Subject: Quick KX-TVS100 Installation Guide

Document Number: KTVS1000001

AN INSTALLER'S GUIDE TO THE
KX-TVS100
VOICE PROCESSING SYSTEMS

QUICK GUIDE TO THE KX-TVS100

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CHAPTER 1

Stop! Know The Basics *Before* Going to the Site

WHAT THE VPS CAN AND CANNOT DO

WHY VOICE PROCESSING?

The VPS handles incoming and outgoing calls. When a call comes in, it answers, forwards to appropriate extensions, takes and stores messages, and notifies subscribers when messages are left. Subscribers may send and transfer messages to other subscribers within the system. The VPS is easy to use, helping callers through the system with step-by-step voice prompts.

Unlike handwritten messages or those left with answering services, VPS messages are confidential; they are stored in a mailbox and retrieved only with the subscriber's password. Other advantages of the VPS are clarity and accuracy, which are commonly lacking with written messages. The messages come directly from the caller, in the caller's own voice. To further ensure accuracy, the system allows the sender to correct or change messages before saving them. Messages can be erased, transferred, or saved for future reference by the recipient.

BASIC OPERATIONS

Greeting Callers:	Callers are greeted by a prerecorded message that includes directions for leaving and editing messages. The VPS can list single-digit numbers for each available extension, mailbox, or department. Callers who know the extension of the person they wish to reach may dial the extension number at any time. Callers with rotary phones are transferred to a preprogrammed destination (which is often an operator or the General Delivery Mailbox) to leave a message.
Sending Messages:	Callers can review and edit messages before leaving them in a mailbox. Subscribers can send messages to an individual or to several mailboxes at once. The message sender can then verify that the message has been received by the other subscriber.
Receiving Messages:	Subscribers can choose from several different message notification methods. They can be notified by: message waiting lamp, pager, or a call from the system to another line. System programming determines whether a subscriber will be notified each time a message is left. (Subscribers can choose to be notified of messages differently depending on the time of day.) Mailbox parameters determine maximum length and accommodate 5-100 messages. If the system is connected using Digital Integration, subscribers can press a button to record

conversations in their own mailboxes or other subscribers' mailboxes while talking on the phone. Digital Integration also allows subscribers to screen messages as they are being left and pick up if they choose to take the call.

VPS LIMITATIONS

The KX-TVS100 does not support:

Fax-on-demand   Some systems are connected to fax machines. Callers are offered the option of leaving a fax number; the information is then automatically faxed to that number. *This system does **not** support this feature at this time.*

UCD functions   UCD (universal call distribution) is a service that distributes calls evenly among extensions and returns to callers to say that all extensions are busy. *This system does **not** support UCD functions.*

Integration with the wrong PBX or with certain Key Systems presents limitations to the TVS100's standard functions. We do not recommend these systems for integration with the TVS100. The section *Which Phone Systems Are Compatible?* explains problems with compatibility.

SYSTEM BASICS

SYSTEM COMPONENTS

Main Cabinet

Grounding Strap

Hard Disk Drive

SLOT 3
SLOT 2
SLOT 1

Slot for Optional CO Card

CO Card

Rotary Switch
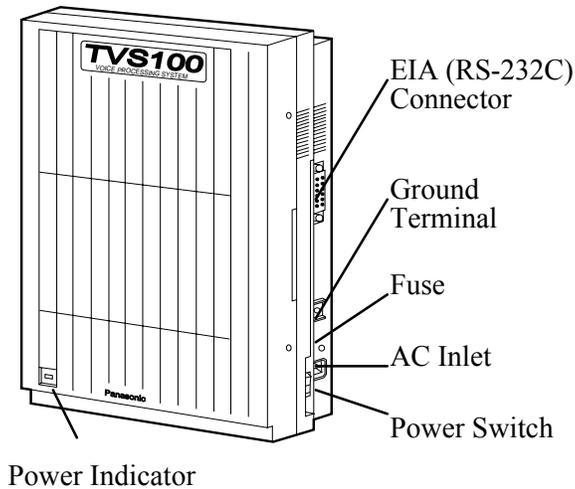
POWER
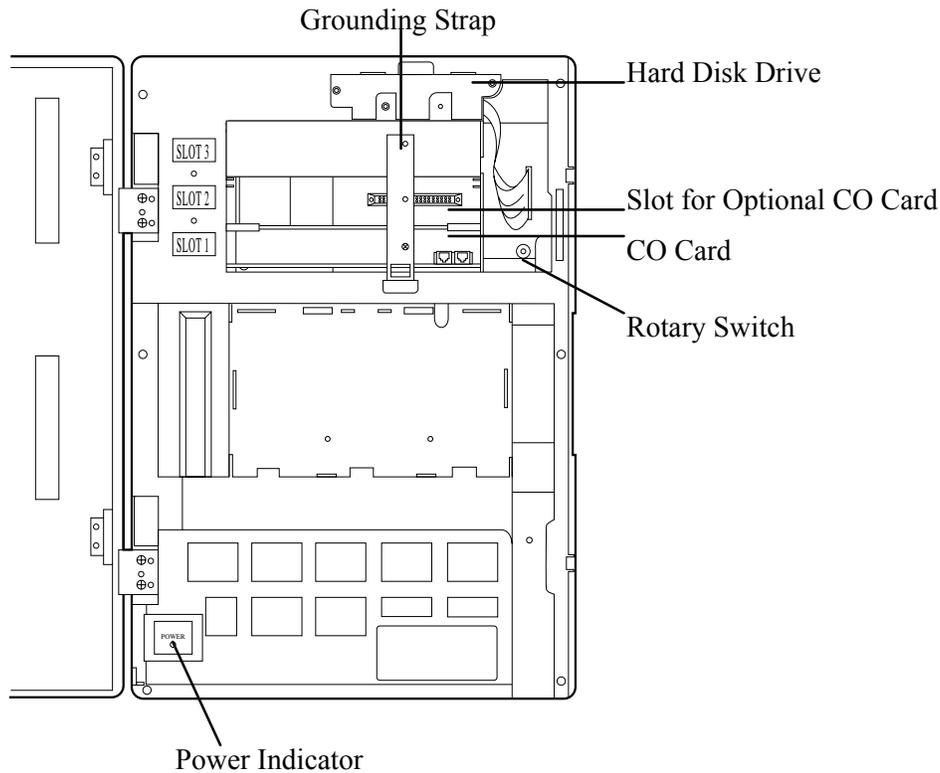
Power Indicator

Inside View of the Main Cabinet

AC Power Jack	Connects the power cable to an AC outlet dedicated for the VPS.
Power Indicator	Indicates system status—when flashing, the system is off-line (not ready to receive calls).
Power Switch	Starts the system and begins the self test.
	SAFETY PRECAUTION: When making any connections or removing the cover, be sure the power switch is turned off.
Ground Terminal	This terminal should be connected to a ground source with less than 1 ohm resistance.
Fuse (700mA 250v)	Protects the system from power line surges and should only be replaced with the same type.

CO Card	KX-TVS102 (1-2/system) Includes the telephone line interface and the CODEC facility. The telephone line interface transmits and receives analog and digital signals(when used with KX-TD D-PITS extensions to and from the Voice Mail ports). The analog signal is digitized at a sampling rate of 8 kHz to create an 8-bit digital signal. The CODEC facility consists of two digital signal processors (DSP). When a user calls the VPS, one of the DSPs compresses the digital signal sent from the telephone interface. This compressed signal is stored on the hard disk as data. When messages are played back, the DSP decompresses the stored data and the signal is then sent back to the telephone interface. Each card supports two ports. (The number of ports determines how many users can simultaneously access the VPS.)
CPU Card	(1/system) Main processing unit for the system; comprised of: central microprocessor, ROM, dynamic RAM, system controller, rotary switch, and an RS-232C interface.
EIA Connector	RS-232C Connects an ASCII or VT terminal to the VPS; must be used to program system.
Hard Disk Drive	(1/system) Stores the proprietary system program, the system administration table, and the voice prompts (about 40 minutes worth); has the capacity to record approximately four hours of messages from callers. (The hard disk is controlled by the central microprocessor.)
Grounding Strap (Ground)	Protects the printed circuit board from static electricity. ***SAFETY PRECAUTION: Discharge any body static by touching the metal board.***
Rotary Switch	(Check the status of this switch only at start-up.) Provides the following additional functions:

Position	Additional Function
0	Normal setting.
1	Initializes RS-232C parameters. RS-232 default parameters: 9,600, N, 8, 1
2*	Quick Setup is automatically completed and all ports are set for Automated Attendant service.
3*	Quick Setup is automatically completed and all ports are set for Voice Mail service.
4	Reserved for future function.
5	Initializes the VPS. Clears all messages and data.
6-9	Reserved for future function.

* For Panasonic KX-TD series telephone systems with
   D-PITS Integration

WHICH PHONE SYSTEMS ARE COMPATIBLE?

We recommend integration with the following Panasonic phone systems:

>Panasonic KX-TD1232
>Panasonic KX-TD816
>Panasonic KX-T336
>Panasonic KX-T123211D

We cannot guarantee adequate integration of the TVS100 with other PBX systems or with Key Systems. If the customer does not have one of the recommended Panasonic PBX systems, be sure that the system has the features listed in the following section.

The PBX must have the following features for successful integration:

- Single line (tip/ring) port circuits
  (Some PBXs need an OPX card to provide this connection. See page 4.2 for   more details and minimum current and voltages that the PBX must supply.)
- Station to station DTMF signaling
- Message waiting notification from an SLT (single-line telephone)
- Screened transfer from an SLT

If the PBX does not have these features, VPS operation will be limited.

Please see Chapter 4 under the heading: *PBX Requirements for Integration*. For each of the features above, this section gives the following information:

- Description
- Limitations of the system without the feature
- Tests to determine whether the PBX has the feature

Avoid Voice Mail Jail!

The recommended Panasonic PBX systems have Follow-on ID and Inband Integration. When callers are transferred to an extension that is forwarded to Voice Mail, Follow-on-ID sends callers directly to the mailbox. Without Follow-on ID, the caller would have to re-enter the desired mailbox number when connected to the Voice Mail.

DTMF Integration enables the VPS to recognize the current state of the call and improve its call handling performance. When enabled, the PBX informs the VPS of the status of the call (busy, answered, ringing, etc.) by sending a code with DTMF tones before sending the normal call progress tones. For example, when a caller hangs up before making a selection, the PBX sends # 9 to the VPS port that answered. This informs the VPS that the caller has hung up. Upon receiving these digits, the VPS goes on-hook and is ready to handle another call.

Digital (D-PITS) Integration is available when the VPS is connected to a Panasonic KX-TD series PBX (depending on the software version). This digital integration provides the VPS with more information than DTMF integration. This information enables the system to identify the extension number of the caller, know where the call is forwarded from and why, and recognize what the caller wants to do. Some features are available only with D-PITS integration (Live Call Screening, Two-Way Recording, Direct Mailbox Access, Intercom Paging, Auto Configuring).

INSTALLER EQUIPMENT AND SOFTWARE REQUIREMENTS

The installer **must** have a laptop computer or data terminal equipped with terminal emulation software. We recommend *Procom Plus®,* version 2.0 or higher. The computer is used to program the VPS. Terminal emulation software enables the keyboard to be used as a data entry device. The data terminal or terminal emulation software must support ASCII or VT100 type terminals. It is best to use a VT100 type terminal to program the system.

While both the laptop and data terminal will work, the laptop allows screens to be saved in a file throughout the process. It is often helpful to retrieve these files later if technical support is needed.

EXPANSION CAPABILITIES

Standard System: 2 ports, 1 CO card

The VPS comes equipped with 2 ports. Each port represents one extension on the phone system. Expansion requires an additional CO card (KX-TVS102). With 2 ports, the VPS can handle 2 simultaneous calls; it can be expanded to 4 ports (to handle 4 simultaneous calls). Because each CO card has 2 ports, ports are increased in increments of 2.

Ports:
extensions connected to VPS (2 ports—standard)
extensions connected to VPS (4 ports—maximum)

Voice Storage:
The standard KX-TVS100 can store up to 4 hours; this cannot be expanded.

RECOMMENDATIONS FOR SYSTEM CONFIGURATION

General guideline: a ratio of 6/1 (for every 6 lines, 1 CO board). There are two questions to ask when considering how many CO boards:

1. Are the ports answering all incoming calls or just forwarded/transferred calls?
2. If they are answering incoming calls, how busy are the lines?

The guideline above (6/1) usually works well with moderate traffic. This may have to be modified for heavy traffic. These recommendations are outlined in the chart below.   **Recommendations for Voice Mail Ports**

1 CO board may not support an Automated Attendant configuration with 5 CO lines. The following recommendations for Automated Attendant ports may have to be modified for heavy traffic.

Recommendations for Automated Attendant Ports

INSTALLING AN OPTIONAL CO CARD

Safety Precautions:
1. Make sure that the power switch is turned off.

2. Discharge any body static by touching the grounding strap.
    (This protects the printed circuit board from static electricity.)

3. Refer to the manual for the optional CO card for further precautions
    and installation procedures.

1. Loosen the screw on the grounding strap. Then remove the strap from the unit.
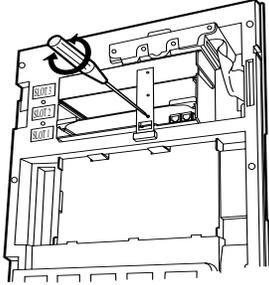
2. Insert the optional CO card, along the guide rails, into SLOT 2.

Guide Rail
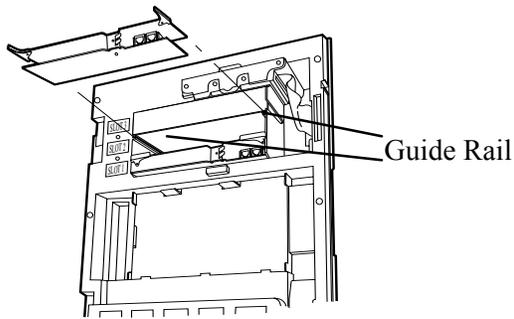
3. Press the left and right card latches firmly, then affix the grounding strap to the unit   with a screwdriver.

<div style="border: 2px solid black; padding: 20px;">
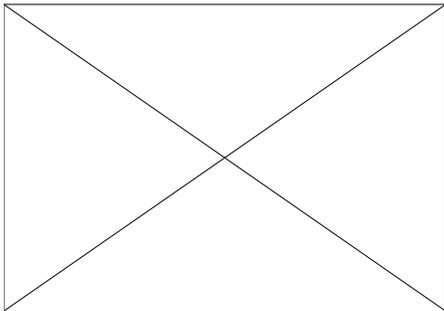
CHAPTER 2

INSTALLATION

</div>

SAFETY PRECAUTIONS

Please read the following precautions before installing the VPS.

INSTALLATION

The VPS can be installed on the floor or on the wall. Improper placement of the system may result in malfunction, noise, or discoloration. Avoid installing the VPS in the following places:

- in direct sunlight; in hot, cold, or humid places.

- in new areas where there are thermal springs, etc. (where sulfuric gas may damage the equipment or contacts).

- where shocks or vibrations are frequent or strong.

- in dusty places or places where water or oil may come in contact with the unit.

- near high frequency generating devices such as sewing machines, elevators or   electric welders.

- on or near computers, telexes, or other office equipment; near microwave ovens or   air conditioners. (Ideally, the VPS should not be in the room with these items and   should be at least 6 feet away from televisions.)

  Do not obstruct the areas around the PBX and the VPS. Both require space above for cooling and space on the sides for maintenance and inspection.

WIRING

- Do not wire the telephone cable parallel to an AC power source, computer, telex, etc. If cables are run near those wires, shield the cables with metal tubing or use   shielded cables and ground the shields.

- Use protectors if running cables on the floor; avoid wiring under carpets.

- Avoid sharing a 120 V AC power supply for computers, telexes, and other office   equipment with the VPS. Induction noise from that equipment may interrupt the   VPS operation.

When making any connections or removing the cover, be sure the power switch is turned off.

WALL MOUNTING

The VPS can be installed on the floor or on the wall. If mounting on the wall, be sure that the wall can support the weight of the VPS. Use the screws supplied with the system or use screws that are the same in diameter.

ON WOOD

1. Place the template (included) on the wall to mark the three screw positions.
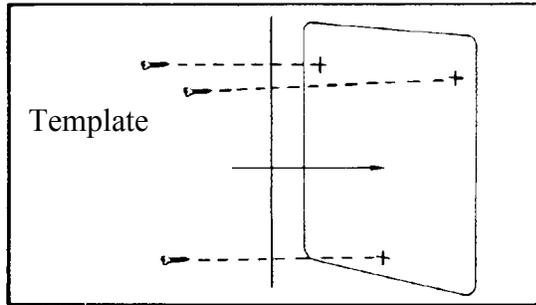
2. Install three screws.
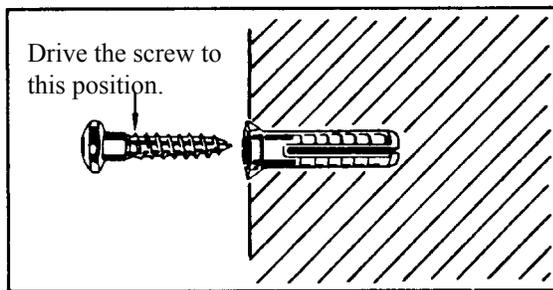
3. Hook the unit onto the screw heads.
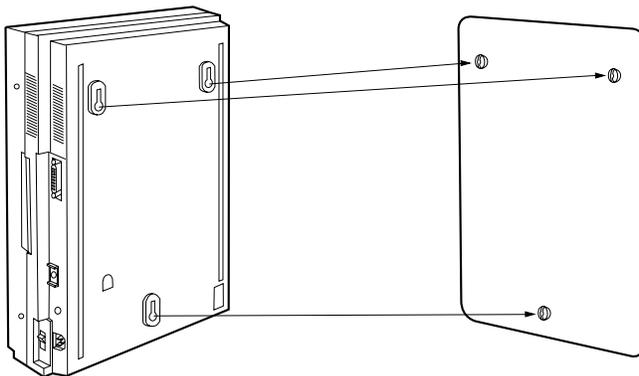
ON CONCRETE OR MORTAR

1. Place the template (included) on the wall to mark the three screw positions.

2. Drill three holes and hammer in anchor plugs until they are flush with the wall.

To Wall Surface   Anchor Plug   Concrete Wall

6.4 mm
1/4 inch

29 mm

1 1/8 inch
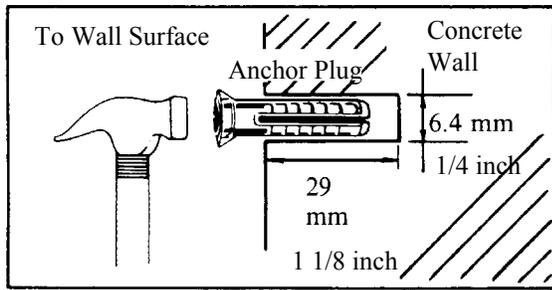
3. Install three screws into the anchor plugs.

Drive the screw to this position.
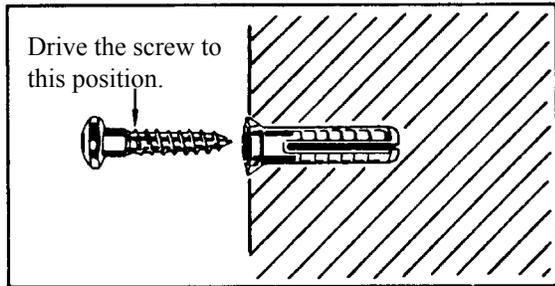
4. Hook the unit onto the screw heads.
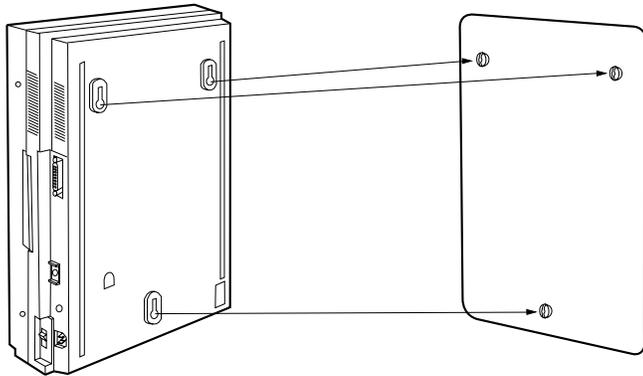
CONNECTIONS

CONNECTING PBX EXTENSIONS

The VPS must be connected to the PBX extensions before starting the system. Up to four extensions can be connected to the VPS. Each PBX extension is inserted into the modular jack on the CO card.

