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NEAX® 2000 IVS²
INTEGRATED VOICE SERVER
Remote PIM System Manual

FEBRUARY, 2000

NEC America, Inc.

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INTRODUCTION

PURPOSE

This manual explains the system outline and installation procedure for providing the Remote PIM to the NEAX2000 IVS^2.

USING THIS MANUAL

This manual contains the following chapters:

CHAPTER 1 GENERAL INFORMATION
This chapter explains the outline of system configuration, required equipment, system capacity, system conditions, and time slot allocation.

CHAPTER 2 INSTALLATION
This chapter explains how to install the Remote PIM hardware. This chapter describes only the installation procedure required for providing the Remote PIM System. Refer to the Installation Procedure Manual for general installation procedures.

CHAPTER 3 TROUBLESHOOTING
This chapter explains the method for fault diagnosis and troubleshooting when maintenance personnel detect fault occurrences by lamp indication on DAIA/DAIB/DAIC/DAID/DAIE/DAIF and M10 cards. For other system faults, refer to the Maintenance Manual.

CHAPTER 4 CIRCUIT CARD INFORMATION
This chapter explains the mounting location, the meaning of lamp indications, and the method of switch settings of each circuit card for the Remote PIM.

REFERENCE MANUALS

Refer to the following manuals during installation:

Installation Procedure Manual	Provides the installation procedures for the PBX system.
Command Manual	Describes the Customer Administration Terminal (CAT) operation, command function, and setting data required for programming the PBX system.
Office Data Programming Manual	Contains the Customer Specification Sheets and Office Data Programming Sheets.
Maintenance Manual	Describes the maintenance service features and the recommended troubleshooting procedures.

CHAPTER 1

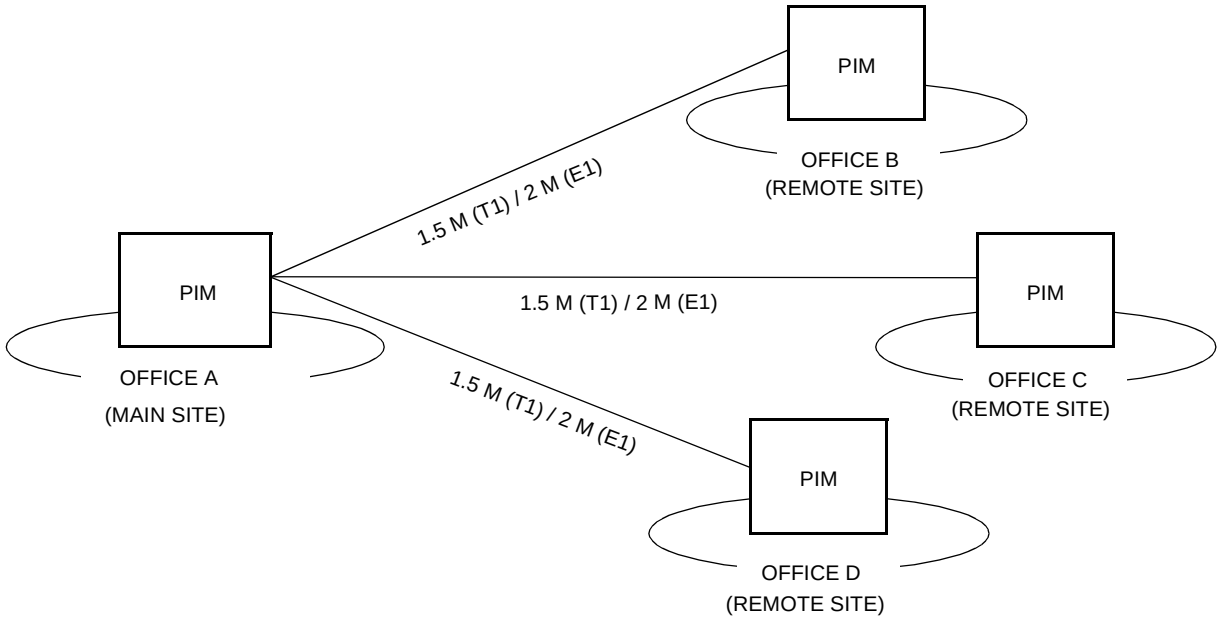
GENERAL INFORMATION

This chapter explains the outline of system configuration, required equipment, system capacity, system conditions, and time slot allocation.

SYSTEM OUTLINE

Remote PIMs can be installed separately at the distance in one building, or between the offices via the Public Switching Telephone Network (PSTN).
The customers in the Remote Site can use the same service features as in the Main Site.
Remote PIMs are connected to the Main Site by T1 (1.5 Mbps) / E1 (2 Mbps) digital interface.

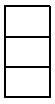
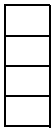
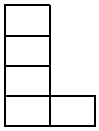
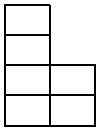
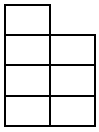
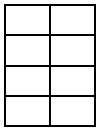
Figure 1-1 Outline of Remote PIM System



PIM CONFIGURATION

One PIM can be installed respectively as a Remote Site. A maximum of three Remote Sites can be provided. The number of Remote Sites determines the number of PIMs in one system. Table 1-1 shows the available PIM configuration for the Remote PIM System.

Table 1-1 PIM Configuration

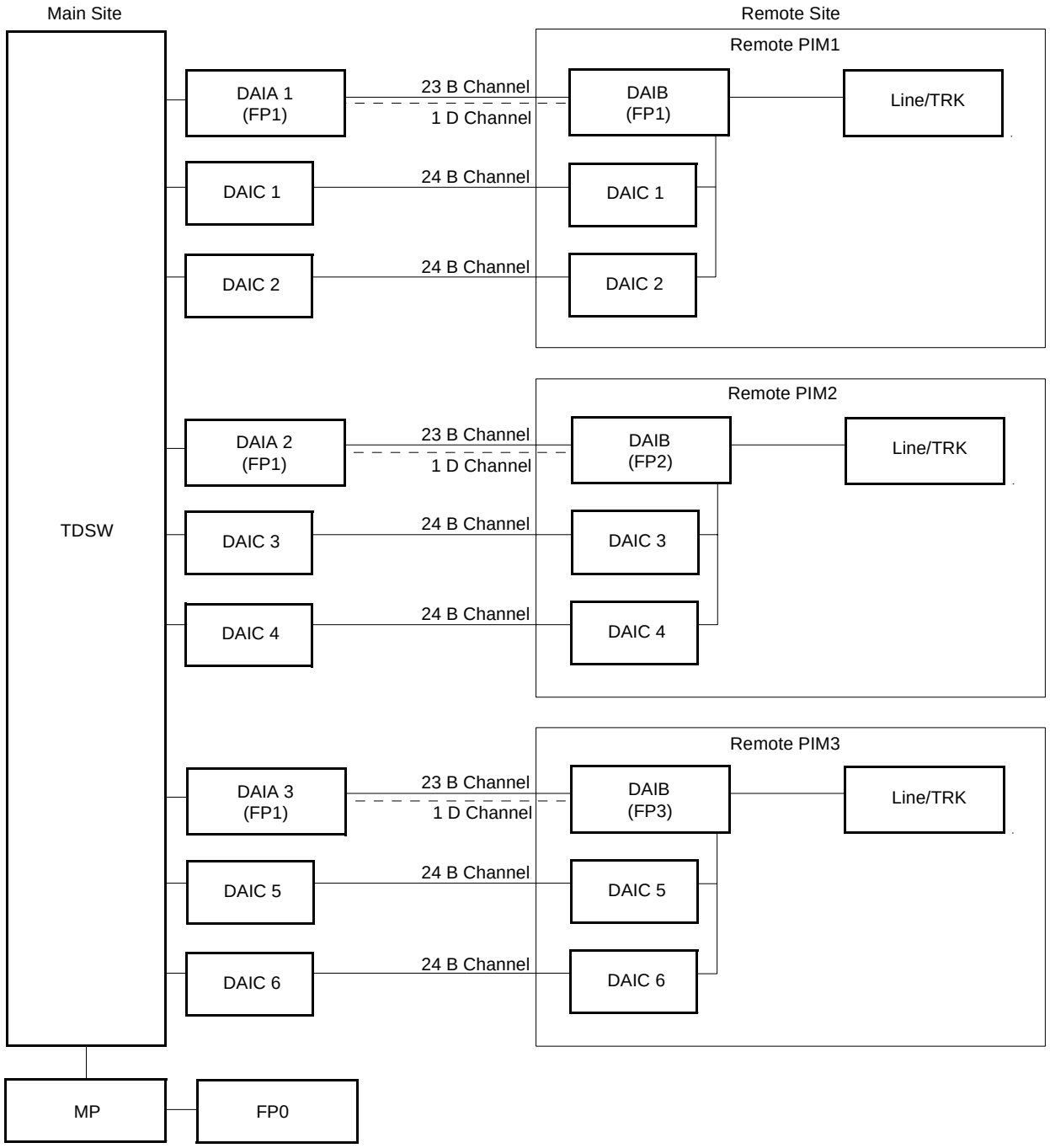
NUMBER OF PIM AT MAIN SITE	AVAILABLE NUMBER OF REMOTE SITE		
1 PIM (1 FP) 	1	2	3
2 PIM (1 FP) 	1	2	3
3 PIM (2 FP) 	1	2	–
4 PIM (2 FP) 	1	2	–
5 PIM (3 FP) 	1	–	–
6 PIM (3 FP) 	1	–	–
7 PIM (4 FP) 	–	–	–
8 PIM (4 FP) 	–	–	–

SYSTEM CONFIGURATION

System Configuration for T1

Figure 1-2 shows the system configuration for T1.

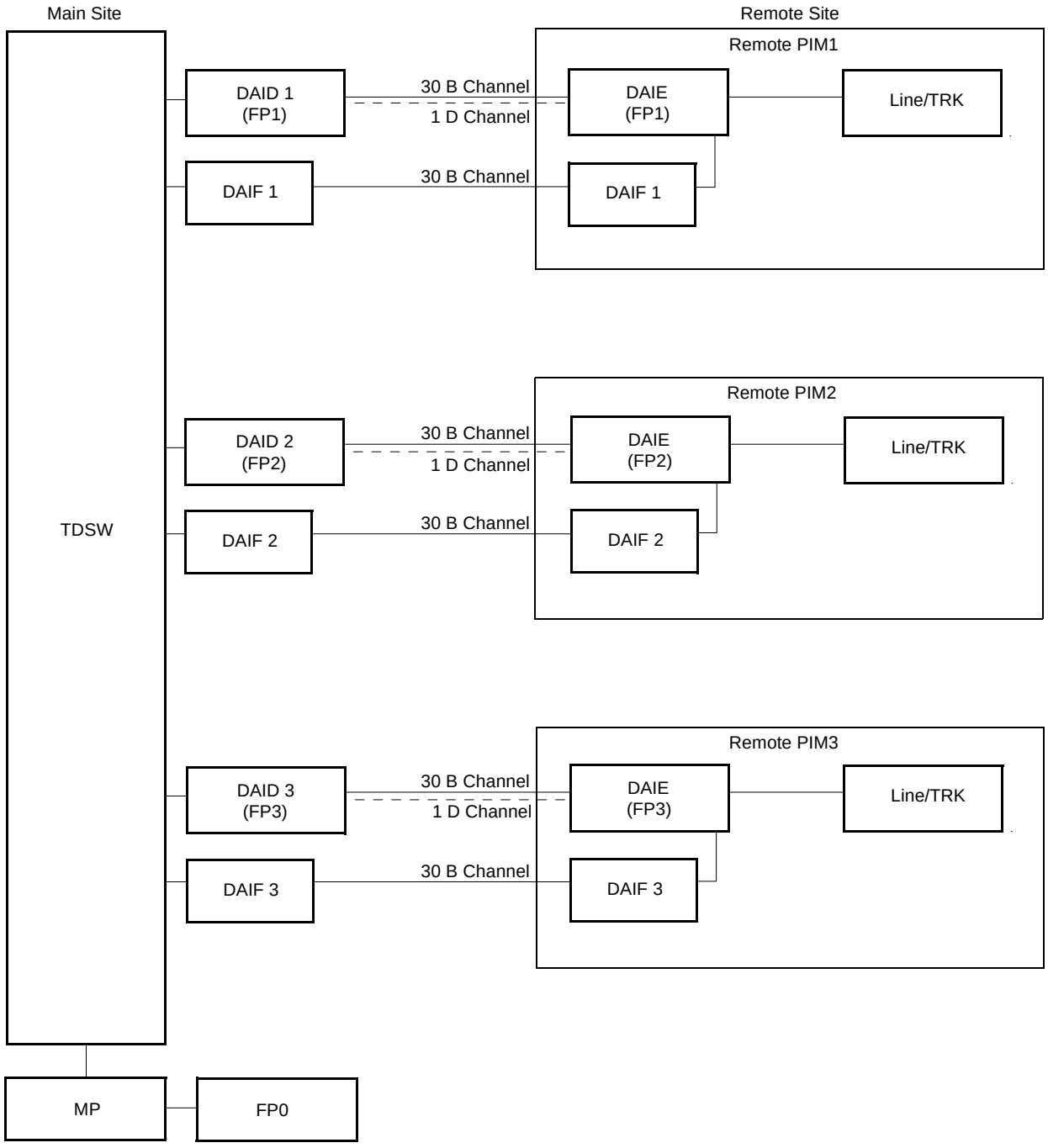
Figure 1-2 System Configuration for T1



System Configuration for E1

Figure 1-3 shows the system configuration for E1.

Figure 1-3 System Configuration for E1



REQUIRED EQUIPMENT

Table 1-2 shows the required equipment for providing the Remote PIM System.

Table 1-2 Required Equipmen t

EQUIPMENT NAME	FUNCTIONAL NAME	FUNCTION
PN-DAIA	DAI	T1 Digital Trunk Interface (23B + D, 1.5 Mbps) Card for Remote PIM Accommodates 24-channel PCM digital lines, and provides Firmware Processor and BUS interface One through three cards must be provided at the Main Site, which corresponds to the number of the Remote Site.
PN-DAIB	DAI	T1 Digital Trunk Interface (23B + D, 1.5 Mbps) Card for Remote PIM Accommodates 24-channel PCM digital lines, and provides Firmware Processor One card is required per Remote PIM at the Remote Site.
PN-DAIC	DAI	T1 Digital Trunk Interface (23B + D, 1.5 Mbps) Channel Expansion Card Accommodates 24-channel PCM digital lines One through six cards can be provided at the Main Site. Two cards can be provided at the Remote Site.
PN-DAID	DAI	E1 Digital Trunk Interface (2 Mbps) Card for Remote PIM Accommodates 30-channel PCM digital lines and provides Firmware Processor and BUS interface One though three cards must be provided at the Main Site, which corresponds to the number of the Remote Site.
PN-DAIE	DAI	E1 Digital Trunk Interface (2 Mbps) Card for Remote PIM Accommodates 30-channel PCM digital lines and provides Firmware Processor One card is required per Remote PIM at the Remote Site.
PN-DAIF	DAI	E1 Digital Trunk Interface (2 Mbps) Channel Expansion Card Accommodates 30-channel PCM digital lines One through three cards can be provided at the Main Site. One card can be provided at the Remote Site.

