

Title: Panasonic KX-TD Integration

Document: IN000001

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Overview

This document covers the configuration of the Panasonic KX-TD for integration with the DuVoice Messaging System. Refer to the Panasonic Programming Manual for more information.

Theory of Operation

The DuVoice Messaging System connects to the Panasonic KX-TD using analog extensions. For each call transferred to the voice mail, the Panasonic provides a series of inband DTMF digits at the start of the call. By interpreting these digits, the VMS can determine if the call is for direct voice mail access (to retrieve messages), or because of a forward (to leave a message in a specific mailbox).

Critical Considerations

- This integration does not provide the reason for a forwarded call. Therefore it will always answer forwarded calls as RNA.
- Message waiting indicator set and clear is performed via inband signaling.

PBX Requirements and Programming

Programming can be done via a digital phone set or the Panasonic Programmer.

Requirements

- Panasonic does not recommend more than one port of VMS per jack
- *Dedicated* uninterruptible power supply (UPS) for the VMS.
- One analog extension per voice mail port (and, if applicable, per fax port).
- One analog extension for the remote administration modem.
- Technical bulletin TB000007: Loading a new Tone Table.

Programming

Switch Programming

In order to program the Panasonic via touch-tone you must access system programming. From a digital set press PROGRAM, *# followed by the system administration password. By default the system password setting is 1234.

The Panasonic Programmer is a windows application which connects to the KX-TD via a serial port or modem. The default RS232 settings for the Panasonic are 9600, 8, M, 1 using a NULL modem cable. The password is the same one used for touch-tone programming. This software is capable of being run

on the VMS; however this will restrict the number of serial ports available to the VMS. The screen shots seen here are from version 1.04 of the Panasonic Programmer.

For proper integration configure the Panasonic programs below as described.

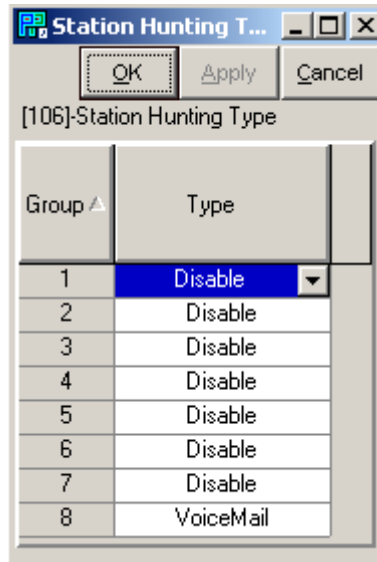
- **602 EXT GROUP #:** Assign the jack numbers connected to the VMS to an available extension group. The example shows group 8 has been assigned to the VMS ports located on extensions 107-108.

		Group Assignment							
Jack ▲	Extn	01	02	03	04	05	06	07	08
06-2	206	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
07-1	107	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
07-2	207	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
08-1	108	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
08-2	208	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

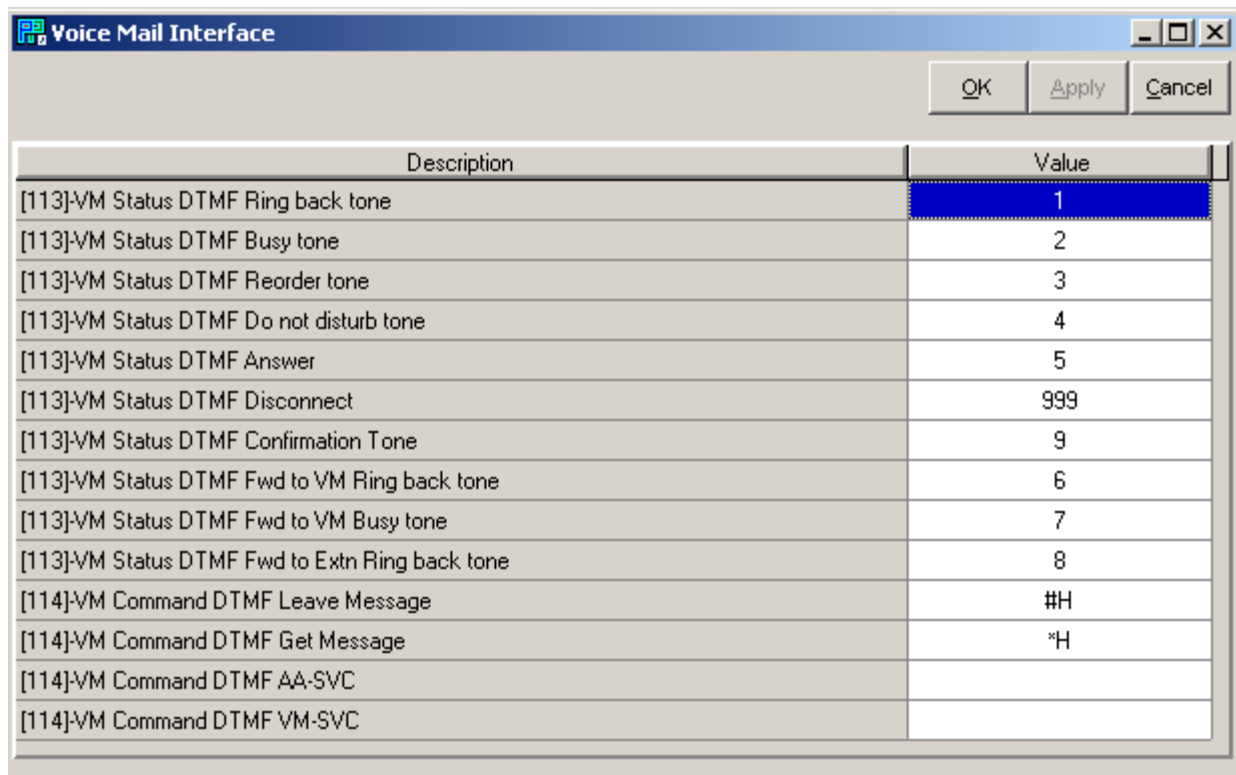
- **813 FLOATING #:** Set the extension group number for the group assigned to the VMS.