1. Loosen the two screws on the right side of the main unit, then open the front cover (A).
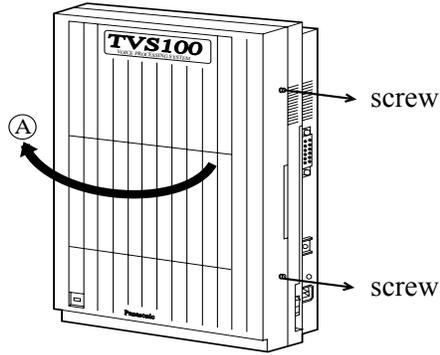
2. Insert modular plug of the PBX extension into modular jack on the CO card.

to the extension
port of the PBX
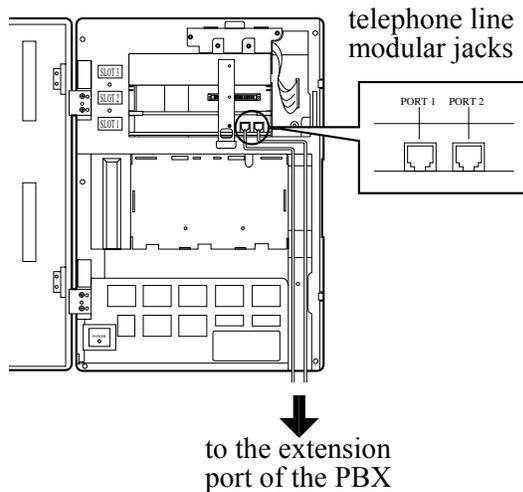
   Make sure the PBX extension is connected to the proper modular jack. Modular jacks on the CO card correspond to the port numbers as follows:

CO Card	Modular Jack	Port Number
1	Left	1
1	Right	2
2	Left	3
2	Right	4

   Assign one of the incoming call services according to the port number.

To use D-PITS Integration, Port 1 of the VPS must be connected to the lowest number jack assigned as a VPS extension. When D-PITS Integration is activated, a single extension jack provides two single-line interfaces to the CO card on the VPS. For example, only connect one line cord (4 wire) to Port 1 on the VPS. This will provide two extensions. Then connect the second line cord (4 wire) to Port 3 (if installed) for the other two extensions. ***Only one D-PITS (4 wire) extension can be connected per card.***

3. Connect the PBX extension to the CO ports of the Voice Processing System.
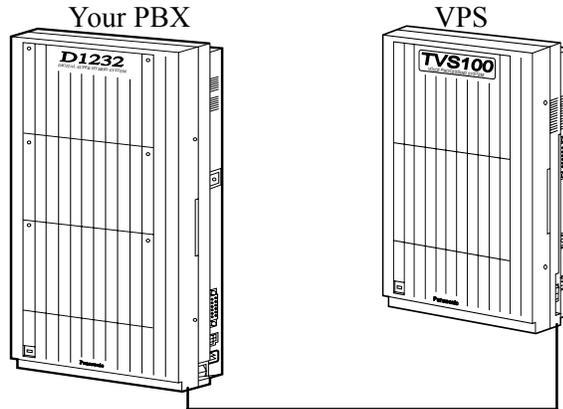
Follow instructions on the PBX to connect the PBX extension ports to the CO ports on the VPS. Use a four-conductor wiring cord for connection with KX-TD systems that use D-PITS integration. Use a two-conductor wiring cord for connections to all other PBXs. The maximum length of the wire varies according to the PBX length. (Refer to the PBX installation manual for length.) Write down the extension port number of the PBX extensions that are connected to the TVS100. You will need to know these numbers when accessing the TVS100.

4. Close the front cover of the VPS (and the PBX if the cover was removed).

5. Tighten the two screws firmly.

REQUIREMENTS FOR CONNECTING PROGRAMMING TERMINAL

The programming terminal must be connected with a serial cable with an RS-232C connector at the EIA port. This enables system administration (system set-up, mailbox set-up, and system diagnosis). If the DEC VT220 (100) or VT220 (100) compatible terminal is used, the system administrator can set up system parameters and diagnose the system with the menu-driven program. Other RS-232C ASCII terminals can also be used, but we recommend a terminal that supports VT emulation. The wiring and parameters are the same for either terminal type.

Communication parameters of the VPS have been set to the following values at the factory:

COMMUNICATION PARAMETERS	
Baud Rate:	9600 bps
Word Bit Length:	8 Bits
Parity:	None
Stop Bit Length:	1 Bit

CONNECTING RS-232C CABLE

STOP: *Before connecting the cable, make sure the power switches on* *both the data terminal and the VPS are OFF.*

RS-232C Cable

Data Terminal
or Printer

EIA Port (RS-232C)
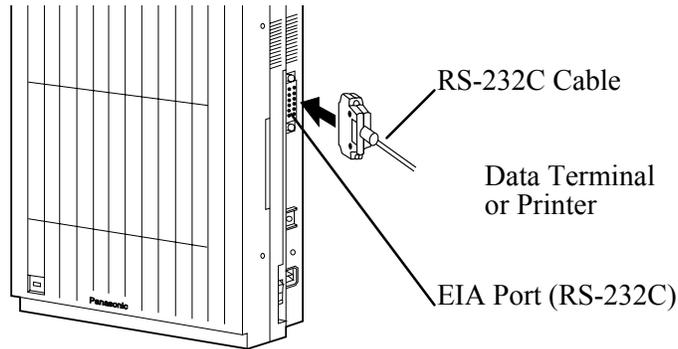
Insert the RS-232C cable into the VPS with the connector indicating the same direction.

Programming Terminal Connection

Connect the terminal and KX-TVS100 cables as shown in the chart below. Cables must be shielded and no longer than 6.5 feet.

	TVS100			**Data Terminal**	
Circuit Type (EIA)	Signal Name	Pin No.	Pin No.	Signal Name	Circuit Type (EIA)
AA	FG	1	1	FG	AA
BA	TXD	2	3	RXD	BB
BB	RXD	3	2	TXD	BA
CC	DSR	6	20	DTR	CD
AB	SG	7	7	SG	AB
CD	DTR	20	5	CTS	CB
			6	DSR	CC
			8	DCD	CF

Sub-part J of Part 15 of FCC Rules requires special accessories, such as cable, to comply with Class A computing devices. Accessories specified in this installation manual meet this requirement.

Frame Ground (FG)
Connects to the unit frame an external ground, usually the ground pin of the AC power cord.

Transmitted Data (TXD)—*output*
Conveys signals from the unit to the terminal/printer. A "mark" condition is held unless data or BREAK signals are being transmitted.

Received Data (RXD)—*input*
Conveys signals from the terminal/printer to the unit.

Request To Send (RTS)—*output*
Sets the modem to originate so that it can send; this lead is held on whenever DSR is on.

Clear To Send (CTS)—*input*
When circuit CTS is on, the terminal/printer is ready to receive data from the unit. The unit does not attempt to transfer data or receive data when circuit CTS is off.

Data Set Ready (DSR)—*input*
When circuit DSR is on, the terminal/printer is ready. Circuit DSR ON does not indicate that communication has been established with the terminal/printer.

Signal Ground (SG)
Connects to the DC ground of the unit for all interface signals.

Data Terminal Ready (DTR)—*output*
This signal line is turned on by the unit to indicate that it is on line. Circuit DTR ON does not indicate that communication has been established with the terminal/printer. It is switched off when the unit is off-line.

Data Carrier Detect (DCD)—*input*
The DCD is on when the carrier signal is being received.

Before connecting the power cable to an AC outlet, make sure all other connections
(RS-232C data terminal with VPS, PBX with VPS, PBX with PBX extensions) are secure. Use an AC outlet
dedicated for the VPS unit.

RS-232C
Interface

Data Terminal

To AC Outlet

Port 1   Port 2

Operator
(Message
Manager)

EXT. 101

EXT. 102

EXT. 103

EXT. 104

EXT. 105

CO 01

CHAPTER 3

INTEGRATING THE VPS WITH THE
PANASONIC KX-TD DIGITAL PBX
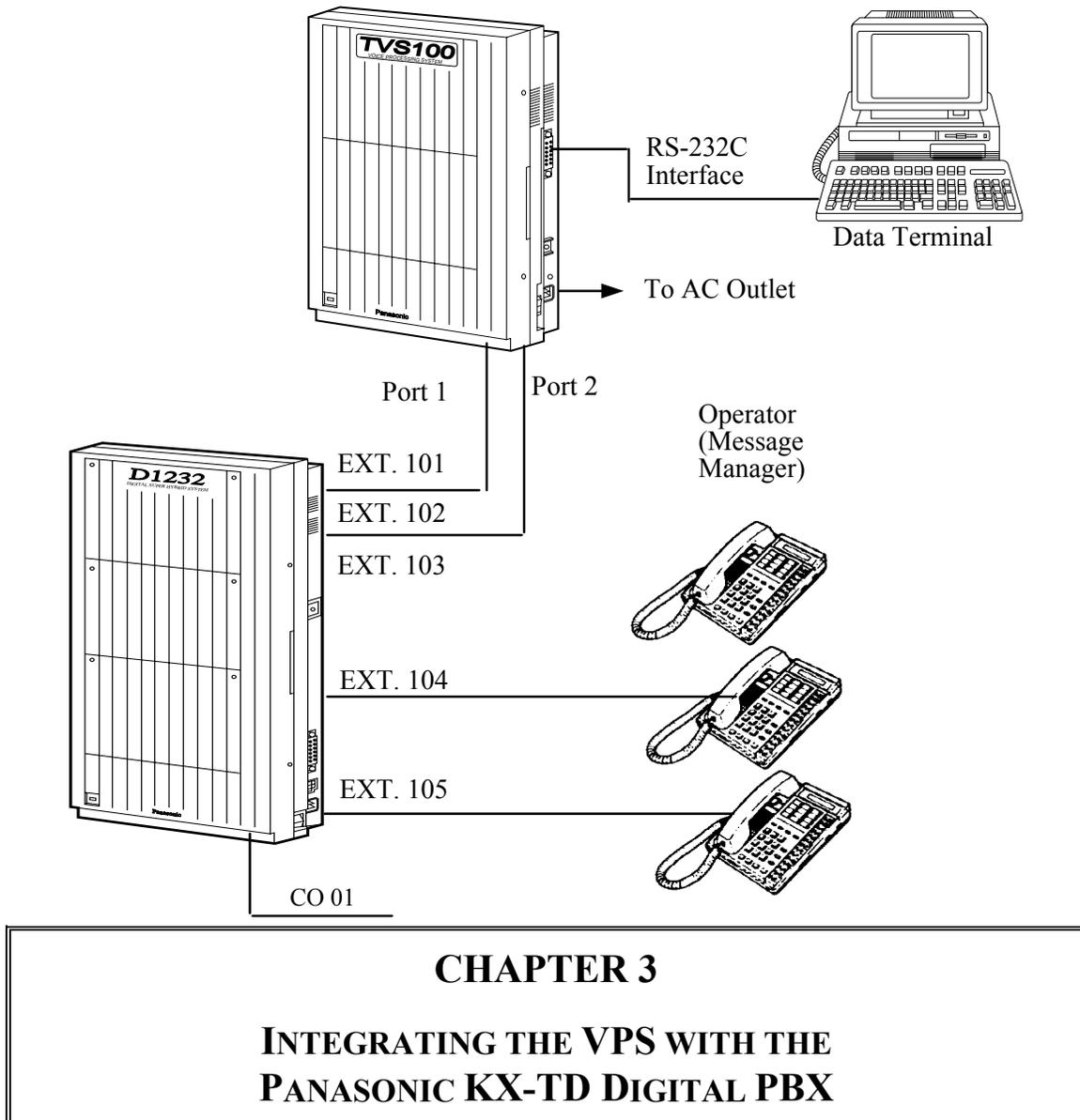
GUIDELINES FOR DIGITAL INTEGRATION

WHY DIGITAL INTEGRATION IS IMPORTANT

The KX-TVS100 works well with most PBXs because its connections are made through a standard single line (tip/ring) telephone interface. However, the communication between the PBX and VPS is best when Digital Integration is used; the KX-TVS100 is already set up to communicate through Digital Integration.

UNDERSTANDING HOW DIGITAL INTEGRATION WORKS

To the Panasonic KX-TD digital PBX, the VPS ports look like digital extensions. The PBX thinks that the VPS is a digital phone, and the VPS mimics all actions of a digital set. Another advantage of Digital Integration is that the 2B+D communication provides two Voice Mail ports for each Digital Station port. For example, you can connect jack 15 of the KX-TD1232 to Port 1 of the Voice Mail with a four-wire connection (see diagram below). This connection creates two Voice Mail extensions and can simultaneously answer two calls. This means that a fully-configured four-port system requires only two jacks from
the PBX.

port 2 ·
extensions 167 and 168

KX-TD1232

16

15

KX-TVS100

port 1
extensions 165 and 16
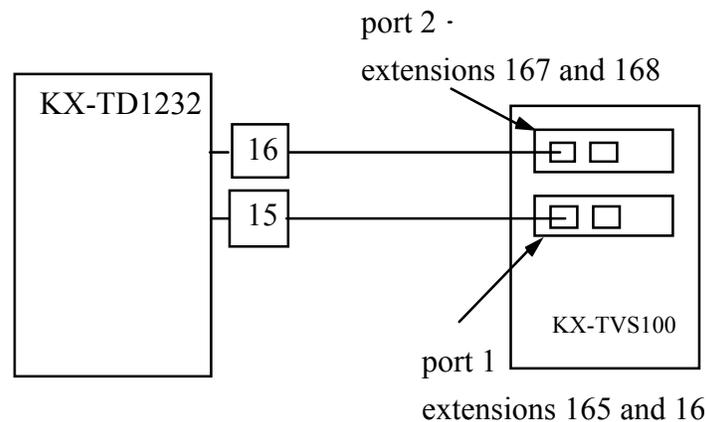
Fig. 1

Communication between the VPS and the PBX through Digital Integration requires the proper software level in the PBX and four-wire connections for each port. Also, the PBX and VPS must be programmed to work with each other.

Once Digital Integration is established, the PBX sends information to the VPS through the data link. This information enables the VPS to identify the extension that is calling, know where a call is forwarded and why it's forwarded, and recognize what a caller wants to do. This communication allows features that are only available with Digital Integration, several of which are described below.

DIGITAL INTEGRATION FEATURES	
Auto Configuration	The VPS knows what extension numbers exist on the PBX and creates mailboxes for each extension automatically.
Live Call Screening	Extension users can monitor messages as they are being left in the mailbox and intercept if required.
Two-Way Recording	Extension users can record conversations in their own mailboxes by pressing one button.
Direct Mailbox Access	The VPS asks the caller for the password; the caller does not have to dial the mailbox number.
Intercom Paging	Callers can page subscribers through built-in speakers and external paging equipment.

The KX-TVS100 System comes from the factory already set up for a KX-TD1232 PBX. When the power is turned on for the first time, the VPS will try to communicate with the KX-TD1232 through Digital Integration. For this reason, several things should be done before starting up the KX-TVS100 for the first time.

PROGRAMMING INSTRUCTIONS—CONNECTING THE VPS WITH THE PANASONIC KX-TD1232

KX-TD1232 SOFTWARE VERIFICATION AND PROGRAMMING FOR DIGITAL INTEGRATION VIA THE MANAGER'S EXTENSION

It is important that the KX-TD1232 have the proper software level to allow Digital Integration with the VPS. Follow the procedures below to confirm the software level,
then complete the required programming before starting up the VPS.

NOTE: Two methods of programming are available on the KX-TD1232. The instructions below show how to program *without* the operating and maintenance tool. For instructions on programming with the operating and maintenance tool, please see page 3.9.

All of the following procedures must be done after entering system programming. Refer to the KX-TD1232 Installation Manual for instructions on how to enter the system programming mode.

> **Step 1**
>> Check the software version of the KX-TD1232 by using PITS programming code 116, which shows the software version number: **P 1 0 1 A 5 0 5 0 8 B**
>>
>> The underlined digits represent the software production date code (format YMMDD). In this example, the date code is May 8, 1995 (year, month, day). For Digital Integration, the software production date of the PBX must be March 31, 1995, or later. ***If the software production date of the PBX is earlier than this, call Panasonic Parts Center (MSC) about an upgrade: 1-800-833-9626.***

Step 2

*From the **System-Prg No. ?** screen:*

1. Enter [116].
2. Press the NEXT button (sp-phone).
3. Enter the system number ([0] or [1], master/slave).
   The system displays the ROM version and date it was created.

This version must be P101A with a date of 05-08-95 or later for Digital Integration to be utilized (both systems if system connection is used).

VOICE MAIL PORT ASSIGNMENT

This program tells the PBX which jacks will be connected to the Voice Mail system. This allows the PBX to send the proper Digital Integration information to those ports.

*From the **System-Prg No. ?** screen:*

1. Enter [117].
2. Press the NEXT button (Sp-Phone).
   Screen Output: Master: # # #
3. Enter the jack number of the first port you will use
   for the Voice Mail (02 - 64).
4. Press [→] to enter the next jack number.
5. Enter the second jack to be used for Voice Mail.
6. Repeat Steps 4 and 5 until all jacks are entered.
7. Press STORE.
8. Press the NEXT button to program the slave system (if connected).
9. Press END (Hold) when finished.

Conditions: Jack 01 cannot be used as a Voice Mail port. A jack programmed as a Manager Extension (prg. 006) cannot be used in this program. The jack numbers correspond to Voice Mail port numbers in numerical order. The lowest jack entered here must be connected to the first port of the VPS.

Example: Jack 02 = Voice Mail numbers 01, 02; Jack 03 = 03, 04
                    (Each jack entered gives two Voice Mail ports.)

VOICE MAIL EXTENSION NUMBER ASSIGNMENT

This program allows you to assign an extension number to each Voice Mail port. Since each jack connected to the VPS provides two extensions, this enables you to assign extension numbers to each port. You can assign any extension number that is not already assigned to another port. To reach the Voice Mail system, users dial these extension numbers. It is not necessary to change the default programming for the extensions 165, 166, 167, 168.

*From the **System-Prg No. ?** screen:*

1. Enter [118].
2. Press the NEXT button (Sp-Phone).
   Screen Output: VM NO? →
3. Press the NEXT button (Sp-Phone).
   Screen Output: VM-01:#_ _ -1: 165
   (_ _ = the first port number you entered in program 117).

6.24

4. Enter the extension number that you want this port to have. (The default extension number for port 1: 165; port 2: 166 ...)

5. Press STORE.

6. Repeat Steps 3, 4, and 5 until all extension numbers are entered.

Conditions: No two jacks on the system can have the same extension number. If you try to enter a number that is already assigned, you will hear an error tone. Each digital extension connected provides two Voice Mail ports and must have two different extension numbers assigned.

VOICE MAIL EXTENSION GROUP ASSIGNMENT

This program allows you to assign an extension group number to each Voice Mail port. The default programming for all ports is Group 01. The group assigned should be used only for ports connected to the Voice Mail. It is not necessary to change the default programming for Voice Mail extension group assignments for most applications.

*From the **System-Prg No. ?** screen:*

1. Enter [119].

2. Press the NEXT button (Sp-Phone).
   Screen Output: VM EXG Group Assn.

3. Press the NEXT button (Sp-Phone).
   Screen Output: VM No?

4. Enter the extension group number that you want the first Voice Mail port to be in.

5. Press STORE.

6. Repeat Steps 3, 4, and 5 until all Voice Mail ports are assigned a group.

7. Press END (Hold).

The required programming is complete and the VPS and KX-TD1232 should be able to communicate through Digital Integration.