Table 1-2 Required Equipment (Continued)

EQUIPMENT NAME	FUNCTIONAL NAME	FUNCTION
PN-CP15	FP	Firmware Processor Card Provides Line/Trunk interface, Memory (RAM 768 KB), and inter-module BUS interface. BUS interface functions as a driver/receiver of various signals, adjusts gate delay timing and cable delay timing, monitors I/O BUS and PCM BUS. When the system consists of three or more PIMs, one each of this card is mounted respectively in PIM0, PIM2, PIM4, and PIM6. For Remote PIM System, the FP card must be mounted on PIM0 at the Main Site, even if the system is 1-PIM/2-PIM configuration.
PN-M10	M10	Optical Interface Card Provides internal optical modem to T1/E1 network or Remote PIM Line length : 10 km (6.25 miles) or less Line coding: CMI
RMT BUS CA-A	–	0.6 m (2 ft.) PCM Signal Cable Used for connecting between the DAIA/DAID card and the BUS connector on the PIM BWB
17-TW-0.3 CONN CA-A	–	0.3 m (1 ft.) Connection Cable Between the DAIA/DAID cards Required when multiple DAIA/DAID cards are mounted in a PIM at the Main Site
48-TW-0.2 CONN CA	–	0.2 m (0.7 ft.) Connection Cable Used for the following connection between the cards: • DAIA-DAIC • DAIB-DAIC • DAIC-DAIC • DAID-DAIF • DAIE-DAIF

SYSTEM CAPACITY

System Capacity for T1

Table 1-3 shows the system capacity for T1.

Table 1-3 System Capacity for T1

DESCRIPTION	CAPACITY		REMARKS
	MAIN PIM	REMOTE PIM	
DAIA card	3	–	
DAIB card	–	1	
DAIC card	6	2	
Line/Trunk Ports on Remote Site	–	24 **NOTE 1**	Main PIM : 1 DAIA Remote PIM: 1 DAIB
		48 **NOTE 1**	Main PIM : 1 DAIA, 1 DAIC Remote PIM: 1 DAIB, 1 DAIC
		64 **NOTE 1**	Main PIM : 1 DAIA, 2 DAIC Remote PIM: 1 DAIB, 2 DAIC
Number of PIM	1/2	3	Number of PIM depends on the number of Main PIM and Remote PIM. See "PIM Configuration" on Page 5.
	3/4	2	
	5/6	1	
	7/8	0 **NOTE 2**	

NOTE 1: One port is used for the control signaling channel.
NOTE 2: When the Main Site consists of 7 or 8 PIMs, Remote PIM cannot be provided.

System Capacity for E1

Table 1-4 shows the system capacity for E1.

Table 1-4 System Capacity for E1

DESCRIPTION	CAPACITY		REMARKS
	MAIN PIM	REMOTE PIM	
DAID card	3	–	
DAIE card	–	1	
DAIF card	3	1	
Line/Trunk Ports on Remote Site	–	30	Main PIM : 1 DAID Remote PIM: 1 DAIE
		60	Main PIM : 1 DAID, 1 DAIF Remote PIM: 1 DAIE, 1 DAIF
Number of PIM	1/2	3	Number of PIM depends on the number of Main PIM and Remote PIM. See "PIM Configuration" on Page 5.
	3/4	2	
	5/6	1	
	7/8	0 **NOTE**	

NOTE: When the Main Site consists of 7 or 8 PIMs, Remote PIM cannot be provided.

SYSTEM CONDITIONS

- Only one PIM configuration is available at the Remote Site.
- Remote PIM can be installed at a maximum of 400 m (1312 ft.) distance from the Main Site. Using the Optical Interface card (PN-M10) or line extension equipment (Repeater, MUX, etc.), the distance can be extended.
- At the Remote Site, the line/trunk cards can be used as same as the Main Site.
  For North America, the line/trunk cards, except the CSI card for wireless system according to UTAM regulation, can be used.
- The application processor cards cannot be used at the Remote Site. When you provide the ILC or CSI card to the Remote Site, the ICH or CSH card must be installed on the Main Site.
- For Remote PIM System, the installation procedures for modules, circuit cards, and peripheral equipment are the same as those for the regular system, except the DAI cards installation and the BUS cable connection.
  Refer to the Installation Procedure Manual for detailed information.
- When the link between the Main Site and Remote Site has been lost due to power failure or PCM Frame Loss, the system activates the Power Failure Transfer (PFT) automatically on the Remote Site, if provided.
- The Resident System Programming cannot be set to the Remote Site while the Main Site can be set.
- If ILC or COTB card is mounted in Remote PIM, the T1 link between main and Remote Sites must be configured as 64 Kbps with ESF and B8ZS.

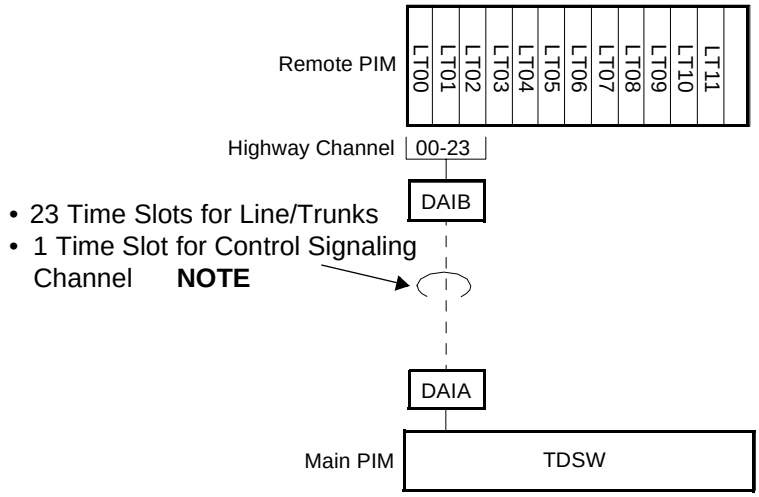
TIME SLOT ALLOCATION

Time Slot Allocation for T1

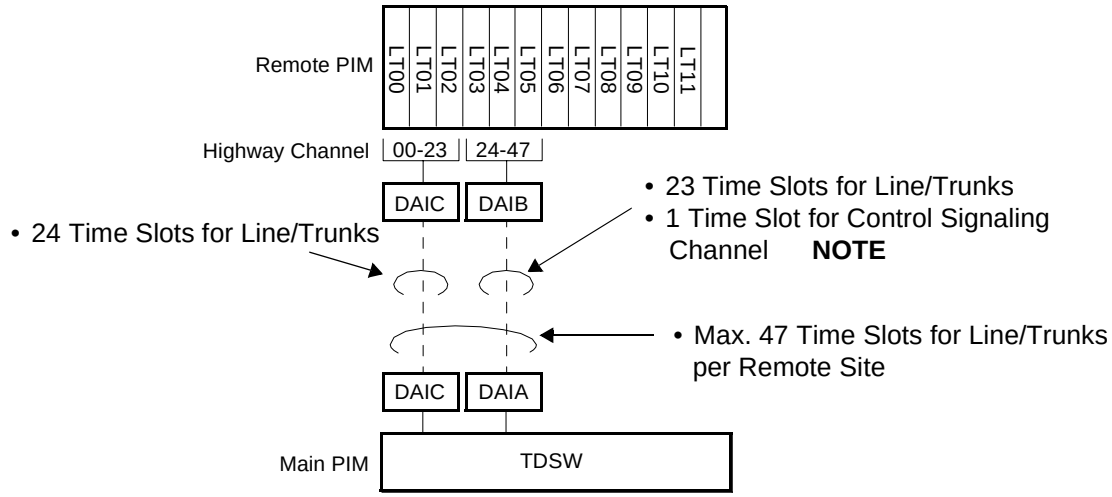
One time slot out of the last 24 time slots provided by DAIA-DAIB connection is used for the control signaling channel. Figure 1-4 shows the examples of time slot allocation when mounting 8-port cards to the PIM.

Figure 1-4 Time Slot Allocation for T1 (1 of 2)

(a) When using 1 DAIA card and 1 DAIB card



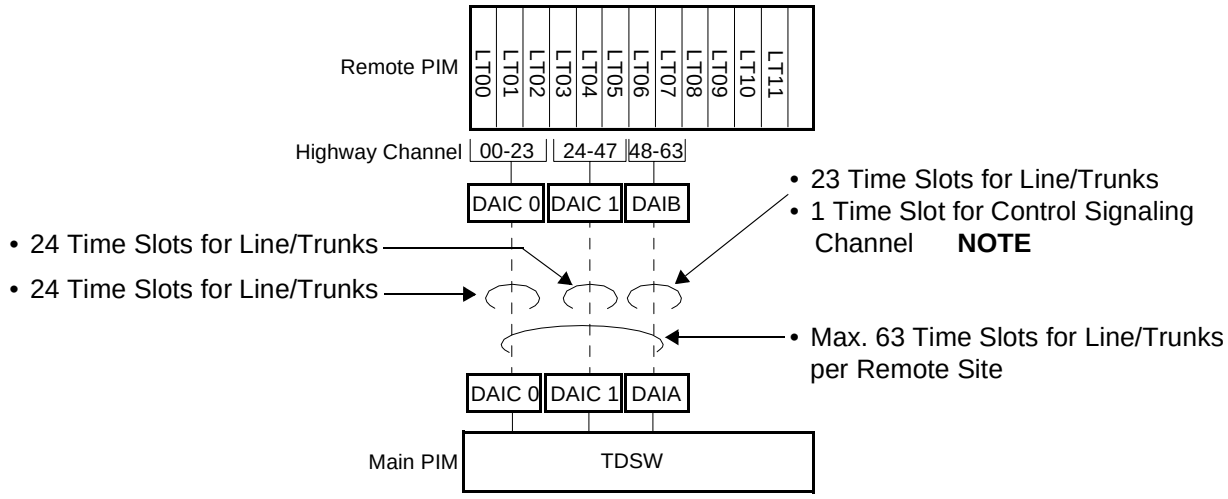
(b) When using 1 DAIA card, 1 DAIB card and 2 DAIC cards



NOTE: Control signaling channel is set by SW2 of DAIA/DAIB card. See CHAPTER 4 for the switch settings.

Figure 1-4 Time Slot Allocation for T1 (2 of 2)

(c) When using 1 DAIA card, 1 DAIB card and 4 DAIC cards



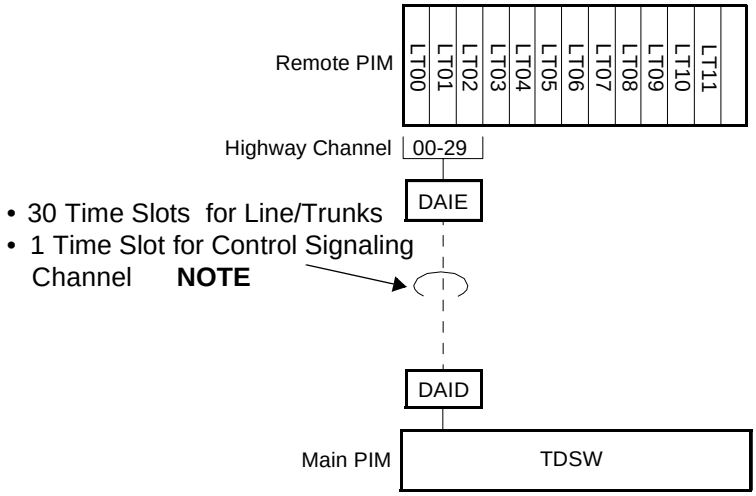
NOTE: Control signaling channel is set by SW2 of DAIA/DAIB card. See CHAPTER 4 for the switch settings.

Time Slot Allocation for E1

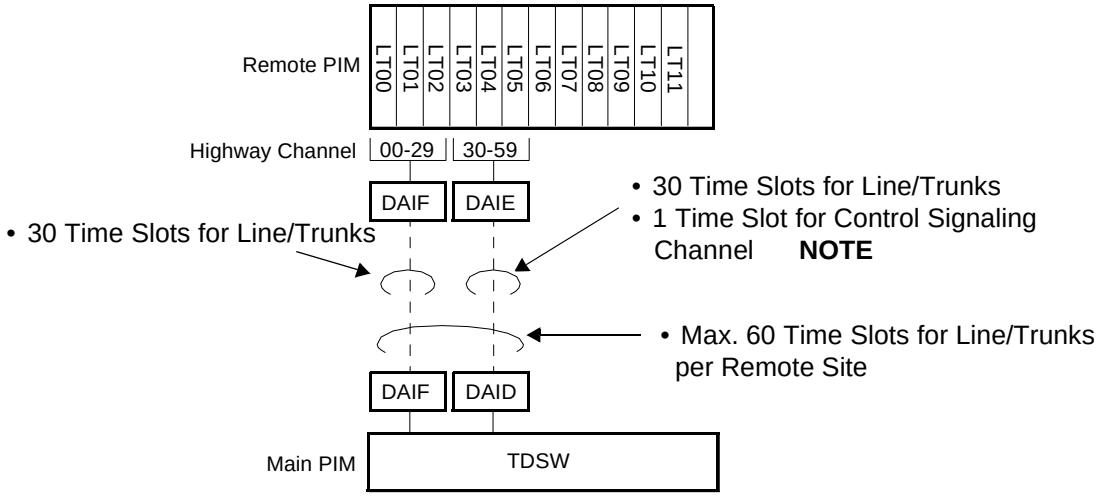
One time slot out of the last 32 time slots provided by DAID-DAIE connection is used for the control signaling channel. Figure 1-5 shows examples of time slot allocation when mounting 8-port cards to the PIM.

Figure 1-5 Time Slot Allocation for E1

(a) When using 1 DAID card and 1 DAIE card



(b) When using 1 DAID card, 1 DAIE card and 2 DAIF cards



NOTE: Control signaling channel is set by SW2 of DAID/DAIE card. See CHAPTER 4 for the switch settings.

This page is for your notes.

CHAPTER 2

INSTALLATION

This chapter explains how to install the Remote PIM hardware. This chapter describes only the installation procedures required for the Remote PIM System. Refer to the Installation Procedure Manual for general installation procedures.

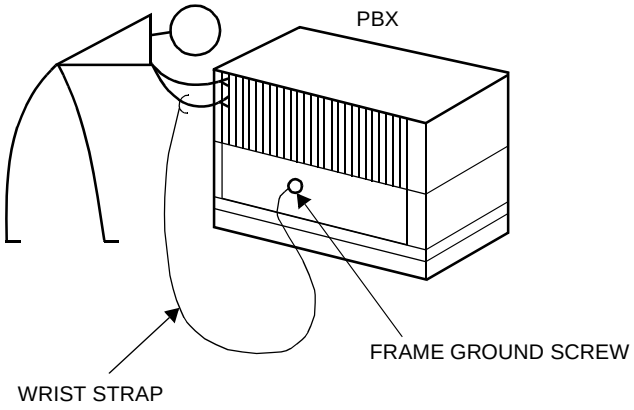
PRECAUTIONS

Static Electricity Guard

You must wear a grounded wrist strap to protect circuit cards from static electricity.

