

Panasonic
Communication Systems Division
Technical Advisory

Updated: Nov. 16,
00

Subject: KX-TD1232 T1 Card (KX-TD187) Installation

Document Number: KXTD1232009

Before you start you must have Software Version P211D00712A (-4) or higher.

If you require an upgrade call VND at 1-888-201-4030.

Your KX-TD170 cards must have a "C" or higher as the fifth digit of the serial number. If not you must replace them.

Ordering your T-1 Lines

The card supports D-4 or ESF framing format and line formats AMI or B8ZF.

The T1 digital trunk card is compatible with the following services:

AT&T	MEGACOM	E&M
	MEGACOM 800	E&M
	SDN	LCO, GCO, OPX, E&M, DID
MCI	T1	LCO, GCO, OPX, E&M, DID
US SPRINT	T1	LCO, GCO, OPX, E&M, DID

The system supports the following T1 line types:

- Loop start central office lines (LCO, Pulse or DTMF)
- Ground start central office lines (GCO, Pulse or DTMF)
- Direct in dial central lines (DID, Pulse or DTMF)
- Off premise extension lines (OPX)
- TIE lines (E&M, Pulse or DTMF, CID with DTMF Only)

The circuits should not be ordered with line power. Have the T-span terminated on a RJ-48C jack. Check the CSU specifications for distance limitations between the CSU and the service provider termination. When ordering a circuit to access the public switching network, be sure to specify the signaling type (E&M, DID ETC.) to be used on each channel.

Hardware Requirements

- T-1 Digital trunk card (KX-TD187), One maximum per system.
- Channel Service Unit (CSU), One required per system.
- T-1 to CSU cable.
- CSU to RJ-48C cable.

Installing the KX-TD187 card

- 1- Insert the card following the installation instructions.
- 2- Install the CSU and cabling per the manufacturer's instructions.

System Programming (Applies to type)

- 109 set to "T1" (All)
- 128 PBX Code. (TIE)
- 135 DID number conversion selection. (DID)
- 136 DID number assignment. (DID)
- 137 DID destination extension day. (DID)
- 138 DID destination extension night. (DID)
- 139 DID name. (DID)
- 340 Sets the TIE line routing table. (TIE)
- 341 Sets the removed and added digits of a TIE call received digits. (TIE)
- 430 Sets the DID/TIE format. (DID+TIE)
- 431 Sets incoming DID/TIE format. (DID+TIE)
- 432 Sets outgoing DID/TIE format. (DID+TIE)
- 433 Sets the amount of digits to be removed from DID/TIE lines. (DID+TIE)
- 434 Sets the digits to be added to DID/TIE lines. (DID+TIE)
- 435 Sets the wink timeout for DID/TIE lines. (DID+TIE)
- 436 Enables or disables CO to TIE transfer. (TIE)
- 437 Enables or disables TIE to CO transfer. (TIE)
- 438 Enables or disables TIE to TIE transfer. (TIE)
- 439 Sets the TIE security. (TIE)
- 700 Set to the carriers specifications. (All)
- 701 Set to the carriers specifications. (All)
- 702 Set to the carriers specifications. (LCO)
- 703 Set to the carriers specifications. (DID)
- 704 Set to the carriers specifications. (LCO)
- 705 Set to the carriers specifications. (DID)
- 706 Set to the carriers specifications. (DID)
- 707 Set to the carriers specifications. (All)
- 708 Set to the carriers specifications. (All)
- 709 Set to the carriers specifications. (All)
- 710 Set to the carriers specifications. (All)
- 711 Set to the carriers specifications. (All)
- 712 Set to the carriers specifications. (DID+TIE)
- 713 Set to the carriers specifications. (All)
- 714 Set to the carriers specifications. (All)
- 715 Set to the carriers specifications. (All)
- 716 Set to the carriers specifications. (All)
- 717 Set to the carriers specifications. (All)
- 718 Set to the carriers specifications. (All)
- 719 Set to the carriers specifications. (All)
- 720 Set to Tie or DIL mode. (TIE)
- 721 Set to the desired outside line reference. (LCO+GCO)
- 722 No answer timer for a TIE or DID outgoing call. (DID+TIE)
- 723 Set if you want CID sent on TIE line calls. (TIE)
- 725 Sets the extension numbers for OPX TIE lines. (OPX)
- 726 Sets the extension name for OPX TIE lines. (OPX)
- 727 Assign the COS of the T1 channels. (OPX)
- 728 Day mode T1 outgoing assignment. (OPX)
- 729 Night mode T1 outgoing assignment. (OPX)
- 730 Sets a mailbox number to extensions on the T1. (OPX)
- 990 field 63 to determine what happens if the extension is busy. (DID)
- 990 field 66 to determine if the DID number replaces the caller ID number on the SMDR printout. (DID)