We recommend that the KX-TD1232 system have any optional extension cards and telephones connected before starting the VPS.

When running the Quick Setup command (Chapter 5) from the VPS, the PBX transmits the station information automatically. This saves time when programming the VPS.

COMMON DIGITAL INTEGRATION FEATURES AND SETUP PROCEDURES

LIVE CALL SCREENING (LCS) PROGRAMMING

LCS notifies subscribers of incoming messages to their mailboxes. The notification method is programmable for hands-free or private. Hands-free allows the user to monitor a recording through the speaker-phone and, if desired, intercept the call by lifting the handset. The private mode notifies the user with an alert tone when a message is being recorded. By pressing the LCS button, the user can monitor the message and intercept the call by going off-hook. Programming also determines whether the mailbox continues to record after the user intercepts the call.

LIVE CALL SCREENING RECORDING MODE ASSIGNMENT
This program allows the VPS to continue recording the conversation in the mailbox after the extension intercepts the call during the Live Call Screening.
1. Enter [610].
2. Press the NEXT button (sp-phone).
    Screen Output: Jack No.?
3. Enter the jack number.
    Screen Output: # _ _ Stop Recording
    (_ _ = the jack number you entered)
4. Press the SELECT button (Auto-Ans) until the desired selection is   displayed.
5. Press STORE.
6. Press the NEXT button (Sp-Phone).
7. Repeat Steps 4, 5, and 6 until all jacks are programmed.
   Conditions: Only available with D-PITS Integration.

LIVE CALL SCREENING PRIVATE/HANDS-FREE MODE ASSIGNMENT
This program assigns a VPS response for when a message is being left in a mailbox. It determines whether an alert tone is sent and whether the recorded message is played through the built-in speaker of the extension. The default mode is hands-free. (This is a **station level program** and should be done at each individual phone.)
1. Enter PITS programming:
    a. With the phone on-hook, press the PROGRAM button.
    b. Dial [99]. (Display changes to PT-Prg Mode.)
2. Dial the code for the mode you want this phone to have.
    Hands-Free = 71
    Private = 72
    Screen Output: Hands-Free or Private
3. Press STORE.
4. Exit the program mode by pressing the PROGRAM button.
5. Repeat these steps at each telephone.
   Conditions: None.

LIVE CALL SCREENING BUTTON ASSIGNMENT

For the Live Call Screening feature to work at an extension, the extension must have an LCS button on it and the button must be lit at the time of the message. This key must be either a DSS/BLF or CO key (must have a lamp). Follow the procedure below to assign an LCS button on an extension. (This is a **station level program** and should be done at each individual phone.)

1. Enter PITS programming:
    a. With the phone on-hook, press the PROGRAM button.
    b. Dial [99]. (Display changes to PT-Prg Mode.)
2. Press the desired FLEXIBLE (CO or DSS/BLF) button you want to assign
    as the LCS button.
3. Dial [92].
    Screen Output: LCS
4. Press STORE.
5. Repeat these steps at each telephone.
6. To exit the Station Programming mode, press the PROGRAM button
    or lift the handset.
7. Repeat these steps for each telephone.

     Conditions: This button must be assigned and lit for LCS to operate. To light this, press the button and dial the LCS password (see Password Assignment).

LIVE CALL SCREENING CANCEL BUTTON ASSIGNMENT

This button assignment allows you to assign a Flexible (CO, DSS) button as a Live Call Screening Cancel button. (Before setting, be sure that you are in the Station Programming mode; press [PROGRAM 99]).

1. Press the Flexible (CO, DSS) button that you wish to assign
    as a Live Call Screening Cancel button.
2. Dial [93].
    Screen Output: LCS Cancel
3. Press STORE.

     The STORE indicator light turns on.
     The display shows the initial programming mode.

4. To exit the Station Programming mode, press the PROGRAM button
    or lift the handset.

     The Live Call Screening Cancel Button Assignment is optional; Live Call Screening can also be canceled by pressing the FLASH button.

LIVE CALL SCREENING PASSWORD ASSIGNMENT

To allow the Live Call Screening feature to work at an extension, the extension must have the LCS button lit. To light this button on the phone, press the LCS button, then enter the password. This password prevents others from activating the LCS feature and listening to the messages as they are being left. (It is **not** necessary to enter PITS Programming to activate this feature.)

1. Lift the handset or press the speaker-phone button.
2. Dial the feature number [799].

3. Dial any password of three digits ([000] - [999]) twice.
   You will hear a confirmation tone, then a dialtone.
   Screen Output: The three-digit password you entered is displayed.

LIVE CALL SCREENING PASSWORD CANCELING

To cancel the password, follow the procedure below. (It is **not** necessary to enter PITS Programming to activate this feature).

1. Lift the handset or press the speaker-phone button.

2. Dial the feature number [799].

3. Dial the password ([000] - [999]).
   You will hear confirmation tone, then a dialtone.
   Screen Output: Password Canceled.

LIVE CALL SCREENING PASSWORD CONTROL

This feature allows Operator 1 to cancel the password for LCS at any extension. If a user forgets the pre-programmed password, Operator 1 can cancel the LCS password.

1. Enter PITS programming:
   a. With the phone on-hook, press the PROGRAM button.
   b. Dial [99]. (Display changes to PT-Prg Mode.)

2. Dial [*].
   Screen Output: Ext No?

3. Dial the extension number or [*] key to remove all passwords.

4. Press STORE.

5. To exit the Station Programming mode, press the PROGRAM button
   or lift the handset.

TWO-WAY RECORDING INTO MAILBOX

This feature allows extension users to record conversations into their mailboxes by pressing the Two-Way Recording (TWR) button.

TWO-WAY RECORDING (TWR) BUTTON ASSIGNMENT

For the Two-Way Recording feature to work at an extension, the extension must have a TWR button on it. This key must be either a DSS/BLF or CO key (must have a lamp). Follow the procedure below to assign a TWR button on an extension. (This is a **station level program** and should be done at each individual phone.)

1. Enter PITS programming:
   a. With the phone on-hook, press the PROGRAM button.
   b. Dial [99]. (Display changes to PT-Prg Mode.)

2. Press the FLEXIBLE button (CO or DSS/BLF) that you want to assign
   as the TWR button.

3. Dial [90].
   Screen Output: 2 Way-Rec.:

4. Enter a Voice Mail extension number.
   Screen Output: 2 Way-Rec: _ _ _
   (_ _ _ = The extension number you entered).

5. Press STORE.

6. To exit the Station Programming mode, press the PROGRAM button
    or lift the handset.

7. Repeat these steps for each telephone.

Conditions: This button must be a CO or DSS/BLF button to be programmed as a TWR button. When all Voice Mail ports are busy and this key is pressed, the user will hear reorder tone.

TWO-WAY TRANSFER INTO MAILBOX

This feature allows an extension user to record a conversation into another user's mailbox by pressing the Two-Way Transfer button followed by the mailbox number. This is commonly used by a person who is taking a detailed message for someone else and wants the message recorded in the mailbox at the same time.

TWO-WAY TRANSFER (TWT) BUTTON ASSIGNMENT

For the Two-Way Transfer feature to work at an extension, the extension must have a TWT button on it. This key must be either a DSS/BLF or CO key (must have a lamp). Follow the procedure below to assign a TWT button on an extension. (This is a **station level program** and should be done at each individual phone.)

1. Enter PITS programming:
    a. With the phone on-hook, press the PROGRAM button.
    b. Dial [99]. (Display changes to PT-Prg Mode.)

2. Press the desired FLEXIBLE (CO or DSS/BLF) button that you want to   assign as the TWT button.

3. Dial [90].
    Screen Output: 2 Way-Trans:

4. Enter a Voice Mail extension number.
    Screen Output: 2 Way-Trans: _ _ _
    (_ _ _ = The extension number you entered).

5. Press STORE.

6. To exit the Station Programming mode, press the PROGRAM button
    or lift the handset.

7. Repeat these steps for each telephone.

Conditions: This button must be a CO or DSS/BLF button to be programmed as a TWT button. When all Voice Mail ports are busy and this key is pressed, the user will hear reorder tone.

KX-TD1232 SOFTWARE VERIFICATION AND PROGRAMMING VIA THE OPERATING AND MAINTENANCE TOOL

Follow these steps after communication between the KX-TD1232 and the programming software has been established. Refer to the Operating and Maintenance manual for connection information.

SOFTWARE VERIFICATION

Step 1
Go to the *Main Menu*. Press the ALT key and the letter [V] at the same time.

Step 2
Verify the Operating and Maintenance version being used.

      Sample display: DB data (PC): Empty
                           Version: <u>3.00</u>MUK

This version must be 3.00 or higher to program the KX-TD1232 for Digital Integration.

NOTE: If you have an older version of the maintenance tool but have the correct ROM version in the system, you may still program the KX-TD1232 but you must program using the Manager's Extension.

Step 3
Verify the ROM version of the KX-TD1232.

<div align="center">Example: P 0 1 0 1 A <u>5 0 5 0 8</u> B</div>

This version must be P101A with a date of 05-08-95 for Digital Integration to be utilized (both systems if system connection is being used).

In the example above, the underlined digits represent the software production date code (format YMMDD). In this example, the date code is May 8, 1995 (year, month, day). For Digital Integration, the software production date of the PBX must be May 8, 1995, or later. ***If the software production date of the PBX is earlier than this, call Panasonic Parts Center (MSC) about an upgrade: 1-800-833-9626.***

SYSTEM PROGRAMMING

Step 1
Go to the *Main Menu*. Choose *System Data Programming*.
(BATCH [1] or INTERACTIVE [2]).

Main Menu

    1.System Data Programming (BATCH)
    2.System Data Programming (INTERACTIVE)
    3.Disk File Management
    4.DSHS Management
    5.DSHS Connect/Disconnect
    6.Quit
      Select the number : [   ]

Step 2

Choose *System* from the *System Data Programming Main Menu.*

System Data Programming Main Menu

  1.Line
  2.Station
  3.System
  4.Toll Restriction
  5.ARS
  6.Aux. Ports
  7.Additional Function
  8.Caller ID
    Select the number : [**3**]

Step 3

Choose *Voice Mail Integration* from the *System Menu.*

System Menu

  01.Day/Night
  02.Class of Service
  03.Speed Dial
  04.Absent Message
  05.Flexible Numbering
  06.Account Code/Special Carrier
  07.Timer
  08.Voice Mail
  09.Voice Mail Integration
  10.Miscellaneous
  11.System Time
  12.Version
    Select the number : [**09**]

Step 4

First, enter the port numbers that will be connected to the VPS. If desired, change the default extension numbers of the Voice Mail ports.

Voice Mail Integration

| VM Port No. | Master [07] [ ] [ ] |
| | Slave [ ] [ ] [ ] |

	VM	Jack	EXT	EXG
Master	01	07-1	[165]	[1]
	02	07-2	[166]	[1]
	03	-1	[167]	[1]
	04	-2	[168]	[1]
	05	-1	[169]	[1]
	06	-2	[170]	[1]
Slave	07	-1	[171]	[1]
	08	-2	[172]	[1]
	09	-1	[173]	[1]
	10	-2	[174]	[1]
	11	-1	[175]	[1]
	12	-2	[176]	[1]

Step 5

Step 5 should only be done if the VPS is going to answer all incoming Central Office lines directly.

Return to the *System Data Programming Main Menu.* Select *Line.* Program all lines DIL to the first extension of the Voice Mail hunt group.

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CO Line Setting

CO No	CORNG	TRG	DIAL	DTMF	PPS	CID	CPC Detection Mode	CPC Detection Out	DIL 1:1 EXT No Day	DIL 1:1 EXT No Night
01	Y	[1]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
02	Y	[2]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
03	Y	[3]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
04	Y	[4]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
05	Y	[5]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
06	Y	[6]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
07	Y	[7]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
08	Y	[8]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
09	Y	[8]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
10	Y	[8]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
11	Y	[8]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**
12	Y	[8]	D	80	10	N	400ms	Disable	**EXT [165]**	**EXT [165]**

The required programming is now complete and the VPS and KX-TD1232 should be able to communicate through Digital Integration.

We recommend that the KX-TD1232 system have any optional extension cards and telephones connected before starting the VPS.

When running the Quick Setup command (Chapter 5) from the VPS, the PBX transmits the station information automatically. This saves time when programming the VPS.

GUIDELINES FOR INTEGRATION

WHY INTEGRATION IS IMPORTANT

The KX-TVS100 works well with most PBXs because its connections are made through a standard single-line (tip/ring) telephone interface. However, the VPS operation depends on the capabilities and features provided by the PBX; its performance will vary when connected with different PBX systems. For example, Follow-on (or Called Party) ID is a feature of the PBX. If the PBX does not have this feature, the VPS cannot transfer calls directly to the correct mailbox and play the busy or no-answer greeting for that mailbox. Instead, callers are told that the extension is busy or that no one is available and they may choose to leave a message or take another action.

UNDERSTANDING HOW THE VPS AND THE PBX COMMUNICATE

To the PBX, the VPS looks like SLT sets. The PBX thinks that the VPS is an SLT, and the VPS mimics all actions a live attendant would carry out from an ordinary 2500 type set.

For the VPS and the PBX to communicate, proper signaling is important. Like an attendant, the VPS places calls by going off-hook and dialing numbers. It starts call transfers with a hookswitch flash to put callers on hold and then dials the desired extension number. By recognizing call progress tones from the PBX, the VPS decides how calls should be handled. Inband Integration allows the PBX to send certain digits (DTMF) to the VPS, allowing it to quickly recognize the status of the extension and take the appropriate action.

VPS/PBX COMMUNICATION

PBX to VPS	VPS to PBX
Call Progress Tones	SLT Signals
• ring back	• on/off hook
• busy	• hookswitch flash
• reorder	• DTMF tones
DTMF Tones	

The VPS must also have access to certain PBX features. For example, if the VPS takes a message, one way it can notify the mailbox owner is by dialing the PBX's Message-Waiting-Lamp-On code. Once new messages are retrieved, the VPS dials the Message-Waiting-Lamp-Off code for that same mailbox owner.

PBX REQUIREMENTS FOR INTEGRATION

The PBX must have certain capabilities and features to work with the VPS. (Although this section includes tests to help you evaluate the PBX, it may be necessary to refer to the PBX's documentation for detailed capability and feature descriptions.)

- **Single Line (Tip/Ring) Port Circuits**

  The VPS can only be connected to a PBX that supports SLT sets (e.g. 2500 type sets). Some PBXs need an OPX card to provide this connection. *However, some OPX cards do not provide all the capabilities listed in this section.*

  Following are the minimum current and voltages that the PBX must supply:

Minimum Loop Current	20 mA
Minimum Line Voltage	5 Vdc
Minimum Ringing Voltage (Frequency : 25 Hz)	40 Vac

- **Station to Station DTMF Signaling**

  For system users to access VPS services and features, they must be able to send DTMF tones from their telephones to the VPS port. As a rule, SLT sets can perform station to station DTMF signaling; however, many proprietary telephones cannot. Some PBXs need to be programmed to make proprietary sets use DTMF signaling. *If the PBX does not provide station-to-station DTMF signaling, VPS services and features will be limited.*

  TEST: Call an SLT extension from the telephone in question. When the call is answered, see if the person receiving the call hears DTMF tones when numbers are dialed.

- **Message Waiting Notification from an SLT**

  The PBX extensions should light a lamp or receive stutter dialtone when the Message-Waiting-Lamp-On code is dialed by the VPS. The VPS functions best when the Light-On or Light-Off code is followed by the extension number of the voice mailbox owner. On some PBXs, however, the extension number is dialed first, followed by a hookswitch flash and then the On code. This presents a problem if the extension is answered before the VPS sends the hookswitch flash.

  If the PBX does not provide message waiting notification from an SLT, the VPS can only notify mailbox owners by dialing a pager number or user-assigned extension. This process slows down VPS performance as it dials the pager or extension number and waits to confirm notification. The pager or user-assigned extension notification is meant to be used for necessity, usually for mailbox owners who are often out of the office (e.g. salespeople or field representatives). The only other option, without message waiting notification, is for mailbox owners to periodically call the VPS to check for messages.

  TEST: See if an extension's message waiting indicator can be turned on by dialing the On code from an SLT.

- **Screened Transfer From an SLT**

  The PBX must provide a screened transfer from an SLT for the VPS to function properly.

  A screened transfer:

  1. Puts the caller on hold, usually with a hookswitch flash.
  2. Dials the extension.

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3. Checks to see if the called subscriber is in, out, or on another line, and whether or not that subscriber accepts the transfer.

4. Completes the transfer (by going on-hook) or returns to the caller to say that the party is busy or not available. It then gives the caller an opportunity to leave a message.

If the PBX does not provide screened transfer from an SLT, the VPS cannot give callers the option to leave a message in a subscriber's mailbox.

TEST: Place an outside call from an SLT. See if you can set up a screened transfer to another extension. Next, try the same test with an internal call. (The VPS may have to transfer both types of calls.)

- **Follow-on ID or Called Party ID**
  When forwarding or transferring a call to the VPS, a PBX with Follow-on ID sends the mailbox number of the called subscriber to the VPS before connecting the caller. The VPS responds by playing that subscriber's personal greeting. This operation is sometimes called Call Forward to Mailbox. Without this feature, the VPS cannot immediately play the greeting when the line is busy or there is no answer and allow the caller to leave a message.

PBX PARAMETERS AND PORT SETTINGS: GENERAL GUIDELINES AND DEFINITIONS

Optimal performance of the VPS/PBX system relies on proper VPS programming. There are three categories of hardware settings: RS-232C, Port Settings, and PBX Interface Parameters. Some of the parameters are set by entering a number, while others use sequence codes.

RS-232C SETTINGS

- **Baud Rate (300 - 19200):** Specifies the bits per second (the speed at which the data is transferred).

- **Word Bit Length (7 - 8):** Defines the number of bits in each byte or character.

- **Parity (N, O, E):** Specifies the number of bits used for error detection.

- **Stop Bit Length (1 - 2):** Specifies the number of bits used to signify the end of the byte.

PORT SETTINGS

There is no need to change these in a typical installation. Each port on the VPS should be matched to the type of signaling the PBX expects. If you need to change these settings, refer to the PBX reference manual or customer support office to get the correct values for these settings.

- **Flash Time—300, 600, 900 milliseconds:** The minimum amount of time that the PBX requires to recognize a hookswitch flash. Choose the amount that is equal to or greater than the PBX's setting.

- **CPC Signal (Calling Party Control Signal)—NONE, 6.5, 150, 300, 450, 600 milliseconds:** The amount of time allowed for the short break in loop current that is used to indicate that the caller has hung up; usually set to NONE, since most PBXs do not provide this signal to single line ports. If choosing a setting other than NONE, use an amount equal to or less than the PBX or telephone company provided CPC signal.

- **Disconnect Time—1 - 8 seconds:** The amount of time an SLT has to be on-hook for the PBX to recognize a disconnect.

- **Dial Mode—DTMF, Pulse 10pps, Pulse 10pps:** The type of signaling the PBX single line port expects to receive. (pps = pulses per second)

PBX INTERFACE PARAMETERS

- **Dialing Parameters**

    PBX Type: Specifies the type of PBX which is connected to the VPS.

    Integration Mode: Specifies the method of integration to be used between the VPS and PBX. If PBX type is set to Panasonic KX-T series, the inband signaling parameters are set automatically and should not be altered. D-PITS integration is only available when a KX-TD series PBX is connected.