Figure 2-1 Static Electricity Guard (1 of 2)

- WHEN PLUGGING/UNPLUGGING A CIRCUIT CARD



- WHEN HOLDING A CIRCUIT CARD

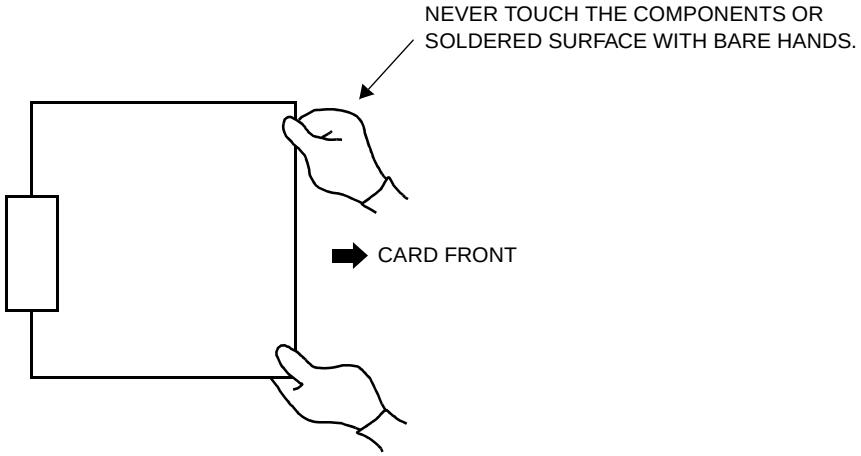
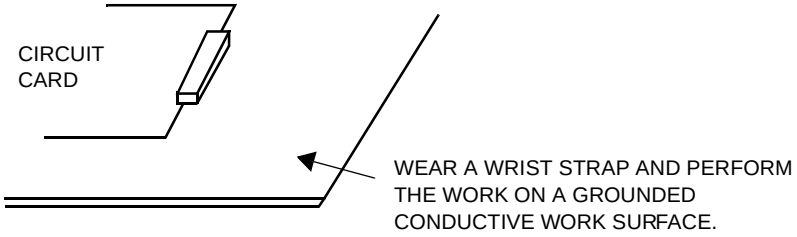
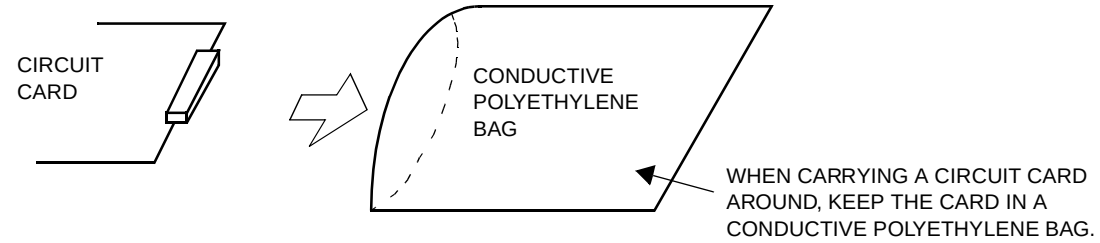


Figure 2-1 Static Electricity Guard (2 of 2)

- WHEN MAKING A SWITCH SETTING ON A CIRCUIT CARD



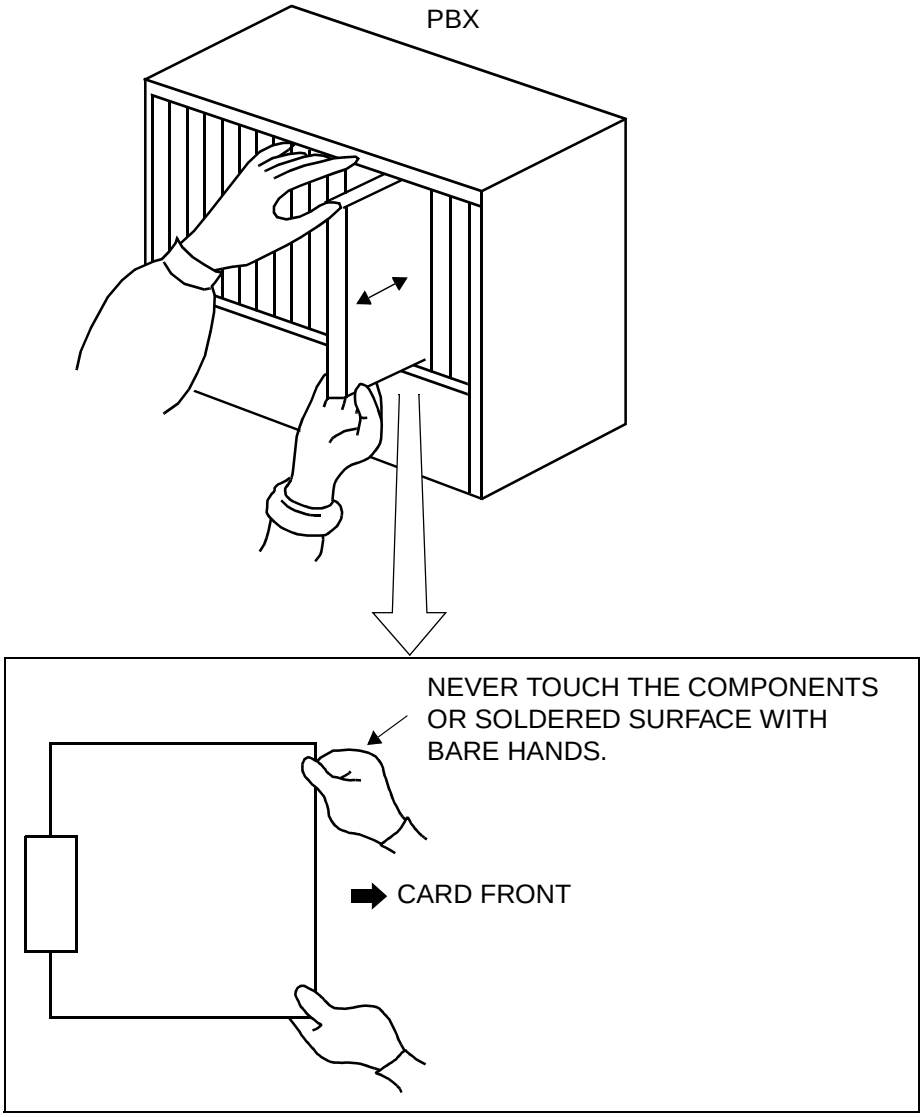
- WHEN CARRYING A CIRCUIT CARD



The mark shown below is attached to the sheet for the work in which circuit cards are handled. When engaging in such work, the installer must be careful not to cause damage by static electricity.

CAUTION

You must hold the edge of a circuit card when plugging or unplugging the circuit card. If you touch another area, you may be exposed to hazardous voltages.



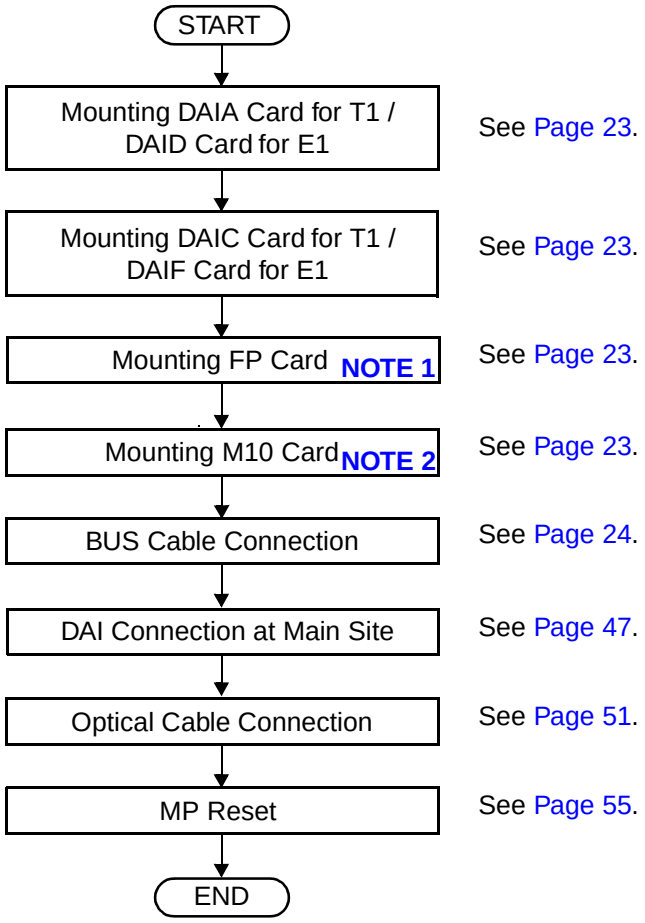
INSTALLATION PROCEDURE

Install the Remote PIM System according to the following procedure.

Installation Procedure for Main Site

Figure 2-2 shows a flowchart of the installation procedure for the Main Site.

Figure 2-2 Installation Procedure for Main Site



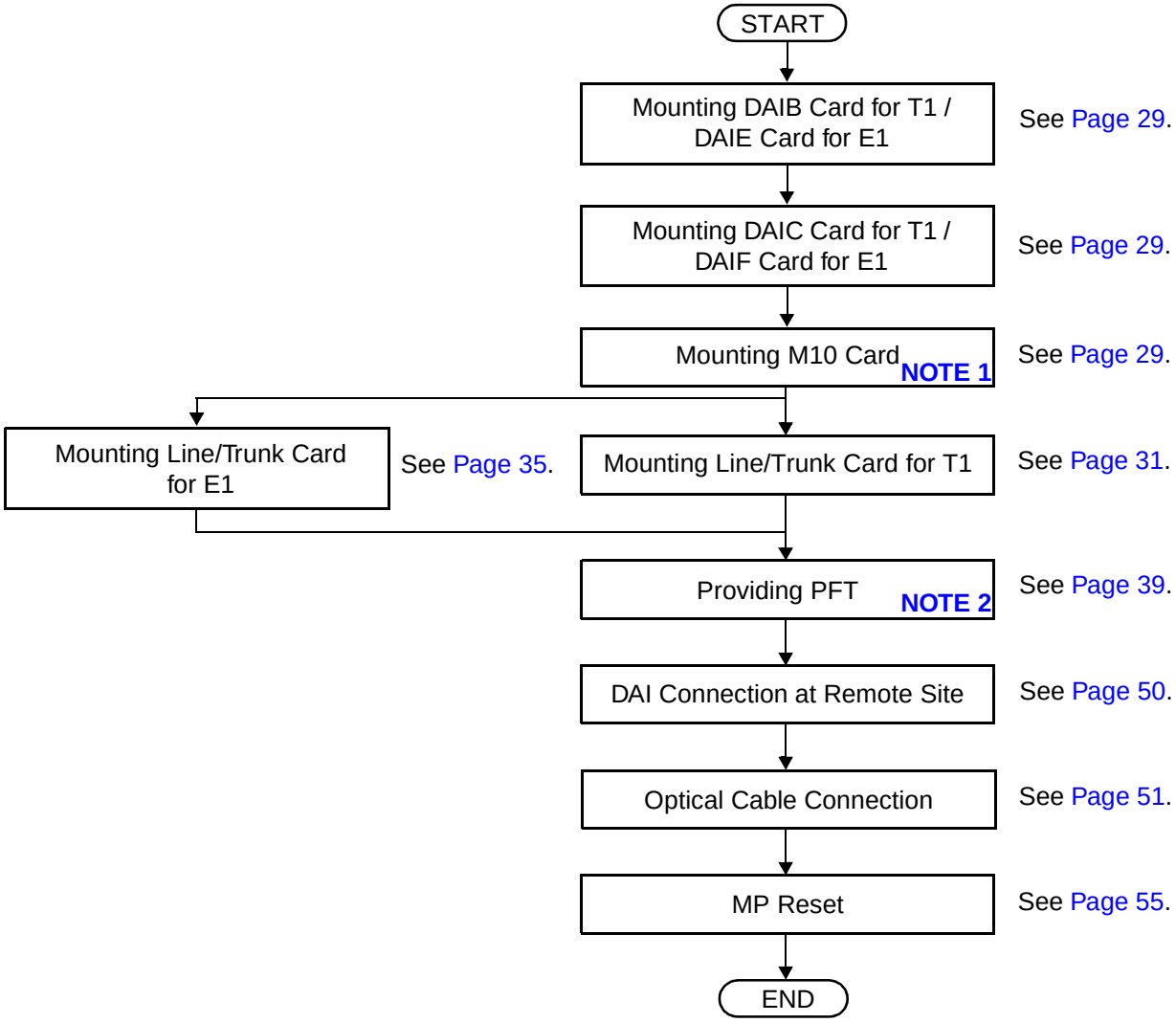
NOTE 1: This procedure is required even if the Main Site is 1-PIM/2-PIM configuration.

NOTE 2: This procedure is required when providing PN-M10 card to connect an optical interface.

Installation Procedure for Remote Site

Figure 2-3 shows a flowchart of the installation procedure for the Remote Site.

Figure 2-3 Installation Procedure for Remote Site



NOTE 1: This procedure is required when providing PN-M10 card to connect an optical interface.

NOTE 2: It is recommended that the Power Failure Transfer (PFT) is provided on the Remote Site in case the link between the Main Site and the Remote Site is lost.

INSTALLATION FOR MAIN SITE

Mounting DAIA Card for T1 / DAID Card for E1

(1) Before mounting the DAIA/DAID card, set the MB switch to UP position, and set the other switches to appropriate position. See CHAPTER 4.

(2) Mount the DAIA/DAID card in the AP slots (AP00-AP11) on the Main Site PIM0, 2, 4.
A maximum of three DAIA/DAID cards can be mounted.
After mounting the card, set the MB switch to DOWN position.

Mounting DAIC Card for T1 / DAIF Card for E1

(1) Before mounting the DAIC/DAIF card, set the MB switch to UP position, and set the other switches to appropriate position. See CHAPTER 4.

(2) Mount the DAIC/DAIF card in the AP slots (AP00-AP11) on the Main Site PIM0, 2, 4.
A maximum of six DAIC cards can be mounted.
A maximum of three DAIF cards can be mounted.
After mounting the card, set MB switch to DOWN position.

(3) After mounting all DAIC/DAIF cards, set MB switch on DAIA/DAID card to UP, and then DOWN.

Mounting FP Card

(1) Before mounting the FP card, set the MB switch to UP position, and set the other switches to appropriate position. See CHAPTER 4.

(2) Mount the FP card in the FP slot of PIM0, PIM2, PIM4 and PIM6.
After mounting the card, set MB switch to DOWN position.

Mounting M10 Card

(1) Confirm the correct switch settings. See CHAPTER 4.

(2) Mount the M10 card in any one of LT slot on each PIM.

