will say, "I have a new message for (Your Name). Please enter your password to accept the message." Of course, you can access your messages manually at any time. However, if you are expecting an important message or do not plan to be in the office, this feature provides added flexibility.

If you are not available when the system tries to reach you, it will redial periodically until you receive the message.

G. EDIT TIME PERIOD

Edit Time Period allows the mailbox owner to edit mailbox settings for: Daytime, Evenings, Weekends, and Holidays. The items that may be changed are the greeting, name, password, or the other settings selection. These items can be different for all the time periods.

H. DISTRIBUTION LISTS

This feature allows users to create a message and send it to a distribution list. A list may be up to twenty (20) mailboxes. There are 100 distribution lists in the system. The lists may be connected together to obtain more than 20 total mailboxes. To use this feature, the Lists setting in Class of Service must have been set to either Personal or System. The lists are set up in programming portion of the system. The lists are set up as "pseudo" mailbox numbers. For example, if the system mailbox numbers are 100-I 58, the distribution list numbers may be 500599. This enables a user to enter a list number as they would a mailbox.

200.3 AUTOMATED ATTENDANT

This feature allows the AVP to answer calls and transfer them to an extension based upon what digits the caller dialed. This relieves the telephone load on receptionists. The caller can always reach a live operator by dialing a programmed digit (usually 0). In addition the auto attendant module can provide a company directory so that callers may dial by name to be transferred to the desired party. This module also supports call screening. This requests that callers say their name, the system will then call you and play the person's name. At this point you can accept or reject the caller by dialing a digit.

A. SYSTEM ACCESS

System access allows you to set and edit the special features that come with the automated attendant.

You access extension features like you do for voice messaging; by dialing into the system, pressing the key, and then entering your password.

B. PASSWORD

To prevent unauthorized access to your extension feature settings, the password can be changed as often as you like. It is a four digit number unless you are told otherwise by the system administrator. If you forget the code, the administrator can reset it.

C. TRANSFER OPTIONS

When Starplus AVP forwards a call to your extension the transfer can be one of three methods. The user may change these methods through extension maintenance. This allows the user to customize their extension for maximum flexibility. The call transfer methods are:

- Supervised - **Starplus** AVP monitors the transfer. If you do not answer, the call is forwarded.
- Unsupervised - **Starplus** AVP does not monitor the transfer. The call is not forwarded in the event you do not answer.
- Immediate Forward - **Starplus** AVP forwards the call immediately without trying to reach the extension.

If the transfer is supervised or forwarded **immediately**, then you need to select where the call will be forwarded to. There are several forwarding options you can choose from. See the call forward (Item F) for these options.

D. CALL SCREENING

This feature prompts the caller for their name before transferring the call. Then, you hear, "I have a call from (Persons Name). Press 1 to accept the call or 2 to reject." If the call is rejected, it is handled in accordance with the forwarding instructions. This allows you to screen all incoming calls to accept or reject calls.

E. CALL HOLDING

This feature allows the caller to remain on hold if your extension is busy. The caller hears, "That extension is busy. To hold press 1, press 2 to select another extension, or 3 to leave a message." With call holding turned off, the call is handled in accordance with the forwarding instructions.

F. CALL FORWARDING

This selection allows you to set how a call is handled on a supervised transfer or when the call transfer option is set to immediate. These settings may be changed by the user through extension maintenance for maximum flexibility.

- Forwarding Off - disables this feature and the call is not forwarded.
- Forward to Mailbox - probably the most common use of this feature. If you don't answer the caller hears your personal greeting and is prompted to leave a message.
- Forward to Extension - forwards the call to another extension; for example, a secretary or another sales person.
- Forward to Menu - provides the caller with a menu of special options. For example, For information on Product XXX press 1 or press 2 to leave a message.
- Forward to Outside Number - The call is connected to an outside phone number, like your home or mobile telephone.

200.4 MENU ROUTING

This feature allows you to build call processing applications so that callers may access information without the assistance of a live operator by dialing DTMF digits. Callers receive voice prompts such as, "to dial sales, press 1, to dial service, press 2." Based on the digits dialed the system can perform one of a number of actions. The caller could be transferred to an extension, the caller could receive an information announcement, the caller could be routed to voice messaging, etc... The highlights of this feature are:

- Multi-level menus, the system allows any number of menu levels to be created.
- Three recordings per menu, this allows three different voice recordings to be associated with each menu. There

is an introduction prompt, description prompt, and a instruction prompt.

- Time-outs/Retries on a per menu basis. Retries and time outs for user errors can be set on a per menu basis.
- Edit Prompt Feature. This allows the user to enter a menu and change the prompts at any time. This is a password protected function so that callers entering the menu cannot access this without knowing the password. All three prompts on each menu can be edited by the user. This allows messages such as daily specials to be updated while the main greeting (introduction prompt) can remain the same.

200.5 MULTI-TASKING

This module is utilized on 386 PC based systems to allow on line programming without taking the system off line. On standard 286 based machines the system must be taken off line in order to make database changes. With the Multi-Tasking module the system can still process voice messages while in the programming mode. This is only available on custom systems.

This option allows the user to run several applications at once. It uses a priority system to determine which applications receive the most processor time. The priorities are setup in programming for the multi tasker.

This option is described completely in Appendix D.

SECTION 210

VOICE MESSAGING

210.1 VOICE MESSAGING

A. PASSWORD

Voice Messaging allows users to send and receive voice messages. The following features are available with the Voice Mail Module on the **Starplus** AVP.

To prevent unauthorized access to your mailbox feature settings, the password can be changed as often as you like. It is a four digit number unless you are told otherwise by the system administrator. If you forget the code, the administrator can reset it.

B. GREETING

The greeting is a personal message that a caller hears when they dial your mailbox. The greeting usually tells the caller that you are not available, when you can be reached, and how to record a message. If you do not record a personal message, the system plays the following canned message, "The person you have tried to reach is unavailable. Your call is being answered by the **Starplus** Automated Voice Processing system. After the tone, please leave a message. When you are finished, hang-up, or press any key for more options".

C. RETRIEVING MESSAGES

When messages are retrieved, new messages are played back before previously saved messages, and they are played in the order they were received. The oldest message is played first. The diagram below shows the features available while you are reviewing the messages. Features can be accessed at any time. It is not necessary, to wait until the end of the message. Note that if you hang up without doing a delete or save, your messages are automatically saved in the same state as they were when you accessed the mailbox.

After you have finished listening to the message the following options are available:

- **Forward** - Allows you to pass the message along to another mailbox owner. To use this feature you must know the mailbox number of the person you want to forward the message to. An option off this feature is the ability to add your introductory comments at the beginning of the message. The person receiving the forwarded message hears your comments then the forwarded message.
- **Reply** - Is used to respond directly to the person who left you the message without having to enter a mailbox number. To use this feature, the message must have been sent from another mailbox owner.
- **Date/Time** - Gives you the date and time that the message was sent. The system automatically attaches this information to each message.

D. SENDING A MESSAGE

This allows users to record and send messages to other mailbox users in the AVP system. The following features are available when sending messages:

- Replay the message, allows you to listen to the message you just recorded.
- Cancel the message, allows you to terminate the send operation.
- Re record the message, allows you to record the message over again if you are not satisfied with the current one.

E. STATE

The mailbox State determines how the system handles a call when someone tries to leave a message. Usually, this means playing the called party's personal greeting and then prompting the caller to leave a message. However, several other feature selections allow the call to be handled differently. Below are the selections available and a description of what they are used for:

- Normal - Plays personal greeting and then takes the caller's message.
- Off - disables the mailbox and caller hears, "This mailbox is not available. Press 1 to try another mailbox or 0 for an operator."
- Greeting only - plays the personal greeting only and then, "Press 1 to try another extension or 0 for an operator."
- Forward to an extension (option) - transfers the call to an extension instead of taking a message.
- Forward to a mailbox - transfers the call to another mailbox instead of this one. For example, in the evening a sales department might want messages left in a generic mailbox with common password access.
- Forward to a menu - transfers the caller to a custom designed menu with a number of selections.

These options can be changed by the mailbox user through their mailbox access.

F. MESSAGE NOTIFICATION

This instructs the system to contact you on receipt of a message by dialing an alternate phone number or activating a paging device. This allows you to receive your messages immediately or at some set time when you are away from your office. The user can change the notification settings through their mailbox.

The following shows the available selections:

- Play - is used to hear the current settings.
- Off/On - turns this feature off/on.
- Immediate/Timed - toggles the type of notification you want.
- Timed - is used to set the reminder time.
- Number - is used to set the number where you can be reached. This number can be an internal extension, outside phone number, or digital pager.

When the system calls you it will say, "I have a new message for (Your Name). Please enter your password to accept the message." Of course, you can access your messages manually at any time. However, if you are expecting an important message or do not plan to be in the office, this feature provides added flexibility.

If you are not available when the system tries to reach you, it will redial periodically until you receive the message.

G. EDIT TIME PERIOD

Edit Time Period allows the mailbox owner to edit mailbox settings for: Daytime, Evenings, Weekends, and Holidays. The items that may be changed are the greeting, name, password, or the other settings selection.

H. DISTRIBUTION LISTS

This feature allows users to create a message and send it to a distribution list. A list may be up to twenty (20) mailboxes. There are 100 distribution lists in the system. The lists may be connected together to obtain more than 20 total mailboxes. To use this feature, the Lists setting in Class of Service must have been set to either Personal or System. The lists are set up in programming portion of the system. The lists are set up as "pseudo" mailbox numbers. For example, if the system mailbox numbers are 100-I 58, the distribution list numbers may be 500-599. This enables a user to enter a list number as they would a mailbox.

SECTION 220

AUTOMATED ATTENDANT

22d.I INTRODUCTION

This feature allows the AVP to answer calls and transfer them to an extension based upon what digits the caller dialed. This relieves the telephone load on receptionists. The caller can always reach a live operator by dialing a programmed digit (usually 0). In addition, the auto attendant module can provide a company directory so that callers who do not know their party's extension number may dial by name to be transferred to the desired party. This module also supports call screening. This requests that callers say their name and the system will then call you and play the person's name. At this point you can accept or reject the caller by dialing a digit.

A. SYSTEM ACCESS

System access allows you to set and edit the special features that come with the automated attendant.

You access extension features like you do for voice messaging; by dialing into the system, pressing the key, and then entering your password.

B. PASSWORD

To prevent unauthorized access to your extension feature settings, the password can be changed as often as you like. It is a four digit number unless you are told otherwise by the system administrator. If you forget the code, the administrator can reset it.

C. TRANSFER OPTIONS

When **Starplus** AVP forwards a call to your extension the transfer can be one of three methods. The user may change these methods through extension maintenance. This allows the user to customize their extension for maximum flexibility. These methods are:

- **Supervised** - **Starplus** AVP monitors the transfer. If you do not answer, the call is forwarded.
- **Unsupervised** - **Starplus** AVP does not monitor the transfer. The call is not forwarded in the event you do not answer.
- **Immediate Forward** - **Starplus** AVP forwards the call immediately without trying to reach the extension.

If the transfer is supervised or forwarded immediately, then you need to select where the call will be forwarded to. There are several forwarding options you can choose from.

D. CALL SCREENING

This feature prompts the caller for his name before transferring the call. Then you hear, "I have a call from (Persons Name). Press 1 to accept the call or 2 to reject." If the call is rejected, it is handled in accordance with the forwarding instructions. This allows you to screen all incoming calls to accept or reject the call.

E. CALL HOLDING

This feature allows the caller to remain on hold if your extension is busy. The caller hears, "That extension is busy. To hold press 1, press 2 to select another extension, or 3 to leave a message." With call holding turned off, the call is handled in accordance with the forwarding instructions.

F. CALL FORWARDING

This selection allows you to set how a call is handled on a supervised transfer or when the call transfer option is set to immediate. These settings may be changed by the user through extension maintenance for maximum flexibility.

- Forwarding Off - disables this feature and the call is not forwarded.
- Forward to Mailbox - probably the most common use of this feature. If you don't answer the caller hears your personal greeting and is prompted to leave a message.
- Forward to Extension - forwards the call to another extension; for example, a secretary or another sales person.
- Forward to Menu - provides the caller with a menu of special options. For example, "For information on Product XXX press 1 or press 2 to leave a message."
- Forward to Outside Number - If you do pick up the phone, the call is connected to an outside phone number, like your home or mobile telephone.

SECTION 230

Menu Routing

230.1 INTRODUCTION

This feature allows you to build call processing applications so that callers may access information without the assistance of a live operator by dialing DTMF digits. Callers receive voice prompts such as, "to dial sales, press 1, to dial service, press 2." Based on the digits dialed the system can perform one of a number of actions. The caller could be transferred to an extension, the caller could receive an information announcement, the caller could be routed to voice messaging, etc.. The highlights of this feature are:

- Multi-level menus, the system allows any number of menu levels to be created.
- Three recordings-per menu, this allows three different voice recordings to be associated with each menu. There is an introduction prompt, description prompt, and a instruction prompt.
- Time-outs/Retries on a per menu basis. Retries and time outs for user errors can be set on a per menu basis.
- Edit Prompt Feature. This allows the user to enter a menu and change the prompts at any time. This is a password protected function so that callers entering the menu cannot access this without knowing the password. All three prompts on each menu can be edited by the user. This allows messages such as daily specials to be updated while the main greeting (introduction prompt) can remain the same.

SECTION 300

FEATURE OPERATION

300.1 INTRODUCTION

Starplus AVP is a powerful tool for telephone automation. With it, you can:

- receive voice messages
- send voice messages
- forward messages to a paging device or outside number
- record a personal greeting
- verify the date and time a message was sent
- screen incoming calls
- activate voice menus when you are away from your desk
- be notified of an important message anytime, anyplace
- allow a calling party to wait on hold

This guide is designed to show you how to use the **Starplus AVP** system features. You will learn:

- What the features are used for.
- How to access them.
- How to change their settings.

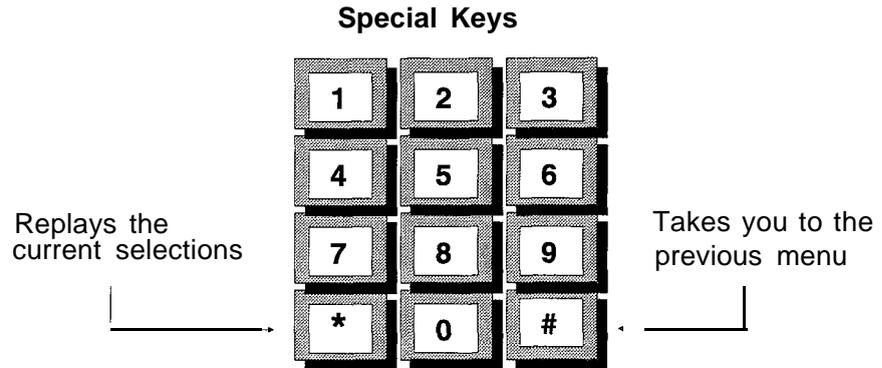
Voice prompts guide you through the operation of all the features. In fact, **Starplus AVP** is so easy to use that you almost do not need this manual. However, by taking the time to read it, you will get the most out of the product.

Note that the system administrator may not have activated all the features described in this manual and, therefore, some may not be accessible. Check with your system administrator about which features are available on your system.

A. SOME BASICS

A menu is a group of features or selections. The features can be accessed by pressing **0-9, *, or #** from the **dialpad** of any push button telephone. Menus are connected in what we call a tree structure, where general topics are broken into more specific areas. For example, "press 1 to retrieve messages, press 2 to send a message, press 8 for personal options." These selections are general topics that deal with a number of feature settings. If you select personal options you hear the following: "press 1 to edit greeting, press 2 to enter name..."

Special keys include the * which replays the selections of the current menu, and # which takes you back to the previous menu. The * is also used at specific points in the program to gain access to system features.



As a new user, press the [*] key often to replay the menu choices. In this way you will quickly become familiar with the system.

Experienced users may not want to listen to the menu selections at all. In that case, the type ahead feature overrides the voice prompts and allows you to enter a string of keys that will take you to where you want to be.

B. GETTING STARTED

Before going further, you need to have the following information:

- The internal number or phone number to access the Starplus AVP system
- Your mailbox number
- Your extension number
- Your Password

The feature operation contains the sections for Voice Messaging, Auto Attendant, and the Menu Routing modules of the Starplus AVP. These sections are described individually.

SECTION 310

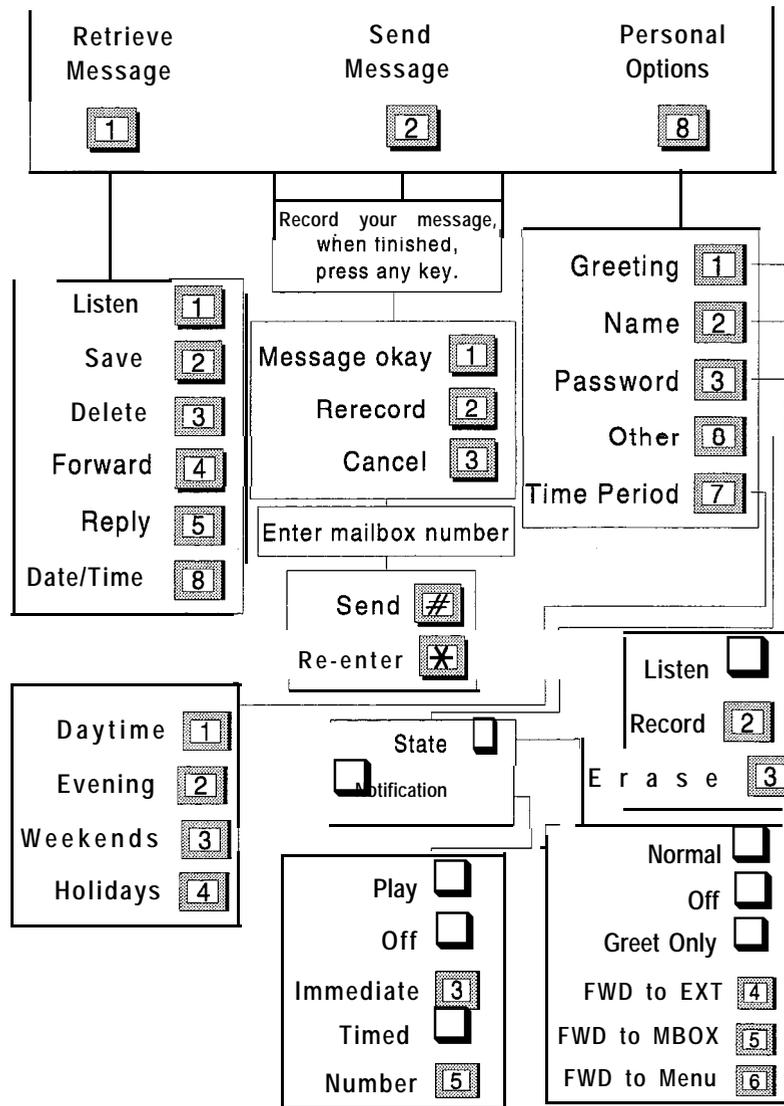
VOICE MESSAGING OPERATION

310.1 INTRODUCTION

Voice Messaging allows users to send and receive voice messages. This eliminates "telephone tag" and increases productivity.

310.2 VOICE MESSAGING

The following drawing shows the menu structure for voice messaging:



A. SYSTEM ACCESS

to Access your Mailbox:

1. Dial the internal extension;
 or outside phone number; () -

2. Enter your mailbox number;

3. Press *

4. Enter your password:

In order to access the system:

1. Dial the internal extension or outside phone number of the system.
 Once connected, you will hear a prompt similar to the following, "You have reached the voice mail center please enter the mailbox number of the person you are trying to reach. Enter your mailbox number."
2. Enter your mailbox number.
3. Press the [*] key. This tells the system that you want to access your mailbox. The system will respond with the following prompt, "Please enter your password." Note that the * key is the default key set at the factory and the system administrator may have changed this.

If you are connected to a Starplus phone system, simply press your voice mail button (or dial the VM pilot number). The first three steps are automatically done for you and you begin at the next step.

4. Enter your password. This number is the initial password set by the system administrator. The default password is 0000. Once you access your mailbox the system always plays a message about the number of messages you have. The system tells you the number of new messages, and then the number of saved messages. For example, "you have two new messages and three saved messages."

After this you hear the following:

- Press [1] to retrieve messages
- Press [2] to send a message
- Press [8] for personal options

If you have no messages, the system simply prompts you to:

- press 2 to send a message,
- or press 8 for personal options.

As a new user, you need to:

1. Record your name as the owner of this mailbox
2. Change the security code
3. Record a personal greeting

B. RECORD NAME

Recording your name provides a personalized identity for your mailbox. For example, when another VM user leaves you a message they hear the following prompt, "message has been sent to (Your Name)." This gives the caller a confirmation that the message has been sent to the correct person. If a name is not recorded the caller hears, "message has been sent to mailbox 1 234."

to Record your Name

1. Press  for personal options

2. Press  to edit name

3. Press  to record a new name

1. Press [8] for personal options.
2. Press [2] for name option.

The current name (if recorded) will be played.

3. Press [2] to record your name.

Once the name has been recorded you can

- press [1] to listen to the current name
- press [2] to record again
- press [3] to erase it

C. PASSWORD

To keep your messages confidential and prevent unauthorized use of your mailbox, you need to change the password. The password can be changed **as** often as you like.

The password is a four digit number, unless you are told otherwise by the system administrator. 'Select a code that is easy to remember but is not obvious. For example, do not use 5555. However, the first four digits of your home telephone number might work well. If you forget the code, the administrator can reset the mailbox.

to Enter a new Password

1. Press **8** for personal options
2. Press **3** to edit your password
3. Press **2** to record a new password

1. Press [8] for personal options.
2. Press [3] for password option.

The current password is played.

3. Press [2] to enter a new password.

Once the security code is entered, you can:

- press [1] to review it
- press [2] record a new code

D. GREETING

The greeting is a personal message that a caller hears when he dials your mailbox. The greeting usually tells the caller that you are not available, when you can be reached, and how to record a message. When you record a greeting, try speaking at a natural pace, perhaps just slightly faster than normal.

An example of a typical greeting might be, "Hello, this is Roger Smith. I'm either on the phone or out of the office. After the tone please leave your name, number, and a detailed message. I'll return the call as soon as possible. When you have finished the message you can hang up, or press any key for more options."

Instructing the caller to press any key at the **end of his**' message allows him to select from a number of editing options including, review, re record, and send.

If you do not record a personal message, the system plays the following canned message, "The person you are trying to reach is unavailable. Your call is being answered by the **Starplus** Automated Voice Processing system. After the tone record your message. When you are finished, you can hang up or press any key for other options."

to Record a new Greeting

1. Press		for personal options
2. Press		to edit your greeting
3. Press		to record a new greeting

1. Press [8] for personal options.
2. Press [1] for greeting.

The current greeting (if recorded) is played.

3. Press [2] to record a greeting.

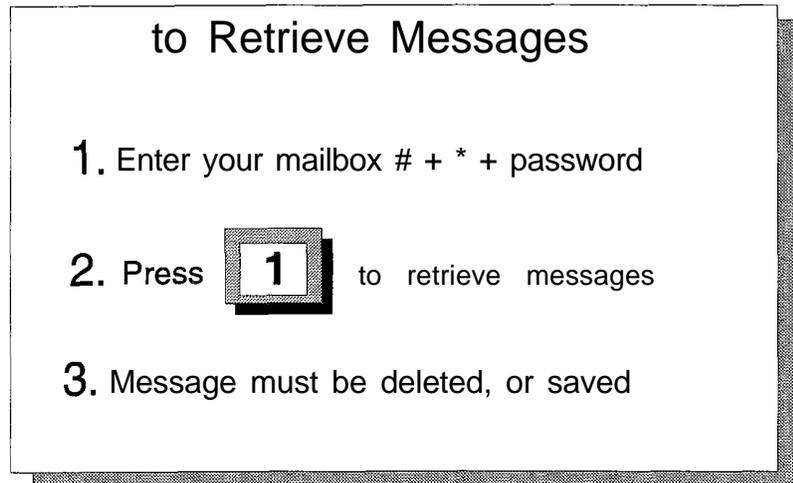
Once the greeting has been recorded, you can:

- press [1] to review it
- press [2] re-record
- press [3] to erase it

E. RETRIEVING MESSAGES

When messages are retrieved, new messages are played back before previously saved messages, and they are played in the order they were received. The oldest message is played first.

The diagram below shows the features available while you are reviewing the messages. Features can be accessed at any time. It is not necessary, to wait until the end of the message. After hearing you have a message, Press 1 to listen to the message.



1. Press [1] to listen to the message.

After listening to a message, you must do one of the following:

- Delete, Press [3]
- Save, Press [2]
- Forward, Press [4]

Note that even if a message is forwarded, it must be deleted or saved.

In most cases, you will probably delete the message. If you save it, be aware that the system will automatically erase the message after a period of time. This time is called the retention period and is typically set to a week or so, but ask the system administrator to be sure.

- Forward, Press [4] • allows you to pass the message along to another mailbox owner. To use this feature you must know the mailbox number of the person you want to forward the message to. You may forward the message as is or you may add introductory comments (pre-ambles) to the message. In this case, the person receiving the forwarded message will hear your pre-ambles (comments) first followed by the message.
- Reply, Press [5] • is used to respond directly to the person who left you the message without having to enter a mailbox number. To use this feature, the message must have been sent from another mailbox owner.

- Date/Time, Press [8] - gives you the date and time that the message was sent. The system automatically attaches this information to each message.

Note that if you hang up without doing a delete or save, your messages are automatically saved in the same state as they were when you accessed the mailbox.

F. SENDING A MESSAGE

You may send messages to other mailbox owners or to a distribution list. A distribution list is a group of mailboxes which will receive the message. You only have to record the message once and the system will automatically send it to the mailboxes in the distribution list. You may send a message to one or any number of mailboxes after recording it.

to Send a Message

1. Enter your mailbox [#] + [*] + password
2. Press **[2]** to send a message.
3. Record your message after the tone. When finished press any key.
4. Press **[1]** if message is okay,
[2] to re-record, **[3]** to cancel.
5. Enter the mailbox number that is to receive the message.
6. Press **[#]** to send message,
[*] to re-enter number.

You may repeat from step 5 until all desired mailboxes are entered.

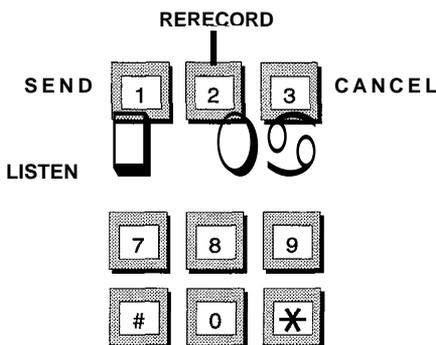
1. Press **[2]** to send a message.
2. Record your message after the tone and press any key after recording to end the message.
3. Press **[1]** if message is okay.
4. Enter the desired mailbox number.

The person's name (if recorded) or mailbox number is played.

5. Press **[#]** to send the message or * to re-enter the mailbox number.
6. Enter the next mailbox number to send to, or press **[#]**.

After you finish recording the message and before you press 1 (at Step 3) to send it, you are given the following options:

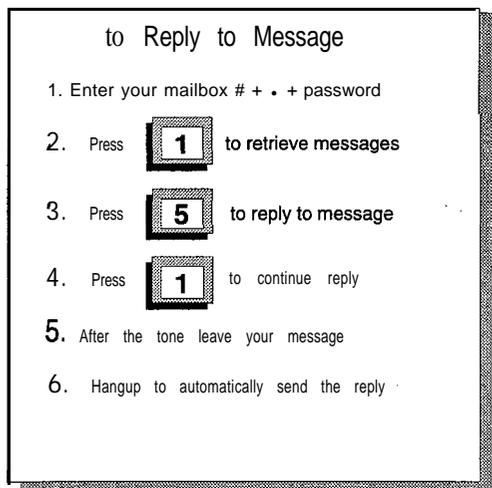
- Re-record the message, Press **[2]**
- Cancel the message, Press **[3]**
- Listen to the message, Press **[4]**



PRESS	FUNCTION
[1]	SEND the message
[2]	RERECORD the message
[3]	CANCEL the message
[4]	LISTEN to the message

G. REPLY TO SENDER

Reply to Sender allows the user to respond to a mailbox message. Starplus AVP will automatically send your reply to the person whose message you are responding to. If a response is not permitted, the option key will not be included as part of the menu.



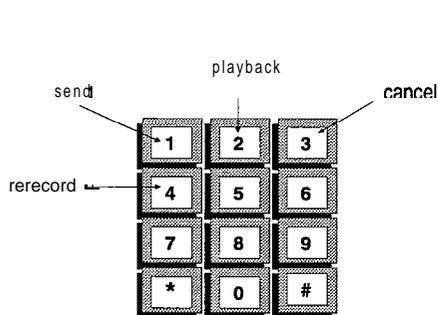
1. Press [1] to retrieve your message.
2. Press [5] to reply to message.
3. Press [1] to continue reply.
4. After the tone, leave your message.
5. Hang up to send the reply automatically.

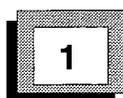
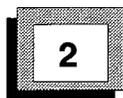
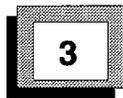
If you need to edit the message, press any key on the telephone key pad instead of hanging up the phone to send the message.

Starplus AVP will present the following options:

- Send the message, Press [1]
- Replay the message, Press [2]
- Cancel the message, Press [3]
- Re-record the message, Press [4]

Press Function

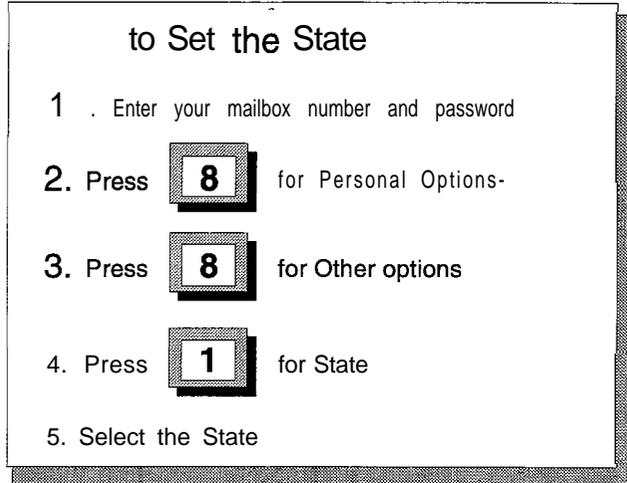


-  SEND the message
-  REPLAY the message
-  CANCEL the message and replay menu
-  RERECORD the message

To use this feature, the message that you are responding to must have been sent from within a mailbox in your Starplus AVP system.

H. STATE

The mailbox State determines how the system handles a call when someone tries to leave a message. Usually, this means playing the called party's personal greeting and then prompting the caller to leave a message. However, several other feature selections allow the call to be handled differently.



1. Press [8] for personal options.
2. Press [8] for other options.
3. Press [1] for the state option.

The diagram below shows the selections available and a description of what they are used for:

Press	Function
[1]	NORMAL mode of operation
[2]	OFF mailbox is not available
[3]	GREETING ONLY does not taks message
[4]	FORWARD to an extension
[5]	FORWARD to a mailbox
[6]	FORWARD to a menu

- Normal, Press [1] - plays personal greeting and then takes the caller's message.
- Off, Press [2] - disables the mailbox and caller hears, "This mailbox is not available. Press 1 to try another mailbox or 0 for an operator."
- Greeting only, Press [3] - plays the personal greeting only and then, Press 1 to try another extension or 0 for an operator.
- Forward to an extension, Press [4] - transfers the call to an extension instead of taking a message.
- Forward to a mailbox, Press [5] - transfers the call to another mailbox instead of this one. For example, in the evening a sales department might want messages left in a generic mailbox with common password access.
- Forward to a menu, Press [8] - transfers the caller to a custom designed menu with a number of selections.

I. MESSAGE NOTIFICATION

Message Notification instructs the system to contact you on receipt of a message by dialing an alternate phone number or activating a paging device.

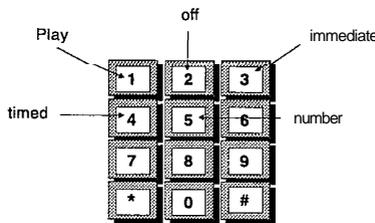
to Set Message Notification

1. Enter your mailbox number and password
2. Press **[8]** for Personal Options
3. Press **[8]** for Other options
4. Press **[2]** for Notification
5. Select the **type** of notification

1. Press [8] for personal options.
2. Press [8] for other options.
3. Press [2] for notification.

Notification type can either be immediate or timed. Where immediate the system will dial you as soon as the message is left, or timed where the system waits to a set time before dialing you.

The following diagram shows you the selections:



Press	Function
-------	----------

- | | |
|----------|--|
| 1 | PLAY the current setting |
| 2 | OFF disables message notification |
| 3 | IMMEDIATE notifies on receipt |
| 4 | TIMED to set the time of day |
| 5 | NUMBER to notify at ext or outside phone |

- Play, Press [1] is used to hear the current settings.
- Off/On, Press [2] turns this feature off/on.
- Immediate/Timed, Press [3] toggles the type of notification you want.
- Timed, Press [4] is used to set the reminder time.
- Number, Press [5] is used to set the number where you can be reached. This number can be an internal extension, outside phone number, or digital pager.

When the system calls you it will say, "You have a new message for Your Name. Please enter your password to accept the message."

Of course, you can access your messages manually at anytime. However, if you are expecting an important message or do not plan to be in the office, this feature provides added flexibility.

If you are not available when the system tries to reach you, it will redial periodically until you receive the message.

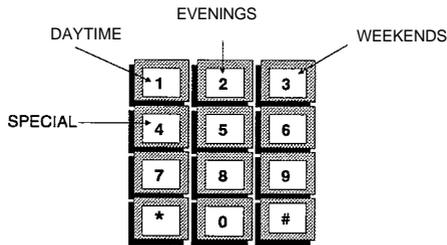
J. EDIT TIME PERIOD

Edit Time Period allows the mailbox owner to edit mailbox settings for: Daytime, Evenings, Weekends, and Holidays. To select a time period:

to Edit Time Period

1. Enter your mailbox # + * + pa&word
2. Press **[8]** for personal options
3. Press **[7]** to edit time period
4. Select a Time Period to edit

1. Press **[8]** for personal options.
2. Press **[7]** for time period option.
3. Press **[1-4]** to edit desired period.



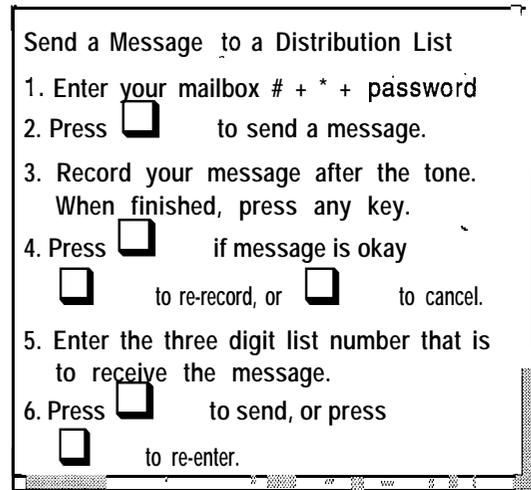
Press	Function
[1]	for DAYTIME
[2]	for EVENINGS
[3]	for WEEKENDS
[4]	for HOLIDAYS or SPECIALDAYS

After selecting a time period, additional options will be presented. The options correspond to the specific Timed Settings options and parameters found in Edit Mailbox:

- Press **[1]** to edit Greeting
- Press **[2]** to edit Name (the same for all time periods)
- Press **[3]** to edit Password (the same for all time periods)
- Press **[7]** to change edit time period
- Press **[8]** for Other Settings
- Press **[1]** to edit Mailbox State
- Press **[2]** to edit Message Notification State

K. SEND MESSAGE TO DISTRIBUTION LIST

Send Message To Distribution List allows the user to create a message and send it to a distribution list. To use this feature, the Lists setting in Class of Service must have been set to either Personal or System.



1. Press [2] to send a message.
2. Record your message after the tone and press any key after recording to end the message.
3. Press [1] if message is okay.
4. Enter the desired distribution list number.

The distribution name (if recorded) will play.

5. Press [#] to send the message or [*] to re-enter the list number.
6. Enter the next list to send to, or press [#].

PRESS	FUNCTION
	SEND the message
	RERECORD the message
	CANCEL the message
	LISTEN to the message

After you finish recording the message and before you press 1 (at Step 3) to send it, you are given the following options:

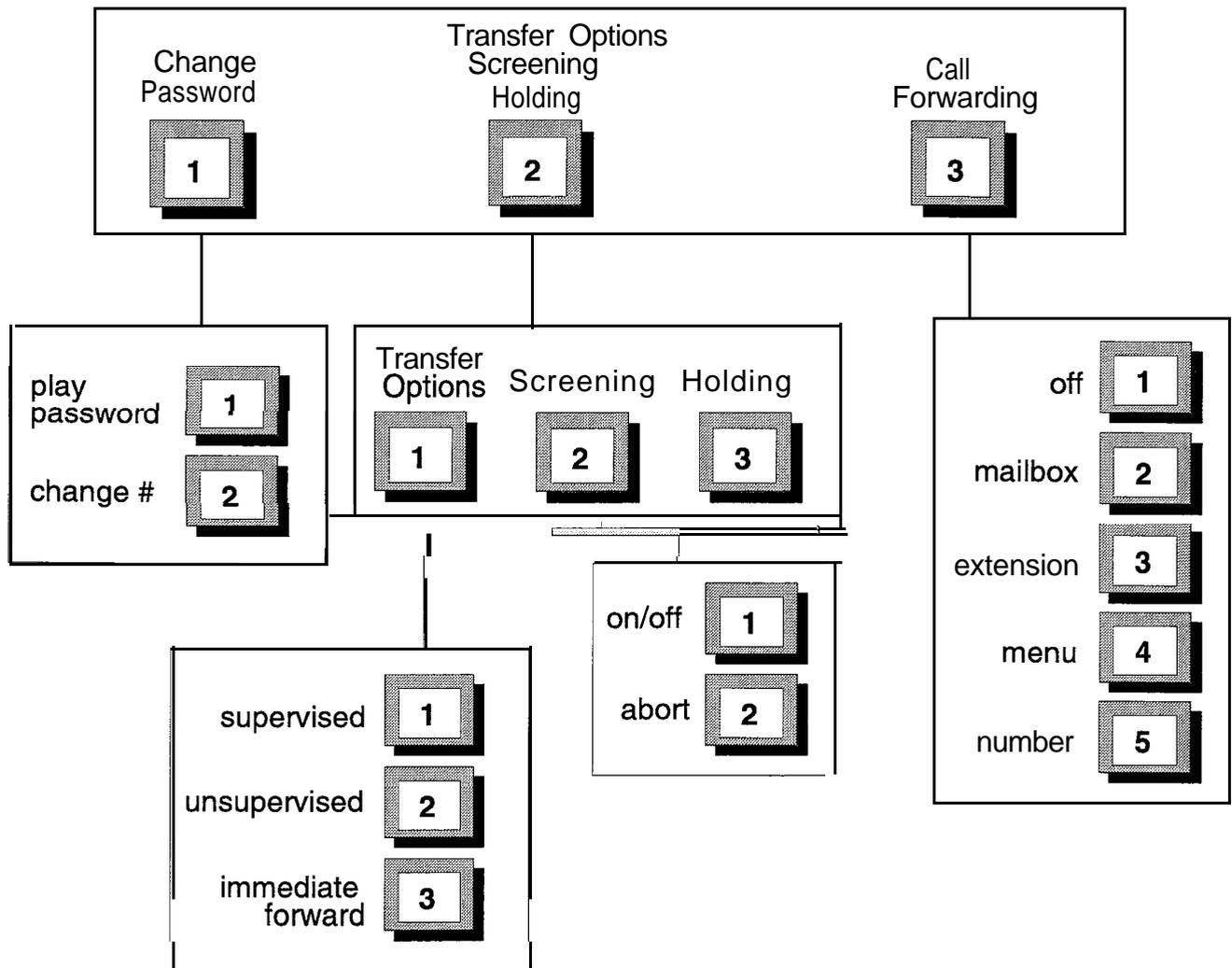
- Re-record the message, Press [2]
- Cancel the message, Press [3]
- Listen to the message, Press [4]

SECTION 320

AUTOMATED ATTENDANT OPERATION

320.1 INTRODUCTION

The following drawing shows the menu structure for the automated attendant:



A. SYSTEM ACCESS

System access allows you to set and edit the special features that come with the automated attendant. You access extension features like you do for voice messaging; by dialing into the system, pressing the key, and then entering your password. However, note that the key sequences are slightly different.

to Access Extension Maintenance	
1. Dial the internal extension; or outside phone number;	<input type="text"/> <input type="text"/>
2. Press	<input type="button" value="*"/>
3. Enter your ext number;	<input type="text"/>
4. Enter your password:	<input type="text"/>

Mailbox maintenance:

- Enter mailbox number
- Enter a [*]
- Enter password

Extension maintenance:

- Enter a [*]
- Enter extension
- Enter password

1. Dial the internal extension or outside phone number of the system.
2. Press the [*] key.
3. Enter your extension number.

The system will prompt you to, Please enter your password.

4. Enter your password.

This number is the initial password set by the system administrator. Once you access the extension maintenance menu you hear the following:

“To change password press 1, to change call options, screening, or call holding press 2, to change call forwarding press 3.”

As a new user, you need to change your security code

B. PASSWORD

To prevent unauthorized access to your extension feature settings, you need to change the password. The password can be changed as often as you like. It is a four digit number unless you are told otherwise by the system administrator. If you forget the code, the administrator can reset it.

to Enter a new Password

1. Press  to change your password

2. Press  to record a new password

1. Press [1] for the password option.

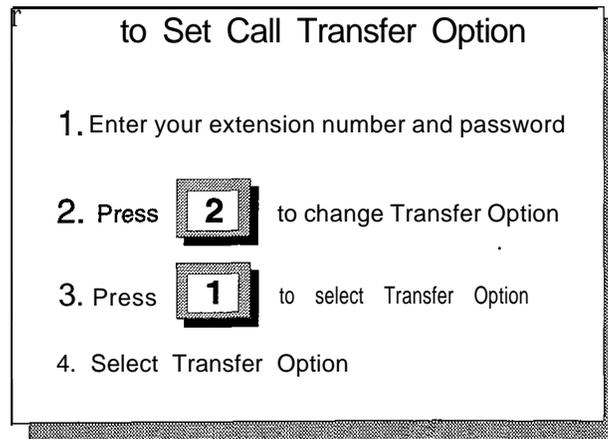
Once the security code is entered, you can:

- press [1] to review it
- press [2] record a new code

You should always record your own personal password for security purposes.

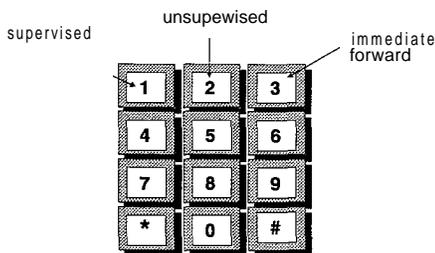
C. CALL TRANSFER OPTIONS

The diagram below shows the transfer option selections. The Starplus AVP can transfer calls utilizing several methods. The user can change these methods through extension maintenance.



1. Press **[2]** for the call transfer option.
2. Press **[1]** to select transfer option.

When Starplus AVP forwards a call to your extension the transfer can be:



Press	Function
1	SUPERVISED TRANSFER
2	UNSUPERVISED TRANSFER
3	IMMEDIATE FORWARDING

- Supervised, Press **[1]** - Starplus AVP monitors the transfer. If you do not answer, the call is forwarded.
- Unsupervised, Press **[2]** - Starplus AVP does not monitor the transfer. The call is not forwarded in the event you do not answer.
- Immediate Forward, Press **[3]** - Starplus AVP forwards the call immediately without trying to reach the extension.

If the transfer is supervised or forwarded immediately, then you need to select where the call will be forwarded to.

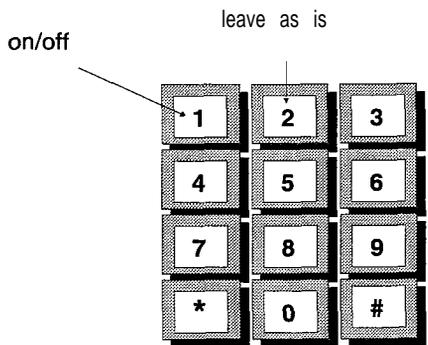
D. CALL SCREENING

This feature prompts the caller for his name before transferring the call. Then, you hear, "I have a call for Your Name. Press 1 to accept the call or 2 to reject." If the call is rejected, it is handled in accordance with the forwarding instructions. To change these options:

to Set Call Screening

1. Enter your extension number and password
2. Press **2** to change Screening Option
3. Press **2** to select Screening Option
4. Select Screening Option

1. Press [2] for the call transfer option.
2. Press [2] to select screening option.



Press Function

	ON/OFF TOGGLE
	ABORT leave as is

- Select the screening option:
- On/Off, Press [1] to toggle.
 - Abort, leave as is, Press [2]

E. CALL HOLDING

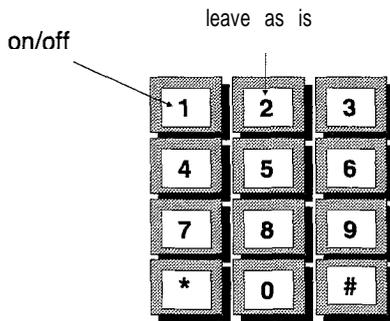
This feature allows the caller to remain on hold if your extension is busy. The caller hears, "That extension is busy. To hold press 1, press 2 to select another extension, or 3 to leave a message." With call holding turned off, the call is handled in accordance with the forwarding instructions.

to Set Call Holding'

1. Enter your extension number and password
2. Press **2** to change Holding Option
3. Press **3** to select Holding Option
4. Select Screening Option

To change these options:

1. Press [2] for the call transfer option.
2. Press [3] to select holding option.



Press	Function
	ON/OFF TOGGLE
	ABORT leave as is

Select the holding option:

- On/Off, Press [1] to toggle.
- Abort, leave as is, Press [2]

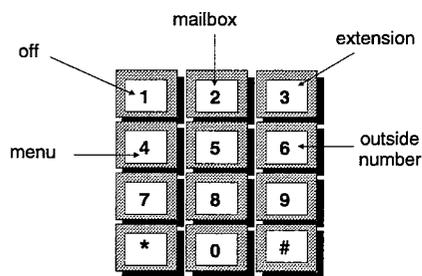
F. CALL FORWARDING

This selection allows you to set how a call is handled on a supervised transfer or when the call transfer option is set to immediate.

to Set Call Forwarding

1. Enter your extension number and password
2. Press **3** to change Forwarding
3. Select Forwarding Option

1. Press **[3]** to select forward option.



Press	Function
1	OFF forwarding disabled
2	MAILBOX forward
3	EXTENSION forward
4	MENU forward
5	OUTSIDE NUMBER forward

Select forward option.

- Forwarding Off, Press **[1]** - disables this feature and the call is not forwarded.
- Forward to Mailbox, Press **[2]** - probably the most common use of this feature. If you don't answer the caller hears your personal greeting and is prompted to leave a message.
- Forward to Extension, Press **[3]** - forwards the call to another extension; for example, a secretary or another sales person.
- Forward to Menu, Press **[4]** - provides the caller with a menu of special options. For example, "For information on Product XXX press 1 or press 2 to leave a message."
- Forward to Outside Number, Press **[5]** - If you do pick up the phone, the call is connected to an outside phone number, like your home or mobile telephone.

SECTION 330

MENU ROUTING OPERATION

330.1 INTRODUCTION

This feature allows you to build custom call processing applications so that callers may access information without the assistance of a live operator by dialing DTMF digits. Callers receive voice prompts such as, "to dial sales, press 1, to dial service, press 2". Based on the digits dialed by the user the system can perform one of a number of actions. The caller could be transferred to an extension, the caller could receive an information announcement, the caller could be routed to voice messaging, etc. Two terms need to be defined before going into the Menu Routing feature, they are:

- Menu
- Action

A menu is a list of actions that is executed through touch tone key pads. As an example, "to dial sales, press 1, to dial service, press 2". A menu can have up to twelve (12) options each one corresponding to a key on a standard telephone keypad plus one option for a default action.

An action is an instruction that is selected from the menu action list. It tells the system how to respond when a specific key is pressed. An action can invoke another module (for example, voice messaging or bring up another menu in menu routing) or perform a special feature (for example, play a prerecorded message).

A. PREPARATION

Before you attempt to set up a complicated, multi-level menu, you need to read this section of the manual first. It is important that you understand the mechanics of building a Menu Routing menu. Next, draft your ideas on a piece of paper. If you can, prepare a draft flow chart to define your ideas. If your ideas are not yet sufficiently organized to do this, jot them down on a piece of paper. Don't worry about a specific order, at this stage it is more important to document your thoughts on paper so that alternatives won't be forgotten. Obviously, your drawing will depend on your application and does not need to be as detailed. However, try to put your concept in print so you have a blueprint that can be used to build your system.

To facilitate the create of the menus use a form like the one below. It is a replica of what you will see when you edit your Menu Rout-

MENU ROUTE DATABASE FORM

Menu Name _____

PROMPTS

Introduction _____ .Hvx

Description _____ .Mvx

Instruction _____ .lvx

Password _____

KEY ACTIONS

1 _____	6 _____
2 _____	7 _____
3 _____	8 _____
4 _____	9 _____
5 _____	0 _____
# _____	X _____

Time Out _____

ing menus. Again, the idea is to put your thoughts on paper first. When you make mistakes, they can be easily changed.

330.2 MENU ROUTING

1. Highlight Menu Routing in the Modules sub menu and press [ENTER]. The Menu Routing sub menu will be presented.

MAINT sn525100 Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping
<div style="border: 1px solid black; display: inline-block; padding: 5px;"> Menu Routing Menu Maintenance Settings </div>				
Esc: back a menu Return: selects ++: back a menu ↑↓: moves bar				

- Menu Maintenance - is used to create, delete, or edit menus
- Settings - is used to define the timers and counters that reset the menu state in the event of a caller time-out or series of incorrect dial pad entries.

When you enter the menu, Menu Maintenance will be highlighted.

2. Press [ENTER] again to display the Menu Maintenance mode.

MAINT sn525100			v+3.10a
Configuration	Modules	Reports	Utilities HouseKeeping
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> Maintenance Edit Menu create Menu Delete Menu </div>			
Select a menu and name Esc: back a menu Return: selects ⇐: back a menu ↑↓: moves bar			

Three maintenance options are available:

- Edit Menu - is used to edit a new or existing voice menu
- Create Menu - is used to create a new voice menu
- Delete Menu - is used to delete an existing voice menu

As with the other Starplus AVP modules, you must first create a menu before you can edit it. After you have created the menu the actual menu design is done in Edit menu topic.

A. CREATE

This command allows you to create a menu that does not currently exist.

1. Select Create from the Menu Maintenance menu and the Create data entry screen will be presented.
2. Enter up to eight characters that describe the menu. The name should be descriptively recognizable so that later you can select it from a list and know what its about without looking at it. Also, any spaces are converted to underscores.
3. After pressing [F9] you will be put into the edit screen.

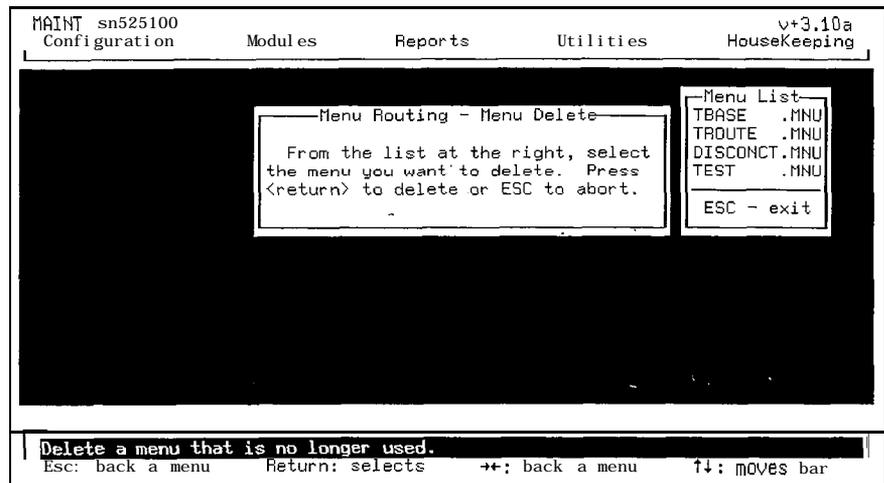
See Edit in the following pages.

B. DELETE

If you want to remove a menu that is no longer needed use the Delete option.

1. Select Delete from Menu Maintenance and an inset listing of existing menus will be presented.
2. Move the highlight bar to select the menu that is to be deleted and press [Enter].

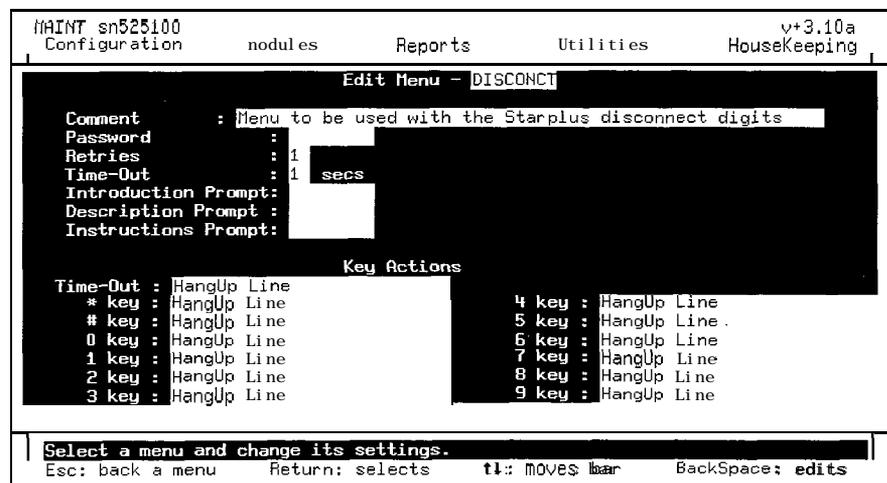
Be very careful with this option. Once a menu is deleted it is no longer recoverable.



C. EDIT

The Edit function is used to edit both new and existing menus. To display the Edit screen select Edit from Menu Maintenance. An inset listing of existing menus will be presented.

1. Highlight the menu that you wish to edit and press [ENTER].



The Edit Menu screen will be presented. If it is a new menu being edited, the data entry fields will be blank. If it is an existing menu, entries will already be provided.

The Edit screen is made up of several sections. At the very top of the screen is the name of the menu.

2. Enter the desired comment in the comment line.
This is usually a brief statement as to the purpose of the menu. For example, description of product information or transfers of bank funds. It might also be used to remind yourself of a special message like need to complete this by Tuesday.
3. Enter the password that will be needed if the voice prompts on this menu are to be edited over the phone.
Users may edit the prompts on the menu by pressing the correct key. Upon pressing this key, they will be required to en-

ter the password. This key is set up in the key actions area of the screen.

4. Enter the desired number of retries a user can have on this menu, [0-9].
If the user exceeds this value, the system will play a ending prompt and disconnect the caller. A value of 0 allows an infinite number of retries.
5. Enter the desired time-out in seconds the menu should use, [0-99]
This defines the maximum time, if a user takes no action, the system will wait before taking action.

Each menu can have up to three prompts associated with it. These prompts are broken down into introduction, description, and instructions.

- Introduction is played only once; when the caller enters the menu and it is always played first. The introduction is often a greeting or special message.
For example, Thank-you for calling The Corner Grocery..
 - Description sometimes contains special information, but usually is the main topic of the menu. It is played right after the Introduction.
An example of a special message that changes regularly might be, Don't miss our special of the week; turkey cutlets for twenty five cents a pound..
An example of a main topic is a product description. Assume there is a previous menu that says, Dial 1 for information on product A, dial 2 for information on product B.... The information on product A would be recorded in the Description prompt.
 - Instructions includes the basic instructions on how to use this menu. This file is always played right after the Description.
For example, Please dial 1 for administration, 2 for support, 3 for instructions or stay on the line and an operator will be with you momentarily. Almost all menus have Instructions. Usually the first menu in a multi-level structure has an Introduction and Description. However, It is not mandatory to have these prompt files and their existence is dependent on the application design.
6. Move the highlight bar to Introduction and press [ENTER] to select from a list of previously created voice prompts. If the prompt file has not yet been created do the following:
 - Press [F9]
 - Enter the name of the file and press [ENTER]. (Use a descriptively recognizable name.)
 - Select Record Over from the Operations list and follow the screen directions. (See Utilities\Recording Studio for complete instructions.)
 7. Move the highlight bar to Description and press [ENTER] to select from a list of previously created voice prompts. If the

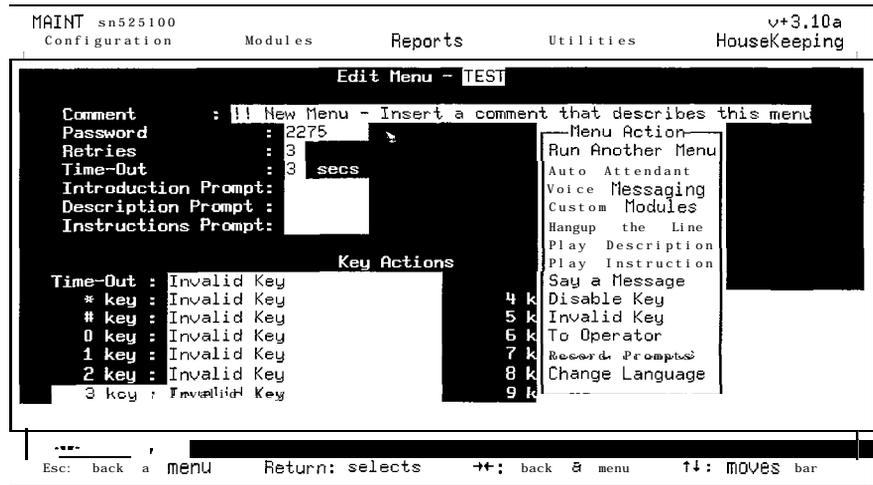
prompt file has not yet been created, follow the procedure given above for the Introduction prompt.

8. Move the highlight bar to Instructions and press [ENTER] to select from a list of previously created voice prompts. If the prompt file has not yet been created, follow the procedure given above for the Introduction prompt.

The bottom part of the screen is concerned with ' Key Actions.

D. KEY ACTIONS

Key actions define the response that is invoked when a particular key is selected. Note there is a field for each dial-pad key and a special field labeled time-out. The time-out field is used to describe what happens when the caller fails to do anything.



1. To define an action, move the highlight bar to select the desired key and press [ENTER].
2. Move the highlight bar to select an action and press [ENTER]. A description of the action appears next to the key.
 - Run Another Menu - executes the menu selected.
 - Auto Attendant - is used to transfer a call through either a direct transfer, a request for the caller to enter an extension number, or by means of a start key. If you select Auto Attendant, 3 transfer options will be presented:
 - Direct Transfer - select this option to automatically route a caller to a specific extension. Choose the appropriate extension from a listing of extensions that is presented when the option is entered.
 - Request Extension - choose this option when you want Starplus AVP to request that the caller enter a specific extension to which the transfer is to be made.
 - Start Key - choose this option to designate a specific key to be the beginning digit of an extension number. For example, if all of your office extensions begin with 1, 2, or 3, you can set these specific keys as start keys. When a caller enters the extension number, Menu Routing will automatically know by the first key pressed that it is an extension and will automatically pass the extension number to Auto Atten-

dant. Your instructions would read Enter the extension of the person you wish to reach or press (for example) 4 for sales,

- Voice Messaging - is used to record the caller's message by either sending him directly to a default mailbox, requesting him to enter a mailbox number, or by means of a start key. If you select Voice Messaging, 3 transfer options will be presented:
 - Direct Transfer - Select this option to automatically route a caller to a specific mailbox. Choose the appropriate mailbox from a listing that is presented when the option is entered.
 - Request Mailbox - choose this option when you want Starplus AVP to request that the caller enter a specific mailbox to which the transfer is to be made.
 - Start Key - choose this option to designate a specific key to be the beginning digit of an mailbox number. For example, if all of your office mailboxes begin with 1, you can designate this specific key as start keys. When a caller presses 1, Menu Routing will automatically know by the key pressed that it is a mailbox number and will automatically route the call. Your instructions would read, Enter the mailbox number of the person you wish to reach, or press (for example) 4 for sales....
- Other Modules - allows you to select from a list of special modules. *This feature is not used at this time.*
- Custom Modules - other modules that Starplus AVP supports. *This feature is not used at this time.*
- Hang-up the Line - plays the message, "thank-you for calling," and the caller is disconnected. For example, a menu might include this option at the end of a list, press 1 for sales, 2 for support, #to return to the previous menu, and 9 to disconnect.
- Play Description - replays the Description prompt followed by the Instruction prompt. For example, "to listen again to the specials of the week, press 4".
- Play Instruction - replays only the Instructions prompt. For example, To hear this menu again press *.
- Previous Menu - takes the caller back one menu as specified in the Previous Menu field at the top of the screen.
- Say a Message - can be any type of information. The message is not restricted in recording length. Therefore, it can be a brief description or a lengthy discussion. However, in general, do not record main topics here. That information is reserved for the Description prompt which has greater flexibility. Note, that the Instruction prompt file is always repeated right after the Say message.
- Disable Key - pressing a key with this action has no affect at all. It's as if the key were never pressed.
- Invalid Key - plays the message, "invalid key," and then repeats the Instructions prompt.