SEQUENCE CODES	
D	Disconnect
F	Hookswitch Flash
R	Ring Detection
S	Silence Detection
T	Dialtone Detection
W	Wait for 1 Second
X	Dial Extension
0-9, *, #	DTMF Digits

Operator Transfer Sequence: This setting tells the VPS how to transfer a call to the operator.
> *Example:* FTX [hookswitch flash—wait for dial-tone—dial (operator)   extension]

Extension Transfer Sequence: This setting tells the VPS how to transfer a call to an extension.
> *Example:* FTX [hookswitch flash—wait for dialtone—dial extension]

Alternate Extension (Transfer Sequence): This setting tells the VPS how to transfer a call to an extension that is entered into the "Alternate Extension Group." This is useful for extensions that need a special transfer procedure (ie. blind transfer) such as modem extensions.
> *Example:* FTXD [hookswitch flash—wait for dialtone—dial
> extension—hang up]

Reconnect Sequence on Busy: If the extension the caller has dialed is busy, this setting tells the VPS how to return to the caller. PBXs differ in how they handle this function. Test from an SLT to determine the sequence.

Reconnect Sequence on No-Answer: If the extension the caller has dialed does not answer, this setting tells the VPS how to return to the caller. PBXs differ in how they handle this function. Test from an SLT to determine the sequence.

Reconnect Sequence on Transfer Refused: If the extension the caller has dialed has Call Screening enabled and the subscriber chooses not to take the call, this setting tells the VPS how to return to the caller. PBXs differ in how they handle this function. Test from an SLT to determine the sequence.

Light On Sequence for Message Waiting Lamp: This is the dialing sequence that the VPS must use to turn on a message lamp at an extension.

Light Off Sequence for Message Waiting Lamp: This is the dialing sequence that the VPS must use to turn off a message lamp at an extension.

Call Waiting Sequence: This sequence is carried out by the VPS to perform call waiting when the extension being called is busy. PBXs differ in how they handle this function. Test from an SLT to determine the sequence.

Release Sequence for Call Waiting: This sequence is carried out by the VPS to release call waiting. PBXs differ in how they handle this function. Test from an SLT to determine the sequence.

- **Inband Signaling**

    These parameters are used when the Integration Mode is set to Inband. If the PBX type is set to a KX-T series system, these parameters will be automatically set. If another type PBX is used, check that system's installation manual for settings.

Code (default)	Call State	Sent to the Voice Mail Port When...
1	Ring-back Tone	The extension dialed is ringing.
2	Busy Tone	The extension dialed is busy.
3	Reorder Tone	An invalid extension number is dialed or the call is inadvertently connected to another Voice Mail port (also heard when no DTMF receiver is available to the Voice Mail extension).
4	DND	The extension dialed has set DND feature (Do Not Disturb).
5	Answer	The extension dialed is answered.
6	Forwarded to Voice Mail (Ringing)	The extension dialed is forwarded to Voice Mail and another Voice Mail port is able to answer. (This lets the first Voice Mail port, usually an Auto Attendant, send the call to the other Voice Mail port.)
7	Forwarded to Voice Mail (Busy)	The extension dialed is forwarded to Voice Mail and no other Voice Mail ports are available to accept the call. (This signals the Voice Mail port [usually Auto-Attendant] to let the caller to leave a message.)
8	Forwarded to Ext.	The extension dialed is forwarded to another, non-Voice Mail extension.
9	Confirmation Tone	The Message Waiting Lamp On or Message Waiting Lamp Off code is dialed successfully.
#9	Disconnect	The caller disconnects. The central office must set a CPC signal to the PBX line for this signal to work for CO calls.

- **Digit Translation Table Parameters**

    These parameters allow PBXs that have a fixed Follow-on ID sequence to be used with the KX-TVS100. For example, a Follow-on ID sequence of ***101 can be changed to #6101 by using these parameters.

    Inter-Digit Time-Out: This parameter defines the interval of incoming signals (Follow-on ID) from the PBX to the VPS. The digits received within this time are applied to translation by the Digit Translation Table.

    Input-Output (up to 8 alphanumeric characters): When the system receives digits within the inter-digit time, it checks them against the input table. If they are found, the system utilizes the output digits in their place.

The remainder of this chapter consists of step-by-step guides for software verification and programming of the recommended Panasonic PBX systems.
If you have any problems as you go through this chapter, call Panasonic Technical Support at (201) 392-4843.

PROGRAMMING INSTRUCTIONS—CONNECTING THE VPS WITH PANASONIC KX-T SERIES PBXs

KX-TVS100 SOFTWARE VERIFICATION AND PROGRAMMING

Set parameters from the System Administration Terminal. The table below lists recommended parameters for Panasonic KX-T series PBXs.

PBX Type	Other Manu-facturers	T308	T616	T1232	T96	T336	TD816	TD1232
Integration Mode	None	None	None	Inband	Inband	Inband	Inband	Inband
Operator Transfer Sequence	FX	FTX	FTX	FTX	FTX	FTX	FTX	FTX
Extension Transfer Sequence	FX	FTX	FTX	FTX	FTX	FTX	FTX	FTX
Alternate Extension	FX	FTX	FTX	FTX	FTX	FTX	FTX	FTX
Reconnect Sequence on Busy	F	F	F	F	F	F	F	F
Reconnect Sequence on No-Answer	F	F	F	F	F	F	F	F
Reconnect Sequence on Refuse Call	F	F	F	F	F	F	F	F
Light-On Sequence for Message Waiting Lamp	*	N/A	N/A	T701X#	T#91X	T*9X	T701X	T701X
Light-Off Sequence for Message Waiting Lamp	*	N/A	N/A	T702X#	T#90X	T#9X	T700X	T700X
Call Waiting Sequence	*	N/A	N/A	1	N/A	N/A	1	1
Release Sequence for Call Waiting	*	N/A	N/A	F	N/A	N/A	F	F

N/A   Not Available
*   Check with manufacturer.

KX-T123211D SOFTWARE VERIFICATION AND PROGRAMMING

Step 1

Check the software version of the KX-T123211D by using PITS programming code 98, which shows the software version number: **Y201Z940430(TM3)**

The underlined digits represent the software production date code (format YYMMDD). In this example, the date code is April 30, 1994 (year, month, day). For this software version, the software production date of the VPS must be April 30, 1994, or later. ***If the software production date of the PBX is earlier than the 4/30/94, call Panasonic Parts Center (MSC) for an upgrade: 1-800-833-9626.***

Step 2

Enable PITS programming code 80 for each extension connected to the VPS.

This parameter is used to tell the KX-T123211D which extensions are connected to the VPS. Ports with this parameter enabled can receive Follow-on ID and DTMF call status signaling (busy, answered, disconnect, etc.) if the Voice Mail integration and DTMF integration features are also enabled.

Step 3

Enable PITS programming code 81 to turn on DTMF Integration.

On extensions with the Voice Mail port parameter enabled, the KX-T123211D can send codes (DTMF tones) to indicate call states; this increases VPS efficiency. Codes apply to all transferred calls; CO line calls only indicate disconnect (provided the T123211D is programmed for CPC detection and the CO sends the CPC signal). Refer to the table on page 4.6.

Step 4

Put all extensions connected to the VPS into one extension group using PITS program 60. ***Reserve this extension group for these extensions!***
Do not mix other extensions into this group.

Step 5

Enable hunting for the VPS extension group using PITS program 08.

Step 6

Set the hunting type for the VPS extension group to *circular*; use PITS program 09.

Step 7

At every VPS extension, temporarily connect an SLT or butt set, go off-hook and dial 7301# to turn on Data Line Security.

This prevents the KX-T123211D from sending Executive Override or Call Waiting tones to these extensions. We recommend that all Voice Mail port extensions have this feature enabled to avoid interruption of recording.

Step 8

At every user's extension, go off-hook and dial 7192#.

This sets the proper Follow-on ID sequence so that forwarded calls go directly to the extension's mailbox. The KX-T123211D automatically sends the extension's digits to the Voice Mail port before connecting the caller.

For Follow-on ID to work:
  • Ports connected to the TVS100 must be assigned as Voice Mail ports.
  • Extensions must be forwarded to the first port of the Voice Mail (using the   Busy/No-Answer mode or the All Calls mode).
  • The mailbox number should be the same as the extension number.

Interaction with other features:

  • **Call Forwarding**—If the extension is forwarded to an extension that is   also forwarded, the forwarding will not work.

  • **Call Hunting**—Hunting does not interfere with Follow-on ID.

  • **Call Transfer**—Calls transferred to an extension with Follow-on ID enabled   and call forwarding set will be forwarded directly to the mailbox.

• **Data Line Security**—We recommend that all Voice Mail port extensions have this feature enabled to avoid interruption of recording by Executive Override tone or Call Waiting tone.

Step 9

Select the appropriate CO Line feature settings depending on how your customer plans to use the VPS: A) to answer all incoming calls, B) as an operator backup, or C) to only answer calls not answered by user extensions.

Recommended CO Line feature settings:

A. If the KX-TVS100 is answering all incoming calls:

CO Mode—Use PITS programs 51 and 52 to set this parameter. Program all lines DIL to the first extension of the Voice Mail hunt group. The KX-T123211D will allow incoming CO calls to hunt only if the CO lines are DIL to the first port of the hunt group. Lines programmed as Normal do not hunt.

B. If the KX-TVS100 is only answering calls not answered by the operator (Operator Backup):

Flexible Ringing Assignment—For each CO line, use PITS programs 47 (Day Mode) and 48 (Night Mode) to enable ringing at the operator's extension (jack). Assign CO lines to ring at VPS prots as suggested below.

2 Ports, 4 Lines

Ports	Lines
1	1, 3
2	2, 4

4 Ports, 8 Lines

Ports	Lines
1	1, 5
2	2, 6
3	3, 7
4	4, 8

Delayed Ringing Assignment—To give the operator time to answer the call before the VPS picks up, we recommend setting the delay to three or four rings for each extension connected to the KX-TVS100. Use PITS programs 49 (Day Mode) and 50 (Night Mode).

CO Mode—Set the mode for each CO to Normal. Use PITS programs 51 and 52 to set this parameter.

C. If the KX-TVS100 is only answering calls not answered by user extensions:

Flexible Ringing Assignment—For each CO line, use PITS programs 47 (Day Mode) and 48 (Night Mode) to enable ringing on every extension (jack) that you want to have ring. Refer to chart above (9B) for suggested CO line assignments.

Delayed Ringing Assignment—To give users time to answer the call before the VPS picks up, we recommend setting the delay to three or four rings for each extension connected to the KX-TVS100. Use PITS programs 49 (Day Mode) and 50 (Night Mode).

CO Mode—Set the mode for each CO to Normal. Use PITS programs 51 and 52 to set this parameter.

KX-T336 SOFTWARE VERIFICATION AND PROGRAMMING

Step 1

Verify the software version of the KX-T336 using the programming terminal or console. Go to the *Monitor→Device Status* screen. The ROM version must be V6.50 or higher.

```
Device Status  (1/4)                    | ONL | MON |       |

--------------------------------------------+------+------+------+------
                              System Status
    ROM Version --------------------------   V6.50                    ←←←
        Date ----------------------------   DEC 26 1992
        For Place ---------------------------   Area-2
    CPU RAM --------------------------------   INS
    Basic Shelf -----------------------------   INS
    Expansion Shelf 1 -------------------- ----   INS
    Expansion Shelf 2 -----------------------
    TSW ---------------------------------------   INS
        Additional CONF --------------------
    SMDR -------------------------------------
```

INS: In Service; OUS: Out of Service; FLT: Fault

If the ROM version is lower than V6.50, call Panasonic Technical Support about a software upgrade.

Step 2

Enable the system level parameter DTMF Tone Integration.

A. From the Main Menu, press the CTRL and [V] keys at the same time to get into dumb terminal mode.

B. At the > prompt, type PRG and press ENTER.

C. At the PRG> prompt, type [WS3 AT 3] and press ENTER.
    Screen output: DTMF Tone Integration--------------------N
                                 INPUT>>

D. At the INPUT>> prompt, type [Y] and press ENTER.
    Screen output: SLT On -hook Operation Mode----------------1
                                 INPUT>>

E. At the INPUT>> prompt, type [$EOD] and press ENTER to get back to the PRG> prompt. Don't exit the dumb terminal mode yet. You will need to use it for Step 3.

Step 3

Make each extension that is connected to the KX-TVS100 a Voice Mail port. Up to 16 Voice Mail ports can be assigned on the KX-T336.

A. At the PRG> prompt, type [VMD AT 01] and press ENTER.

B. At the Input>> prompt, type [DNxxx].
    (xxx = the number of the first extension connected to the KX-TVS100)

        Screen output: 01:Voice Mail DN------------------------0
                                 Input>>

C. After you enter this extension, you will be prompted to enter the next KX-TVS100 extension.

Sample programming session for connecting extensions 112 through 115:

Screen Output:

```
PRG>VMD AT 01
    01:Voice Mail Dn------------------------0
        Input>>DN112
    02:Voice Mail Dn------------------------0
        Input>>DN113
    03:Voice Mail Dn------------------------0
        Input>>DN114
    04:Voice Mail Dn------------------------0
        Input>>DN115
    05:Voice Mail Dn-----------------------0|
        Input>>$eod
```

D. When you have finished programming all KX-TVS100 extensions, type   [$EOD] at the Input>> prompt and press ENTER. This will take you back   to the PRG> prompt.

   Don't exit the dumb terminal mode yet. You will need to use it for Step 4.

Step 4

Set the Follow-on ID sequence for every extension that will have a mailbox on the KX-TVS100. By sending an extension's Follow-on ID sequence to the KX-TVS100 port before connecting the caller, the KX-T336 transfers unanswered calls directly to that extension's voice mailbox. This operation is often called Call Forward to Mailbox. Only extensions programmed as Voice Mail ports (see Step 3 above) can receive Follow-on ID.

A. From the dumb terminal mode PRG> prompt, type [MBN AT DNxxx] (xxx = extension number).

   Screen output: PRG>MBN AT DN100
```
    1: Mail Box Number-------------------#6100
        Input>>
```

B. At the Input>> prompt, type the Follow-on ID sequence and press   ENTER. We recommend the Follow-on ID sequence #6xxx (xxx = mailbox   number). The #6 forces the KX-TVS100 into Voice Mail service regardless of   port service setting (Automated Attendant, Custom Service, Voice Mail)

C. To program the next extension, type [$EOD] at the Input>> prompt and   press ENTER. Then press the up arrow key (↑) to recall the previous MBN   AT DNxxx command. Use the backspace key to erase the previous   extension number and enter the number of your next extension.

Screen output:

```
PRG>MBN AT DN101
    1:  Mail Box Number-------------------#6101
          Input>>101
    1:  Mail Box Number-------------------#6101
          Input>>$EOD
    PRG>
```

<press the ↑ key to recall the previous command>

```
PRG>MBN AT DN101
```

<use the backspace key to erase the extension>

```
PRG>MBN AT DN
```

<enter the next extension number and press ENTER>

```
PRG>MBN AT DN102
    1:  Mail Box Number-------------------#6102
          Input>>102
    1:  Mail Box Number-------------------#6102
          Input>>$EOD
    PRG>
          and so on...
```

D.   When you have finished programming all the extensions and mailbox   numbers, type [$EOD] at the Input>> prompt and press ENTER. This will   take you back to the PRG prompt. Next, type [EXIT] and press ENTER.   Then press the CTRL and the [V] key at the same time to get out of dumb   terminal programming and back to the main menu.

E. Activate one of the following Call Forwarding features *at each extension* that   needs Call Forward to Mailbox: ***The Follow-on ID sequence will not   be sent unless Call Forwarding is activated.*** (See pages 4-F-6 to 4-F-15 of the KX-T336 manual for instructions on Call Forwarding activation.)

- All Calls
- Busy
- No-Answer
- Busy/No-Answer

Step 5

Go to the *Extension - Station* screen for each extension connected to the KX-TVS100 and set the following parameters:

A.   Put all extensions connected to the KX-TVS100 into a **circular** hunting   group using the Next Hunt Station parameter.

Example: extensions 112 through 115 connected to the KX-TVS100:

KX-TVS100 Extension	Next Hunt Station
112	113
113	114
114	115
115	112

B.   Set Data Line Security to Yes.

C.   Set Automatic Callback - Trunk to No.

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D. If the KX-TVS100 extension is connected to a hybrid card, set Parallel   Connect to No.

```
Extension - Station                            | ONL | PRG | SCR | SEL
------------------------------------------------------+------+-----+------+-----
               Station Equipment No. = 1121 (1/3)
    Telephone Type ---------------    PITS
        Model -----------------------    KX-T123235(7130)
    OHCA Circuit -----------------    No
    -                                112
    Primary Directory Number --      —
    Intercom Number --------------    VPS
    Station Name -----------------    1
    ICM Group --------------------    PCKUP:01
    Pickup Group ------------------   (see example for 2A)        ← ← ←2A
    Next Hunt Station -------         30
    Class of Service ---------------  Yes                         ← ← ←2B
    Data Line Security ------         No                          ← ← ←2C
    Automatic Callback ---           No                           ← ← ←2D
    Trunk -------------------------   —
    Parallel Connect ---------
    Message Waiting Indication
```

Step 6

The last step is to select the appropriate CO Line feature settings depending on how your customer plans to use the VPS: A) to answer all incoming CO calls, B) as an operator backup, or C) to only answer CO calls not answered by user extensions.

Recommended settings:

A. If the KX-TVS100 is answering all incoming calls:

1. Set the Incoming Mode (Day) for each trunk group to DIL1:1. These parameters are in the *Group - Trunk Group* screen.

```
Group - Trunk Group                    | ONL | PRG | SCR | SEL
------------------------------------------------+------+------+------+-----
               Trunk Group No. = 01 (1/2)
    Type----------------------------    DDD
    Name----------------------------    CD
    Tenant--------------------------    —
    Incoming/Outgoing ----------     Both-way
    Incoming Mode (Day) --          DIL 1:1               ← ← ←
    Incoming Mode (Night) ----       FLEXIBLE
    Intercept Routing (Day)-----     EXT:104    (Type:No.)
    Intercept Routing (Night)----    EXT:104    (Type:No.)
    Toll Restriction Level -------    16
    Toll Restriction Table -------    1
    Dialing Plan -------------------   Type-A
    CO-CO Duration Limit -------     10     minute(s) (1-64)
    Disconnect Time --------------    1.5    second(s)
    Pause Time --------------------    3.5    second(s)
    Hook Switch Flash Time ----      None
```

2. Set Direct Termination for each CO line to the extension number connected to the first port of the KX-TVS100. This parameter is in the *Trunk-CO Line*   screen. *Example: extension 112 is connected to the first KX-TVS100 port:*

```
Trunk - CO Line                        | ONL  | PRG | SCR | DIR
```

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```
---------------------------------------------------+-------+------+------+-----
                Trunk Equipment No. = 1042
   :........................................................................:
   : Trunk Group -------------------    01                          :
   : Trunk Name--------------------     TECH2                       :
   : Direct Termination -----           D N :112         ← ← ←      :
   : Night Answer Point (Type:No.)-     EX :121                     :
   : Dial Mode----------------------    DTMF                        :
   : DTMF Duration Time  -------        80 msecond(s)               :
   : Pulse Speed --------------------   —                           :
   : % Break -----------------------    — %                         :
   : CPC Detection -----------------    50*8  msecond(s)            :
   : DID Start Arrangement -------      —                           :
   :........................................................................:
```

B. If the KX-TVS100 is only answering calls not answered by the Operator (Operator Backup):

1. Set the Incoming Mode (Day) for each trunk group to DIL1:1. These parameters are in the *Group - Trunk Group* screen.