BUS Cable Connection

(1) Cable Connection Between BUS Connector on the BWB and DAIA/DAID Card

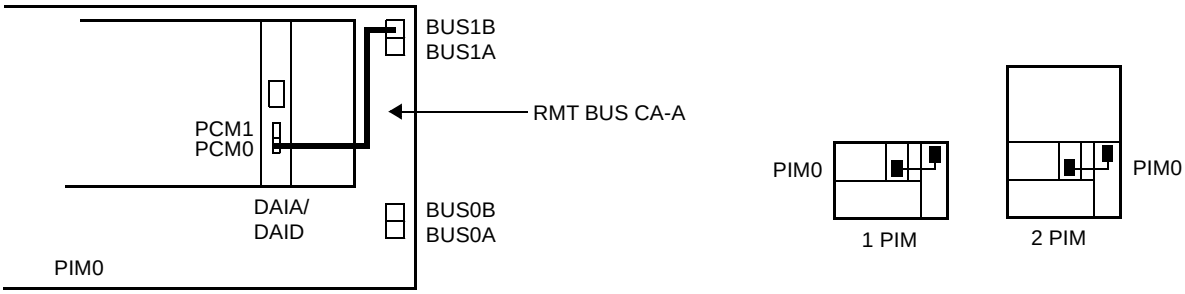
Connect the DAIA/DAID card to the BUS connector on the BWB by the RMT BUS CA-A, as shown in Figure 2-4.

In BUS connector on the BWB, BUS1B or BUS0B of the even-numbered PIMs (PIM0, 2, 4, etc.) must be used for this connection.

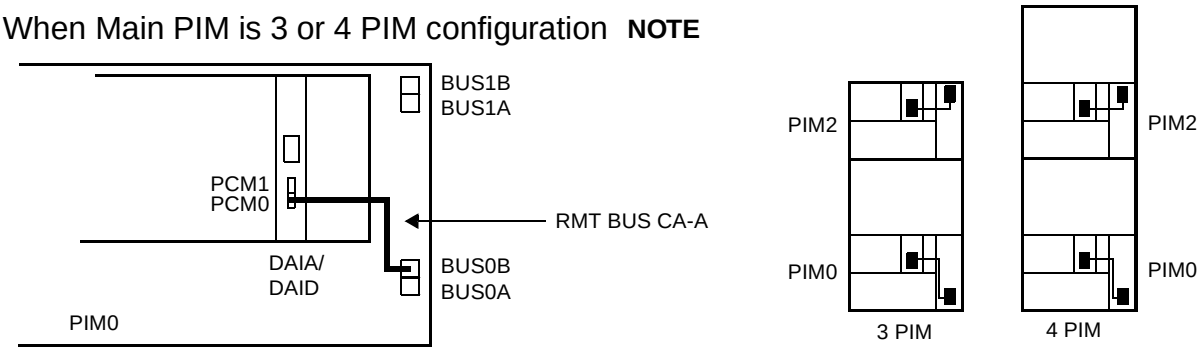
Figure 2-4 BUS Cable Connection (1 of 2)

(a) When mounting DAIA/DAID card on PIM0

- When Main PIM is 1 or 2 PIM configuration **NOTE**



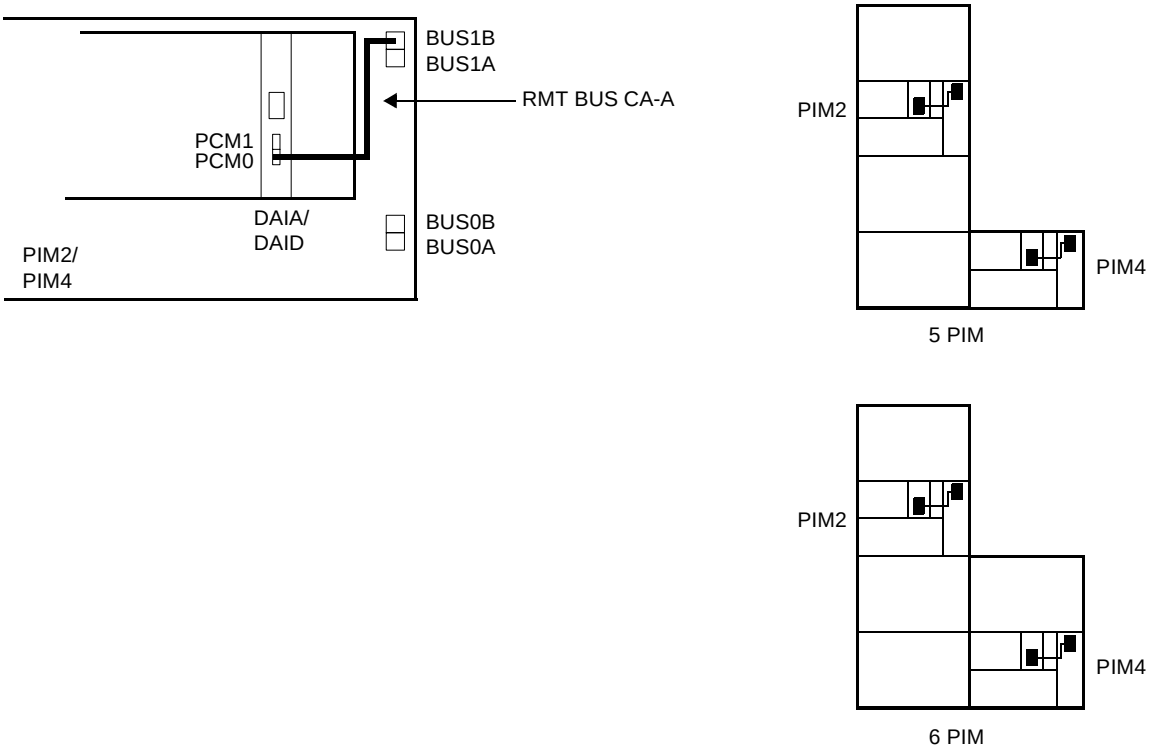
- When Main PIM is 3 or 4 PIM configuration **NOTE**



NOTE: DAIA/DAID card must be mounted in even-numbered PIMs. When mounted in PIM0 BWB BUS connector, BUS1B or BUS0B may be used for this connection. When mounted in PIM2 or PIM4 BWB BUS connector, BUS1B must be used.

Figure 2-4 BUS Cable Connection (2 of 2)

(b) When mounting DAIA/DAID card on PIM2, PIM4 **NOTE**
When Main PIM is 5 or 6 PIM configuration, the DAIA/DAID card must be mounted on PIM2 and/or PIM4, and connected as follows:



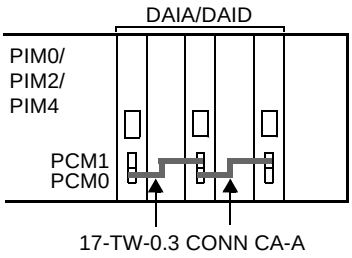
NOTE: DAIA/DAID card must be mounted in even-numbered PIMs. When mounted in PIM0 BWB BUS connector, BUS1B or BUS0B may be used for this connection. When mounted in PIM2 or PIM4 BWB BUS connector, BUS1B must be used.

(2) Cable Connection Between DAIA/DAID Cards

If two or three DAIA/DAID cards are mounted on one PIM, connect between the PCM0 connector and PCM1 connector on the DAIA/DAID cards by 17-TW-0.3 CONN CA-A, as shown in Figure 2-5.

Up to three DAIA/DAID cards can be connected directly by a daisy chain connection on one PIM.

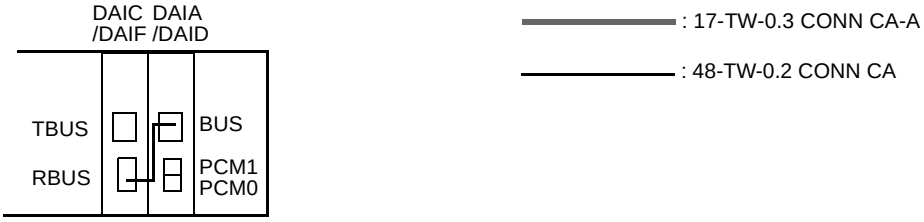
Figure 2-5 DAIA/DAID Between DAIA/DAID Cable Connection



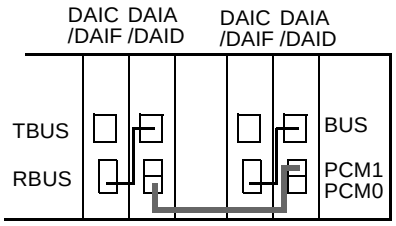
(3) Cable Connection Between DAIA/DAID Card and DAIC/DAIF Card
Connect between the RBUS connector on the DAIC/DAIF card and the BUS connector on the DAIA/DAID card by 48-TW-0.2 CONN CA, as shown in Figure 2-6.
Up to two DAIC cards can be mounted per DAIA card.
Only one DAIF card can be mounted per DAID card.

Figure 2-6 DAIA/DAID Between DAIC/DAIF Cable Connection (1 of 2)

- When mounting 1 DAIA/DAID card and 1 DAIC/DAIF card



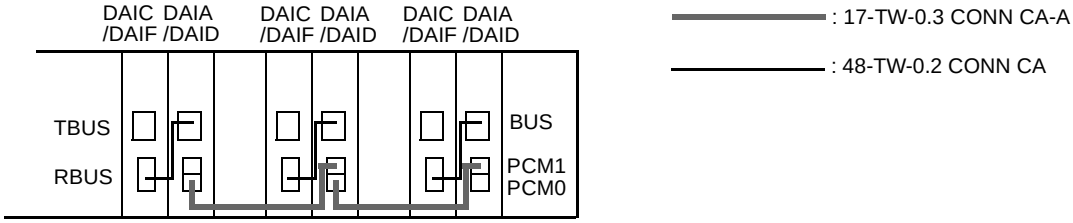
- When mounting 2 DAIA/DAID cards and 2 DAIC/DAIF cards **NOTE**



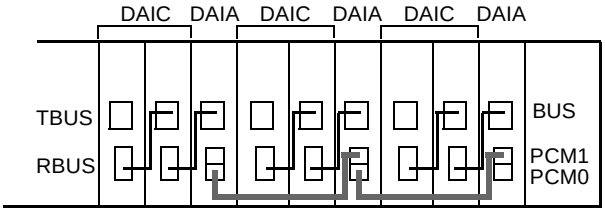
NOTE: You can mount two DAIA/DAID cards and two DAIC/DAIF cards in PIM0 or PIM2, or one DAIA/DAID card and one DAIC/DAIF card in PIM0 and one DAIA/DAID card and one DAIC/DAIF card in PIM2.

Figure 2-6 DAIA/DAID Between DAIC/DAIF Cable Connection (2 of 2)

- When mounting 3 DAIA/DAID cards and 3 DAIC/DAIF cards



- When mounting 3 DAIA cards and 6 DAIC cards



INSTALLATION FOR REMOTE SITE

Mounting DAIB Card for T1 / DAIE Card for E1

(1) Before mounting the DAIB/DAIE card, set the MB switch to UP position, and set the other switches to appropriate position. See CHAPTER 4.

(2) Mount the DAIB/DAIE card in the MP slot on Remote PIM.
After mounting the card, set the MB switch to DOWN position.

Mounting DAIC Card for T1 / DAIF Card for E1

(1) Before mounting the DAIC/DAIF card, set the MB switch to UP position, and set the other switches to appropriate position. See CHAPTER 4.

(2) Mount the DAIC/DAIF card in the AP slots (AP00-AP11) on Remote PIM.
A maximum of two DAIC cards can be mounted per Remote PIM.
A maximum of one DAIF card can be mounted per Remote PIM.
After mounting the card, set MB switch to DOWN position.

(3) After mounting all DAIC/DAIF cards, set MB switch on DAIB/DAIE card to UP, and then DOWN.

Mounting M10 Card

(1) Confirm the correct switch settings. See CHAPTER 4.

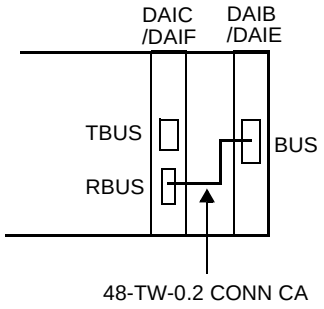
(2) Mount the M10 card in any one of LT slot on each PIM.

BUS Cable Connection

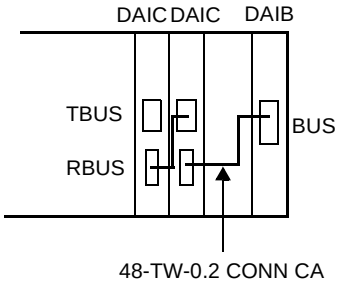
Connect between the BUS connector on the DAIB/DAIE card and the RBUS connector on the DAIC/DAIF card by the 48-TW-0.2 CONN CA, as shown in Figure 2-7.

Figure 2-7 DAIB/DAIE Between DAIC/DAIF Cable Connection

• When mounting 1 DAIC/DAIF card



• When mounting 2 DAIC cards

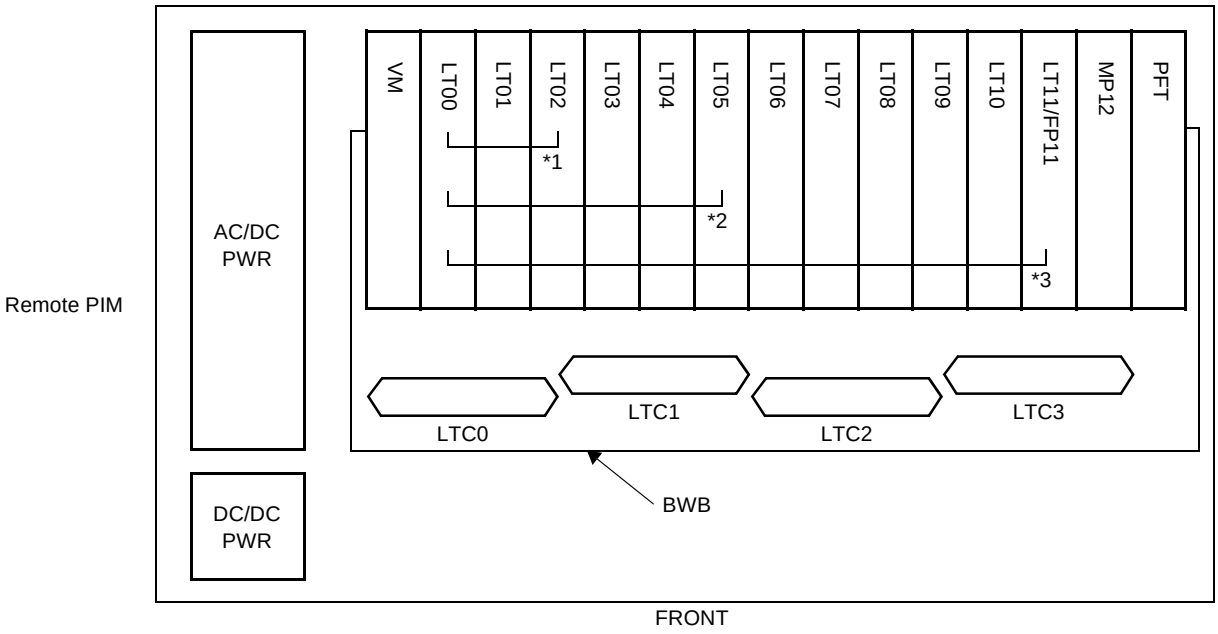


Mounting Line/Trunk Card for T1

(1) Mount line/trunk cards in the LT slots on the Remote PIM.

(2) Connect the line cables by referring to Figure 2-8 and Table 2-1.