- To Operator - transfer caller to operator by doing a blind transfer to 0.
 - Record Prompts - allows caller to re-record prompts for a menu. The caller, after pressing the key associated with this action, is prompted for the menu password. The Introduction, Description, Instructions, -or any say file attached to a particular key can then be edited. This feature is useful for menus that are changed often. The system will prompt the different voice files that can be edited.
3. Repeat this procedure for all keys entering the desired function at each key.

Press the [ESC] key when you are finished.

E. SAMPLE MENUS

Intro is a typical menu. The name of the menu, **Intro**, is at the top. There is no Previous Menu since this is the top level.

The Introduction is a file called Intro. It is played once when the call is answered. There is no Description to this menu, just a set of

```

MAINT sn525100                                     v+3.10a
Configuration      Modules      Reports      Utilities      HouseKeeping
-----
Edit Menu - INTRO

Comment      : First Level Menu
Password     : 2275
Retries      : 4
Time-Out     : 3 secs
Introduction Prompt: INTRO
Description Prompt :
Instructions Prompt: INTRO

Key Actions
Time-Out : Send to Operator
* key : Edit Prompts
# key : Play Instruction
0 key : Send to Operator
1 key : Auto Attendant Start
2 key : Auto Attendant Start
3 key : Auto Attendant Start
4 key : Menu PRODUCT
5 key : Auto Attendant 104
6 key : Invalid Key
7 key : Voice Messaging
8 key : Invalid Key
9 key : HangUp Line

Select a menu and change its settings.
Esc: back a menu      Return: selects      ↑↓: moves bar      BackSpace: edits
    
```

Instructions. As soon as a caller enters a menu the voice files are played, one after the next. The caller can interrupt the message at any time by pressing a key.

- Keys #1, #2, and #3 are Auto Attendant start keys. Anytime a caller presses one of these keys, Starplus AVP will assume that it is the first digit of an extension number and will automatically route the call when the remaining digits are entered.
- Key #7 is Voice Messaging alone, while the rest of the Auto Attendant keys (Time-out, 0, 4, and 5) have extension numbers. This is because key #5 is a transfer by requesting the caller for the extension number. The others involve direct transfers to departments.
- Note that the * and # keys perform special editing functions and 0 sends the caller to a live operator. The Time-out key, as well as the #0, key are direct transfers to the operator.
- Key #4 and Key #5 are direct transfers to other extensions.
- Key #7 will permit a caller to leave a voice message in any specified mailbox.

- Key #9 will disconnect the caller.
- Key #4 takes the caller to a secondary menu.

The name of this menu is Product and it is accessed by pressing key #4 from the Intro menu as described on the page before. The Comment field describes the purpose of the menu.

Neither an Introduction prompt nor a Description prompt is needed. There isn't any need for one. The purpose of this menu is

```

MAINT sn525100                               v+3.10a
Configuration      Modules      Reports      Utilities      HouseKeeping
-----
Edit Menu - PRODUCT
Comment           : Menu Off of Intro, to provide information on SPAUP.
Password          : 2275
Retries           : 4
Time-Out          : 3 secs
Introduction Prompt:
Description Prompt:
Instructions Prompt:

Key Actions
Time-Out : Send to Operator
* key : Invalid Key
# key : Menu INTRO
0 key : Send to Operator
1 key : Menu SPAUP
2 key : Invalid Key
3 key : Voice Messaging 2000
4 key : Invalid Key
5 key : Invalid Key
6 key : Invalid Key
7 key : Invalid Key
8 key : Invalid Key
9 key : HangUp Line

Select a menu and change its settings.
Esc: back a menu      Return: selects      tl: moves bar      BackSpace: edits

```

to find out what product information the caller is after: Starplus AVP. This is done by Instructions to press the appropriate key.

Note that the # key takes the caller back to the menu specified in the Previous Menu field at the top of the screen.

- Key #3 is Voice Messaging followed by a mailbox number. If you look at the previous menu, Key #7 lists Voice Messaging alone. The difference is that the previous menu sends the caller to voice messaging and asks him to enter a mailbox number, while here the caller is defaulted to a specific mailbox.
- Key #9 allows the caller to disconnect.

Let's look at a menu on a deeper level off of this one which details the SPAVP product.

This menu is called SPAVP and it is accessed by pressing #1 from the Previous Menu, Product. This menu is concerned with giving the caller detailed product information on the Starplus AVP line.

```

MAINT sn525100          v+3.10a
Configuration          Modules  -Reports  Utilities  HouseKeeping

Edit Menu - SPAVP

Comment      : Detailed description of product.
Password     : 2275
Retries      : 4
Time-Out     : 3 secs
Introduction Prompt:
Description Prompt: SPAVP
Instructions Prompt: SPAVP

Key Actions

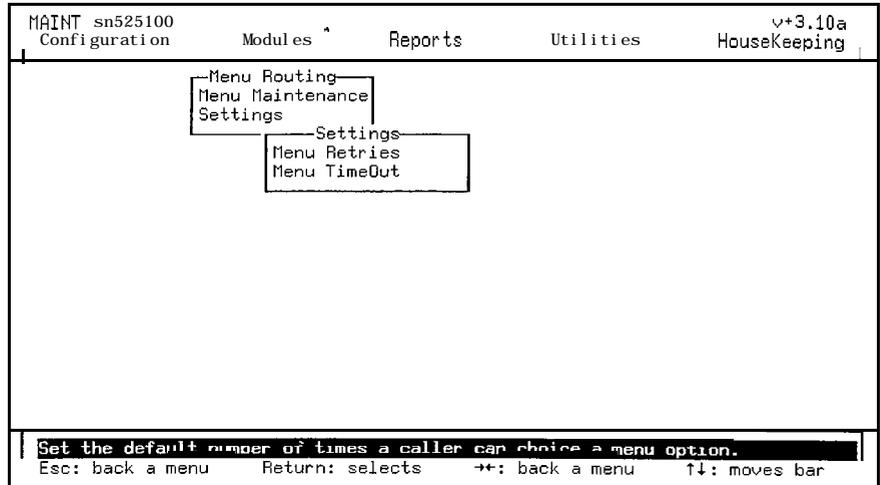
Time-Out : Send to Operator
* key : Play Instruction
# key : Menu PRODUCT
0 key : Send to Operator
1 key : Say SPAVP
2 key : Say SPAVP1
3 key : Say SPAVP2
4 key : Say SPAVP3
5 key : Say SPAVP4
6 key : Say SPAVP5
7 key : Say SPAVP6
8 key : Say SPAVP7
9 key : HangUp Line

Esc: back a menu      Return: selects      ↑↓: moves bar      BackSpace: edits
    
```

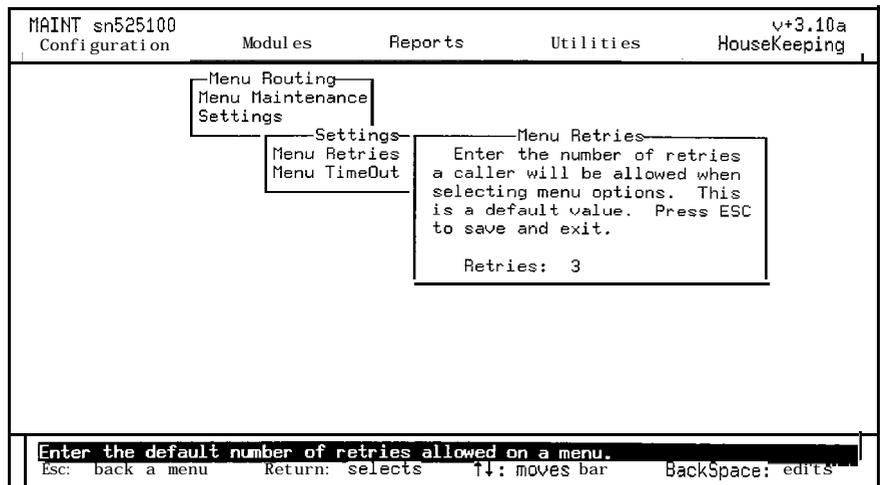
There is no Introduction, but there is a long Description. The function of the Description is to provide a general overview of Starplus AVP. This recording lasts for about two minutes. The Instruction prompt tells the caller how to use the menu and, of course, it is played right after the Description. By recording the Description and the Instruction separately, it is possible to replay the instructions without subjecting the caller to the long presentation on Starplus AVP. That's exactly what is accomplished by press the * key. The Say action on keys #1 through #8 provides more detailed product information. When Say is activated the associated voice file is played followed by the instructions. It is interesting to note that we could have defined these keys as other Menus and then used the Description prompt to play a message. However, since the instructions for each of those menus would have been the same as this one, we opted to use Say in order to streamline the menu design.

330.3 SETTINGS

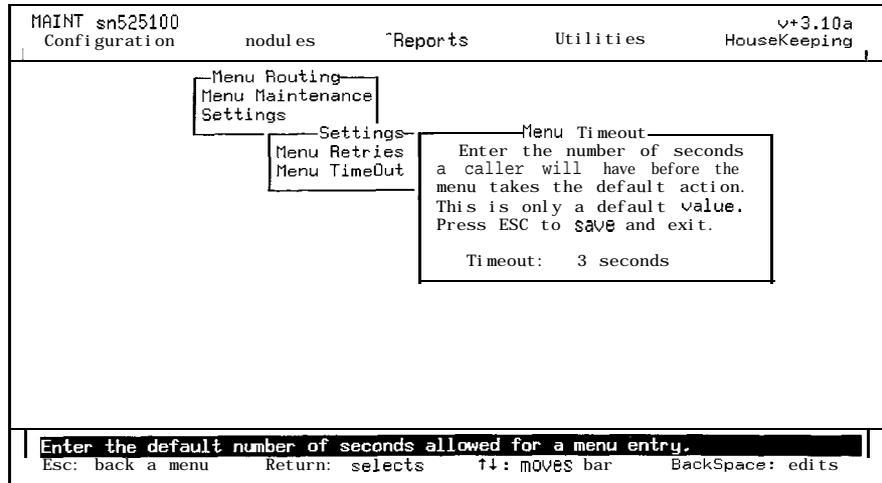
Select Settings from the Menu Routing menu to display the following:



- **Menu Retries:** is the number of invalid entries allowed for all menus other than the first menu. If this number is reached the following prompt is played, "Please call the account supervisor for assistance" and the call is disconnected.



- Menu Time-out: is the maximum length of time the caller is allowed to do nothing on all menus other than the first menu. If this value is exceeded, the instructions in the Time-Out key action field are activated.



To set these values, type the desired value. To erase an existing value use the Backspace key. Retry values can be set from 0 to 9 (recommended is 3). Time-out values can range from 0 to 99 seconds (recommended is 5 seconds). [ESC] exits and saves your entry.

These settings are only used on menus that have their retries/time-outs set to 0 on the individual menu settings.

A. CANNED MENUS

Menu Routing is a canned menu provided with your Starplus AVP system. It is used to forward a mailbox or extension number directly to Auto Attendant. This menu should not be changed or modified by the user. You should only use this menu when you want to forward an extension or mailbox to Auto Attendant without specifying an extension.

- Voice Messaging - is a canned menu provided with your Starplus AVP system. It is used to forward a mailbox or extension number to Voice Messaging. You should only use this menu when you want to forward an extension or mailbox to Voice Messaging without specifying a mailbox.

This menu should not be changed or modified by the user.

- Auto Attendant - is a canned menu provided with your Starplus AVP system. It is used to forward an extension number to the Auto Attendant.

This menu should not be changed or modified by the user,

SECTION 400

SYSTEM CONFIGURATION

400.1 HARDWARE BASE UNITS

The hardware base units are the microcomputer (PC) items that run the Starplus AVP software. These units are incomplete by themselves. The base units are combined with voice boards and software to obtain a complete Starplus AVP system that can be connected to the phone system. The base units are high quality industrial grade components designed for years of trouble free service.

A. THREE HOUR UNIT

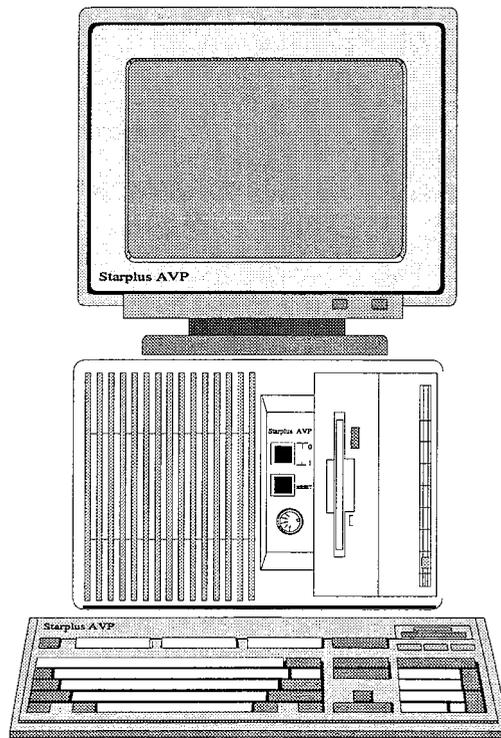
This hardware platform provides up to three(3) hours of voice storage. The components included are the six(6) slot enclosure with power supply, 286 CPU board with two(2) Megabytes RAM, SCSI controller card, monochrome video card, 40 Megabyte SCSI hard drive, a serial and parallel port, keyboard, and a monochrome monitor.

In the standard Starplus AVP software offerings this base unit is offered in either a two(2) or four(4) port version.

B. SEVEN HOUR UNIT

This hardware platform provides up to seven(7) hours of voice storage. The components included are the six(6) slot enclosure, 286 CPU board with two(2) Megabytes RAM, SCSI controller card, monochrome video card, 80 Megabyte SCSI hard drive, a serial and parallel port, keyboard, and a monochrome monitor.

In the standard Starplus AVP software offerings this base unit is offered in a four(4), six(6), or eight(8) port version.



C. CUSTOM UNIT

In addition to the above base units, the Starplus AVP can be ordered to fit a custom port/storage capacity. Any port (line) configuration up to 24 and a storage capacity of up to 15 hours can be ordered. Other custom items are a 386 CPU, more RAM memory, and a color (VGA) screen.

400.2 VOICE BOARDS

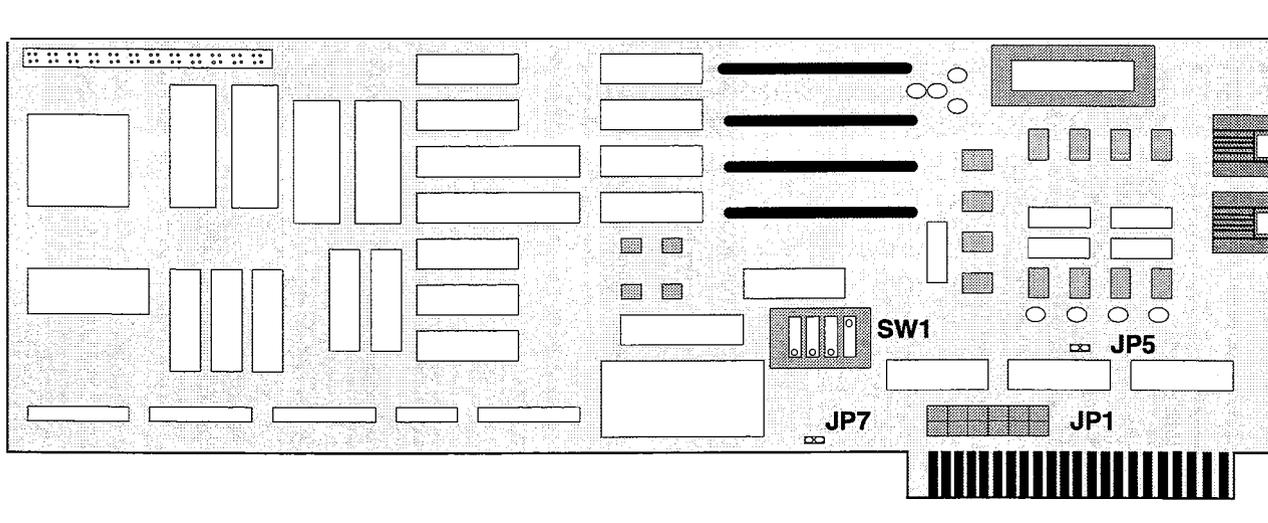
The voice boards are the interface from the Starplus AVP to the phone system. These boards digitize human speech and recognize DTMF digits. Typically these boards are connected to SLT ports from a Starplus phone system. The phone-system and the Starplus AVP communicate through DTMF (in-band) signaling. The voice boards are offered in two(2) configurations.

A. TWO PORT BOARD

This board provides two ports (lines) to interface to the phone system. The lines are connected to the board via two RJ14 modular plugs on the back of the board. The inner pair of conductors (GN-RD) on each connector provides access to the lines. *All jumper and switch settings on the board are set correctly when you receive a new system. Do not change any voice board settings on a new system.*

B. FOUR PORT BOARD

This board provides four ports (lines) to interface to the phone system. The lines are connected to the board via two RJ14 modular plugs on the back of the board. The upper modular plug contains ports one and two. On this plug, the inner pair of conductors GN-RD are port one and the outer pair of conductors BK-YL are port two. The lower modular plug contains ports three and four. On this plug, the inner pair of conductors GN-RD are port three and the outer pair of conductors BK-YL are port four.



400.3 SOFTWARE PACKAGES

The software packages for the Starplus AVP contain the system disks and software key that make the system function. The software is preloaded onto the machine when the system is ordered. The software packages offered on the Starplus AVP are two port-three hour, four port-three hour, four port-seven hour, six port-seven hour, eight port-seven hour, or the custom package.

A. STANDARD PACKAGES

The standard software packages on the Starplus AVP are pre-defined port-t/hour configurations that can be ordered. These packages are: (The first number is the port size,-the second the hour capacity.)

- . 2 X 3
- 4 x 3
- 4 x 7
- . 6 X 7
- . 8 X 7

B. CUSTOM PACKAGES

The Starplus AVP software can be custom configured to a specific port/hour size upon request. The system can handle up to 24 ports and can be equipped for a maximum storage time of 15 hours. These capacities are available by ordering special hardware items in addition to the custom software. Some of these items include a 12 slot enclosure, 386 CPU, and a 200 Megabyte SCSI hard drive.

400.4 ENCLOSURES

The enclosure is the case that houses all PCB's, power supply and drives in the Starplus AVP system. Two versions of the enclosure are available.

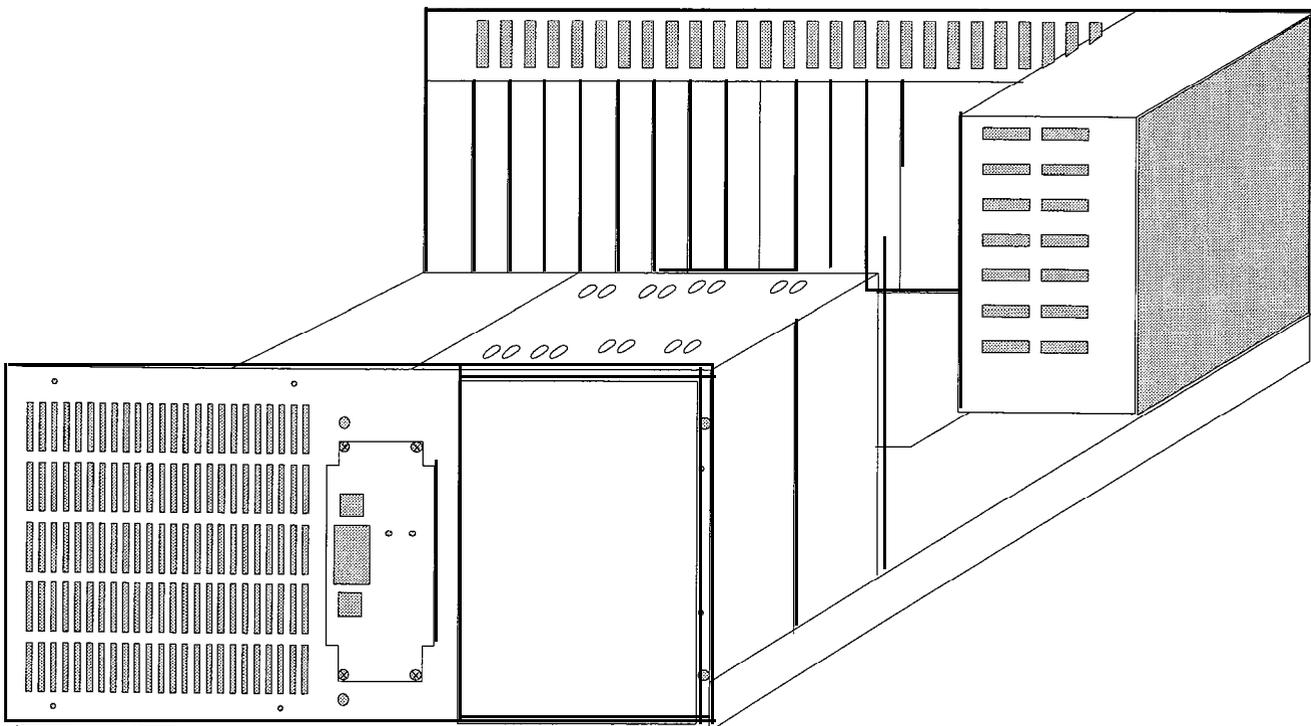
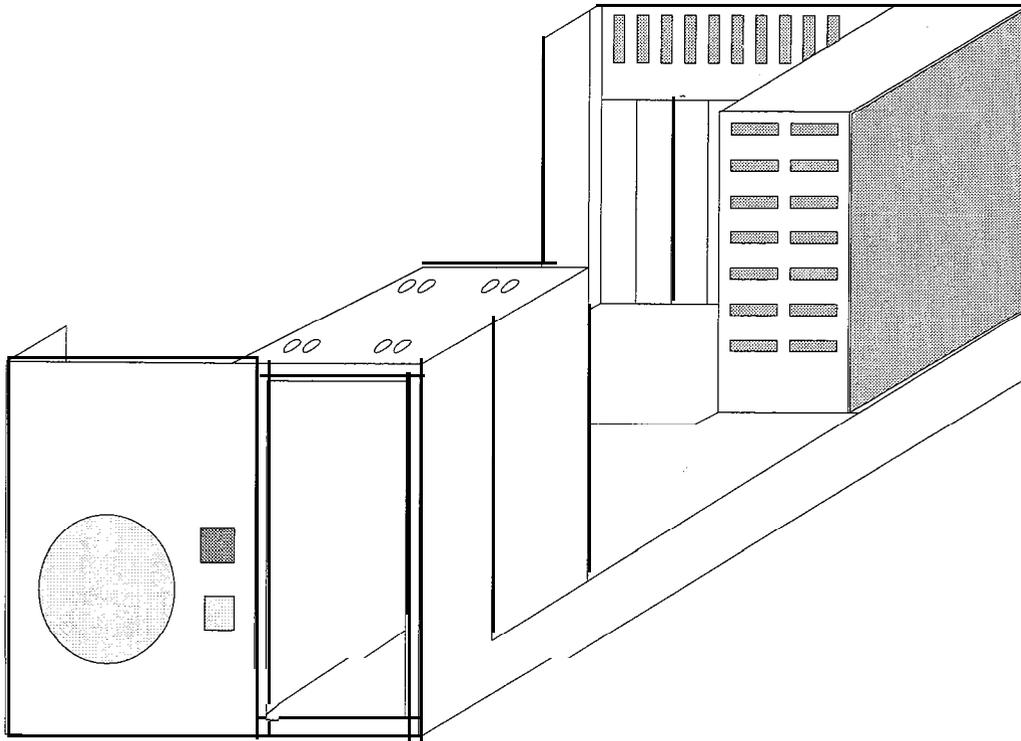
A. SIX SLOT ENCLOSURE

This enclosure provides six consecutive slots for PCB's, a 135 watt power supply, and two half height (3.5") drive bays. This is the enclosure provided on the three and seven hour base units. Once the CPU, hard drive card, and video card are installed there are three expansion slots remaining. These slots can be used for voice boards to expand the port size.

B. TWELVE SLOT ENCLOSURE

This enclosure provides twelve consecutive slots for PCB's, a 200 watt power supply, and two half height (3.5") drive bays. This enclosure can be ordered for a custom system. Once the CPU, hard drive card, video card are installed there are nine expansion slots remaining. These slots can be used for voice boards to expand the port size.

In addition this enclosure can be ordered in a two six slot layout. In this version the mother board is divided into two enclosures which are separate from each other.



400.5 CPU BOARD

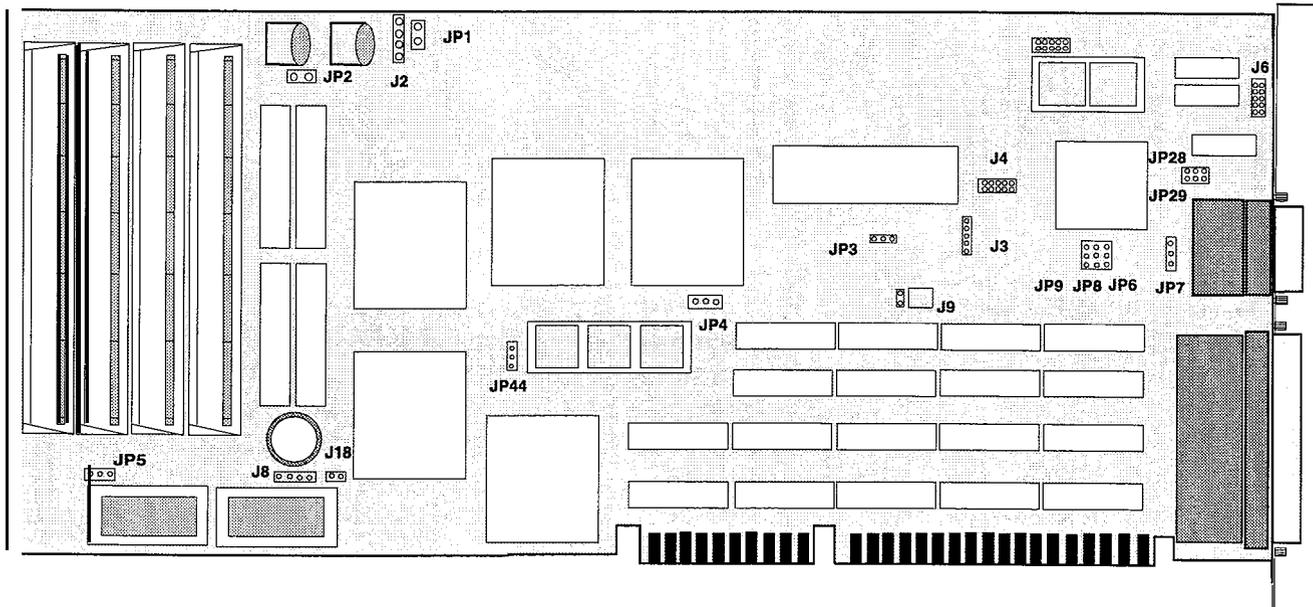
The CPU is the controller card of the system. This card controls all functions under command from the software. The card is offered in two versions, a 286 or **386 model**. The 286 is included with all standard base units while the 386 is reserved for custom units.

A. 286 BOARD

This board contains a 286 CPU chip running at 12 Megahertz clock speed. The board can be equipped for up to four megabytes of RAM. The board has a battery for the clock/calendar and is fully AT compatible. The board has 2 MB of RAM installed on it.

B. 386 BOARD

This board contains a 386 CPU chip running at 25 Megahertz clock speed. The board can be equipped for up to sixteen megabytes of RAM. The board has a battery for the clock/calendar and is fully AT compatible.



400.6 HARD DISK DRIVES

The hard drives provide the system with the storage capacity for voice messages. The drive also contains the system software on it. The drives are SCSI (small computer standard interface) type and are offered in three sizes. The sizes are 40, 80, or 200 Megabytes.

A. FORTY (40) MEGABYTE DRIVE

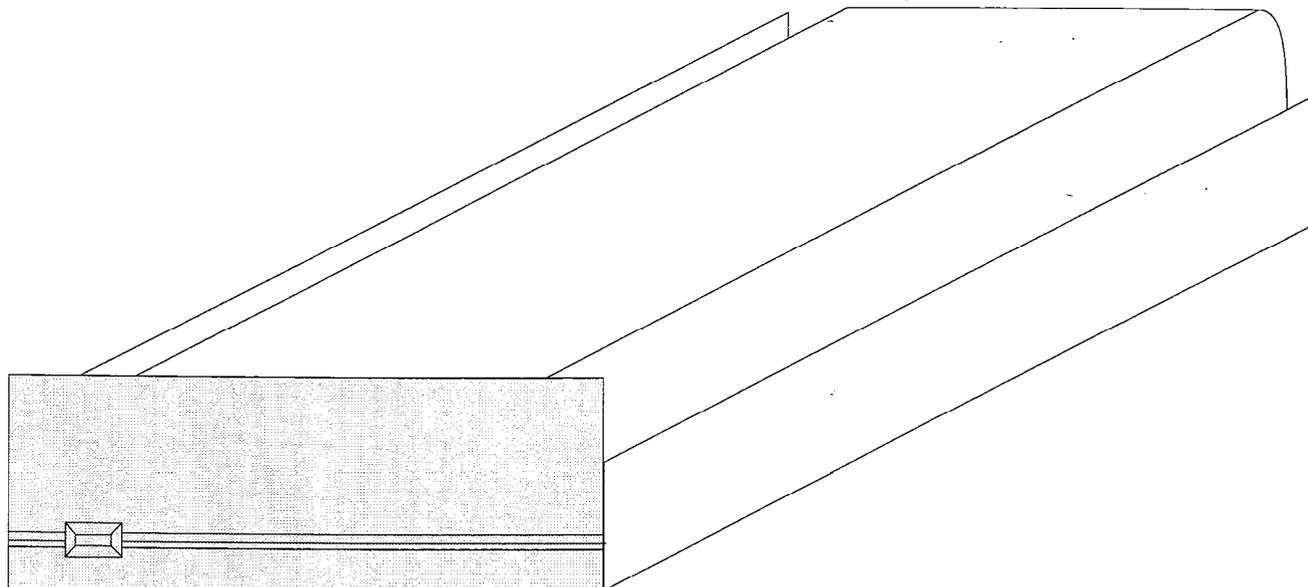
The 40 megabyte drive will handle approximately three(3) hours of voice storage on the **Starplus** AVP system. This is the drive included with all three hour base units.

B. EIGHTY (80) MEGABYTE DRIVE

The 80 megabyte drive will handle approximately seven(7) hours of voice storage on the **Starplus** AVP system. This is the drive included with all seven hour base units.

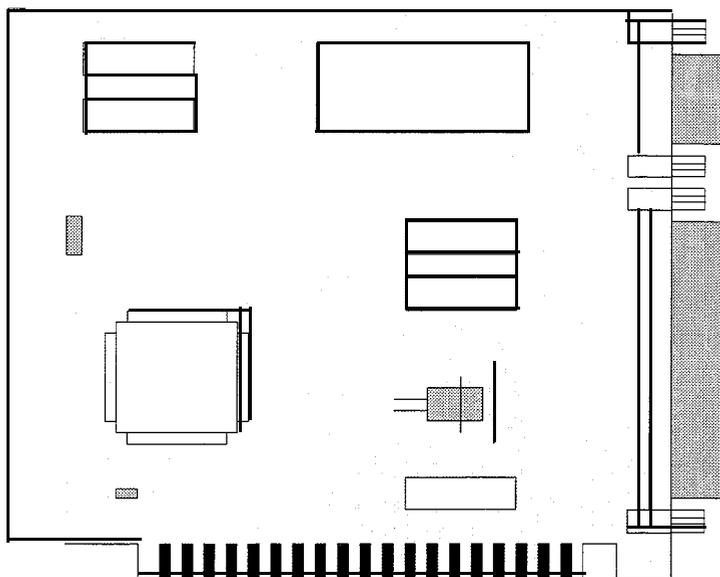
C. TWO-HUNDRED (200) MEGABYTE DRIVE

The 200 megabyte drive will handle approximately fifteen(15) hours of voice storage on the Starplus AVP system. This drive can be ordered in a custom system.



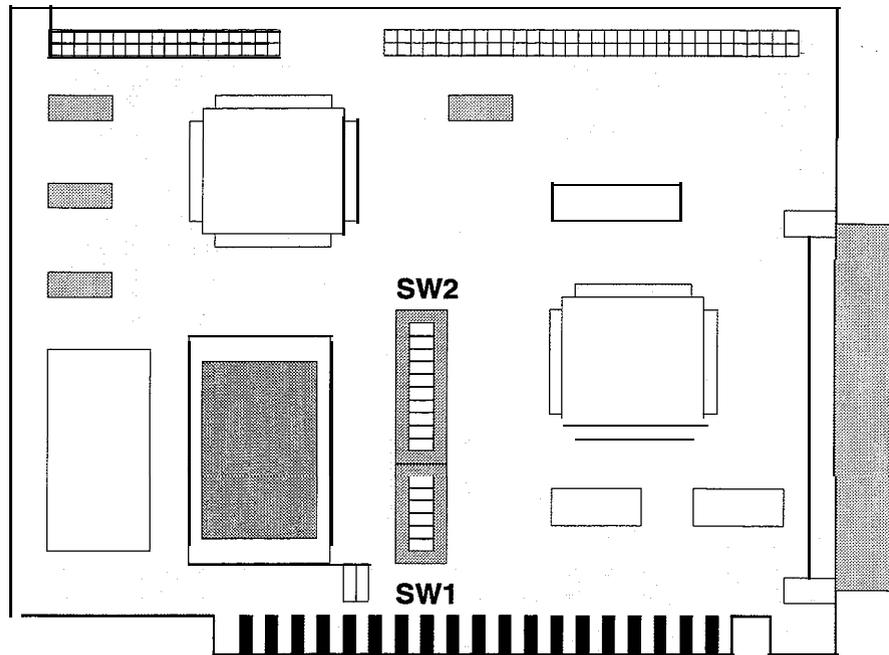
400.7 VIDEO CARD

This card provides the interface between the AVP and the monitor. The card provides a monochrome output. The parallel port on the card is disabled so as not to interfere with the activator. The card is assigned to interrupt request 7 so as not to interfere with the voice boards.



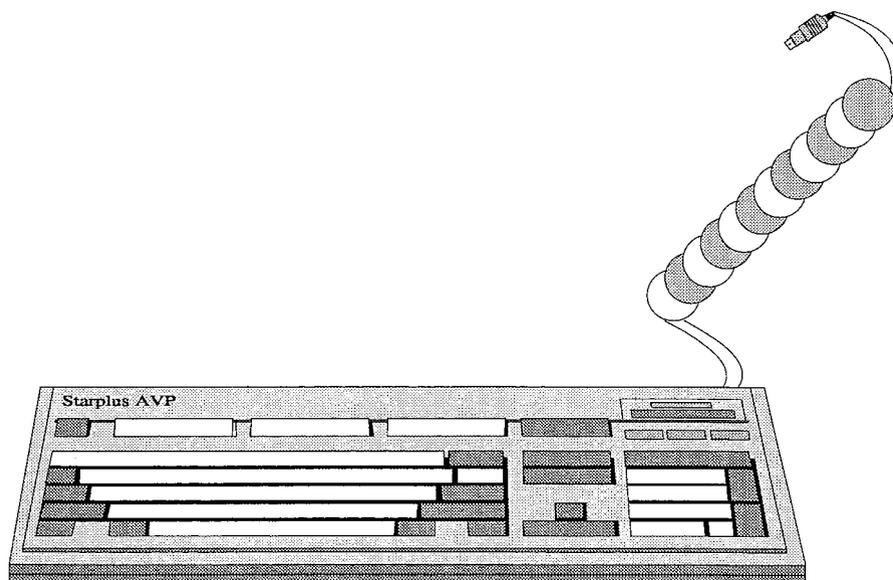
400.8 SCSI (HARD DRIVE) CARD

This card is the interface between the disk drives and the AVP. The card controls both the floppy and hard drives on the system. There are two DIP switches on the card labeled SW1 and SW2. Set all switches on SW1 to the open position. On SW2, switch 1 should be in the closed position, switches 2-7 should be in the open position, switches 8 and 9 should be in the closed position, and switch 10 should be in the open position.



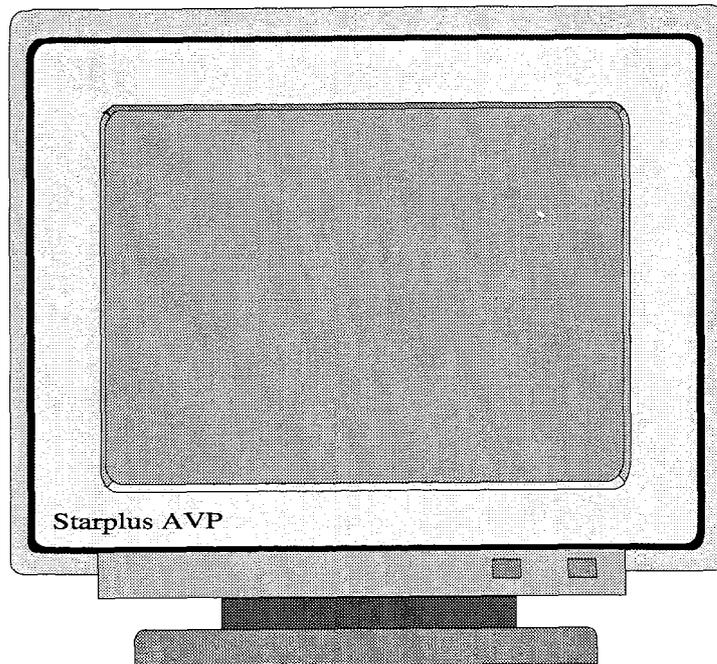
400.9 KEYBOARD

The keyboard provided with the Starplus AVP is a 101 type keyboard. This keyboard plugs into the front of the enclosure. This must be plugged in at all times or the system will shut down.



400.10 MONITOR

The monitor provided with the Starplus AVP is a 14" monochrome (black/white) type. This monitor connects to the video card in the back of the enclosure via a 9 pin connector. This type of monitor requires the least amount of memory to run which provides the AVP with more system memory. It is recommended that monochrome always be used, however, the Starplus AVP does offer a color version as a custom option. This requires a new board and monitor.



400.11 FLOPPY DISK DRIVE

The floppy disk drive provided with the Starplus AVP is a 3.5" size with a 1.44 (high density) MegaByte capacity. This disk drive will read/write 720 KiloBytes (low density) disks. This disk is used to load system software during upgrades or replacements.



400.12 PART NUMBERS

- 3 Hour Base Unit SP100-03
- 7 Hour Base Unit SP100-07
- 2 Port Voice Board SP130-02
- 4 Port Voice Board SP130-04
- 2 x 3 S/W Kit S PI 20-23
- 4 x 3 S/W Kit SP120-43
- 4 x 7 S/W SP120-47
- 6 x 7 S/W SP120-67
- 8 x 7 S/W SP120-87
- Custom S/W Kit SP120-99
- 2 Port Upgrade SP132-02
- 4 Port Upgrade SP132-04
- 7 Hour Upgrade SP132-07
- 15 Hour Upgrade SP132-15
- Remote Programming Option SP137-00
- Technical Manual SP150-00
- System Administrator Guide SP151-00
- User Guide SP152-00
- Quick Reference Card SP153-00

SECTION 410

SPECIFICATIONS

410.1 ENCLOSURE

A. DIMENSIONS

- 7" height (7.25 with rubber feet)
- 10.5" width
- 16.88" depth

B. ENVIRONMENTAL

- 0 to 50°C, 10 to 90% humidity, non-condensing

C. MTBF:

- 35,000 hours

D. INPUT VOLTAGE

- 90-1 32 or 180-260 Vac, 47-63 Hz

E. OUTPUT VOLTAGE TOLERANCES

- +5 Vdc 4.75 to 5.25
- -5 Vdc -4.50 to -5.50
- +12 Vdc 11.40 to 12.60
- -12 Vdc 10.80 to 13.20

F. OUTPUT CURRENT RATINGS

- +5 Vdc 2.3 to 15 Amps
- -5 Vdc 0 to .5 Amps
- +12 Vdc .4 to 4.2 Amps
- -12 Vdc 0 to .5 Amps

G. COOLING

- One 21 cfm fan for card cage and one internal fan for power supply.

H. PERIPHERALS

- Two half height 5.25" mounting spaces (accessible from exterior of enclosure)

I. MATERIAL

- Chassis - .060 Aluminum Gold Alodine finish
- Cover - .040 Aluminum painted
- Front Panel - ABS plastic
- The paint meets federal standard 595.

J. REGULATORY

- The unit meets the FCC Part 15 requirements for a Class A computing device.

410.2 VOICE BOARDS

A. REGULATORY

- The board meets the FCC Part 15 requirements for a Class A computing device'.
- FCC regulatory number : EB26FN-71693-MA-E Ringer
Equivalence.3A
Dialogic D21 /B
Dialogic D21 /D
Dialogic D41 /B
Dialogic D41/D

SECTION 500

INSTALLATION

500.1 INTRODUCTION

New Starplus AVP systems come with the hardware pre-configured and all software pre-loaded onto the hard drive. All that is required is to connect the monitor, software controller, and the keyboard. These are all external connections and do not require the unit to be disassembled. Once these external connections are made you can power the system up and begin to configure it. The Starplus AVP software contains configuration files for the Starplus phone systems which make integrating to these systems simple.

In cases of upgrading either port or hour size, it will be necessary to disassemble the unit to install the voice boards and/or the hard drive and software. The upgrade topic in this section describes these procedures. This section is useful when performing upgrades to an existing system.

The Starplus AVP can also integrate with other phone systems and PBX's. To assist you in this endeavor, we have prepared a check list of tasks that needs to be completed to properly install your Starplus AVP system to another vendors phone system.

This chapter discusses the following topics:

- **SITE REQUIREMENTS.** This section discusses the environment and physical requirements the Starplus AVP requires. This includes mounting location and installation considerations.
- **NEW SYSTEM INSTALLATION.** This section discusses the procedures to install a new Starplus AVP system. This section covers the installation of the S/W controller, keyboard and monitor, phone line connection as well as system start up and initial configuration.
- **SYSTEM UPGRADE INSTALLATION.** This section discusses the procedures necessary to upgrade an existing Starplus AVP system. Upgrades consist of increasing port or hour size or both. This requires that new hardware and software be installed onto the Starplus AVP system. This section covers both hardware and software items utilized in an upgrade.
- **PRE-INSTALLATION WORKSHEET.** This is used to gather certain information that is needed to properly configure the AVP system when not connecting it to a Starplus phone system. A series of tests/questions about the phone system are presented. From these results you will be able to configure the Starplus AVP to work with the phone system. The worksheet is located at the end of this section. **If you are connecting the AVP to a Starplus phone system you can bypass this section.**

500.2 SITE REQUIREMENTS

Selection of a suitable location is the most basic, yet most critical consideration in the installation of the **Starplus** AVP system. The following factors should be considered when choosing an appropriate location for equipment installation:

- Ample space must be allowed to remove the cabinet cover, to access assemblies and cards within the cabinet and allow space for connections to the unit. There must be room to insert floppy disks into the drive.
- A separately fused, dedicated 117 volts AC, 10 amp, 60 Hz, single phase, 3 wire power outlet should be located within 5 feet of the system.
- Location of the **CO/PBX** line terminations must be considered when selecting a location for the system.
- A well ventilated, and **well** lighted area having a optimum temperature range of 50° to 80° degrees F and a relative humidity range of 10 % to 85 % (non-condensing) must be provided.
- Hazardous or flammable materials should be removed from the vicinity of the system. The immediate area must not be subject to flooding or excess moisture. The cabinet should be isolated from areas of moving machinery or equipment. It is also recommended that static electricity producing carpets not be installed in the area.
- The system should be placed in an electrically noise free environment, isolated and shielded from equipment that causes electro-magnetic interference (EMI) or radio frequency interference (RFI). Examples of electrical noise are rotating electrical machinery, arc welding equipment, and radio transmitters.

A. SITE PREPARATION

The **Starplus** AVP is a table top system. A solid table or desk top, approximately 60 inches by 28 inches, is needed for the chassis, monitor and keyboard. If a shelf is to be used, the combined weight of these items is approximately 50 pounds. Do not install the system in a closet or on the floor where it may be bumped, exposed to moisture, or where the cables may cause a hazard.

B. POWER CABLING AND GROUNDING

To function properly, the **Starplus** AVP systems must be correctly powered.

- Before installing the **Starplus** AVP, inspect all wiring and electrical outlets for proper grounding and voltage. Be sure the third wire power ground connects to the building input transformer or a suitable ground rod. Voltage measurements between the black wire (measured from the smaller of the two slots on an outlet) and third wire ground should equal 117 Volts AC.
- In areas where electrical storms pose a danger, install a transient AC protection device in the power lines. This is particularly important where power is provided by outside

overhead lines. Install a transient AC protection device if the system is installed in a manufacturing area where motor driven machinery and such is installed.

- Protect the equipment against accumulated static electricity which can damage sensitive electronic circuitry in the enclosure. If the site is at a high altitude or in a dry climate, humidifying the area may be necessary to correct static electricity problems.

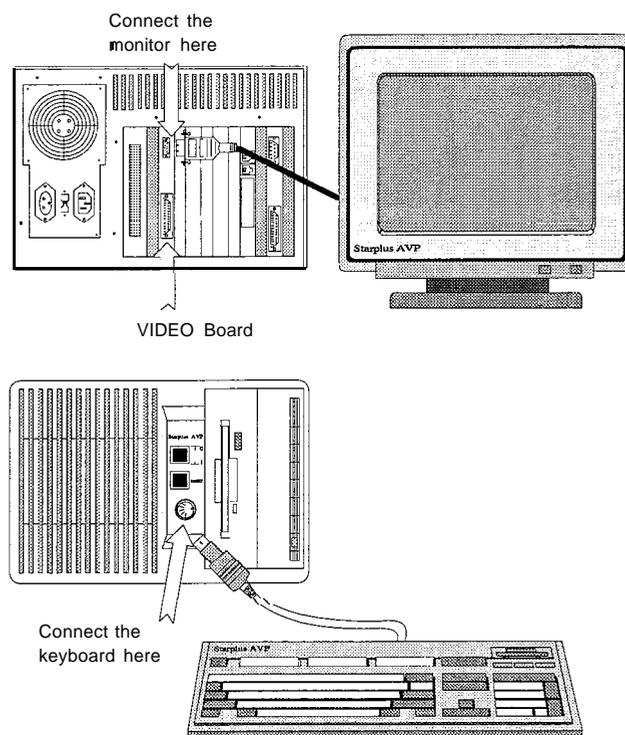
500.3 NEW SYSTEM HARDWARE INSTALLATION

New Starplus AVP systems come with the hardware pre-configured and all software pre-loaded onto the hard drive. All that is required is to connect the monitor, software controller, and the keyboard. These are all external connections and do not require the unit to be disassembled. Once these external connections are made you can power the system up and begin to configure it. This section includes installing the monitor, keyboard, S/W controller, phone lines, and initial configuration programming.

A. MONITOR AND KEYBOARD INSTALLATION

After the system has been placed in the selected location, you need to connect the monitor and keyboard.

1. Connect the monitor to the 9 pin connector on the video controller board on the back of the system. The video controller board can be identified by the female 25 pin connector, and the male 9 pin connector.
2. Connect the round 5 pin plug from the keyboard to the mating jack on the front of the enclosure. The connector is keyed so that it will only install in one position.



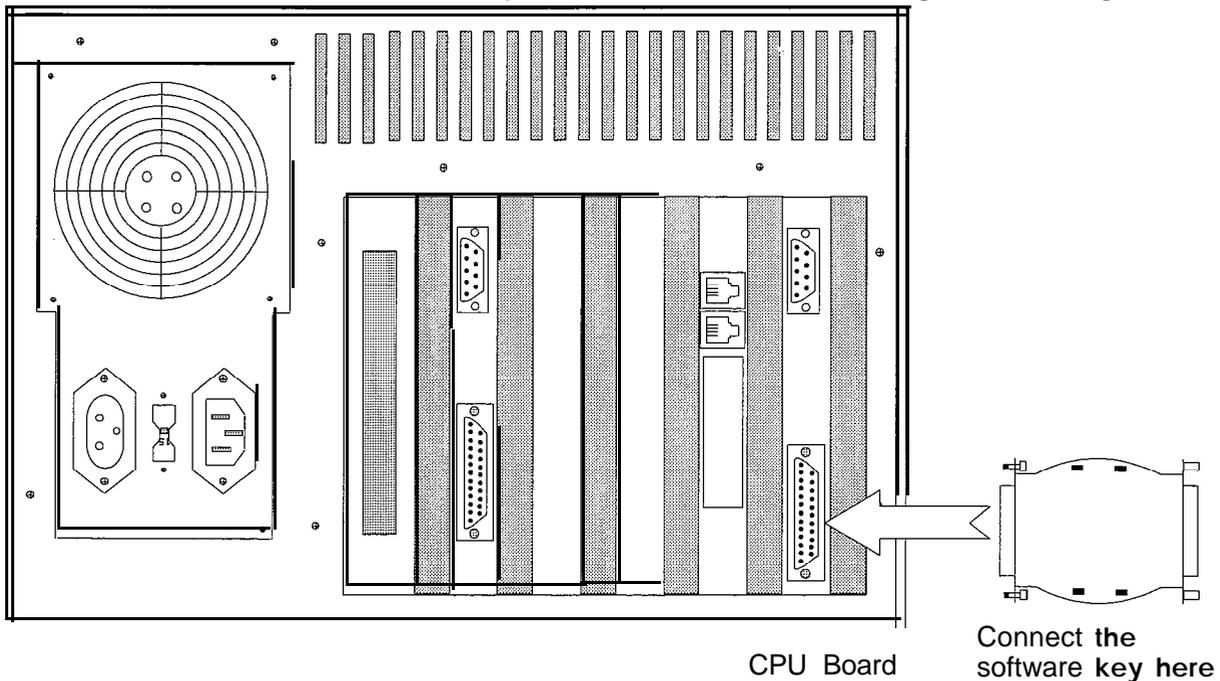
B. INSTALLING THE SOFTWARE CONTROLLER

The controller resembles a standard male/female parallel connector and simply plugs into the parallel port on the back of the PC. If you have a parallel printer or other device attached to that port, temporarily remove it, install the controller, and then reinstall the device on the back of the controller.

IMPORTANT! The software controller is designed to recognize the type and version number of the modules currently installed on your system, Starplus A VP will not function properly unless this controller is installed at all times.

1. Install the controller on the parallel port of the CPU card.

If you attach a printer to the back of the controller, do not turn the device off or take it off-line. Doing so, might cause the Starplus AVP program to stop running. If this condition does occur, disconnect the printer from the PC before turning it off or taking it off line.



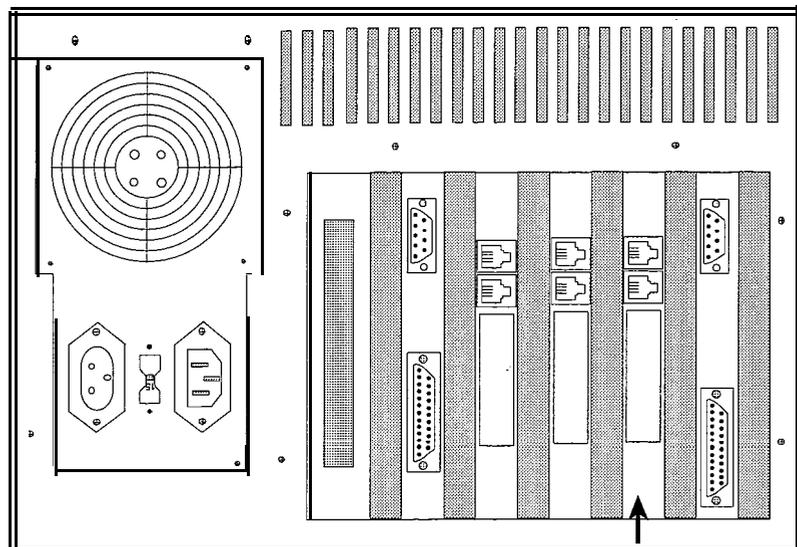
C. CONNECTING THE PHONE LINES

The Starplus AVP system uses standard RJ-14 modular jacks to connect the phone system to the voice board. The four port voice board has two (2) RJ-14 connectors. Each RJ-14 carries two telephone lines, line 1 is on the GN-RD pair, and line 2 is on the BLK-YL pair. The two port board also has two modular connectors. Each connector carries one line on the GN-RD pair.

1. With the board components face up and the jacks on the right side, the top connector is for channels one and two and the bottom connector is for channels three and four. Within each connector, the inside pair of wires is for channels one and three, and the outside pair is for channels two and four. On a two port board the inside pair on the upper connector is for channel 1 and the inside pair on the lower connector is for channel 2.

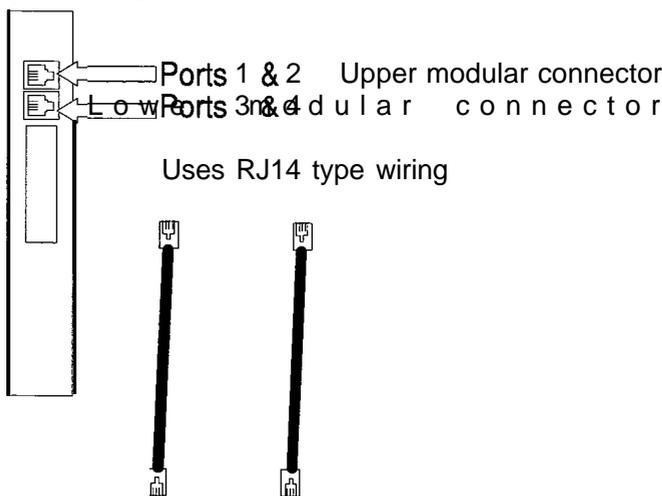
If you have RJ-14 terminations for your phone lines then you need a pair of standard 4-wire modular cables.

2. Connect the modular connectors to any of the jacks on the board. The cable should slide in easily and snap in place when the connection is made.

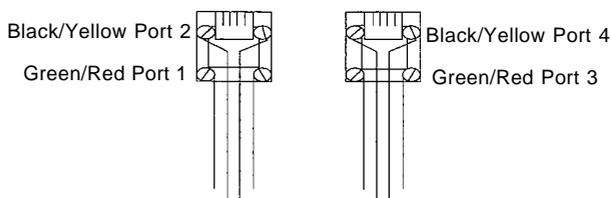
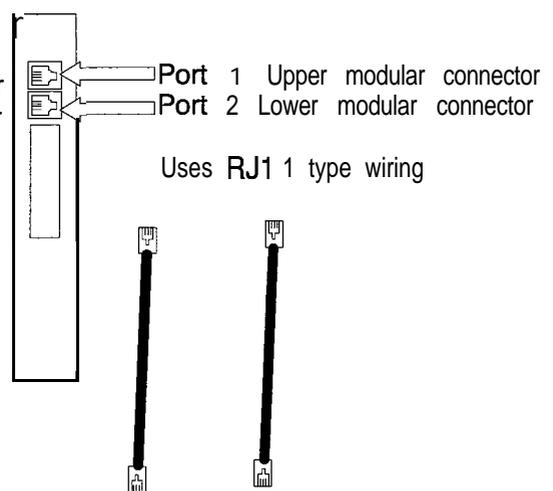


AUDIO Board(s) Up to 3

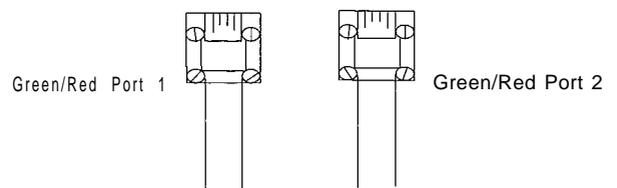
4 Port Voice Board



2 Port Voice Board



To Telephone Extensions



To Telephone Extensions

500.4 NEW SYSTEM SOFTWARE INSTALLATION

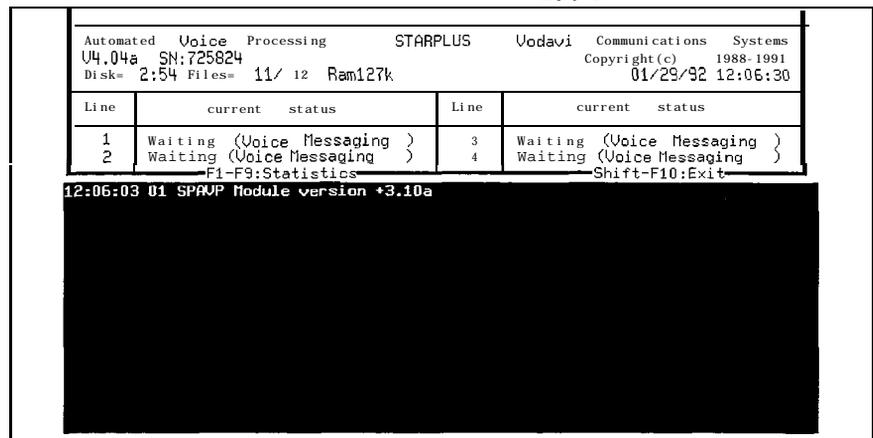
A. INITIAL SET UP

Once the hardware items are installed, you are ready to power the system up and configure the basic items needed for integration.

1. Push the power switch on the front of the enclosure to the ON (depressed) position.

The system should go through its power up procedure and load the system software. You should be at the main screen showing the lines and current status window.

2. Write down the serial number in the upper left corner of the



screen. It is labeled SN:XXXXXX

3. Simultaneously depress the [SHFT][F10] keys to shutdown the system.

The system will shut down and you will be at the Vodavi Main Menu.

4. Enter a [3] to go to the utility menu.



A listing of the Starplus phone systems that may be loaded will appear. These items are lettered G-K to represent the various Starplus phone systems that integrate with the Starplus AVP.

5. Enter the letter (G-K) that represents the phone system settings you wish to load.

```
A = Voice Board Setup          G = Load SP-2448 Phone Settings
B = Run CPCauto               H = Load SP-96EX Phone Settings
C = Set Time and Date         I = Load SP-1428 Phone Settings
D = Delete Log Files         J = Load SP_2856 Phone Settings
E = Backup Messages          K = Load SPX Phone Settings
F = Restore from Backups     L = Save System Settings to Floppy
X = Return to Main Menu      M = Restore Default System Settings

Select option from items above and press [ENTER]

Type option then press ENTER:
```

6. Press any key if you are sure this is the phone system you wish to load. Press [CTRL-C] to abort the operation. Once the settings are loaded you will be returned to the utility menu.
7. Enter [C] to set the time and date. Follow the prompts on the screen to set the time and date.

```
Please enter the correct date in the following format  Month/Day/Year
or press enter to keep the date shown.

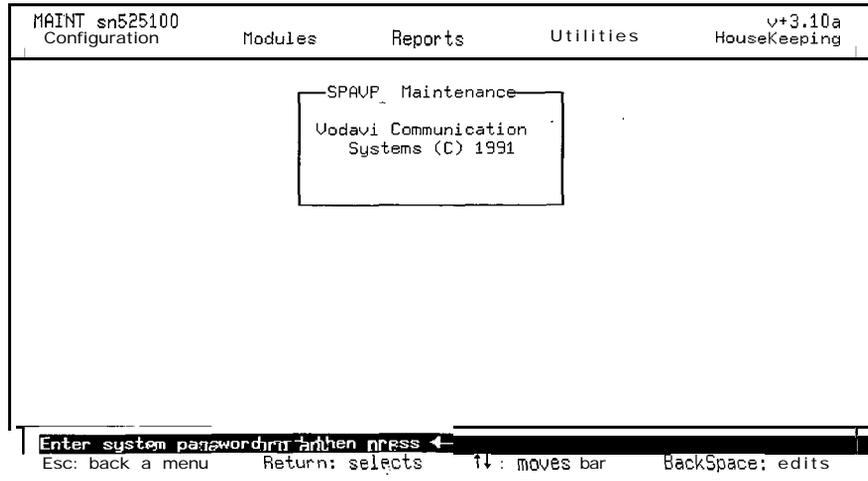
Current date is Tue 01-28-1992
Enter new date (mm-dd-yy):

Please enter the correct time in the following format  Hour/Minute/Seconds
or press enter to keep the time shown.

Current time is  2:57:36.36p
Enter new time:
```

8. Press X to return to the main menu.
9. Enter a [2] and press the [ENTER] key to start the maintenance program.

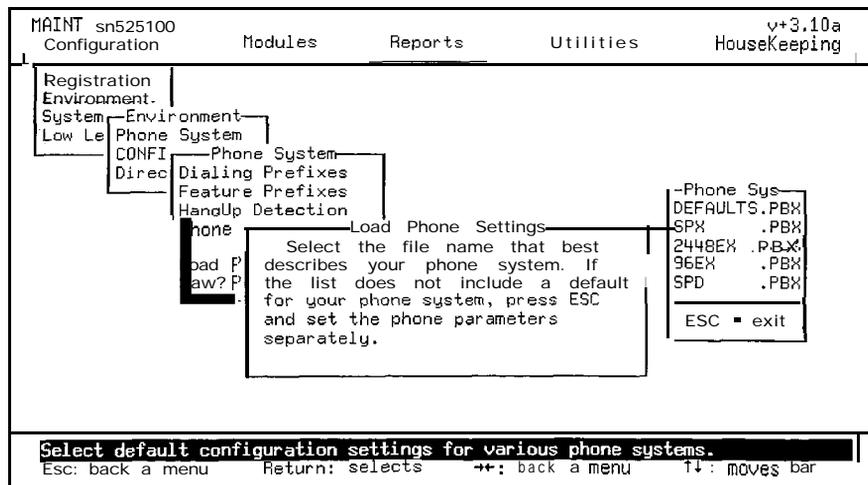
The system will load the maintenance program and prompt you for a password.