Setting up LCO lines

System Programming

- 109 Set to "T1". (Note must reset system after changing) *
- 700 Set all channels to "LCO". *
- 701 Normally you will not need to change. *
- 702 Normally you will not need to change. *
- 704 Normally you will not need to change. *
- 707 Normally you will not need to change. *
- 708 Must match carrier. (B8ZS OR AMI) *
- 709 Must match carrier. (ESF or D4) *
- 710 Normally you will not need to change. *
- 711 Normally you will not need to change. *
- 713 Normally you will not need to change. *
- 714 Normally you will not need to change. *
- 715 Normally you will not need to change. *
- 716 Normally you will not need to change. *
- 717 Normally you will not need to change. *
- 718 Normally you will not need to change. *
- 719 Normally you will not need to change. *
- 721 This matches a T1 channel to a CO in DIL 1:N and CO Line Outgoing. So if you set CO 25 (T1 channel 1) to match up with CO 9, that means when you are in the CO 1:N screen how you set CO 9 is how T1 channel 1 will ring and when you are in the CO Line Outgoing screen how you set CO 9 (Y or N) allows or disallows an extension to access CO 25. *

Note: The lines from the T1 are CO 25 to 48, by default all extension have CO 1 to 24. Please properly set each extensions line key.

* Whenever making any programming changes you **MUST** reset the system before they will take effect.

Setting up GCO lines

System Programming

- 109 Set to "T1". (Note must reset system after changing) *
- 700 Set all channels to "GCO" *
- 701 Normally you will not need to change. *
- 707 Normally you will not need to change. *
- 708 Must match carrier. (B8ZS OR AMI) *
- 709 Must match carrier. (ESF or D4) *
- 710 Normally you will not need to change. *
- 711 Normally you will not need to change. *
- 713 Normally you will not need to change. *
- 714 Normally you will not need to change. *
- 715 Normally you will not need to change. *
- 716 Normally you will not need to change. *
- 717 Normally you will not need to change. *
- 718 Normally you will not need to change. *
- 719 Normally you will not need to change. *
- 721 This matches a T1 channel to a CO in DIL 1:N. So if you set CO 25 (T1 channel 1) to match up with CO 9, that means when you are in the CO 1:N screen how you set CO 9 is how T1 channel 1 will ring. *

Note: The lines from the T1 are CO 25 to 48, by default all extension have CO 1 to 24. Please properly set each extensions line key.

* Whenever making any programming changes you **MUST** reset the system before they will take effect.