Figure 2-8 Mounting Location of Line/Trunk Card for T1



*1 When providing only one DAIB card (Max. 23 ports): LT00~LT02 slot
*2 When providing one DAIB card and one DAIC card (Max. 47 ports): LT00~LT05 slot
*3 When providing one DAIB card and two DAIC cards (Max. 63 ports): LT00~LT11 slot

NOTE: One port of the last 24 ports cannot be used for line/trunk because it is used for control signaling channel.

Table 2-1 LTC Connector Accommodation for T1

LTC CONNECTOR	CARD SLOT NUMBER
LTC0	LT00~LT02
LTC1	LT03~LT05
LTC2	LT06~LT08
LTC3	LT09~LT11

Figure 2-9 Location of Each LEN for T1

• When opposite DAIA card is set to FP No. 1:

	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT11
LEN	207	215	223	231	239	247	255	263				
	206	214	222	230	238	246	254	262				
	205	213	221	229	237	245	253	261				
	204	212	220	228	236	244	252	260				
	203	211	219	227	235	243	251	259	239	247	255	263
	202	210	218	226	234	242	250	258	238	246	254	262
	201	209	217	225	233	241	249	257	237	245	253	261
	200	208	216	224	232	240	248	256	236	244	252	260
SLOT No.												

NOTE 2

• When opposite DAIA card is set to FP No. 2:

	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT11
LEN	407	415	423	431	439	447	455	463				
	406	414	422	430	438	446	454	462				
	405	413	421	429	437	445	453	461				
	404	412	420	428	436	444	452	460				
	403	411	419	427	435	443	451	459	439	447	455	463
	402	410	418	426	434	442	450	458	438	446	454	462
	401	409	417	425	433	441	449	457	437	445	453	461
	400	408	416	424	432	440	448	456	436	444	452	460
SLOT No.												

NOTE 2

• When opposite DAIA card is set to FP No. 3:

	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT11
LEN	607	615	623	631	639	647	655	663				
	606	614	622	630	638	646	654	662				
	605	613	621	629	637	645	653	661				
	604	612	620	628	636	644	652	660				
	603	611	619	627	635	643	651	659	639	647	655	663
	602	610	618	626	634	642	650	658	638	646	654	662
	601	609	617	625	633	641	649	657	637	645	653	661
	600	608	616	624	632	640	648	656	636	644	652	660
SLOT No.												

NOTE 2

NOTE 1: A maximum of 63 line/trunks can be accommodated in one Remote PIM.

NOTE 2: In Slot 08-11, only 4-port line/trunk cards are mountable.
When the following 8-port cards are mounted in Slot 04-07, any line/trunk cards are not mountable in Slot 08-11.
8COT, 8DLC, 8LC, 8RSTA, 4DAT, CFTB, 2CSI, 2ILC

Figure 2-10 LTC Connector Pin Arrangement for T1 (1 of 2)

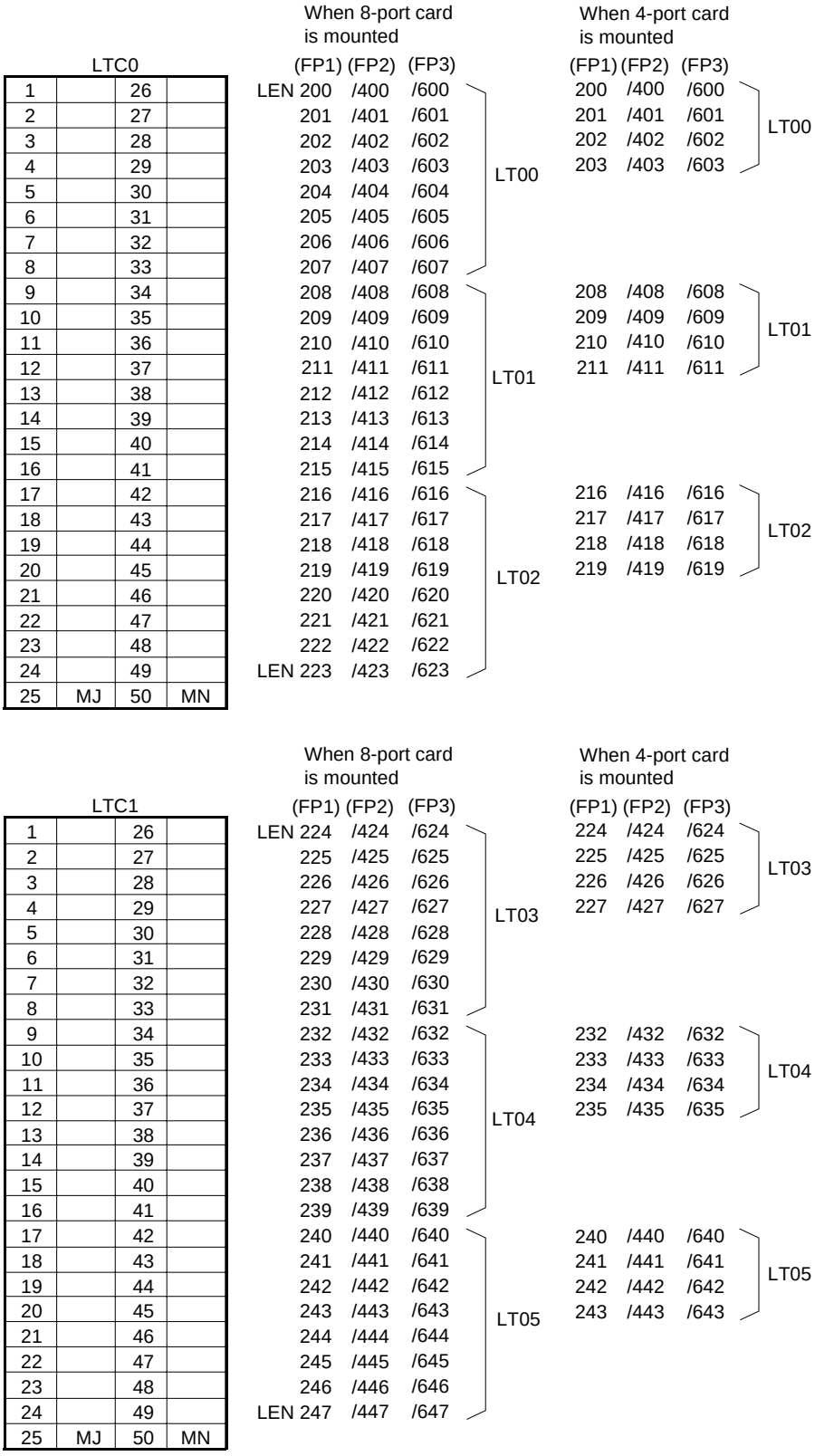
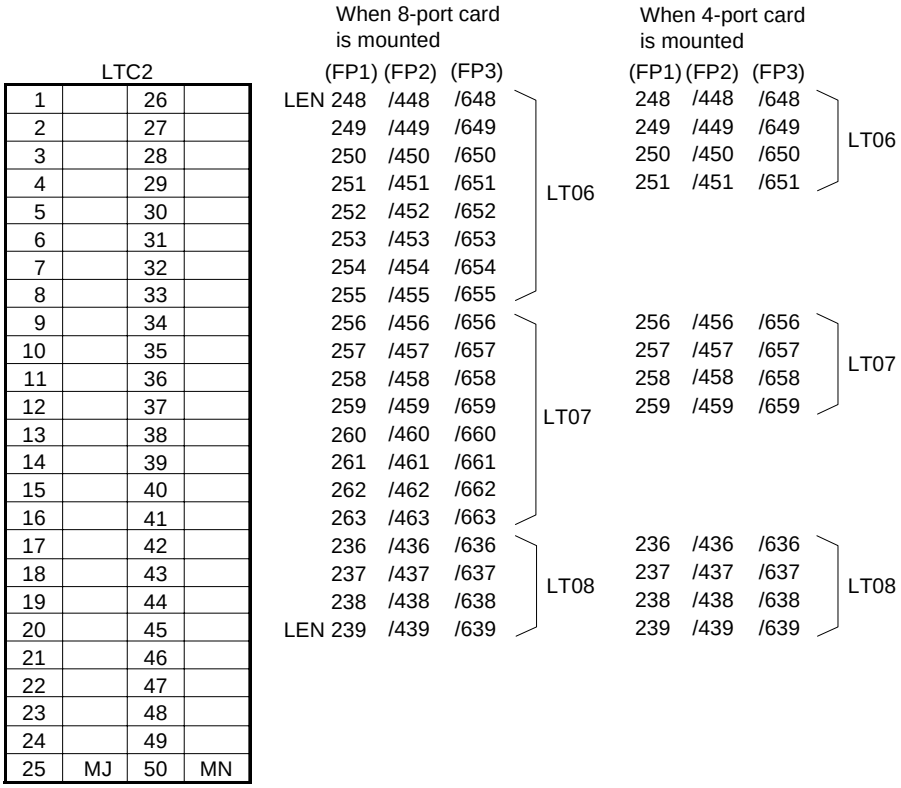
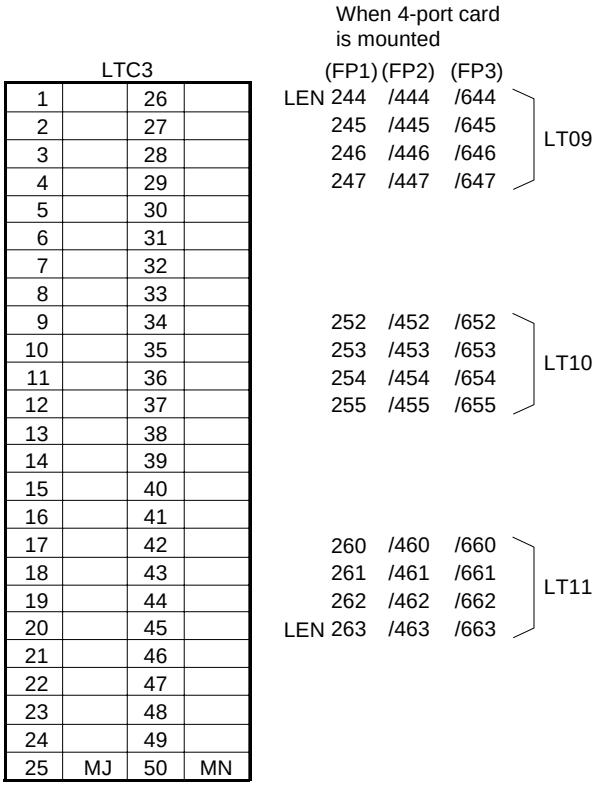


Figure 2-10 LTC Connector Pin Arrangement for T1 (2 of 2)



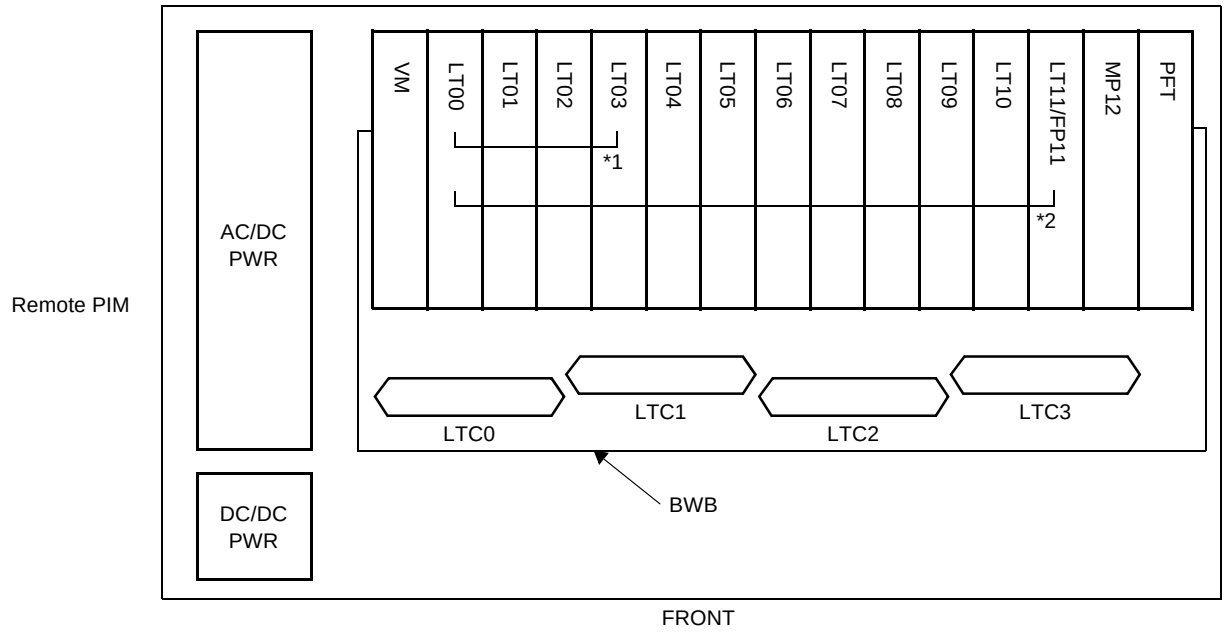


Mounting Line/Trunk Card for E1

(1) Mount line/trunk cards in the LT slots on the Remote PIM.

(2) Connect the line cables by referring to Figure 2-11 and Table 2-2.

Figure 2-11 Mounting Location of Line/Trunk Card for E1



*1 When providing only one DAIE card (Max. 30 ports): LT00~LT03 slot
*2 When providing one DAIE card and one DAIF card (Max. 60 ports): LT00~LT11 slot

Table 2-2 LTC Connector Accommodation for E1

LTC CONNECTOR	CARD SLOT NUMBER
LTC0	LT00~LT02
LTC1	LT03~LT05
LTC2	LT06~LT08
LTC3	LT09~LT11

Figure 2-12 Location of Each LEN for E1

• When opposite DAID card is set to FP No. 1:

	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT11
LEN	207	215	223	231	239	247	255	263				
	206	214	222	230	238	246	254	262				
	205	213	221	229	237	245	253	261				
	204	212	220	228	236	244	252	260				
	203	211	219	227	235	243	251	259	239	247	255	263
	202	210	218	226	234	242	250	258	238	246	254	262
	201	209	217	225	233	241	249	257	237	245	253	261
	200	208	216	224	232	240	248	256	236	244	252	260
SLOT No.												

NOTE 2

• When opposite DAID card is set to FP No. 2:

	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT11
LEN	407	415	423	431	439	447	455	463				
	406	414	422	430	438	446	454	462				
	405	413	421	429	437	445	453	461				
	404	412	420	428	436	444	452	460				
	403	411	419	427	435	443	451	459	439	447	455	463
	402	410	418	426	434	442	450	458	438	446	454	462
	401	409	417	425	433	441	449	457	437	445	453	461
	400	408	416	424	432	440	448	456	436	444	452	460
SLOT No.												

NOTE 2

• When opposite DAID card is set to FP No. 3:

	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07	LT08	LT09	LT10	LT11
LEN	607	615	623	631	639	647	655	663				
	606	614	622	630	638	646	654	662				
	605	613	621	629	637	645	653	661				
	604	612	620	628	636	644	652	660				
	603	611	619	627	635	643	651	659	639	647	655	663
	602	610	618	626	634	642	650	658	638	646	654	662
	601	609	617	625	633	641	649	657	637	645	653	661
	600	608	616	624	632	640	648	656	636	644	652	660
SLOT No.												