1. Press the [ENTER] key. This is the default password.

The highlight bar should appear on the configuration menu item.

2. Press the [DOWN ARROW] or [ENTER] key to pull down the menu.
3. Highlight the Environment item and press [ENTER].
4. Highlight the Phone System item and press [ENTER].
5. Highlight the Load Phone System item and press [ENTER].



The Starplus phone system that you just loaded from the utility menu should appear. It will have a .PBX extension. Press the [ENTER] key to load these settings. This is the second step in a two step process, the first step was already done in the utility menu. Refer to the subsection B, System Defaults for a definition of what settings are loaded with each phone system.

In this example all Starplus phone systems are shown.

6. Press the [ESC] key twice.
7. Highlight the Registration item and press [ENTER].
8. Highlight the Edit Registration item and press [ENTER].
9. Complete the registration form.

You may use the arrow keys, backspace, and enter keys to edit the registration-form.

MAINT sn525100	Configuration	nodules	Reports	Utilities	v+3.10a HouseKeeping
Registration	Registration	Edit Registration			
Environ	Edit Registration	Serial #:			
System	Print Registration	Date :			
Low L	Clear Registration	Name :			
		Company :			
		street :			
		City :			
		state :			
		Zip :			
		Phone :			
		Number of Lines :			
		Number of Ext. :			
		PBX Manufacturer :			
		P B X Model #			
		Bought SPAUP from:			
		Publications read :			
		Press ESC when done.			
I _____ address, phone number and other information.					
Esc: back a menu Return: selects ↑↓: moves bar Backspace: edits					

10. Press the [ESC] key twice to return to the configuration menu.

You will be returned to the Configuration main menu item.

11. Press [F10] to exit the programming mode.

You will be returned to the Vodavi menu.

You may now press [1] to boot the system up or press [2] to further configure the system. Sections 600-650 describe the programming for the individual menu items.

By default, all ports are set to Voice Mail, request extension.

B. SYSTEM DEFAULTS

This section defines the settings for the various **Starplus** phone systems that may be loaded from the utility menu. When you load a phone system from the menu, default mailboxes and auto attendant extensions, as well as five class of services are created to match the phone system you selected. In the case of the SPX the system defaults to match the PCDBA default data disk.

COS SETTINGS

00 - (LEVEL 1) User type 1, max message length 300 seconds, max message count 100, max retention 30 days, use message waiting lamps, lists personal.

01 - (LEVEL 2) User type 1, max message length 300 seconds, max message count 100, max retention 30 days, ignore message waiting lamps, lists personal.

02 - (LEVEL 3) User type 2, max message length 180 seconds, max message count 50, max retention 15 days, use message waiting lamps, lists personal.

03 - (LEVEL 4) User type 5, max message length 90 seconds, max message count 25, max retention 10 days, ignore message waiting lamps, lists none.

04 - (DIST LIST) User type 8

THIS COS SHOULD ONLY BE ASSIGNED TO MAILBOX NUMBERS THAT ARE REPRESENTING DISTRIBUTION LISTS! DO NOT ASSIGN NORMAL VOICE MAIL USERS THIS COS!

Starplus 1428 Digital Settings (1428.PBX)

System

- Input Lengths - 3 Digit mailbox and extension lengths, password is 4 digits

Global Settings

- Initiate Channels - All 4 ports default to Voice Messaging (day, night, weekend, holiday)
- Number of Rings - 2

Mailboxes

- Mailbox numbers: 100 - 127. Also one mailbox number 999. Mailbox 999 is set to forward to disconnect menu at all times. This mailbox should not be changed. Mailbox(s) 100 - 127 set to COS 0 and no notification for all time periods.

Auto Attendant

Extensions

- Extension numbers 100 - 127, copy mailbox settings. Extension 100 - 127 set to blind transfer, no hold, no screening for all time periods.

Extension Settings

- Operator 0, 0 for operator to operator, outside transfer blind, blind transfer wait 1 second.

Starplus 2856 Digital Settings (2856.PBX)

System

- Input Lengths - 3 Digit mailbox and extension lengths, password is 4 digits

Global Settings

- Initiate Channels - All 4 ports default to Voice Messaging (day, night, weekend, holiday)
- Number of Rings - 2

Mailboxes

- Mailbox numbers: 100 - 155. Also one mailbox number 999. Mailbox 999 is set to forward to disconnect menu at all times. This mailbox should not be changed. Mailbox(s) 100 - 155 set to COS 0 and no notification for all time periods.

Auto Attendant

- Extensions, Extension numbers 100 - 155, copy mailbox settings.

Extension 100 - 155 set to blind transfer, no hold, no screening for all time periods.

Extension Settings

- Operator 0, 0 for operator to operator, outside transfer blind, blind transfer wait 1 second.

Starplus 2448 Settings (2448.PBX)

System

- Input Lengths - 2 Digits mailbox and extension lengths, password is 4 digits

Global Settings

- Initiate Channels - All 4 ports default to Voice Messaging (day, night, weekend, holiday)
- Number of Rings - 2

Mailboxes

- Mailbox numbers: 10 - 57. Also one mailbox number 99. Mailbox 99 is set to forward to disconnect menu at all times. This mailbox should not be changed. Mailbox(s) 10 - 57 set to COS 0 and no notification for all time periods.

Auto Attendant

- Extensions, Extension numbers 10 - 57, copy mailbox settings. Extension 10 - 57 set to blind transfer, no hold, no screening for all time periods.

Extension Settings

- Operator 0, 0 for operator to operator, outside transfer blind, blind transfer wait 1 second.

Starplus 96EX Settings (96EX.PBX)

System

- 3 Digit mailbox and extension lengths, password is 4 digits

Global Settings

- - All 4 ports default to Voice Messaging (day, night, weekend, holiday)
- - 2

Mailboxes

- Mailbox numbers: 100 - 195. Also one mailbox number 999. Mailbox 999 is set to forward to disconnect menu at all times. This mailbox should not be changed. Mailbox(s) 100 - 195 set to COS 0 and no notification for all time periods.

Auto Attendant

- Extensions, Extension numbers 100 - 195, copy mailbox settings. Extension 100 - 195 set to blind transfer, no hold, no screening for all time periods.

Extension Settings

- Operator 0, 0 for operator to operator, outside transfer blind, blind transfer wait 1 second.

Starplus SPX Settings (SPX.PBX)

System

- 4 Digit mailbox and extension lengths, password is 4 digits

Global Settings

- Initiate Channels - All 4 ports default to Voice Messaging (day, night, weekend, holiday)
- Number of Rings - 2

Mailboxes

- Mailbox numbers: 1000 - 1100. Also one mailbox number 9999. Mailbox 9999 is set to forward to disconnect menu at all times. This mailbox should not be changed. Mailbox(s) 1000 - 1100 set to COS 0 and no notification for all time periods.

Auto Attendant

- Extensions, Extension numbers 1000 - 1100, copy mailbox settings. Extension 1000 - 1100 set to blind transfer, no hold, no screening for all time periods.

Extension Settings

- Operator 0, 0 for operator to operator, outside transfer blind, blind transfer wait 1 second.

C. BATCH PROGRAMS

The Vodavi menu and the Utility menu are DOS batch programs which perform various functions. The Vodavi menu allows you to load voice mail, load programming, or go to the Utility menu. These programs are pre-loaded onto new Starplus AVP systems. In addition to the software diskettes, you will receive a diskette that contains these programs. Should you ever replace your hard drive (due to upgrade or problem) the batch files may be installed on the hard drive. Install the AVP software first, then install the batch diskette and type A:install. The install program will copy over the necessary files and create the proper directories.

It is not necessary to load this diskette on a new system. The diskette installation procedure is done at the factory at the time of build.

The AUTOEXEC.BAT file is programmed to boot up to voice mail. This should not be changed. You always want the system to load voice mail upon boot up. This ensures that if the system loses power for any reason, when power is returned the system will load voice mail and start processing.

Each program is described by topic in the following text. The [X.BAT] listed after the menu item is the program name of the batch file.

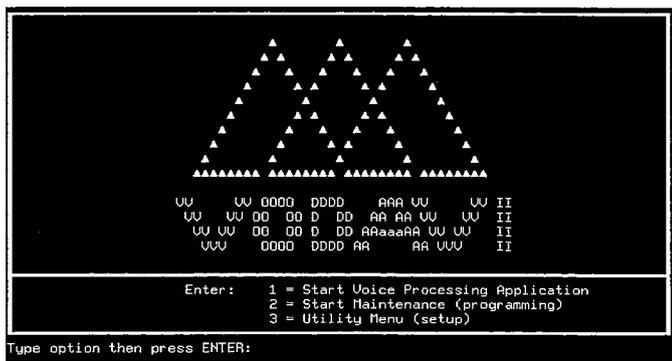
Install Program [INSTALL.BAT]

This is the program that installs the batch files from the floppy drive to the hard drive. The program creates the Vodavi directory and copies the necessary files to it. The program also copies a new autoexec.bat and config.sys file to the hard drive. These files are setup for a four port system and will need to be changed if you have more ports. Read the section Autoexec and Config Files for more information regarding changes to these files. *It is not necessary to run install on a new system.*

Main Menu [VODAVI.BAT]

This is the main menu that is presented when the system is shut down or database administration is exited. This menu allows you to:

- Load voice mail, [1]
- Load database programming, [2]
- Goto the Utility menu, [3]



Utility Menu [3.BAT]

This is the menu that allows you to select the various system options. Each of these options is described individually. The items on this menu are:

- Voice Board, [A]
- CPC Auto, [B]
- Time and Date, [C]
- Delete Log Files, [D]
- Message Backup, [E]
- Restore Messages, [F]
- Load 2448 System, [G]
- Load 96EX System, [H]
- Load 1428 System, [I]
- Load 2856 System, [J]
- Load SPX System, [K]
- Save Configuration, [L]
- Restore Defaults, [M]
- Return to Main, [X]

```
A = Voice Board Setup          G = Load SP-2448 Phone Settings
B = Run CPCauto                H = Load SP-96EX Phone Settings
C = Set Time and Date          I = Load SP-1428 Phone Settings
D = Delete Log Files           J = Load SP-2856 Phone Settings
E = Backup Messages            K = Load SPX Phone Settings
F = Restore from Backups       L = Save System Settings to Floppy
X = Return to Main Menu        M = Restore Default System Settings

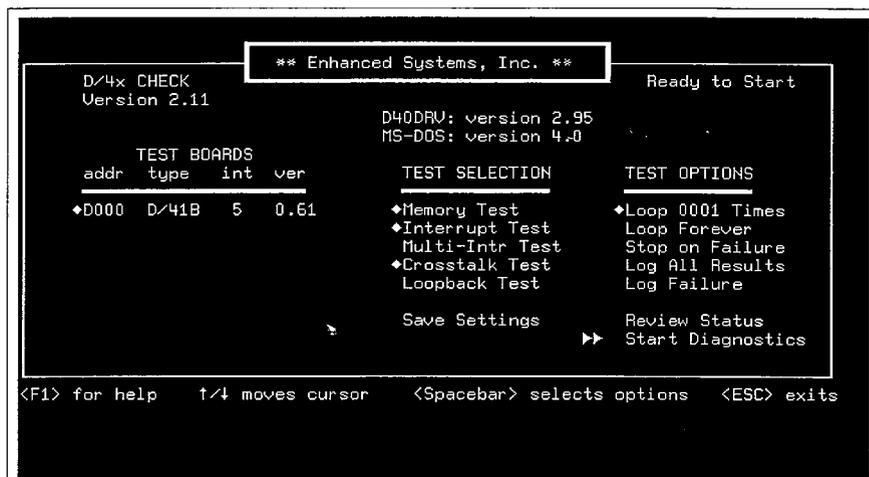
Select option from items above and press [ENTER]

Type option then press ENTER:
```

Voice Board [A.BAT]

This option runs the D40CHK program which performs tests on the voice board. To run this follow this procedure:

1. Press [A] from the utility menu.
The system will load the D40CHK program and the main screen will appear after a few seconds.



The left side of the screen will show the current board(s) installed in the system, their IRQ, Address, type, and firmware settings.

2. Make sure the Mem test, Int test, Multi-Int test, and Loop 0001 item have marks in front of them.
If not, use the arrow keys to highlight the item and press the spacebar to mark the item.
If running the test with only one voice board, unmark the Multi-Int test by using the arrow keys to highlight the Multi-Int item and press the spacebar to remove the mark.
3. Move the highlight bar to Start Diagnostics and press the [ENTER] key.

The test will begin and a status square will appear in the lower left corner of the screen. When the test is finished, a pass or fail result will be given. If failed is given, refer to the trouble shooting section of the Starplus AVP manual. If pass is given, move to the next step.

4. Use the arrow keys to move the highlight bar to the Save Settings item and press the [ENTER] key.
5. Enter a period [.] at the prompt for the filename and press the [ENTER] key.
6. Press the [ESC] key.
The file C:SPAVP\D40CHK.CFG will be updated with the test information.
7. Type [VODAVI] then press the [ENTER] key.

CPC Auto [B.BAT]

This option describes the procedure for running CPC Auto. CPC Auto is used when connecting the AVP to a non-Starplus phone system. In this case, CPC Auto performs a ring and busy test with an extension off the phone system. In doing this, CPC "learns" the tone cadences and frequencies of the phone system. This information is used in the Auto Attendant portion of the AVP if screened transfers are desired. To run CPC auto type the following:

1. cd\spavp [ENTER]
2. CPCAUTO 5 XXXX [ENTER]

(where 5 is the IRQ and XXXX is the extension number of the phone to test.)

The phone must not be answered during the ring test and must re-

```

CALL PROGRESS CHARACTERIZATION (CPC)

CPC (Call Progress Characterization) is a utility program designed to
optimize call transfer reliability and speed.  CPC does this by analyz-
ing and storing the RING and BUSY tones produced by the phone system
during some test calls.  After successfully running CPC to "learn" the
RING and BUSY tones, these results can be loaded into Voice Mail sett-
ings by using the MAINT, the system administration program.

NOTE: You must first complete both hardware and software installation
before proceeding with CPC.  Refer to Appendix F in the SPAUP
Manual for additional information and instructions on running CPC.
Before running CPC you must have the following;

1)  An analog phone line (switch extension) connected to the first
line on the first voice board installed in the system.
2)  You must know the IRQ (interrupt) of the voice board.
3)  The "test extension" that can be called during testing.

To run CPC type:  CPCAUTO [irq] [ext]  Enter
To return to the Utility Menu type:  3  Enter.
Type option then press Enter:
    
```

main busy for the busy test.

Time and Date [C.BAT]

This option allows you to change the time and date on the system. The time and date are entered in the standard DOS format.

```

Please enter the correct date in the following format  Month/Day/Year
or press enter to keep the date shown.

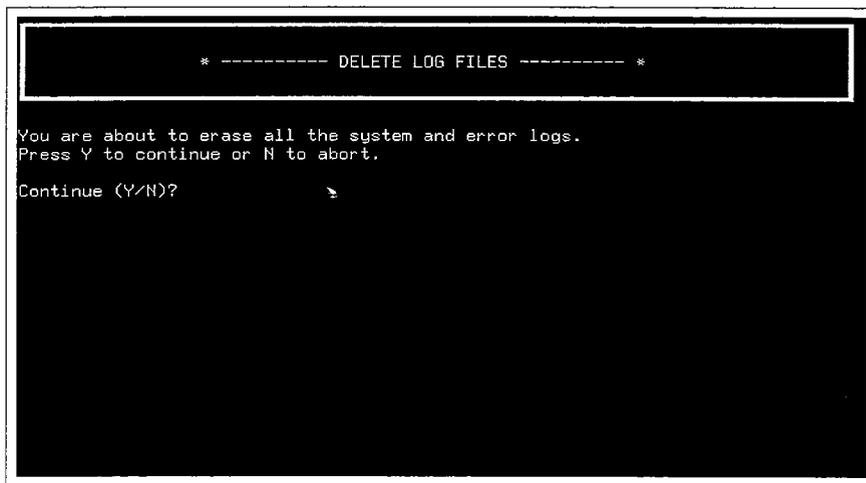
Current date is Tue 01-28-1992
Enter new date (mm-dd-yy):

Please enter the correct time in the following format  Hour/Minute/Seconds
or press enter to keep the time shown.

Current time is  2:57:36.36p
Enter new time:
    
```

Delete Log Files [D.BAT]

This option will erase all the log information from the C:\SPA VP\LOGS directory. This should only be used when the Erase Logs feature in the Configuration\System\Logging database item is not enabled. If this item is enabled, the system will automatically, on a monthly basis, delete the logs. This provides valuable disk space for the voice messaging feature.' If you want to back the current log information up, go into programming under the Reports menu and save all logs to a floppy. Refer to Section 640 Reports for more information.



Backup Messages [E.BAT]

This option does a DOS backup of the C:\SPA VP\MESSAGES*. * and all sub directories. This item is used only when upgrading or replacing the hard drive. It is not meant as a normal maintenance function.

This function is to be used after new system software is installed on the AVP. Using this function and then the message restore as a daily maintenance function will cause problems. This is because DOS backup does not backup empty sub directories, *It is possible to lose message directories which will result in customer complaints about lost messages or not getting any messages if you use this as a maintenance function! Use this only when replacing a hard drive.*

1. Enter a [E] and follow the directions on screen.

```
* ----- MESSAGE BACKUP ----- *

This option backs up all messages to one or more floppy disks.
Depending on how full your system is you may need many floppies.
If you feel you don't have sufficient disks then come back to
this option after obtaining them.

This procedure requires the user to manually insert all disks as
the system requests them and may take an extended period of time.
Care should be taken to label each disk correctly with the disk number,
date, and short note specifying system type as shown below.

Example:  Disk 01, 5-Mar-92
          Voice Mail Backup

Continue(Y/N)?
```

Restore Messages [F.BAT]

This option is used after the above option to restore the messages to the C:\SPA\PMESSAGES\ directory. When done after loading new software, the installation procedure has already created the message directory structure. This allows the messages to be restored to the same directory they were backed up from. Again this is not a normal maintenance function.

1. Enter a [F] and follow the instructions on screen.

```
* ----- RESTORE FROM FLOPPIES ----- *

This option restores all information from one or more floppy disks
and overwrites the existing information on the system disk.

WARNING: Be sure that the information you want is on the backup disks.

This procedure requires the user to manually insert all disks as
the system requests them and may take an extended period of time.

Continue(Y/N)?
```

Load 2448 Settings [G.BAT]

This option loads the **Starplus** 2448 phone settings into the AVP for proper interfacing. Any current phone information is checked for and if found, a caution message will be prompted. The option loads the following information specifically for the 2448:

- Mailbox Numbers
- Extension Numbers
- Feature Prefixes, input Lengths

You must also go into database programming and load the phone setting from the Configuration/Environment/Phone System/Load Phone Settings item! This will load the proper CPC tone plan for the **Starplus** system. Refer to Section 500.4, A. Initial Set Up for the procedure.

Load 96EX Settings [H.BAT]

This option loads the **Starplus** 96EX phone settings into the AVP for proper interfacing. Any current phone information is checked for and if found, a caution message will be prompted. The option loads the following information specifically for the 96EX:

- Mailbox Numbers
- Extension Numbers
- Feature Prefixes, Input Lengths

You must also go into database programming and load the phone setting from the Configuration/Environment/Phone System/Load Phone Settings item! This will load the proper CPC tone plan for the **Starplus** system. Refer to Section 500.4, A. Initial Set Up for the procedure.

Load 1428 Settings [I.BAT]

This option loads the **Starplus** 1428 digital phone settings into the AVP for proper interfacing. Any current phone information is checked for and if found, a caution message will be prompted. The option loads the following information specifically for the 1428:

- Mailbox Numbers
- Extension Numbers
- Feature Prefixes, Input Lengths

You must also go into database programming and load the phone setting from the Configuration/Environment/Phone System/Load Phone Settings item! This will load the proper CPC tone plan for the **Starplus** system. Refer to Section 500.4, A. Initial Set Up for the procedure.

Load 2856 Settings [J.BAT]

This option loads the Starplus 2856 digital phone settings into the AVP for proper interfacing. Any current phone information is checked for and if found, a caution message will be prompted. The option loads the following information specifically for the 2856:

- Mailbox Numbers
- Extension Numbers
- Feature Prefixes, Input Lengths

You must also go into database programming and load the phone setting from the Configuration/Environment/Phone System/Load Phone Settings item! This will load the proper CPC tone plan for the Starplus system. Refer to Section 500.4, A. Initial Set Up for the procedure.

Load SPX Settings [K.BAT]

This option loads the Starplus SPX phone settings into the AVP for proper interfacing. Any current phone information is checked for and if found, a caution message will be prompted. The option loads the following information specifically for the SPX: (SPX matches the PCDBA default data disk)

- Mailbox Numbers
- Extension Numbers
- Feature Prefixes, Input Lengths

You must also go into database programming and load the phone setting from the Configuration/Environment/Phone System/Load Phone Settings item! This will load the proper CPC tone plan for the Starplus system. Refer to Section 500.4, A. Initial Set Up for the procedure.

Save Configuration [L.BAT]

This option saves the system settings to a floppy disk. Information that is saved is the mailbox/extension information and the phone system settings. To restore the information type the following:

1. RESTORE A: C:\SPAVP*. * /S [ENTER]

```
* ----- CONFIGURATION BACKUP ----- *

This option backs up all system settings to a single floppy disk.
(Voice Mail Messages and System Operating Files will not be backed up)

You will need a floppy disk for this procedure. It is important that this
disk be labeled properly and kept in a safe place when done.

If you don't have a floppy disk then come back to this option after
obtaining one. Use a 3.5 inch 1.44 MB (high density) floppy diskette.

Continue(Y/N)?
```

Load Defaults [M.BAT]

This option erases all system information and returns the system to its' original settings. The following information is erased so be careful with this option:

- Mailbox/Extension information
- Phone System Settings/Tone Plan

When selecting this, five default class of services are loaded automatically. Their definition is as follows:

00 ▪ (LEVEL 1) User type 1, max message length 300 seconds, max message count 100, max retention 30 days, use message waiting lamps, lists personal.

01 ▪ (LEVEL 2) User type 1, max message length 300 seconds, max message count 100, max retention 30 days, ignore message waiting lamps, lists personal.

02 ▪ (LEVEL 3) User type 2, max message length 180 seconds, max message count 50, max retention 15 days, use message waiting lamps, lists personal.

03 ▪ (LEVEL 4) User type 5, max message length 90 seconds, max message count 25, max retention 10 days, ignore message waiting lamps, lists none.

04 ▪ (DIST LIST) User type 8

THIS COS SHOULD ONLY BE ASSIGNED TO MAILBOX NUMBERS THAT ARE REPRESENTING DISTRIBUTION LISTS! DO NOT ASSIGN NORMAL VOICE MAIL USERS THIS COS!

D. AUTOEXEC.BAT and CONFIG.SYS

These are the files used to load the correct PC settings and the voice board portion of the AVP. When you receive a new AVP, these settings are already set correctly. It is only when you upgrade that is possible that these settings need to be changed. The Starplus AVP has a built in editor to allow these files to be edited. The possible changes that could be made to each file is described below.

AUTOEXEC.BAT

The only line that will be changed in this file is the C:\SPAVP\d40drv -e64 -c0 line.

The -e64 switch loads 4 channels (ports) with 16K of memory.

This may be changed by doing this:

1. Enter CD\SPAVP [ENTER]
2. Type ED C:\AUTOEXEC.BAT

```

Line: 1      Column: 1      05  Insert: 0c  Indent: 0c  Hold cursor: Off  SQUE
REGIO OFF
SET COMSPEC=C:\DOS\COMMAND.COM
VERIFY OFF
PATH C:\DOS;c:\VODRUI;
PROMPT $P$G
c:\SPAVP\d40drv -e64 -c0
VODRUI 1

```

3. The editor screen will appear with the file contents shown.
4. Use the arrow key to move to the 6 in the 64 entry and press [DEL] twice to erase. Then modify the setting as follows:
 - 2 Ports should read -e32 (type 32)
 - 4 Ports should read -e64 (type 64)
 - 6 Ports should read -e96 (type 96).
 - 8 Ports should read -e128 (type 128)
 - 12 Ports should read -e192 (type 192)
5. Press [CTRL-F2] to save the file and exit the editor.
6. Type [VODAVI] and press the [ENTER] key to pull-up the main menu.

CONFIG.SYS

The config.sys file can be updated through database programming. Refer to section 610, config.sys item for more information.

E. REMOTE PROGRAMMING OPTION

The remote programming option provides a 2400 Baud modem and the host end of Carbon Copy communications software. By purchasing the guest end of Carbon Copy, the user may program the Starplus AVP off site. Carbon Copy allows a remote PC via modem, to emulate the AVP's keyboard. This allows the remote end to program the system just as if they were on site.

The remote programming option can be installed on a new or existing system. If installed on a new system, the modem board is already set up and the Carbon Copy software loaded on the hard drive. All that has to be edited is the Autoexec.bat file to load the software on boot up. If installed on an existing system, all the procedures below must be followed.

MODEM INSTALLATION

The system must be powered down for this part of the installation. A grounded wrist strap should also be worn.

1. Remove the screws from both sides of the enclosure and the six screws on the rear of the enclosure and remove the cover.
2. Set the modem jumpers to select COM 2. Follow the instructions on the modem documentation.
3. Install the modem into a empty card slot and secure the card bracket with the phillips screw.
4. Replace the cover and secure the screws.
5. Power the system up and verify the system boots up. If not, remove the cover and check the modem for seating, loose connections.

INSTALLING CARBON COPY

This procedure will load the Carbon Copy host end onto the hard drive of the Starplus AVP. The system should be at the Vodavi menu.

1. Install the Carbon Copy disk into the floppy drive. (Label faces away from eject button.)
2. Type [A:] then press the [ENTER] key.
3. Type CCSTART and press the [ENTER] key.

4. Enter your company name at the sign in screen.
Make sure the spelling is correct as you only get one chance to enter the company name.
5. Answer all of the questions as they appear on the screen.
Select modem type AT Compatible.
6. Enter a [X] when done with all the questions.
7. Type [C:] and then the [ENTER] key.
8. Type [CD\] and press the [ENTER] key.
9. Type [MD CCOPY] and press the [ENTER] key.
10. Type [CD\CCOPY] and press the [ENTER] key.
11. Type [COPY A:*.*) and press the [ENTER] key.
The system will copy the files from the diskette to the C:\CCOPY directory on the hard drive.
12. When finished, type [VODAVI] and press the [ENTER] key.
You will be returned to the Vodavi main menu.

MODIFYING AUTOEXEC.BAT TO RUN CARBON COPY

To have Carbon Copy load automatically whenever the SPAVP is turned on you must modify the AUTOEXEC.BAT file. The following instructions should help you perform this task.

1. At the Vodavi Menu type CD\SPAVP and press [ENTER].
2. Type ED C:\AUTOEXEC.BAT and press [ENTER].
Be extremely careful at this point. Any changes you make can adversely affect the way your SPAVP will run.
3. Using the arrow keys move the cursor to the beginning of the line that reads "VODAVI 1" and press enter (VODAVI 1 should move down one line).

Using the up arrow key move the cursor up to the blank line that you just created and type CD\CCOPY then press [ENTER]. This will create another blank line.

4. On the blank line type CC and press [ENTER]. Another blank line will be created.
5. On this blank line type CD\

- Using the up arrow key move the cursor to the line that starts with PATH. Move the cursor to the end of this line and type [C:\CCOPY].

At this point your AUTOEXEC.BAT file should look similar to the following example.

This is only an **example**. Your AUTOEXEC.BAT file may be slightly different.

```
@ ECHO OFF
SET COMSPEC=C:\DOS\COMMAND.COM
VERIFY OFF
PATH C:\DOS;C:\VODAVI;C:\CCOPY
PROMPT $P$G
C:\SPAVP\d40drv -e64 -c0
CD\CCOPY
c c
CD\
VODAVI 1
```

- Press and hold the control (Ctrl) button and press the F2 button (this will save the changes that you have just made to the AUTOEXEC.BAT file). Type [VODAVI] then press the [ENTER] key.
- Turn the computer off and let it sit for a few minutes, then turn it back on. When you watch the screen you should see the CCOPY screen appear for a short period of time before the SPAVP program starts.

If you see any ERROR messages on the screen during the system start up please call a Vodavi Field Service Representative for help.

500.5 SYSTEM UPGRADES

A. PORT UPGRADES

This section describes the procedures involved in upgrading an existing Starplus AVP. The base Starplus AVP system is a flexible platform that can expand up to 12 ports and 15 hour storage capacity. Upgrades are divided into three types, port, storage, or both.

Port upgrades increase the line capacity of the Starplus AVP. This is achieved by adding additional voice boards and updating the software controller. The voice boards are offered in either two (2) or four (4) port versions.

Whenever you are increasing port capacity on a system that contains a two port board, you should remove the two port board and install the four port board in its place. Then install any additional two or four port boards from there.

REPLACING THE VOICE BOARD

This board is the interface between the voice processing system and the telephone system. The conversion between voice and digital information takes place on this board. Each board provides two modular jacks for the connection of four lines from the telephone system. Each jack connects two lines. There is also a two line version of the card. This contains only one modular jack. This jack connects the two lines.

1. Remove the enclosure.
2. Disconnect any line cords connected to the voice board.
3. Remove the 6-32 screw in the back of the enclosure holding the board in place.
4. Gently lift the card out of the system.

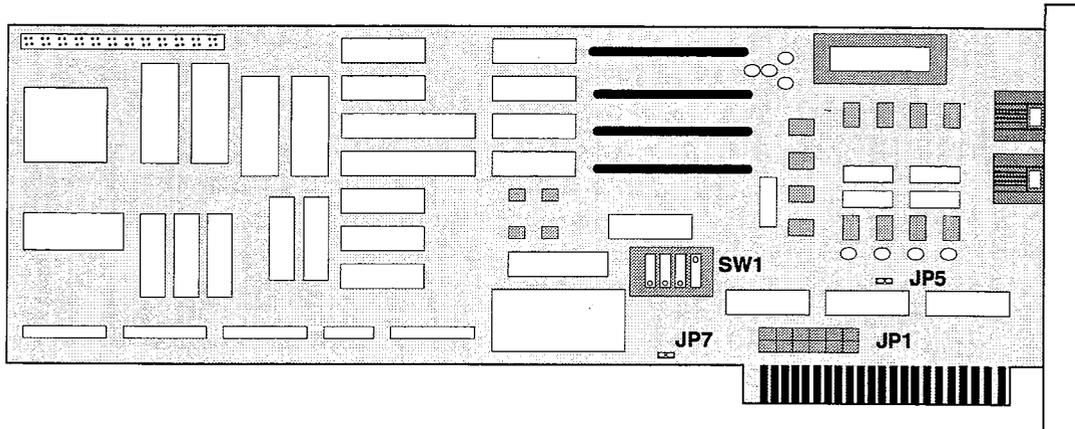
Make sure the new/additional board switch settings are configured properly. Refer to the chart below and text Voice BOARD SETTINGS for the correct setting information.

5. Install the new card, being certain it is perpendicular to the enclosure.
6. Make certain the board is secured in its connector. Reinstall the 6-32 screw to secure the back edge of the board into place.
7. Put the cover on the enclosure and power up the system to make sure it boots.

If the system does not boot up, remove the cover and verify all connections and switch settings.

VOICE BOARD SETTINGS

There are three jumpers and a DIP switch that need to be set on the voice board. The jumpers are labeled JP7, JP1, and JP5. Each is located near the bottom of the board just above the bus connector. The DIP switch, labeled SW1, located above the bus connector, has four toggle switches.

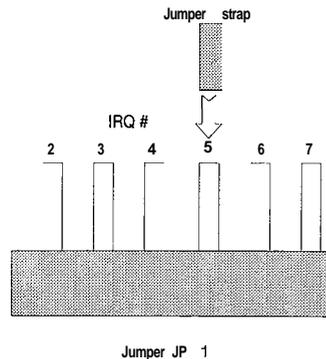


- Jumper JP7 is used to identify the terminating voice board in your Starplus AVP system. This jumper must only be installed on one voice board in a multiple board system. It doesn't matter on which board it is installed, as long as the other voice boards in the system (if any), do not have JP7 installed.

On a one board installation the jumper should be installed.

On a multiple board installation we recommend that the first voice board have the jumper installed and all other boards should not have the jumper installed.

- Jumper JP1 is used to select the IRQ used by the voice board(s). This setting must be the same for all voice boards. The IRQ selected for the voice board(s) must not conflict with the IRQs used by other system peripherals. The board should be set to utilize IRQ5. Do not change the setting.



- Jumper JP5 is used to select the base memory address that will be occupied by the voice board(s). The default setting is almost always the best choice, because memory paragraph **D000** is reserved for add-on hardware like the **Starplus** AVP voice boards. However, there could be a memory address conflict between the voice board(s) and other add-on hardware (such as a tape drive controller, a network card, etc.) in the **D000** paragraph. If there is a conflict, and the **A000** paragraph is available (not used by other hardware, especially EGA/VGA cards), JP5 can be used to change the base memory address to the **A000** paragraph.

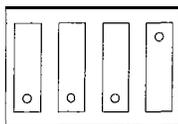
The voice boards will be shipped with Jumper JP5 removed, designating **D000** as the base memory setting. To change the base memory setting to **A000**, install Jumper JP5. *Starplus AVP always uses **D000** address. Do not change this setting.*

- DIP Switch SW1, Positions 1-3, are used to set the voice board's memory offset address. The selected address is relative to the base setting defined by Jumper JP5. The memory base address combined with the memory offset address determine the memory location for each voice board. Each voice board can occupy a 200K block of memory. There are sixteen possible voice board memory address settings. The board with the lowest address is designated as the first board in the system and will contain lines 1 through 4. The next lowest address is the second board in the system and will contain lines 5 through 8. A basic **Starplus** AVP system can contain up to 3 boards.

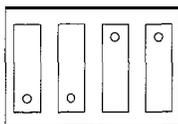
The basic rules for selecting memory addresses are as follows:

- Different Address For Each Voice Board ▪ In multiple board installations, you must use different addresses for each board. If you do not, **Starplus** AVP will either not recognize the number of boards in your system, or will not process calls correctly.
- Consecutive Addresses For All Voice Boards ▪ In multiple board installations, it is best to set the addresses of the boards so that all boards are grouped in consecutive addresses. there will be 200 bytes in between each board. The first board is at **D000**, the second at **D200**, the third at **D400**.
- Addresses Must Not Conflict With Other Hardware ▪ The address range(s) selected for your voice board(s) must not be the same as the memory address range(s) used by other hardware in the system. This includes other add on hardware.

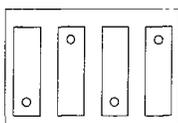
The following settings are provided as examples.



Switch 1 settings, board 1
Address D000



Switch 1 settings, board 2
Address D200



Switch 1 settings, board 3
Address D400

Multiple voice board installation, switch 1 settings

SOFTWARE INSTALLATION

When you upgrade your port capacity, you will need to update the software controller via a set of disks that came with your upgrade package.

To install the **Starplus AVP** upgrade program, insert the **Starplus AVP MASTER DISKETTE DISK I** into the floppy disk drive. Make sure that the root directory of C drive is displayed on your monitor:
c:\

1. Close the drive door and type:
A:INSTALL C: [ENTER]
A: identifies the drive where you have just inserted the **Starplus AVP MASTER DISKETTE DISK I**. C: designates the target drive onto which the **Starplus AVP** files will be copied.
2. Follow the directions on the screen. The system will prompt you to insert the diskettes. When this procedure is complete, which requires less than a minute, the system will display the following message:

Starplus AVP Installation complete.

3. Type **VODAVI [ENTER]**. This will return you to the Vodavi main menu. From there you can enter a 2 to go to the maintenance program to reconfigure the system. Refer to Section 620, Modules, Global Settings, Initiate Channel item to reconfigure the ports.

B. STORAGE CAPACITY

The hard drive is the storage device for the system. It provides storage for the voice prompts, system software, operating system, and user voice messages. The storage capacity of the hard disk is either 40, 80, or 200 MB, depending upon the storage time ordered.

There are four (4) stages to replacing a hard disk, they are:

- Backup the existing hard drive. Refer to Appendix G for backup procedures.
- Remove the existing hard drive.
- Install the new hard drive.
- Restore the backed up information to the new hard drive. Refer to Appendix G for restore procedures.

HARD DRIVE REPLACEMENT

1. Remove the enclosure.
2. Locate the ribbon cable and power connector on the hard disk and disconnect them. Be sure to make note of the polarity of the connector so it may be reconnected the same way.
3. Remove the four (4) screws securing the hard disk from the top and bottom of the enclosure, then slide the drive out.
4. The new hard disk will not come with a set of mounting brackets. Screw the brackets onto the drive.
5. Slide the drive into the enclosure, replace the screws and tighten them securely.
6. Connect the ribbon cable and power connector to the new drive and make sure the polarity is the same as before.
7. Put the cover on the enclosure and power up the system to make sure it boots.

SOFTWARE INSTALLATION

When you upgrade your hour capacity, you will need to update the software controller via a set of disks that came with your upgrade package.

To install the **Starplus** AVP upgrade program, insert the **Starplus AVP MASTER DISKETTE DISK I** into the floppy disk drive. Make sure that the root directory of C drive is displayed on your monitor:
c:\

1. Close the drive door and type:
A:INSTALL C: [ENTER]
A: identifies the drive where you have just inserted the **Starplus AVP MASTER DISKETTE DISK I**. C: designates the target drive onto which the **Starplus AVP** files will be copied.
2. Follow the directions on the screen. The system will prompt you to insert the diskettes. When this procedure is complete, which requires less than a minute, the system will display the following message:
Starplus AVP Installation complete.
3. Type **VODAVI [ENTER]**. This will return you to the Vodavi main menu. From there you can enter a 2 to go to the maintenance program to reconfigure the system.

C. PORT AND STORAGE UPGRADES

It is possible that an upgrade could consist of both a port and storage increase. In these cases you will receive the additional voice boards and hard drive and one set of software. This software contains the information for both the port and storage capacity.

1. Add the new voice board(s) as per the Port Upgrade topic. Do not follow the software procedure in that section.
2. Add the new hard drive as per the Storage Capacity topic. Do not follow the software procedure in that section.

3. Follow the software procedure described in this section.

SOFTWARE INSTALLATION

When you upgrade your port and hour capacity, you will need to update the software controller via a set of disks that came with your upgrade package.

To install the **Starplus** AVP upgrade program, insert the **Starplus** AVP MASTER DISKETTE DISK I into the floppy disk drive. Make sure that the root directory of C drive is displayed on your monitor:
c:\

1. Close the drive door and type:
A:INSTALL C: [ENTER]
A: identifies the drive where you have just inserted the **Starplus** AVP MASTER DISKETTE DISK I. C: designates the target drive onto which the **Starplus** AVP files will be copied. When this procedure is complete, which requires less than a minute, the system will display the following message:
2. Follow the directions on the screen. The system will prompt you to insert the diskettes. When this procedure is complete, which requires less than a minute, the system will display the **Starplus** AVP Installation complete.
3. Type **VODAVI** [ENTER]. This will return you to the Vodavi main menu. From there you can enter a 2 to go to the maintenance program to reconfigure the system.

600.6 PRE-INSTALLATION WORKSHEET

This section describes the procedure of gathering information to configure the **Starplus** AVP to integrate with non-**Starplus** phone systems. On the following pages is a worksheet that must be completed before you begin the actual installation of **Starplus** AVP. The worksheet serves the following purpose:

- It is used to gather the PBX feature commands needed to perform basic **Starplus** AVP routines like call transfers, call holds, and reconnects.

It is important to re-emphasize, one last time, that you should answer as many of the questions from the worksheet as you can and perform the tests that are detailed as best as you can.

- Phone System Hardware Requirements
- Make/Model of Phone System:
- Phone System Software Level:
- Number of Stations:
- Can you connect a regular Touch-Tone telephone (i.e., AT&T (2500 set) to the Phone System and use it as station?

PHONE SYSTEM FEATURE REQUIREMENTS:

Phone System must support DTMF (Touch-Tone signaling). Perform the following test:

Have an outside caller dial through to an extension. When the caller presses the keys on his' push button phone can the extension hear the DTMF tones?

Extensions must generate DTMF tones on all calls. For example:

- Electronic feature telephones?
- Single-line telephones?
- Attendant console?
- Internal calls?
- External calls?
- Transfer calls?
- Conference calls?

PHONE SYSTEM FEATURE REQUIREMENTS:

After a station-to-station call is connected, tones should not be interpreted as being internal Phone System commands. If so, adjustments must be made. Perform the following test:

- Call an outside phone number from a single line telephone. Once connected, press the #, *, and several other keys. The voice path should not be interrupted. Is this the case?

You must be able to hear a calling party on all the **Starplus** AVP lines. Perform the following test:

- Plug a single line telephone into one of the **Starplus** AVP lines. Have an outside caller ring the line. When you answer the call you should be able to hear the calling party. Repeat this procedure for each **Starplus** AVP line.

PHONE SYSTEM FEATURE REQUIREMENTS:

Can the Phone System transfer an incoming call to the **Starplus** AVP lines? Perform the following test:

- Send a call to a single line telephone set connected to one of the **Starplus** AVP lines. The phone should ring. When you answer the call you must be able to hear the outside caller.

Can a call be placed on hold on one of the **Starplus** AVP lines? Perform the following test:

- Send a call to a single line telephone set connected to one of the **Starplus** AVP lines. Answer the call and place it on hold. Then retrieve or pull back the call.

PHONE SYSTEM FEATURE REQUIREMENTS

Can your phone system transfer a call from an internal extension to another extension? Perform the following test:

- Send a call to a single line telephone set connected to one of the **Starplus** AVP lines. After answering the call, transfer it to another internal extension. The caller must hear a ringing tone. This tone could be a busy tone if the called party is off hook. Intercom calls and similar features are not allowed and must be turned off.
- If the called extension is busy or does not answer, you must be able to get the call back. Test to verify that this is the case.

PHONE SYSTEM FEATURE PROFILE:

(answer as many questions as possible)

Technical:

- What is the length of DTMF generated by the Phone System?
- Is the length of the Phone System DTMF tone user programmable?
If yes, what is the minimum/maximum length?
- What is the length of the Phone System flash hook?
Is it programmable?
- How many internal talk paths does the Phone System provide?

PHONE SYSTEM FEATURE PROFILE

Transfer Requirements:

- Does the Phone System allow direct incoming lines or trunks from the Central Office to be terminated directly to extensions or hunt groups, bypassing the attendant console?
- What types of hunt groups are available with the Phone System?
- If all **Starplus** AVP lines are busy, can the phone system be programmed to send the overflow traffic to another extension or group such as the attendant or operator console?
- How does an extension transfer a call to the operator? (i.e., Flash Hook *7)
- How does the operator transfer a call to a station? (i.e., Flash Hook *7)
- Can Extensions Call Forward Busy?

- Can extensions Call Forward on Ring No Answer?
- Can extensions Call Forward all calls?
- Can extensions Call Forward to a speed number?
- Can extensions Call Forward to an outside number?
- Can the operator Call Forward to an extension that does not answer or is busy?

INTEGRATION INFORMATION:

- Does the Phone System provide called party identification on a forwarded call?
- Does the Phone System pass DID digits received from the Central Office to Starplus AVP?

HANG-UP INFORMATION:

- On an extension call, if one person hangs up and the other does not, what will be heard by the person still on the phone?
- Does the Phone System support industry standard ring?(2 seconds on, 4 seconds off)
- Is there a different ring for internal or external calls?
- Is the ring programmable?If not, what are the cadences?(i.e., 3 seconds on, 5 seconds off)
- Does the Phone System use an industry standard busy signal? (i.e., half second on, half second off)

MESSAGE WAITING INFORMATION:

- Does the Phone System have a feature to turn on message waiting at a specific station?
- Does the Phone System have a feature to turn off message waiting at a specific station?

Other sections that apply to interfacing non-Starplus phone systems to the AVP are:

- Appendix F CPC

SECTION 600

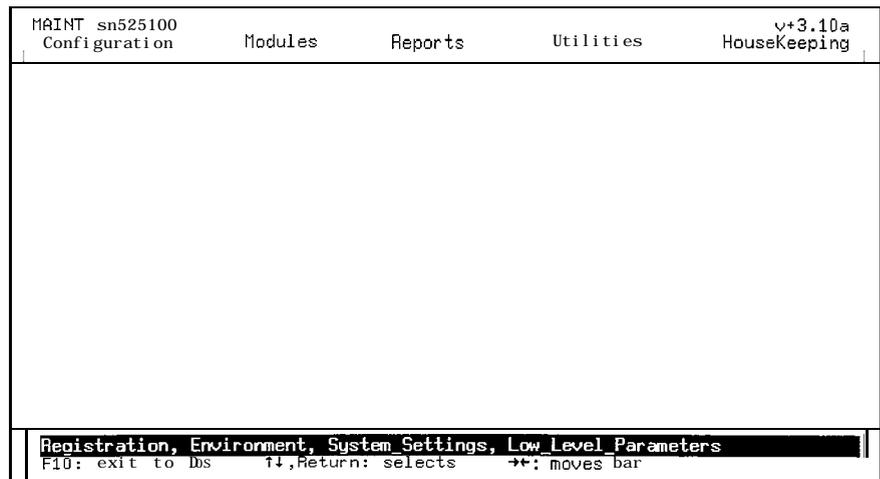
DATABASE ADMINISTRATION

600.1 INTRODUCTION

The database administration program for the Starplus AVP allows the user to add, delete, or modify all the parameters in the AVP system. Other than the changes users are allowed to make to their personal settings, all other administration changes must be done through database administration. On a 286 machine, the system must be taken off-line to enter the database administration program. On a 386 machine, the multi-tasker can be used to enter the administration program while the system continues to process calls.

The main menu items in the administration program are:

- . CONFIGURATION
- . MODULES
- . REPORTS
- . UTILITIES
- . HOUSEKEEPING



Each of these items is discussed in its' own section. Each menu item has a number of sub-items that control various functions.

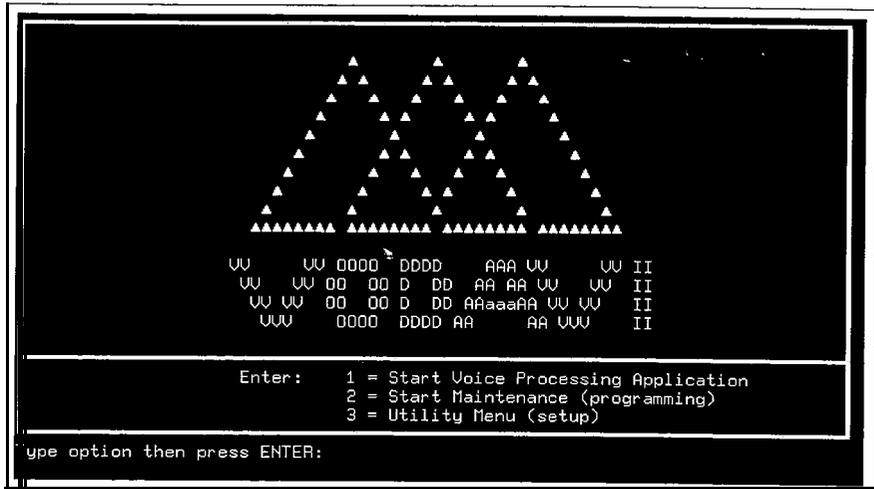
The Multi-Tasking system is described in Appendix D of this manual. All the procedures in this section are for the Non Multi-Tasking systems.

600.2 OPERATION

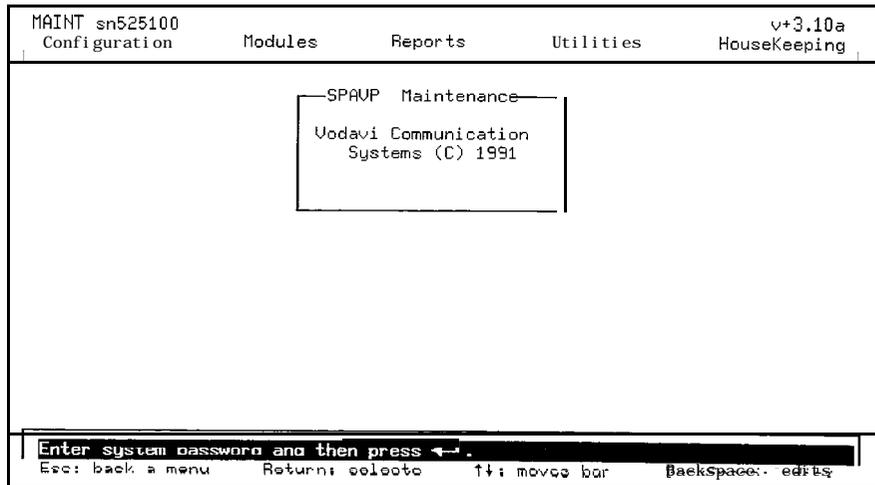
A. NON MULTI-TASKING SYSTEM

The database administration can be entered by the following methods:

When the system is powered up the Starplus AVP loads the voice processing program. To exit this press [SHIFT F10] at the same time. The Vodavi menu will be presented. This menu must be on the screen to enter the administration program.



1. Enter [2] to load the administration program and press [Enter].
2. Enter the password. (The default is the ENTER key.)



You may now move through the menu items using the L/R arrow keys.

TO EXIT:

You must be at one of the five main menu items to exit the database administration. Once at any one of these items press [F10]. You will be returned to the Vodavi Menu. Select [1] to place the AVP back on line.

B. MENU ITEMS

The first thing to remember, is that a menu is simply a list of choices organized in logical and related groups. When you enter the **Starplus** AVP program you will be viewing its highest level menu grouping. The **Starplus** AVP Main Menu is composed of 5 major submenus:

- Configuration, is used to set the various parameters concerned with the interface between the phone system and the PC. These include, for example, call transfer sequences, operator extension number, and hang-up detection.
- Modules, includes the various functions, applications and subsystems that can be run.
- Reports, provides complete administrative and management reports on the operation of the system so that you know exactly how the system is being used.
- Utilities, are special functions for setting screen colors, performing remote diagnostics, and transferring files. This section also includes a Recording Studio that is used to create and edit menu prompts and other voice files.
- Housekeeping, is used for disk management. **Starplus** AVP applications are disk intensive and voice files can be very large. Proper management of the system requires that files be removed or backed-up on a regular basis.

Each of these submenus, in turn, is composed of other **sub-**menus. These **submenus** are detailed in later chapters.

Generally, as you configure the **Starplus** AVP system, you will work from left to right and from the top of each sub menu to the bottom. In other words, you will work with Configuration before Modules, Modules before Reports, Reports before Utilities and Utilities before Housekeeping.

*Some items are already configured upon loading a **Starplus** phone system from the Utility menu. Please refer to Section 500, system defaults, if you have loaded phone settings to find out what has been loaded.*

Starplus AVP HELP SCREENS

You have probably already noticed that as you moved the highlight bar, a brief description of each selected option appears at the bottom of the screen. In addition, help screens are also provided as part of all data entry screens. The help screens list specific instructions whenever you are required to make some kind of field entry or parameter setting.

Also notice at the very bottom of the screen, in reverse video, there is an additional listing of keyboard commands followed by a brief description of their associated action.

Take a few minutes now to become familiar with the Main menu screen. Read the help messages and use the various keys to move around the menu. Move back to the **VODAVI** main menu and then re-enter the **Starplus** AVP menu.

C. KEYBOARD COMMANDS

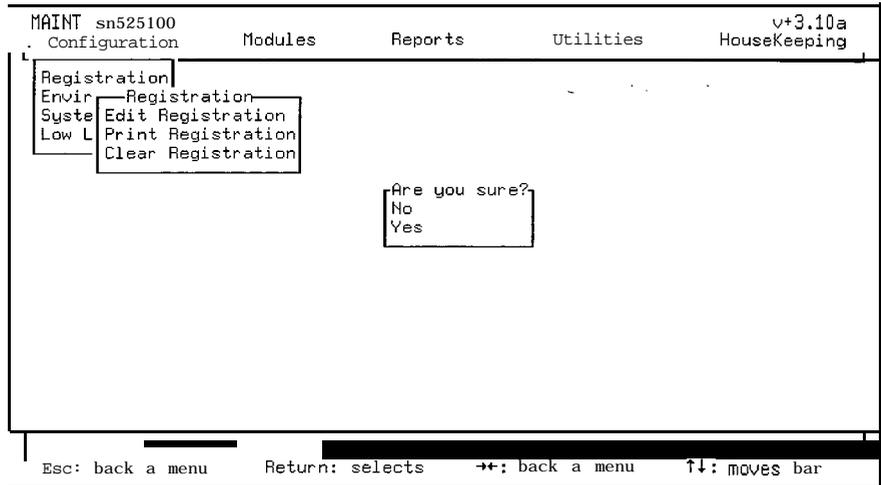
The **Starplus** AVP database administration has a rather large system of menus in it. As you move through each menu item, the following commands are used:

- [ARROW KEYS] - These keys move you through the options within a menu. As you move up or down, the highlight bar highlights a different option. Once in an option these keys also move you through all the items in the option.
- [ENTER] - This key selects an item when it is highlighted.
- ESCAPE [ESC] - This backs you out one menu level. In certain fields this will save the information then-exit the field.
- [F9] - This is the "save" key for some fields. Some information is not saved if the [ESC] key is pressed. In these cases the F9 key is used.

As you move through the menus and their items, a brief description is shown at the bottom of the screen. This, combined with entry instructions on each menu item will be displayed to move you through the program and provide specific entry commands. Generally, you will work from left to right when configuring the **Starplus** AVP system. Be sure that the Number Lock key is off on the keyboard.

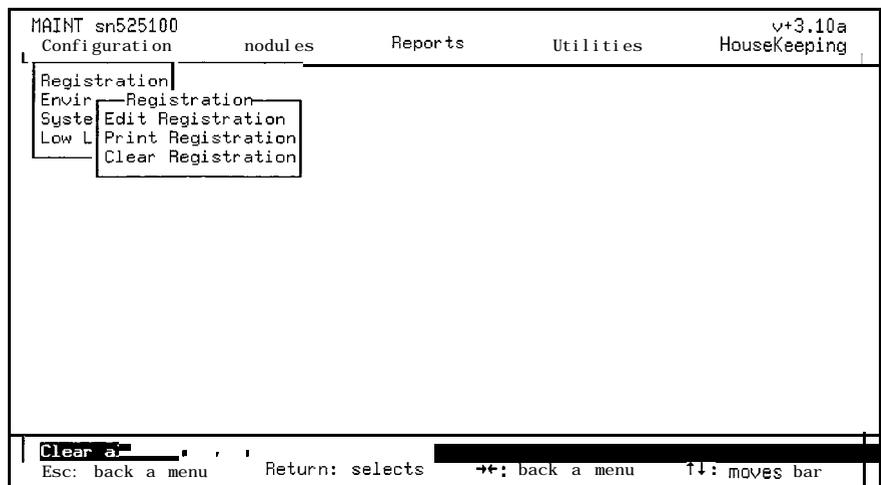
You are now ready to print the registration form. Make sure that the printer is on-line and loaded with paper. This is an optional step, you do not have to print the registration form.

1. Select the Print Registration item from the registration menu, After you have selected the Print function, Starplus AVP will ask, "Are You Sure". Use the-[Up or Down Arrow] Keys to select "Y" or "N" and press [ENTER].



CLEAR REGISTRATION

This screen is used to erase all of the entries listed and saved in the Edit Registration screen. Once this screen is selected your data will automatically be erased. There is no second chance to change your mind.



B. PHONE SYSTEM MENU

The Phone System sub menu contains various settings and parameters that need to be properly configured before Starplus AVP can interact with your phone system. Starplus AVP includes default configurations for the Starplus phone systems. The default files contain setting information for the following phone system features:

- Dialing Prefixes
- Feature Prefixes
- Hang-Up Detection

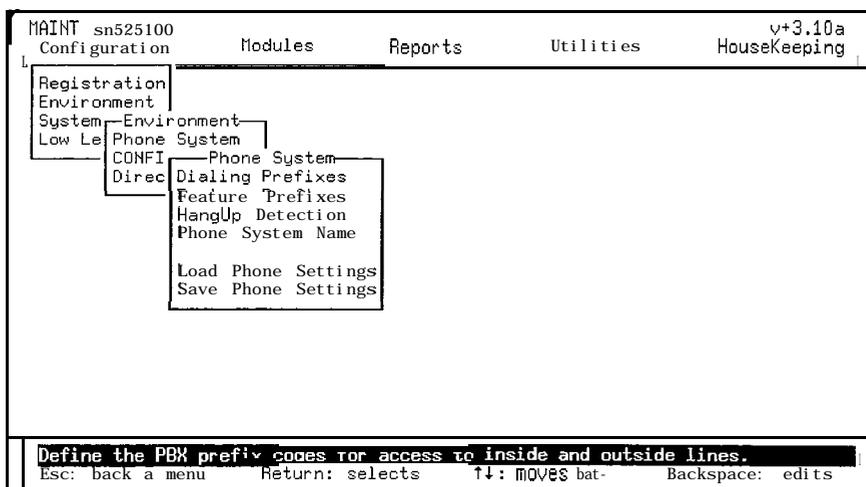
This is done in conjunction with the Utility menu procedure. Please follow section 500, Initial set up for the entire procedure.

To select a phone system configuration:

1. Highlight the Load Phone System sub menu and press [ENTER].

A file, with descriptively recognizable names, will be listed.

2. Highlight either, 2448EX.pbx, 96EX.pbx, 1428.pbx, 2856.pbx, or SPX.pbx and press the [ENTER] key.



You will be immediately brought back to the previous menu and **Starplus** AVP will be updated with the selected information. To select a different configuration file, simply follow the procedure described above. Setting information from the second selection will replace the first.

If you are connecting the **Starplus** AVP to a non-**Starplus** system you will have to program the dialing prefixes, feature prefixes, and hang up detection in the phone system menu.

C. DIALING PREFIXES

Dialing prefixes are numbers that are used to access different types of phone lines. **Starplus** AVP uses these numbers to perform the same call access routines.

It is common on many **PBXs** to dial the number "9" in order to access an outside phone number. Some **PBXs** might require the number "8" to dial a local call. On many phone systems a pause is needed after the dialing prefix in order to allow for a connect time. Use the "," to denote a pause. The pause is currently set at .20 second (which can be adjusted from Low Level). For example, "9," might instruct the system to access a long distance line and then wait for .20 second before continuing.

1. Highlight dialing prefixes and press the [ENTER] key.

- Transfer Outside: This is a flash hook or tone command that transfers a call to an outside number.
- Set Message Waiting: This command turns the message waiting light "On" for any extension that has a message waiting light. Note that not all phone systems support this feature. If your system does have message waiting indication, it must be accessible through DTMF. In other words, by dialing a sequence of numbers from a single line telephone, you can turn the light on or off. If your phone system does not have message waiting, leave this field blank
- Clear message waiting: Enter the sequence that can turn a message waiting light off.

E. HANG UP DETECTION

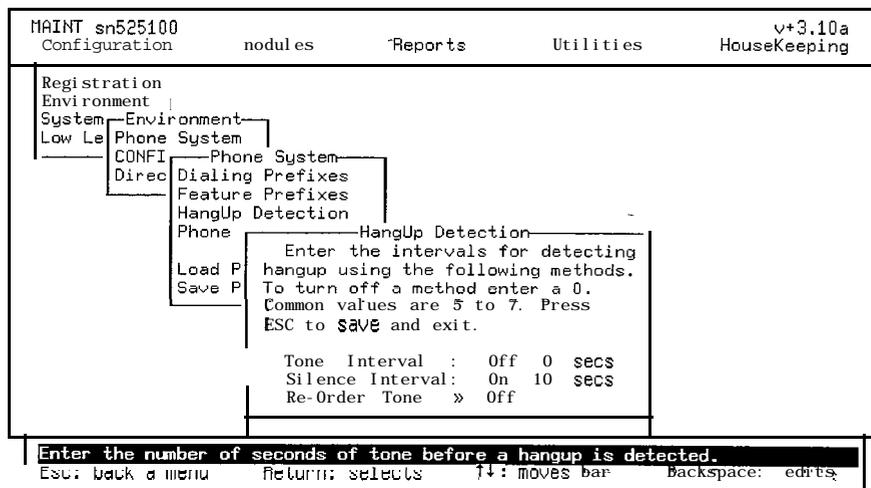
Hang-up Detection is extremely important because it allows Starplus AVP to detect both on-hook and off-hook phone states. Unless it is properly set Starplus AVP will be unable to detect a hang-up condition. Starplus AVP supports four types of hang-up detection:

- Loop Current Drop
- Tone Interval
- Silence Interval
- Re-Order Tone

Starplus AVP's default setting is silence interval to match the Starplus systems' default operation. If you loaded a Starplus phone system from the Vodavi menu, you do not need to change this item.

- Loop Current Drop ▪ This is the most reliable but is only available if the lines connected to the Starplus AVP support loop current drop.
- Tone Interval ▪ must be selected if your phone system listens for a tone to detect a disconnect. To make this determination, have somebody call in and then hang-up after you answer. Stay on the line and listen for a dial tone. If there is a tone you may assume that your phone system uses a tone interval as its disconnect method.
- Silence Interval ▪ must be selected if your phone system listens for a silence, rather than a tone, as a means of detecting a disconnect. Use the same procedure defined above. If there is silence after the caller has hung-up, you may assume that your phone system uses a silence interval as its disconnect method.
- Re-Order Tone ▪ must be selected if there is a cadence of tone and silence after a disconnect. If your phone system supports Re-Order Tone, press Enter to define the specific value of each re-order parameter.