```
Group  -  Trunk Group                       | ONL | PRG | SCR | SEL
---------------------------------------------------+-------+------+------+-----
                Trunk Group No. = 01 (1/2)
   :........................................................................:
   :  Type-----------------------------   DDD                       :
   :  Name----------------------------    CD                        :
   :  Tenant--------------------------    —                         :
   :  Incoming/Outgoing ----------       Both-way                   :
   :  Incoming Mode (Day) --             DIL 1:1        ← ← ←        :
   :  Incoming Mode (Night) -----        FLEXIBLE                   :
   :  Intercept Routing (Day)------      None      (Type:No.)       :
   :  Intercept Routing (Night)----      None      (Type:No.)       :
   :  Toll Restriction Level -------     16                         :
   :  Toll Restriction Table -------     1                          :
   :  Dialing Plan ------------------    Type-A                     :
   :  CO-CO Duration Limit -------       10    minute(s) (1-64)     :
   :  Disconnect Time --------------     1.5   second(s)            :
   :  Pause Time --------------------    3.5   second(s)            :
   :  Hook Switch Flash Time ----        None                       :
   :........................................................................:
```

2. Set Direct Termination for each CO line to the operator's extension. This   parameter is found in the *Trunk - CO Line* screen. *Example: operator's   extension is 101:*

```
Trunk  -  CO Line                                    | ONL | PRG | SCR | DIR
--------------------------------------------------------+------+-----+-------+-----
              Trunk Equipment No. = 1042
  Trunk Group--------------------    01
  Trunk Name---------------------    TECH2
  Direct Termination -----          D N  :101                    ← ← ←
  Night Answer Point (Type:No.)     E X T:121
  Dial Mode ---------------------    DTMF
  DTMF Duration Time ---------       80   msecond(s)
  Pulse Speed --------------------   —
  % Break ------------------------   —  %
  CPC Detection -----------------    50*8  msecond(s)
  DID Start Arrangement -------      —
```

3. Set the Intercept Routing (Day) and Intercept Routing (Night) to the extension   number connected to the first KX-TVS100 port. *Example: the number   of the extension connected to the first KX-TVS100 port is 112:*

```
Group  -  Trunk Group                                 | ONL | PRG | SCR | SEL

------------------------------------------------------+-----+-----+-----+-----
              Trunk Group No. = 01 (1/2)
   Type-----------------------------   DDD
   Name----------------------------    CD
   Tenant-------------------------     —
   Incoming/Outgoing ----------       Both-way
   Incoming Mode (Day) --             DIL 1:1
   Incoming Mode (Night)  -----        FLEXIBLE
   Intercept Routing (Day)------       EXT:112    (Type:No.)
   Intercept Routing (Night)----       EXT:112    (Type:No.)       ← ← ←
   Toll Restriction Level -------      16                          ← ← ←
   Toll Restriction Table -------      1
   Dialing Plan ------------           Type-A
   CO-CO Duration Limit ----           10     minute(s) (1-64)
   Disconnect Time --------            1.5    second(s)
   Pause Time -------------            3.5    second(s)
   Hook Switch Flash Time --           None
```

4. Set the Intercept Routing Time-Out (System) parameter in the *System - System   Timer* screen. This parameter tells the KX-T336 how long to let a call ring at   an extension before forwarding. Since the KX-T336 ringing patterns are five   seconds long, we recommend using one of the following settings:

INTERCEPT ROUTING	
Delay by	Setting
3 rings	15 seconds
4 rings	20 seconds
5 rings	25 seconds
6 rings	30 seconds

```
System  -  System Timer                               | ONL | PRG | SCR | DIR
--------------------------------------------------------+------+------+------+-----
```

```
Held Call Reminder -------------------------------------   240  second(s) (15-240)
Held Call Reminder (ATT) ----------------------------   240  second(s) (15-240)
Transfer Recall ------------------------------------------   240  second(s) (15-240)
Pickup Dial Waiting -----------------------------------   1  second(s) ( 1- 5)
External First Digit Time-Out ------------------------   20  second(s) ( 5-120)
External Interdigit Time-Out --------------------------   5  second(s) ( 3- 15)
External Interdigit Time-Out (PBX)------------------   5  second(s) ( 3- 10)
Toll Restriction Guard Time-Out --------------------   5  second(s) ( 0- 25)
Call Forwarding - No-Answer Time-Out -------------   19  second(s) ( 5- 60)
Intercept Routing Time-Out (System) ---   15  second(s) (15-240)   ← ← ←
Intercept Routing Time-Out (DISA) --------   15  second(s) (15-240)
Attendant Overflow Time--------------------   15   second(s) (15-240)
SMDR Duration Time -----------------------   3  second(s) ( 0- 15)
```

5. Set the Follow-on ID sequence for the operator's extension. Setting is based on   how you choose to have the Intercept Routing feature handle calls forwarded from   the operator's extension. (See Step 4 on page 4.11 for Follow-on ID sequence   programming instructions.)

FOLLOW-ON ID OPTIONS	
Options	**Operator's Sequence Setting**
Forward to Automated Attendant service	#8
Forward to Voice Mail service	#6
Leave a message in the operator's mailbox	#6 followed by the operator's extension number

C. If the KX-TVS100 is only answering calls not answered by user extensions:

1. Set the Incoming Mode (Day) for each trunk group to DIL1:1. These parameters   are in the *Group - Trunk Group* screen.

```
Group  -  Trunk Group                      | ONL | PRG | SCR | SEL
------------------------------------------------------+-----+-----+-----+-----
                Trunk Group No. = 01 (1/2)
     Type----------------------------  :  DDD
     Name---------------------------  :  CD
     Tenant-------------------------  :  —
     Incoming/Outgoing ----------  :  Both-way
     Incoming Mode (Day) --  :  DIL 1:1                ← ← ←
     Incoming Mode (Night) -----  :  FLEXIBLE
     Intercept Routing (Day)------  :  EXT:104    (Type:No.)
     Intercept Routing (Night)----  :  EXT:104    (Type:No.)
     Toll Restriction Level -------  :  16
     Toll Restriction Table -------  :  1
     Dialing Plan -------------------  :  Type-A
     CO-CO Duration Limit -------  :  10    minute(s) (1-64)
     Disconnect Time --------------  :  1.5   second(s)
     Pause Time ---------------------  :  3.5   second(s)
     Hook Switch Flash Time ----  :  None
```

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2. Choose **one** extension number to be the direct termination for all CO lines   and set the Direct Termination parameter for each CO line to this number.   This parameter is found in the *Trunk - CO Line* screen. *Example:*   *extension 124 is the direct termination:*

```
Trunk  -  CO Line                              | ONL | PRG | SCR | DIR

-------------------------------------------------------+-----+------+-----+-----
                  Trunk Equipment No. = 1042
```

```
: Trunk Group------------------------- : 01
: Trunk Name------------------------- : TECH2
: Direct Termination ----------- : D N  :124                        ← ← ←
: Night Answer Point (Type:No.) -- : E X T:121
: Dial Mode --------------------------- : DTMF
: DTMF Duration Time -------------- : 80   msecond(s)
: Pulse Speed ------------------------- : —
: % Break ---------------------------- : —  %
: CPC Detection ---------------------- : 50*8  msecond(s)
: DID Start Arrangement ------------- : —
```

3. Set the Intercept Routing (Day) and Intercept Routing (Night) to the number of   the extension connected to the first KX-TVS100 port. *Example: the number   of the extension connected to the first KX-TVS100 port is 112:*

```
Group  -  Trunk Group                       | ONL | PRG | SCR | SEL

-------------------------------------------------------+-----+-----+-----+-----
                  Trunk Group No. = 01 (1/2)
```

```
: Type----------------------------- :   DDD
: Name---------------------------- :   CD
: Tenant------------------------- :    —
: Incoming/Outgoing ---------- :   Both-way
: Incoming Mode (Day) -- :   DIL 1:1
: Incoming Mode (Night) ----- :   FLEXIBLE
: Intercept Routing (Day)------ :   EXT:112    (Type:No.)          ← ← ←
: Intercept Routing (Night)---- :   EXT:112    (Type:No.)          ← ← ←
: Toll Restriction Level ------- :   16
: Toll Restriction Table ------- :   1
: Dialing Plan ------------ :   Type-A
: CO-CO Duration Limit ---- :   10    minute(s) (1-64)
: Disconnect Time -------- :   1.5   second(s)
: Pause Time ------------- :   3.5   second(s)
: Hook Switch Flash Time -- :   None
```

4. Set the Intercept Routing Time-Out (System) parameter in the *System - System   Timer* screen. This parameter tells the KX-T336 how long to let a call ring at an extension before automatically forwarding. Since the KX-T336 ringing patterns   are five seconds long, we recommend using one of the following settings:

INTERCEPT ROUTING	
Delay by	Setting
3 rings	15 seconds
4 rings	20 seconds
5 rings	25 seconds
6 rings	30 seconds

System - System Timer | ONL | PRG | SCR | DIR
---+------+------+------+-----

```
 Held Call Reminder ----------------------------------    240  second(s) (15-240)
 Held Call Reminder (ATT) ----------------------------    240  second(s) (15-240)
 Transfer Recall -------------------------------------    240  second(s) (15-240)
 Pickup Dial Waiting ---------------------------------    1  second(s) ( 1- 5)
 External First Digit Time-Out -----------------------    20  second(s) ( 5-120)
 External Interdigit Time-Out ------------------------    5  second(s) ( 3- 15)
 External Interdigit Time-Out (PBX)------------------    5  second(s) ( 3- 10)
 Toll Restriction Guard Time-Out ---------------------    5  second(s) ( 0- 25)
 Call Forwarding - No-Answer Time-Out -------------    19  second(s) ( 5- 60)
 Intercept Routing Time-Out (System) ---               15  second(s) (15-240)      ← ← ←
 Intercept Routing Time-Out (DISA) --------            15  second(s) (15-240)
 Attendant Overflow Time--------------------           15    second(s) (15-240)
 SMDR Duration Time -----------------------            3  second(s) ( 0- 15)
```

5. Set the Follow-on ID sequence for the operator's extension. Setting is based on   how you choose to have the Intercept Routing feature handle calls forwarded from   the operator's extension. (See Step 4 on page 4.11 for Follow-on ID sequence   programming instructions.)

FOLLOW-ON ID OPTIONS	
Options	**Operator's Sequence Setting**
Forward to Automated Attendant service	#8
Forward to Voice Mail service	#6
Leave a message in the operator's mailbox	#6 followed by the operator's extension number

C. If the KX-TVS100 is only answering calls not answered by user extensions:

1. Choose **one** extension number to be the direct termination for all CO lines   and set the Direct Termination parameter for each CO line to this number.   This parameter is found in the *Trunk - CO Line* screen. *Example: extension 124 is the direct termination:*

```
Trunk  -  CO Line                              | ONL | PRG | SCR | DIR
--------------------------------------------------------+-----+------+-----+-----
              Trunk Equipment No. = 1042
```

```
:.............................................................:
: Trunk Group-------------------------- : 01                   :
: Trunk Name--------------------------- : TECH2                :
: Direct Termination ----------         : D N  :124            :   ← ← ←
: Night Answer Point (Type:No.) --       : E X T:121            :
: Dial Mode ---------------------------  : DTMF                 :
: DTMF Duration Time --------------      : 80   msecond(s)      :
: Pulse Speed -------------------------  : —                    :
: % Break -----------------------------  : —  %                 :
: CPC Detection ----------------------   : 50*8  msecond(s)     :
: DID Start Arrangement -------------    : —                    :
:.............................................................:
```

2. Set the Incoming Mode (Day) for each trunk group to DIL1:1. These parameters   are in the *Group - Trunk Group* screen.

```
Group  -  Trunk Group                          | ONL | PRG | SCR | SEL
--------------------------------------------------------+-----+-----+-----+-----
              Trunk Group No. = 01 (1/2)
```

```
:.............................................................:
:  Type---------------------------- :  DDD                     :
:  Name---------------------------- :  CD                      :
:  Tenant------------------------- :  —                        :
:  Incoming/Outgoing ---------- :  Both-way                    :
:  Incoming Mode (Day) -- :  DIL 1:1                           :   ← ← ←
:  Incoming Mode (Night) ----- :  FLEXIBLE                     :
:  Intercept Routing (Day)------ :  EXT:104    (Type:No.)       :
:  Intercept Routing (Night)---- :  EXT:104    (Type:No.)       :
:  Toll Restriction Level ------- :  16                         :
:  Toll Restriction Table ------- :  1                          :
:  Dialing Plan ------------------- :  Type-A                   :
:  CO-CO Duration Limit ------- :  10     minute(s) (1-64)      :
:  Disconnect Time -------------- :  1.5    second(s)           :
:  Pause Time -------------------- :  3.5    second(s)          :
:  Hook Switch Flash Time ---- :  None                         :
:.............................................................:
```

3. Set the Intercept Routing (Day) and Intercept Routing (Night) to the number of   the extension connected to the first KX-TVS100 port. *Example: the number   of the extension connected to the first KX-TVS100 port is 112:*

```
Group  -  Trunk Group                          | ONL | PRG | SCR | SEL
--------------------------------------------------------+-----+-----+-----+-----
              Trunk Group No. = 01 (1/2)
```

```
Type----------------------------   DDD
Name--------------------------   CD
Tenant-------------------------   —
Incoming/Outgoing ----------   Both-way
Incoming Mode (Day) --   DIL 1:1
Incoming Mode (Night) -----   FLEXIBLE
Intercept Routing (Day)------   EXT:112    (Type:No.)      ← ← ←
Intercept Routing (Night)----   EXT:112    (Type:No.)      ← ← ←
Toll Restriction Level -------   16
Toll Restriction Table -------   1
Dialing Plan -------------------   Type-A
CO-CO Duration Limit -------   10    minute(s) (1-64)
Disconnect Time --------------   1.5    second(s)
Pause Time ---------------------   3.5    second(s)
Hook Switch Flash Time ----   None
```

4. Set the Intercept Routing Time-Out (System) parameter in the *System - System Timer* screen. This parameter tells the KX-T336 how long to let a call ring at an extension before automatically forwarding. The KX-T336 ringing patterns are five seconds long.

Recommended Settings	
To Delay Intercept Routing by	Use this setting
3 rings	15 seconds
4 rings	20 seconds
5 rings	25 seconds
6 rings	30 seconds

```
System  -  System Timer                              | ONL | PRG | SCR | DIR
-------------------------------------------------------+-----+-----+-----+-----
```

```
Held Call Reminder ----------------------------------   240  second(s) (15-240)
Held Call Reminder (ATT) ---------------------------   240  second(s) (15-240)
Transfer Recall -----------------------------------------   240  second(s) (15-240)
Pickup Dial Waiting --------------------------------   1  second(s) ( 1- 5)
External First Digit Time-Out -----------------------   20  second(s) ( 5-120)
External Interdigit Time-Out ------------------------   5  second(s) ( 3- 15)
External Interdigit Time-Out (PBX)----------------   5  second(s) ( 3- 10)
Toll Restriction Guard Time-Out -------------------   5  second(s) ( 0- 25)
Call Forwarding - No-Answer Time-Out -----------   19  second(s) ( 5- 60)
Intercept Routing Time-Out (System) -               15  second(s) (15-240)   ← ← ←
Intercept Routing Time-Out (DISA) ----------------   15  second(s) (15-240)
Attendant Overflow Time-----------------------------   15    second(s) (15-240)
SMDR Duration Time ------------------------------   3  second(s) ( 0- 15)
-
```

5. Set the Follow-on ID sequence for the direct termination extension. Setting is based on how you choose to have the Intercept Routing feature handle calls forwarded from the operator's extension. (See Step 4 on page 4.11 for Follow-on ID sequence programming instructions.)

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Direct termination extension's Follow-on ID sequence settings:

For Automated Attendant service: #8

For Voice Mail service: #6

6.   Set up an SDN for the direct termination extension on all extensions on the   system. This will allow other extensions to pick up incoming calls before they   are forwarded to the Voice Mail system. This is done in the *Extension -   Station* screen.

Example: *the set up of extension 101 if the direct termination extension is 124:*

```
Extension  -  Station                          | ONL | PRG | SCR | SEL
--------------------------------------------+------+------+------+-----

                                  Station Equipment No. = 1011 (2/3)
```

Key	Type	Number	SDN COS		Day Ring	Night Ring	
DN-01	PDN	101	—		Instantly	Instantly	
DN-02	PDN	101	—		Instantly	Instantly	
DN-03	SINGLE CO	1044	—		Instantly	Instantly	
DN-04	LOGIN	—	—		—	—	
DN-05	**SDN**	124	Station		No ring	No ring	
DN-06	**SDN**	103	Station		No ring	No ring	← ← ←
DN-07	**SDN**	104	Station		No ring	No ring	
DN-08	SINGLE CO	1045	—		Instantly	Instantly	
DN-09	GROUP CO	07	—		No ring	No ring	
DN-10	SINGLE CO	1043	—		No ring	No ring	
DN-11	SINGLE CO	1042	—		No ring	No ring	
DN-12	SINGLE CO	1041	—		No ring	No ring	

NOTE: PITS Only

6.53

Step 1

Go to the *Main Menu*. Choose *System Data Programming*.
(BATCH [1] or INTERACTIVE [2]).

• Before choosing Batch Programming, you must open a file in the
DSHS File Management Menu (Item 3).

• Before choosing Interactive Programming, you must connect with the
system in the *DSHS Connect/Disconnect* menu.

Main Menu

1.System Data Programming (BATCH)
2.System Data Programming (INTERACTIVE)
3.Disk File Management
4.DSHS Management
5.DSHS Connect/Disconnect
6.Quit
Select the number : [   ]

Step 2

Choose *Station* from the *System Data Programming Main Menu.*

System Data Programming Main Menu

1.Line
2.Station
3.System
4.Toll Restriction
5.ARS
6.Aux. Ports
7.Additional Function
8.Caller ID
Select the number : [**2**]

Step 3

Choose *Station Setting 1* from the *Station Menu.*

Station Menu

1.Station Setting 1
2.Station Setting 2
3.Station Setting 3
4.Station Setting 4
5.Flexible Keys 1
6.Flexible Keys 2
7.DSS
Select the number : [**1**]

Step 4

Enable XDP ports. Place Voice Mail extensions in Extension Group 8.

Station Setting 1

Jack	Et	Name	XDP	EXG	Dorophone Day 1 2 3 4	Night 1 2 3 4	LCS Mode
01-1	[101]	[1]	N	[1]	Y Y Y Y	Y Y Y Y	Stop Rec
					N N N N	N N N N	
01-2	[201]	[1]	-	[1]	N N N N	N N N N	Stop Rec
					N N N N	N N N N	
02-1	[102]	[1]	N	[1]	N N N N	N N N N	Stop Rec
					N N N N	N N N N	
02-2	[202]	[1]	-	[1]	N N N N	N N N N	Stop Rec
					N N N N	N N N N	
03-1	[103]	[1]	N	[1]	N N N N	N N N N	Stop Rec
					N N N N	N N N N	
03-2	[203]	[1]	-	[1]	N N N N	N N N N	Stop Rec
					N N N N	N N N N	
04-1	[104]	[1]	N	[1]	N N N N	N N N N	Stop Rec
					N N N N	N N N N	
04-2	[204]	[1]	-	[1]	N N N N	N N N N	Stop Rec
					N N N N	N N N N	
05-1	[105]	[1]	**Y**	[1]	N N N N	N N N N	
05-2	[205]	[8]	-	[8]			
06-1	[106]	[1]	**Y**	[1]			
06-2	[206]	[8]	-	[8]			
07-1	[107]	[1]	**Y**	[1]			
07-2	[207]	[8]	-	[8]			
08-1	[108]	[1]	**Y**	[1]			
08-2	[208]	[8]	-	[8]			

Step 5

Return to the *System Data Programming Main Menu.* Select *System.*

Step 6

Choose *Miscellaneous* from the *System Menu.*

System Menu

01. Day/Night
02. Class of Service
03. Speed Dial
04. Absent Message
05. Flexible Numbering
06. Account Code/Special Carrier
07. Timer
08. Voice Mail
09. Voice Mail Integration

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10.Miscellaneous
11.System Time
12.Version
    Select the number : [**10**]

Step 7

Choose the Call Hunting extension group. Set the last extension group to **A** for Automated Attendant.

Miscellaneous

```
Password => [1234   ]

Operator-1 => Jack [01]
Operator-1    => Disable
Manager       => Disable

Local Access => Priority  =        1    2    3    4    5    6    7    8
                           TRG No. = [1]  [2]  [3]  [4]  [5]  [6]  [7]  [8]

Call Hunting => EXG No.  =          1    2    3    4    5    6    7    8
                                    D    D    D    D    D    D    D    A