NOTE 2

NOTE 1: A maximum of 60 line/trunks can be accommodated in one Remote PIM.

NOTE 2: In Slot 08-11, only 4-port line/trunk cards are mountable.
When the following 8-port cards are mounted in Slot 04-07, any line/trunk cards are not mountable in Slot 08-11.
8COT, 8DLC, 8LC, 8RSTA, 4DAT, CFTB, 2CSI, 2ILC

Figure 2-13 LTC Connector Pin Arrangement for E1 (1 of 2)

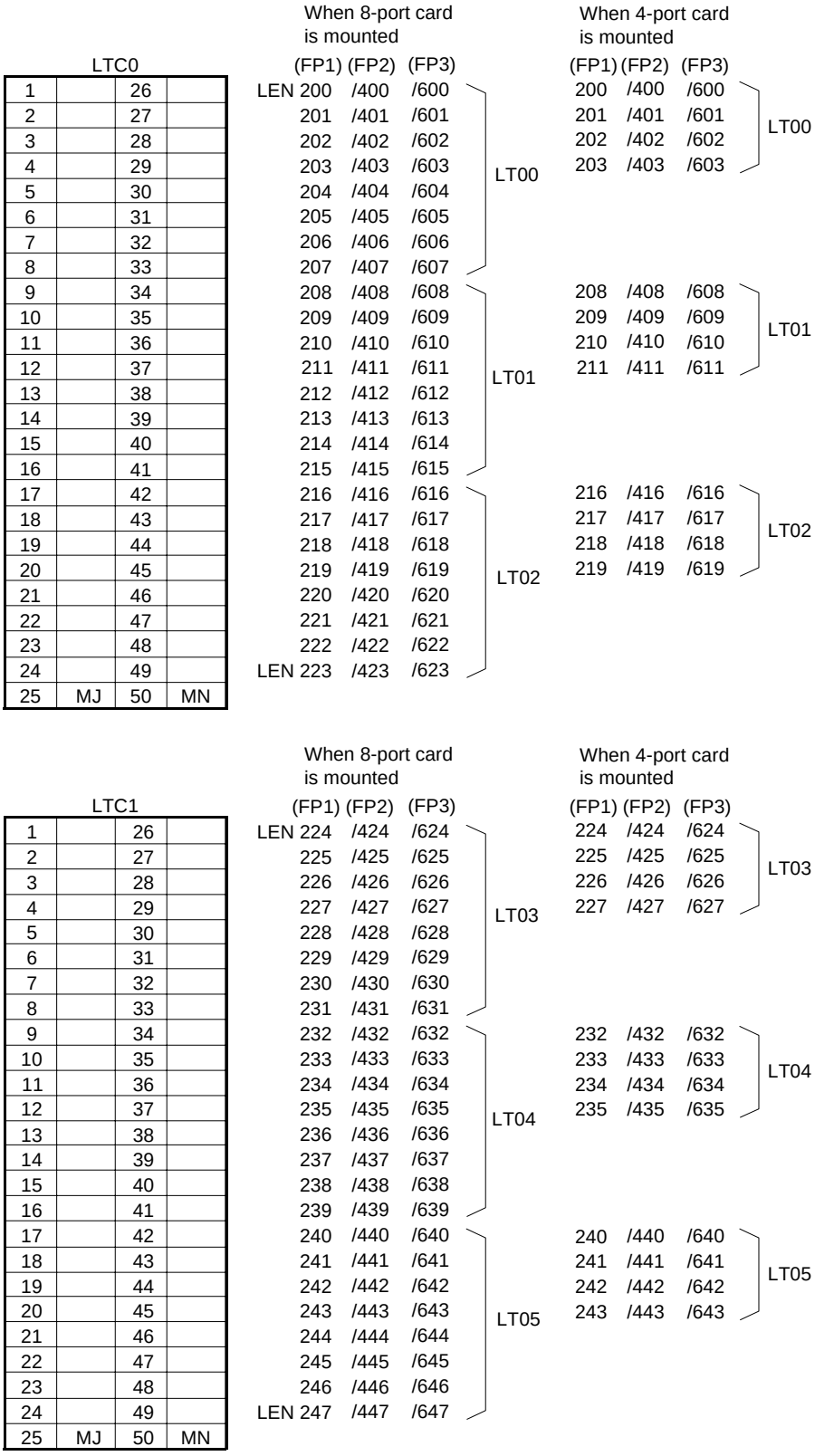
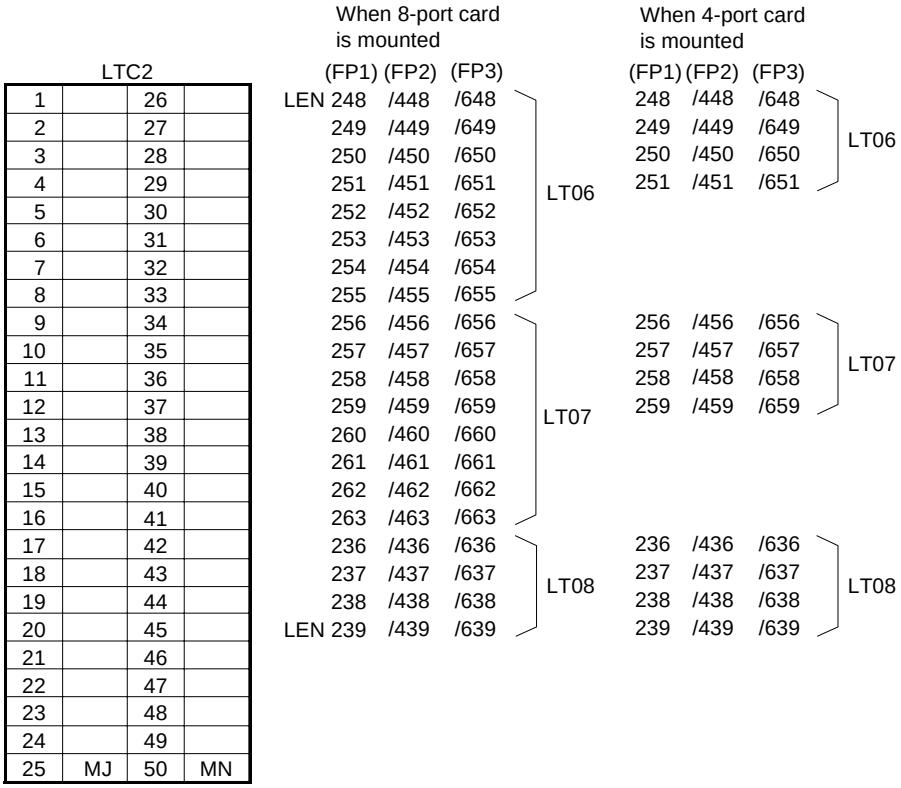
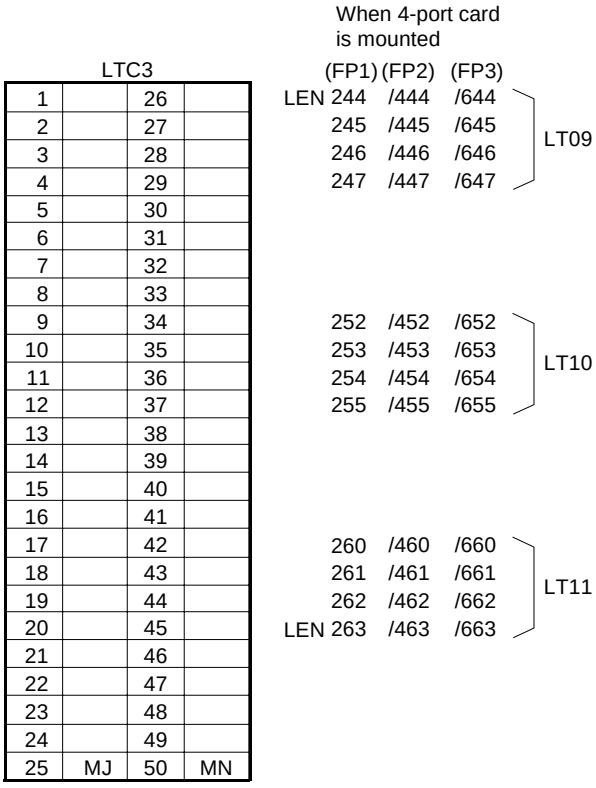


Figure 2-13 LTC Connector Pin Arrangement for E1 (2 of 2)





Power Failure Transfer (AUC)

The PN-AUC card can be used as the PFT card at the Remote Site.

- Figure 2-14 shows an outline of a PFT (PN-AUC) connection.
- Figure 2-15 shows the MDF cross connection for a PFT (PN-AUC).

Figure 2-14 PFT Connection Outline (AUC)

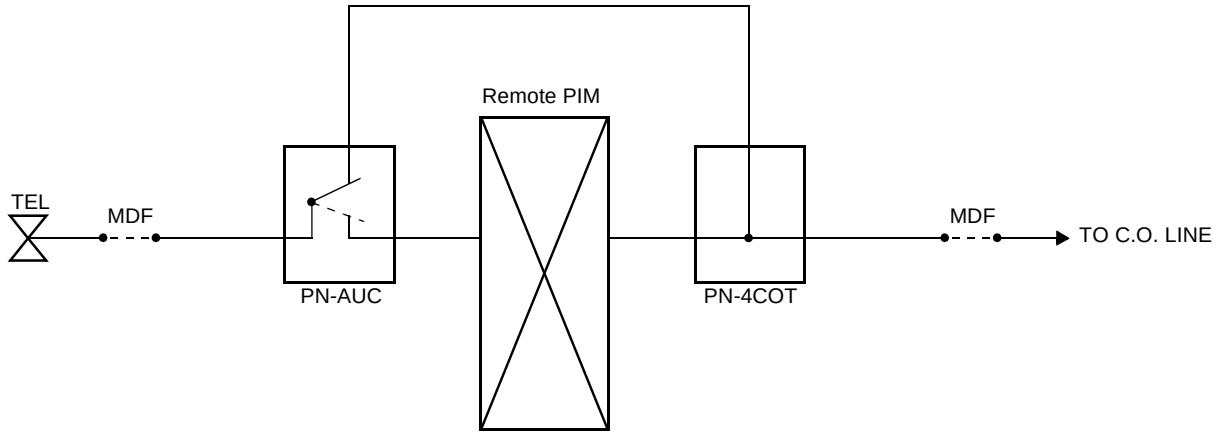


Figure 2-15 MDF Cross Connection for PFT (AUC) (1 of 2)

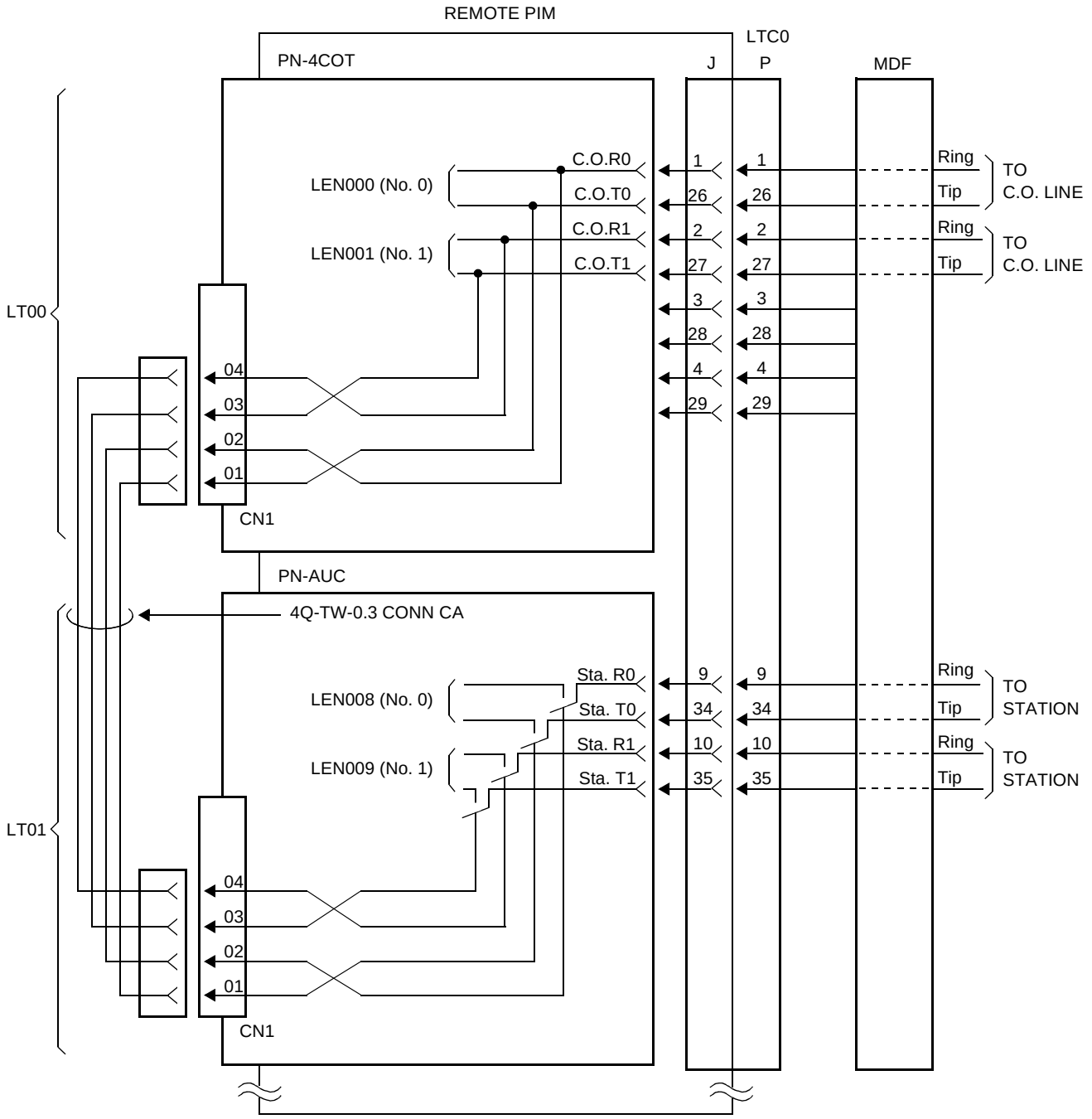
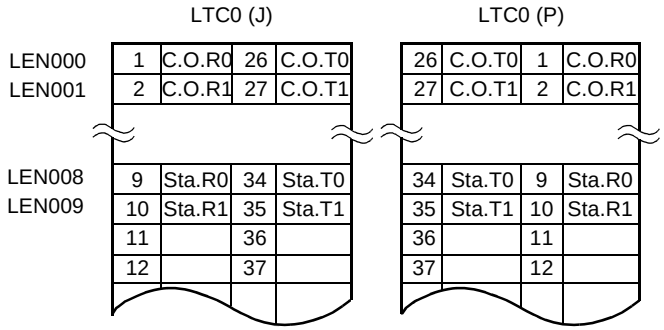


Figure 2-15 MDF Cross Connection for PFT (PN-AUC) (2 of 2)



NOTE 1: The No. 2 and No. 3 circuit in the PN-4COT card cannot be used with the PFT function.