After determining the appropriate disconnect method, select Hang-up Detection in the Phone System sub menu. The Set Hang-up Type sub menu will be presented. Select Manually to display the Manual Hang-up Detection screen.



Depending on your switch's disconnect method, specify a number between zero and ninety-nine that represents the time in seconds for the detection interval. This interval defines the period of time that will elapse before Starplus AVP will disconnect or hang-up a call. For example, entering 5 for the tone interval instructs Starplus AVP to listen for a steady tone that is five seconds long and upon detection to treat the call as a disconnect.

If the interval is set too short, any pause could be interpreted as silence or tone and signal a false Hang-up. If the interval is too long, the system can be tied up longer than is necessary. The recommended interval for both tone and silence is 5 to 7 seconds.

1. To save the new settings and return to the previous menu and press [ENTER].

The Starplus AVP uses Tone and Silence interval to determine hang up when integrated with a Starplus phone system.

F. AUTOMATIC DETECTION

If you wish you can have **Starplus** AVP determine the appropriate settings for hang-up detection. Select Automatic from the Hang-up Type sub menu and the Automatic Hang-up Detection screen will be presented.

```

MAINT sn525100          v+3.10a
Configuration          Modules  Reports  Utilities  HouseKeeping
-----
                                Hangup Detection
Status: Waiting on ring      1. Ring in on any line
Line: 0                    2. Hangup and press F1 or F2 to start
Duration: 0 (sec)
Loop Current: No 0 (sec)      Reorder      Silence: 0 (msec)
Silence: 0 (sec)             Non-Silence: 0 (msec)
Non-Silence: 0 (sec)         -Accuracy: 0 (msec)
                                Repeat: 0
<ESC>-Quit  F1-Short Test  F2-Long Test  F3-Report  F10-Save

Make a phone call to check hangup type for your system.
Esc: back a menu  Return: selects  f↓: moves bar  BackSpace: edits
  
```

*This item is only used when connecting the **Starplus** AVP to a non **Starplus** phone system.*

- Using a telephone, dial the extension of the line connected to the **Starplus** AVP system. Hang-up the phone and select either the Short Test (concluded after 60 seconds) or the Long Test (concluded by pressing) to begin the procedure. **Starplus** AVP will time the tone and/or silence intervals. After the test is completed press for an analysis of the findings.
- Press [F10] to save the analysis and transfer the findings to the Manual Hang-up Detection screen.

Once the above settings and parameters are entered, save them in a special configuration file for future use. In the event the file becomes corrupted, the correct configuration parameters can be quickly restored.

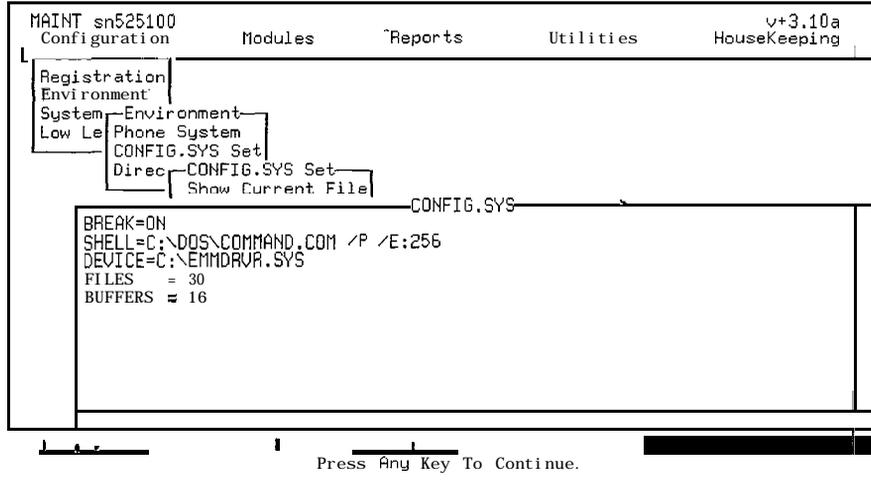
- Select Save Phone Settings and enter a descriptively recognizable filename up to eight characters long. **Starplus** AVP automatically attaches a .PBX extension to the file and converts any spaces to underscores. For example, a Northern Telecom SL1 user might describe his file as NTSL1.PBX.
- Press [ENTER] to save or [ESC] to Abort.

G. CONFIG.SYS FILE

After you have completed the registration and phone system work, check the contents of the DOS file called Config.Sys. This file is automatically loaded into memory when your computer is turned on or rebooted. Commands in the file pass information to the DOS operating system that limit the number of files that can be open at one time.

SHOW CURRENT FILE

1. To determine the current Config.Sys file configuration move the highlight bar to Show Current File. If it already exists it should read:



Files = 30

Buffers = 16 (These settings may be different depending upon port size)

Everytime you enter the maintenance program, item [2] from the Vodavi menu, the system checks this file to make sure it is correct. If it is not the system will prompt you to run the append settings function to correct it.

2. If it is set correctly, simply press [ESC] to exit the menu.

APPEND SETTINGS

If the file does not exist, or if it needs to be modified, select Append Settings. Press [ENTER] and the file will be correctly configured.

ERASE

If you wish to erase the Config.Sys file simply press [Enter]. The file will be automatically erased. It will be recreated the next time the system is turned on or rebooted.

DIRECTORIES

This section allows you to place the Starplus AVP files in directories other than the defaults and to define a path so the program can locate them. It is recommended that these settings not be changed!

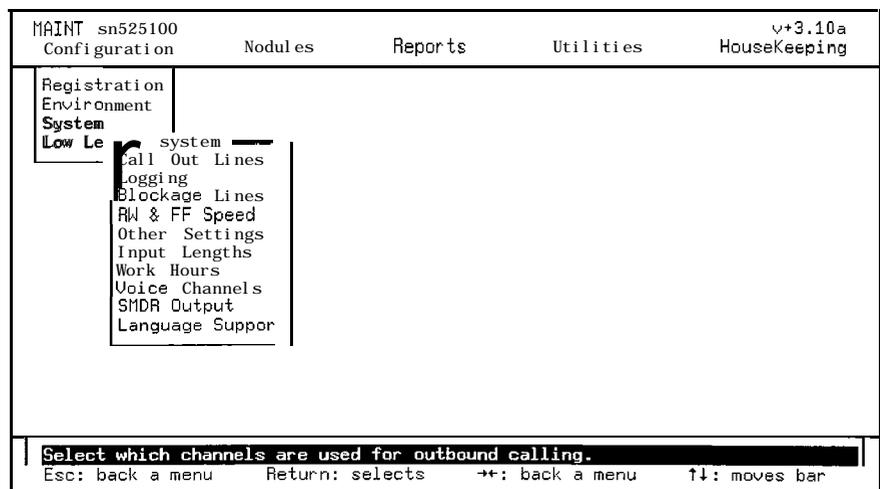
610.2 SYSTEM

The System menu should not be confused with the Phone System menu. The Phone System menu defines the interface between Starplus AVP and your specific type of phone system. In the System menu, you define the environment within which the phone system operates. The System menu includes the following submenus:

- Call Out Lines
- Logging
- Blockage Lines
- RR & FF Speed
- Other Settings
- Input Lengths
- Work Hours

A. CALL OUT LINES

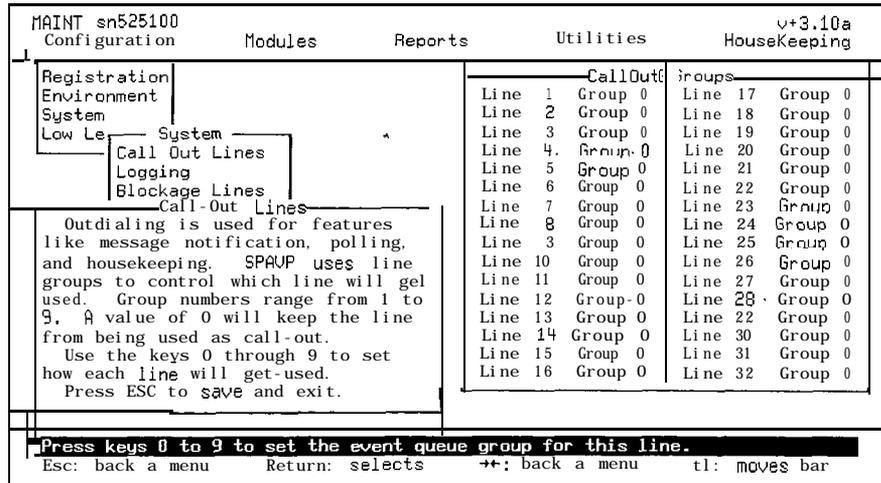
This section of Starplus AVP defines which lines the program can



select for outbound calls. Outbound dialing is used for message notification and polling. A line that has outbound dialing capability, can still handle incoming calls.

You can designate as many call-out lines as you wish. In most cases, however, one or two lines are sufficient. Make sure these lines have not been dial restricted from the PBX and that they can carry outbound calls. Generally it is a good idea to select the last line(s) connected to the board. This reduces the probability of a conflict that could arise when in incoming call arrives at the same moment it is needed for an outbound call (glare).

The screen and all its' entries are shown below.

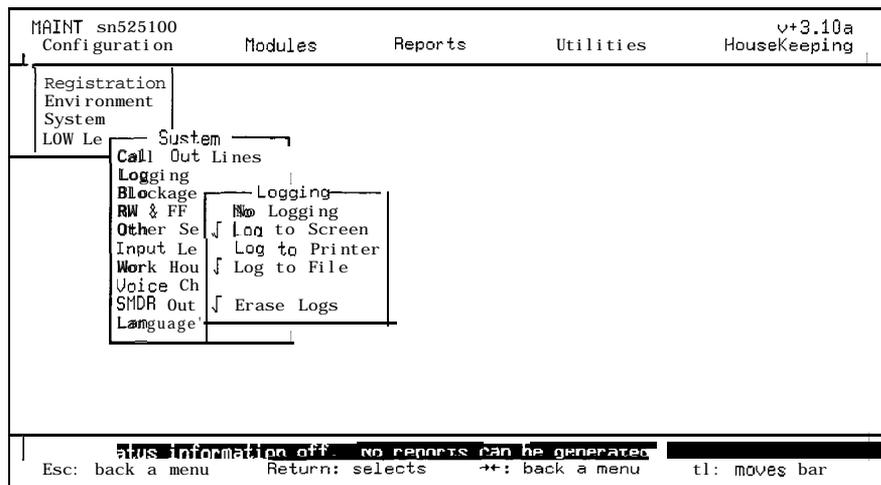


1. Move the highlight bar to the channel you want and enter the number [1-9] to assign the channel.
2. Press [ESC] to save your selections and exit to the previous menu.

B. LOGGING

Starplus AVP provides detailed information about how the system is operating. This information is formatted into a variety of reports that help you measure system performance like port traffic, mailbox usage, and blockage studies. The reports are generated in the Reports section of Starplus AVP.

Logging is used to direct the raw data to various devices that include the printer, screen, or disk drive. The raw data is a chronological history of all events that occur on the system. This data is quite useful in itself since it displays system performance in real time.



The information includes time, date, channel, module, and a description of the event. The column labeled "(1)" in the header is a condition code that is used internally by Starplus AVP and can be ignored.

1. To turn logging "on" move the highlight bar to the device that you want to direct the data to, and press [ENTER]. The Enter key acts like a toggle. Pressing Enter a second time turns the device "off". A check mark next to a device indicates that it is turned "on".

Note that in order to generate reports, you **MUST** direct the logging output to the File. We recommend that you do this unless disk space is in critically short supply. Output to the disk is stored in a file called, SPXXXXXX.LOG. Where XXXXXX is the date code.

2. We also recommend that Log To Screen be activated until the system is running smoothly. Log to the printer directs the output to LPT1:, the parallel port on the PC.
3. From time to time, you need to erase the log file in order to free up disk space. Select Erase Log File option. This enables the system to delete the log files on a monthly basis. This frees up disk space.
4. Press [ESC] to save the settings and return to the System Menu,

C. BLOCKAGE GROUPS

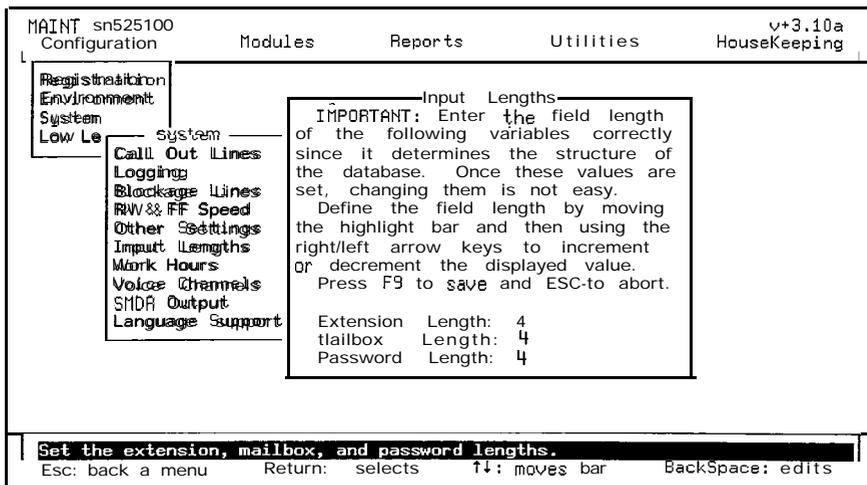
Starplus AVP can monitor 8 blockage groups simultaneously. You define the composition of each blockage group by specifying the line or port number to be included in the blockage group. Blockage groups can be modified and redefined at any time. Blockage occurs when all lines in a group are active (busy). In addition, to blockage reports, a run-time blockage screen shows blockage information in real-time.

MAINT sn525100		v+3.10a	
Configuration	Modules	Reports	HouseKeeping
Registration		Blockage	Groups
Environment		Line 1 Group 1	Line 17 Group 0
System		Line 2 Group 1	Line 18 Group 0
Low Level		Line 3 Group 1	Line 19 Group 0
	System	Line 4 Group 1	Line 20 Group 0
	Call Out Lines	Line 5 Group 0	Line 21 Group 0
	Logging	Line 6 Group 0	Line 22 Group 0
	Blockage Lines	Line 7 Group 0	Line 23 Group 0
	Blockage Lines	Line 8 Group 0	Line 24 Group 0
SPAUP can monitor 8 blockage groups at a time. For each line on the right, assign a blockage group to it by pressing number keys 0 - 8. When SPAUP is running, press F9 to display realtime blockage info. Press ESC to save and exit.		Line 9 Group 0	Line 25 Group 0
		Line 10 Group 0	Line 26 Group 0
		Line 11 Group 0	Line 27 Group 0
		Line 12 Group 0	Line 28 Group 0
		Line 13 Group 0	Line 29 Group 0
		Line 14 Group 0	Line 30 Group 0
		Line 15 Group 0	Line 31 Group 0
		Line 16 Group 0	Line 32 Group 0
Press keys 0 to 8 to represent the blockage group for this line. Esc: back a menu Return: selects →: back a menu ↑↓: moves bar			

To define or modify blockage groups, use the [Up or Down arrow] keys to highlight a specific line number. When a particular line has been highlighted, use the number keys to assign a value of 0 to 8. All lines with the same numeric assignment will be considered part of the same blockage group. Number 0 designates a line as not belonging to any particular blockage group.

F. INPUT LENGTHS

In this section you set the number of characters for extensions, mailboxes, and passwords.



The character string lengths define structures that Starplus AVP needs to create certain databases. Starplus AVP also uses this information when it “listens” for caller input.

Although these settings can be changed at a later time, it may require redefining many parameters. Therefore, it is important that it be entered correctly the first time.

If you have loaded a Starplus phone system these settings have been configured already.

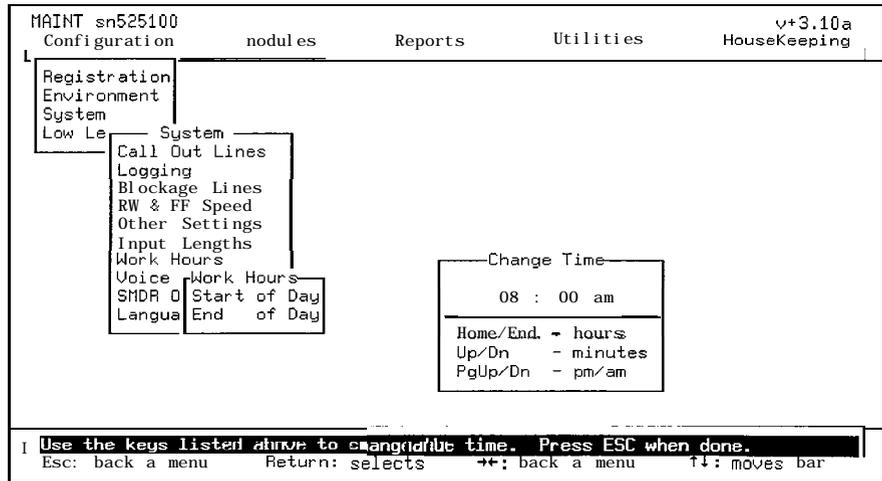
For example, if you have 3 digit extension numbers, then enter 3 for the length. Although, the length of the mail box can be different than the extension, we recommend that they be the same. The system is more user friendly when the mailbox and extension number are the same.

- Extension Length: is the number of digits for your extensions with a maximum length of 9 characters.
- Mailbox Length: is the number of digits for your mail boxes with a maximum length of 7 characters. If possible, set this length the same as the extension.
- Password: is the security code that a system user enters to access features like message review, notification instructions, and forwarding assignments. We recommend 4 digit passwords although up to 9 digits is allowed.

When you have completed this section press [F9] to save your entries. Press [ESC] again to exit to the Configuration menu.

G. WORK HOURS .

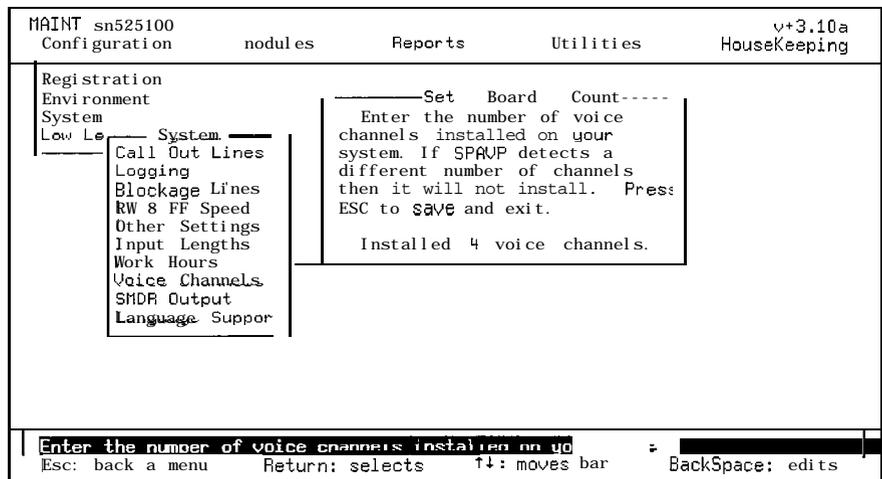
This entry identifies the start time and closing time of your office. Many Starplus AVP features are time-of-day sensitive. For example, it is possible to create a menu that plays a specific day-time greeting between the hours of 8:00 am and 5:00 p.m. and a night-time or off-hours greeting for the rest of the day. In addition, a mailbox can be programmed to notify its owner at a specific extension during the day and at an outside number, perhaps a residential number, on the weekends.



1. To set the time highlight Work Hours in the System sub menu and press [ENTER]. Then, select either Start of Day or End of Day. You will need to set both, but you don't have to do it in a certain order.
2. To change the hours use the [Home and End] keys. To change the minutes use the [Up Arrow and the Down Arrow] keys. To change AM/P.M. use the [Page Up and the Page Down] keys.

H. VOICE CHANNELS

This item shows the amount of voice channels installed in the system. It should always match the number of ports installed in your system.



I. LANGUAGE

This parameter is not supported at this time.

DO NOT CHANGE THE LANGUAGE AS THIS WILL RESULT IN ERROR MESSAGES ON YOUR RUNTIME SCREEN.

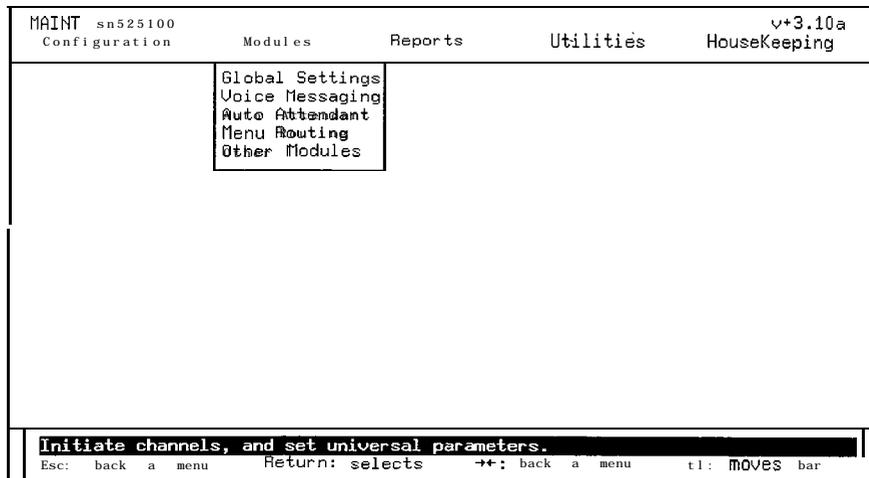
610.3 LOW LEVEL

DO NOT ATTEMPT ENTRY TO THIS MENU UNLESS YOU HAVE BEEN AUTHORIZED TO DO SO BY A TECHNICAL SUPPORT PERSON. THESE PARAMETERS INVOLVE DETAILED VOICE BOARD AND PHONE SYSTEM FUNCTIONS THAT HAVE BEEN ALREADY SET. THEY ARE USED TO FINE TUNE THE SYSTEM.

SECTION 620 MODULES

620.1 INTRODUCTION

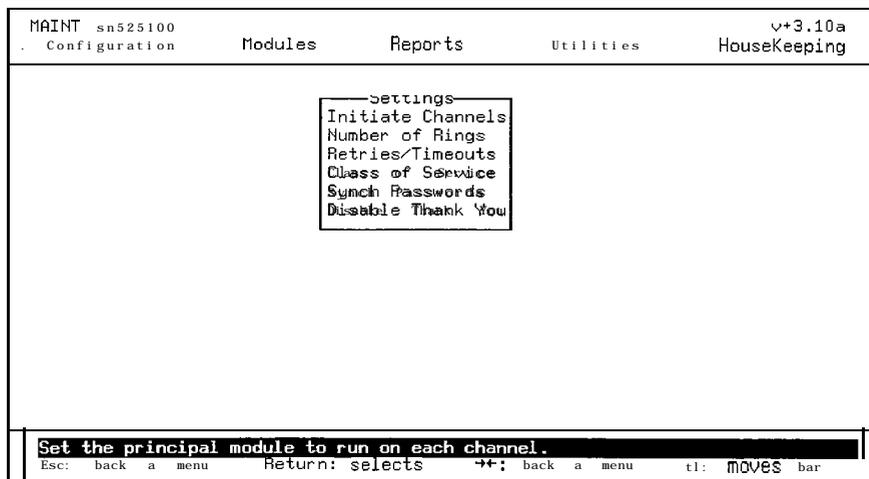
Modules are the telephone automation applications that the Starplus AVP runs. This chapter will discuss how to configure and install each module.



Once the modules menu is pulled down, Global Settings will be highlighted. The other module items, Voice Messaging, Auto Attendant, and Menu Routing are also presented. Each of these modules are discussed individually in this chapter.

620.2 GLOBAL SETTINGS

All setting and parameter information defined in the Global Settings sub menu are automatically applied to each of your AVP modules. Rather than duplicate information for each module, a single entry updates all modules as required.



A. INITIATE CHANNELS

Telephone automation applications are called modules. In this sub menu you assign a specific module to each voice channel or line. When a caller dials that line, AVP will run the module that has been assigned to it. It is important to understand that each line is independent and can be programmed to provide a unique response. This allows multiple telephone applications to be run on the same Starplus AVP system. To do this, you **must**:

- Select a particular voice channel or line.
- Select a module that will be installed on the line.
- Select a parameter, if any, that defines how the installed module will function.

This procedure must be done for each voice channel or line. By default, all lines are configured as voice messaging with the request mailbox parameter enabled. If a line is left undefined the Starplus AVP will not know how to answer the call and the call will be ignored.

MAINT sn525100 Configuration	modules	Reports	Utilities	v+3.10a HouseKeeping																					
<table border="1"> <thead> <tr> <th>Daytime Hours</th> <th>modules</th> <th>to Answer</th> </tr> <tr> <th>Line</th> <th>Module</th> <th>Parameter</th> </tr> </thead> <tbody> <tr> <td>Default</td> <td>Voice Messaging</td> <td></td> </tr> <tr> <td>1</td> <td>Voice Messaging</td> <td></td> </tr> <tr> <td>2</td> <td>Voice Messaging</td> <td></td> </tr> <tr> <td>3</td> <td>Voice Messaging</td> <td></td> </tr> <tr> <td>4</td> <td>Voice Messaging</td> <td></td> </tr> </tbody> </table>					Daytime Hours	modules	to Answer	Line	Module	Parameter	Default	Voice Messaging		1	Voice Messaging		2	Voice Messaging		3	Voice Messaging		4	Voice Messaging	
Daytime Hours	modules	to Answer																							
Line	Module	Parameter																							
Default	Voice Messaging																								
1	Voice Messaging																								
2	Voice Messaging																								
3	Voice Messaging																								
4	Voice Messaging																								
<p>Press <enter> to change what will run on this channel. Esc: back a menu Return: selects ++: back a menu ↑↓: moves bar</p>																									

1. Select Initiate Channels from the Global settings sub menu and the Timed Settings sub menu will be presented.

The Starplus AVP allows you to configure the voice channels by specific day and/or time settings. Using this feature, you will be able to selectively define how each channel performs depending on the time of day and the day of the week. The settings are defined as follows:

- DAYTIME - Normal office hours as defined by the Start of day and End of day in the Configuration menu System sub menu. This setting is used as a default in the event any other timed setting is left undefined.
- EVENINGS - The remaining portion of the day not defined above.
- WEEKENDS - The period from the close of business day on Friday to the beginning of the business day on Monday.

- SPECIAL - Any day that you specify as a holiday or special event.
 - COPY DAYTIME - Allows you to copy the daytime setting to any other time period. Use this function to give you a starting point on **which to** build the next timed setting.
2. Select a particular day/time setting and press the [ENTER] key. The initiate channels data screen will be presented.

The menu is divided into three separate sections. These sections are the line section, the module section, and the parameter section.

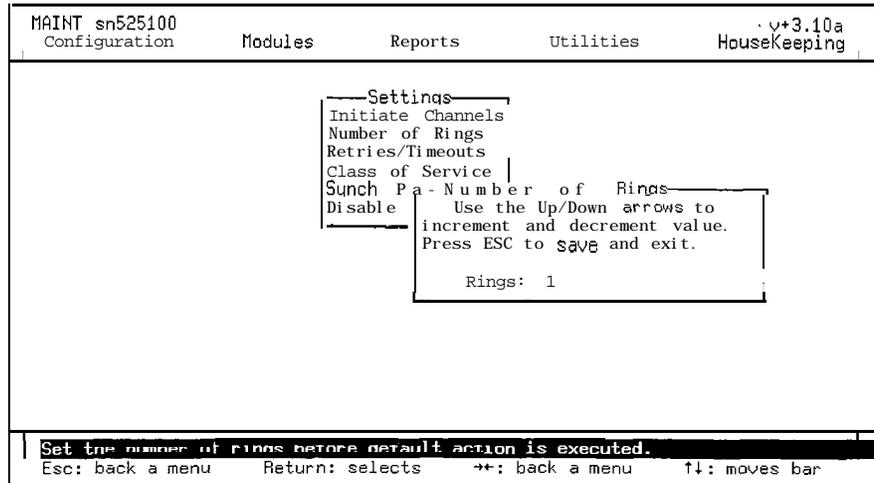
- Line refers to a particular port or channel. The screen will automatically display the total number of lines that have been installed in your system. The default line is located at the top of the screen. Starplus AVP will automatically run the module displayed on the default line on any line that is left undefined. Use the up/down arrow keys to move between the lines. Remember that default is a line option, this is where the highlight bar will be when first entering this data area.
 - Module refers to the type of application (VM, Auto Att, Menu route) that will be installed on the line. Only a single module may be installed on a line. Once on the desired line press the [ENTER] key. This will display the module inset screen with the module options available. Highlight the desired module and press the [ENTER] key. This will assign the module to that line and also bring up the parameter inset.
 - Parameters define how calls will be processed within the context of each module. For example, Menu Routing parameters include a selection of voice menus. Voice Messaging and Auto Attendant parameters include user defined call transfer procedures. Follow the screen instructions as you are prompted for additional parameter information. The following describes the parameter settings for the primary call processing modules:
 - MENU ROUTING - Prompts you for the name of the menu to run. Select a menu from the inset listing. The menus listed were created in the Menu Routing sub menu.
 - AUTO ATTENDANT - Can perform either a direct transfer to an extension or a supervised transfer by asking the caller to enter the extension number. For a direct transfer, you need to select the extension number from the inset list.
 - VOICE MESSAGING - Can either route a call directly to a mailbox, or can ask the caller to enter a mailbox number. For a direct transfer, you need to select the mailbox number from the inset list.
3. Repeat the procedures detailed above to define the primary module for each line and the parameters for each module. If you make a mistake or wish to cancel a module on a line, simply highlight the Clear Line in the module inset listing to delete an entry.

B. NUMBER OF RINGS

4. Press the [ESC] key to exit and save the information

This setting determines the number of rings that will sound on a call transfer or message notification attempt. After the designated number of rings, Starplus AVP assumes the called party is unavailable. On a no answer the system can perform a number of default actions like transferring the caller to a mailbox, or another extension, or playing a prerecorded menu. To access this function, select the Number of Rings screen from the Settings sub menu.

1. Use the up/down arrow keys to increase or decrease the



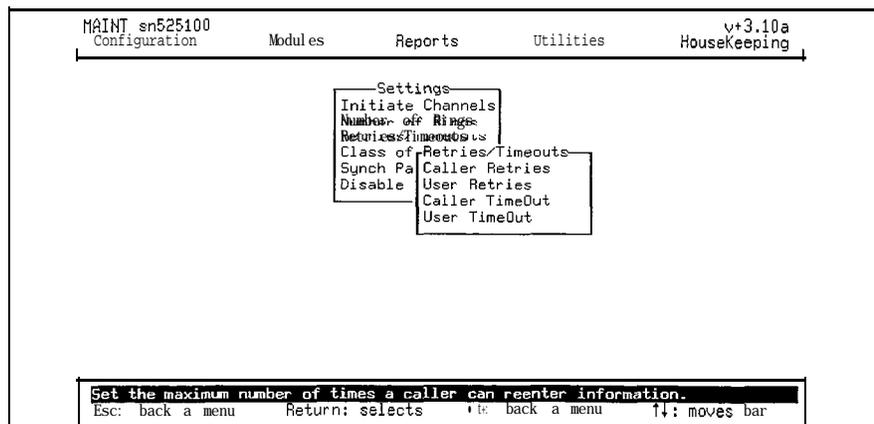
number of rings that will be heard.

Values can be set from 0-9. If the setting is set to 0, users will not be notified of pending calls or messages. The default value is four (4) rings.

2. Press the [ESC] key to save and exit the menu.

C. RETRIES AND TIME-OUTS

This menu allows you to define the maximum number of invalid entries and maximum length of time that a caller will have to make each entry. If these values are exceeded, Starplus AVP will take appropriate action. All these entry values are changed by using the up/down arrow keys to increase or decrease the values.



- **CALLER RETRIES** ▪ This is the maximum number of times a caller will be able to make an invalid entry when prompted by the system for some type of touch tone input. Values are from 0-9. If set to 0, the number of retries is unlimited. The default value is 3.
An example of this would be if a caller dials a mailbox that does not exist. After three attempts the system takes the following action, "Thank you for calling. Please call an account supervisor for assistance, goodbye" and the caller is disconnected.
- **USER RETRIES** ▪ This is the maximum number of times a system user (somebody with a mailbox) will be able to make an invalid entry when prompted by the system for some type of touch tone input. Values are from 0-9. If set to 0, the number of retries is unlimited. The default value is 3.
- **CALLER TIME-OUT** ▪ This is the maximum amount of time the system will wait for a caller to make a keypad entry. If the time out limit is exceeded, the system will send the call to one of three places, a default mailbox, or a default extension, or a time out instruction if the time out occurred while the caller was in a menu. The time-out values can be from 1 to 19 seconds.
THIS TIME OUT LENGTH MUST BE SET LESS THAN THE SILENCE INTERVAL IN HANG UP DETECTION IN ORDER FOR IT TO FUNCTION PROPERLY!
- **USER TIME-OUT** ▪ This is the maximum amount of time the system will wait for a user to make a keypad entry. The time-out values can be from 1 to 19 seconds.

D. CLASS OF SERVICE

The **Starplus** AVP allows you to create classes of service that can be associated with individual mailboxes and extensions. Each class of service contains different service features. By assigning a class of service to an extension or mailbox, it is possible to change parameters for a group of mailboxes or extensions in a class without changing each individually.

The **Starplus** AVP comes pre-defined with five (5) class of services. Each COS allows certain features and timers. The COS 04 is for assigning to distribution list numbers. This COS should not be used by normal mailboxes in the system. The settings and their parameters are as follows:

- **COS 00** ▪ user type= 9, maximum message length= 300 seconds, maximum message count= 75, maximum retention= 15 days, use message waiting lamps, and access to distribution lists.
- **COS 01** ▪ Same parameters as COS 00 but message waiting lamps turned off.
- **COS 02** ▪ user type= 5, maximum message length= 180 seconds, maximum message count= 50, maximum retention= 7 days, use message waiting lamps, and access to distribution lists.

- COS 03 ▪ user type= 2, max message length= 180 seconds, maximum message count= 25, maximum retention= 5 days, message waiting lamps turned off, and no access to distribution lists.
- COS 04 ▪ user type= 8, maximum message length= 5 seconds, maximum message count= 5, maximum retention= 1 day, no message wait lamps, and no access to distribution lists. **This COS should only be assigned to distribution list pilot numbers!**

```

MAINT sn525100          v+3.10a
Configuration          Modules      Reports      Utilities      Ho&Keeping

-----Settings-----
Class of Service Edit har
                       Rir
                       mec
                       erv
                       wor
                       ank

From the list at the right, move
the highlight bar to select a Class
of Service and press <return> to
edit. Press ESC to abort and exit.

Class of Service
0 : COS Number 00
1 : COS Number 01
2 : COS Number 02
3 : COS Number 03
4 : COS Number 04
5 : Disconnect COS
6 : COS Number 06
7 : COS Number 07
8 : COS Number 08
9 : COS Number 09

ESC-exit      F9-edit

Esc: back a menu      Return: selects      ↑↓: moves bar      Backspace: edits
    
```

1. Select Class of Service from the Global Settings sub menu. The Class of Service selector screen will be displayed. This is where you select the Class of Service to edit. The Starplus AVP has 1259 possible classes. These are numbered from 0-1 259.

2. Highlight the desired Class of Service and press [ENTER]. You may scroll through the entries on each page with the [up/down arrow] keys. To move from page to page the [page up/down] keys are used. Each class of service has four pages of information associated with it.

Once a Class of Service is selected the following fields are available for editing on Page 1:

```

MAINT sn525100          v+3.10a
Configuration          Modules      Reports      Utilities      HouseKeeping

-----Editing COS 00-----
Title: COS Number 00          1 of 4

General
User Type          : 9
Event Counters     » None
Language           » English
Personal operator  :
Restrict Out-Dial  » No

Voice Messaging
Maximum Message Length : 300 seconds
Maximum Greeting Length: 30 seconds
Maximum Messages      : 100 messages
Maximum Retention    : 30 days
Message Waiting Lamps » Every message
continued...
PgUp/PgDn to change page; ESC to save and exit.

Enter the user type. 08 is Lists, 09 is Supervisor.
Esc: back a menu      Return: selects      ↑↓: moves bar      BackSpace: edits
    
```

- TITLE - Allows a specific description name to be entered for the Class of Service.
- USER TYPE ▪ This provides access to certain features and services. Entry values are from 0-99 with 8 being assigned only to distribution lists and 9 being a supervisor status.
- EVENT COUNTERS ▪ This enables specific activities to be recorded on the Starplus AVP system. This information is displayed on the statistics screen in real-time while the Starplus AVP is running. There are the following options in this field:
 - Not Included ▪ Do not show extension and mailbox usage in the event counter window.
 - Maintenance ▪ Show only extension/mailbox maintenance in the event counter window.
 - Callers ▪ Show only the extension/mailbox callers in the event counter window.
 - Both ▪ Show all extension/mailbox usage in the event counter window.
- LANGUAGE ▪ The system has the capability to provide the default voice prompts in languages other than English (the default). Six other languages are available. Highlight the desired language and press the Enter key.
- PERSONAL OPERATOR ▪ This allows a Class of Service to have its own operator (extension) associated with it. This routes callers to the extension specified in this field rather than a general operator. The system will perform a supervised transfer to this extension. You may have the system perform a blind transfer by adding a bl in front of the extension number.
- RESTRICT OUTDIAL - This allows/disallows outside calling privileges. Press Enter to toggle Y/N.
- MAXIMUM MESSAGE LENGTH -This is the maximum length in seconds that is allowed for each message. Values are from 000 to 999. 000 disables this.
- MAXIMUM GREETING LENGTH ▪ This is the maximum length in seconds a user's greeting can be. The values are 000-999. 000 disables the this.
- MAXIMUM MESSAGES -This is the maximum number of messages that a mailbox can store.
- MAXIMUM RETENTION ▪ This is the time in days that saved messages will be kept. After this time period they will be deleted by a housekeeping routine of the system. The range is 000-999. 0 disables this.

THE SYSTEM WILL NEVER DELETE A NEW MESSAGE. ONLY MESSAGES THAT HAVE BEEN LISTENED TO WILL BE DELETED IF THE RETENTION PERIOD EXPIRES.

- MESSAGE WAITING - This activates a message wait lamp on the telephone set. There are three options available:
 - Don't Use - No message waiting is provided with this selection.
 - Turn On First Message - Activate the message light only after the first new message.
 - Turn On Every Message - Activate the message light on every new message. This is used for Starplus phone systems.

The next page is a continuation of the voice mail settings. Press [PG DN] to move to the next page.

```

MAINT sn525100                               v+3.10a
Configuration      Modules      Reports      Utilities      HouseKeeping
-----
                               Editing COS 00                               2 of 4
Title: COS Number 00
Voice Messaging (cont)
 Say Time of Messages      » Off
 Message Play Order       » First-In First-Out
 Message Type to Record    » Voice Only
 Greeting to Play         » Personal Greeting
 Start Recording          » After Greeting
 Distribution Lists        » System/Personal

continued...

PgUp/PgDn to change page; ESC to $AVE and exit.
-----
Press <enter> to select if a message's time will be play automatically.
Esc: back a menu      Return: selects      ↑↓: moves bar      Backspace: edits
    
```

- SAY TIME - This enables the feature that always plays the time/day stamp when a mailbox with this Class of Service listens to a message. Press the Enter key to pull-up the inset menu. Then highlight Y/N and press the [ENTER] key.
- MESSAGE PLAY ORDER - This determines what order (first in/first out or last in/first out) user will receive their messages. Press the [ENTER] key to pull-up the inset menu and highlight FIFO or LIFO.
- MESSAGE TYPE RECORD - This allows the system to only record for certain types of calls. For example, the Class of Service can be set up to only record DTMF inputs and ignore voice calls. Press the [ENTER] key to pull-up the inset list. Highlight the desired choice and press [ENTER]. The default entry is voice calls.
- GREETING TO PLAY - This determines what greeting(s) will be played when a caller reaches a mailbox with this Class of Service. Press [ENTER] to pull-up the inset menu. Highlight the desired choice and press [ENTER]. The choices are personal, system, personal then system, voice inset(custom), or a Class of Service message.

- **START RECORDING** - This determines if a caller reaching a mailbox with this enabled will have to press a key to leave a message or the system will start recording immediately after the mailbox greeting is played. Press [ENTER] to pull-up the inset menu; highlight the desired choice and press [ENTER].
- **DISTRIBUTION LISTS** - This determines if the Class of Service is allowed access to the distribution lists. The choices are system, personal, or none. Press [ENTER] to pull-up the inset menu, highlight the desired choice and press [ENTER].

The next page deals with the message notification portion of the Class of Service. Press the [PG DN] key to move to the next page.

```

MAINT sn525100                               v+3.10a
Configuration      tlmodules      Reports      Utilities      HouseKeeping
-----
                               Editing COS 00
Title: COS Number 00                               3 of 4
Voice Messaging Notification
Password Required      » On
Message Pickup Allowed » Allow Retrieval
All Time Periods      » Off
Retry Interval         : 5 minutes
Number of Retries     : 5 times
Pager Uses Retries    » Off
Use Notify Command File» Off
Event Handler to Use  : 0

continued...

PgUp/PgDn to change page: ESC to save and exit.
Press <enter> to select if a password is required during notification.
Esc: back a menu      Return: selects      ↑↓: moves bar      BackSpace: edits
    
```

- **PASSWORD REQUIRED** - This determines if the user must enter a password upon message notification. Press [ENTER] to pull-up the inset menu, then highlight Yes or No and press [ENTER].
- **MESSAGE PICKUP** - This determines if a user is allowed to retrieve messages upon notification receipt. Press [ENTER] to pull-up the inset menu, then highlight NO, Normal, or All New Play and press [ENTER].
- **ALL TIME PERIODS** - This enables the notification for all time period operation. If this is set to No, notification only takes place in the Daytime period. If this is set to Yes, notification can take place in all time periods. Press [ENTER] to pull-up the inset menu, then highlight Yes or No and press [ENTER].
- **RETRY INTERVAL** - This is the time between notification attempts. The values are from 0-99 seconds with 0 disabling this.
- **NUMBER OF RETRIES** - This is the number of times the system will attempt to notify a user. The values are from 0-99 tries with 0 disabling this.

- PAGER RETRIES - This enables the system to retry notification attempts when dialing pager devices. Press [ENTER] to pull-up the inset menu, then highlight Yes or No and press [Enter].
- USE NOTIFY COMMAND FILE - Press [ENTER] to pull-up the inset menu, then highlight Yes or No and press [ENTER]. **This feature is not used at this time!**
- EVENT HANDLER TO USE - Enter a value from 0-99. 0 disables this feature. This determines what call out line group the COS is to use.

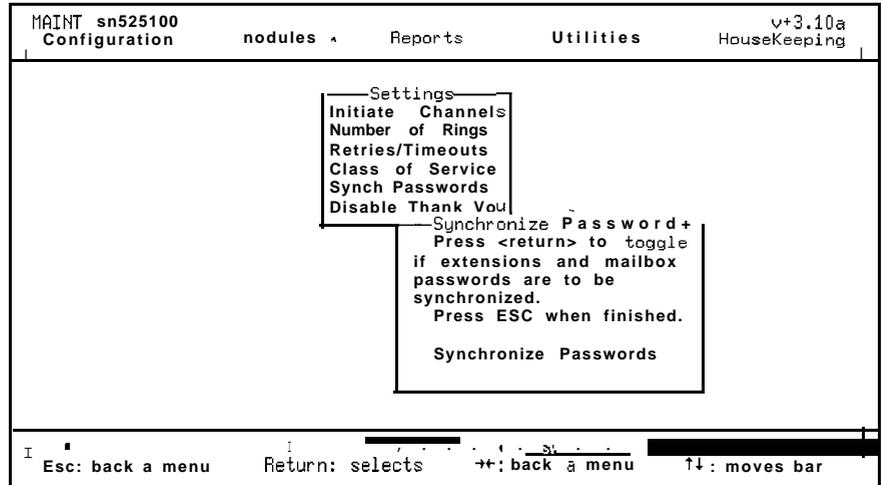
The next page deals with the auto attendant portion of the Class of Service. Press the [PG DN] key to move to the next page.

MAINT sn525100 Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping
Editing COS 00				
Title: COS Number 00				4 of 4
Auto Attendant				
Hold Interval	:	10 seconds		
Type of Holding	:	Silence		
Screening Length	:	3 seconds		
Internal Blind				
Transfer Wait	:	0 seconds		
External Blind				
Transfer Wait	:	0 seconds		
PgUp/PgDn to change page; ESC to save and exit.				
Enter the hold interval when a caller elects to be put on hold.				
Esc: back a menu Return: selects ↑↓: moves bar Backspace: edits				

- HOLD INTERVAL - This is the amount of time a caller will be left on hold before the system tries the busy extension again. The value is from 0-99 seconds with 0 disabling the feature.
- TYPE OF HOLDING - This determines how the caller will be placed on hold. The choices are silence, flash hook, play files(custom messages), or park caller. Press [ENTER] to pull-up the inset menu, highlight the desired choice and press the [ENTER] key.
- SCREENING LENGTH - This is the amount of time a caller has to say their name when the call screening feature is enabled. The value is from 0-99 seconds with 0 disabling the feature.
- INTERNAL BLIND - This is the amount of time the system will pause before connecting the call on an internal blind transfer. The values are from 0-99 seconds with 0 being an immediate connection.
- EXTERNAL BLIND - This is the amount of time the system will pause before connecting the call on an external blind transfer. The values are from 0-99 seconds with 0 being an immediate connection.

E. SYNCHRONIZE PASSWORD

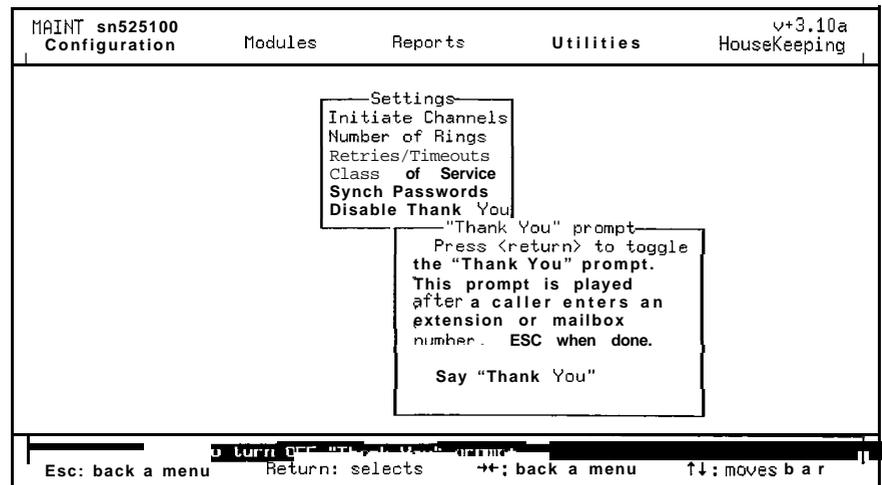
Mailbox and Extension users have a 3 or 4 digit password to gain access for editing their parameters. If this feature is enabled the passwords for editing both mailbox and auto attendant options are the same.



1. Press the Enter key to pull-up the inset menu, highlight the desired choice and press [ENTER].

F. DISABLE THANK YOU

This enables or disables the thank you recording used by the Starplus AVP system. This recording is heard when a caller enters an extension or mailbox.



1. Press the [ENTER] key to pull-up the inset menu, highlight the desired choice and press [ENTER].

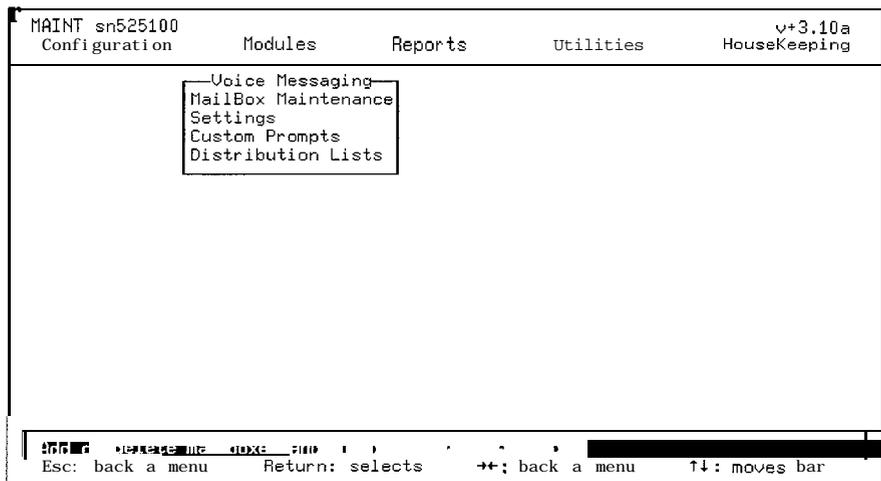
620.3 VOICE
MESSAGING

The Voice Messaging module can best be described by comparing it to a written message taken by a telephone receptionist or telephone answering service. Instead of a piece of paper being used as the medium of communication, Voice Messaging enables the caller's voice to be recorded, sent to the called party and filed away until the message is actually received. Unlike written messages, voice messages are always accurate, highly personal, and can be as detailed as the caller wants.

Messages are "locked" in mailboxes that can only be accessed by entering a security code. Each extension is assigned a unique mailbox number which allows that extension's messages to be kept private and confidential.

To enter this Starplus AVP function, highlight Voice Messaging in the Modules sub menu. The Voice Messaging sub menu will be presented.

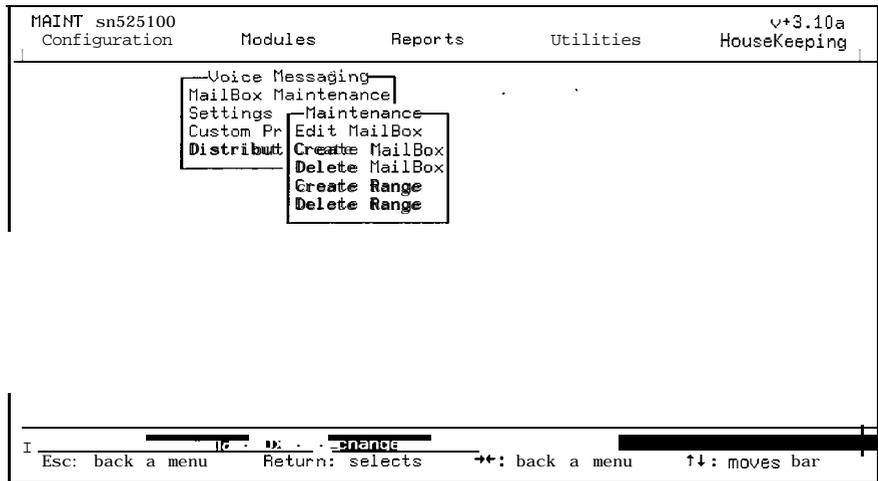
- Mailbox Maintenance
- Settings
- Custom Prompts
- Distribution Lists



A. MAILBOX
MAINTENANCE

Select Mailbox Maintenance from the Voice Messaging sub menu and the Voice Messaging Maintenance menu is presented. Voice Messaging can not perform voice messaging functions unless a mailbox is created for each user and certain mailbox information is properly defined. It is common to assign mailbox numbers that directly relate to the extension number. For example, extension number 310 is given mailbox number 310 or 1310. This makes it easier for the owner to remember his mailbox number and easier for a caller to leave a message.

Any attempt to transfer a call to an invalid mailbox will cause Voice Messaging to play the following error message, "mailbox number xxx does not exist".

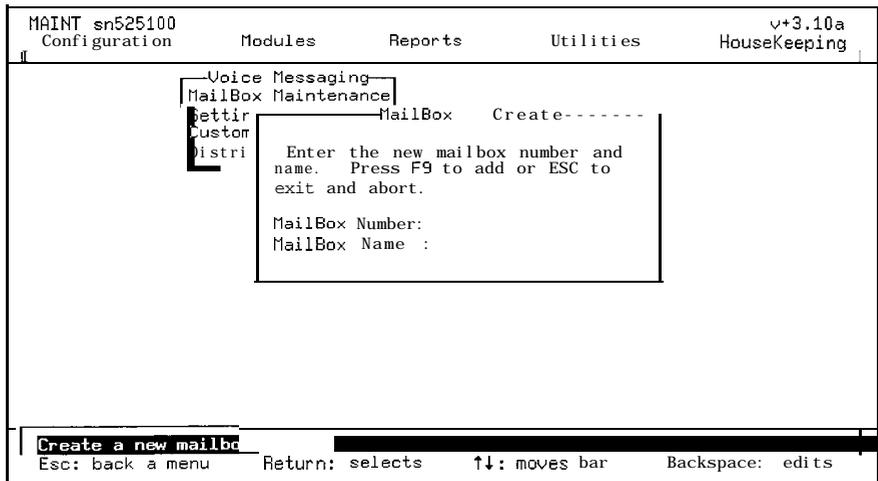


There are two ways to create mailboxes:

- Create Mailbox
- Create Range

B. CREATE MAILBOX

Create Mailbox is used to create mailboxes one at a time. Typically, it will be used to create a mailbox for a new employee. To create a mailbox highlight Create Mailbox in Voice Messaging sub menu and press [ENTER]. The Create Mailbox data entry screen will be presented.



The following fields must be edited:

- Employee Name - the name of the person using the mailbox.
 - Extension Number - the employee extension number.
1. When you have finished, press [F9] to save your entries and exit the screen. Press [ESC] to exit the screen without saving the entries.

C. CREATE RANGE

Create Range is used to conveniently create multiple mailboxes without having to create each mailbox individually.

MAINT sn525100 Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping
	Voice Messaging			
	MailBox Maintenance			
	Settin	MailBox Create Range		
	Custom			
	Distri			
<p>Enter the low and high mailbox numbers. When ready to create press the F9 key. Press ESC to abort the create.</p> <p>Low Number: 0000 High Number: 0000</p> <p>Original to Copy » None Check Duplicates » Off</p>				
<p>Add a range of mailbox numbers to the database.</p> <p>Esc: back a menu Return: selects tl: moves bar Backspace: edits</p>				

1. To use this function, first create a sample mailbox that will be used as a template to define feature characteristics for the range. Create the sample mailbox with the Create Mailbox function described above. After you have created a sample mailbox, use the Edit Mailbox function (described below) to define the various parameters and settings that you wish the sample mailbox to have.
2. After editing the template, select Create Range from the Mailbox Maintenance sub menu. The Create Range data entry screen will be presented.
3. Position the highlight bar to Low Number and enter the start of the mailbox range. Select High Number to enter the upper limit of the range.
4. Move the cursor to the Original to Copy field and press [ENTER]. A list of mailboxes will appear as an inset screen. Move the highlight bar to select the mailbox that will serve as the template and press [ENTER]. If you are initially configuring Starplus AVP, do not use Check Duplicate. This will speed up the mailbox creation process. However, for all subsequent uses, it is a good idea to use this feature to avoid accidental duplication of records.
5. To use this feature, highlight Check Duplicate and press [ENTER]. Press [ENTER] again to turn the feature "ON" or "OFF".
6. When you are ready to create the range press [F9]. Press [ESC] to abort your entries and return to the previous menu. All setting and parameter information from the template mailbox will be copied to the range.

D. EDIT MAILBOX

Edit Mailbox is used to make changes to the settings and parameters of existing mailboxes. To use this feature, a mailbox must have previously been created with either Create or Create Range. In addition to Edit Mailbox, as described in this section, mailbox users are also able to access and edit certain mailbox features from the dial pad of a touch tone phone. The features that may be edited in this manner include:

- Mailbox Greeting
- User Name/Signature
- User Password
- Timed Settings
- Mailbox State
- Message Notification

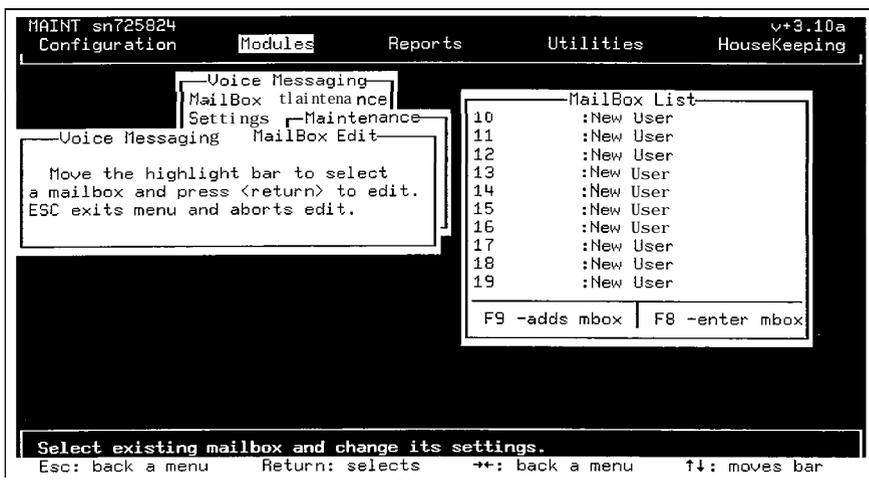
For more information about editing mailbox features consult the **Starplus AVP Users Guide**.

When you select Edit Mailbox from the Mailbox Maintenance menu, an inset screen listing existing mailboxes will be presented. The listing is presented in numerical order. To find a mailbox not listed on the initial screen, use either the [Up or Down arrow] keys or the [Page Up or Page Down] keys.

Also, you may use the number keys to move through the listing by a percentage amount. For example, if you are at the beginning of the list and press 6, **Starplus AVP** will transport you 60 per cent of the way through the list. If you press 3, **Starplus AVP** will transport you 30 per cent of the way through the list.

The percentages are all absolute values no matter where in the list you are located. For example, if you are presently 60 per cent through a list and press 3, you will be transported to a location that is 30 per cent through the list.

1. Highlight the mailbox to be edited and press [ENTER]. The Mailbox Edit screen will be presented.



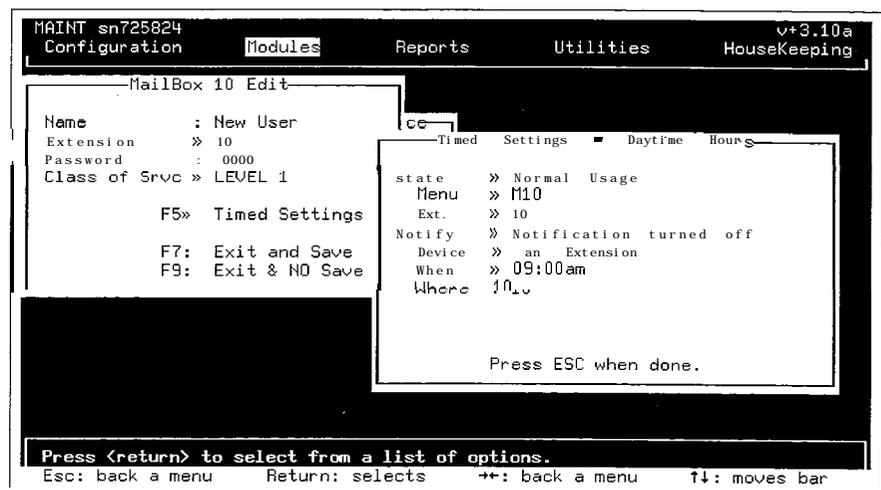
The following describes the data entry fields:

- Name - enter a new name or edit the existing name of the mailbox owner. Use the backspace key to erase any information in the field.
- Extension - is the extension number associated with this mailbox. Often this number is directly related to the mailbox number. For example, extension 310 and mailbox 1310. Press [ENTER] for an inset listing of system extension numbers.
- Password - is the number that is entered by the system user to retrieve mailbox messages. Initially, it should be set to some easy to remember code, like "1111".
- Class of Service - press Enter to select the Class of Service selection screen. Select a class of service that you wish to associate with the mailbox.

E. TIMED SETTINGS

Timed Settings provides four time periods that allow the mailbox owner to program time sensitive mailbox features. For example, a mailbox can be programmed to notify its owner of messages at an internal extension during the day and at a home phone number at night. Features that are time sensitive include:

- Mailbox Greeting
 - Notification Instructions
 - Mailbox State
1. Select this feature and the Timed Settings selector screen appears.



The Timed Settings include:

- Daytime - your office hours as defined by Start of Day and End of Day in Configuration.
- Evenings - the remaining portion of the day not defined above.
- Weekends - the period of time that begins at the close of the business day Friday and ends at the beginning of the business day on Monday.

- Special - any day that you specify as a holiday or special event.
 - Copy Daytime - allows you to copy your daytime setting to the other time periods. Use this function if your evenings, weekends and special **day** settings are identical to your daytime setting.
2. Select a timed setting to edit, probably daytime first, and press [ENTER]. When you have finished, use the Copy Daytime option to copy the setting information into the other time periods. The Timed Settings edit screen is presented.

The Timed Settings data entry screen includes various options for setting the state of a mailbox and activating message notification instructions. The screen has two general categories:

- State
- Notify

Even though most of these features are accessible to the mailbox owner through DTMF (Touch-Tone), as the system administrator, you may want to set the initial defaults.