SPD TRS Override                => Disable
CO Auto-Hold by Push DSS-Key    => Enable
Adjust Time                     => [01:00] AM
```

Step 8

Return to the *System Data Programming Main Menu.* Select *Line.* Program all lines DIL to the first extension of the Voice Mail hunt group.

CO Line Setting

CO No	CON	TRG	DIAL	DTMF	PPS	CID	CPC Detection Mode	CPC Detection Out	DIL 1:1 EXT No Day	DIL 1:1 EXT No Night
01	Y	[1]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
02	Y	[2]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
03	Y	[3]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
04	Y	[4]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
05	Y	[5]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
06	Y	[6]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
07	Y	[7]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
08	Y	[8]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
09	Y	[8]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
10	Y	[8]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
11	Y	[8]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]
12	Y	[8]	D	80	10	N	400ms	Disable	EXT [205]	EXT [205]

CHAPTER 5

CUSTOMIZING THE SYSTEM

STARTING UP

START-UP SEQUENCE

Before starting the VPS, make sure all installation and line connections have been done as described in Chapter 2.

Turn the power switch to ON. The calls to the VPS can be processed after the Power Light stops flashing.
.

After turning the power on, the system starts up in the following sequence:

1. The Power Indicator light goes on.

2. The Power Indicator light begins to flash.

3. "CARD TEST" is displayed on the screen.

4. "SYSTEM SETUP" is displayed.

> Screen Output:

```
CARD TEST...
SYSTEM SETUP...
1..   2..   3..
```

5. The VPS tests the CPU card, the hard disk drive, and the CO cards
   as "SYSTEM SETUP..." is displayed.

6. Active ports are displayed on the screen.

> Screen Output:

```
Active COs:  1  2  3  4
DPITS Interface Connection is Established
** ON LINE MODE **
```

The display will alert you if System Setup is not completed successfully.

> Screen Output:

```
Active COs:  1  2  3  4

DPITS Interface Connection is not Established

** OFF LINE MODE **
```

This message is shown when the digital (D-PITS) connection between the VPS and telephone system cannot be established.

Possible causes of this message are listed below:

Cause	Action
The PBX is not a KX-TD series system. Since the default PBX type for the KX-TVS100 is set to KX-TD1232 at the factory, this message will *always* appear when connecting to another type of PBX.	Change the PBX type by using Quick Setup (see below).
The cabling between the PBX extension ports and the VPS is not four-wire or is improperly connected.	Confirm the cabling is connected as described in Chapter 2.
The PBX is a KX-TD series but does not have the proper level of software required to support D-PITS Integration.	Contact Panasonic Parts Center (MSC) at 1-800-833-9296 or use Inband Integration under hardware settings.
The PBX is not programmed properly to support D-PITS Integration.	Do required integration programming as described in Chapter 3.

Start-up completed:

1. The Power Indicator light stops blinking when the start-up has been successful.
    (The delay varies according to the system's condition.)

2. "**ON LINE MODE**" is displayed.

3. System prompt > is displayed on the screen.
    To enter system administration, press ENTER.

When the system administrator starts operation, the system asks for the terminal type. By choosing VT100 [2], all parameters can be set through the menu driven program.

> *Please Select Your Terminal Type.*
> *1. ASCII TERMINAL*
> *2. VT100 COMPATIBLE TERMINAL*
> *ENTER THE NUMBER := _____*

QUICK SETUP

Quick Setup provides a quick way to set the following programming items. Each of these must be initially set to start the VPS operation.

1. PBX type
2. Extension numbers of VPS ports
3. Extension numbers for mailboxes
4. Creating mailboxes
5. Port service setting
6. Password setting

7. Date and time setting
8. Activating the Quick Setup

Depending on your PBX type, some steps can be skipped as shown below.

PBX Type	Required Procedures							
KX-T308/T616	1	2	3	4	5	6	7	8
KX-T123211D/T96/T336 non-Panasonic system	1		3	4	5	6	7	8
KX-TD816/1232	1			4	5	6	7	8

Starting the Quick Setup

Quick Setup is only available to the VT100 mode. At the *System Administration Top Menu,* type [5] and press ENTER.

Screen Output:

System Administration Top Menu→5

Quick Setup Utility for connection to Panasonic KX-T series telephone systems.

This utility provides a quick way of programming the Voice Processing System to operate in a standard automated attendant or Voice Mail configuration when connected to a Panasonic KX-T series telephone system. The system will prompt you to enter, modify, or confirm settings based upon which PBX type you select.

By entering the appropriate information in the following screens, the system sets PBX integration parameters, identifies the extension numbers connected to it, creates default mailboxes, sets its ports to handle callers with automated attendant or voice mail service, sets system passwords and sets the time and date. Finally, it confirms that you want to activate the system based on the information you entered, modified, or confirmed.

To proceed, press Enter. To exit and cancel Quick Setup now, press [/].

Step 1. PBX Type:
1. Press ENTER.

Screen Output:

Quick Setup - PBX type

Please select your PBX type.

1. KX-T308
2. KX-T616
3. KX-T123211D
4. KX-T96
5. KX-T336
6. KX-TD816
7. KX-TD1232
8. OTHERS

2. Select your PBX type. The required steps are different for some models.
Go to the step indicated below for that type.

1. KX-T308, 2. KX-T616	Go to Step 2.
3. KX-T123211D, 4. KX-T96, 5. KX-T336, 8. Others	Go to Step 3.
6. KX-TD816, 7. KX-TD1232	Go to Step 4.

NOTE: D-PITS Integration with the KX-TD816 or KX-TD1232 will be activated automatically by selecting "6. KX-TD816" or "7. KX-TD1232."

Step 2. Extension Numbers of VPS Ports

Screen Output:

```
Quick Setup - Assigned extension No. of VPS Port
        Please enter extension number of VPS.
              1:  11          2:  22          3:  33
              4:             5:             6:
        Please enter extension numbers.
                (2 digits) : =
              S:  Next Screen
```

Enter extension numbers of VPS ports with two-digit numbers.

This improves the VPS integration with the KX-T308 or KX-T616 by allowing the VPS to discriminate between VPS extensions and non-VPS extensions.

Type [S] to go to the next screen.

Step 3. Extension Numbers for Mailboxes

Screen Output:

```
Quick Setup - Enter Extensions for Mailboxes
    What extensions need a mailbox on this system?
    1: 110          2: 111         3: 112         4: 113         5: 114
    6: 115  7: 116  8: 117         9: 118         10: 119
    11: 120         12: 121        13: 122        14: 123        15: 124
    16: 125         17: 126        18: 127        19: 128        20: 129
    21: 130         22: 131        23: 132        24: 133        25: 134
    26: 135         27: 136        28: 137        29: 138        30: 139
    31: 140         32: 141        33: 142        34: 143        35: 144
    36: 145         37: 146        38: 147        39: 148        40: 149
    41: 150         42: 151        43: 152        44: 153        45: 154
    46: 155         47: 156        48: 157        49: 158        50: 159
    51: 160         52: 161        53: 162        54: 163        55: 164
    56: 165         57: 166        58: 167        59: 168        60: 169
    61: 170         62: 171
                Please enter extension numbers.
                        : =
                S: Next Screen
```

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Enter extension numbers of subscribers who need personal mailboxes (2-5 digits). For example, to enter the extension number 101, enter [101] and ENTER. You can also enter multiple extensions. Enter the extensions from No. 101 to No. 110 by entering [101-110] and ENTER.

The VPS will create mailboxes with the extension numbers entered. (See Step 4.)

NOTES:
- The VPS accepts any extension numbers within a two to five-digit range.
- Up to 62 extension numbers can be entered.

Step 4. Creating Mailboxes

Screen Output:

```
Quick Setup - Mailbox Editing
    Extension and mailbox list       Assigned 62   Vacant 0        Page 1/4
    Ext       MBX   Owner  (Last Name)           MAKE (Make/Delete)
    • • •  :   101   • • • • • • • • • • • • • • • •    Make
    110   :   110   • • • • • • • • • • • • • • • •    Make
    111   :   111   • • • • • • • • • • • • • • • •    Make
    112   :   112   • • • • • • • • • • • • • • • •    Make
    113   :   113   • • • • • • • • • • • • • • • •    Make
    114   :   114   • • • • • • • • • • • • • • • •    Make
    115   :   115   • • • • • • • • • • • • • • • •    Make
    116   :   116   • • • • • • • • • • • • • • • •    Make
    117   :   117   • • • • • • • • • • • • • • • •    Make
        P: Previous menu,    N: Next menu,    S: Next Screen
```

1. **To create or discard the mailboxes**
   In the "MAKE (Make/Delete)" field: type [M] (Make) to create the mailbox; type [D] (Delete) to discard the mailbox. If there are more than 62 mailboxes, the first 62 are displayed with "Make" and the rest are displayed with "Delete." (Screen Output: [Assigned 62, Vacant 0])

   To change the status of a mailbox from "Delete" to "Make," first change the status of a mailbox from "Make" to "Delete." (Screen Output: [Assigned 61, Vacant 1]) Then change the status from "Delete" to "Make."

2. **Owner's last name**
   Up to 16 alphabetic characters can be assigned as an Owner's Last Name.

NOTES:
- **Mailbox numbers displayed on this screen**
  Panasonic KX-TD Series System
  The same numbers as the extensions of the KX-TD series system that   were automatically transmitted to the VPS — Auto Configuration.
  Non-KX-TD Series System
  The same numbers as that of the extensions entered in Step 3.

- **The length of mailbox numbers**

    If both three- and four-digit extension numbers exist at one time, the VPS will unify all mailbox numbers to four-digit length by putting [0] at the end of all three-digit numbers.

    Example:

Extension Numbers	Mailbox Numbers
201	201(0) *
202	202(0) *
203	203(0)*
2000	2000
2001	2001
2002	2002

    * The VPS puts [0] at the end of three-digit numbers.

    To program mailbox parameters other than the extension numbers and Owner's Last Name, see page 5.15 "Setting Mailboxes."

Step 5. Port Service Setting

Screen Output:

```
Quick Setup- Port Service Setting

    All ports are currently set up to handle callers with standard Automated
    Attendant operation, day and night mode, using the Custom Service
    feature (Custom 1).  You can change the operation to standard Voice
    Mail (Custom 2) or leave it as Automated Attendant.  If necessary,
    Custom 1 and Custom 2 can be modified under the menu

    'Program -> Service Setting -> Custom Service.'


            PORT 1 (Day)---------------- :  Auto Attend.  (using Custom 1)
            PORT 1 (Night)-------------- :  Auto Attend.  (using Custom 1)
            PORT 2 (Day)---------------- :  Auto Attend.  (using Custom 1)
            PORT 2 (Night)-------------- :  Auto Attend.  (using Custom 1)
            PORT 3 (Day)---------------- :  Auto Attend.  (using Custom 1)
            PORT 3 (Night)-------------- :  Auto Attend.  (using Custom 1)
            PORT 4 (Day)---------------- :  Auto Attend.  (using Custom 1)
            PORT 4 (Night)-------------- :  Auto Attend.  (using Custom 1)


        A: Auto Attend.      V: Voice Mail      S: Next Screen
```

Incoming Call Services for all ports (Day/Night) can be defined by this setting. Default values for all ports (Day/Night) are "Custom 1 : Extension." To select other incoming call services, go to page 5.13, "Setting Ports."

Step 6. Password Setting

Screen Output:

```
Quick Setup-Password Setting
        System Administrator Password
                NEW PASSWORD : =
                VERIFICATION : =
        System Reset/Clear Password
                NEW PASSWORD : =
                VERIFICATION  : =
```

You can assign the System Administrator Password and System Reset/Clear Password in this screen, if necessary.

To go to the next screen without assigning the password, press ENTER.

Step 7. Date and Time Setting

Screen Output:

```
Quick Setup-Time Setting
        Current time is 3:04, PM
                Enter new time (HH:MM, AM/PM) : =
        Current date is SAT 1-JAN- 1994
                Enter new date (DD-MM-YY) : =
```

Enter the date (month and year in two digits).

To go to the next screen, press ENTER.

NOTE: If you have a Panasonic KX-TD series telephone system, date and time are automatically synchronized between the PBX and the VPS.

Step 8. Activating the Quick Setup

Screen Output:

```
Quick Setup - Setup
        To set up the mailbox and restart, select "Yes."
        To cancel and exit, select "No."
1: Yes          2: No
```

To activate the Quick Setup, press [1]. The VPS begins to change system programming data.

Screen Output:

```
Quick-Setup
          To set up the mailbox and restart, select "Yes."
          To cancel and exit, select "No."
                         1: Yes       2: No
Setup 101
```

Then "CARD TEST…," "SYSTEM SETUP…" and "1…2… 3…"
appear on the screen one by one.

Screen Output:

```
CARD TEST ...
SYSTEM SETUP ...
1 ...  2 ...  3 ...
```

Screen Output when Quick Setup is finished:

```
**ON LINE MODE**
>
```

Press ENTER.

Screen Output:

```
Please Select Your Terminal Type.
1. ASCII TERMINAL
2.  VT 100
Please Enter the Number : =
```

To Cancel Quick Setup, press [2].

Screen Output:

System Administration Top Menu

```
1 : Program
2 :  System Reports
3 : Utility Command
4 : System Reset/Clear
5 :  Quick Setup
SELECT ITEM AND PRESS RETURN KEY
```

NOTE: "5: Quick Setup" in above screen does not appear in the ASCII TERMINAL mode.

PORT SETTING OPTIONS

Design each system to suit the needs of the customer. You should be familiar with all options for port assignment so that customers get exactly what they need and expect.

Each port can be assigned as Voice Mail, Interview Service, Automated Attendant, or Custom Service. Custom Service is the most flexible of all the services because it allows access to the other services by pressing one key. **We recommend that you program all ports as Custom Service to provide callers with the easiest method of reaching their intended party.**

### CUSTOM SERVICE (RECOMMENDED)

Custom Service incorporates all features of the Automated Attendant and Voice Mail. Custom Service offers callers a menu of single digits that they may use to reach the desired location quickly and easily.

SAMPLE CUSTOM SERVICE MESSAGE

"Thank you for calling the ABC company. If you know the extension number of the person you are calling, you can dial it at any time. For a list of extensions, press [1]; to reach the sales department, press [2]; to reach the service department, press [3]; if you would like to place an order, press [4]; all other callers, please wait and an operator will be right with you."

SAMPLE CUSTOM SERVICE TREE

Create a tree to design a route leading callers to the desired extension, mailbox, or next menu. This tree should include all available caller options and cannot be deeper than eight layers. Discuss available options with the customer before programming the system.

```
                    ┌─────────────────────┐
                    │     Custom Svc.     │
                    │         100         │
                    │    Main Greeting    │
                    │    All ports day    │
                    └─────────────────────┘
         ┌──────────────┬──────────┴──────┬──────────────┐
   ┌──────────┐   ┌──────────┐    ┌──────────┐    ┌──────────┐
   │1 Custom 2│   │2 Custom 3│    │3 Tranfer │    │4 Tranfer │
   │ Extension│   │   Sales  │    │    To    │    │    To    │
   │   List   │   │   Menu   │    │  Service │    │  Orders  │
   └──────────┘   └──────────┘    └──────────┘    └──────────┘
                   ┌─────┴─────┐
              ┌─────────┐ ┌─────────┐
              │1   New  │ │2  Used  │
              │   Cars  │ │   Cars  │
              └─────────┘ └─────────┘
```
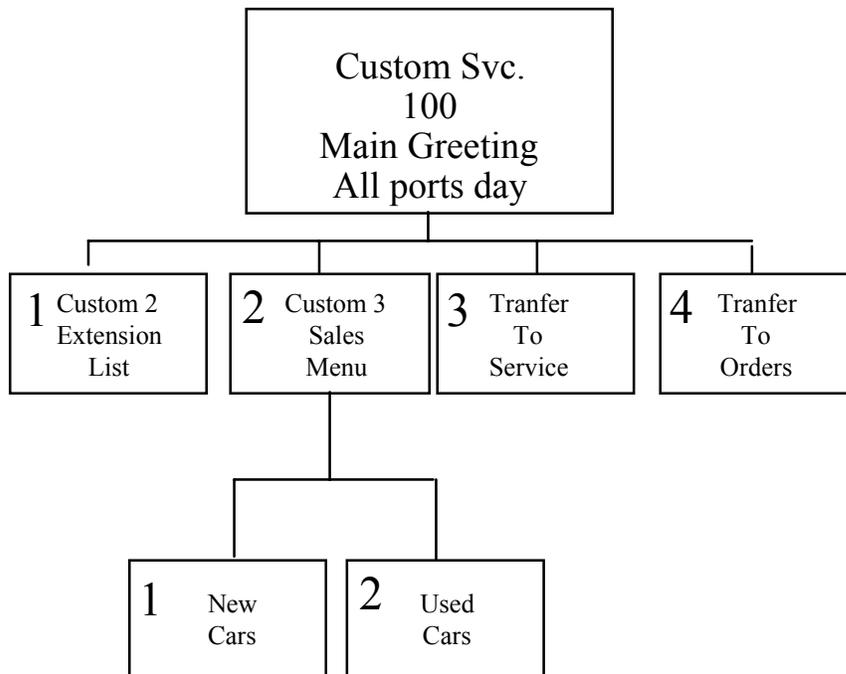
The top of the tree should include what callers will hear when they are first connected to the VPS. Then create a branch for each option. This should be done until each caller option has been documented. Next, fill in each box with the action that it represents so you can easily remember what action corresponds to each keystroke.

Remember that it is possible and often necessary to have one custom service lead to another custom service. For example, if someone presses [1] for sales, you might want another menu to say "for new car sales, press [1]; for used car sales, press [2]." This way callers are routed directly to the person best suited to handle them.

CUSTOM SERVICE PROGRAMMING

After the tree is complete, enter the *System Programming Custom Service Settings Menu.*

Access the *Custom Service Setting Menu* through the following sequence:

System Administration
Top Menu: Enter The Number: =**1** *(Program)*

                                             Enter The Number: =**4** *(Service Settings)*

                                             Enter The Number: =**2** *(Custom Service)*

The system then asks what Custom Service number you want to edit. Enter the desired number (1-100).

The *Custom Service* screen is displayed:

```
Service Setting - Custom 01


        Description ----------------------------------------          |
.................
                                                 | ................
        Prompt Mode(1:Sys 2:User1 3:User2) -----  | System
        Menu Repeat Cycle (1-3) ----------------------  | 3 times
        Call Transfer Anytime(Ext/Mbx/No) ------   | Ext
        Wait for Second Digit (1-5 seconds) --------  | 1 seconds
        No DTMF Input Operation(a-f) --------------  | c