Setting up DID lines

System Programming

- 109 Set to “T1” (Note must reset system after changing). *
- 135 DID number conversion selection. (DID)
- 136 DID number assignment. (DID)
- 137 DID destination extension day. (DID)
- 138 DID destination extension night. (DID)
- 139 DID name. (DID)
- 430 Set the format to group 1-8 as set in program 431 and 432. *
- 431 Sets the DID incoming format (Wink or Immediate). *
- 432 Sets the DID outgoing format (Wink or Immediate). *
- 433 Sets the DID number of digits to be removed. *
- 434 Sets the DID digits to be added. *
- 435 Normally you will not need to change. *
- 700 Set all channels to “DID” *
- 701 Normally you will not need to change. *
- 703 Normally you will not need to change. *
- 705 Normally you will not need to change. *
- 706 Normally you will not need to change. *
- 707 Normally you will not need to change. *
- 708 Must match carrier. (B8ZS OR AMI) *
- 709 Must match carrier. (ESF or D4) *
- 710 Normally you will not need to change. *
- 711 Normally you will not need to change. *
- 712 Normally you will not need to change. *
- 713 Normally you will not need to change. *
- 714 Normally you will not need to change. *
- 715 Normally you will not need to change. *
- 716 Normally you will not need to change. *
- 717 Normally you will not need to change. *
- 718 Normally you will not need to change. *
- 719 Normally you will not need to change. *
- 722 Normally you will not need to change. *

Note: The lines from the T1 are CO 25 to 48, by default all extension have CO 1 to 24. Please properly set each extensions line key.

* Whenever making any programming changes you MUST reset the system before they will take effect.

Setting up OPX lines

System Programming

- 109 Set to “T1” (Note must reset system after changing). *
- 700 Set all channels to “OPX” *
- 701 Normally you will not need to change. *
- 707 Normally you will not need to change. *
- 708 Must match carrier. (B8ZS OR AMI) *
- 709 Must match carrier. (ESF or D4) *
- 710 Normally you will not need to change. *
- 711 Normally you will not need to change. *
- 713 Normally you will not need to change. *
- 714 Normally you will not need to change. *
- 715 Normally you will not need to change. *
- 716 Normally you will not need to change. *
- 717 Normally you will not need to change. *
- 718 Normally you will not need to change. *
- 719 Normally you will not need to change. *
- 725 Sets the OPX Extension Number.
- 726 Sets the OPX Extension Name.
- 727 Sets the COS for each OPX Extension.
- 728 Enables or Disables an OPX extension from accessing CO lines Day Mode.
- 729 Enables or Disables an OPX extension from accessing CO lines Night Mode.
- 730 Sets the Mailbox Number for each OPX Extension.

* Whenever making any programming changes you MUST reset the system before they will take effect.

Setting up TIE lines

System Programming

- 109 Set to “T1” (Note must reset system after changing). *
- 128 PBX Code. (TIE) *

- 340 Used to route calls over TIE lines. (Similar to ARS)
- 341 Sets the number of digits to be added or removed from TIE calls. *
- 430 Set the format to group 1-8 as set in program 431 and 432. *
- 431 Sets the TIE incoming format (Wink or Immediate). *
- 432 Sets the TIE outgoing format (Wink or Immediate). *
- 433 Sets the TIE number of digits to be removed. *
- 434 Sets the TIE digits to be added. *
- 435 Normally you will not need to change. *
- 436 Enables or disables CO to TIE transfer. (TIE)
- 437 Enables or disables TIE to CO transfer. (TIE)
- 438 Enables or disables TIE to TIE transfer. (TIE)
- 439 Sets the TIE security. (TIE)
- 700 Set all channels to “TIE” *
- 701 Normally you will not need to change. *
- 707 Normally you will not need to change. *
- 708 Must match carrier. (B8ZS OR AMI) *
- 709 Must match carrier. (ESF or D4) *
- 710 Normally you will not need to change. *
- 711 Normally you will not need to change. *
- 712 Normally you will not need to change. *
- 713 Normally you will not need to change. *
- 714 Normally you will not need to change. *
- 715 Normally you will not need to change. *
- 716 Normally you will not need to change. *
- 717 Normally you will not need to change. *
- 718 Normally you will not need to change. *
- 719 Normally you will not need to change. *
- 720 Sets how the TIE lines will ring DIL 1:N or TIE mode. *
- 722 Normally you will not need to change. *
- 723 Normally you will not need to change. *

Note: The lines from the T1 are CO 25 to 48, by default all extension have CO 1 to 24. Please properly set each extensions line key.

* Whenever making any programming changes you **MUST** reset the system before they will take effect.