State defines how a mailbox functions when it is accessed for message storage. It contains the following edit fields:

- Turned Off - deactivates the normal operating mode. When "Off" the caller is prompted that the mailbox is not available and to try another mail box or extension.
- Turned On - activates the normal operating mode. When "On" the mailbox can receive messages.
- Greeting Only - plays the personal greeting without taking any messages.
- Forward to Mailbox - transfers the call to another mail box. For example, all marketing agents might have their calls forwarded at night to a common mailbox.
- Forward to Extension - transfers the call to another extension. For example, during the day a call to the sales manager might be answered by a secretary, but at night the call might be routed to a mailbox. (Auto Attendant must be installed to forward a call to another extension.) Press [ENTER] to display a listing of extension numbers. Select an extension where calls will be forwarded if Forward to Extension is active in the State field.
- Forward to Menu - transfers the call to a custom designed menu (need to have Menu Routing installed). This allows the caller to choose from a menu of options. For example, "Sorry I'm unavailable at the moment. However, for my secretary press 1. Press 2 for product information. Press 3 to leave a message." Press Enter to display a listing of available menus. Select the menu that will be played if menu is active in the State field. Additional menus can be created with Menu Routing.

Notify is used to define the instructions that Starplus AVP will use to contact the mailbox owner on receipt of a message. Notification of message receipt can be either immediate or at a specified time. Notify contains the following fields.

- Turned Off/On - is used to **activate** notification. If notification is activated, you need to select the device number where notification will occur. This can be an internal extension (most likely the mailbox owner's extension although it does not have to be), any outside phone number (**usually a home phone number**), or digital pager.
- Immediate - used to activate immediate notification. If activated, the called party will be notified immediately on receipt of a message at the designated extension.
- At Set Time - is used to set the specific time when Starplus AVP is to notify a person that there are messages waiting.

After you have finished setting the Notify fields, the following entries also need to be completed:

- Device - can be an extension, outside number, or pager.
 - When is used to enter the time, the mailbox owner wishes to be called by Starplus AVP. This time setting will only be used if Notification is set to At Set Time.
 - Where tells Starplus AVP which internal extension number or outside phone number to dial on Notification. For an outside number, your PBX requires a dialing prefix, do not enter that number here. Enter only the number that would ordinarily be entered from the dial pad. The dial prefix is set in Dialing Prefixes in the Configuration sub menu.
3. After setting the above parameters press [ESC]. Your entries will be saved and you will be returned to the Edit Mailbox screen. If you wish to edit another time period, make your selection from this screen and repeat the above procedure for the specified time period.

The Copy Daytime function enables you to automatically copy your daytime settings to all other time periods. Use this feature when all your time settings (daytime, evenings, weekends, and holidays) are identical.

4. When you have finished editing a mailbox press [F7] to save and exit. Press [F9] to exit without saving the entry. You will be returned to the mailbox maintenance screen.

F. DELETE MAILBOX

The Delete Mailbox function is used to delete individual mailboxes from the system. For example, it is particularly useful when deleting individual mailboxes of persons who have left the company. After a mailbox has been deleted, its parameters and settings are erased and its identification number is removed from the system. The number can be reused only after it has been recreated in Create Mailbox.

To delete a mailbox, select Delete Mailbox from the Mailbox sub menu. The Mailbox selector screen will be presented.

MAINT sn525100 Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping
Voice Messaging MailBox Maintenance Voice Messaging - MailBox Delete		MailBox List 1000 1001 1002 1003 1004 1005 1006 1007 1008 : 1009 :		
From the menu list at the right, pick the mailbox which you wish to delete. If you do not want to delete a mailbox press ESC.		F9 - adds mbox F8 - enter mbox		
Delete a current mailbox that is no longer used. Esc: back a menu Return: selects tl: moves bar BackSpace: edits				

1. Highlight the mailbox to be deleted and press [ENTER].

The mailbox will be automatically removed from the system. If you are in the process of deleting a mailbox and change your mind, press [ESC] to leave the screen. No changes will be made,

G. DELETE RANGE

Delete Range is used to delete a range of mailboxes from the system. Use this function to delete a large contiguous block of mailboxes. All settings and parameters will be deleted as will the individual mailbox numbers.

To delete a range of mailboxes, select Delete Range from the Mailbox sub menu. The Delete Range selector screen will be presented.

MAINT sn525100 Configuration	Nodules	Reports	Utilities	v+3.10a HouseKeeping
Voice Messaging MailBox Maintenance MailBox Delete Range		Enter the low and high mailbox numbers. When ready to delete press the F9 key. Press ESC to abort the delete. Low Number: 0000 High Number: 0000		
Delete a range of mailbox numbers from the database. Esc: back a menu Return: selects ↑↓: moves bar BackSpace: edits				

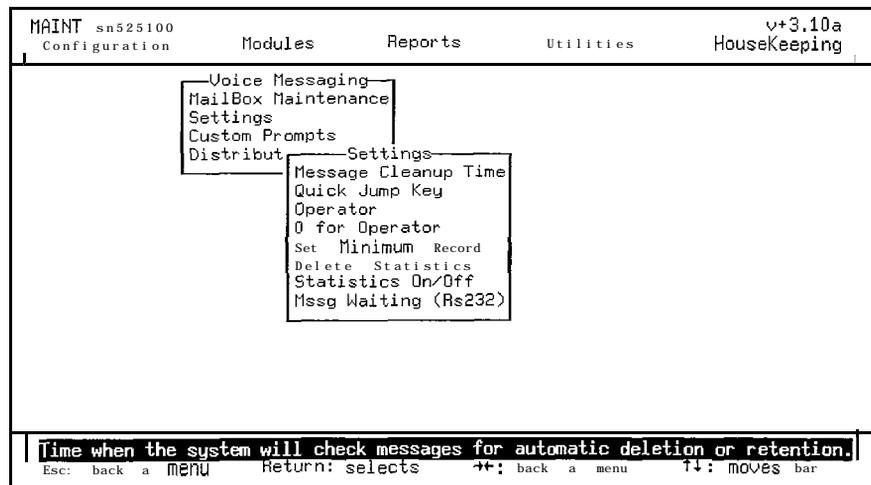
1. Select the range that is to be deleted by using the same procedure that was described in Create Range.
2. Press [F9] to delete the range.

3. A confirmation screen will appear. Move the highlight bar to YES to confirm the deletion.
4. Press [ESC] to leave the screen without deleting the specified mailbox.

620.4 SETTINGS

The Settings sub menu contains a number of Starplus AVP functions that determine operational characteristics of Voice Messaging. These are universal settings that apply to all mailboxes.

- Message Cleanup Time
- Quick Jump Key
- Operator
- 0 for Operator
- Set Minimum Record
- Delete Statistics
- Statistics On/Off
- Message Waiting (RS232)

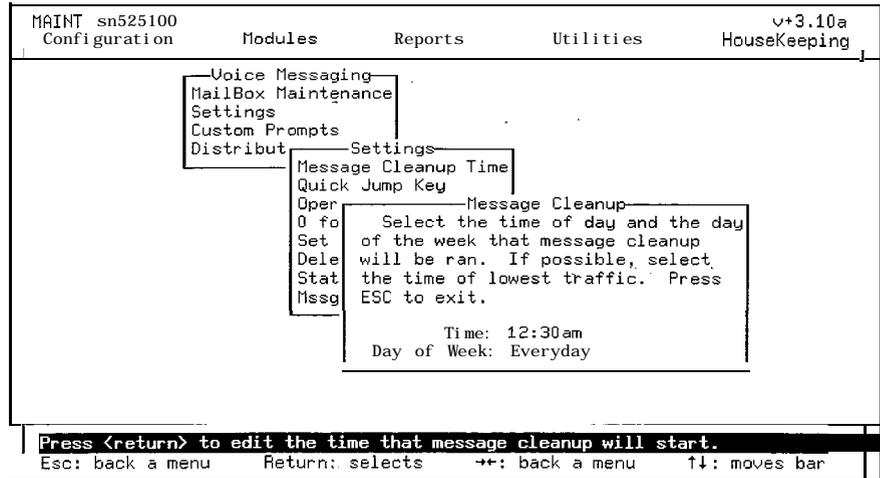


A. MESSAGE CLEANUP TIME

Message Cleanup Time specifies the time when Starplus AVP deletes messages that have exceeded the specified retention period. The retention period is the maximum length of time that a message can be saved. For example, if the retention period is set to 30 days, all saved messages older than 30 days will be deleted at the time specified in Message Cleanup. If a mailbox owner tries to retrieve a message that has been deleted, he will be advised by Starplus AVP that the message has been deleted. The message retention period is defined by the mailbox's Class Of Service

The system does not check on a real-time basis to determine if messages needs to be deleted. Instead, it performs this house keeping function as specified by Message Cleanup Time. Message cleanup should occur when the system is normally inactive, for example, from midnight to 3:00 am.

The Message Cleanup Time data entry screen is presented below.
 1. Enter the specific time for message cleanup.



2. Press [ESC] to save your selection and exit to the previous menu.

B. QUICK JUMP KEY

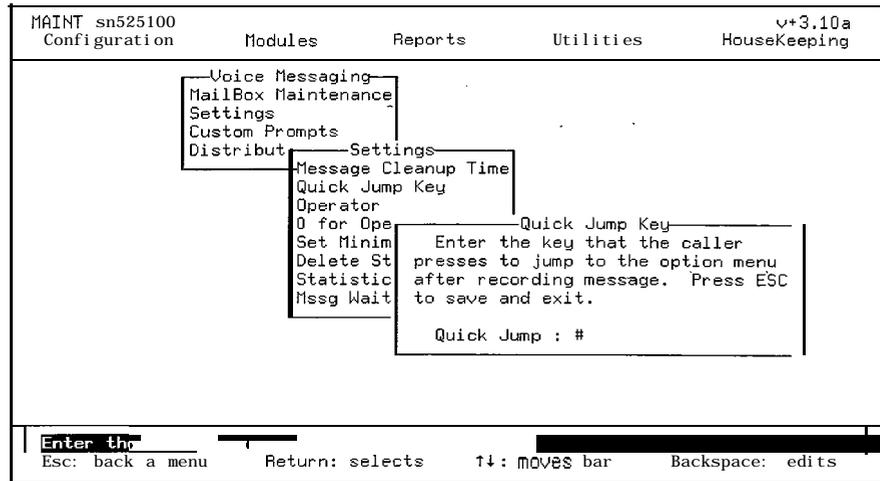
The Quick Jump Key gives a caller immediate access to a special “Canned” menu from within Voice Messaging. The special menu gives the caller the following options:

- “Press 1 to try another mailbox’
- “Press 2 to try another extension”
- “Press 0 to transfer to the operator’

This “canned” menu is normally played as the last option after a sequence of events occurs which include playing the mailbox greeting, recording a message, or editing the message.

The Quick Jump Key “short circuits” this sequence and allows the caller to jump directly to the “canned menu”. Also note, that if Voice Messaging has been installed as a branch of a menu, (and not as a primary module) pressing the “#” key will take the caller to the top level of the menu. This “canned” menu can be re recorded by using the Recording Studio. To do this you must create a prompt file called Lastopt.vox and put that file in the sub directory.

To enter the screen, select Quick Jump Key from the Settings menu. The Quick Jump Key screen will be presented.



1. Enter the key that will be designated for the Quick Jump Function.

Typically, the “#” key is used for this purpose. If you make a mistake use the backspace key to delete the incorrect entry.

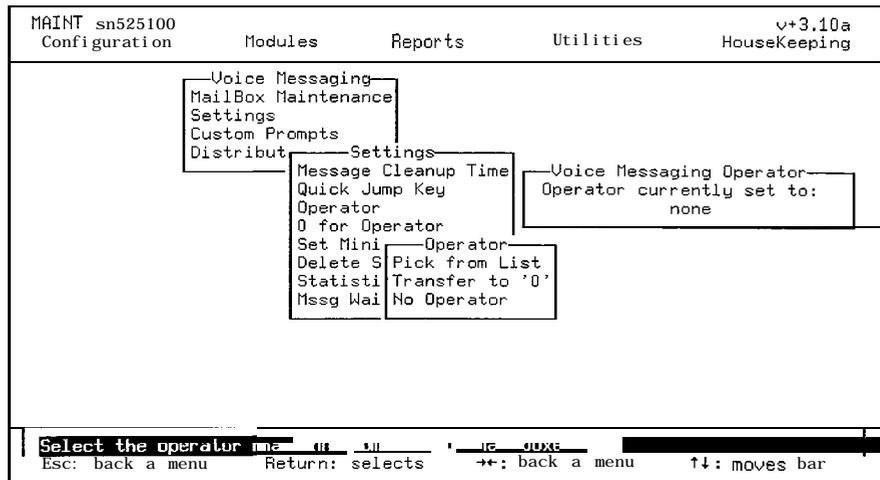
2. Press [ESC] to exit the screen and save the entry.

C. VOICE MESSAGING OPERATOR

Voice Messaging Operator determines call handling procedure when a caller presses “0” or “times out” from Voice Messaging. The “0” or time-out options include:

- sending the caller to the operator
- sending the caller to the mailbox
- do nothing

To enter the screen, select Operator from the Settings menu. The Voice Messaging Operator data entry screen will be presented.



- Pick From List - sends the caller to a mailbox. You must have previously defined the mailbox that you will use for this purpose.

To select this option, move the highlight bar to Pick From List and press [ENTER]. An inset listing of mailboxes will be presented. Move the highlight bar to the mailbox and press [ENTER]. You will be returned to the Voice Messaging Settings sub menu.

Mailboxes are typically used to record a caller's message. However, it is important to remember that mailboxes can be forwarded to other extensions or custom menus. Mailboxes are time sensitive as well.

- Transfer To 0 - if you select Transfer To 0, Starplus AVP will perform a blind transfer to "0".
To select this option, move the highlight bar to Transfer To 0 and press [ENTER]. The option will be selected and you will be returned to the Voice Messaging Settings sub menu.

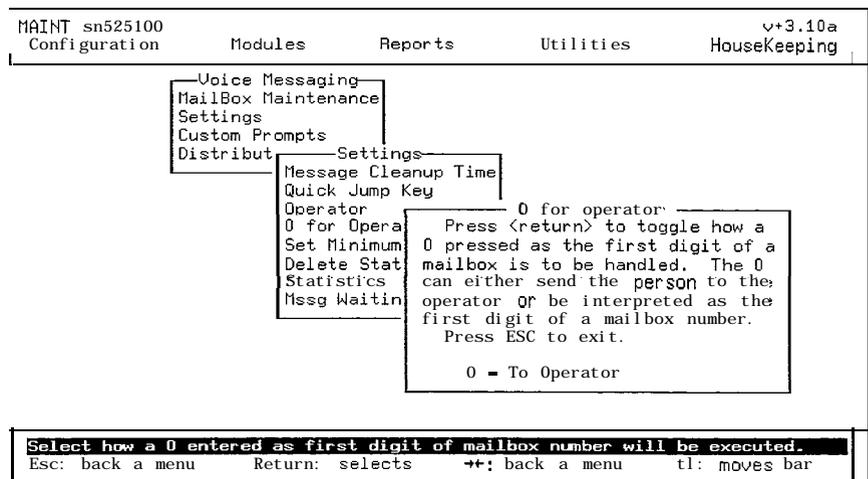
- No Operator - this option tells Starplus AVP that your system does not have an operator. Starplus AVP will play the following prompt:

"The operator is not available. To try another mailbox, press 1. To try another extension, press 2". To select this option, move the highlight bar to No Operator and press [ENTER]. You will be returned to the Voice Messaging Settings sub menu.

D. 0 FOR OPERATOR

This defines how Starplus AVP will handle a mailbox entry that begins with a 0. If you define as the operator setting, a caller will be transferred to the operator when is pressed. If you define as the first mailbox digit, operator assistance will not be provided and Starplus AVP will interpret the " as the first digit of a mailbox.

It is recommended that be used for operator assistance and that the first digit of the mailboxes begin with a number other than". To change the current setting, highlight 0 For Operator in the Settings sub menu and press [ENTER]. The 0 For Operator data entry screen will be presented and the current setting displayed.

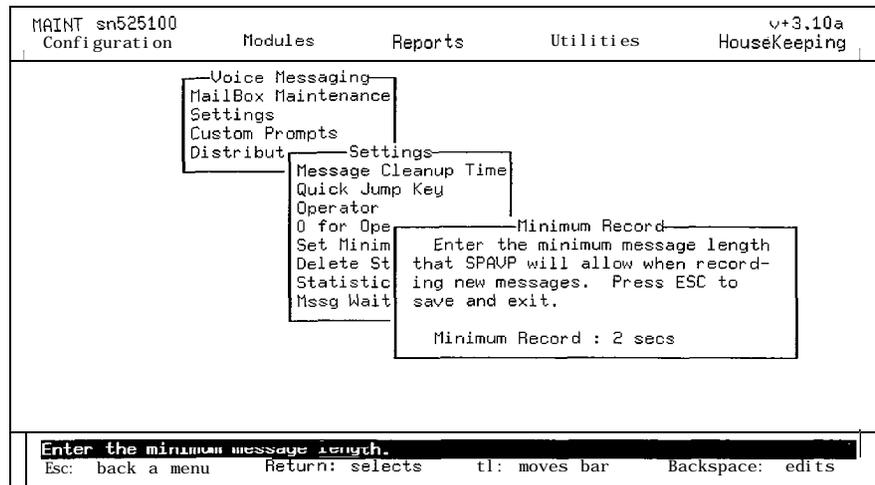


Two settings are available:

- To Operator- select this option if you want the caller to be transferred to the operator after pressing 0".
 - First Mailbox Digit- will interpret the 0 as the first digit of the mailbox number.
1. Press [ENTER] to change the current setting. Press [ESC] to save the setting and exit the screen.

E. SET MINIMUM RECORD

Set Minimum Record designates the minimum duration for a valid message. Any message that does not meet this duration will not be saved. This feature acts like a filter to discard hang-up messages that may have been inadvertently saved. Select Set Minimum Record from the Settings sub menu. The Set Minimum Record data entry screen will be presented. A two second record time is recommended.



1. Press [ESC] to save your entry and exit the screen.

F. DELETE STATISTICS

This will erase the current statistics for the mailboxes that were enabled with the statistics module.

THIS FEATURE IS NOT AVAILABLE ON THE STARPLUS AVP AT THIS TIME!

G. STATISTICS ON/OFF

This enables or disables the statistics feature.

THIS FEATURE IS NOT AVAILABLE ON THE STARPLUS AVP AT THIS TIME!

H. MESSAGE WAITING (RS232)

This enables or disables the RS-232 integration feature.

THIS FEATURE IS NOT AVAILABLE ON THE STARPLUS AVP AT THIS TIME!

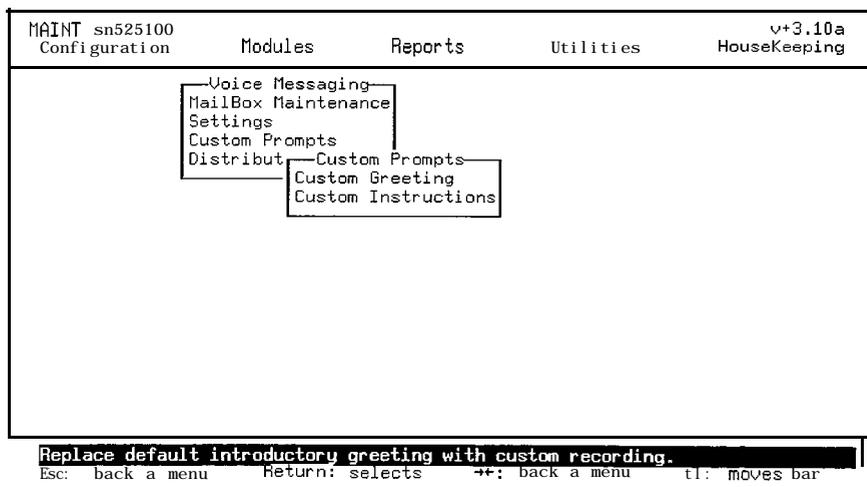
620.5 CUSTOM PROMPTS

Custom Prompts allows you to record your own special introductory greeting and caller instructions.

Although Starplus AVP can accept direct input from a microphone or cassette recorder, the-standard telephone handset is the most often used input device for recording custom prompts. You will need to make sure you have access to a telephone that is located next to the Starplus AVP system. The keyboard on your computer is used as the command interface for recording and listening to prompts. You are now ready to record custom voice prompts and custom greetings for your Starplus AVP system.

The Custom Prompts sub menu is divided into two sections:

- Custom Greeting
- Custom Instructions



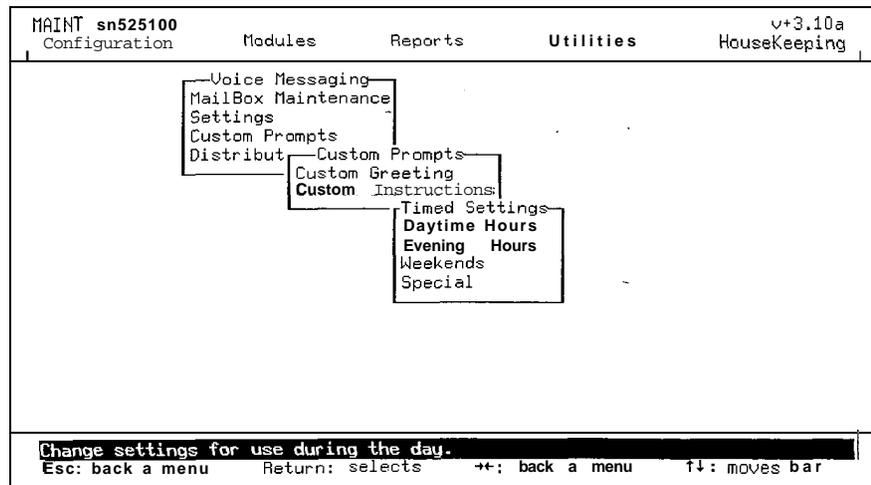
1. Select Custom Prompts from the Voice Messaging sub menu.
2.
 - Custom Greeting - is a message that is played when the call is answered. A custom greeting is usually recorded when Voice Messaging is the primary module on a channel. For example, Thank-you for calling Vodavi Communications Systems...
 - Custom Instructions - is the message that tells the caller how to use the system. For example, Enter the mailbox number of the person you are trying to reach....

When a call is answered the custom greeting is played immediately, followed by the custom instruction.

If the caller does nothing, he is transferred to the operator. If the caller enters an invalid key, the Custom Instruction is replayed.

A. SELECT CUSTOM GREETING

Select Custom Greeting from the Custom Prompts sub menu. The Time Settings sub menu is displayed.



Starplus AVP allows you to selectively record custom greetings by various day and/or time settings. These settings are defined as follows:

- Daytime - your office hours as defined by Start of Day and End of Day in Configuration
- Evenings - the remaining portion of the day not defined above.
- Weekends - the period of time that begins at the close of the business day Friday and ends at the beginning of the business day on Monday.
- Special - any day that you specify as a holiday or special event.
- Copy Daytime - allows you to copy the daytime setting to all channels and time periods. Use this function if your daytime hours are the same for evenings, weekends and special days or holidays.

You will probably want to record the daytime greeting first. After this has been completed, you may want to record different greetings for evenings, weekends, special days, or holidays.

1. Select a time and/or day setting for which to record a custom greeting. The following Recording Studio message screen will be presented.
2. Using the telephone, dial the extension of the line connected to the Starplus AVP system.

Once the connection has been made, the Recording Studio data entry screen is presented.

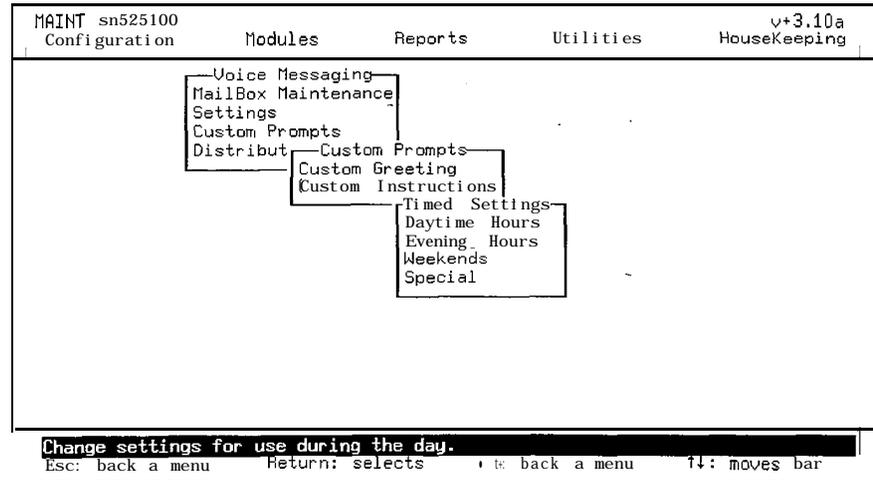
MAINT sn525100 Configuration	modules	Reports	Utilities	v+3.10a HouseKeeping
Recording Information			Recording Studio	Type
Name : VOX\RECMENU.VOX			What?	
Length: 15.3 secs (46454 bytes)			mpts	
Cut Size : 0.5 secs			Greetings	
Using Line #1			Signatures	
File: VOX\RECMENU.VOX			n Signatures	
			ompts	
			les (VOX\)	
			Operations	
			Play File	
			Record Over	
			Append	
			Chop Start	
			Chop End	
			Change Cut	
			Erase File	
			Exit Studio	
Place the file Press any key on the phone pad or keyboard to abort.				
Esc: back a menu Return: selects *+: back a menu ↑↓: moves bar				

Choose any of the recording studio functions, to record or change voice prompts:

- Play File ■ plays the current file.
- Record Over ■ erases the file and re records.
- Append ■ adds a new recording to the end of the existing file.
- Chop Start - cuts from the beginning of the prompt, an amount equal to the Cut Size. The Cut Size is displayed in the Recording Information box.
- Chop End- same as above but chops end.
- Change Cut ■ changes the cut size. Use the cursor keys to increment of decrement this value. Press [ESC] after value has been selected.
- Erase File ■ deletes the prompt completely. Once erased it is not recoverable.
- Exit Studio ■ hangs up the line and exits.
- Help ■ provides on-line support.

Starplus AVP allows you to selectively record custom instructions by various day and/or time settings. You will probably want to record a daytime greeting first. After this is completed, you may want to record different greetings for evenings, weekends, special days, or holidays.

Select Custom Instructions from the Custom Prompts sub menu, The Time Setting screen is displayed.



The settings are defined as follows:

- Daytime - your office hours as defined by Start of Day and End of Day in Configuration.
 - Evenings -the remaining portion of the day not defined above.
 - Weekends - the period of time that begins at the close of the business day Friday and ends at the beginning of the business day on Monday.
 - Special- any day that you specify as a holiday or special event.
 - Copy Daytime - allows you to copy the daytime setting to all channels and time periods. Use this function if your day-time hours are the same for evenings, weekends and special days or holidays.
1. Select a time and/or day setting for which to record a custom instructions. The Recording Studio data entry screen is presented.
 2. Using the telephone, dial the extension of the line connected to the Starplus AVP system.

Once the connection has been made the Recording Studio data entry screen is presented.

MAINT sn525100	Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping
Recording Information		What?		Recording Studio	Type
Name : VOX\RECMENU.VOX.		ompts		Operations	
Length: 15.3 secs (46454 bytes)		Greetings		Play File	
Cut Size : 0.5 secs		Signatures		Record Over	
Using Line #1		n Signatures		Append	
File: VOX\RECMENU.VOX		ompts		Chop Start	
		les (VOX\)		Chop End	
				Change Cut	
				Erase File	
				Exit Studio	
Plays the file. Press any key on the phone pad or keyboard to abort.					
Esc: back a menu Return: selects ⇐: back a menu ↑↓: moves bar					

Choose any of the following prompts to record or change voice prompts:

- Play File - plays the current file.
- Record Over - erases the file and re records.
- Append - adds a new recording to the end of the existing file.
- Chop Start - cuts from the beginning of the prompt, an amount equal to the Cut Size. The Cut Size is displayed in the Recording Information box.
- Chop End - same as above but chops end.
- Change Cut - changes the cut size. Use the cursor keys to increment or decrement this value. Press [ESC] after value has been selected.
- Erase File - deletes the prompt completely. Once erased it is not recoverable.
- Exit Studio - hangs up the line and exits.
- Help - provides on-line support.

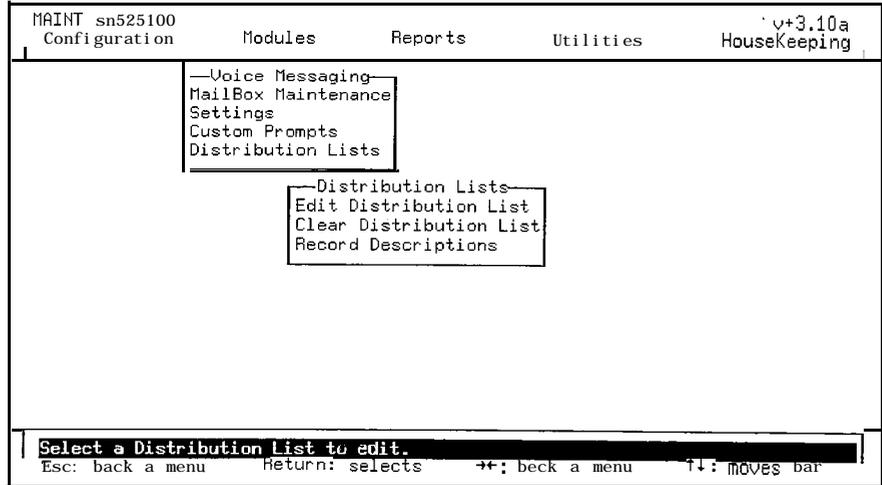
620.6 DISTRIBUTION LISTS

Distribution Lists allow system users to route messages to groups of mailboxes simultaneously. For example, a distribution list might include the mailboxes of all sales employees. The sales manager can broadcast a message by sending it to the list instead of to each sales employee. Starplus AVP allows selected users to create up to one-hundred distribution lists numbered 000-099. Each list has a capacity of twenty mailboxes. For a user to utilize this feature, Lists in Class Of Service must have been activated.

A distribution list is merely a "pseudo" mailbox number. For example, if the system mailbox numbers are 100- 150, the list numbers could be 500-599. When a user wants to send a message to distribution list 000, they send the message to mailbox 500. The Starplus A VP will strip the leading digit (5) and insert a 0. If a user wanted to send a message to list number 20, they would enter 520.

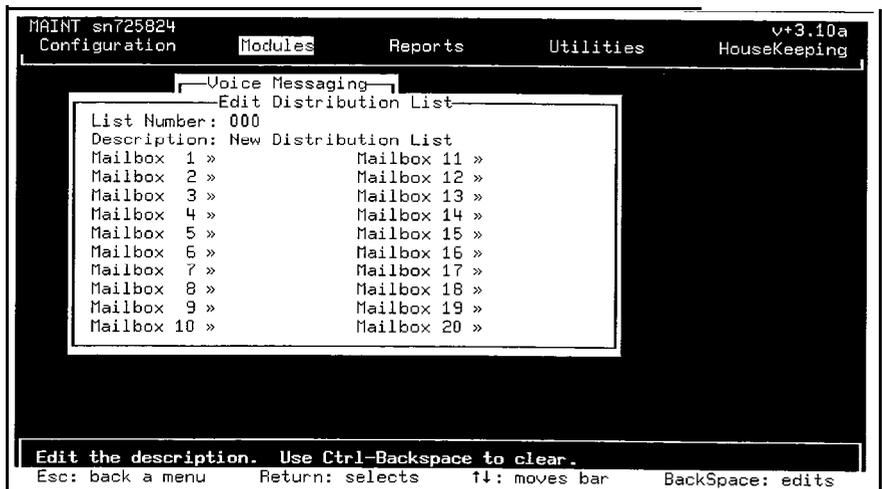
The Starplus AVP recognizes mailboxes as lists whenever the COS associated with the mailbox has a user type of 8. This user type indicates that this mailbox should be sent to the distribution list formed with the last two digits of its mailbox number. These mailboxes should also have set up in the COS minimal features. Set the message length to 5 seconds, retention time to 1 day, no message lamps, no outdial, etc.

Select Distribution Lists in the Voice Messaging sub menu and the following screen will be displayed.



A. EDIT DISTRIBUTION LISTS

To edit or create a distribution list, select Edit from the Distribution Lists sub menu. The Distribution List selector screen will be presented. If you wish to create a new distribution list, select a listing not previously used. If you wish to edit an existing distribution list, locate it by name or number. To make your selection, press Enter and the Edit Distribution List data entry screen will be presented.



1. The List Number will appear at the top of the listing screen. Enter a name that describes the list.
2. Use the Down arrow key to highlight the first available mailbox slot and press [ENTER]. The mailbox listing screen will

be presented. Highlight a mailbox that will be included in the distribution list and press [ENTER].

You will be returned to the Edit Distribution List data entry screen.

3. Repeat this procedure until your distribution list is complete.

If you have a distribution list with more than twenty mailboxes, it is possible to connect lists.

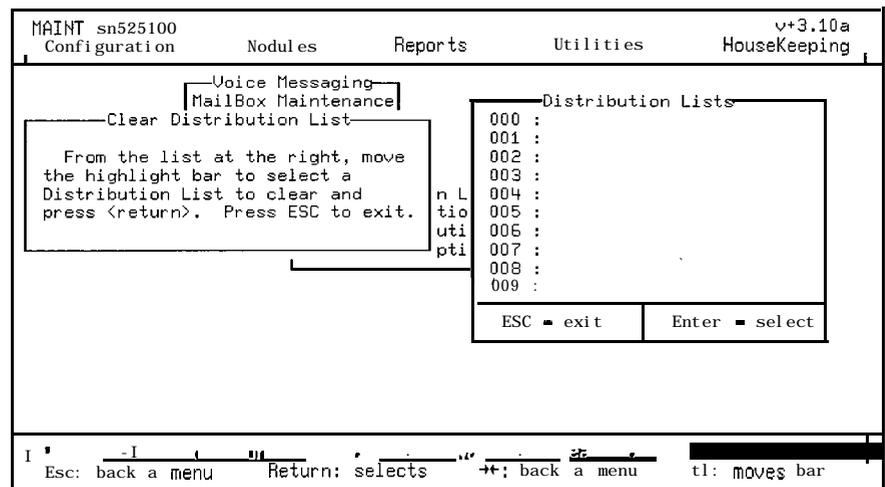
1. Select an available mailbox location and press [F8.]
The Distribution List selector screen will be presented.
2. Select the list that is to be connected and press [ENTER].
You will be returned to the Mailbox data entry screen.

Note that when lists are connected, you will be unable to add additional mailboxes to the distribution list below the distribution list number you have just added. If you intend to connect distribution lists, it is recommended that the last mailbox location of each list be reserved for this purpose.

To delete a mailbox or distribution list number from a distribution list, highlight the entry and press [Ctrl-Backspace].

B. CLEAR DISTRIBUTION LISTS

To clear or delete a distribution list select Clear Distributions Lists from the Distribution Lists sub menu . The Distribution List selector screen will be presented.



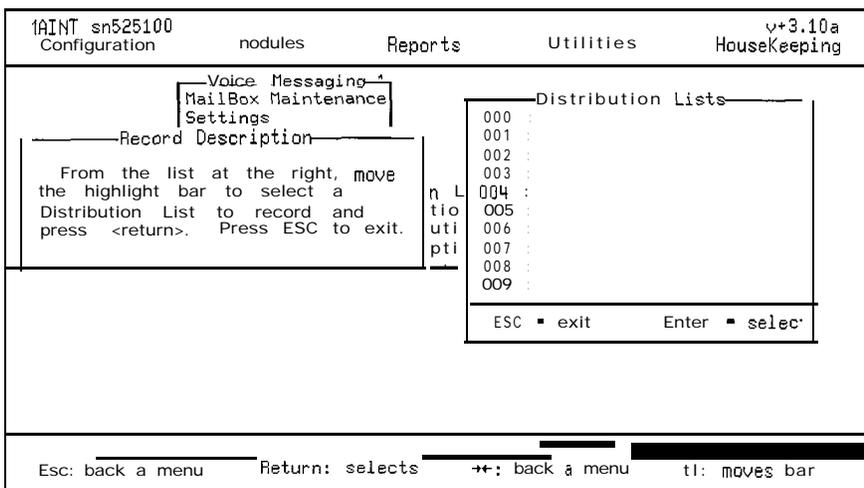
1. Highlight the specific list to be deleted and press [ENTER].
The contents of the distribution list will be deleted.

Each distribution list can have a recorded voice prompt that describes what the list is. When a system user accesses the list, the description is played back.

For example, entering List # 001 might invoke southeast sales agents. This feature provides the user with voice verification of the list's subject matter.

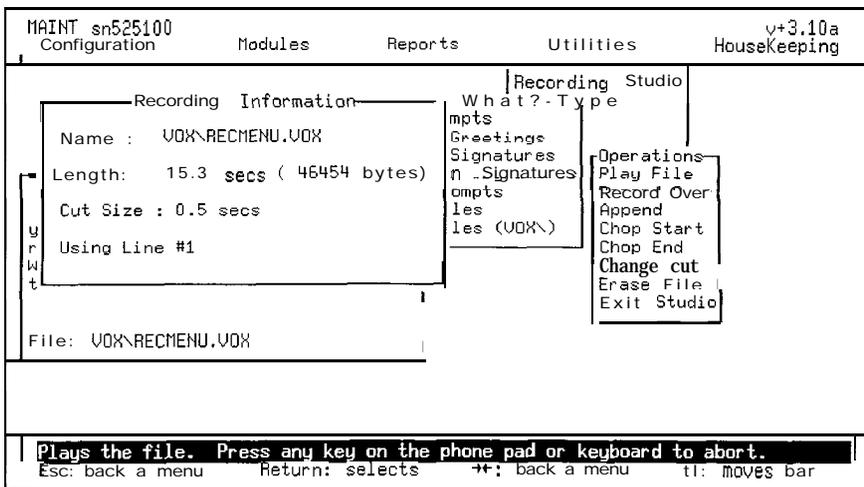
C. RECORD DESCRIPTIONS

To record descriptions of distribution lists select Record Descriptions from the Distributions List sub menu. Highlight the specific list for which a new recording is to be made and press [ENTER].



1. Select a time and/or day setting for which to record a custom greeting.
2. Using the telephone, dial the extension of the line connected to the Starplus AVP system.

Once the connection has been made, the Recording Studio data entry screen will be presented.



Choose any of the recording studio functions to record or change voice prompts:

- Play File - plays the current file.
- Record Over - erases the file and re records.
- Append - adds a new recording to the end of the existing file.
- Chop Start - cuts from the beginning of the prompt, an amount equal to the Cut Size. The Cut Size is displayed in the Recording Information box.

- Chop End ▪ same as above but chops end.
- Change Cut ▪ changes the cut size. Use the cursor keys to increment or decrement this value. Press Esc ▪ after the value has been selected.
- Erase File ▪ deletes the prompt completely. Once erased it is not recoverable,
- Exit Studio ▪ disconnects the line and exits.
- Help ▪ provides on-line support.

620.7 AUTO ATTENDANT

The Auto Attendant module is responsible for call transfers without the assistance of a live operator.

Two types of call transfers can be performed:

- Direct transfer will send a caller to a preprogrammed extension when a particular key is pressed. Direct transfers are usually activated from within menus. For example, a menu might include the following selections, "dial 1 for sales, 2 for support.... "When the caller presses 1, Auto Attendant immediately transfers the call to the sales extension.
- Requested transfer involves prompting the caller for either the extension number or the name of the called party.

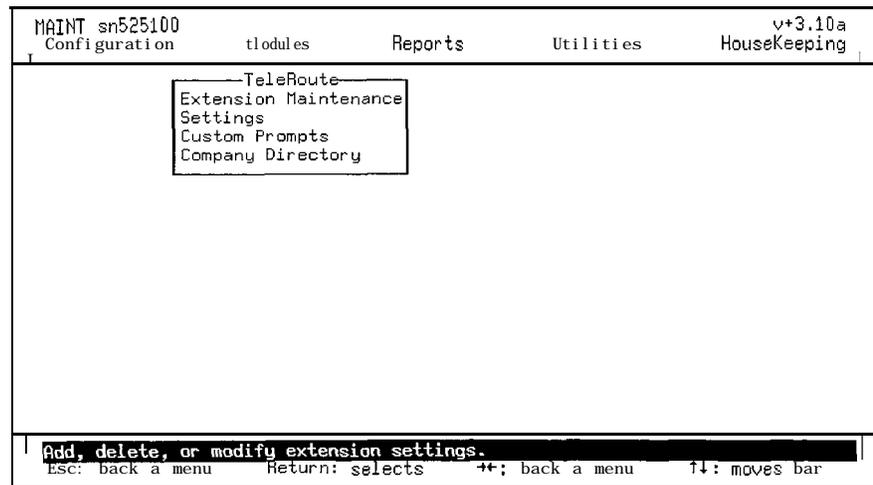
Transfers can also be internal or external, supervised or blind.

- Internal transfer will direct a caller to a specific PBX extension.
- External transfer will route the caller to a phone number outside the PBX. On a supervised transfer, Starplus AVP monitors the call to detect if the extension is busy and to determine if the call has been answered.
- Blind transfer, Starplus AVP transfers the call and turns control over to the PBX.

To enter Auto Attendant, highlight Auto Attendant in the Modules sub menu. The Auto Attendant sub menu will be presented.

- Extension Maintenance
- Settings
- Custom Prompts
- Company Directory

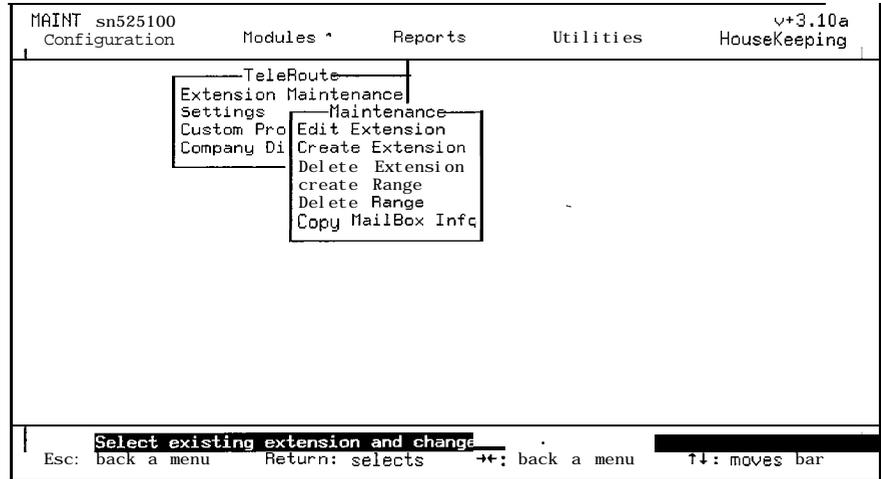
A.



EXTENSION MAINTENANCE

Select Extension Maintenance from the Auto Attendant sub menu and the Mailbox Maintenance menu is presented.

Auto Attendant cannot transfer a call unless all extensions are properly defined. An attempt to transfer a call to an invalid extension will cause Auto Attendant to play the following error message, extension number xxx does not exist.



The first step in defining extensions is to create them. There are three ways to do this:

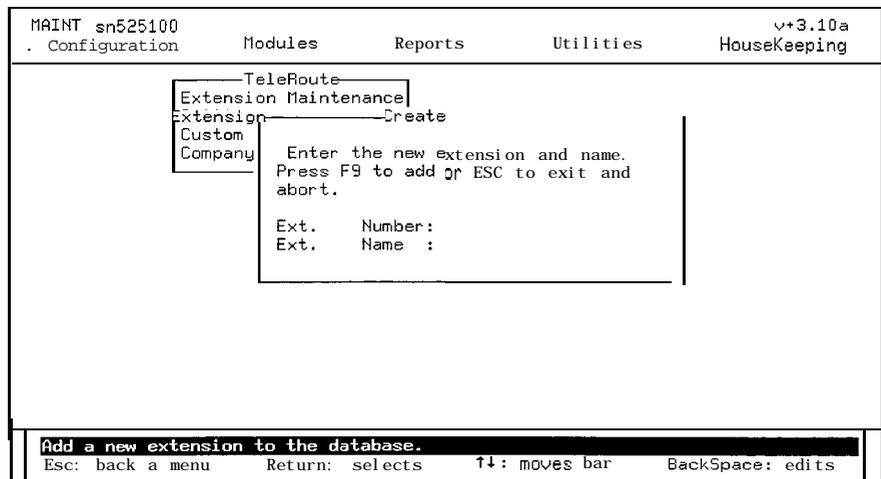
- Create Extension - to create extensions one at a time
- Create Range - to create multiple extensions
- Copy Mailbox Info - to expedite the creation of extensions when Voice Messaging has been installed and there is a correlation between mailbox and extension numbers.

The loading of a *Starplus* phone system will automatically create a range of extensions to match the phone system.

B. CREATE EXTENSION

Create Extension is used to create extensions one at a time. Typically, it is used when an extension is created for a new employee.

To create an individual extension, highlight Create Extension in the Extension Maintenance sub menu and press [ENTER]. The Create Extension data entry screen will be presented.



The following fields must be edited:

- Extension Number - the number of the extension being created.
- Extension Name - the name of the person assigned to the extension number being created.

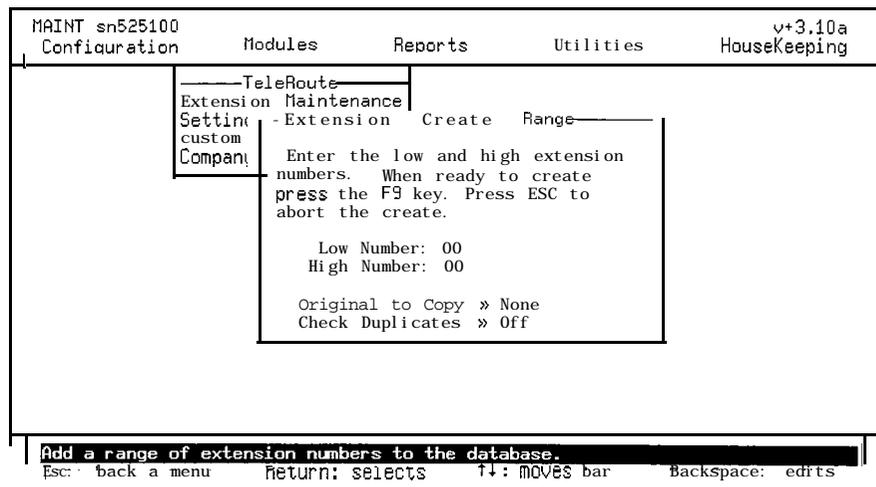
1. Press [F9] to save your entries and exit the screen.
2. Press [ESC] to exit the screen without saving the entries.

In addition, it is possible to create extensions within most of the other Extension Selection Screens. When this feature is available, the procedure is the same as described above..

C. CREATE RANGE

Create Range is used to conveniently create multiple extensions without having to create each individually. To use this function, first create a sample extension which will be used as a template to define the settings and parameter for the range. Create the sample extension with the Create Extension function described above. Then use Edit Extension to define the various parameters and settings that you wish the sample to have.

Select Create Range from the Extension Maintenance sub menu. The Create Range data entry screen will be presented.



1. Position the highlight bar to Low Number and enter the start of the extension range. Then, select High Number to enter the upper limit of the range. Move the cursor into the Original to Copy field and press [ENTER].
2. A list of extensions will appear. Move the highlight bar to select the extension that was created as the sample template and press [ENTER].
If you are initially configuring Starplus AVP, do not use Check Duplicate. This will speed up the creation of the range. However, it is a good idea to use this feature the next time you create extensions. It will prevent any accidental duplication of records.
3. When you are ready to create the range press [F9].

4. Press [ESC] to abort the procedure and return to the previous menu.

D. COPY MAILBOX INFORMATION

The Copy Mailbox Info function automatically copies selected parameters from the mailboxes created in Voice Messaging to the extensions created in Auto Attendant. Parameters that are copied include:

- Mailbox Number
- Name
- Password

The Name and Password fields for each mailbox will be copied exactly as they are entered in Voice Messaging. The transfer of mailbox numbers, however, is subject to certain conditions.

Numbers are copied from right to left. If mailboxes and extensions have an equal number of characters, then the numbers will be identical after they are copied. For example, Mailbox 1310 will be copied to extension 1310. However, if the mailbox numbers have four digits and the extensions have three digits, the number that is transferred will be 310. Conversely, if the mailbox numbers have three digits and the extension numbers have four digits, the number that is copied is 0310.

1. Select Copy Mailbox Info from the Extension Maintenance sub menu. The Copy Mailbox data entry screen will be presented.
2. Highlight Yes and press [ENTER] to copy the mailbox parameters. If you confirm the entry the copy routine will begin, If you do not wish to use this feature, highlight No and press [ENTER].

Note that Copy Mailbox carefully should only be used when your system is being installed for the first time. This selection will expedite the creation of extensions. It is not meant to be used as a day-to-day maintenance routine.

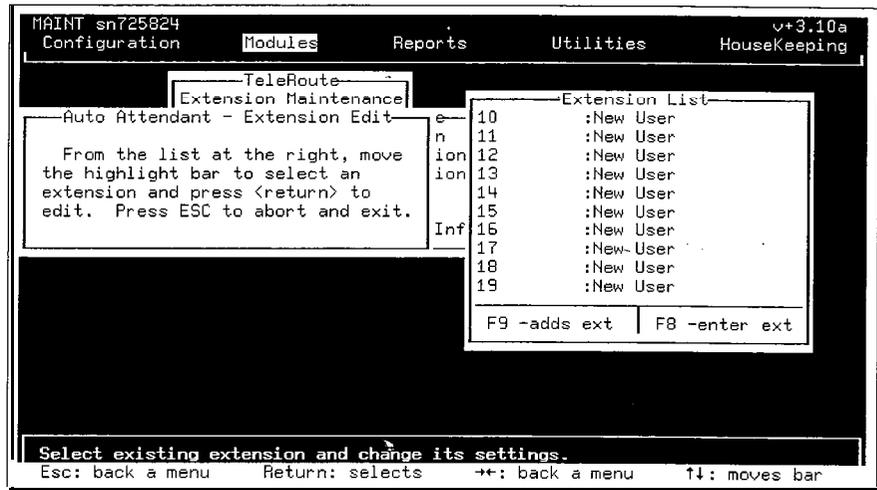
E. EDIT EXTENSION

Edit Extension is used to edit extension features and parameters. In addition to Edit Extension, as described in this chapter, system users are also able to access and edit certain extension features from the dial pad of a touch tone phone. Features that may be edited in this manner include:

- User Password
- Screening
- Holding
- Call Transfer Type
- Extension State
- Timed Settings

For more information about each of these functions please consult the Starplus AVP Users Guide.

Select Edit Extension from the Extension Maintenance sub menu and press [ENTER]. An inset listing of available extensions will be presented.



1. The listing is presented in numerical order.

To find an extension not listed on the initial screen, use either the [Up or Down arrow] keys or the [Page Up or Page Down] keys. Also, you may use the number keys to move through the listing by a percentage amount. For Example, if you are at the beginning of the list and press [6], Starplus AVP will transport you 60 per cent of the way through the list. If you press [3], Starplus AVP will transport you 30 per cent of the way through the list.

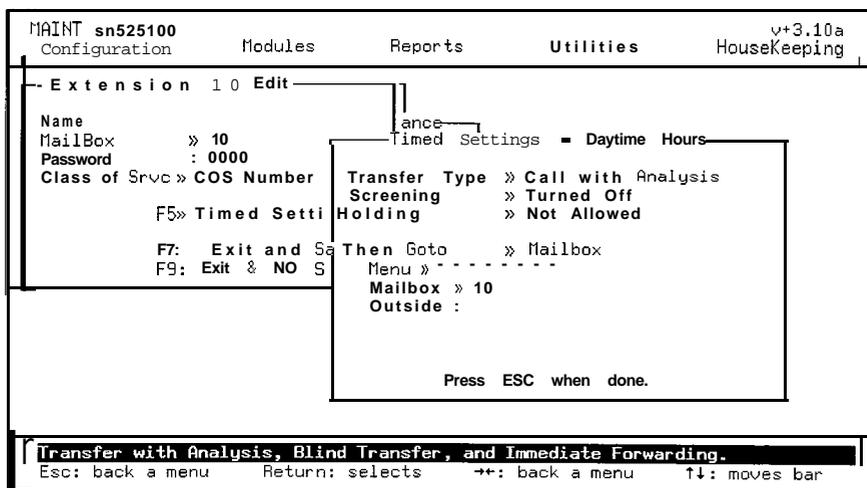
The percentages are all absolute values no matter where in the list you are located. For example, if you are presently 60 per cent through the list and press 3, you will be transported to a location that is 30 per cent through the list.

2. Locate and select the extension that is to be edited. The following menu is displayed:

- Name - enter the name of the person assigned to this extension.
- Mail Box - is the mail box number of this extension. Often this number is directly related to the extension number. For example, extension 310 and mailbox 1310.
- Password - is the number that is entered by the system user to edit various Auto Attendant features. If you have used Copy Mailbox Info to create extensions, the password in each mailbox has been copied to the respective extension.
- Timed Settings - provides four time periods with different call routing instructions. For example, during the day, on no answer, a call might be routed to another extension, while at night it might be routed to a mailbox. Select this feature and the timed settings screen is presented. Starplus AVP allows you to selectively activate extension features by vari-

ous day and/or time settings. The settings are defined as follows:

- Daytime - your office hours as defined by Start of Day and End of Day in Configuration.
 - Evenings - the remaining portion of the day not defined above.
 - Weekends - the period that begins at the close of the business day on Friday and ends at the beginning of the business day on Monday.
 - Special - any day that you specify as a holiday or special event.
 - Copy Daytime - allows you to copy the daytime setting to all time periods. Use this function if your daytime hours are the same for evenings, weekends, and special days or holidays.
3. Select a time and/or day setting and the Timed Settings edit screen will be presented.



The following fields must be edited:

• TRANSFER TYPE

4. Press Enter to select a transfer type that is to be associated with the extension being edited. Three settings are available:
 - With Analysis - allows Starplus AVP to monitor the transfer to determine whether the called extension is busy or is not being answered. On a no answer the call is handled as specified in the Then Goto field (see next section).
 - Blind Transfer - is an unsupervised call transfer where Starplus AVP simply forwards the call to the requested extension. This option is commonly used to transfer to a hunt group or in an environment where you are sure the call will be answered.
 - Immediate Forwarding - is used to forward the call immediately to the action described in the Then Goto field.

• SCREENING

When a caller attempts to dial an extension through Auto Atten-

dant, the Call Screening feature prompts him for a name. This information is then given to the called party before the call is actually transferred. The called party can either accept or reject the call.

If the call is rejected, it can be directed to a mailbox, another extension, or to a menu. The called party will hear: **Starplus AVP**, you have a call from callers name. Press 1 to accept the call. Press 2 to hear message again. Press 3 to reject”.

5. Press [ENTER] to select a call screening mode. Two settings are available:
 - On - if set to On **Starplus AVP** will announce the caller's name. The called party has the opportunity to either accept or reject the call.
 - OFF - if set to Off all calls to a specific extension are unannounced.

. HOLDING

This feature gives the caller the option of holding on the line in the event the called party is busy. The caller hears the following prompt: I'm sorry, extension's name is busy. If you would like to hold press 1. To try another extension or leave a message for this extension, press 2.

6. Press [ENTER] to determine if this extension allows a caller to hold if extension is busy. Two settings are available:
 - Allowed - caller can elect to Hold if the extension is busy.
 - Not Allowed - caller is not allowed to be placed on Hold.

THEN GO TO

7. Press [ENTER] to specify how a call will be forwarded if the called extension does not answer. Five settings are available:
 - Nothing - calls cannot be forwarded. **Starplus AVP** will request the caller to try another extension.
 - Mailbox - calls are forwarded to a specific mailbox. When this function is selected, the specific mailbox to which the call will be transferred must also be entered in the Mailbox field (see below). Usually this is the called extension's personal mailbox.
 - Extension - calls are forwarded to a specific extension. When this function is selected, the specific extension to which the call will be transferred must also be entered in the Extension field (see below).
 - Menu - calls are forwarded to a specific menu. When this function is selected, the specific menu to which the call will be transferred must also be entered in the Menu field. (see below)
 - Number - call is forwarded to a specific outside number. When this function is selected, the specific number to which the call will be transferred must also be entered in the Outside field.

MENU - Press [ENTER] to select a menu that will be played when a call is forwarded to a menu. An inset screen will be presented. Highlight the menu and press Enter.

If you wish to listen to the available menus, you may do so in the **Starplus AVP Recording Studio** (see Recording Studio in the **Utilities** sub menu. If an appropriate menu is not available, one must be created in Menu Routing.

- **EXTENSION/MAILBOX** - Press [ENTER] to select a specific extension or mailbox-to which calls will be forwarded. An inset screen will be presented.

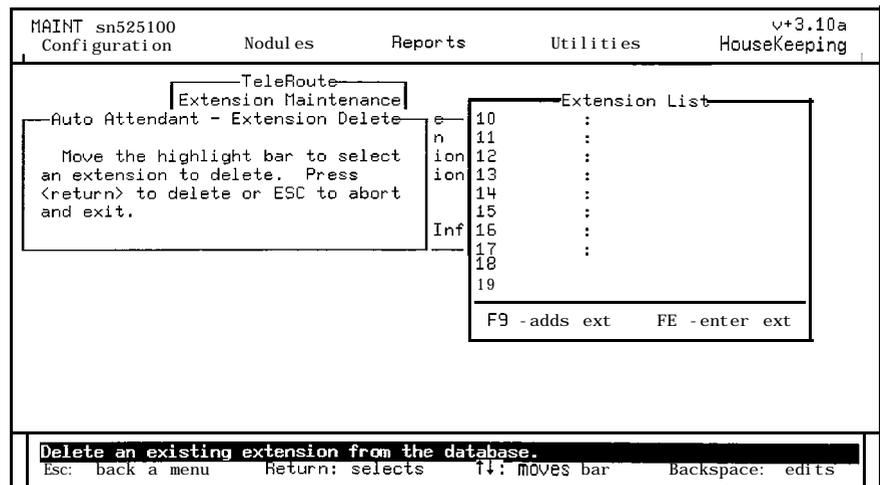
If you are forwarding a call to an extension, the listing will include extension numbers. If you are forwarding a call to a mailbox, the listing will include mailboxes. Highlight the selection and press [ENTER]. This function is used when a person is not at his or her primary extension and wants all calls transferred to a secondary location.

OUTSIDE - Enter an outside number to which calls are to be transferred. This function is used, for example, when a person is out of the office and wants to have calls forwarded.

F. DELETE EXTENSION

Delete Extension is used to delete a specific extension. To use this function highlight Delete Extension from the Extension Maintenance menu. An inset listing of extension numbers will appear.

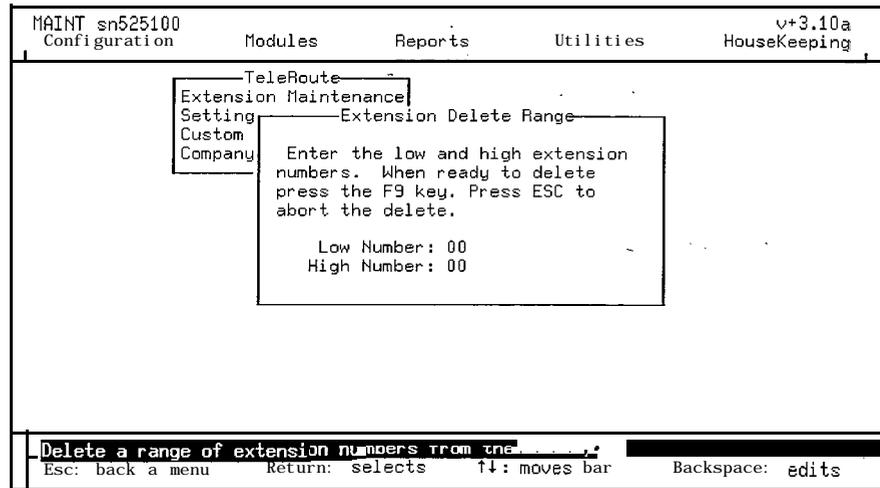
1. Position the highlight bar over the extension to be deleted.



Press [ENTER] to delete the extension. Press [ESC] to abort the delete process.

G. DELETE RANGE

Delete Range is used to delete a range of extensions. To use this function highlight Delete Range from the Extension Maintenance menu. The Delete Range selector screen will be presented.



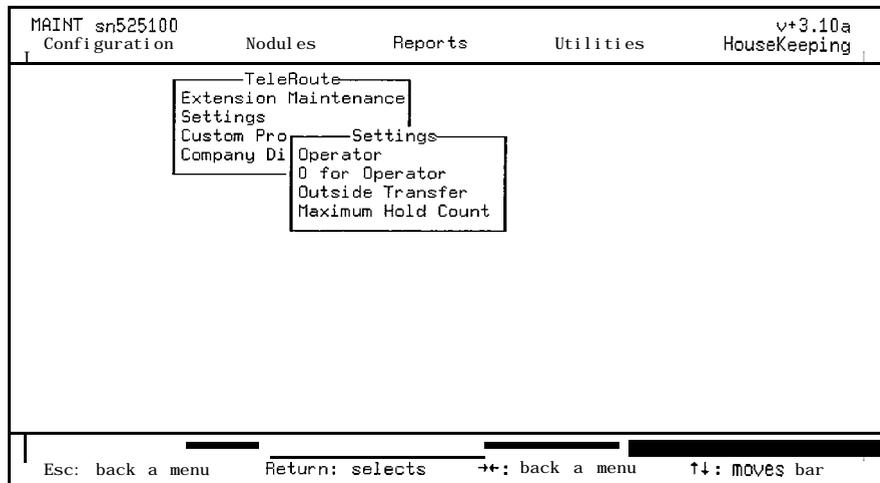
The highlight bar will be positioned over the beginning number of the range to be deleted. Use the backspace key to erase an incorrect entry.