Loc ▲	Name	Number
1	Pager1	196
7	Modem	299
8	Extn Group 1	191
9	Extn Group 2	192
10	Extn Group 3	193
11	Extn Group 4	194
12	Extn Group 5	291
13	Extn Group 6	292
14	Extn Group 7	293
15	Extn Group 8	294

- **106 STATION HUNT:** Set the Hunting Type of the VMS group to VoiceMail.



- **113 VM DTMF SET:** Set the disconnect string to “999”. If using Version 3.03, clear all other settings.
- **114 VM DTMF CMD:**
 - Set **LV-MSG** to “#H”, use the Flash key for the letter H.
 - Set **GETMSG** to “*H”, use the Flash key for the letter H.
 - Clear **AA-SVC** and **VM-SVC**



- **990 SYS ADD DATA:** Set the DTMF Duration setting to 1 (160ms). This setting is Area 01, Bit 10. Example: 0010101011000001



- Using the VMS for Auto Attendant
 - **407 DIL 1:1 DAY:** For daytime operation configure the CO lines to the first extension of the GROUP created in program 602.
 - **408 DIL 1:1 NITE:** For night operation configure the CO lines to the first extension of the GROUP created in program 602.
- Using the VMS to handle overflow from the attendant
 - **409 INTERCEP DAY:** For daytime operation configure the CO lines to the first extension of the GROUP created in program 602.
 - **410 INTERCEP NT:** For night operation configure the CO lines to the first extension of the GROUP created in program 602.
- In order to support Message Waiting Indicators and Callouts allow the last port on the VMS to have intercom dial tone when off hook and trunk access by dialing 9.

Station Programming

All stations should be programmed to auto forward to the extension group created for the VMS in program 602.

Optional Programming

- **VM Transfer Button (VTR):** This allows an operator or user to transfer a caller directly to a users greeting to record a message.
- **FWD/DND Button:** It is suggested to set the FWD/DND settings for a station to FWD.

[003]-Extension Number Set					Forward Settings		
Jack	Extn ▲	Fwd/DND Selection	DND	FWD	Type	Extn	Dialed number
01-1	101	FWD	Invalid	Valid	all calls	107	
02-1	102	FWD	Invalid	Valid	busy/no answer	107	

Voicemail Requirements and Programming

Requirements

This integration is supported on all versions of DV2000/DV4 using analog telephony boards.

Programming

Class of Service

Using Mailbox Administration set the type of transfer for all the class of service templates created to “Integrated”. For a detailed explanation on how to edit Class of Service Templates see Chapter 4 of the DuVoice Manual. This type of transfer uses the command codes found in program 113 to control the transfers. This transfer type is not available on versions prior to 3.04 therefore you should clear all the fields specified in program 113 with the exception of the DTMF disconnect.

If you are using the Integrated Transfer type and you are not using the default codes found in program 113. You can change what the VMS uses to interpret these codes by editing the INTEGRATION.INI file located in C:\PAIRTREE32. This file is documented in the Manual under PBX Integrations.

Message Waiting Indicators

- Default on code is *701,Extension Number.
- Default off code is *700,Extension Number.

Inband codes

For greater detail on how to program the Inband codes for a integration see Chapter 4 of the DuVoice Manual.

- RNA code should be set to a #rrr for a three digit configuration.
- Subscriber login code should be *eee for a three digit configuration.

Tone-Tables

Using the Technical Bulletin “TB000007: Loading a new Tone Table”, configure the dialogic boards to use the correct tone-table.

Ring-No-Answer Timing

The system by default waits 20 seconds before canceling a transfer when using Integrated Transfers. This setting can be changed in the INTEGRATIONS.INI file as the field **WaitBeforeRNA**. This value is in seconds.

Troubleshooting and Testing

The Trace Utility documented in Chapter 1 of the DuVoice Manual will allow you to view the inband digits the system receives from the switch.

Conclusion

If you need further assistance please contact DuVoice Technical Support Monday - Friday 8am - 5pm Pacific Time, (425)250-2393.