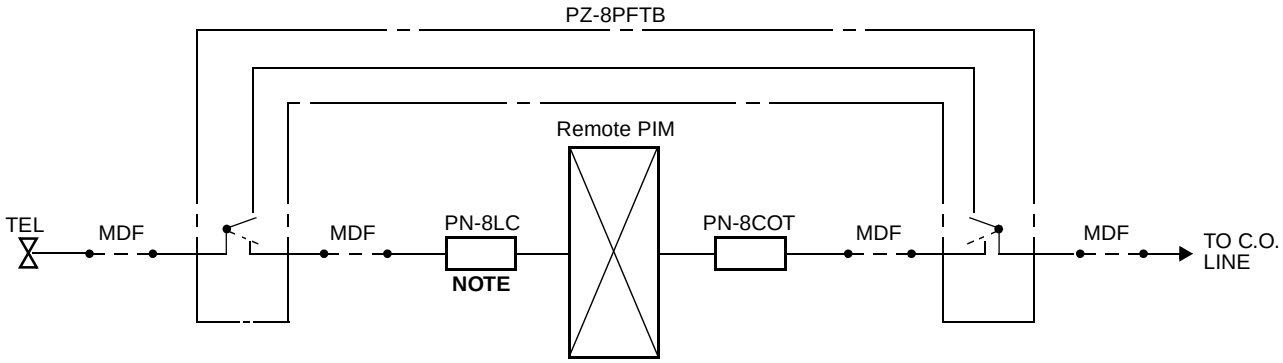
NOTE 2: When using Ground Start trunks with the PFT function, the single line stations must have a ground sending button and a ground lead must be run to the station.

Power Failure Transfer (8PFT)

The PZ-8PFTB card can be used as the PFT card at the Remote Site.

- Figure 2-16 shows an outline of a PFT (PZ-8PFTB) connection.

Figure 2-16 PFT Connection Outline (8PFT)

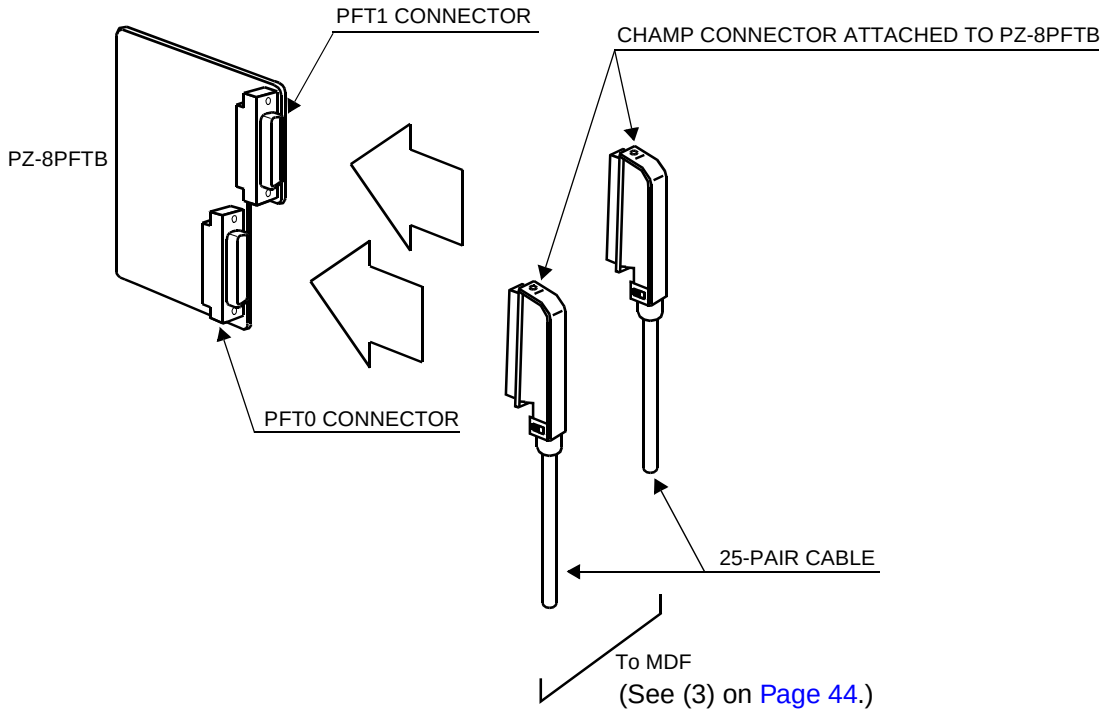


NOTE: Using the PN-AUC card (long line card) instead of the PN-8LC card is not recommended due to the variations from Central Office to the PBX; line quality cannot be assured.

- Install the PZ-8PFTB card to the PIM according to the following steps:

(1) Mount the PZ-8PFTB card into the PFT slot of the PIM.
(2) Connect the champ connectors of 25-pair cables to the PFT0 and PFT1 connectors on the PZ-8PFTB card as shown in Figure 2-27.

Figure 2-17 Connection of 25-Pair Cable and PZ-8PFTB



(See (3) on Page 44.)

(3) Connect the 25-pair cables on the MDF.

- Figure 2-18 shows the PFT connector pin assignment for each PFT circuit number (No. 0-No. 7).

Figure 2-18 PFT Connector Pin Assignment

PFT0

1	Sta. R0	26	Sta. T0	No. 0
2	8LC. R0	27	8LC. T0	
3	C.O. R0	28	C.O. T0	
4	8COT. R0	29	8COT. T0	
5	Sta. R1	30	Sta. T1	No. 1
6	8LC. R1	31	8LC. T1	
7	C.O. R1	32	C.O. T1	
8	8COT. R1	33	8COT. T1	
9	Sta. R2	34	Sta. T2	No. 2
10	8LC. R2	35	8LC. T2	
11	C.O. R2	36	C.O. T2	
12	8COT. R2	37	8COT. T2	
13	Sta. R3	38	Sta. T3	No. 3
14	8LC. R3	39	8LC. T3	
15	C.O. R3	40	C.O. T3	
16	8COT. R3	41	8COT. T3	
17	Sta. R4	42	Sta. T4	No. 4
18	8LC. R4	43	8LC. T4	
19	C.O. R4	44	C.O. T4	
20	8COT. R4	45	8COT. T4	
21	Sta. R5	46	Sta. T5	No. 5
22	8LC. R5	47	8LC. T5	
23	C.O. R5	48	C.O. T5	
24	8COT. R5	49	8COT. T5	
25		50		

PFT1

1	Sta. R6	26	Sta. T6	No. 6
2	8LC. R6	27	8LC. T6	
3	C.O. R6	28	C.O. T6	
4	8COT. R6	29	8COT. T6	
5	Sta. R7	30	Sta. T7	No. 7
6	8LC. R7	31	8LC. T7	
7	C.O. R7	32	C.O. T7	
8	8COT. R7	33	8COT. T7	
9		34		
10		35		
11		36		
12		37		
13		38		
14		39		
15		40		
16		41		
17		42		
18		43		
19		44		
20		45		
21		46		
22		47		
23		48		
24		49	E	
25		50	–27 V	

- Figure 2-19 shows an example of the MDF cross connection for the No. 0 circuit on the PFT (PZ-8PFTB).

Figure 2-19 MDF Cross Connection for PFT (8PFT) (1 of 2)

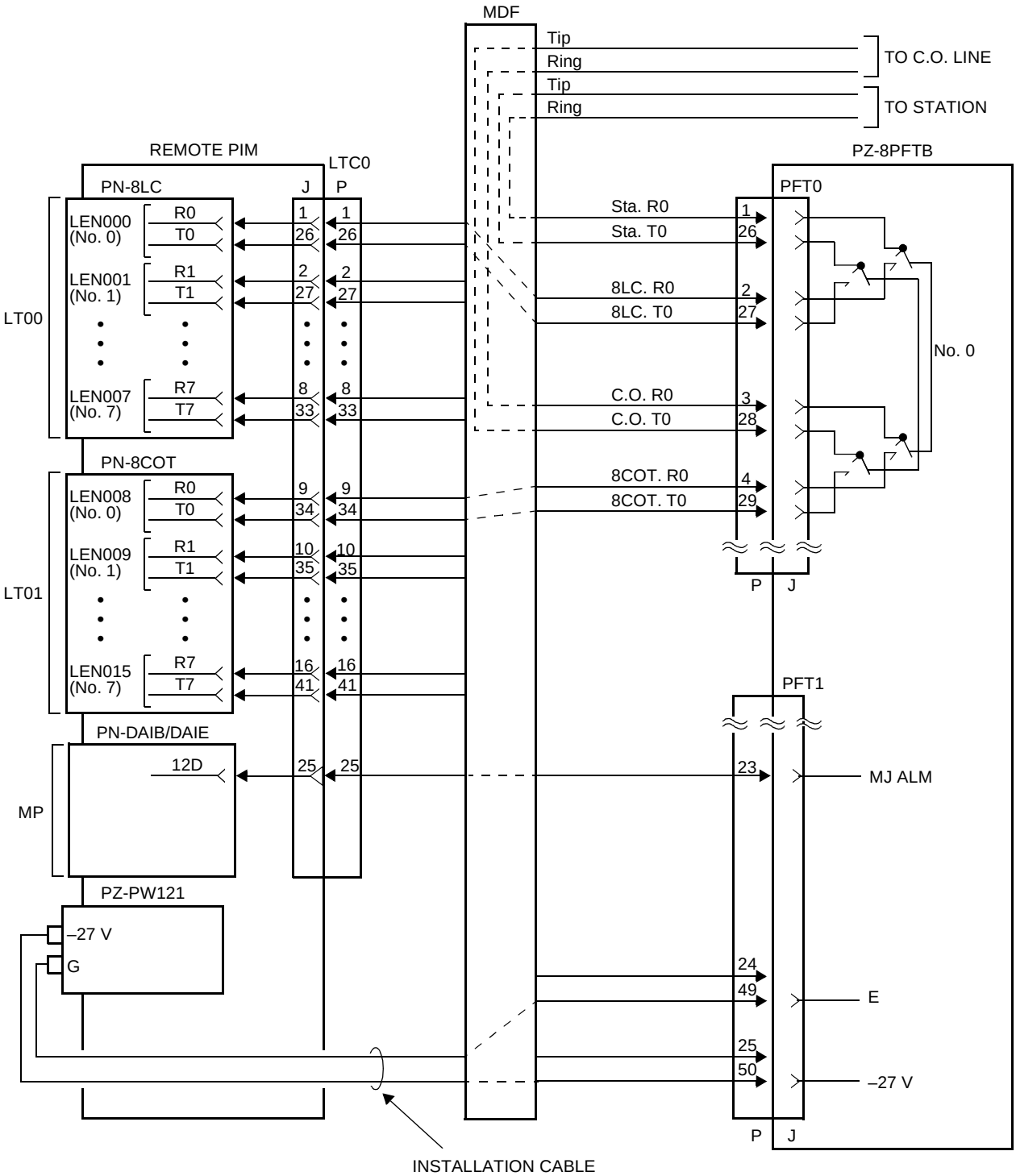


Figure 2-20 MDF Cross Connection for PFT (8PFT) (2 of 2)

① PFT0 CONNECTOR

PFT0 (J)

1	Sta. R0	26	Sta. T0
2	8LC. R0	27	8LC. T0
3	C.O. R0	28	C.O. T0
4	8COT. R0	29	8COT. T0

PFT0 (P)

26	Sta. T0	1	Sta. R0	TO STATION
27	8LC. T0	2	8LC. R0	TO PN-8LC
28	C.O. T0	3	C.O. R0	TO C.O. LINE
29	8COT. T0	4	8COT. R0	TO PN-8COT

② PFT1 CONNECTOR

PFT1 (J)

23	MJ ALM	48	
24		49	E
25		50	–27 V

PFT1 (P)

48		23	MJ ALM	TO PN-DAIB/DAIE
49	E	24		TO PZ-PW121
50	–27 V	25		

③ LTC0 CONNECTOR

LTC0 (J)

LEN000	1	R0	26	T0
	2		27	
	3		28	
	4		29	
LEN008	9	R0	34	T0
	10		35	
	11		36	
	12		37	

LTC0 (P)

26	T0	1	R0	TO PZ-8PFTB
27		2		
28		3		
29		4		
34	T0	9	R0	TO PZ-8PFTB
35		10		
36		11		
37		12		

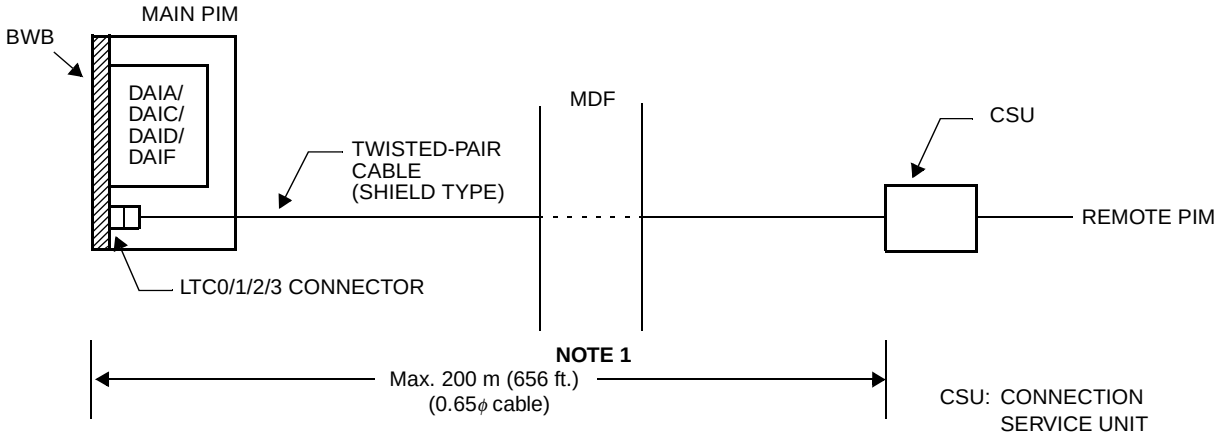
CONNECTION BETWEEN MAIN SITE AND REMOTE SITE

DAI Connection at Main Site

(1) When using the LTC connector on the BWB

Connect the cable to a CSU or directly to the Remote PIM via the MDF as shown in Figure 2-21. Figure 2-22 shows an example of DAI MDF cross connection.
For the optical cable connection between the Main PIM and the Remote PIM, refer to "Optical Cable Connection" on Page 51.