1. Highlight the ending number of the range that you wish to delete and press [F9]. You will be asked to confirm the deletion.
2. Highlight the appropriate response and press [ENTER]. You can also abort the deletion process by pressing [ESC].

620.8 SETTINGS

The settings sub menu contains a number of functions that determine operational characteristics of Auto Attendant.

- Operator
- 0 for Operator
- Outside Transfer
- Maximum Hold Count



A. OPERATOR

Auto Attendant Operator determines whether or not an operator will be used in your Starplus AVP system. If an operator is designated, a time-out or 0 key pad entry will be transferred to the operator. The live operator can then provide caller assistance. If an operator is not designated, an operator assistance call can be transferred to a another extension (see Edit Extension). This extension, in turn, can be configured to present the caller with another menu, perhaps a caller assistance menu with special menu directives. It can also be configured to transfer the assistance call to a special extension where personalized assistance can be provided.

To enter the screen, select Auto Attendant Operator from the Settings menu. The Auto Attendant Operator data entry screen will be presented.

MAINT sr525100 Configuration	Nodules	Reports	Utilities	v+3.10a HouseKeeping
TeleRoute	Extension Maintenance	Settings	operator	operator currently set to:
Settings	Operator	Operator	0	
Custom Pro	0 for Op	Pick from List		
Company Di	Outside	Transfer to '0'		
	Maximum	No Operator		
Select the operator extension from list of extensions. Esc: back a menu Return: selects ++: back a menu ↑↓: moves bar				

Three options are available:

- **Pick From List** - if you wish, you can designate any extension in your system to receive operator assistance calls. You must have previously defined the extension that you will use for this purpose (see Create and Edit Extension in the Menu Routing sub menu).
To select this option, move the highlight bar to Pick From List and press [ENTER]. An inset listing of extensions will be presented. Move the highlight bar to the extension that you want your operator assistance calls transferred to and press [ENTER]. Your selection will have been made and you will be returned to the Voice Messaging Settings sub menu.
- **Transfer To 0** - if you select Transfer To 0, Starplus AVP will transfer all operator assistance calls to the operator. To select this option, move the highlight bar to Transfer To 0 and press [ENTER]. The option will be selected and you will be returned to the Voice Messaging Settings sub menu.
- **No Operator** - the No Operator option tells Starplus AVP that your system has no operator.
o select this option, move the highlight bar to No Operator

and press [ENTER]. The option will be selected and you will be returned to the Auto Attendant Settings sub menu.

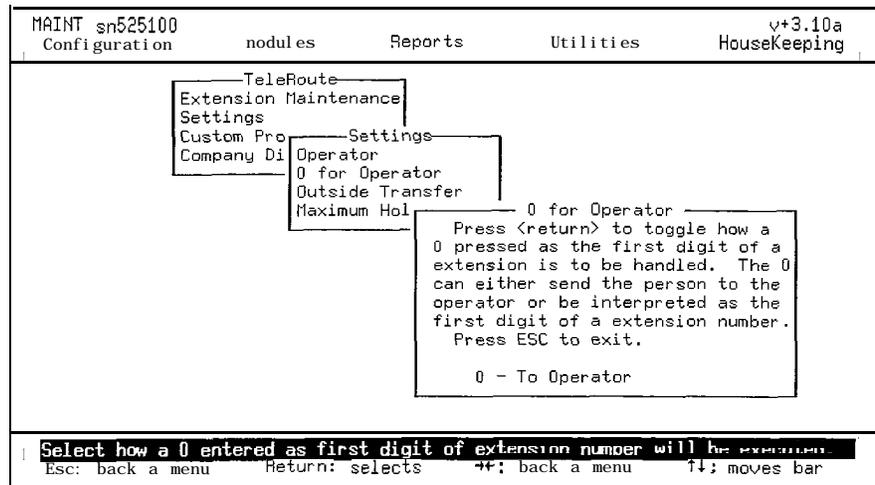
B. 0 FOR OPERATOR

0 for Operator defines how Starplus AVP will process an extension entry that begins with 0.

If you define 0 as the operator setting, callers will be transferred to the operator if they press. If you define 0 as the first extension digit, operator assistance will not be provided and Starplus AVP will interpret all 0 entries as the first digit of an extension.

It is recommended that 0 be used for operator assistance and that the first digit of your system's mailbox settings begin with 1.

To select this function, highlight 0 For Operator in the Auto Attendant Settings sub menu and press [ENTER]. The 0 For Operator data entry screen will be presented and the current settings displayed.

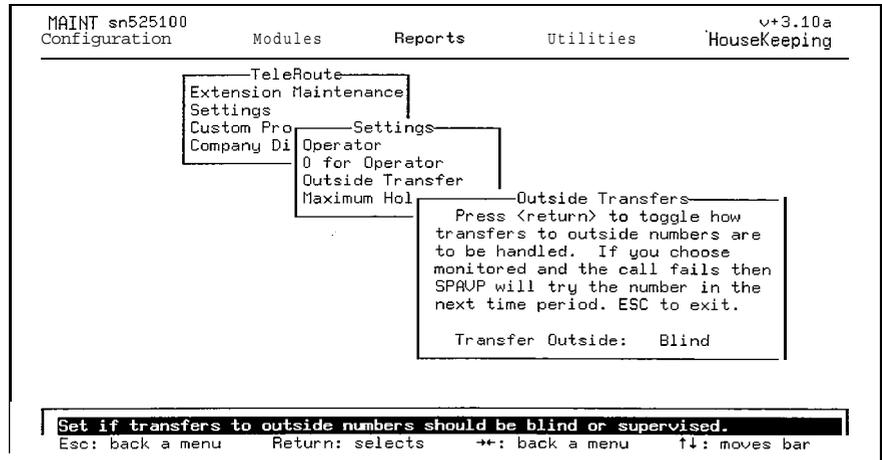


1. Press [ENTER] to select either of the alternative settings:
 - To Operator - select this option if you want the caller to be sent to the operator after pressing
 - First Extension Digit - to designate 0 as the first digit of an extension number.
2. Press [ENTER] to change the current setting. Press [ESC] to save the setting and exit the screen.

C. OUTSIDE TRANSFER

When properly configured, **Starplus AVP** can be set up to call forward an internal extension transfer to an outside phone number. This feature, however, allows **Starplus AVP** to try a secondary outside forwarding number in the event a call transfer is not completed because the first outside number called was busy or went unanswered.

To select the Outside Transfer function, highlight Outside Transfer in the Settings sub menu and press [ENTER]. The Outside Transfer screen will be presented.



1. Press [ENTER] to select either setting:
 - **Monitored** - **Starplus AVP** will monitor an outside call transfer. If the call is not completed, **Starplus AVP** will attempt to transfer the call to a secondary number.

IMPORTANT!

To monitor an outside transfer, the extension from which the transfer is made must be correctly configured. This is done from the Edit Extension data entry screen. The Transfer Type for the extension must be set to either Call Analysis or Immediate Forwarding. Then **Goto** must be set to Number. Enter the number where calls should be forwarded in the Outside field.

If the transfer cannot be completed, either because it is busy or because it has gone unanswered, **Starplus AVP** will try a second number. The phone number it dials is the one, if any, that is set in the subsequent time setting. If your first forwarding number is entered as a Daytime setting, the second will be taken from the Evening setting.

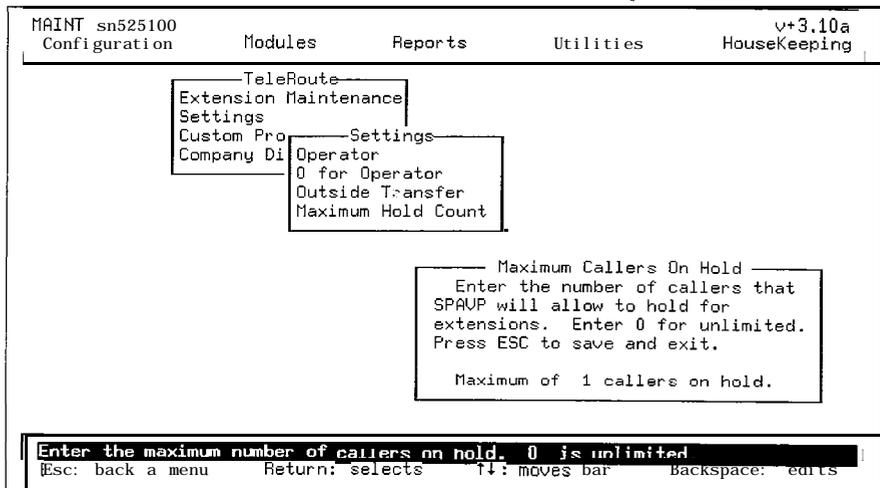
- **Blind** - **Starplus AVP** will pass control of an outside transfer back to the PBX for completion. The PBX then becomes responsible for call handling as **Starplus AVP** loses control over it.

IMPORTANT!

For **Starplus AVP** to function properly on a blind transfer, the extension from which the transfer is made must be correctly configured. This is done in the Edit Extension data en-

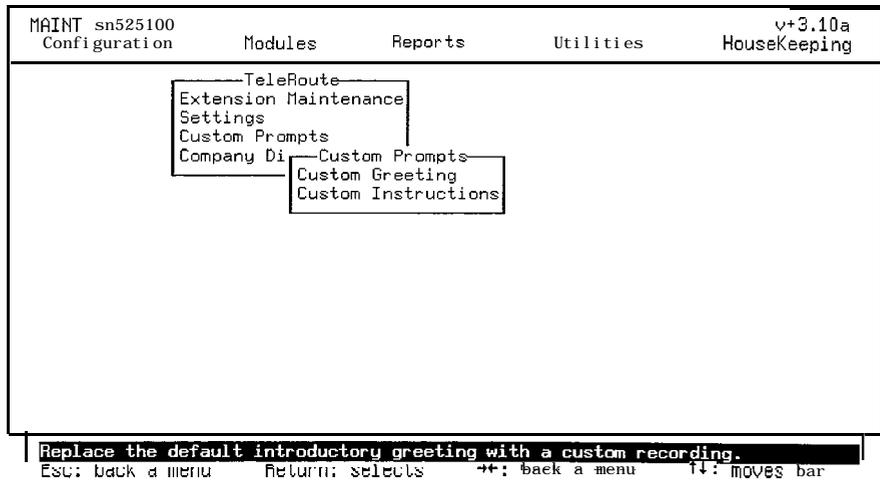
- try screen. Transfer Type must be set to Blind Transfer and Outside must contain a forwarding number.
- 2. After the selection has been made press [ESC] to exit the screen and save your entry.
You will be returned to the Auto Attendant Settings sub menu.

D. MAXIMUM HOLD COUNT This determines how many callers that **Starplus AVP** will allow to hold for one extension. Use the arrow keys to increase or decrease the value from 0-9. 0 represents an unlimited amount of callers.



620.9 CUSTOM PROMPTS

To enter this sub menu select Custom Prompts from the Auto Attendant sub menu.



The Custom Prompts sub menu is divided into two sections:

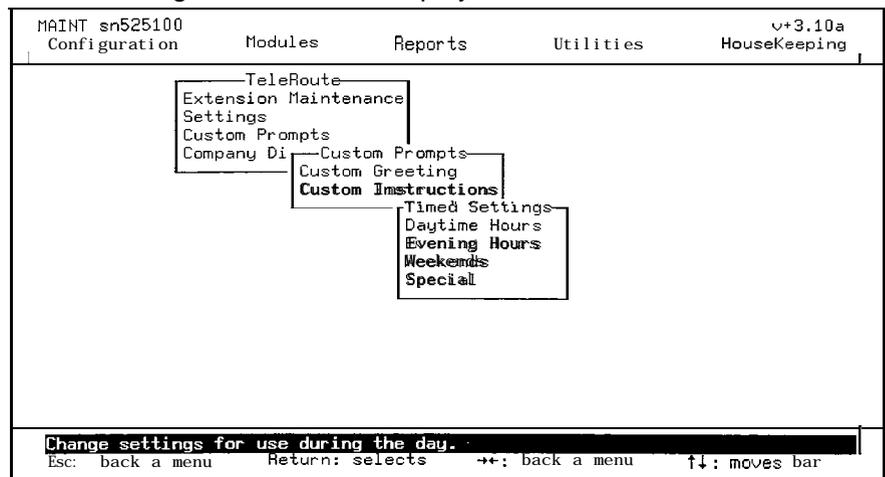
- Custom Greeting - is a message that is played when the call is answered. The greeting is usually activated when Auto Attendant is the primary or only module on a channel. For example, "Thank-you for calling Vodavi Communications Systems...".
- Custom Instructions - is the message that tells the caller how to use the system. For example, "Enter the extension number of the person you are trying to reach...".

When a call is answered the custom greeting is played immediately, followed by the custom instruction. Use this selection to set up a personalized system prompt for your company.

If the caller does nothing, he is transferred to the operator. If the caller enters an invalid key, the Custom Instruction is replayed.

A. RECORD CUSTOM GREETING

Select Custom Greeting from the Custom Prompts sub menu. The Timed Settings sub menu is displayed.

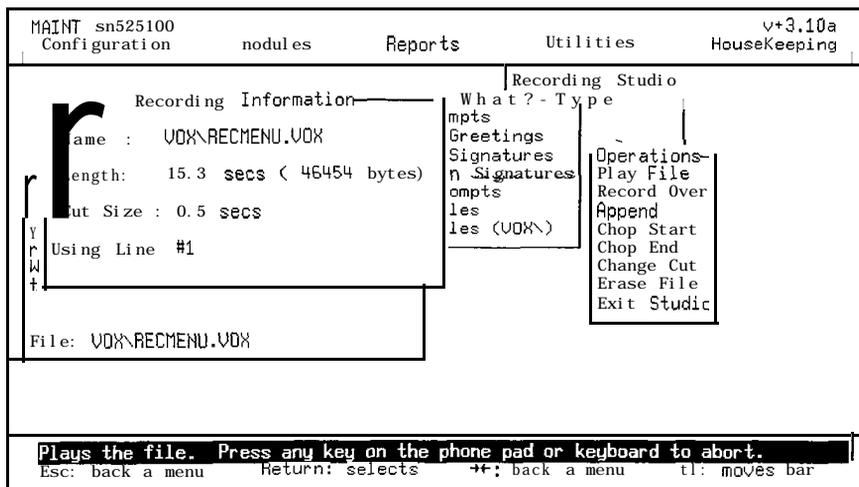


Starplus AVP allows you to selectively record custom greetings by various day and/or time settings. The settings are defined as follows:

- Daytime - your office hours as defined by Start Of Day and End Of Day.
- Evenings - the remaining portion of the day not defined above.
- Weekends - the period of time that begins at the close of the business day Friday and ends at the beginning of the business day on Monday.
- Special - any day that you specify as a holiday or special event.
- Copy Daytime - allows you to copy the daytime setting to all time periods. Use this function if your daytime hours are the same for evenings, weekends and special days or holidays.

You will probably want to record the daytime greeting first. After this has been completed, record the evening greeting, the weekend greeting, and then the special or holiday greeting.

1. Select a time or day setting for which to record a custom greeting.
 2. Using the telephone, dial the extension of any line connected to the Starplus AVP system.
- Once the connection has been made the Recording Studio data entry screen is presented.

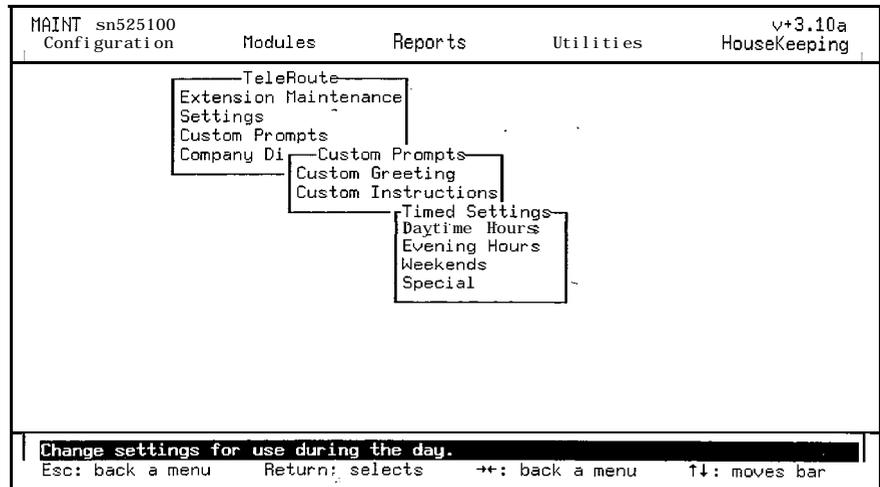


Choose any of the Recording Studio functions to record or change voice prompts:

- Play File - plays the current file.
- Record Over - erases the file and re records.
- Append - adds a new recording to the end of the existing file.
- Chop Start - cuts from the beginning of the prompt, an amount equal to the Cut Size. The Cut Size is displayed in the Recording Information box.
- Chop End - same as above but chops end.
- Change Cut - changes the cut size. Use the cursor keys to increment of decrement this value. Press Enter after value has been selected.
- Erase File deletes the prompt completed. Once erased it is not recoverable.
- Exit Studio - hangs up the line and exits.

B. RECORD CUSTOM INSTRUCTIONS

Select Custom Instructions from the Custom Prompts sub menu. The Timed Settings sub menu is displayed.

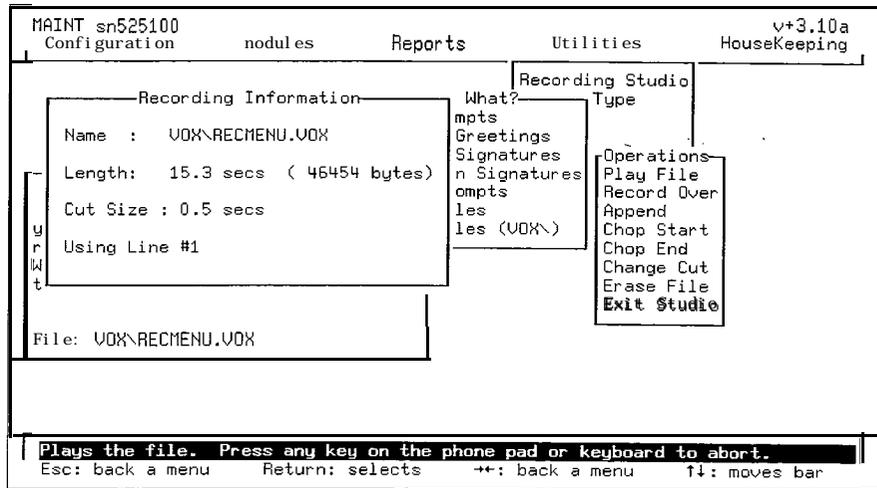


Starplus AVP allows you to selectively record custom instructions by various day and/or time settings. The settings are defined as follows:

- Daytime - your office hours as defined by Start Of Day and End Of Day.
- Evenings - the remaining portion of the day not defined above.
- Weekends - the period of time that begins at the close of the business day Friday and ends at the beginning of the business day on Monday.
- Special - any day that you specify as a holiday or special event.
- Copy Daytime - allows you to copy the daytime setting to all channels and time periods. Use this function if your daytime hours are the same for evenings, weekends and special days or holidays.

You will probably want to record the daytime instructions first. After this has been completed, record the evening instructions, the weekend instructions, and then the special or holiday instructions.

1. Select a time and/or day setting for which to record a custom instructions.
2. Using the telephone, dial the extension of any line connected to the **Starplus** AVP system.
Once the connection has been made the Recording Studio data entry screen is presented.



Choose any of the Recording Studio functions to record or change voice prompts:

- Play File - plays the current file.
- Record Over - erases the file and re records.
- Append - adds a new recording to the end of the existing file.
- Chop Start - cuts from the beginning of the prompt, an amount equal to the Cut Size. The Cut Size is displayed in the Recording Information box.
- Chop End - same as above but chops end.
- Change Cut - changes the cut size. Use the cursor keys to increment or decrement this value. Press [ENTER] after value has been selected.
- Erase File - deletes the prompt completely. Once erased it is not recoverable.
- Exit Studio - hangs up the line and exits.

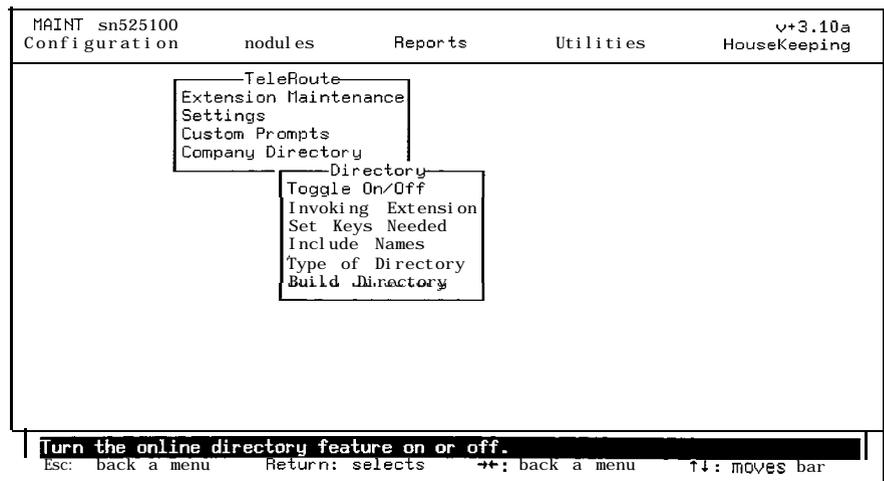
620.10 COMPANY DIRECTORY

The Starplus AVP Company Directory permits a caller to enter the name of the person he is trying to reach when he does not know the extension number. A voice recording will provide the names of all persons whose last names begin with a specific combination of letters entered from the telephone key pad.

A caller accesses directory listings by pressing the dial pad keys that correspond to the person's last name. For example, a caller wants to talk with John Smith but does not know his extension. After he dials the company's number he is presented with a menu. "If you know the extension number of the person you wish to reach enter it now or dial 411 for a company directory". If 411 is pressed, he hears: "Press the keys on the phone that represent the first three letters of the person's last name".

In response to these instructions, our caller would enter 7-6-4 (SMI) on the telephone dial pad. The entry would be terminated by pressing the # key. If there is a single exact match for the entry, Starplus AVP will automatically dial John Smith's extension. If there are several matches, Starplus AVP presents each one until the caller indicates the correct name. When the correct match is made Starplus AVP automatically dials the appropriate extension. The remaining portion of this section describes how to setup the Starplus AVP Directory. To access this function, select Company Directory from the Auto Attendant sub menu. The Company Directory menu will be presented.

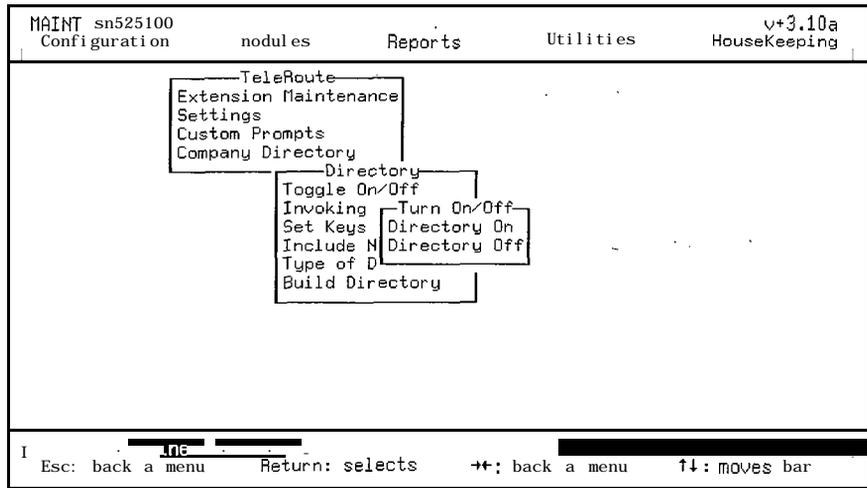
- Toggle On/Off
- Invoking Extension
- Set Keys Needed
- Include Names
- Type of Directory
- Build Directory



If any of the items in the Company Directory sub menu are highlighted in red or are ghosted, the directory needs to be activated (see next section).

A. TOGGLE ON/OFF

To activate the Company Directory, highlight Toggle On/Off in the Company Directory sub menu and press [ENTER]. The Toggle On/Off screen will be displayed.

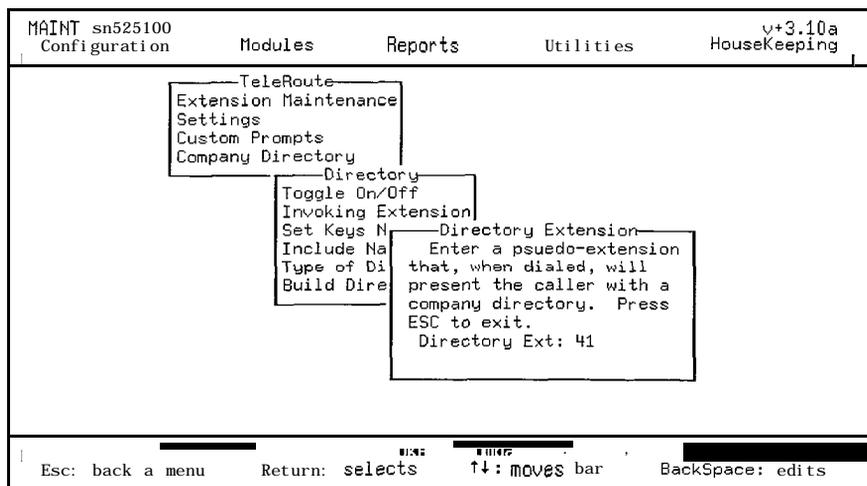


1. Highlight Toggle On and press [ENTER].
The Company Directory sub menu will be presented and you will have access to the other Starplus AVP Directory menu items.

B. INVOKING EXTENSION

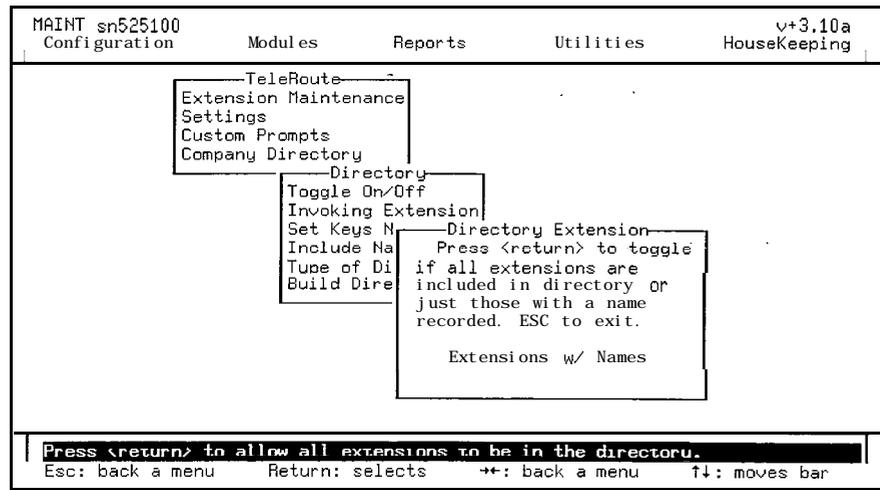
This setting defines the sequence of keys that a caller must press in order to access the Company Directory. The “extension” is really a “pseudo” extension since it is not a physical extension on the PBX but is used only for the purpose of activating the directory. Highlight Invoking Extension in the Company Directory sub menu and press [ENTER]. The Invoking Extension screen will be presented.

1. Enter the extension number that will allow access to the di-



rectory.
Typically, the number is 411, the same used by the telephone company for directory assistance.
Use the backspace key to erase an incorrect entry.

To select either option, highlight Include Names from the Company Directory sub menu and press [ENTER]. The Include Names screen will be presented.



1. Press [ENTER] to change the current setting.
Press [ESC] to save the entry and exit the screen.

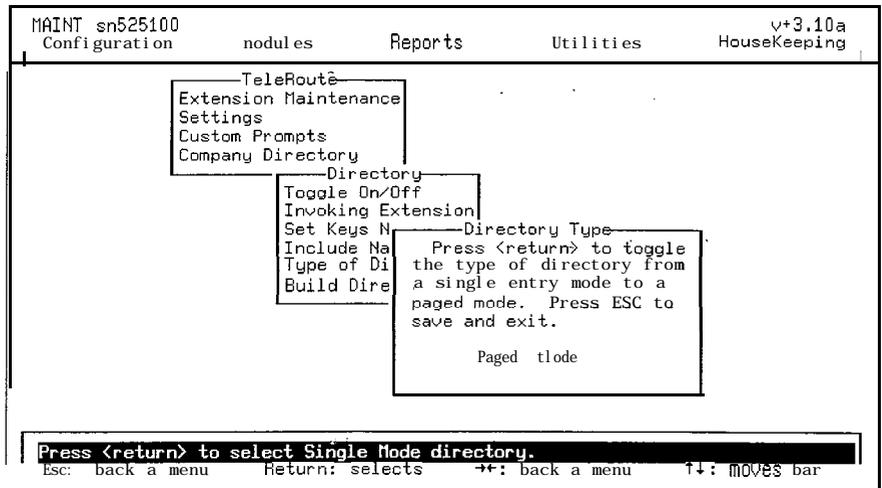
NOTE: that extension names are actually recorded through a mailbox function. To include this feature you must have installed Voice Messaging.

E. TYPE OF DIRECTORY

This function determines what the caller will hear when there is more than one name in the directory that matches the caller entry. There are two formats:

- Single Mode - each name that matches the selection criteria will be presented individually. The caller must accept or reject the selection as it is presented.
For example, Starplus AVP says the first directory listing and then the following options: "Press 1 for Bill Roberts at extension ???, otherwise press 2." Starplus AVP then says the second directory listing and the following option: "Press 1 for Bob Scott at extension ???, otherwise press 2". This continues until the caller has selected an extension or until all matches have been exhausted.
- Paged Mode - all names matching the selection criteria are presented as a single page. The caller presses the appropriate dial pad key that corresponds to the name he is searching for.
For example, Starplus AVP says up to nine directory listings as a single page and then the following options: "Press 1 for Bill Samuals at extension ???, press 2 for John Sims at extension ???, press 3 for John Smith at extension ???...."

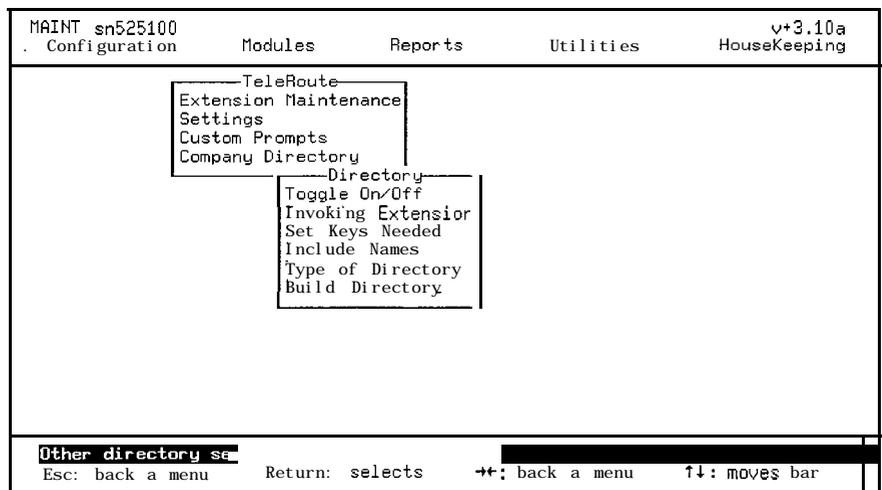
To select this function, highlight Type Of Directory from the Company Directory sub menu and press [ENTER]. The Type Of Directory data entry screen will be presented.



1. Press [ENTER] to change the existing condition. Press [ESC] to save the entry and exit to the Company Directory sub menu.

F. BUILD DIRECTORY

When you have completed configuring your Company Directory, select this function to build the directory data base. Highlight Build Directory in the Company Directory sub menu and press [ENTER]. The Build Directory data entry screen will be presented.



Press [ENTER] again to build the directory. You will be returned to the Company Directory Menu. *Everytime changes are made to the directory this command should be run to update the directory.*

620.11 MENU ROUTING

Menu Routing is used to build multi-level menus that combine other modules and special features to create sophisticated call processing applications. Before going into a detailed description of Menu Routing, two terms must be defined:

- Menu
- Action

A menu is a list of actions that is executed through Touch-Tone keys. For example, Dial 1 for sales. 2 for support. 3 for administration.... A menu can have up to 12 options each one corresponding to a key on a standard telephone keypad plus 1 option for default actions.

An action is a Menu Routing instruction that is selected from the Menu Action List. It tells the system how to respond when a specific key is pressed. An action can invoke another module (for example, transfer the call to another extension through Auto Attendant or bring up another menu through Menu Routing or perform a special feature (for example, play a prerecorded message).

A. PREPARATION

Before you attempt to set up a complicated, multi-level menu, you need to read this section of the manual first. It is important that you understand the mechanics of building a Menu Routing menu. Next, draft your ideas on a piece of paper. If you can, prepare a draft flow chart to define your ideas. If your ideas are not yet sufficiently organized to do this, jot them down on a piece of paper. Don't worry about a specific order, at this stage it is more important to document your thoughts on paper so that alternatives won't be forgotten. The flow chart below outlines the design of a multi-level menu. Obviously, your drawing will depend on your application and does not need to be as detailed. However, try to put your concept in print so you have a blueprint that can be used to build your system.

To facilitate the create of the menus use a form like the one below.

MENU ROUTE DATABASE FORM

Menu Name _____

PROMPTS

Introduction _____ .Hxx

Description _____ .Mxx

Instruction _____ .Ixx

Password _____

KEY ACTIONS

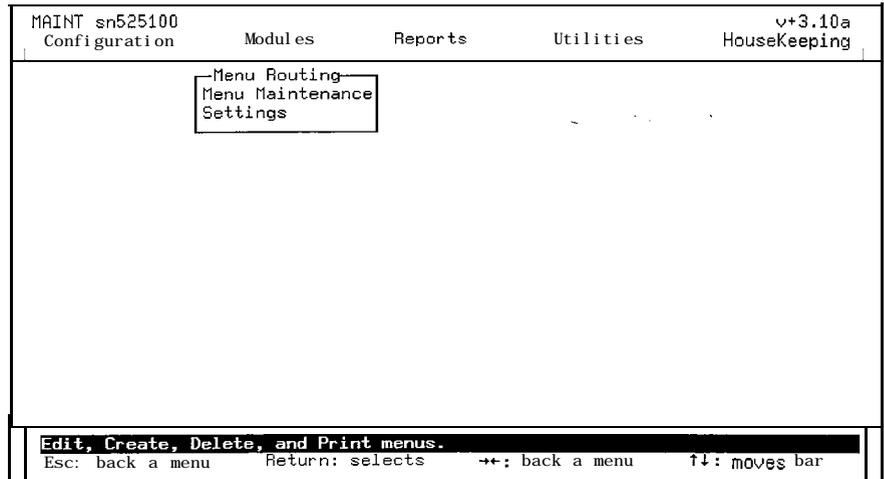
1	_____	6	_____
2	_____	7	_____
3	_____	8	_____
4	_____	9	_____
5	_____	0	_____
#	_____	*	_____

Time Out _____

It is a replica of what you will see when you edit your Menu Routing menus. Again, the idea is to put your thoughts on paper first. When you make mistakes, they can be easily changed.

You will build and define menus from the Edit selection.

Highlight Menu Routing in the Modules sub menu and press [ENTER]. The Menu Routing sub menu will be presented.



- Menu Maintenance - is used to create, delete, or edit menus
 - Settings - is used to define the timers and counters that reset the menu state in the event of a caller time-out or series of incorrect dial pad entries.
1. When you enter the menu, Menu Maintenance will be highlighted. Press [ENTER] again to display the Menu Routing Maintenance menu.

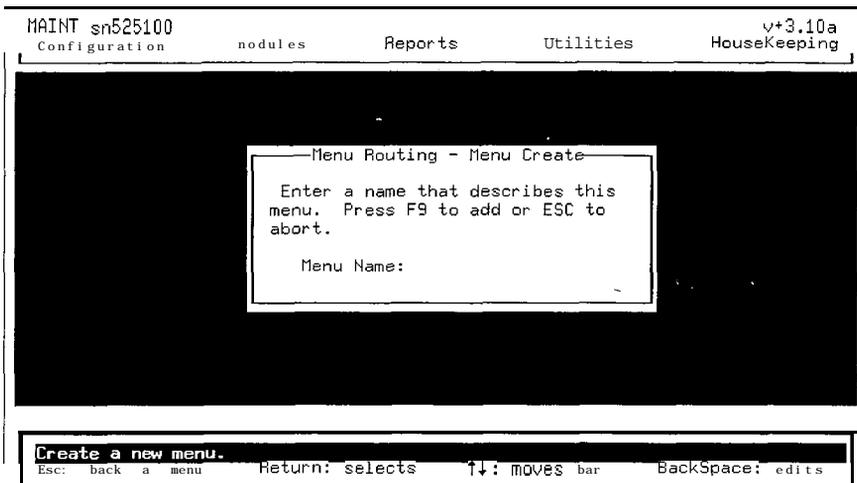
Three maintenance options are available:

- Edit Menu - is used to edit a new or existing voice menu
- Create Menu - is used to create a new voice menu
- Delete Menu - is used to delete an existing voice menu

As with the other Starplus AVP modules, you must first create a menu before you can edit it.

B. CREATE MENU

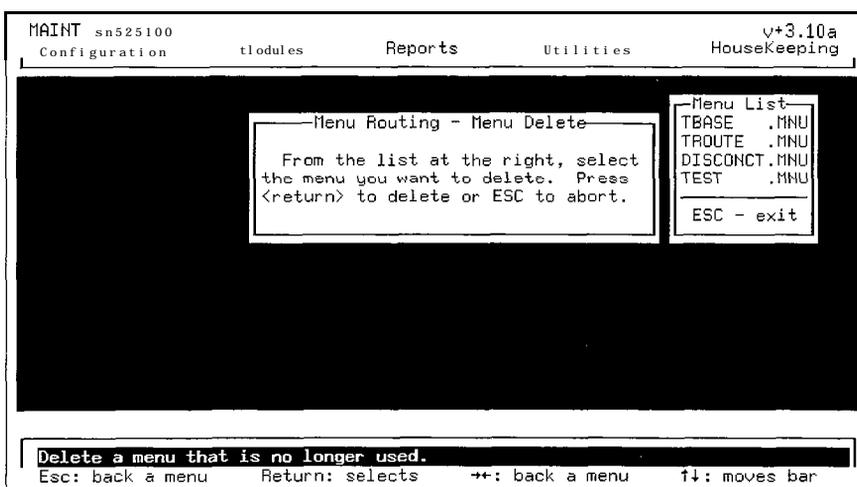
Select Create from the Menu Maintenance menu and the Create data entry screen will be presented.



1. Enter up to eight characters that describe the menu. The name should be descriptively recognizable so that later you can select it from a list and know what its about without looking at it.
For example, a menu that will be used as an introduction when a call is first answered might be called INTRO, FIRST, or LEAD-MNU. Note that all menus are automatically assigned a .MNU DOS extension. Also, any spaces are converted to underscores.
2. After pressing [F9] you will be put into the edit screen. See EDIT MENU in this section.

C. DELETE MENU

If you want to remove a menu that is no longer needed use the Delete option.

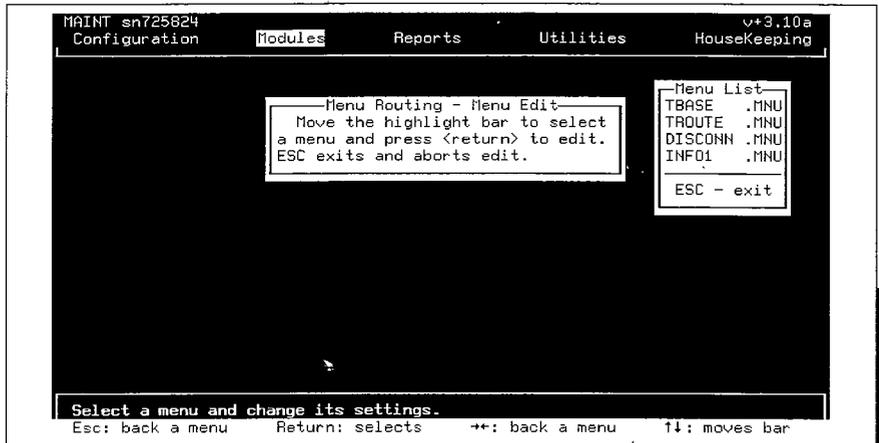


1. Select Delete from Menu Maintenance and an inset listing of existing menus will be presented.
2. Move the highlight bar to select the menu that is to be deleted and press [ENTER].

D. EDIT MENU

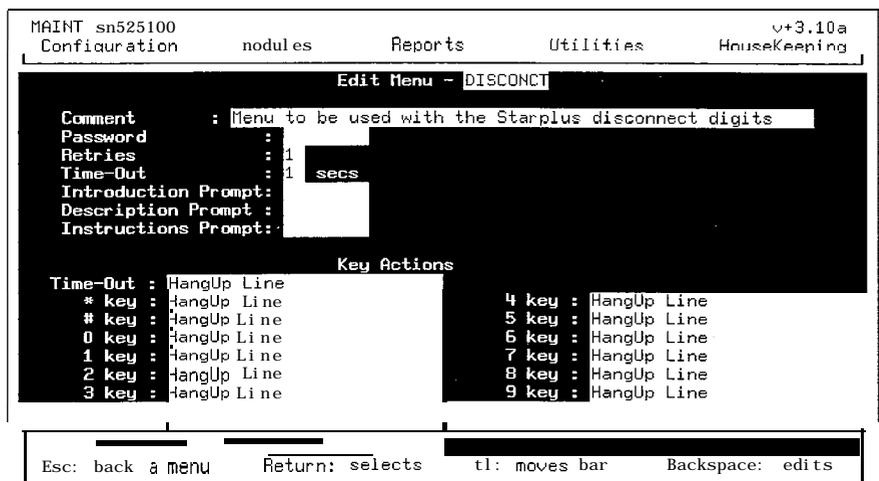
Be very careful with this option. Once a menu is deleted it is no longer recoverable.

The Edit function is used to edit both new and existing menus. To display the Edit screen select Edit from Menu Maintenance. An inset listing of existing menus will be presented.



1. Highlight the menu that you wish to edit and press [ENTER]. The Edit Menu screen will be presented. If it is a new menu being edited, the data entry fields will be blank. If it is an existing menu, entries will already be provided.

The Edit screen is made up of several sections. At the very top of the screen is the name of the menu. Below this, the comment line is used to enter a remark. This is usually a brief statement as to the purpose of the menu. For example, description of product information or transfers of bank funds. It might also be used to remind yourself of a special message like need to complete this by Tuesday.



Below this, Previous Menu lists the menu that calls up this one (if there is one).

2. Press [ENTER] to select from a list of menus. If the menu does not yet exist, you can Create it by pressing

[F9]. Otherwise, move the highlight bar to select the menu and press Enter. [ESC] aborts the entry.

Next, is the Prompts field. Each menu has three special voice files:

- Introduction is played only once; when the caller enters the menu and it is always played first. The introduction is often a greeting or special message. For example, Thank-you for calling The Corner Grocery..

- Description sometimes contains special information, but usually is the main topic of the menu. It is played right after the Introduction.

An example of a special message that changes regularly might be, Don't miss our special of the week; turkey cutlets for twenty five cents a pound..

An example of a main topic is a product description. Assume there is a previous menu that says, Dial 1 for information on product A, dial 2 for information on product B.... The information on product A would be recorded in the Description prompt.

- Instructions - includes the basic instructions on how to use this menu. This file is always played right after the Description.

For example, Please dial 1 for administration, 2 for support, 3 for instructions or stay on the line and an operator will be with you momentarily. Almost all menus have Instructions. Usually the first menu in a multi-level structure has an Introduction and Description. However, It is not mandatory to have these prompt files and their existence is dependent on the application design.

3. Move the highlight bar to Prompts and press [ENTER] to select from a list of previously created voice prompts.

If the prompt file has not yet been created do the following:

- Press [F9]
- Enter the name of the file and press [ENTER]. (Use a descriptively recognizable name.)

Select Record Over from the Operations list and follow the screen directions. (See **Utilities\Recording Studio** for complete instructions).

Note that all Introduction prompt files have an Hvx DOS extension, Description files have Mvx, and Instructions have Ivx.

The bottom part of the screen is concerned with Key Actions.

E. KEY ACTIONS

Key actions define the response that is invoked when a particular key is selected.

Note! There is a field for each dial-pad key and a special field labeled time-out. The time-out field is used to describe what happens when the caller fails to do anything.

To define an action, move the highlight bar to select the key and press [ENTER]. The following menu is displayed:

```

MAINT sn525100          v+3.10a
Configuration          Modules   Reports   Utilities   HouseKeeping

Edit Menu - TEST

Comment      : !! New Menu - Insert a comment that describes this menu
Password     : 2275
Retries      : 3
Time-Out     : 3 secs
Introduction Prompt:
Description Prompt:
Instructions Prompt:

Key Actions

Time-Out : Invalid Key
* key : Invalid Key      4 k
# key : Invalid Key      5 k
0 key : Invalid Key      6 k
1 key : Invalid Key      7 k
2 key : Invalid Key      8 k
3 key : Invalid Key      9 k

Menu Action
Run Another Menu
Auto Attendant
Voice Messaging
Custom Modules
Hangup the Line
Play Description
Play Instruction
Say a Message
Disable Key
Invalid Key
To Operator
Record Prompts
Change Language

Select a menu
Esc: back a menu      Return: selects      ++: back a menu      ↑↓: moves bar

```

- Move the highlight bar to select an action and press [ENTER]. A description of the action appears next to the key.
 - Run Another Menu - executes the menu selected.
 - Auto Attendant - is used to transfer a call through either a direct transfer, a request for the caller to enter an extension number, or by means of a start key. If you select Auto Attendant, 3 transfer options will be presented:
 - Direct Transfer** - select this option to automatically route a caller to a specific extension. Choose the appropriate extension from a listing of extensions that is presented when the option is entered.
 - Request Extension** - choose this option when you want Starplus AVP to request that the caller enter a specific extension to which the transfer is to be made.
 - Start Key** - choose this option to designate a specific key to be the beginning digit of an extension number. For example, if all of your office extensions begin with 1, 2, or 3, you can set these specific keys as start keys. When a caller enters the extension number, Menu Routing will automatically know by the first key pressed that it is an extension and will automatically pass the extension number to Auto Attendant. Your instructions would read Enter the extension of the person you wish to reach or press (for example) 4 for sales,
 - Voice Messaging - is used to record the caller's message by either sending him directly to a default mailbox, requesting him to enter a mailbox number, or by means of a start key. If you select Voice Messaging, 3 transfer options will

be presented:

Direct Transfer ▪ Select this option to automatically route a caller to a specific mailbox. Choose the appropriate mailbox form a listing that is presented when the option is entered.

Request Mailbox ▪ choose this option when you want Starplus AVP to request that the caller enter a specific mailbox to which the transfer is to be made.

Start Key ▪ choose this option to designate a specific key to be the beginning digit of an mailbox number. For example, if all of your office mailboxes begin with 1, you can designate this specific key as start keys. When a caller presses 1, Menu Routing will automatically know by the key pressed that it is a mailbox number and will automatically route the call. Your instructions would read, Enter the mailbox number of the person you wish to reach, or press (for example) 4 for sales

- Other Modules ▪ allows you to select from a list of special modules.
- Custom Modules ▪ other modules that Starplus AVP supports.
- Hang-up the Line ▪ plays the message thank-you for calling, and the caller is disconnected. For example, a menu might include this option at the end of a list, press 1 for sales, 2 for support, #to return to the previous menu, and 9 to disconnect.
- Play Description ▪ replays the Description prompt followed by the Instruction prompt. For example, to listen again to the specials of the week, press 4”.
- Play Instruction ▪ replays only the Instructions prompt. For example, To hear this menu again press *.
- Previous Menu ▪ takes the caller back one menu as specified in the Previous Menu field at the top of the screen.
- Say a Message ▪ can be any type of information. The message is not restricted in recording length. Therefore, it can be a brief description or a lengthy discussion. However, in general, do not record main topics here. That information is reserved for the Description prompt which has greater flexibility.

Note!The Instruction prompt file is always repeated right after the Say message.

- Disable Key ▪ pressing a key with this action has no affect at all. It's as if the key were never pressed.
- Invalid Key ▪ plays the message invalid key, and then repeats the Instructions prompt.
- To Operator ▪ transfer caller to operator by doing a blind transfer to 0.
- Record Prompts ▪ allows caller a caller to re-record prompts for a menu. The caller, after pressing the key associated with this action, is prompted for the system password 2275. The Introduction, Description, Instructions, or

The name of this menu is Product and it is accessed by pressing key #4 from the Intro menu as described on the page before. The Comment field describes the purpose of the menu.

```

MAINT sn525100          v+3.10a
Configuration          Modules      Reports      Utilities      HouseKeeping

Edit Menu - PRODUCT

Comment      : Menu Off of Intro, to provide information on SPAVP.
Password     : 2275
Retries      : 4
Time-Out     : 3 secs
Introduction Prompt:
Description Prompt :
Instructions Prompt:

Key Actions

Time-Out : Send to Operator
* key : Invalid Key
# key : Menu INTRO
0 key : Send to Operator
1 key : Menu SPAVP
2 key : Invalid Key
3 key : Voice Messaging 2000
4 key : Invalid Key
5 key : Invalid Key
6 key : Invalid Key
7 key : Invalid Key
8 key : Invalid Key
9 key : HangUp Line

Select a menu and change its settings.
Esc: back a menu      Return: selects      ↑↓: moves bar      Backspace: edits
    
```

Neither an Introduction prompt nor a Description prompt is needed. There isn't any need for one. The purpose of this menu is to find out what product information the caller is after: Starplus AVP. This is done by Instructions to press the appropriate key.

Note that the # key takes the caller back to the Intro menu.

Key #3 is Voice Messaging followed by a mailbox number. If you look at the previous menu, Key #7 lists Voice Messaging alone. The difference is that the previous menu sends the caller to voice messaging and asks him to enter a mailbox number, while here the caller is defaulted to a specific mailbox.

Key #9 allows the caller to disconnect.

Let's look at a menu on a deeper level.

This menu is called Starplus AVP and it is accessed by pressing #1 from the Previous Menu, Product. This menu is concerned with giving the caller detailed product information on the Starplus AVP line.

There is no Introduction, but there is a long Description. The func-

```

MAINT sn525100          v+3.10a
Configuration          Modules      Reports      Utilities      HouseKeeping

Edit Menu - SPAVP

Comment      : Detailed description of product.
Password     : 2275
Retries      : 4
Time-Out     : 3 secs
Introduction Prompt:
Description Prompt : SPAVP
Instructions Prompt: SPAVP

Key Actions

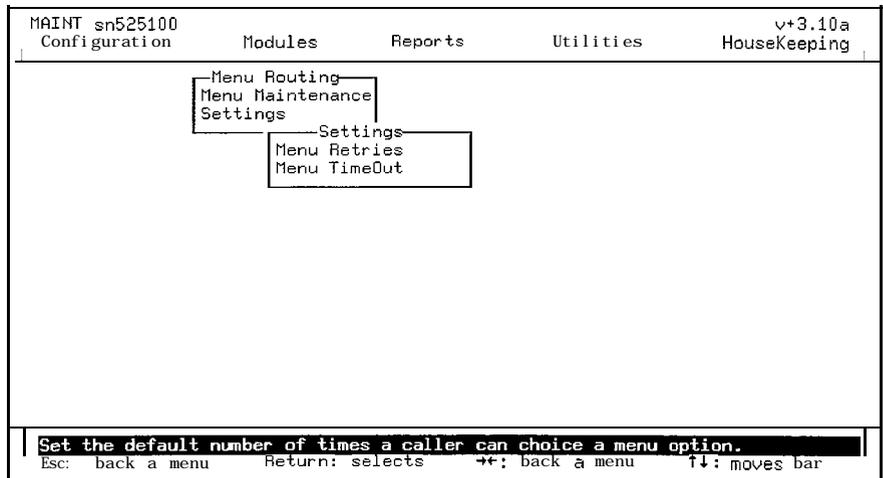
Time-Out : Send to Operator
* key : Play Instruction
# key : Menu PRODUCT
0 key : Send to Operator
1 key : Say SPAVP
2 key : Say SPAVP1
3 key : Say SPAVP2
4 key : Say SPAVP3
5 key : Say SPAVP4
6 key : Say SPAVP5
7 key : Say SPAVP6
8 key : Say SPAVP7
9 key : HangUp Line

Select a menu and change its settings.
Esc: back a menu      Return: selects      ↑↓: moves bar      Backspace: edits
    
```

tion of the Description is to provide a general overview of Starplus AVP. This recording lasts for about two minutes. The instruction prompt tells the caller how to use the menu and, of course, it is played right after the Description. By recording the Description and the Instruction separately, it is possible to replay the instructions without subjecting the caller to the long presentation on Starplus AVP. That's exactly what is accomplished by press the * key. The Say action on keys #1#2, and #4 provides more detailed product information. When Say is activated the associated voice file is played followed by the instructions. It is interesting to note that we could have defined these keys as other Menus and then used the Description prompt to play a message. However, since the instructions for each of those menus would have been the same as this one, we opted to use Say in order to streamline the menu design.

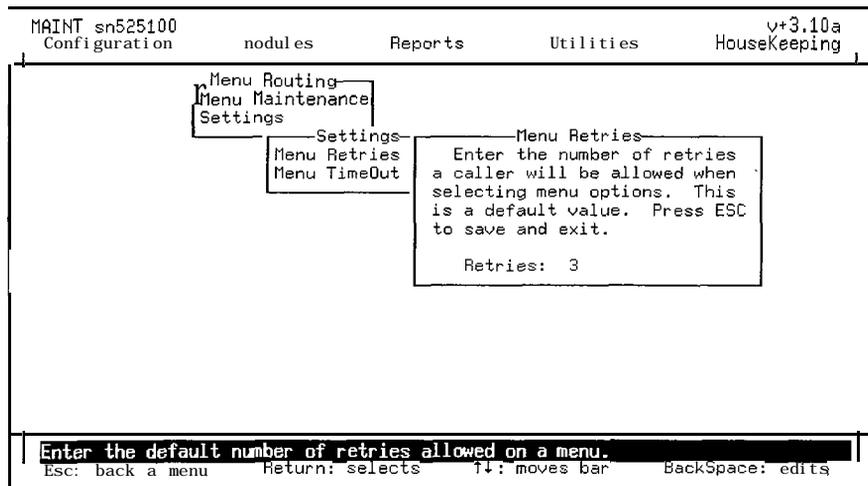
620.12 SETTINGS

Select Settings from the Menu Routing menu to display the following:

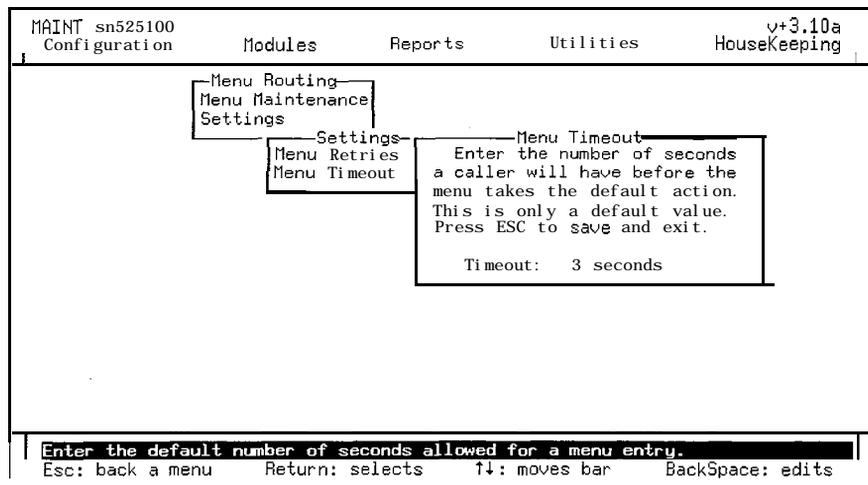


These items are the default values if the retires/time-outs entries on each menu are not entered.

- Menu Retries: is the number of invalid entries allowed for all menus if no retry value is entered on a menu. If this number is reached the following prompt is played, Please call the account supervisor for assistance and the call is disconnected.



- Menu Time-out: is the maximum length of time the caller is allowed to do nothing if no time out value is assigned on the menu. If this value is exceeded, the instructions in the Time-Out key action field are activated.



1. To set the these values, use the cursor **Up/Dn** arrow to increment or decrement the value.
Retry values can be set from 0 to 9 (recommended is 3).
Time-out values can range from 1 to 19 seconds (recommended is 5 seconds).
2. [ESC] exits and saves your entry.
These values are the “defaults” in case the entries on each menu are not entered. If there is a value in a menu, these parameters are not utilized and the menu entry values are used.

A. CANNED MENUS

- Auto Attendant is a canned menu provided with your Star-

plus AVP system. It is used to forward a mailbox or extension number directly to Auto Attendant. You should only use this menu when you want to forward an extension or mailbox to Auto Attendant without specifying an extension. *This menu should not be changed or modified by the user.*

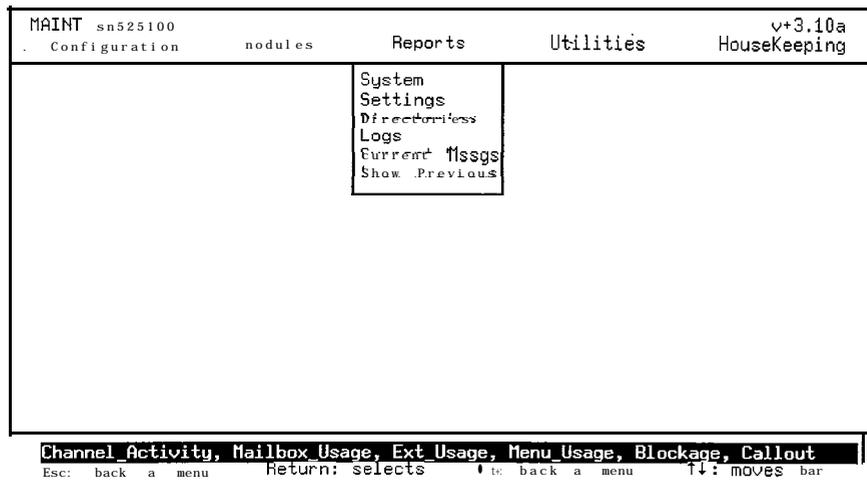
- Voice Messaging ▪ is a canned menu provided with your **Starplus** AVP system. It is used to forward a mailbox or extension number to Voice Messaging. You should only use this menu when you want to forward an extension or mailbox to Voice Messaging without specifying a mailbox. *This menu should not be changed or modified by the user.*

SECTION 630

REPORTS

630.1 INTRODUCTION

The Starplus AVP contains a variety of reports that are used by the systems administrator for diagnostic and information purposes. Reports are divided into five categories:



- System Reports - These reports are concerned with the operation and performance of the system. Data for the reports is condensed and reformatted from the phone log.
- Settings - This set of reports identifies the various Starplus AVP settings that were entered during system configuration. Information is available for mailboxes, extensions, and menu design.
- Message Reports - Message reports provide the system administrator with a means of determining the current status of system mailboxes.
- Directories - Directory reports associate system users with specific mailboxes or extensions.
- Logs - These reports provide system information and error messages. Logs are used as diagnostic tools to trace system activity.

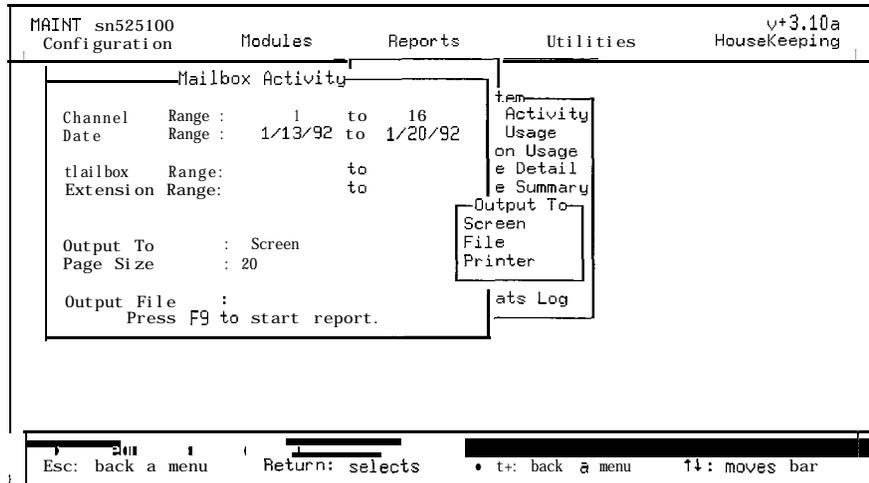
A. RANGE SETTINGS

When you select a report, a range selection window opens up. The window is the same for all the reports even though some range sets are not available for every report. For example, the mailbox range has no purpose and is not used for the Extension Usage report.