  Keypad Assignment
    1:              2:              3:
    4:              5:              6:
    7:              8:              9:
    *: d            0: c            #:
```


Enter data into the Custom Service menu; use the table below as a guide.

Description	Value Range (Default)	Description/Function
	(up to 32 alphanumeric characters)	(for reference only)
Prompt Mode	1. System 2. User 1 3. User 2 (System)	Specifies the language that the caller will hear when calling this Custom Service.
Menu Repeat Cycle	1-3 Times (3)	Specifies the number of times the Custom Service menu is repeated before the system uses the No DTMF Input entry.

Call Transfer Any Time	Ext/Mbx/No (Ext)	Specifies where a caller is transferred when dialing an extension or mailbox number during the menu. If this entry is set to Extension, the caller is transferred to the corresponding extension. If it is set to Mailbox, the caller is sent directly to the greeting of the corresponding mailbox.
Wait for Second Digit	1-5 secs (1)	This is used when the first digit of a mailbox or extension is also a menu choice within the custom service. If a second digit is not dialed within this time, the system uses the menu choice.
No DTMF Input Operation	a.-f. (c.)	This is used when a caller does not dial anything when hearing the menu (usually rotary callers).
Keypad Assignment	a.-n. (*=d, 0=c, others=None)	This entry assigns the different actions that can be performed when each digit is dialed. Callers are then able to access these services by pressing the corresponding keys on their telephones. See following chart for options.

Keypad Assignment Options

Entry	Function
a. Followed by a mailbox number	Sends the caller to the designated mailbox and plays the personal greeting.
b. Followed by an extension number	Transfers the caller to the specified extension.
c. Operator	Transfers the caller to the operator.
d. Exit	Plays the Custom Service exit prompt and disconnects the caller.
e. Previous Menu	Returns the caller to the previous menu.
f. Followed by a Custom Service number	Sends the caller into the designated Custom Service and plays the menu.
g. Voice Mail Service	Changes the port status to Voice Mail and plays Voice Mail prompt.
h. Call Transfer	Changes the port status to Automated Attendant and plays Automated Attendant prompt.
i. Subscriber Service	Allows the caller to enter subscriber service. Digits received after entering this code are assumed to be the subscriber's mailbox number.
j. Department Dialing	Plays the *Department Dial Menu*.
k. Dial by Name	Asks the caller to enter the first three or four digits of the person (last name) they wish to reach, then allows transfer to that extension.
l. Repeat Menu	Repeats the menu prompt.
m. Main Menu	Returns the caller to the top level of Custom Service tree. Plays the menu for that service.
n. Fax Transfer	Transfers the caller to the extension designated as the fax extension in system programming.

RECORDING MENUS

Once you have finished entering the parameters in each menu, the menu messages should be recorded. Menu messages tell the caller what options are available and what keys correspond to those options. For this reason the prompts must match the programming that has been input.

Step 1.   Access the Message Managers mailbox (998) by dialing an extension connected to the VPS.

Step 2.   When the VPS answers, dial [#6*998] to enter the Mailbox Manager's mailbox.

Step 3.   Press [5] to modify messages.

Step 4.   Press [4] to change the custom service menu.

Step 5.   You will hear:
> *Enter the Custom Service number [1] through [100].*
> *To record the Custom Service Exit prompt, press [0].*

Step 6.   You will hear:
> *Record menu at the tone...*

Follow the instructions until all Custom Service prompts have been recorded, using the tree that you created as a guide.

CHECKING OPERATION

After you have entered and recorded all menus, it is important to try the program yourself to see that all functions perform properly. Dial into the system and try all the choices to see if you are routed correctly. Verify that each menu choice works as it should.

VOICE MAIL

Voice Mail service is a message-taking service that allows non-subscribers to leave messages for subscribers. This service is often assigned when incoming calls are answered by a live person. This person can then send the caller to the Voice Mail service if desired.

Callers can access Voice Mail service by:

1. Voice Mail Port
    This service can be programmed independently of any or all ports of the   VPS. Callers reaching these ports immediately access Voice Mail service.

2. Service Access Command
    A caller can switch to Voice Mail service by dialing [#6] during a call.

3. Custom Service
    This service can be assigned to a keypad digit within a Custom Service.
    After pressing this key, the caller enters Voice Mail service.

INTERVIEW SERVICE

The subscriber can leave a series of prerecorded questions for the caller in an Interview Mailbox. As the caller answers questions, those answers are recorded in the mailbox.

Automated Attendant service answers incoming calls and waits for the caller to input an extension number. The caller is then transferred to the appropriate extension.

Callers can access Automated Attendant Service by:

1. Automated Attendant Port
   This service can be programmed independently of any or all ports of the   VPS. Callers reaching these ports access Automated Attendant service.

2. Service Access Command
   A caller can switch to Automated Attendant service by dialing [#8] during a call.

3. Custom Service
   The call transfer service can be assigned to a keypad digit within a Custom   Service. After pressing this key, the caller enters Automated Attendant service.

SETTING PORTS

PORT SERVICE MENU

Access the Port Service Menu through the following sequence:

System Administration
Top Menu: Enter The Number: =**1** *(Program)*
Program Menu: Enter The Number: =**3** *(Port Service)*

Screen Output:

Program - Port Service Menu
     1. Port1
     2. Port2
     3. Port3
     4. Port4
 SELECT ITEM AND PRESS KEY
     Day Mode, Night Mode

Port 1
from Program - Port Service Menu:

Enter the data using the table below as a guide.

Description	Value Range (Default)	Description/Function
Company Greeting No.	1-32 (None)	Specifies the company greeting to be played on the port.
Incoming Call Service	1. Voice Mail 2. Auto Attend 3. Interview 4. Custom (Auto Attend)	Specifies one of four incoming call services. When you use Custom Service, Custom Service numbers (1-100) should also be specified.
Incoming Call Service Prompt	1. System 2. User 1 3. User 2 4. Selective (User 1)	Specifies the language of voice prompts to be played on this port.

Delayed Answer	0-60 sec. (0)	Specifies whether the port answers immediately or in delay.

AUTOMATED ATTENDANT PARAMETERS

Automated Attendant parameters include: operator parameters, department dialing, and alternate extension.

AUTOMATED ATTENDANT MENU

From Top Menu:

> Enter The Numbers : = **1 - 4 - 1**
>
> Program - Service Settings - Auto. Attn. Menu
> 1. Department Dialing
> 2. Operator Parameters
> 3. Alternate Extension

DEPARTMENT DIALING

Department Dialing numbers (0 - 9) represent department extensions; these numbers are given to the caller in the initial list of prompts.

Return to Program - Auto. Attn. Setting Menu:

> Enter The Number : = **1**
>
> Program - Auto. Attn. Setting - Department Dialing Menu
> 1. Department Dialing No.1 [   ] := 102
> 2. Department Dialing No.2 [   ] := 104
> 3. Department Dialing No.3 [   ] := 115
> 4. Department Dialing No.4 [   ] := 136
> 5. Department Dialing No.5 [   ] := 107
> 6. Department Dialing No.6 [   ] := 108
> 7. Department Dialing No.7 [   ] := 109
> 8. Department Dialing No.8 [   ] := 110
> 9. Department Dialing No.9 [   ] := 111

OPERATOR PARAMETERS

If you enable operator service, you must set the following parameters: operator extension and mailbox number, coverage modes, and message repeat cycle.

Return to Program - Auto. Attn. Setting Menu:

Enter The Number : = **2**

Program - Auto. Attn. Setting - Operator's Parameters Menu
> 1. Operator 1
> 2. Operator 2
> 3. Operator 3

  SELECT ITEM AND PRESS KEY
> Day Mode, Night Mode

Enter the data using the table below as a guide.

Description	Value Range (Default)	Description/Function
Operator Service	1. Disable 2. Enable (Enable)	Enables or disables operator service.
Operator's Extension	2-5 Digits (0)	Specifies the operator's extension.

Operator's Mailbox Number	2-5 Digits (998)	Specifies Operator 1's mailbox number. Also specifies general delivery mailbox.
Operator No Answer Time	10-60 secs. (30)	If a call transferred to Operator 1, 2, or 3 is not answered within this period of time, the VPS uses the No-Answer Coverage Mode.
Busy Coverage Mode	1. Hold 2. No Answer Coverage 3. Call Waiting 4. Disconnect Message (Hold)	Specifies the treatment of calls when Operator 1 is busy.
No-Answer Coverage Mode	1. Caller Select 2. Leave Message 3. Disconnect Message 4. Next Operator (Caller Select)	Specifies the treatment of calls when Operator 1 does not answer.
Menu Repeat Cycle	1-3 Times (3)	Specifies the number of times the VPS plays the option selection message to the caller. (No-Answer Mode)

SETTING MAILBOXES

MAILBOX SETTING MENU

Access the *Mailbox Setting Menu* through the following sequence:

> **System Administration**
> **Top Menu:**   Enter The Number: =**1** *(Program)*
> **Program Menu:**   Enter The Number: =**1** *(Mailbox Setting)*

> Program - Mailbox Setting Menu
>   1. Enter
>   2. Delete
>   3. Password Reset
>   4. Mailbox Listing

ENTERING A MAILBOX

From *Mailbox Setting Menu:*

> Enter The Number : = **1**
>
> Then Enter the Mailbox number:
>
> Program - Mailbox Setting Menu - Enter/Edit
>   1. Mailbox Setting
>   2. Notification Setting
>
> Enter The Number : = **1**

Enter the data using the table below as a guide.

Description	Value Range (Default)	Description/Function
Extension of the Owner	2-5 Digits (None)	Sets the extension to be used in conjunction with the mailbox. Any valid number, including an ext. group, can be assigned.
Owners Name First + Last	Up to 16 characters (None)	The Dial by Name feature uses the last name. Both are printed on mailbox report.
Class of Service	COS No. 1-62 (1)	Used to define a set of services available to the subscriber. 63 and 64 are fixed to message manager and system manager.
Covering Extension	2-5 Digits (None)	Specifies where the caller who was unable to reach this mailbox owner's extension will be transferred when Covering Extension is dialed or set under Incomplete Call Handling.
Interview Mailbox	2-5 Digits (None)	Used to permit this mailbox owner to have his or her own interview mailbox. Must be unused mailbox.
All Calls Transfer to Mailbox	1. Yes 2. No (No)	If set to Yes, calls coming to the extension through Auto-Attendant go directly to the mailbox and do not ring the extension. (When set to Yes, the message lamp of this extension is never turned on by the VPS.)

From Mailbox Setting Enter/Edit Menu:-

    Enter The Number : = **2**

    Enter the notification number: = **1**

Enter the data using the table below as a guide.

Description	Value Range (Default)	Description/Function
Number to Dial	Up to 32 Digits of [1-9,0,*,#,P,T,M,X] (None)	Assigns the telephone or beeper number to Device 1. The callback number entry code (X) must be entered if COS is set to enable and set to beeper.
Type	1. Beeper 2. Telephone (Telephone)	Assigns whether device is beeper or telephone.

Use Device	1. Not Use 2. Continuously 3. Scheduled (Continuously)	Not Use: Does not use device. Continuously: The VPS notifies each time a message is recorded in mailbox. Scheduled: The VPS notifies the subscriber if a message is left during one of the time frames.
Number of Retries	0-3 Times (0)	Specifies the number of times a device should be retried when busy or no-answer.
Busy Delay	0-120 mins. (3)	The time the VPS will wait before retry on busy.
No Answer Delay	0-120 mins. (30)	The time the VPS will wait before retry on No Answer.
Time Frame 1, 2 MON - SUN	1-12: hour 00-59: minute AM/PM: am/pm *: All Day Space: No Use	Weekly Schedule for Message Waiting Notification. The schedule is only used when Use Device is set to Scheduled.

DELETING A MAILBOX

From Mailbox Setting Menu:

> Enter The Number : = **2**

> Program - Mailbox Setting - Delete
> Enter the Mailbox Number :=
> Are you sure?, (Y, N) :=

PASSWORD RESET

To reset the password, go to the *Password Reset Menu*. "Enter the Mailbox Number" appears on the screen. Enter the mailbox number you wish to reset. "Enter the Mailbox Number" appears again. Enter a new number.

From Mailbox Setting Menu:

> Enter The Number : = **3**

> Program - Mailbox Setting - Password Reset
> Enter the Mailbox Number := **101**
> Enter the Mailbox Number := **111**

MAILBOX LISTING

This listing is a report of mailbox extension assignments.

From Mailbox Setting Menu:

> Enter The Number : = **4**

> Program - Mailbox Setting - Mailbox Listing
> 1: 101   2: 103   3: ----   4: ----   5: ----
> 6: ----   7: ----   8: ----   9: ----   10: ----
> 11: ----   12: ----   13: ----   14: ----   15: ----
> 16: ----   17: ----   18: ----   19: ----   20: ----
> *(..to 61)*

> System Manager's Mailbox Number.:**999**
> Message Manager's Mailbox Number.:**998**

MESSAGE MANAGER'S MAILBOX

The message manager takes care of the General Delivery Mailbox, recording company greetings and modifying voice prompts. Follow the instructions below to record the required greetings and voice prompts.

ACCESSING THE MESSAGE MANAGER'S MAILBOX (DIAL [#6*998])

Dial an extension number that is connected to the Voice Mail.

You will hear the initial prompt:

> Good morning/Good afternoon/Good evening. Welcome to the voice processing system...

Press [# 6 * 9 9 8] to access the message manager's mailbox.

You will hear the following prompt if mailbox 998 has a password set:

> Please enter the password, followed by a pound sign.

Enter the message manager's password (if programmed). Otherwise, you will hear the *Message Manager's Main Command Menu.*

MESSAGE MANAGER'S MAIN COMMAND MENU

> You have...messages.
>
> To transfer general delivery mailbox messages, press [1].
>
> To set up message waiting notification, press [2].
>
> To customize your mailbox, press [3].
>
> To set the clock, press [4].
>
> To modify messages, press [5].
>
> To end this call, press [*].

COMPANY GREETINGS (DIAL [#6*998,5,1])

Access the *Message Manager's Main Command Menu.*

To modify messages, press [5].

To change the company greeting, press [1].

Continue following voice prompts through appropriate menus. Prompts lead you through the choices and recording process.

After you record the company greeting, it may be necessary to enter programming through the terminal and set the company greeting assignment under the *Port Settings Menu.* This tells the system what company greeting to play on each port.

NOTE: A company greeting should be very short. ***Example:*** *"Thank you for calling ABC Company."* It is not necessary to give any other instruction within the company greeting because instructions will follow the company greeting automatically.

MODIFYING VOICE PROMPTS (DIAL [#6*998,5,6])

The customer may want to enter user prompts in place of the automated system prompts. The following chart lists all system prompts. To change the user prompts:

Access the *Message Manager's Main Command Menu.*

To modify messages, press [5].

To modify the user prompts, press [6].

To change user prompt 1, press [1].

To change individual prompts, press [1]; to change all prompts, press [2].

Enter the prompt number you want to change.

Continue following voice prompts through appropriate menus. Prompts lead you through the choices and recording process.

Voice Prompts

1	ZERO	16	FIFTEEN
2	ONE	17	SIXTEEN
3	TWO	18	SEVENTEEN
4	THREE	19	EIGHTEEN
5	FOUR	20	NINETEEN
6	FIVE	21	TWENTY
7	SIX	22	TWENTY-ONE
8	SEVEN	23	TWENTY-TWO
9	EIGHT	24	TWENTY-THREE
10	NINE	25	TWENTY-FOUR
11	TEN	26	TWENTY-FIVE
12	ELEVEN	27	TWENTY-SIX
13	TWELVE	28	TWENTY-SEVEN
14	THIRTEEN	29	TWENTY-EIGHT
15	FOURTEEN	30	TWENTY-NINE

31	THIRTY		68	SIXTY-SEVEN
32	THIRTY-ONE		69	SIXTY-EIGHT
33	THIRTY-TWO		70	SIXTY-NINE
34	THIRTY-THREE		71	SEVENTY
35	THIRTY-FOUR		72	SEVENTY-ONE
36	THIRTY-FIVE		73	SEVENTY-TWO
37	THIRTY-SIX		74	SEVENTY-THREE
38	THIRTY-SEVEN		75	SEVENTY-FOUR
39	THIRTY-EIGHT		76	SEVENTY-FIVE
40	THIRTY-NINE		77	SEVENTY-SIX
41	FORTY		78	SEVENTY-SEVEN
42	FORTY-ONE		79	SEVENTY-EIGHT
43	FORTY-TWO		80	SEVENTY-NINE
44	FORTY-THREE		81	EIGHTY
45	FORTY-FOUR		82	EIGHTY-ONE
46	FORTY-FIVE		83	EIGHTY-TWO
47	FORTY-SIX		84	EIGHTY-THREE
48	FORTY-SEVEN		85	EIGHTY-FOUR
49	FORTY-EIGHT		86	EIGHTY-FIVE
50	FORTY-NINE		87	EIGHTY-SIX
51	FIFTY		88	EIGHTY-SEVEN
52	FIFTY-ONE		89	EIGHTY-EIGHT
53	FIFTY-TWO		90	EIGHTY-NINE
54	FIFTY-THREE		91	NINETY
55	FIFTY-FOUR		92	NINETY-ONE
56	FIFTY-FIVE		93	NINETY-TWO
57	FIFTY-SIX		94	NINETY-THREE
58	FIFTY-SEVEN		95	NINETY-FOUR
59	FIFTY-EIGHT		96	NINETY-FIVE
60	FIFTY-NINE		97	NINETY-SIX
61	SIXTY		98	NINETY-SEVEN
62	SIXTY-ONE		99	NINETY-EIGHT
63	SIXTY-TWO		100	NINETY-NINE
64	SIXTY-THREE		101	HUNDRED
65	SIXTY-FOUR		102	MORE THAN HUNDRED
66	SIXTY-FIVE		103	A.M.
67	SIXTY-SIX		104	P.M.

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105	O'CLOCK	
106	ONE	(HOUR)
107	TWO	(HOUR)
108	THREE	(HOUR)
109	FOUR	(HOUR)
110	FIVE	(HOUR)
111	SIX	(HOUR)
112	SEVEN	(HOUR)
113	EIGHT	(HOUR)
114	NINE	(HOUR)
115	TEN	(HOUR)
116	ELEVEN	(HOUR)
117	TWELVE	(HOUR)
118	THIRTEEN	(HOUR)
119	FOURTEEN	(HOUR)
120	FIFTEEN	(HOUR)
121	SIXTEEN	(HOUR)
122	SEVENTEEN	(HOUR)
123	EIGHTEEN	(HOUR)
124	NINETEEN	(HOUR)
125	TWENTY	(HOUR)
126	TWENTY-ONE	(HOUR)
127	TWENTY-TWO	(HOUR)
128	TWENTY-THREE	(HOUR)
129	TWENTY-FOUR	(HOUR)
130	ONE	(MINUTE)
131	TWO	(MINUTE)
132	THREE	(MINUTE)
133	FOUR	(MINUTE)
134	FIVE	(MINUTE)
135	SIX	(MINUTE)
136	SEVEN	(MINUTE)
137	EIGHT	(MINUTE)
138	NINE	(MINUTE)
139	TEN	(MINUTE)
140	ELEVEN	(MINUTE)
141	TWELVE	(MINUTE)

142	THIRTEEN	(MINUTE)
143	FOURTEEN	(MINUTE)
144	FIFTEEN	(MINUTE)
145	SIXTEEN	(MINUTE)
146	SEVENTEEN	(MINUTE)
147	EIGHTEEN	(MINUTE)
148	NINETEEN	(MINUTE)
149	TWENTY	(MINUTE)
150	TWENTY-ONE	(MINUTE)
151	TWENTY-TWO	(MINUTE)
152	TWENTY-THREE	(MINUTE)
153	TWENTY-FOUR	(MINUTE)
154	TWENTY-FIVE	(MINUTE)
155	TWENTY-SIX	(MINUTE)
156	TWENTY-SEVEN	(MINUTE)
157	TWENTY-EIGHT	(MINUTE)
158	TWENTY-NINE	(MINUTE)
159	THIRTY	(MINUTE)
160	THIRTY-ONE	(MINUTE)
161	THIRTY-TWO	(MINUTE)
162	THIRTY-THREE	(MINUTE)
163	THIRTY-FOUR	(MINUTE)
164	THIRTY-FIVE	(MINUTE)
165	THIRTY-SIX	(MINUTE)
166	THIRTY-SEVEN	(MINUTE)
167	THIRTY-EIGHT	(MINUTE)
168	THIRTY-NINE	(MINUTE)
169	FORTY	(MINUTE)
170	FORTY-ONE	(MINUTE)
171	FORTY-TWO	(MINUTE)
172	FORTY-THREE	(MINUTE)
173	FORTY-FOUR	(MINUTE)
174	FORTY-FIVE	(MINUTE)
175	FORTY-SIX	(MINUTE)
176	FORTY-SEVEN	(MINUTE)
177	FORTY-EIGHT	(MINUTE)
178	FORTY-NINE	(MINUTE)

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179	FIFTY	(MINUTE)	216	NINTH	
180	FIFTY-ONE	(MINUTE)	217	TENTH	
181	FIFTY-TWO	(MINUTE)	218	ELEVENTH	
182	FIFTY-THREE	(MINUTE)	219	TWELFTH	
183	FIFTY-FOUR	(MINUTE)	220	THIRTEENTH	
184	FIFTY-FIVE	(MINUTE)	221	FOURTEENTH	
185	FIFTY-SIX	(MINUTE)	222	FIFTEENTH	
186	FIFTY-SEVEN	(MINUTE)	223	SIXTEENTH	
187	FIFTY-EIGHT	(MINUTE)	224	SEVENTEENTH	
188	FIFTY-NINE	(MINUTE)	225	EIGHTEENTH	
189	JANUARY		226	NINETEENTH	
190	FEBRUARY		227	TWENTIETH	
191	MARCH		228	TWENTY-FIRST	
192	APRIL		229	TWENTY-SECOND	
193	MAY		230	TWENTY-THIRD	
194	JUNE		231	TWENTY-FOURTH	
195	JULY		232	TWENTY-FIFTH	
196	AUGUST		233	TWENTY-SIXTH	
197	SEPTEMBER		234	TWENTY-SEVENTH	
198	OCTOBER		235	TWENTY-EIGHTH	
199	NOVEMBER		236	TWENTY-NINTH	
200	DECEMBER		237	THIRTIETH	
201	MONDAY		238	THIRTY-FIRST	
202	TUESDAY		239	STAR (*)	
203	WEDNESDAY		240	POUND (#)	
204	THURSDAY		241	PAUSE	
205	FRIDAY		242	TONE DIALING MODE	
206	SATURDAY		243	PULSE DIALING MODE	
207	SUNDAY		244	DIALTONE	
208	FIRST		245	CALLBACK NUMBER	
209	SECOND		246	Mailbox	
210	THIRD		247	And	
211	FOURTH		248	At	
212	FIFTH		249	For	
213	SIXTH		250	Sorry	
214	SEVENTH		251	Thank you.	
215	EIGHTH		252	Messages	

253	Days
254	Minutes
255	Seconds
256	Enter your password, followed by [#].
257	Incorrect entry.
258	You have (number).
259	New messages.