Once set, they remain the same until they are changed. The only exception is the date range. Each time you re-enter the Reports menu, it is defaulted to the date limits of the database.

The following describes each range set and its affect:

- **Date Range** - Use this to request the date range of the data you want in the reports. The date range set is available for all reports.
- **Mailbox Range** - applies to the Mailbox Usage report and Mailbox Directory report. If no range is specified, all mailboxes will be assumed.
- **Extension Range** - applies to the Extension Usage report and Extension Directory report. If no extension is specified, all extensions will be assumed.
- **Channel Range** - allows you to specify the range of channels (lines) that are included in the reports. This setting is available for all reports except the directories and menu listings.
- **Sort By** - determines how the Directory, Mailbox, Menu, and Extension Usage reports are sorted. (This feature not used currently).
- **Output To** - is used to direct the output to the screen, printer, or disk. Sending a report to the screen is useful for quickly accessing limited information on a specific extension or mailbox. Sending a report to your printer directs the output to LPT1:. Printing a report to a file causes an ASCII file to be created. You will need to create a print file name.



Both Starplus AVP and Starplus AVP Maintenance will use the DOS print spooler if it is installed. For those systems with Multi-Tasker, we strongly recommend that PRINT.COM be loaded from AUTOEXEC.BAT, either before or after loading D40DRV. This will greatly speed report printing.

- **No Headers** - allows you to specify if headers should be attached to the reports. You may want these removed, especially if the report is directed to the disk.
- **Page Size** - allows you to enter the page dimensions when sending reports to a Printer or the File.
- **Output File** - enables you to enter a specific data file name.

630.2 SYSTEM REPORTS

A. CHANNEL ACTIVITY REPORT

This report displays traffic information. The data is sorted by date and then separated by channel (line). The report includes the calls, time, and average length of call.

The report documents:

- Date - of reporting period
- Line - call came in on
- Calls - received per line per reporting period
- Duration - total time for all calls per line
- Average - average length of call

The first thing you should look for are lines that show extremely low or no traffic. That is, zero number of calls and no duration. This indicates a line that is not being used or is malfunctioning. The integrity of the line should be checked immediately. Often, this report is the only way to quickly verify that lines are functioning properly.

MAINT sn725824		v+3.10a	
Configuration	Modules	Reports	HouseKeeping
3/27/92 to 3/29/92		Report output:	Wed Jan 29, 1992
		Channel Activity	page: 1
			lines: 1 to 4
Date	Line	Calls	Duration
.....		-----	-----
Total for Period: 0 days			
	Total	0	0:00
			0:00

ESC - aborts report

Next, a review of lines with relatively light volume, might warrant their removal. This is especially true if there is more than one such line running the same application. Conversely, if all lines are carrying about the same volume, they may be saturated to the point where additional lines or voice boards are necessary.

The goal is to have just the right number of channels to handle the call volume. Extra lines are wasteful while too few lines prevent the call from being completed.

Next, pay attention to the type of application running on each channel. Then, compare the call volume received to what you have projected. If the volume is less than expected, then perhaps the application structure should be reconsidered.

For example, Line 1 is running Menu Routing with the following menu, Dial 1 for information on our special of the week.... The

number of calls is affected by several factors like promotion, script, and ease of use. The system is simple to reconfigure. Experiment with several menus and ideas to determine which is most efficient.

B. MAILBOX ACTIVITY REPORT

The Mailbox Activity Report provides a statistical evaluation of mailbox activity. The report, sorted by date, documents each mailbox entry.

MAINT sn725024		v+3.10a	
Configuration	Modules	Reports	HouseKeeping
Report Output			
TOTAL	0	0:00:00	Msg Left 0:00:00

The report documents :

- Name - of mailbox owner
- Mailbox - number
- Line - call came in on
- Time - of mailbox entry
- Duration - time between the caller's initial connection to the **Starplus** AVP system and subsequent hang-up after leaving a message or time required for mailbox owner to retrieve messages.
- Message Length - elapsed time of recording
- Activity - is described as either Maint (for message retrieval) or Msg Left (for caller leaving message).

A review of the report indicates the amount of activity that each owner has received. Those with low activity may not fully understand how to use the system and may need more instruction. On the other hand, when disk space is in short supply, persons with high activity should be reminded to remove messages.

Take note of the average length of a call. When the average length approaches the maximum message length, the maximum message length may need to be increased.

This report, sorted by mailbox, can also be used in client bill-back situations like shared tenant environments, executive suites, or hotels. The report can be output to disk and then imported into another billing program.

C. EXTENSION ACTIVITY REPORT

The Extension Activity Report identifies inbound **call** activity to a specific extension. The report is sorted by date and documents each inbound call attempt as well as the result of the call activity.

Configuration	Modules	Reports	Utilities	HouseKeeping
MAINT sn525100 Configuration: Modules Reports Utilities HouseKeeping				
Extension Activity				
Channel Range:	1	to	16	tem
Date Range:	1/13/92	to	1/20/92	Activity
Mailbox Range:		to		Usage
Extension Range:		to		on Usage
				e Detail
				e Summary
Output To	: Screen			Output To
Page Size	: 20			Screen
				File
				Printer
Output File	:			ats Log
	Press F9 to start report.			
Esc: back a menu Return: select.5 →+: back a menu ↑↓: MOVES bar				

The report documents the time that the call was made as well as its duration. Duration is defined as the elapsed time between the initial connection and the subsequent hang-up from the **Starplus** AVP system. In addition, the report documents specific call activity. Possible responses include:

- Answered ▪ call was answered
- No Answer ▪ extension did not answer
- Busy ▪ extension was busy
- Connect ▪ call was connected
- No Ring Back ▪ extension did not respond
- Blind Transfer ▪ call transfer type

The Extension Activity report describes the results of a call transfer initiated by **Starplus** AVP. The call can either be connected or dropped (a dropped call (explained as either a busy or unanswered extension) may actually route to a mailbox, operator, or menu).

A review of the report can help schedule agents or operators more effectively, determine a need for additional phone lines, or identify persons that are missing an excessive number of calls.

D. MENU USAGE - DETAIL AND SUMMARY

The Menu Usage reports (Detail and Summary) identify user traffic within Menu Routing menus. The reports indicate what information callers are most interested in, as indicated by the number of times that specific menus are accessed. Comparing individual menus can help determine how productive the menu is and whether the number of channels that allow access to it are sufficient to support the traffic.

This information may be useful to persons besides the system administrator. For example, with the following menu dial 1 for information on product X, or dial 2 for information on product Y..., the sales manager may be interested in the number of requests for each.

The Menu Activity Detail report documents:

- Date of the reporting period
- Menu being reported
- Time that the menu was accessed
- Duration - time between the caller's initial connection to the Starplus AVP system and the subsequent hang-up after having exited the menu.
- Key Pressed -the caller's key selection while in the menu.

MAINT sn725824		v+3.10a	
Configuration	Modules	Reports	Utilities
		Report	Output
-----	-----	----	-----
TOTRL	=	0	0:00:00

ESC - aborts report

The Menu Activity Summary report documents:

- Date - of the reporting period
- Menu - being reported
- Accesses - the number of times the menus were accessed
- Duration - the total time each menu was being used, as defined by the total elapsed time each caller remained in the Starplus AVP system.

MAINT sn725824		v+3.10a	
Configuration	Modules	Reports	HouseKeeping
Report Output			Wed Jan 29, 1992
Menu Rctiuity- Summary-			page: 1
3/26/92 to 3/29/92			lines: 1 to 4
Date	Menu	Accesses	Duration
Totals		*****	*****
	TOTAL	0	0:00:00

ESC - aborts report

**E. BLOCKAGE REPORT -
DETAIL AND SUMMARY**

The Starplus AVP system administrator can define blockage groups for lines coming into the system. A blockage group is usually made up of several lines that have been configured to handle calls the same way. Once these blockage groups are established, reports can be prepared that display blockage activity.

Two blockage reports are available: Detail and Summary.

The Detail Blockage report displays:

- Date - for which the report has been prepared
- Group - the blockage group
- Time - of each blockage
- Duration - of each blockage

MAINT sn725824		v+3.10a	
Configuration	Modules	Reports	HouseKeeping
Report output			Wed Jan 29, 1992
Blockage Activity- Detail			page: 1
3/26/92 to 3/29/92			lines: 1 to 4
Date	Group	Time	Duration
Totals		-----	-----
	Grand Total	0	0:00:00

ESC - aborts report

A blocked condition means that all channels in the group are carrying call traffic simultaneously. When the system is blocked, the next caller who tries to use the system will hear a busy signal.

Blocking should not occur frequently. If it does, you need to expand your system by installing additional voice cards.

The Blockage Summary report displays a summary version of the detail report. Instead of identifying the specific time of the blockage, it will identify the number of blockage occurrences, and the total duration of the blockages.

The Blockage Summary report displays the following:

- Date - for which the report has been prepared
- Group - the blockage group
- Time - the number of blockage conditions
- Duration - the total duration for all blockages

Date		Group	Time	Duration
3/25/92 to 3/29/92				
Grand Total			0	0:00:00

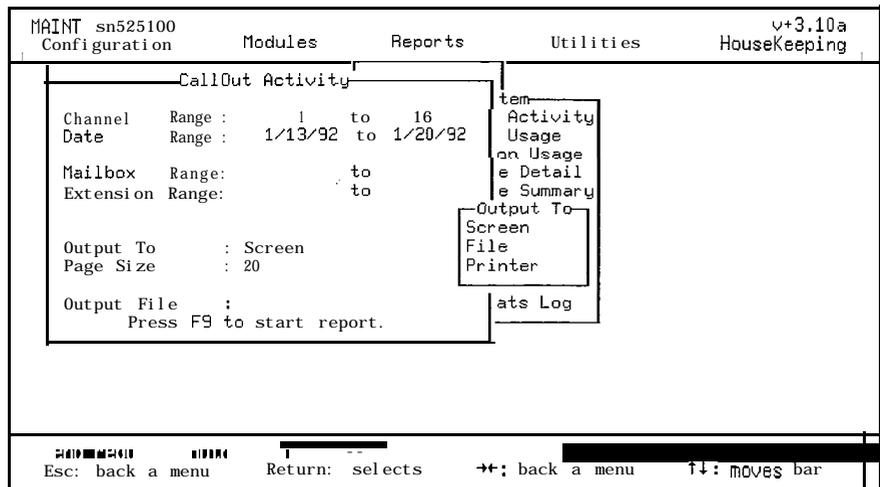
F. CALL-OUT ACTIVITY

The Call-Out report lists all outbound calls made by Starplus AVP. It includes message notification and delivery, but does not include calls made by Auto Attendant for purposes of a call transfer.

This report can be used to verify that the outbound dialing features are functioning properly. It also verifies that the Starplus AVP system has successfully delivered a message.

The Call-out Activity report shows the following:

- Date - for which the report has been prepared
- Name - party to which the extension has been assigned
- Extension - number
- Line - on which the outgoing call was made
- Time-of the outgoing call
- Result - of the outgoing call (Answered, No Answer, Busy, Connect, Blind Transfer)
- Number - to which notification was made



G. NOTIFICATION

Starplus AVP can be configured to notify mailbox owners that messages are waiting for retrieval. If configured to do so, the Notification report displays the results of the notification process.

The report identifies the name of the mailbox owner, the mailbox number, the line that was used to notify the mailbox owner, the time and duration of the notification, as well as the number of tries and the result.

The Notification Activity report displays the following:

- Name - of mailbox owner
- Mailbox - number
- Line - number used for notification
- Time - of notification
- Duration - length of time required
- Try - the specific numbered attempt
- Result - of notification (Answered, No Answer, Busy, Connect, Blind Transfer)
- Number - to which notification was sent

```

MAINT sn525100          v+3.10a
Configuration          Modules  Reports  Utilities  HouseKeeping

Notify Activity
Channel Range:      1      to 16
Date   Hangs:     1/13/92 to 1/20/92
Mailbox Range:      to
Extension Range:    to

Output To      : Screen
Page Size     : 20

Output File   :
Press F9 to start report.

tem
Activity
Usage
on Usage
e Detail
e Summary
Output To
Screen
File
Printer
ats Log

Send report output to the screen.
Esc: back a menu  Return: selects  ++: back a menu  ↑↓: moves bar
    
```

630.3 SETTINGS

A. MAILBOX SETTINGS

The Mailbox Settings report summarizes the configuration of each mailbox in the Starplus AVP system. Each mailbox is identified by owner, the associated extension number, password and class of service. In addition, each mailbox is defined by state and type of notification (both defined in Edit Mailbox/Timed Settings).

```

MAINT sn725824          v+3.10a
Configuration          Modules  Reports  Utilities  HouseKeeping

Report Output
Mailbox Settings      Wed Jan 29, 1992
                      page: 1
                      lines: 1 to 4
3/26/92 to 3/29/92

Name      Mailbox  Extension  Password  Class  State  \ Notify
-----
New User  10         10         0000      00    D    Dn\None
New User  11         11         0000      00    D    Dn\None
New User  12         12         0000      00    D    Dn\None
New User  13         13         0000      00    D    Dn\None
New User  14         14         0000      00    D    Dn\None
New User  15         15         0000      00    D    Dn\None
New User  16         16         0000      00    D    Dn\None
New User  17         17         0000      00    D    Dn\None
New User  18         18         0000      00    D    Dn\None
New User  19         19         0000      00    D    Dn\None
New User  20         20         0000      00    D    Dn\None

Number of Mailboxes: 11

ESC - aborts report
    
```

The following is a list of codes for the State/Notify field:

TIME PERIOD:

- D- Daytime setting
- E - Evening setting
- W - Weekend setting
- H - Holiday setting

STATE:

- Off - Mailbox turned Off
- On - Mailbox turned On
- Grtng - Greeting only, mailbox will not take messages
- FM mbox #- Forward to mailbox
- FE ext # - Forward to extension
- FMn menu name - Forward to menu

NOTIFY:

- None - Notification turned Off
- lmd #- Immediate notification at specific number
- HH:MM # - Notify at specific time, at specific number
- lmd [B] # - Immediate notification at specific beeper
- HH:MM[B] # - Notify at specific time, at specific beeper

B. EXTENSION SETTINGS

The Extension Settings report summarizes the configuration of each mailbox in the Starplus AVP system. Each extension is defined by owner, mailbox number, password and class of service. In addition, each extension is defined by call type and type forwarding (both defined in Edit Extension/Timed Settings)

MAINT sn725824		Configuration		Modules	Reports	Utilities	HouseKeeping
Report Output		Extension Settings		Wed Jan 29, 1992		page: 1	
3/25/92 to 3/29/92				lines: 1 to 4			
Name	Extension	Mailbox	Password	Class	CallType	\	Forward
New User	10	10	0000	00	D Call	Ftl	10
New User	11	11	0000	00	D Call	- FM	11
New User	12	12	0000	00	D Call	- FM	12
New User	13	13	0000	00	D Call	- FM	13
New User	14	14	0000	00	D Call	- FM	14
New User	15	15	0000	00	D Call	- FM	15
New User	16	16	0000	00	D Call	- FM	16
New User	17	17	0000	00	D Call	- FM	17
New User	18	18	0000	00	D Call	- FM	18
New User	19	19	0000	00	D Call	- FM	19
New User	20	20	0000	00	D Call	- FM	20

Number of Extensions: 11

PgDn - to next page ESC - aborts report

The Extension Settings report displays the following:

TIME PERIOD:

- D - Daytime setting
- E - Evening setting
- W - Weekend setting
- H - Holiday setting

CALL TYPE:

- Blind - Blind transfer
- Call - Supervised transfer
- Call **Scrn** - Supervised Transfer with Call Screening
- Call **Scrn Hld** - Supervised Transfer with Call Screening and Call Holding
- Call **Hld** - Supervised Transfer with Call Holding

all - Calls will be immediately forwarded

FORWARDING -

- Not Avail - Forwarding turned off
- FM # - Forward to a specific mailbox
- FE # - Forward to a specific extension
- Fmn menu - Forward to a specific menu
- FO # - Forward to an outside phone number

C. MENU SETTINGS

The Menu Settings report prints out a complete description of each menu and the action that has been programmed for each key.

MAINT sn725824		v3.10a	
Configuration	Modules	Reports	HouseKeeping
3/26/92 to 3/29/92		Report Output	Wed Ja#9, 1992
Menu settings			page: 1
			lines: 1 to 4
Name	Key/Events	Action	
INF01	Password: 2275	Retries: 3	Timeout: 3
	Timeout	Invd	
	* key	Invd	
	# key	Invd	
	0 key	Invd	
	1 key	Invd	
	2 key	Invd	
	3 key	Invd	
	4 key	Invd	
	5 key	Invd	
	6 key	Invd	
	7 key	Invd	

Its purpose is to display how menus relate to each other. Each menu is assigned a level indicating its position in the overall design. The starting menu, level 1, is the highest level. Directly beneath this are level 2 menus that are activated by pressing keys in the level 1 menu, and so on. However, if a menu appears on more than one level, only the first level will be printed.

D. SYSTEM SETTINGS

The System Settings report identifies the version numbers for various programs running on your Starplus AVP system. Each module is identified by a specific value that defines its specific identity. If you require assistance from our customer service department regarding your Starplus AVP system, have these numbers available so that our customer support representatives can properly identify your system.

```

MAINT sn725824          v+3.10a
Configuration  Modules  Reports  Utilities  HouseKeeping
Report Output
System Settings      Wed Jan 29, 1992
                    page: 1
3/26/92 to 3/29/92  lines: 1 to 4
-----
Num  Setting Name          Value
---  -
-- Software Versions --
SPAUP version             v4.04a 12/16/91
tlaint version            v+3.10a
Modules version           v+3.10a
D40Dr version             Not found.
TeleTask version          Not found.
386Max version            Not found.

PgDn to next page      ESC aborts report
    
```

E. CHECK OUT

The Check Out report provides a diagnostic analysis of Starplus AVP system settings. The purpose of the report is to point-out or caution the system administrator about specific settings that may not be correctly set.

This report identifies possible problems. A report listing does not necessarily mean that a problem exists, only that a setting or settings may not be correctly entered.

```

MAINT sn725824          v+3.10a
Configuration  Modules  Reports  Utilities  HouseKeeping
Report Output
System Check-Out    Wed Jan 29, 1992
                    page: 1
3/26/92 to 3/29/92  lines: 1 to 4

hangup tone detection: 0 -->not activated

Warning: By setting the detection of tone hangup to zero it is being
turned off. This is the correct setting for those systems that output
continuous silence or reorder when a caller hangs up. If your phone
system outputs tone (NT SL-1, for example) then you need to set this to
a value between 5 and 15 seconds.

PgDn to next page      ESC aborts report
    
```

630.4 DIRECTORIES

A. MAILBOX DIRECTORY

The Mailbox Directory is a listing of mailbox numbers and information associated with each box. The directory can be sorted chronologically by mailbox number or alphabetically by name. The report includes the state of the mailbox which is a description of how it is being used.

MAINT sn725824		v+3.10a	
Configuration	Modules	Reports	Utilities HouseKeeping
3/27/92 to 3/29/92		Wed Jan 29, 1992	
		page: 1	
		lines: 1 to 4	
Name	Mailbox	Extension	
New User	10	10	
New User	11	11	
New User	12	12	
New User	13	13	
New User	14	14	
New User	15	15	
New User	16	16	
New User	17	17	
New User	18	18	
New User	19	19	
New User	20	20	
=====			
Number of Mailboxes: 11			
		PgDn = to next page ESC = aborts report	

A hard copy output of this information should be made regularly and kept as reference for easy maintenance of the system. It also provides a way to verify that mailbox settings are correct.

B. MAILBOX BY NAME

This allows you to print a report by mailbox name. You enter the range as you would above, then the system will prompt you for the name criteria.

MAINT sn725824		v+3.10a	
Configuration	Modules	Reports	Utilities HouseKeeping
3/27/92 to 3/29/92		Wed Jan 29, 1992	
		page: 1	
		lines: 1 to 4	
Name	Mailbox	Extension	
*****	-----	-----	
New User	10	10	
New User	12	12	
New User	13	13	
New User	14	14	
New User	15	15	
New User	16	16	
New User	17	17	
New User	18	18	
New User	19	19	
New User	20	20	
=====			
Number of Mailboxes: 11			
		PgDn = to next page ESC = aborts report	

C. EXTENSION DIRECTORY

The Extension Directory is a listing of all extensions and setting information associated with each. The directory can be sorted by either extension number or the name of the mailbox owner.

MAINT sn725824		v+3.10a
Configuration	Modules	Reports Utilities HouseKeeping
Report Output		
Extension Directory		Wed Jan 29, 1992
3/27/92 to 3/29/92		page: 1 lines: 1 to 4
Name	Extension	Mailbox
New User	10	10
New User	11	11
New User	12	12
New User	13	13
New User	14	14
New User	15	15
New User	16	16
New User	17	17
New User	18	18
New User	19	19
New User	20	20
Number of Extensions: 11		
PgDn - to next page		ESC - aborts report

A hard copy output of this information should be made regularly and kept as reference for easy maintenance of the system. It also provides a way to verify that extension settings are correct.

D. EXTENSION BY NAME

This allows you to print a report by extension name. You enter the range as you would above, then the system will prompt you for the name criteria.

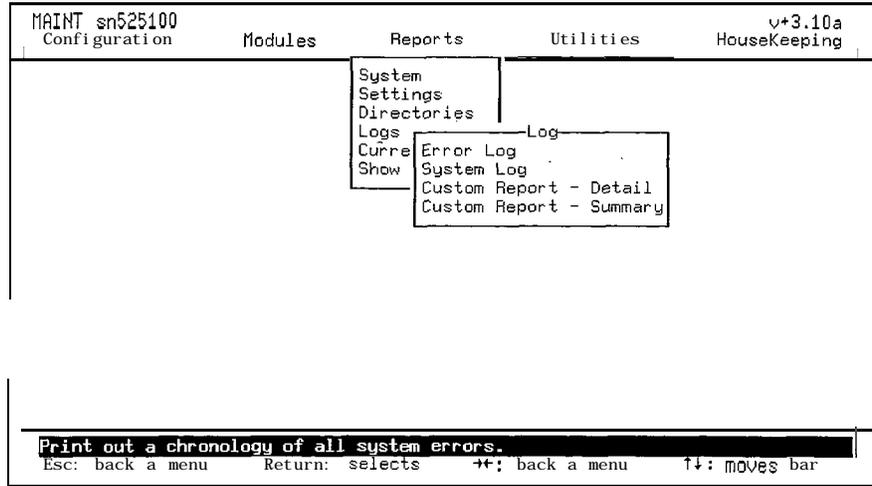
MAINT sn725824		v+3.10a
Configuration	Modules	Reports Utilities HouseKeeping
Report output		
Extension Directory		Wed Jan 22, 1992
3/27/92 to 3/29/92		page: 1 lines: 1 to 4
Name	Extension	Mailbox
New User	10	11
New User	12	12
New User	13	13
New User	14	14
New User	15	15
New User	16	16
New User	17	17
New User	18	18
New User	19	19
New User	20	20
Number of Extensions: 11		
PgDn - to next page		ESC - aborts report

630.5 LOGS

A. ERROR LOG

The Error Log lists any error messages resulting from the operation of the Starplus AVP system. Both hardware or software malfunctions are detected. Each line of the report specifies a specific error condition that has occurred. Each error condition is listed by time of occurrence.

Appendix E? provides a detailed description of the error messages.

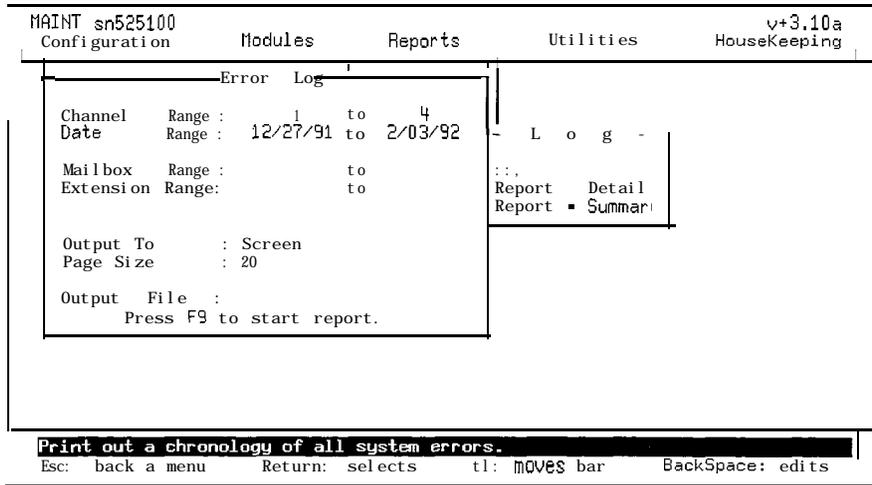


B. SYSTEM LOG

The System Log provides a detailed listing of general system activity. All entries are listed by time of occurrence and by line number.

This report should not be confused with the Error Log. There are instances, however, when both are used together for diagnostic purposes.

Appendix A provides a detailed listing of System Log messages.



C. CUSTOM LOG- DETAIL

The Custom Log - Detail report offers the system administrator the opportunity to search for specific entries that have been previously listed in the System Log. The system will search the log file and provide a listing log entries that match the search criteria.

This report is useful in finding the reoccurrence of specific error messages. For example, your System Log has been periodically displaying an error message since 3:00 AM last night. To identify the specific times when the error condition existed, enter the error code in the Look For field and the column number where it can be found.

MAINT sn525100		Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping
System Log						
Channel	Range:	1	to	4	Log og Log Report - Detail Report - Summary	
Date	Range:	12/27/91	to	2/03/92		
Mailbox	Range:		to			
Extension	Range:		to			
Output To	:	Screen				
Page Size	:	20				
Output File	:	Press F9 to start report.				
Esc: back a menu Return: selects ↑↓: moves bar Backspace: edits						

D. CUSTOM LOG - SUMMARY

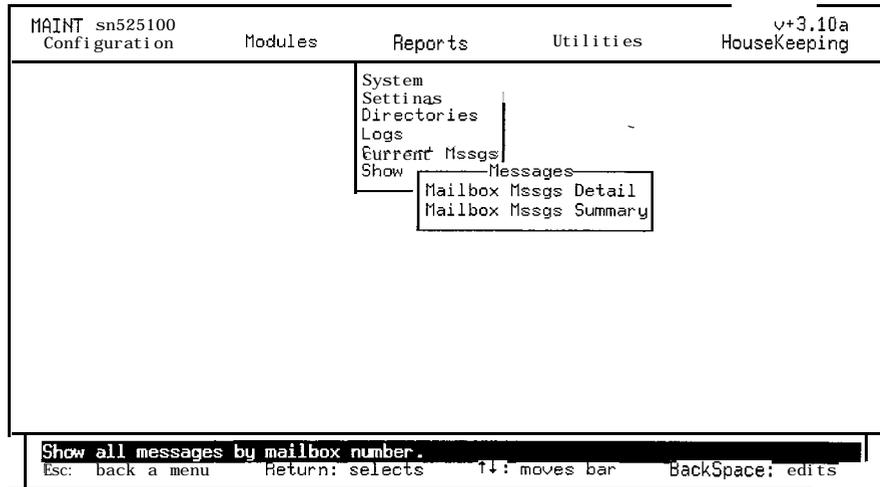
The Custom Log - Summary report counts the number of occurrences of the character sequence that was entered in the selector screen. For example, you would use this report to count the number of times a particular error message occurred in the system. You could also use this report to count the number of times new messages were left in a particular mailbox.

MAINT sn525100		Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping
General Settings						
Channel	Range:	1	to	4	Log og Log Report - Detail Report - Summary	
Date	Range:	12/27/91	to	2/03/92		
Mailbox	Range:		to			
Extension	Range:		to			
Output To	:	Screen				
Page Size	:	20				
Output File	:	Press F9 to start report.				
Print out report based on custom information, deta						
Esc: back a menu Return: selects ↑↓: moves bar Backspace: edits						

630.6 CURRENT MESSAGES

A. MAILBOX MESSAGE - DETAIL

The Mailbox Message - Detail report allows the system administrator to select a mailbox and view its current status.

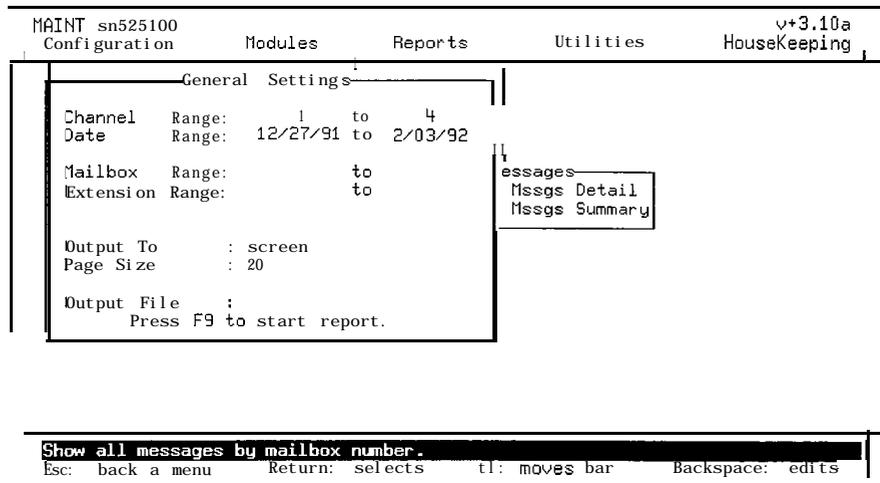


The following fields are displayed:

- Mailbox - mailbox owner name and mailbox number
- New - for new message
- Saved - for saved message
- From Mbx - mailbox message was sent from
- Size - message size in seconds
- Date/Time - date and time message left
- File - file name of the message

B. MAILBOX MESSAGE SUMMARY

The Mailbox Message - Summary report allows the system administrator to summarize various status conditions for system mailboxes. The following fields are displayed:



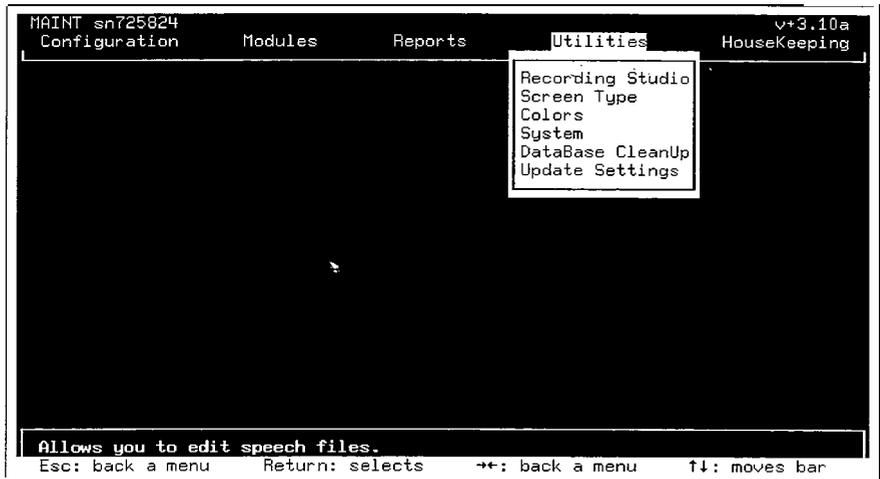
- Mailbox ▪ mailbox owner name and mailbox number
- New ▪ total number of new messages
- Saved ▪ total number of saved messages
- Time ▪ total time for all messages
- Disk Space Used - total occupied disk space per owner

SECTION 640

UTILITIES

640.1 INTRODUCTION

A utility is a specialized software program designed to perform a specific function.

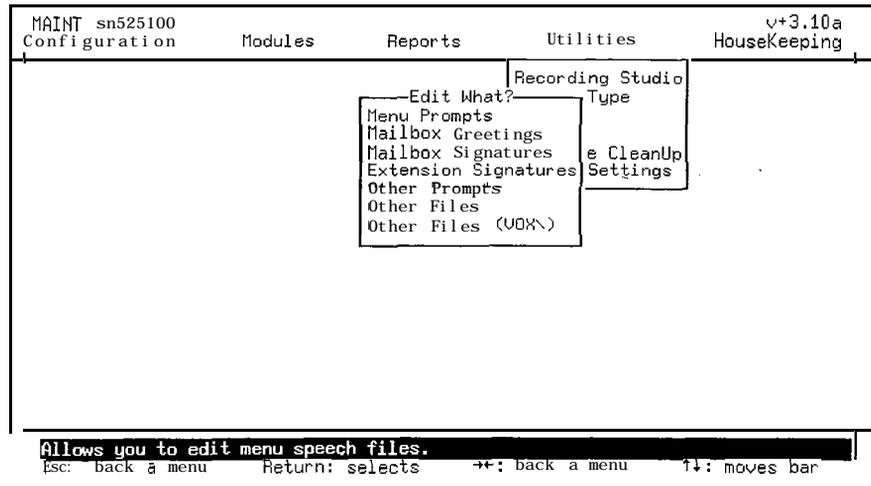


They include:

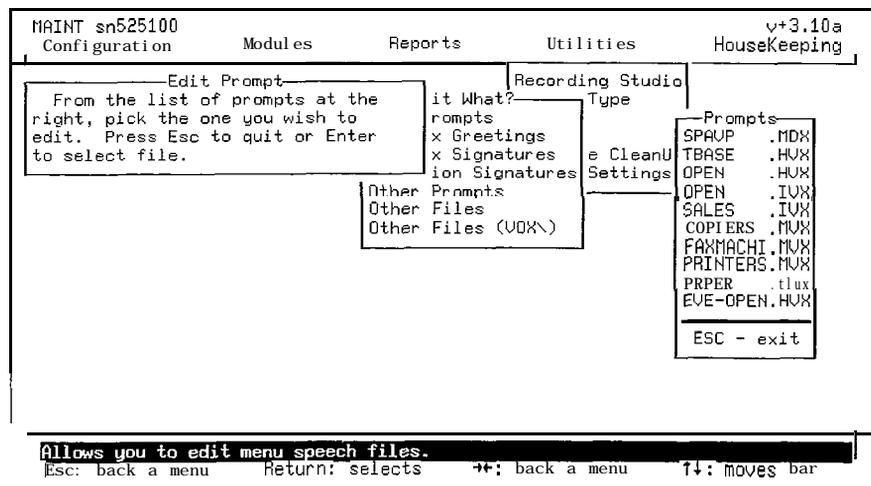
- Recording Studio - to record and edit voice files.
- Colors - to set screen colors and attributes.
- System - to display statistical information helpful for trouble shooting.
- File Conversion - to automatically upgrade new software releases.
- Remote Diagnostics - for maintenance and troubleshooting over the phone.

A. RECORDING STUDIO

The Recording Studio is used to record and edit all voice files. The Recording Studio can be activated from most modules. For example, it can be "popped-up" from Menu Routing to record a message, or from Voice messaging to change the Custom Prompts (usually by pressing the [F9] function key).



1. Select Recording Studio to display the following menu:
2. First, select the type of voice file you want to edit.
 Note, if the recording studio is activated from a module, it is not necessary to select the file type.



- Menu Prompts - allows you to record announcements without having to enter Menu Routing. Note that all Introduction files have an Hvx DOS extension, Description files have MVX, and Instruction have Ivx.
- Mailbox Greetings - allows you to record greetings for every mailbox without having to call into individual mailboxes. Note that mailbox greetings have the Mailbox# + Grt as the DOS extension.
- Mailbox Name - allows you to record the name associated with each mailbox. This information is used with the directory listing module. Note that the mailbox name has the

mailbox# + Num as the DOS extension.

- Other Prompts - is used to record any special prompts. These file all have a Vap extension.
 - Files - is similar to Other Prompts but you can specify the directory as well as the filename. This is generally used with special projects.
3. Next, select the file-that you want to edit or press [F9] to enter a new file name.

The Recording Studio asks which channel to use for recording. You can either select: channel 1 to 9 or dial into the system.

You will select a channel if you are using a-microphone to make recordings. If you are using a standard telephone handset, then dial any extension number that terminates into the system.

At this time the following window is displayed:

On the left side of the screen is a box that displays information about the voice file. On the right is a feature box with various editing commands.

- Play file - plays the current file.
- Record Over - erases the file and rerecords. To stop the recording you can press any key on the key board.
- Append - adds a new recording to the end of the existing file.
- Chop Start - cuts from the beginning of the prompt, an amount equal to the Cut Size. The Cut Size is displayed in the Recording Information box.
- Chop End - same as above but chops the end.
- Change Cut - changes the cut size. Use the cursor keys to increment or decrement this value.
- Erase File - deletes the prompt completely. Once erased it is not recoverable.
- Exit Studio - hangs up the line and exits.
- Help - provides on-line support.

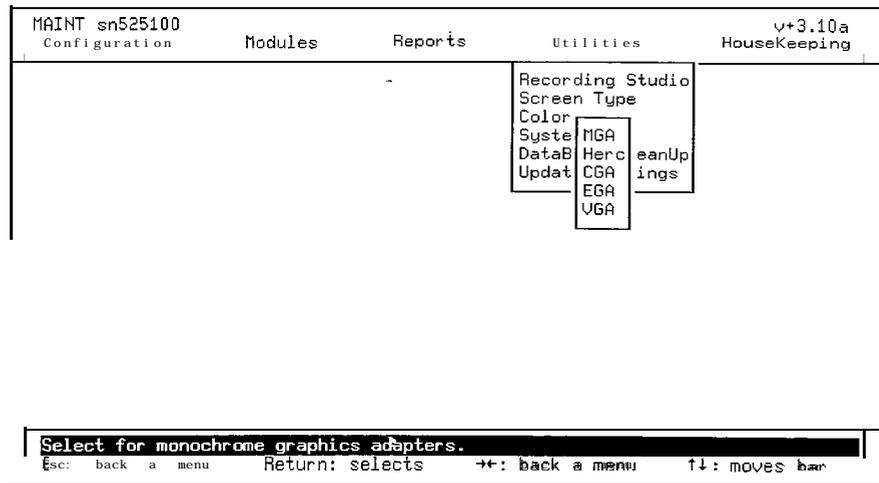
TIPS

When recording, it is important to have a quiet environment. For best results, keep the phone set as far away from the PC as possible to avoid picking up background noise. Don't hold the handset too close to your mouth.

There is a natural tendency to pause before and after the recording. Use Chop Start and End to reduce these blank headers and trailers. With a short prompt, start with a small cut size like 0.5 seconds. Note, if you make the cut size too large you could lose part or all of your prompt.

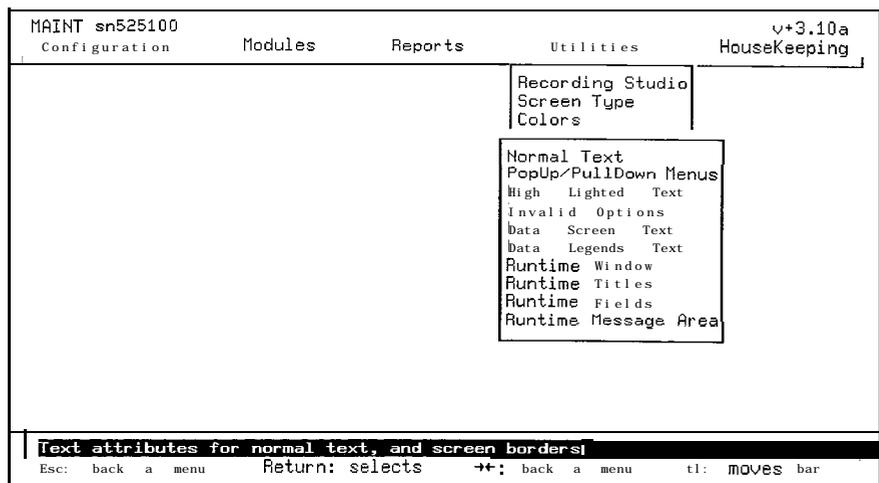
B. SCREEN TYPE

This controls the type of screen the system is connected to. The standard screen provided with the system is a MGA. Unless you have a custom system there is no need to change this.



c. COLORS

This section provides you with complete flexibility to set screen colors and attributes. Select Colors and the type of text you want to change and the following window opens:



On the right side of the screen is a box containing the text selections that can be changed.

- Command Line - is the main menu selections displayed on the top line of the screen.
- Pop-up Menus - are all the menus that are bordered with a window.
- Highlighted Text - is the text that is usually displayed in reverse text indicating the currently active selection.
- Invalid Options - include modules and features that are not installed.
- Data Screen Text - is the field information that appears in menus that are not bordered by a window. These include: Modules to Run, Low Level parameters, and Menu Routing module.

- Data Screen Legends - is the field description text that appears with Data Screen Text as described above.

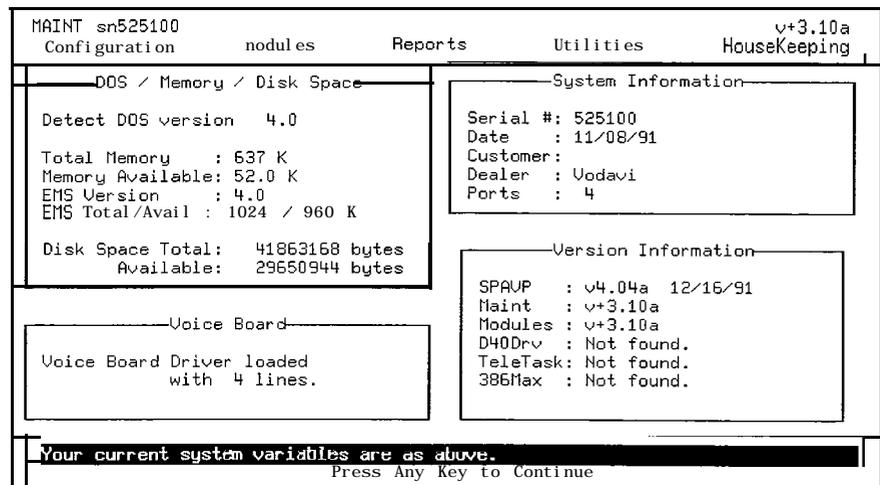
On the left side of the screen the boxed area is used to set the colors. Note the "*" which indicates the active color. The cursor control keys move the "*". As you move the "*" the alphabet at the bottom of the box changes to reflect the new color selection. On monochrome monitors you are limited to three attribute settings:

- normal text
 - underline
 - reverse highlight
1. Press [ENTER] to make your selection or [ESC] to abort. The menus will reflect the new color settings only after you have escaped back to the **Starplus AVP** command line.

The screen color selection is more than a fancy tool to coordinate color scheme. The color settings help you to easily identify parameters and configuration settings. For example, you may want to set "Invalid Options" to red (or underline on monochrome monitors) to make that selection stand out.

D. SYSTEM

Select System to display information that is important for troubleshooting. If you call technical support you will be asked for some or all of this information.



The following information is provided:

- DOS Version/Available memory/Available Disk space - This identifies your operating system, available memory, and available disk space.
- Voice Board - This identifies the current state of the voice board in the system.
- Starplus AVP - This describes the serial number and general information about the AVP software.
- Version information - This displays the software versions of the AVP modules in the system.

E. DATABASE CLEAN UP

This allows you to change databases when you switch from one version of maintenance to another. Normally, you will not be required to use these utilities. If an upgrade applies you will be prompted automatically to use the proper utility. The utility allows conversion of upper/lower case as well as a sort function to organize all the data.

MAINT sn525100 Configuration	Modules	Reports	Utilities	v+3.10a HouseKeeping .
			Recording Studio Screen Type Colors System DataBase CleanUp Update	DataBase CleanUp Change to Upper Case Change to Mixed Case Sort Data Files
Change all names in extension and mailbox files to upper case.				
Esc: back a menu Return: selects ⇐: back a menu ↑↓: moves bar				

F. UPDATE SETTINGS

After you use the database clean up function, you would then move to this function and press [ENTER]. This updates the system with the new "cleaned up" settings.

To use Import Data, create an ASCII text file from an existing database. Include in the database the name of each employee, the extension number and a telephone or other notification number. Create the corresponding extension numbers in Auto Attendant.

MAINT sn525100 Configuration	nodules	-Reports	Utilities	v+3.10a HouseKeeping
				Import Data Password
Import Data Enter the name of the file to be imported. Also enter the columns and length of the extension names and numbers. File name : Name column : 0 length : 0 Ext. column : 0 Notify column : 0 length : 0 ESC- exit F9- start				
Allows importing of mailbox and extension name Esc: back a menu Return: selects ↑↓: moves bar BackSpace: edits				

When these steps are completed, use the Import Data screen to identify the name of the file to be imported, as well as the column location and field lengths in the text file for the employee name, extension and notification numbers. Starplus AVP will use this information as a reference to locate the ASCII text file in the appropriate Starplus AVP database.

B. PASSWORD

Starplus AVP Maintenance is protected by a user defined password. The password screen is the first screen encountered when entering the Starplus AVP Maintenance menu.

When your Starplus AVP system is initially installed, you will be able to enter the Maintenance menu without using a password. Select Password from the Housekeeping menu and the following screen is presented.

MAINT sn525100 Configuration	nodules	Reports	Utilities	v+3.10a HouseKeeping
				Import Data Password
Change Password Enter a new password below. Press Enter to save and exit or ESC to leave password as it is.				
Enter new system password and then press ↵ Esc: back a menu Return: selects ↑↓: moves bar BackSpace: edits				

Enter your new password. It may be up to 10 characters in length. Press [ENTER] to save your entry or [ESC] to leave the screen without changing the current setting.

Be very careful when making a new entry. **Starplus** AVP remembers all alpha-numeric characters and spaces.

SECTION 700

STARTING THE SYSTEM

700.1 INTRODUCTION

At this point you should have completed the following:

- Installed the voice boards, files and the key
- Installed phone lines
- Performed CPC testing (Non-Starplus phone system)
- Configured all modules
- Initiated the Starplus AVP channels

If you have, you are ready to start the system.

700.2 SYSTEM START UP

System start up is the process of executing the Starplus AVP program and activating the voice boards. Once the system is running it is ready to handle its telephone functions. There are two types of system start up:

- System without multi tasker (Multi-Tasker)
- System with multi tasking option

If you have the multi tasking option skip the following section and turn to Start Up With Multi tasking (Multi-Tasker).

A. STARTUP WITHOUT MULTI-TASKING OPTION

To start the Starplus AVP system, you must load the board drivers and Starplus AVP program. To start the system automatically you must include the following commands in your AUTOEXEC.BAT file:

- CD \Starplus AVP
- D40DRV
- Starplus AVP E

To examine or change the AUTOEXEC.BAT file you can use the Starplus AVP text editor loaded into your Starplus AVP sub directory, by entering the following command:

```
ED \AUTOEXEC.BAT
```

After making the appropriate changes press Ctrl-F2 to save the changes. The AUTOEXEC.BAT file will be saved in the root directory (i.e., C:\) of the drive.

Note: Starplus AVP is a highly memory intensive program and under no circumstance should you load any memory resident programs (Sidekick or other TSR's), or create an environment which is memory intensive (this particularly applies to the users of DOS 4.0).

Once the appropriate changes are made you can reboot the system to activate Starplus AVP.

B. START UP WITH MULTI-TASKING OPTION

In a multitasking environment (with Multi-Tasker installed) your AUTOEXEC.BAT can be automatically configured for you by running the FIXBOOT program.

At the DOS command line in the **Starplus** AVP directory, enter:

```
. FIXBOOT
```

To examine or change this file enter the following command while still in the **Starplus** AVP directory:

```
. E D \AUTOEXEC.BAT
```

Your AUTOEXEC.BAT file should contain the following commands:

```
. PROMPT $P$G  
. PATH=C:\DOS  
. CD\SPAVP  
. D40DRV -EI 92 -CO  
• STARTSYS
```

Note that the parameter after **D40DRV** depends upon the number of boards that you have installed. For the correct setting, see Appendix E.

In addition, note that above routine is only an example. The exact configuration may vary depending on the amount and type of memory available, type of monitor and several other variables. Please refer to **MultiTasker** documentation for a more detailed explanation of these parameters and how to make adjustments in case of any problems.

To start **Starplus** AVP, reboot your system now. When the system comes up you will notice the task controller screen. The screen will list various tasks that have been set up. It generally takes about 30 seconds before the system is functional.

C. HELP!

If you experience any problems at this point, please refer to the section of the manual called Before You Start as well as the Error Appendices before you call technical support.

700.3 STARPLUS AVP RUNTIME SCREENS

When Starplus AVP is running, three special screens provide real-time statistical information on system performance.

The system will display the status screen by default, as described below. The following command are available while this screen is displayed:

- F1-F8 - Call Statistics screens
- F9 - Blockage screen
- Shift F1-F5 - Reset all counters
- Shift F10 - Shutdown - now!
- Alt F1 - Shutdown - next chance (after all calls)
- Alt F2 - Shutdown - no more calls (after current calls)
- Alt F3 - Shutdown - now! (active callers will be disconnected)

A. STATUS SCREEN

The Status screen is designed to detail system events on a per line basis. This information reflects system efficiency and indicates whether Starplus AVP is handling calls in the manner in which it was programmed. We recommend that this screen be displayed while the system is in its normal operating mode.

Automated Voice Processing		STARPLUS	Vodavi Communications Systems	
U4.04a SN:525100			Copyright(c) 1988-1991	
Disk= 2:42 Files= 11/ 12 Ram 98k			02/11/92 08:38:47	
Line	Current Status	Line	Current Status	
1	Waiting (Menu Routing OPEN)	3	Waiting (Menu Routing OPEN)	
2	Waiting (Menu Routing OPEN)	4	Waiting (Menu Routing OPEN)	
* Invalid EVENT Line# 6 *				
08:38:18 01 SPRUP Module version +3.10a				

The screen is used to monitor call progress information for each line. This information can be used as a diagnostic tool to quickly discover whether lines are behaving properly. Status messages are displayed with easy to understand meanings.

The top portion of the screen shows the current status of each line. The bottom portion has been reserved to display log records (if logging to screen has been activated, see Configuration/Logging). These records provide more detailed information on all system events and are generated as Starplus AVP processes each call. The Disk= entry shows the hours:minutes of storage time left.

B. CALL STATISTICS SCREEN

The Call Statistics screen is designed to display traffic information. The top portion of the screen shows summary information on the number and duration of calls that have been processed on a per line basis. The information shows today's activity and also displays cumulative totals since the last system reset.

Automated Voice Processing		STARPLUS		Udavi Communications Systems	
Call Statistics				Copyright(c) 1988-1991	
Page 1/1				02/12/92 12:11:53	
	Line-01	Line-02	Line-03	Line-04	All lines(04)
Today					
#Calls:	0	0	0	0	0
Duration:	0:00	0:00	0:00	0:00	0:00
Since Cal	02/05/92 17:13 25	10	0	17	52
Duration:	0:25	0:10	0:00	0:00	0:36
counters		counters		counters	
Menu OPEN	32				
Menu EUE-OPEN	6				
Menu SALES	1				
F1-F8:Calls	F9:Blockage	SF1-SF9:Clear	F10:Status	SF10:Exit	

Only one page of information, which includes four lines, can be displayed at a time. Press [F1] to call up the first four lines, [F2] to call up the second, and so on.

Traffic information provides immediate feedback on system usage. Pay attention to any line that shows no traffic. This might indicate a system fault. Possible reasons for a line showing no traffic include:

- The port has not been initiated properly.
- There is a problem with the phone line.
- There is a problem with the voice board.
- Too many ports in the group; over capacity.

The lower portion of the screen includes counters that record each time a caller accesses a menu. The menus are displayed by their file names. When a caller enters or selects that menu, that event increases the counter by one unit.

Up to 15 menus are arranged from the highest number of accesses to lowest. This screen can be used to quickly identify the type of information that callers request most and least often. It can also be used to help better organize menu structures by placing information that is more often requested, ahead of other selections.

To reset the menu counters press [Alt E.] All values will be set to 0 and new information will reflect the current date and time.

To return to the Status Screen, press [F10]. [Shift F1-F8] clears cumulative call statistics.

C. BLOCKAGE STATISTICS SCREEN

The Blockage Statistics screen identifies blockage for up to eight blockage groups. Blockage occurs when all lines in a blockage group are active or busy at the same time (Blockage groups are defined in Configuration/System).

Automated Voice Processing Blockage Statistics Page 1		STARPLUS	Udavi Communications Systems Copyright (c) 1988-1991 02/11/92 08:39:11	
Today	Group-01 1,2,3	Group-02 4	Group-03 (no lines)	Group-04 (no lines)
#Blocks:	0	0	0	0
Duration:	0:00	0:00	0:00	0:00
Since 02/05/92 17:13				
#Blocks:	1	17	0	0
Duration:	0:00	0:00	0:00	0:00
Today	Group-05 (no lines)	Group-06 (no lines)	Group-07 (no lines)	Group-08 (no lines)
#Blocks:	0	0	0	0
Duration:	0:00	0:00	0:00	0:00
Since 02/05/92 17:13				
#Blocks:	0	0	0	0
Duration:	0:00	0:00	0:00	0:00
F1-F8:Calls	F9:Blockage	SF1-SF9:Clear	F10:Status	SF10:Exit

The display shows the number of times and the total duration of blockage by group. The information shows today's activity and also displays cumulative totals since the last system reset. Duration is displayed in hours:minutes format.

Blockage is important since callers trying to access blocked groups will get a busy indication from the phone system. Relatively high numbers of blocks or blockage of long durations are not desirable. There are two ways to correct this condition:

- Expand the system port capacity by installing an additional voice card.
- Rearrange existing port groups, if possible, to increase system efficiency. You may be able to do this if lines in other port groups are under utilized. A quick way to analyze this is by examining the Call Statistics Screen and identifying any line that seems to be handling an unusually small number of calls.

Shift **F9** clears all cumulative blockage statistics. [**F10**] exits back to the Status screen.

SECTION 800

MAINTENANCE & TROUBLESHOOTING

800.1 MAINTENANCE

A. ENCLOSURE

- Filter

Routinely check the sponge filter for dust build up. The filter is located behind the vented portion of the front panel. The cover must be removed. Remove the filter by gently pulling it from the four velcro tabs at the corner of the filter. Clean the filter in warm water with a mild detergent and rinse.

MAKE SURE THE FILTER IS COMPLETELY DRY BEFORE RE-INSTALLING!.

Reinstall the filter and then the cover.

B. REPLACING THE POWER SUPPLY

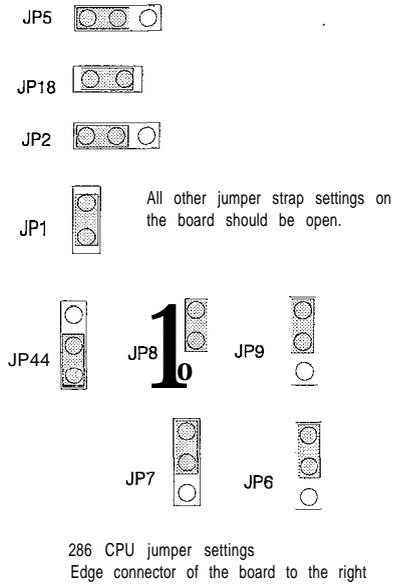
1. Remove the AC power cord from the electrical outlet.
2. Remove the cover of the enclosure.
3. Disconnect connectors **J13** and **J14** on the backplane.
4. Remove the card guide panel by removing six(6) 6-32 pan head screws. (4 front, 2 bottom)
5. Cut the cable tie that secures the switch cord.
6. Remove the switch cap and remove the two(2) 4-40 pan head screws securing the switch.
7. Remove the four(4) mounting screws on the rear panel and the two screws on the support bracket that secure the power supply in place.
 - a. Lift the power supply out of the chassis.

Install the new power supply in the reverse order.

C. REPLACING THE CPU

1. Remove the enclosure.
2. Unplug the software activator from the CPU card parallel port.
3. Remove the 6-32 screw in the back of the enclosure holding the CPU in place.
4. Gently lift the CPU card up but not all the way out.
5. As soon as you can reach them, remove the keyboard connector and reset switch from the CPU.
6. Remove the CPU from the enclosure.

- Install the new CPU, being certain it is perpendicular to the enclosure. Before sliding it down into its connector, reconnect the keyboard and reset switch wires to their respective connectors. The keyboard connector is keyed for proper alignment. Make sure the jumper settings are as follows:



- Make certain the board is secured in its connector. Reinstall the 6-32 screw to secure the back edge of the board in place.
- Put the cover back on the enclosure then turn on the power and make sure the system boots up.

If the system does not boot up, you may have to go to the BIOS setup. This is described in chapter XXX.

D. REPLACING THE SCSI CARD

- Remove the enclosure.
- Remove the 6-32 screw in the back of the enclosure holding the SCSI card in place.
- Gently lift the SCSI card up but not all the way out.
- As soon as you can reach them, remove the hard drive and floppy drive cable from the SCSI card.

Before disconnecting them make note of the polarity (the color stripe on the edge of the ribbon cable) in relation to the connectors so that they are re-connected the same way.

- Remove the SCSI card from the enclosure.
- Set the DIP switches on the SCSI card as follows:

Switch 1

1 - 6 set to the OPEN position.

Switch 2

1 closed, 2 - 7 open, 8 - 9 closed, 10 open.

- install the new SCSI card, being certain it is perpendicular to the enclosure. Before sliding it down into its connector, recon-

nect the floppy and hard drive cables to their respective connectors.

8. Make certain the board is secured in its connector. Reinstall the 6-32 screw to secure the back edge of the board in place.
9. Put the cover back on the enclosure then turn on the power and make sure the system boots up.

If the system does not boot up, remove the cover and verify all connections and switch settings.

E. REPLACING THE VIDEO CARD

1. Remove the enclosure.
2. Remove the monitor connector from the video card.
3. Remove the 6-32 screw in the back of the enclosure holding the SCSI card in place.
4. Gently lift the video card all the way out of the enclosure.
5. Verify that the strapping options on the video SCSI card are as follows:

JP1

Should be strapped between the center post and 0. This disables the parallel port on this card.

JP2

Should be strapped between the center post and 3. This strap assigns this card to interrupt 7.

6. Install the new video card, being certain it is perpendicular to the enclosure.
7. Make certain the board is secured in its connector. Reinstall the 6-32 screw to secure the back edge of the board in place.
8. Put the cover back on the enclosure then turn on the power and make sure the system boots up.

If the system does not boot up, remove the cover and verify all connections and switch settings.

F. REPLACING THE FLOPPY DRIVE

A 3.5 inch 1.44 MB floppy drive is used to initially load the operating system, software programs, and the voice prompts onto the hard disk. After the system is setup, the floppy drive is used to make backups of the system software and configuration data, and to perform software upgrades.

1. Remove the enclosure.
2. Locate the ribbon cable and power connector on the floppy disk and disconnect them. Be sure to make note of the polarity of the connector so it may be reconnected the same way.
3. Remove the four (4) screws securing the floppy disk from the top and bottom of the enclosure, then slide the drive out.
4. The new floppy disk should come with a set of mounting brackets. Screw the brackets onto the drive.
5. Slide the drive into the enclosure, replace the screws and tighten them securely.
6. Connect the ribbon cable and power connector to the new drive and make surer the polarity is the same as before.

7. Put the cover on the enclosure and power up the system to make sure it boots.

If the system does not boot up, remove the cover and verify all connections and switch settings.

G. REPLACING THE HARD DRIVE

The hard drive is the storage device for the system. It provides storage for the voice prompts, system software, operating system, and user voice messages. The storage capacity of the hard disk is either 40, 80, or 200 MB, depending upon the storage time ordered. A hard disk is replaced either to increase storage capacity or if the current drive is defective.

There are four (4) stages to replacing a hard disk, they are:

1. Backup the existing hard drive.
2. Remove the existing hard drive.
3. Install the new hard drive.
4. Restore the backed up information to the new hard drive.

The steps are done in that order.

1. Remove the enclosure.
2. Locate the ribbon cable and power connector on the hard disk and disconnect them. Be sure to make note of the polarity of the connector so it may be reconnected the same way.
3. Remove the four (4) screws securing the hard disk from the top and bottom of the enclosure, then slide the drive out.
4. The new hard disk does not come with a set of mounting brackets. You must use the brackets from the old drive.
5. Slide the drive into the enclosure, replace the screws and tighten them securely.
6. Connect the ribbon cable and power connector to the new drive and make sure the polarity is the same as before.
7. Put the cover on the enclosure and power up the system to make sure it boots.

If the system does not boot up, remove the cover and verify all connections and switch settings.

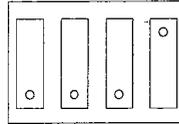
H. REPLACING THE VOICE BOARD

This board is the interface between the voice processing system and the telephone system. The conversion between voice and digital information takes place on this board. Each board provides two modular jacks for the connection of four lines from the telephone system. Each jack connects two lines. There is also a two line version of the card. This contains only one modular jack. This jack connects the two lines.

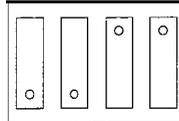
1. Remove the enclosure.
2. Disconnect any line cords connected to the voice board.
3. Remove the 6-32 screw in the back of the enclosure holding the board in place.

4. Gently lift the card out of the system.

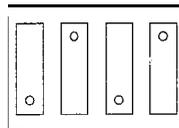
Make sure the new/additional board switch settings are configured properly. Refer to the chart below for setting information.



Switch 1 settings, board 1
Address D000



Switch 1 settings, board 2
Address D200



Switch 1 settings, board 3
Address D400

Multiple voice board installation, switch 1 settings

5. Install the new card, being certain it is perpendicular to the enclosure.
6. Make certain the board is secured in its connector. Reinstall the 6-32 screw to secure the back edge of the board into place.
7. Put the cover on the enclosure and power up the system to make sure it boots.

If the system does not boot up, remove the cover and verify all connections and switch settings.

800.2 TROUBLE-SHOOTING

A. ISOLATING PROBLEMS

Problems generally fall into one of these categories. These categories are telephone system configuration, hardware problem with the AVP, or software problems.

- TELEPHONE SYSTEM PROBLEMS

The best way to isolate this problem is to replace the **Starplus** AVP system with a single line telephone and simulate calling into the system. the following should be checked in doing this:

- Confirm lines ring on the appropriate line.
- Check telephone feature commands such as transfer and reconnect.
- Check the phone system programming for errors, VM group programming, station programming.

- HARDWARE PROBLEMS

NO POWER UP

- Symptoms
 - Fans are noticeably quiet
 - System does not respond to keyboard commands
- Remedy
 - Check that AC cord is plugged in
 - Check that power switch is on

If this does not remedy the problem, proceed with the internal check.

INTERNAL CHECK

- Backplane LED is off and fan is not on:
 - Check that power supply connectors are connected.
Check that all voltages from the power supply are OK.

If voltages on the backplane are OK, power down the system and remove all cards from the system. Visually check all card and enclosure connectors for shorted pins or any foreign material that may have fallen into the connector.

If, after all this, the system still does not respond, replace the power supply.

- Backplane LED is on, fan is not on, +12 Vdc is okay at J17.
 - Replace the fan. If +12 Vdc is not okay at J17, replace the power supply.

. SOFTWARE PROBLEMS

Software problems fall into one of three areas, these areas are:

Initial configuration, if there is a problem with your initial configuration you will notice it when you first bring up the system. Check all switch settings and configuration straps as well as your **auto-exec.bat** and **config.sys** files for errors.

Incorrect parameter settings, manifests itself as unreliable operation such as early hang ups, or errors when special features (such as **outdial**) are not working properly. These problems can be diagnosed by the proper reading of the log lines. Refer to Appendix A and Appendix B for log information.

Incorrect module configuration, can occur when modules have not been configured properly. This may be incorrect mailbox or extension settings. These problems can also be diagnosed from the log lines. Refer to Appendix A and Appendix B for log information.

To be able to solve problems in an expeditious manner, it is important to have as much information available as possible. The following are some guidelines as to the type of information that will help you isolate the problems:

- Always bring the system down with the **[SHFT] [F1 0]** command. This ensures that all files are closed and all logs are written to disk.

B. GATHERING INFORMATION

- Use the reports option in the maintenance program to print both the system and error logs. You can send this information to a floppy drive if a printer is not connected to the system.
- If there are problems with mailboxes/extensions, it is important to find out which mailbox/extension is experiencing the problem and when the problem occurred. Isolate the time period in the log to find out what the problem may be.

800.3 COMMON PROBLEMS AND SOLUTIONS

A. CALL TRANSFER NOT WORKING

- Check that the transfer is working using a single line telephone on the port attached to the Starplus AVP. If this does not work the problem is in the phone system.
- Check to make sure that you have the correct feature prefix settings for a transfer under the feature prefixes menu in programming. Make sure that transfer start and transfer abort are set correctly.
- Check your flash hook interval to see if conforms with the manufacturer's specifications. This is usually set to 500 msec.
- If you can detect a flash hook using a butt set and still hear the AVP dialing DTMF tones, it is possible that the AVP system is dialing DTMF tones too fast for the phone system. This can be corrected by increasing tone dialing inter-digit delay in the low level menu of programming. This parameter is under the dialogic control item.
- On some phone systems if the extension is dialed too fast after a flash hook, the tones may be lost or misinterpreted. You may need a comma (pause) after the flash hook character.

B. AUTO ATTENDANT TRANSFER NOT WORKING

- If a caller hears "extension does not exist" when transferring either through Auto Attendant or Menu Routing, make sure the extension that the transfer is supposed to be made to does exist and its extension length is correct.
- If using Menu Routing to do the transfers, make sure the key initiating the transfer is defined properly.
- When the Starplus AVP transfers a call, it dials the transfer start parameter, dials the extension, and dials the after dial sequence. If the caller hears the message "please hold while your call is being transferred", but then hears the DTMF digits being dialed, then the phone system is not detecting the transfer start sequence. Usually this means that the flack duration is set too short and should be increased. Typical values are 500 msec. to 800 msec.

C. CALL TRANSFER IS NOT RELIABLE

- Make sure you get the system log on the failed transfer attempts.
- If the log says “no ring back”, this indicates that the **Starplus AVP** is not receiving any dial tone or cadence from the phone system.
- Make sure the feature prefixes in the configuration menu are set correctly.
- Check that the transfer is working using a single line phone on the port attached to the **Starplus AVP**. Make sure after dialing an extension you receive a distinct tone. Whenever you are utilizing the screened transfer method, you should run CPC first. If you are using the blind transfer method CPC need not be run.
- Slow transfers can also be caused by an improper setting in the CPC program. CPC is a program that measures the phone system busy and ring cadences so that it can better detect busies, no answers, and answers. Again, anytime you are using the screened (call with analysis) method in Auto Attendant or Menu Routing, you should run the CPC program and load the results.

D. STARPLUS AVP DOES NOT ANSWER CALLS

- Make sure that the calls are coming from the phone system by replacing the **Starplus AVP** with a single line telephone. If the phone does not ring, check your phone system for the correct programming entries.
- If the line rings, try the next port on the voice board. Make sure the problem is not isolated to one port. If it is, replace the voice board.
- Check the rings before answer setting in configuration menu. It should be set to a number between 1-3. If the number is too high, it may give the impression that the **Starplus AVP** is not answering calls.
- If you are 100% sure that the phone system is okay, and the system is not answering and you are trying to have the system answer on the first ring, then change the ring count reset delay to 1. This parameter is in the low level menu of the configuration menu. The default value is 80 and should be changed to 1.

E. LONG DELAY BEFORE ANNOUNCING A CALL

- Run the CPC program for correct transfer settings.
- Check the transfer start and transfer connect in the feature prefixes menu for any unnecessary pauses.

F. UNRELIABLE HANG UP DETECTION

the hang up detection test in the maintenance program is used to monitor how the phone system responds to the **Starplus AVP** when a caller hangs up. **Starplus AVP** needs to know this so that it knows when to disconnect the caller. On phone systems that support a drop in loop current running this test is not necessary.

Our suggestion is to have the installer call someone in the company and tell the person to hang up. The installer should listen and find out what tone, if any is returned. If steady tone or silence is heard the test need not be run. The hang up detection values of silence and non-silence should be set to 10 seconds.

If the installer hears re-order tone (tone, silence, tone, silence...) then the test will need to be run.

G. HANG UPS DURING MESSAGE RECORDING

- Check to see if the caller hears a prompt after the recording stops while leaving a message. If so, check the max message length in the class of service associated with the mailbox.
- If this occurs on all mailboxes and the class of service is set properly, make sure that the disk is not at its capacity and there is room available for all messages. The capacity can be checked at the top left hand corner of the runtime screen.
- If the problem occurs randomly, check the log for the method of hang up detected by the Starplus AVP system.

H. PREMATURE HANG UPS

- Check the system log and find out what type of hang up was detected by the Starplus AVP.
 - H-1 indicates a droop in the loop current. It is possible, occasionally, to get an erroneous drop in the loop current. However, if this is excessive, you need to check with the telephone company if the lines are coming direct from the central office. If you do not have loop current and are still getting H-1, you can turn loop current detection off. This is done in the low level menu dialogic control block, item # 19, minimum time loop current off.
 - H-2 indicates that a silence period was detected equal to or more than the silence interval set in the hang up detection item of the configuration menu. You may have to increase this value.
 - H-3 indicates that a tone interval was detected indicating hang up. This could occur if the tone interval is set to a small amount or the caller is calling from a noisy environment. Please note, this can be completely turned off, however, make sure that you have other methods of detection enabled.
 - H-4 indicates that re-order tone was detected. If your phone system does not have re-order tone detection, this parameter must be turned off in the hang up detection menu item.

I. MAILBOX BUSY

If mailboxes are accidentally turned off, this could indicate either that the maximum number of messages set for the mailbox is reached, or that the mailbox has been turned off by the user. Increase the maximum count for the class of service belonging to the mailbox. A message is recorded in the error log whenever a mailbox is turned off.

**J. MISSING MAILBOXES
OR EXTENSIONS**

You have just added mailboxes or extensions, but you find that they are missing. It is possible that the extension or mailbox indexes are corrupted. To rebuild, make sure that you are in single tasking, then go to the utilities/database cleanup/sort data files item.

K. LOST MESSAGES

The **Starplus** AVP never loses messages. However, you can verify this by turning on message tracking from the **configuration/low level/other parameters/message tracking** item. With this parameter set, every message that is recorded or deleted sends a log information to the system.

**L. MESSAGE WAITING
LAMPS ERRATIC**

Confirm the setting in **configuration/system/call out lines** that the proper lines are enabled. Also note that on some phone systems, message waiting lamps can only be turned off from the extension that it was turned on from, in these instances, it is better to use only one call out line.

**M. SYSTEM FREEZES IN
MULTI TASK MODE**

- You may not have enough memory. Check the configuration against XXXXXXXX.
- Make sure the partition size for the **Starplus** AVP is as large as you can make it, preferably 500 K or higher.
- Make sure that the partition size for the **Starplus** AVP is at least 16K larger than the Maintenance program.
- Make sure that the priority number given to the **Starplus** AVP is at least 2 and all other programs are 3. This is done in the Multi Tasker menu item in programming.

**N. RECORDING STUDIO
PROBLEMS**

After recording a prompt with the studio when the user selects the studio again it may not allow a call into the system. When recording your first prompt with the studio you will always have to call into the system. However, after that you can just stay on line with the studio by leaving your phone off hook and just pressing [ESC] to exit the studio. If you press [ESC] to exit but accidentally hang up your phone, you will need to select exit studio from the menu and call back in.

**O. HIGH PITCHED TONE
WHEN LISTENING TO
RECORDINGS**

- Run **D40CHK** from the SPAVP directory to check the voice board.
- Check all IRQ settings for any conflicts.
- If the problem persists, replace the voice board.

**P. NAMES MISSING FROM
COMPANY DIRECTORY**

- Every time you add an extension with a name, you need to rebuild the company directory.

APPENDIX A

SYSTEM LOG MESSAGES

A.1 INTRODUCTION

Starplus AVP outputs two kinds of logs: the error log and a call log. All logs are in ASCII format which allows them to be printed or viewed with simple DOS commands.

The Log files are designed to record all system events and provide an audit trail that allows the administrator to analyze exactly how the system is being used.

A.2 ERROR LOG

The error log is output to a file named SPAVP.ERR. Each line or record in this file contains four fields. The first field is the date that the message was output. The second field is the time. The third field is the channel (or line) number. If the channel number is zero then the message is not linked to any one channel. The rest of the log is text that describes the problem or error.

There are three messages that appear in the error log that do not indicate errors. These lines are:

```
04/28/89 13:51:21 00 RESET 04/28/89 13:51:21 00 010 Sys: Star-
plus AVP v1.982 system reset (F=4). 04/28/89 13:52:28 00 010
Sys: Starplus AVP v1.982 system terminated (F=4).
```

The first two lines indicate that **Starplus** AVP was brought up. The third line shows that **Starplus** AVP was brought down.

The call logs are output in files; one for each day. The file names are MMDDW.Log where MM, DD, and W represent the month, day and year, respectively. If today's date is May 6, 1989, then the log file would be called SP050689.Log.

A.3 CALL LOGS

Call log records are also split into four fields. The first field is the time the call was completed. The second field is the line number. The third field is the time the call **was** begun. The fourth field is a list of actions. The action field is read left to right. The actions are split with commas that represent a change in modules. Each module (ie Voice Messaging . . .) has a letter code associated to it.

Listed below are the current modules and the codes:

- Auto Attendant: [R]
- Voice Messaging: [M]
- Menu Routing: [B]

At the end of each log line you may see the letter H followed by a number. This means that **Starplus** AVP detected that the caller had hangup. The number indicates the type of hangup:

- H1 - Drop in Loop Current
- H2 - Silence Period Detected

- H3 - Tone Period Detected
- H4 - Re-order Tone Detected
- H5 - Integration Hangup Detected

If you do not see an H that means that the caller selected to hangup by pressing a key, such as 9 from the Voice Messaging maintenance. Each of the modules has different log information that will appear after it. These are described individually with their corresponding code information.

A. AUTO ATTENDANT

The letter R represents the Auto Attendant function. After the R you will see the extension the person dialed. If it was invalid then you will see the # sign in front of it. Following the extension will be where **Starplus** AVP sent the caller. In most cases this will be a call to an extension.

For those extensions with supervised transfer you will see caXXX=, where XXX is the extension number. The ca stands for Call Analysis. The value after the equal sign represents what happened to the call.

Possible values are:

- 7 - Busy
- 8 - No Answer
- 9 - No Ringback (bad extension)
- 10 - Call Answered

If the call was answered then that will end the transaction. If there was no answer then the call was most likely sent to the person's mailbox (see Voice Messaging below). In the case of busy the caller may elect to retry the extension, therefore the call repeats.

If the extension is unsupervised then you will see the code bXXXX, which stands for blind transfer followed by the extension number. Since **Starplus** AVP hangs-up automatically after a blind transfer, that should be the end of the log line.

Other codes associated with the Auto Attendant module are:

- fwm, This extension was forwarded to a mailbox. An Mi followed by the mailbox number will appear next.
- fw, This extension was forwarded to a menu. The BXXXXX indicates Menu Routing, followed by the menu name.
- fw oXXXX, This extension is forwarded to an outside number. The number follows the o.
- fwe XXXX, This extension is forwarded to another extension. The forward to extension appears after the code.
- clac, This indicates the extension screened the call and accepted it.
- clrj, This indicates the extension screened the call and rejected it. The remaining log line will indicate where the caller went after being rejected.
- Di, This indicates that the caller entered the Company Directory feature. A normal call transfer line should appear

after this indicating the caller found the desired party and elected to transfer to them.

B. VOICE MESSAGING

Voice Messaging log records are split into two general types. One type is for general message taking, the other is for mailbox maintenance. General message taking is when an internal or external caller leaves a message for a mailbox. Mailbox maintenance is when an internal user is in their mailbox retrieving messages, changing personal options, etc.

The general message taker is indicated in the log with the Mi code. After the Mi code you will see the mailbox number the caller is being sent to. Like Auto Attendant, invalid mailbox numbers are preceded with a # sign. (Unless the person is going to do mailbox maintenance then the caller will probably leave a message. This is indicated by the nm code followed by the message length in HH:MM:SS. nm stands for new message.)

The mailbox maintenance is indicated in the log with the Mm code. After the Mm code you will see the mailbox number of the person in the maintenance mode.

Other codes associated with Voice Messaging are:

- nm, indicates a new message was left for the mailbox. This is usually preceded by a 1 or 2 digit code that indicates why Voice Messaging stopped recording. After the nm, the length of the message in H:MM:SS format.
- m, This message was too short so it was not recorded. This is a programmable feature and the default is 2 seconds.
- kX, where X is 0-9,*,#. This indicates that Voice Messaging detected a DTMF key while it was recording and that is why it stopped. The actual key that was detected is after the k.
- x, Indicates that the time out was expired. While recording this message for a mailbox, the maximum length for a message was reached.
- fm, This mailbox was forwarded to another mailbox.
- fmn, This mailbox was forwarded to a menu. The menu name will appear after the fmn.
- fe, This indicates that the mailbox was forwarded to an extension. The extension number will appear after the fe.
- L, Indicates that the event handler used message wait lamps to notify the mailbox owner of a new message.
- N, Indicates that the event handler utilized notification to notify the mailbox owner of a new message.
- V, This indicates that the event handler was used. The event handler is used for notification, message waiting lamps, and outside calls.

C. MENU ROUTING

Menu Routing uses two basic log lines with descriptive names after the initial code. The log information is as follows:

- B XXXX, Indicates that a caller reached Menu Routing

module. The menu name will follow the B.

- XaYYYY, Indicates that X is the key that was pressed (0-9,*,#), a indicates that an action was taken by the system, and YYYY is the action that was taken. YYYY is defined as:

HgUp ▪ Hang up the line
Oper ▪ Transfer-to the operator
Inst ▪ Replay instructions
Menu ▪ Run a menu
Trou ▪ Go to Auto Attendant
Trou TR Start ▪ Go to Auto Attendant (start key)
Tbas ▪ Go to Voice Messaging
Tbase TB Start ▪ Go to Voice Messaging (start key)
Disb ▪ Disable key
Invd ▪ Invalid key

APPENDIX B

ERROR LOG MESSAGES

B.1 ERROR LOG MESSAGES

The following error messages are for Modules v2.16 and later although many will apply to older versions.

Error **Starplus** AVPDrv- Software Controller Not Installed
Memory key is not installed or is installed incorrectly

Error **Starplus** AVPDrv- Cannot find **Starplus** AVP.RUN (1: not exist)

File does not exist. Must initiate at least one channel.

Error: **Starplus** AVPDrv- Cannot find **Starplus** AVP.RUN (2: bad handle)

FILES parameter in **Config.sys** is set to low, increase to 30.

Error: **Starplus** AVPDrv- Cannot find **Starplus** AVP.RUN (3: no default)

A **Starplus** AVP.Run file has not been specified under Initiate Channels in Maint or the line has not been assigned and there is no default.

Error: **Starplus** AVPDrv- Message data unknown (&mssg_data&) from (&mssg_from&)

Internal **Starplus** AVP error. Please call tech-support for assistance.

Error: **Starplus** AVPDrv- Message source unknown (&mssg_from&)

Internal **Starplus** AVP error. Please call tech support for assistance.

Error: **Starplus** AVPDrv- Bad message return after Answer=2
Internal **Starplus** AVP error. Please call tech-support for assistance.

Error: **Starplus** AVPDrv- Message source unknown (&mssg_from&)

Internal **Starplus** AVP error. Please call tech-support for assistance.

Error: **Starplus** AVPDrv- Message data unknown (&mssg_data&) from (&mssg_from&) - Above messages relate to systems with Integration.

Internal **Starplus** AVP error. Please call tech support for assistance.

Error: **Starplus** AVPDrv- **AutoLoad** Menu (MENU-NAME) does not exist.

The menu specified to run on this line **was** not found. Also make sure **Config.Sys** files is large enough.

Error: Starplus AVPDrv- Line (LINE-NUM) not supported. Need Upgrade

The purchased system was set for less lines than are installed.

Error: Mbox Maint- invalid mailbox number (MBOX#).

Mailbox number passed to TB_Maint was invalid. Software problem or user has called TB_MAINT.SUB directly with bad parameter.

Error: Mbox Maint- Mssg Counts unavailable for mbox (MBOX#) Internal Starplus AVP error. Please call tech-support for assistance.

Error: Mbox Maint sending mssg to PBXcontrol'

Error sending to the PBXcontrol partition

Error: Mbox Maint- opening F file (FILENAME).

The above message occurs when mbox owner is retrieving mssgs and Starplus AVP could not open the files. Probably FILES in Config.sys not big enough.

Error: Mbox Maint- opening receipt file &receipt-file&

The above message occurs when mbox owner is retrieving mssgs and Starplus AVP could not open the files. Probably FILES in Configsys not big enough.

Error: Mbox Maint- opening scratch file for receipt.

The above message occurs when mbox owner is retrieving mssgs and Starplus AVP could not open the files. Probably FILES in Config.sys not big enough.

Error: Fax- file handle (HANDLE) when creating print job

Mailbox maint could not create a fax job for printing. Either Config.Sys problem or file name already exist.

Error: Mbox Maint- (MBOX#) not opened to send to list

This mailbox is already in use.

Error: Fnc_Lib- error sending mssg to PBXcontrol

Could not send to partition PBXcontrol. That partition may be closed down.

Error: Fnc_Lib- Bad fhandle when opening(DL_NUM).

Could not open file; Config.sys or disk error.

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Error: Menu Routing- cannot find menu (MENU-NAME).

Starplus AVP tried to load a menu that does not exist. This is either because an Initiate Channel was set to load a menu and the menu was erased or a mbox/ext was forwarded to a non-existent menu.

Error: Voice Messaging- Mailbox (MBOX#) full with (MSG_NUM). Not really an error. Means the mailbox is full of messages.

Error: Voice Messaging- Mailbox (MBOX#) not opened to send to list.

Mailbox is being used on another line.

Error: Voice Messaging- (MBOX#) password(PASSWORD) invalid length; set to 0s

Password length got corrupted. Starplus AVP set it back to all zeros.

- Error: PtrRtrv opening pointer file (PTR-FILE).
Could not open P file in MESSAGES. Config.Sys error.
- Error: PtrRtrv mssg file (MSG_FILE) not found.
One of the entries in the pointer file did not exist. Should not happen, but...
- Error: PtrRtrv pointer file (PTR-FILE) not found.
The pointer file was erased. Another line must have erased it.
- Error: PtrRtrv mbox (MBOX#) does not exist.
The mailbox passed to Pointer Retrieve does not exist.

APPENDIX C

ADVANCE PROMPT CUSTOMIZATION

C.1 INTRODUCTION

You can further customize Starplus AVP by re-recording some of the prompts that Starplus AVP uses. For example, when Starplus AVP is transferring a call it says Please hold while your call is being transferred. This prompt can be re-recorded in the same voice as your Greeting. All recording is done using the Maintenance program's Utilities/Recording Studio/Other Files Vox.

In the following we have described the various prompts that can be changed:

- File Name: 1.grt, 2.grt, 3.grt, 4.grt
- Module: general
- What: Answer message for line's 1, 2, 3, 4
- Timed: yes
- Default: none
- Description : When a line is answered on the Starplus AVP system, the first thing Starplus AVP does is to check and see if a startup message is present for that line for the current time period. This message is played and Starplus AVP continues. These messages are typically used when you have the same module (Voice Messaging, Auto Attendant, etc.) running on all channels but the lines represent different departments. For example if all the calls in the order entry department come in on lines 1 and 2 and the calls for the shipping department come in on lines 3 and 4, yet all lines are running Auto Attendant, then you could record messages in 1.grt and 2.grt that would say Thank you for calling the Order Entry department. A similar message would be recorded in 3.grt and 4.grt for the shipping department.

File Name:T_base.grt

Module: Voice Messaging

What: Greeting for Voice Messaging module

Timed: yes

Default: none

Description: This file is where the greeting for Voice Messaging is recorded. If you were answering a channel with Voice Messaging, then you would record a message similar to Thank you for Calling Vodavi Communications Systems in t_base.grt.

File Name: T_base.vox

Module: Voice Messaging

What: instructions for Voice Messaging module

Timed: yes

Default: Enter the mailbox number of the person you are trying to reach or press 0 to reach the-operator. Description: This file is where the instructions for Voice Messaging are recorded. The only reason to change this prompt is if you are not using mailboxes as mailboxes but **as** some other item such as product number or restaurant number.

File Name: Xchgmbbox.vox

Module: Voice Messaging

What: Replaces word mailbox for invalid mailbox numbers

Timed: no

Default: Mailbox

Description: In instances where mailboxes represent something other than mailbox numbers then you will also want to record a prompt here so that when the caller enters an invalid mailbox **Starplus** AVP will come back and say Product 123 does not exist instead of saying Mailbox 123 does not exist.

File Name: List-Sig. List Number

Module: Voice Messaging

What: Signature for the distribution list number.

Timed: no

Default: list number

Description: When sending a message to a distribution list, **Starplus** AVP first checks to see if a Distribution List signature has been recorded for the 3 digit list number. If it has it is played otherwise the just number is given.

File Name: T_route.grt

Module: Auto Attendant

What: Greeting for Auto Attendant module Timed: yes

Default: none

Description: This file is where the greeting for Voice Messaging is recorded. If you were answering a channel with Auto Attendant, then you would record a message similar to Thank you for Calling Vodavi Communications Systems in **t_route.grt**.

File Name: T_route.vox

Module: Auto Attendant

What: instructions for Auto Attendant module

Timed: yes

Default: Enter the extension number of the person you are trying to reach or press 0 to reach the operator. If **you** are on a rotary phone please hold and an operator will be with you shortly.

Description: This file is where the instructions for Auto Attendant are recorded. The only reason to change this prompt is if you are not using mailboxes as mailboxes but as some other item such as product number or restaurant number.

File Name: T_final.vox

Module: Auto Attendant

What: Final instructions for Auto Attendant module

Timed: yes

Default: none

Description: When Auto Attendant is called the greeting is played followed by the instructions. If the directory is turned on then instructions for its use are played. Finally, you may record more instructions in **t_final.vox**.

File Name: Tr_dir2.vox

Module: Auto Attendant/Directory

What: Instructions for Paged Mode directory.

Timed: no

Default: Press the first ,4,5 letters of the person's last name followed by the pound key.

Description: Once a caller has selected to use Auto Attendant's company directory, this is the prompt that they will hear. Typically you would rerecord this prompt to change the wording to suit your situation.

File Name: Tr_dir1.vox

Module: Auto Attendant/Directory

What: Instructions for Single Mode directory.

Timed: no

Default: Press the first ,4,5 letters of the person's last name followed by the pound key.

Description: Once a caller has selected to use Auto Attendant's company directory, this is the prompt that they will hear. Typically you would rerecord this prompt to change the wording to suit your situation.

File Name: Notify-h.vox

Module: Voice Messaging/Notify

What: Greeting for message notification.

Timed: no

Default: This is **Starplus** AVP calling. There is a voice message for mailbox . .

Description: Greeting that a mailbox owner hears when he is being notified of message through message notification.

File Name: Notify-p.vox

Module: Voice Messaging/Notify

What: Instructions for a no password needed Notify. Played after instr.

Timed: no

Default: none

Description: If this prompt is present **Starplus** AVP will play it then send the caller immediately to message maintenance, regardless of who answered the phone.

File Name: Tr_dir.vox

Module: Auto Attendant/Directory

What: Instructions to get directory.

Timed: no Default: For company directory information dial

Description: This prompt is played during the Auto Attendant instructions. It is used to inform the caller about the company directory.

File Name: Xfermssg.vox

Module: Auto Attendant

What: Inform before transferring.

Timed: no

Default: Please hold while your call is being transferred.

Description: This prompt is played before a caller is transferred to an extension.

File Name: Havecall.vox

Module: Auto Attendant

What: Inform extension owner of a call.

Timed: no

Default: You have a call.

Description: This prompt is played when a caller is transferred (supervised) to extension and the extension is answered.

File Name: Hold.hold count

Module: Auto Attendant

What: Played while caller is on hold.

Timed: no

Default: none

Description: These prompts, hold.1 to hold.9 are played when a caller tries to reach an extension is busy and has selected to hold. Note that type of holding must be set to play files before the files will be played.

File Name: Lastopt.vox

Module: Voice Messaging

What: Last options after sending a message

Timed: no

Default: To try another mailbox press 1 to transfer to another extension press 2 to transfer to the operator press 0.

Description: This prompt is used to replace what a caller hears after he finishes leaving a message for a mailbox.

File Name: Mssgrtrv.vox (or menus\mssgrtrv.mvx)

Module: Voice Messaging

What: After hearing a message press 7 to play this file.

Timed: no

Default: none

Description: While doing message retrieval a mailbox owner can press 7 to hear this special file. You may place anything in this file since it would probably be used for company information.

File Name: Holdmenu.vox

Module: Auto Attendant

What: Menu that caller hears if extension busy and holding allowed.

Timed: no

Default: Press 1 to hold, press 2 to try another extension, press 3 for other options.

Description: After a caller tries to reach

File Name: System.grt

Module: Voice Messaging

What: The system greeting played if no mailbox greeting exist or if system administrator has set it to play.

Timed: yes

Default: The person you have tried to reach is unavailable

Description: The system greeting that comes with Starplus AVP is very general. To add your own instructions you will need to record a new file.

File Name: Thankyou.vox

Module: Voice Messaging/Auto Attendant
What: Replaces the word Thank You after entering mailbox, extension, or password.

Timed: no

Default: Thank You

Description: If you do not like-the way the current Thank You sounds you can change it by record a new file.

File Name: BrdCst.vox

Module: Voice Messaging

What: Broadcast message or instructions to hear broadcast message.

Timed: no

Default: none

Description: After a mailbox owner hears the prompts to pick up message and how to send messages, this file is played. Typically you would record the message To hear message from system operator press 4.

File Name: Brdcst.msg

Module: Voice Messaging

What: Broadcast message

Timed: no

Default: none

Description: When a mailbox owner presses 4 at the top level of Voice Messaging maintenance, Starplus AVP plays this file.

File Name: Screen.vox

Module: Auto Attendant

What: Instructions for caller to say name.

Timed: no

Default: After the beep please say your name.

Description: If an extension has call screening turned on and a caller tries to reach the extension the Starplus AVP system will ask the caller to record his name. If you want the caller to also say his company name, or his product then you can record a new Screen.Vox to do so.

File Name: Ez_rtrv.vox

Module: Voice Messaging

What: Instructions for user's with mssgs and user **type=1**

Timed: no

Default: none

Description: If a mailbox owner, having a Class Of Service user type 1, does mailbox maintenance he will only be allowed to do message maintenance. He will not be able to change any settings. You can record this special prompt to give the owner more information. It will be played only if he has messages (new or saved) to retrieve and after playing this prompt Starplus AVP will start playing the first message.

APPENDIX D

MULTI-TASKING

D.1 INTRODUCTION

D.2 MULTI-TASKING

The Multi-Task option allows a single PC to run more than one DOS program simultaneously. This Multi-Task program is used on all custom **Starplus** AVP systems. **Starplus** AVP Custom Systems differ from the standard **Starplus** AVP systems in the fact that they utilize a 386 33 Mhz CPU. Standard **Starplus** AVP systems utilize a 286 16 Mhz CPU board. Moving to a **Starplus** AVP Custom allows the user to make changes to the system while it is on line. The Multi-Task program is loaded onto the hard drive and configured at the time of build and all custom systems will boot to the Multi Task main screen

Multi-Task is a multi-tasking shell that runs on top of DOS. Multi-Task continually switches among the tasks listed on the Task Controller screen, running each one for a few fractions of a second. A PC has only one processor, so how much time a single task spends running affects the speed of the other tasks. Only one task can actually be executing at one time. The Multi-Tasker switches between them so quickly it appears that they are all running at the same time.

In a non-multi-tasking environment, the PC will only run a single DOS program, for example, either **Starplus** AVP Runtime or **Starplus** AVP Maintenance can be loaded at one time but not both. Without Multi-Task, the system administration program can not be loaded while **Starplus** AVP is up and running. In order to make program changes the administrator must take the system off line. However, with Multi-Task both programs can be active, allowing **Starplus** AVP and the system maintenance programs to run simultaneously. On smaller **Starplus** AVP systems (under 10 ports) Multi-Task might be considered an optional item. On larger systems, where maintenance activities occur more frequently, or for longer durations, it is a highly recommended item.

The Multi-Task screen includes two primary DOS applications and two secondary DOS applications, they are:

- **Starplus** AVP Runtime (Primary)
- **Starplus** AVP Maintenance (Primary)
- DOS Shell (Secondary)
- Dansr (Secondary)

Starplus AVP Runtime This program is responsible for the execution and management of the **Starplus AVP** modules such as Voice Messaging, Auto Attendant, and Menu Routing. It also includes the **runtime** screens that display usage, blockage, and statistics in realtime. This is the same program as the non multi-tasking systems.

Starplus AVP Maintenance This is the pull-down menu driven program responsible for system administration. It is used to configure the system and includes supporting functions like reporting, housekeeping and prompt recording. When you make a change to any system parameters, the system will prompt if you want the change to take effect immediately, or at a later time, or when the system is idle. Changes to mailboxes and extensions take effect when you exit the programming mode automatically.

DOS Shell This is simply a command to return the user to the DOS prompt from the Multi-Task screen. This screen returns you to the **C:>** prompt. From there, you can type **[3]** to bring up the utility menu. The utility menu contains the phone system settings, back-up procedures, and other utilities.

Dansr This is the remote program used to program the system remotely. Dansr is used in conjunction with Dcall. Dcall is loaded onto the distant computer and used to call the VM system. At that point, Dansr is the program that answers the call and gives control of the keyboard to the distant end computer.

A. HOW TO INSTALL MULTI-TASK

As mentioned above, the Multi-Task program is loaded and configured at the time of assembly. It is not necessary to load the program unless you are upgrading/replacing a hard drive. In this case it will be necessary to load the program from the disk(s) supplied to you with your custom system.

To install Multi-Task, insert the MASTER DISKETTE #1 into the floppy disk drive. There should be the seven (7) system diskettes and one (1) disk labeled 386 FILES. Make sure that the root directory of C drive is displayed on your monitor:

1. Type: **A:>INSTALL C:** then press [ENTER]

A:> identifies the drive where you have just inserted the MASTER DISKETTE and C: designates the target drive onto which the Multi-Task files will be copied.

After you have pressed the [ENTER] key the system responds with:

SPAVP Installation

Do you wish to install the SPAVP software to C: Y/N ?

2. Enter a [Y].

The system will install the first disk and when finished, prompt you to load the second disk. This procedure will be repeated until all seven master software disks have been installed.

When all seven have been installed exit the installation by typing [Q] at the read me window.

3. Remove Disk # 7 and install the disk labeled 386 Files into the A: drive.
4. Type: A:INSTALL C: then press [ENTER]. The system will prompt:
The **Starplus** AVP multi-tasking system will now be copied to drive C:
5. Press the [ENTER] key to continue or [CTRL + C] to abort.

The system will install the second set of Multi-Task files on the disk. Upon completion of the installation the following will be displayed:

Multi-Tasker Installation Complete .

At this point, leave the 386 Disk in the system and proceed directly to the next section to set up port size.

B. MODIFYING PORT SIZE

At this point you must configure the custom AVP system for the correct port size. This procedure has been simplified for you to the point where you need only type the following:

1. Make sure you are at the A:\> prompt. If you are not type A: and press [ENTER]. You should now be at the A:\> prompt.

If you have a 6 port system type: **6port** and press [ENTER].

If you have a 8 port system type: **8port** and press [ENTER].

If you have a 10 port system type: **10port** and press [ENTER].

If you have a 12 port system type: **12port** and press [ENTER].

If you have a 14 port system type: **14port** and press [ENTER].

If you have a 16 port system type: **16port** and press [ENTER].

If you have a 20 port system type: **20port** and press [ENTER].

If you have a 24 port system type: **24port** and press [ENTER].

This will automatically load the correct Autoexec.bat and **Config.sys** files for you. Once this is done the computer can be re-booted. The system will come up to the Multi-Task screen and the **Runtime** and **Dansr** programs should be in the Running status.

C. THE MULTI-TASK SCREEN

When the Multi-Task screen appears, there will be four programs (tasks) assigned to it. Two of the tasks will show as active in the status portion of the screen. These tasks are the **Runtime** program and the **Dansr** program. The screen will look like this:

10/31/92 Task Controller - Enhanced Systems, Inc. 02:22:39 pm							
Swap Avail: 2160K		Max Task: 633K		Disk Space: 103 Meg		u3.01	
Ctrl-Shift-I for Task Controller							
Tasks	status	Memory	Pri	Click	BckGnd	Auto	
1. SPAUP	Not Active	600K	3	7	Same	No	
2. SPAVP Maintenance	Not Active	450K	2	4	Lower	No	
3. Dos Shell	Not Active	150K	2	4	Lower	No	
4. DANSR	Not Active	150K	2	4	Same	Yes	

pick with ↑↓ and ←→ shift-F10 unloads all tasks

The top portion of the controller screen provides memory and disk information as well as the time and date. The memory and disk information is defined as follows:

- **Swap Available** - This indicates the total amount of memory available in the system.
- **Max Task** - This value is the amount of memory that can be dedicated to one program. Each task will have a memory value associated with it. The memory value in each task can not exceed the Max Task value.
- **Disk Space** - This indicates the amount of hard drive space available on the system in **MegaBytes**.

The remainder of the screen provides information on the tasks and their status. These items are defined as follows:

- **Tasks** - This field indicates the actual program name. There will be four tasks when the system is powered up.
- **Status** - This field indicates if the program is running (active) or not running (not active). The only programs that will be running on start up will be **Runtime** and **Dansr**. The more programs you have running the slower the system will be for the VM users.

*It is recommended that you only leave the **Runtime** and **Dansr** programs active. If you enter the **DOS shell** or **Maintenance** programs make sure you exit them properly and return these programs to the **Not Active** status.*

- **Memory** - This field indicates the amount of memory allocated to the program. The value in this field should never exceed the Max Task value at the top of the screen.

- **Priority (Pri)** - This field indicates the importance of the program as far as processor time is concerned.

The Runtime program should have a priority of 3 and all other programs should have a priority of 2. These values should not be changed!

- **Clock (Clck)** - This field allocates the amount of CPU clock time dedicated to each program. There are 18 clock ticks per second.

The Runtime program should have a value of 7, the Maintenance and Dos Shell program values should be 4, and the Dansr program should have a value of 3. These values should not be changed!

- **Background (BckGrnd)** - This field affects how the program will run when it is not the active (on screen) program. If a task has this set to yes and the task is in the background, it's priority will temporarily be decreased by one.

The Runtime and Dansr programs should be set to Same and all other programs should be set to Lower. These values should not be changed!

- **AutoLoad (Auto)** - This field indicates if the program is set to load automatically when the Multi-Tasker is loaded. Only the Runtime and Dansr programs should be set to load automatically.

D. USING THE MULTI-TASK SCREEN

When the Starplus AVP custom is powered up the system will automatically load the Runtime and Dansr programs. These two programs should show Active in the their status field. The highlight bar will be on the Runtime program. The [UP]+[DOWN] arrow keys can be used to move between each program. As you press the arrow keys the highlight bar will move between the programs.

1. To load a specific program use the [UP] + [DOWN] Arrow keys to move the highlight bar to the desired program (task) and press [ENTER]. You may also press the number located beside the program (task) you wish to run.

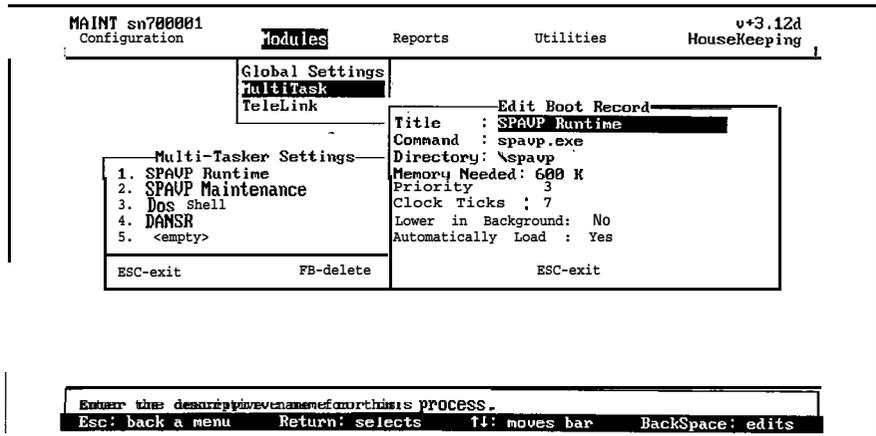
If you load the DOS shell, you will see a conventional DOS prompt. If you load the Starplus AVP Maintenance program, you will see the Starplus AVP Maintenance Password screen.

2. Press [CTRL]+[SHFT]+[1] simultaneously to return to the Multi-Task screen.

You may use the Ctrl and Shift keys and number keys (1 - 9 on the numeric keypad) to move between programs as well as back to the Multi-Task Controller screen.

It is important to understand that once a program is loaded, it continues to run even if its menu is not the one currently displayed on the screen.

You may select one of these items and press the [ENTER] key. The programming field for the item will appear.



Verify that the following settings are on each item:

STARPLUS RUNTIME

- Memory = minimum 515K or greater (usually set to 590-600K)
- Priority = 3
- Clock Ticks = 7
- Lower in Background = No
- AutoLoad = Yes

STARPLUS MAINTENANCE

- Memory = 450K
- Priority = 2
This must not be higher than the Runtime priority
- Clock Ticks = 4
- Lower in Background = Yes
- AutoLoad = No

DOS SHELL

- Memory = 200K
- Priority = 2
This must not be higher than the Runtime priority.
- Clock Ticks = 4
- Lower in Background = Yes
- AutoLoad = No

DANSR

- Memory = 100K
- Priority = 2
This must not be higher than the Runtime priority.
- Clock Ticks = 3
- Lower in Background = No
- AutoLoad = Yes

6. Press the [ESC] key when finished with all changes. Keep pressing this key until you are at the Modules main menu item.
7. Press the [F10] key to exit the Maintenance program.

At this point you must shut down the Multi-Tasker for the changes to take effect. To shut down the Multi-Tasker all programs that are Active must be shut down. Refer to the above section DEACTIVATING PROGRAMS.

8. Press the [SHIFT]+[F10] simultaneously at the Multi-Task screen. A prompt will appear asking to confirm shutdown.
9. Press [Y]. The system will exit to DOS and you will see the C:\SPAVP prompt.

ACTIVATING THE MULTI-TASKER

1. Make sure you are at the C:\>SPAVP prompt. If not type C: and press [ENTER]. Then type CD\SPAVP and press [ENTER].
2. Type STARTHI and press [ENTER].

D.3 REMOTE PROGRAMMING WITH MUTLI-TASK

All custom Starplus AVP systems include a modem and remote programming software installed. This combination allows the user to monitor the system and make changes from a remote location. This makes the system easier to maintain and diagnose any problems reported from the customer. This software differs from the 286 Carbon Copy software used for remote programming in that it was specifically designed to be used with the Multi-Task system. The two main programs that are used for remote programming with the Multi-Task system are Dansr and Dcall.

The remote program was designed to connect two PC's using modems. The remote PC (VM system to be monitored) must be running in the Multi-Task mode and Dansr must be active. The PC that is calling can be any type of PC as long as it is running DOS 3.0 or higher and has a modem. This PC uses Dcall to dial into the VM system and take control of the keyboard. The remote program software will only run on Hayes compatible modems. Starplus AVP custom systems include a 2400 Baud Hayes compatible modem from the factory. The monitor on the remote PC (VM system) and the caller's PC can be different. The remote program software will not work with programs that use graphics mode. It is recommended that you utilize a 2400 baud modem. Dcall cannot use the COM 3 setting on a modem. Only COM 1 or 2 may be used.

A. INSTALLATION OF DANSR AND DCALL

The Dansr program is installed when you receive the Starplus AVP custom. It is located on the hard drive in its' own directory, the full path name is **C:\>DANSR**. The Dansr program is also set up as a partition in the Multi-Task program and is set to automatically load when the Multi-Tasker is started. If you ever upgrade/replace the hard drive the S/W installation procedure will automatically install and set up the Dansr parameters for you. Dansr is set to run at 2400 Baud. The modem on the custom system is set for COM 1 and should not be changed.

RETRIEVING DCALL FROM THE SPAVP SYSTEM

The program utilized on the calling PC (Dcall) must be copied from the custom AVP system and installed on the calling computer. This can be done from the Multi-Task screen as follows:

1. Insert one 3.5" 1.44 MB floppy disk in the A: drive
2. Highlight the DOS Shell program with the [UP]+[DOWN] arrow keys and press [ENTER].
The **C:\>** prompt should appear at the DOS screen.
3. Type **CD\SPAVP** and press [ENTER].
The **C:\>SPAVP** prompt should be on the screen.
4. Type the following: **COPY DCALL.EXE A:** and press [ENTER].
The system will copy the program to your floppy drive and return you to the **C:\>SPAVP** prompt.
5. Type **EXIT** to return to the Multi-Task screen and remove the floppy disk.

INSTALLING DCALL ON THE PC

Once the Dcall program is on a floppy, you can install it on the PC that will be calling the VM system. This is done as follows:

1. Insert the floppy disk into the floppy drive.
2. At the **C:** prompt, type **COPY A:*. * C:** and press [ENTER].
3. When the copying is finished remove the floppy disk.

Dcall has now been installed on your hard drive in the root directory **C:**. *Please note that we use A: in this example, your computer may use A: or B:*

B. USING DCALL

The Dcall program is used by typing **DCALL** followed by its parameters at the DOS prompt. Dcall utilizes the following parameters:

- **-P** (Phone number)
- **-C** (COM port) Default=COM 1
- **-B** (Baud Rate) Default=2400
- **-T** (Wait for Carrier) Default=30 seconds

For example, to call 998-2200 using Corn 2 and 2400 Baud, the user would type at the **C:\>** prompt:

DCALL -P9982200 -C2 -B2400 [ENTER]

After the call has been placed with Dcall, Dansr will answer the call and the two modems will connect. At this point the calling PC's screen will show what is on the remote (VM) PC's screen. You may move through the Multi-Tasker as if you were on site. The arrow keys will move the highlight bar, the [ENTER] key will select a particular program, etc. Once the calling PC has control of the VM PC, the following commands should be used in place of [CTRL]+[SHFT] to move through the system:

(The numbers listed here represent the numbers across the top of the keyboard, not on the numeric keypad)

[ALT]+[1] = Select Program (task) 1 Runtime .

[ALT]+[2] = Select Program (task) 2 Maintenance

[ALT]+[3] = Select Program (task) 3 DOS Shell

[ALT]+[4] = Select Program (task) 4 Dansr

[ALT]+[0] = Disconnect and Hang-up

You can also download files from the VM system using the remote program. This is useful for downloading log files for viewing. To do this the Dansr partition must be in the foreground. To get the Dansr partition in the foreground, return to the Multi-Tasker screen by pressing [ALT]+[1]. Use the [UP]+[DOWN] arrow keys to highlight the Dansr task and press [ENTER]. The Dansr screen will appear. From there complete the following procedure: (In this example the log file 121692.log will be downloaded)

1. Type C \SPAVP\LOGS\121692.LOG and press [ENTER].
The C is used first to check if the file exists. If it does, a brief message with file size, etc. will be displayed.
2. Type S \SPAVP\LOGS\121692.LOG and press [ENTER].
3. Press [CTRL]+[PGDN] to start the download.
At this point you will be prompted to enter a filename for the file to be downloaded. This can be the same name or a different name.
4. After entering the filename press [ENTER].

When downloading log files it is not recommended to download the current day's file. The reason for this is that the file is still open and data is being written to it. Waiting until the next day is recommended.

APPENDIX E

VOICE BOARD SETTINGS

E.1 INTRODUCTION

There are three jumpers-and a DIP switch that need to be set on the voice board. The jumpers are labeled JP7, JP1, and JP5. Each is located near the bottom of the board just above the bus connector. The DIP switch, located above the bus connector, has four toggle switches.

- Jumper JP7 is used to identify the terminating voice board in your **Starplus** AVP system. This jumper must only be installed on one voice board in a multiple board system. It doesn't matter on which board it is installed, **as** long as the other voice boards in the system (if any), do not have JP7 installed. On a one board installation the jumper should be installed. On a multiple board installation we recommend that the first voice board have the jumper installed and all other boards should not have the jumper installed.
- Jumper JP1 is used to select the IRQ used by the voice board(s). This setting must be the same for all voice boards. The IRQ selected for the voice board(s) must not conflict with the IRQs used by other system peripherals. The following IRQs are recommended for use in your **Starplus** AVP system. They are listed in order of preference,

Set the board to utilize IRQ5.

- Jumper JP5 is used to select the base memory address that will be occupied by the voice board(s). The default setting is almost always the best choice, because memory paragraph D000 is reserved for add-on hardware like the **Starplus** AVP voice boards. However, there could be a memory address conflict between the voice board(s) and other add-on hardware (such as a tape drive controller, a network card, etc.) in the D000 paragraph. If there is a conflict, and the A000 paragraph is available (not used by other hardware, especially EGA/VGA cards), JP5 can be used to change the base memory address to the A0000 paragraph.

The voice boards will be shipped with Jumper JP5 removed, designating D000 as the base memory setting. To change the base memory setting to A000, install Jumper JP5.

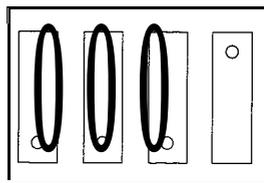
- DIP Switch SW1, Positions 1-3, are used to set the voice board's memory offset address. The selected address is relative to the base setting defined by Jumper JP5. The memory base address combined with the memory offset address determine the memory location for each voice board. Each voice board occupies an 8K block of memory. There are sixteen possible voice board memory address settings. The board with the lowest address is designated

as the first board in the system and will contain lines 1 through 4. The next lowest address is the second board in the system and will contain lines 5 through 8. A basic Starplus AVP system can contain up to 3 boards.

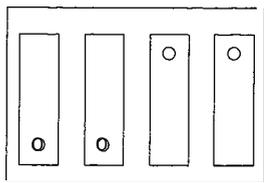
The basic rules for selecting memory addresses are as follows:

- Different Address For-Each Voice Board,- In multiple board installations, you must use different addresses for each board. If you do not, Starplus AVP will either not recognize the number of boards in your system, or will not process calls correctly.
- Consecutive Addresses For All Voice Boards ▪ In multiple board installations, it is best to set the addresses of the boards so that all boards are grouped in consecutive addresses.
- Addresses Must Not Conflict With Other Hardware ▪ The address range(s) selected for your voice board(s) must not be the same as the memory address range(s) used by other hardware in the system. This includes other add on hardware.

The following settings are provided as examples.



Switch 1 settings, board 1
Address D000



Switch 1 settings, board 2
Address D200



Switch 1 settings, board 3
Address D400

Multiple voice board installation, switch 1 settings

APPENDIX F

CALL PROGRESS CHARACTERIZATION

F.I INTRODUCTION

CPC is a utility program that can be used to make Starplus AVP transfer calls on your Non Starplus phone system faster and more reliably. CPC does this by analyzing and storing the RING and BUSY tones produced by the phone system during some test calls. After successfully running CPC to "learn" the RING and BUSY tones, these results can be loaded into Starplus AVP by using MAINT. Afterwards, Starplus AVP will use these results to transfer calls on the phone system as fast as possible. However, running CPC can be a little tricky, especially if you are new to computers, or phone systems, or BOTH! Follow the directions in this section carefully, and you should be able to run it successfully.

BEFORE YOU TRY TO RUN CPC

You must first complete your hardware/software installation before proceeding with CPC. This includes the following:

1. Pre-installation Worksheet
2. Hardware Installation
3. Software Installation
4. System Testing

If you have not completed any of these steps do not run CPC. Install and complete them before running CPC.

A. CPC and the installed IRQ

To run CPC, you need to know the IRQ setting used to install the voice boards. Refer to your Pre-Installation Worksheet, or examine one of your voice boards to determine this number. This is always 5 on the Starplus AVP system.

B. CPC and the first line

To run CPC, you also need to hook at least one analog phone line from the phone system to the "first" line, on the "first" RJ-14 jack, on the "first" voice board. CPC uses this "first line" to make its RING and BUSY test phone calls.

The "first" voice board is the one with the lowest board address. Refer to Chapter 2: Installation, Board Address Setting to determine which is the lowest addressed, or "first" voice board.

The "first" RJ-14 jack on the voice board is the jack closest to the "top" of the board. The "top" of the board is where you install a screw to hold it firmly in the PC.

The "first" line on the RJ-14 jack is the innermost pair of wires. An RJ-14 connection supports two telephone lines, and each line has a pair of wires. The innermost pair of wires is the "first" line on the jack, and the outermost pair of wires is the "second" line.

C. CPC and the text extension

To run CPC, you also need to have a “test extension” that can be called during testing. This is NOT the “first line” that CPC uses to call out on. The “test extension” is a regular extension that is hooked to the phone system, and can be used by a person to make a phone call. The “test extension” must meet the following criteria:

1. It is NOT connected to a Starplus AVP voice board.
2. It is representative of the extensions Starplus AVP will transfer calls to.
3. It is not forwarded in any way to other extensions.
4. It is close enough so you can hear it ring.
5. It is undisturbed during all CPC testing.

CPC and the ring test

While CPC (automatic or manual method) is performing a RING test, the “test extension” must be “ONHOOK”, and must ring for the duration of the test. It should not be forwarded to another phone, and **nobody**(including you!) should answer it or pick it up from another extension.

Just before you run a RING test, confirm that the “test extension” will ring by calling it from some other extension and listening for seven uninterrupted rings. If you do NOT get seven rings, find out why and correct the problem before proceeding with the RING test.

D. CPC and the busy test

While CPC (automatic or manual method) is performing a BUSY test, the “test extension” must be “BUSY”, and must provide busy tones for the duration of the test. It should not be forwarded to another extension, or picked up by anybody (including you!) from another extension.

Just before you run a BUSY test, confirm that the “test extension” is busy by calling it from some other extension and listening for seven uninterrupted busy tones. If you do NOT get seven busy tones, find out why and correct the problem before proceeding with the BUSY test.

E. CPC and common mistakes

1. Wrong IRQ entered
2. “First line” not connected to phone system
3. “Test extension” is forwarded to another extension
4. “Test extension” is in use during a RING test
5. “Test extension” is NOT in use during a BUSY test

F. Two methods of running CPC

There are two methods to run CPC.

- CPCAUTO.BAT - The Automatic Method
- CPC125.EXE - The Manual Method

By far the easiest method of running CPC is by using the CPCAUTO batch file. You should always try to use CPCAUTO (the automatic method) before choosing CPC125.EXE (the manual method). Only the automatic operation is given.

**G. RUNNING CPCAUTO -
The Automatic Method**

CPCAUTO takes almost all of the work out of running CPC. You only need to know two things to begin CPCAUTO:

- The installed IRQ
- The "test extension" number

To get started you should be at the Vodavi menu.

1. Enter [CD/SPAVP] ^
2. TYPE [CPCAUTO irq ext]

where: "irq" is the installed IRQ (always 5)

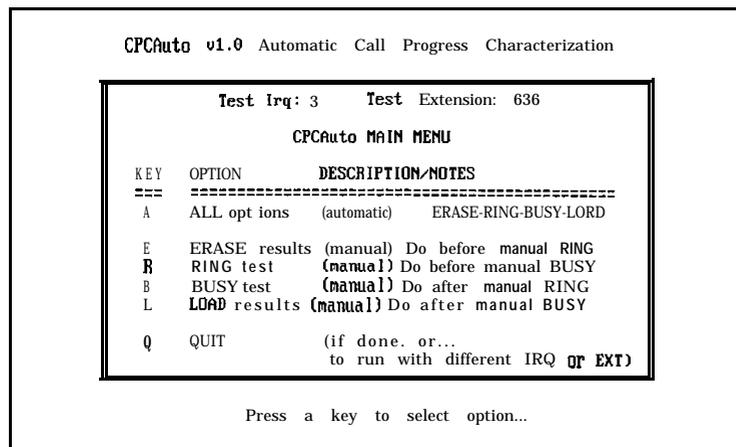
"ext" is the "test extension" number

CPCAUTO will display its MAIN MENU. Using this menu, you can choose either one fully automatic option, or a series of semi-automatic options.

The completely automatic ALL OPTIONS selection does everything for you, and tells you when you have completed all tests successfully. The semi-automatic ERASE, RING, BUSY, and LOAD options are similar, but it is up to you to manually select and perform each step successfully in the correct order.

NOTE: We strongly recommend you use the fully automatic ALL OPTIONS. It is definitely the easiest way to get CPC done correctly!

The CPCAUTO Main Menu looks like this:



For the fully automatic CPC test, choose:

A - ALL OPTIONS (full-auto) ERASE-RING-BUSY-LOAD by pressing the 'A' key. CPCAUTO will do the following:

- Delete any old CPC result files
- Perform a RING test 5 times
- Perform a BUSY test 5 times
- Load the results using MAINT

CPCAUTO makes sure each step completes successfully before advancing to the next step. If any error occurs, CPC pauses to make sure you see what happened. Then you can either retry the operation, or return to the main menu. After all tests are success-

fully completed, CPCAUTO can automatically load the results into Starplus AVP using MAINT.

For a semi-automatic CPC test, you can choose:

- E ERASE old CPC result files
- R RING test
- B BUSY test
- L LOAD results

CPCAUTO performs the selected step for you, again pausing if any errors occur, and letting you retry the test or return to the main menu.

NOTE: It is very important that these options be performed successfully in the above order. Failure to do so will probably produce bad results, which will make Starplus AVP perform poorly during call transfers!

To print your CPC results, type:

- P PRINT results

After you complete your CPC testing, or if you have problems, you may want to print your CPC results on a printer. That way you can either study the results or fax them to Technical Support for assistance.

APPENDIX G

BACKUP

G.1 BACKUP

HBACKUP is a utility program that will perform two functions:

- Backup the **Starplus** AVP system files to floppy disks.
- Restore backed up files to the hard disk in case of a disk error or crash.

You should use Hbackup to back up your system after you have satisfactorily installed **Starplus** AVP.

You can use Hbackup to restore your **Starplus** AVP system in the event of a disk error or crash. Simply repair/replace your disk drive, reinstall **Starplus** AVP from your distribution diskettes and run Hbackup Restore.

HBackup uses file categories to control what is copied to and from the floppies. You choose which categories to backup by selecting the descriptively named items in a menu. Once you have told HBackup what to backup or restore it will automatically prompt you to insert the proper diskettes.

HBackup is easier to use than DOS's COPY and XCOPY commands because it only copies those files that are not included on the distribution disks shipped with **Starplus** AVP. HBackup knows what files can change and what category they fall under.

HBackup has another advantage over XCOPY in that it can copy files larger than the size of the destination drive. It does this by splitting the file across two or more disks. The restore functions in HBackup will join these files back into their original file. This is an important feature because voice files take up large amounts of disk space.

HBackup is also preferable to other backup utilities (such as **Fast-Back**) because it has fewer menu items and copies the files onto the destination drives in a format that can be easily used by regular DOS commands. **FastBack** compresses all the files into a single file and has to search through the entire disk to restore one file.

IMPORTANT!

HBackup was not meant to backup files to a tape drive. It copies files using DOS services and drives A: through Z:. However, if your tape backup unit is configured to resemble a floppy drive, HBackup works in some cases.

In addition, HBackup was not meant to run while **MultiTasker** is loaded. The reason for this is that **Starplus** AVP keeps files open while it is running. If you run HBackup on files that **Starplus** AVP has open, the files can get corrupted.

A. Instructions

Before starting the backup you must:

1. Enter all extension and mailbox information and be sure the system is functioning satisfactorily.
2. Have formatted, diskettes available. These disks should be completely empty and must not contain Volume IDs. The number of disks required will depend on what you intend to backup. A minimum of four high-density disks should be available. You may use either high-density [1.44Mb] or low-density (720K). Since Starplus AVP's distribution disks are high-density, we recommend using this type. You may mix disk types, but it is not recommended.
3. Have sufficient diskette labels -available to mark all diskettes with a descriptive name and numeric order.

To start HBackup make sure the Multi-Tasker program is not running and that you are at the Vodavi main menu. Then type:

1. Type CD\SPAVP [ENTER]
2. Type HBACKUP [ENTER]

You will then see HBackup's main menu. It displays the version number along with three menu options. Pressing [ESC] at this point will exit the program.

To backup your system, select Backup System. To restore from previously backed-up disks, select Restore System. After selecting one of the above you will then be presented with a list of file categories. These categories and the files that belong in them are as follows:

All Starplus AVP Files: All files listed in the categories below. When selecting a category you ONLY get those files.

You should always select this option

System Parameters Only: This category includes those files related to your phone system and how Starplus AVP's modules interact with callers. The files included in this category are: Starplus AVP.SDF, Starplus-AVP.BDF, and Starplus AVP.LOD.

You should backup these files every time you make any system parameter changes such as the hang-up) detection method or feature prefix changes.

Mailbox & Extensions Only: This category includes those files that make up mailbox, extension, and class of service settings. These files contain only the information found when you edit a mailbox, extension or class of service. The files in this category are: SPAVP.EDF, SPAVP.MDF, SPAVP.EDX, SPAVP.MDX and CLASS.*.

Every time you make a change to your extension or mailbox list we recommend backing up these files.

All Other Files Only: This category is a catch-all for all of Starplus AVP's files not found in the above categories. It includes such things as custom voice prompts, registration information, and distribution lists. The file specifications contained in this category are: SPAVP.RU?, SPAVP.DAY, SPAVP.RGS, SPAVP.SCN, BOOT.FIL, BOOT.PRI, BOOT.SHW, REPLY.OFF, DATA*,*, MAILBOXLIST*,*, MENU*,*, and VOX*,*.

Custom Backup Only: This category is used so that Starplus AVP may backup any special files that your system may have. This includes those files used with Fax, Entry, Locator, and other custom modules.

After selecting the category that you want to backup or restore you will be prompted to enter the destination and source drives.

The destination drive for a backup is usually Drive A: and for a restore it is your hard disk, i.e., Drive C:.

The source drive for a backup is your hard disk, i.e., Drive C: and for a restore is Drive A:.

You can change these by entering the new drive letter. The path is assumed to be \Starplus\AVP. Once you have the correct drive letters, press Ctrl-Enter to start the backup or restore process.

During a backup you will see HBackup copying files to the floppy. At the top of the window is the description for Volume. This is the Volume ID that HBackup is putting on the floppy. Each category will have its own set of disks with their own Volume IDs. It is important to write this Volume ID and numeric order on the disk label for future reference. If you forget, you may use the directory command: DIR and obtain the name from the Volume ID...

For example, the first disk for a System Parameters Only backup would be labeled SYS-FILES #1 and the second disk would be labeled SYS-FILES #2. When you restore, you should insert the disks in the order they were backed-up.

As HBackup needs a new disk it will prompt you for it. At anytime during the backup/restore process you may press ESC to abort. The disks that were being copied to will then be invalid. You will be asked if you are sure you wish to abort the backup before HBackup quits.