260	You have one new message.
261	You have one message.
262	There are no messages.
263	Sorry, this function is not available.
264	Please inform system manager.
265	Cannot be retrieved.
266	Thank you for calling.
267	Message manager
268	Please leave a message at the tone.
269	To end recording, press [1].
270	To pause and restart recording, press [2].
271	Record greeting at the tone.
272	Record the question at the tone.
273	Record the prompt at the tone.
274	Record menu at the tone.
275	Record company name at the tone.
276	Record label at the tone.
277	Sorry, there is no space for recording in this mailbox.
278	To end recording, hang up or press [1] for more features.
279	To end recording, hang up. To cancel your message, press [*], if you have a touch tone phone.
280	Recording accepted.
281	To review, press [1].
282	To accept, press [2].
283	To erase and try again, press [3].
284	To add, press [4].
285	To erase and exit, press [*].
286	Sorry, I cannot add any more.

287	To accept the prompt, press [2].
288	Record the recipient's name at the tone.
289	Sorry, no space for recording.
290	Enter the first three or four letters of the person's last name. For "Q," press [7]. For "Z," press [9].
291	Sorry, this name cannot be found.
292	Sorry, there are no more matching names.
293	To call this person, press [1].
294	To change to the next person, press [2].
295	To try again, press [*].
296	Extension (extension number)
297	Sorry, this mailbox is in use.
298	There were (number of failure).
299	Unsuccessful attempts to enter this mailbox.
300	Password entry failure. Check the password.
301	Enter the four-digit password. To skip setting password, press [#].
302	To skip setting password, press [#].
303	Password not assigned.
304	This is the general delivery mailbox.
305	To set delivery time or make this message private, press [1].
306	If this message is urgent, press [1].
307	Otherwise, press [2].
308	To set delivery time, press [1]. For immediate delivery, press [2].
309	Enter the time, followed by [#].
310	For help, press [0].
311	Enter [1] for A.M. or [2] for P.M.
312	Enter the day of the month, followed by [#].
313	To make this message private, press [1].
314	This message will be delivered on (day).
315	Good morning.
316	Welcome to the voice processing system.
317	Good afternoon.
318	Good evening.
319	Please enter your party's mailbox number.

320	To enter by name, press [#, 1].
321	If you are using a rotary telephone, stay on the line.
322	To call the operator, press [0].
323	To accept, press [1].
324	For the next name, press [2].
325	To repeat this name, press [3].
326	To enter a new name or mailbox, press [*].
327	The mailbox number entry failure. Check the mailbox number.
328	To change, press [1].
329	There was one unsuccessful attempt to enter this mailbox.
330	Record your name at the tone.
331	Record the group at the tone.
332	Record owner's name at the tone.
333	For example, to enter 5 o'clock, press [5, #], or to enter 5:15 press [5, 1, 5, #].
334	This message is from (name).
335	Of (company name)
336	Delivering message to (name)
337	Company name (name)
338	Hello, this is the voice processing system.
339	I have a message for (name).
340	To receive the message, press [1].
341	To hold this call, press [2].
342	To retrieve the call, press [2].
343	To repeat this message, press [1].
344	To reply, press [2].
345	To end this call, press [*].
346	To rewind, press [5].
347	To fast forward, press [6].
348	Please call (telephone number).
349	Extension number (extension number).
350	To repeat, press [1].
351	If you want me to call back later, press [3].
352	Welcome to the general delivery mailbox.
353	I have a call for mailbox (mailbox number).
354	Please wait a moment.
355	Please enter your callback number.
356	You can enter up to (number).
357	Digits
358	When you are finished, hang up; stay on the line to confirm or change your number.
359	The callback number is (telephone number).
360	Please hold while I page your party.
361	Sorry, this pager is not available.
362	I have a call for (name).
363	Sorry, no one is available.
364	To leave a message, press [1].
365	To reach the covering extension, press [2].
366	To page your party, press [3].
367	To notify your party's beeper, press [4].
368	To enter another extension, press [*].
369	Sorry, this number is not assigned.
370	Calling the operator.
371	Call transferred from the voice processing system.
372	Sorry, this line is busy.
373	Sorry, operator is not available to answer the call. Please call back later.
374	You have a call.
375	You have a call from (name).
376	To answer the call, press [1]. Otherwise, press [2] and hang up.
377	This call is for (name).
378	From (name).
379	This call is from (name).
380	To cancel holding, press [2] now. Otherwise, I'll try your party again.
381	To continue holding, press [1].
382	To enter another extension, press [2].
383	(Number) other people are waiting to connect.
384	One other person is waiting to connect.
385	If you would like to hold, press [1].
386	Please enter your party's extension.

387	For department dialing, press [*].
388	Custom service menu.
389	The callback number is not assigned.
390	Message from the system manager.
391	State your comment at the tone.
392	Beeper access disabled.
393	To set call transfer status, press [1]. To set up covering extension, press [2]. To set message reception mode, press [3]. To set incomplete handling status, press [4].
394	Call blocking enabled.
395	Call screening enabled.
396	Intercom paging enabled.
397	Beeper access enabled.
398	All transfer services disabled.
399	To enable call blocking, press [1]. To enable call screening, press [2]. To enable intercom paging, press [3]. To enable beeper access, press [4]. To disable all transfer service, press [5].
400	Message reception mode is interview mode.
401	Message reception mode is message recording mode.
402	To set leaving a message status, press [1]. To set covering extension transfer status, press [2]. To set intercom paging status, press [3]. To set beeper access status, press [4]. To set operator transfer status, press [5]. To set returning to top menu Automated Attendant service status, press [6].
403	Leaving a message is enabled.
404	Leaving a message is disabled.
405	Covering extension transfer enabled.
406	Covering extension transfer disabled.
407	Intercom paging disabled.
408	Operator transfer enabled.
409	Operator transfer disabled.
410	Returning to top menu Automated Attendant service enabled.
411	Returning to top menu Automated Attendant service disabled.
412	(Number) messages to verify.
413	One message to verify.
414	No messages to verify.
415	Message for (name).
416	Received on (date).
417	Message recorded on (date).
418	Has not been received.
419	Has been erased, because message retention time expired.
420	To play the message, press [1]. To check the previous message, press [1] twice. To check the next message, press [2].
421	To cancel this message or verification, press [3].
422	No more messages.
423	This is the last message.
424	To delete distribution verification of this message, press [1]. To cancel message delivery, press [2].
425	Verification deleted.
426	Message delivery canceled.
427	The message is (message).
428	Sorry, this group is full.
429	Eight members maximum.
430	This list member already exists.
431	To add more members, press [1]. To end, press [2].
432	Telephone number is (telephone number).
433	To delete all group members, press [1].
434	This group has no members.
435	To delete, press [1].
436	To play the next, press [2].
437	Group member deleted.
438	Enter delivery list number [1] or [2].
439	Delivery list number is (number).
440	To add new member, press [1].
441	To delete members, press [2].
442	To review, press [3].
443	Sorry, this list is in use for delivery. If this list is edified, all the deliveries will be canceled.

444	To record a message for external delivery, press [1]. To check external delivery message status, press [2]. To set up mailing list, press [3].
445	To send to one recipient, press [1]. To send by mailing list, press [2].
446	Sorry, you cannot deliver the message. The maximum number of delivery has already reached.
447	Sorry, there is no space for recording.
448	Password is (number).
449	External delivery message scheduled for (name).
450	On (date)
451	External delivery message will be sent to (name).
452	Right away.
453	To change the setting, press [1].
454	No one specified by this number.
455	To change the telephone number, press [1].
456	To change the password, press [2].
457	To change the recipient's name, press [3].
458	To change the time and date, press [4].
459	To change the password, press [1].
460	To change the time and date, press [2].
461	To deliver now, press only [#].
462	No external delivery message pending.
463	I was unable to reach (name).
464	External delivery message for (name).
465	Was erased
466	Because message retention time expired
467	To reschedule, press [1].
468	To play the next schedule, press [2].
469	To repeat this schedule, press [3].
470	To play the previous schedule, press [4].
471	To cancel external message delivery, press [1].
472	Message to (name)
473	Being delivered now
474	I'll redial only once.

475	I'll redial (number).
476	More times
477	Covering extension is (extension number).
478	Covering extension not assigned.
479	To delete, press [3].
480	Enter extension number.
481	Group name not recorded.
482	To erase, press [3].
483	Owner's name erased.
484	To record the question, press [1]. To set the answer length, press [2]. To erase the question, press [3].
485	To change the answer length, press [1].
486	To skip to the next question, press [2].
487	To skip to the previous question, press [3].
488	To go directly to a question, press [4].
489	Set the answer length using the following options: For 4 seconds, press [1]. For 8 seconds, press [2]. For 16 seconds, press [3]. For 32 seconds, press [4].
490	To change this question, press [1].
491	To erase the question, press [1].
492	Answer length is (number).
493	Enter question number, followed by [#].
494	Question erased.
495	Question number (number).
496	No question recorded.
497	To change the personal greeting, press [1].
498	To change the owner's name, press [3].
499	To set the group distribution lists, press [4].
500	To change the message waiting lamp status, press [1]. To change device status, press [2]. To assign telephone or beeper numbers, press [3]. To change caller selection status, press [4].
501	Message Waiting Lamp notification enabled.
502	Message Waiting Lamp notification disabled.

503	Enter device number, [1] through [3].
504	Device number is (number).
505	This device is for continuous use.
506	This device is not be use.
507	Telephone number is not assigned.
508	First telephone number is (telephone number).
509	First telephone number is not assigned.
510	Second telephone number is (telephone number).
511	Second telephone number is not assigned.
512	Third telephone number is (telephone number).
513	Third telephone number is not assigned.
514	To change the first telephone number, press [1]. To change the second telephone number, press [2]. To change the third telephone number, press [3].
515	I'll notify by telephone.
516	I'll notify by beeper.
517	Sorry, you cannot transfer a private message.
518	To change the no-answer greeting, press [1]. To change the busy greeting, press [2]. To change the after hours greeting, press [3].
519	No-answer greeting is (message).
520	Busy signal greeting is (message).
521	After hours greeting is (message).
522	No-answer greeting is not recorded.
523	Busy signal greeting is not recorded.
524	After hours greeting is not recorded.
525	Getting erased.
526	Twenty members maximum.
527	Enter the mailbox number.
528	Enter a group number, [1] through [4].
529	Group number (number).
530	To change group name, press [1].
531	To add group members, press [2].

532	To delete group members, press [3].
533	To review this group, press [4].
534	Message from the interview mailbox.
535	Message from the message manager.
536	Message recorded by (mailbox number).
537	And transferred via (mailbox number).
538	Message recorded on (date).
539	To play the next message, press [2].
540	To erase this message, press [3].
541	To reply, press [4].
542	To transfer this message, press [7].
543	To replay the previous message, press [1] twice.
544	To message scan, press [8].
545	No previous message.
546	All messages erased.
547	Message transferred via (mailbox number).
548	Message erased.
549	These are the brief segments of your message.
550	To replay the previous message, press [1].
551	To play the entire message, press [3].
552	Message from (name).
553	Was sent on (date).
554	To replay the previous message information, press [1]. To play the next message's information, press [2]. To play the message, press [3].
555	You can add up to (number).
556	More members
557	Sorry, you cannot reply.
558	The message sender is unknown.
559	To call message sender, press [1]. To record a message, press [2].
560	This message from general delivery mailbox.
561	This is the message from you.
562	Telephone number deleted.

563	For notification by telephone, press [1]. For notification by beeper, press [2].
564	Old message
565	New message
566	Message reception mode is set to interview mode.
567	Message reception mode is set to message recording mode.
568	Group name erased.
569	This device is for scheduled use.
570	Owner's name is (name).
571	Owner's name is not recorded.
572	To deliver a message, press [2].
573	To check the mailbox distribution, press [3].
574	For Automated Attendant status, press [4].
575	For mailbox management, press [5].
576	For other features, press [6].
577	For interview mailbox management, press [1].
578	To set up message waiting notification, press [3].
579	Any digit on the telephone keypad can be used.
580	Enter the telephone number and wait. To insert a pause or special command, enter the partial number and wait for the options menu.
581	To add more digits, press [4].
582	To insert a pause, press [5].
583	To set dial mode, press [6].
584	To insert a wait for dial tone, press [7].
585	To insert a beeper display command, press [8].
586	You cannot add any more digits.
587	Sorry, I cannot call this number.
588	Only extension call is available.
589	For external message delivery, press [3].
590	External delivery message scheduled on (date).

591	To add, press [2].
592	To use for scheduling use, press [1]. To use for continuously, press [2]. To use not at all, press [3].
593	To transfer, press [1].
594	To add new mailbox number, press [3].
595	To review mailing list, press [4].
596	Enter your party's mailbox number.
597	Enter the destination mailbox number.
598	To cancel, press [*]. To continue, press [1].
599	Mailbox number already specified.
600	This is your mailbox.
601	To repeat, press [3].
602	Sorry, maximum of 20 destinations exceeded.
603	To record a message, press [1]. To add mailbox number, press [2]. To review mailing list, press [3].
604	To transfer with comment, press [2].
605	To cancel mailing list review, press any key.
606	External delivery message will be sent right away.
607	You have one FAX message.
608	FAX messages.
609	The FAX transfer situation is as follows.
610	Transferred one time.
611	Transferred (number).
612	Times
613	One attempt was successful.
614	One attempt was busy.
615	One attempt was no answer.
616	(Number) attempts were successful.
617	(Number) attempts were busy.
618	(Number) attempts were no answer.

RECORDING THE COMPANY NAME (DIAL [#6*998,5,2])

- Access the *Message Manager's Main Command* Menu.
- To modify messages, press [5] .
- To record the company name, press [2].
- Continue following voice prompts through appropriate menus.
  Prompts lead you through the choices and recording process.

  NOTE: The company name is only played when the External Message Delivery feature is used.

SETTING UP MAILBOXES

The following steps complete the basic installation of the KX-TVS100 system. For each mailbox on the system, a no-answer, busy, and after hours greeting should be recorded, as well as the owner's name and password. Please follow the steps below to set up the mailboxes accordingly.

RECORDING PERSONAL GREETINGS

- Dial an extension connected to the VPS.
- When the port answers, dial [#6], then the mailbox number you wish to change.
- Dial your password (if programmed), then the [#] key.

You are now inside the mailbox.

- For mailbox management, press [5].
- To change the personal greetings, press [1].
- To change the No-Answer Greeting, press [1] again.
- The system will then say: *"The No-Answer Greeting is not recorded. Please state the greeting at the tone."*
- State you greeting when the tone sounds. *Example:* **"***Hi this is Tom I am   away from my desk right now by please leave a message at the tone and I will   return your call as soon as possibl*e."
- When you finish speaking, press [1].
- The system gives the options of reviewing, accepting, or erasing the message.
- To review the message, press [1].
- If the greeting is acceptable, press [2].
- The system will then play the menu for changing the No-Answer Greeting, Busy   signal Greeting and the After hours greeting. Record the busy signal greeting as you did the No-Answer Greeting.
- Continue on to the After Hours greeting and hang up when finished.

RECORDING THE OWNER'S NAME

- Dial an extension connected to the VPS.
- When the port answers dial [#6], then the mailbox number you wish to change.
- Dial your password (if programmed), then [#].

You are now inside the mailbox.

- For mailbox management, press [5] .
- To change the owner's name, press [3].

- The system will say: *"The owner's name is not recorded. Please state the   owner's name at the tone."*
- State the owner's first and last name at the tone.
- Press [1] when finished, then hang up.

TEST THE SYSTEM

Before backing up the system, call each extension to see that each port functions as it should. Check for proper greetings and call transfers.

BACKING UP THE SYSTEM

Choose the Utility Command. Type [OFLN], then ENTER. "OFF LINE MODE" appears (The system will not answer calls when off-line.) Type [SAVE], then ENTER. See screen output below.

from System Administration Top Menu:

Enter The Number : = **3**

Utility Command

$ **OFLN**

** OFF LINE MODE ** (The system will not answer calls when off-line)

$ **SAVE**

VPS Data Save (VPS - › PC : Xmodem)
   1: Program
   2: Parameters
   3: System Prompts
   4: User Prompts 1
   5: User Prompts 2
   6: Custom Service Menu
   7: Personal Greetings
Select No : = **2**

To start press ENTER

Press RETURN or ENTER again at this point. Press the Page Down key. This allows you to access the ProComm Plus® software download function.

Download Protocols - 18268160 bytes free

X)	XMODEM	A)	ASCII
Z)	ZMODEM	R)	RAW ASCII
Y)	YMODEM (Batch)	T)	TELINK
G)	YMODEM-G (Batch)	M)	MODEM7
O)	1K-XMODEM	W)	WXMODEM
E)	1K-XMODEM-G	I)	IMODEM
C)	COMPUSERVE B+	1)	[EXT 1]
K)	KERMIT	2)	[EXT 2]
S)	SEALINK	3)	[EXT 3]

: Your Selection: (press ENTER for XMODEM)

Press X for xmodem and then ENTER.

   Receive XMODEM

   Please enter filename: **(any valid DOS filename, "parametr.sve" for example)**

Type in file name. Press ENTER to transfer files through the software to the hard or floppy disk.

PROTOCOL:	XMODEM
FILE NAME	PETES.PH
FILE SIZE:	
BLOCK CHECK:	CRC
TOTAL BLOCKS:	
TIME ESTIMATE:	
TRANSMITTED:	
BYTE COUNT:	0
BLOCK COUNT:	0
CORRECTIONS:	1
AVERAGE CPS:	0
LAST MESSAGE:	TIME OUT
PROGRESS:	*IIIIIIIIIIIIIIIII*

The file transfer screen appears and shows download progress. Download time will vary depending on the communication speed and file sizes.

"Save Complete" will appear on the screen when the file has finished saving. Continue saving the other items as needed. It is not necessary to save the "Program" or "System Prompts" because these are resident on the hard drive and cannot be altered. We do recommend all other data be saved including User Prompt 1 and User Prompt 2 if they have been recorded.

NOTE: User Prompt files are extremely large and can take several hours to save.

When all information is saved at the $ prompt, type [ONLN]. The VPS system is now back on-line and ready to receive calls. Store saved files in a safe area.