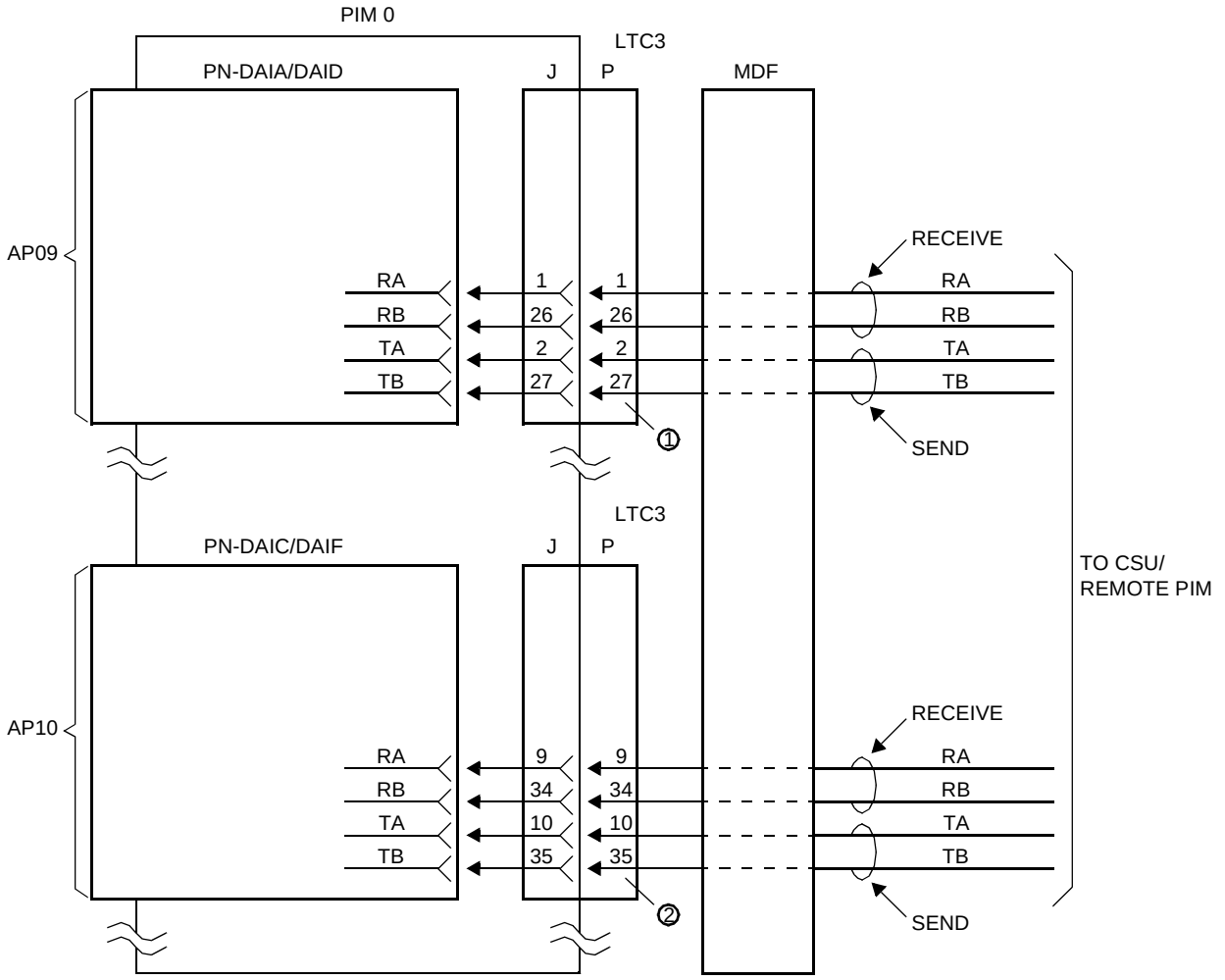
Figure 2-21 DAI Cable Connection via LTC Connector (Main Site)



NOTE 1: When the Remote PIM is directly connected without CSU, maximum distance is 400 m (1312 ft.) between the Main PIM and the Remote PIM.

NOTE 2: When the DAIA/DAID card is mounted in the AP11 slot, be sure to use the CN connector on the DAIA/DAID card. See (2) on Page 49.

Figure 2-22 Example of DAI MDF Cross Connection via LTC Connector (Main Site)



① LTC3 CONNECTOR

1	RA	26	RB
2	TA	27	TB
3		28	
4		29	

LTC (J)

26	RB	1	RA
27	TB	2	TA
28		3	
29		4	

(P)

② LTC3 CONNECTOR

9	RA	34	RB
10	TA	35	TB
11		36	
12		37	

LTC (J)

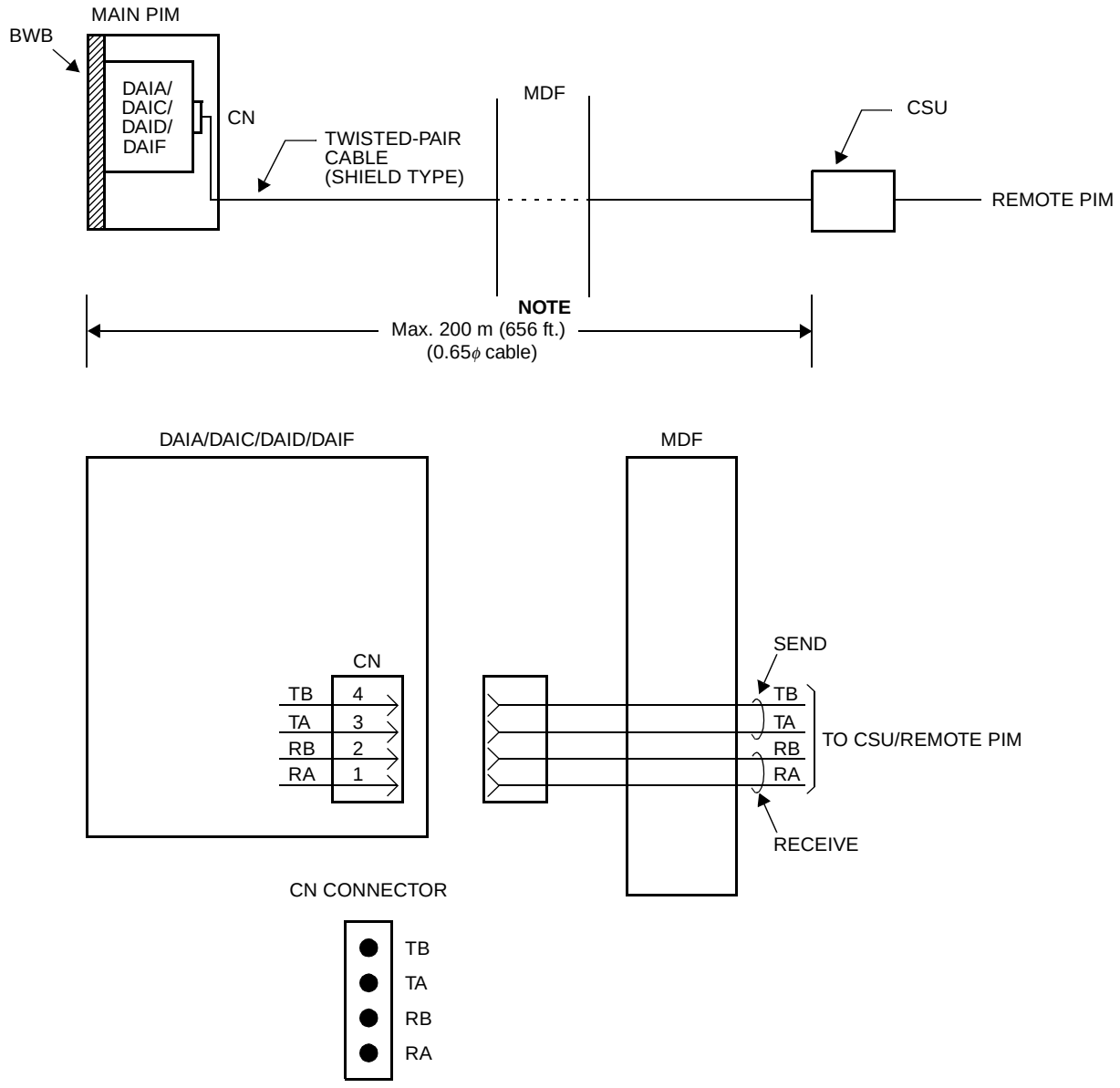
34	RB	9	RA
35	TB	10	TA
36		11	
37		12	

(P)

(2) When using the CN connector on the DAI Card

Connect the cable to a CSU or directly to the Remote PIM via the CN connector on the DAIA/DAIC/DAID/DAIF card as shown in Figure 2-23.

Figure 2-23 DAI Cable Connection via CN Connector (Main Site)

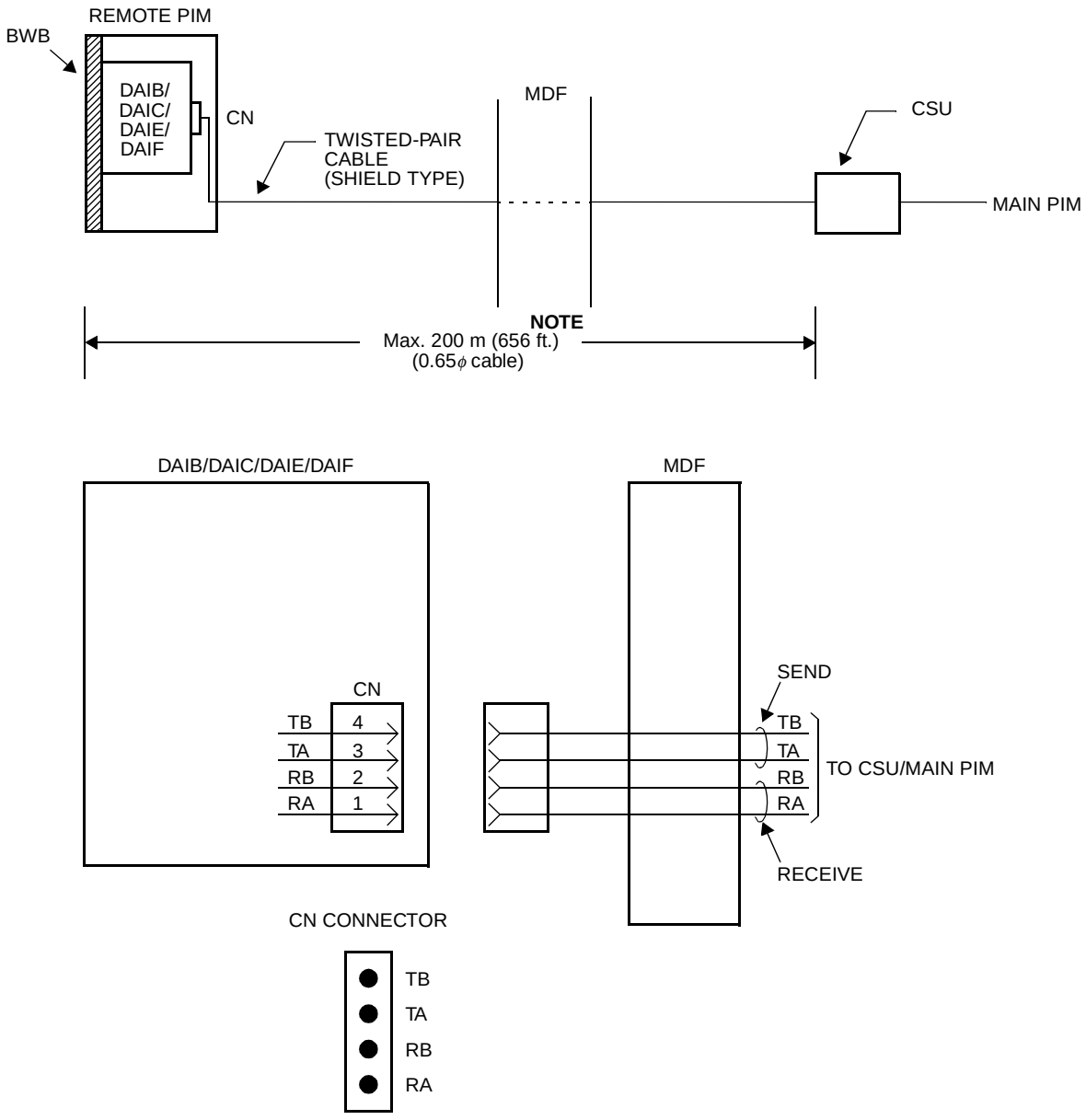


NOTE: When the Remote PIM is directly connected without CSU, maximum distance is 400 m (1312 ft.) between the Main PIM and the Remote PIM.

DAI Connection at Remote Site

Connect the cable to a CSU or directly to the Main PIM via the CN connector on the DAIB/DAIC/DAIE/DAIF card as shown in Figure 2-24.

Figure 2-24 DAI Cable Connection via CN Connector (Remote Site)



NOTE: When the Remote PIM is directly connected without CSU, maximum distance is 400 m (1312 ft.) between the Main PIM and the Remote PIM.

Optical Cable Connection

When using an optical cable to establish the connection between the Main PIM and Remote PIM, connect each end of the cable to the CN1 connector of the M10 cards on both sites. Two DAI cards are connected to one M10 card, via MDF throughLTC connector on the BWB or CN connector on the DAI card.

Figure 2-25 through Figure 2-27 show an outline of the connection and an example of the M10 MDF cross connection.

Figure 2-25 Outline of Optical Cable Connection

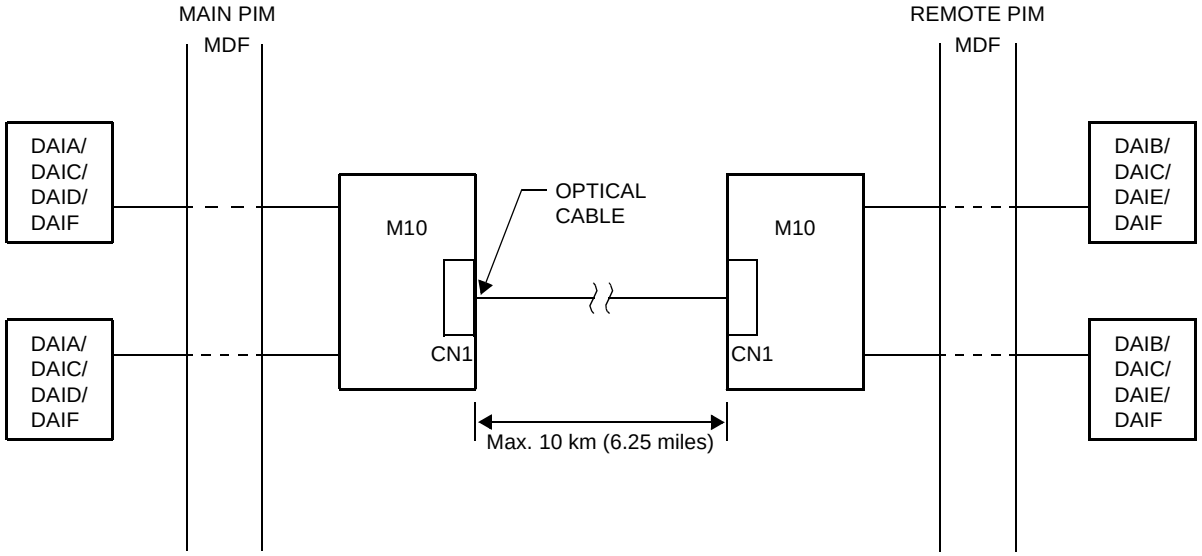


Figure 2-26 Example of M10 MDF Cross Connection via LTC Connector (Main Site) (1 of 2)

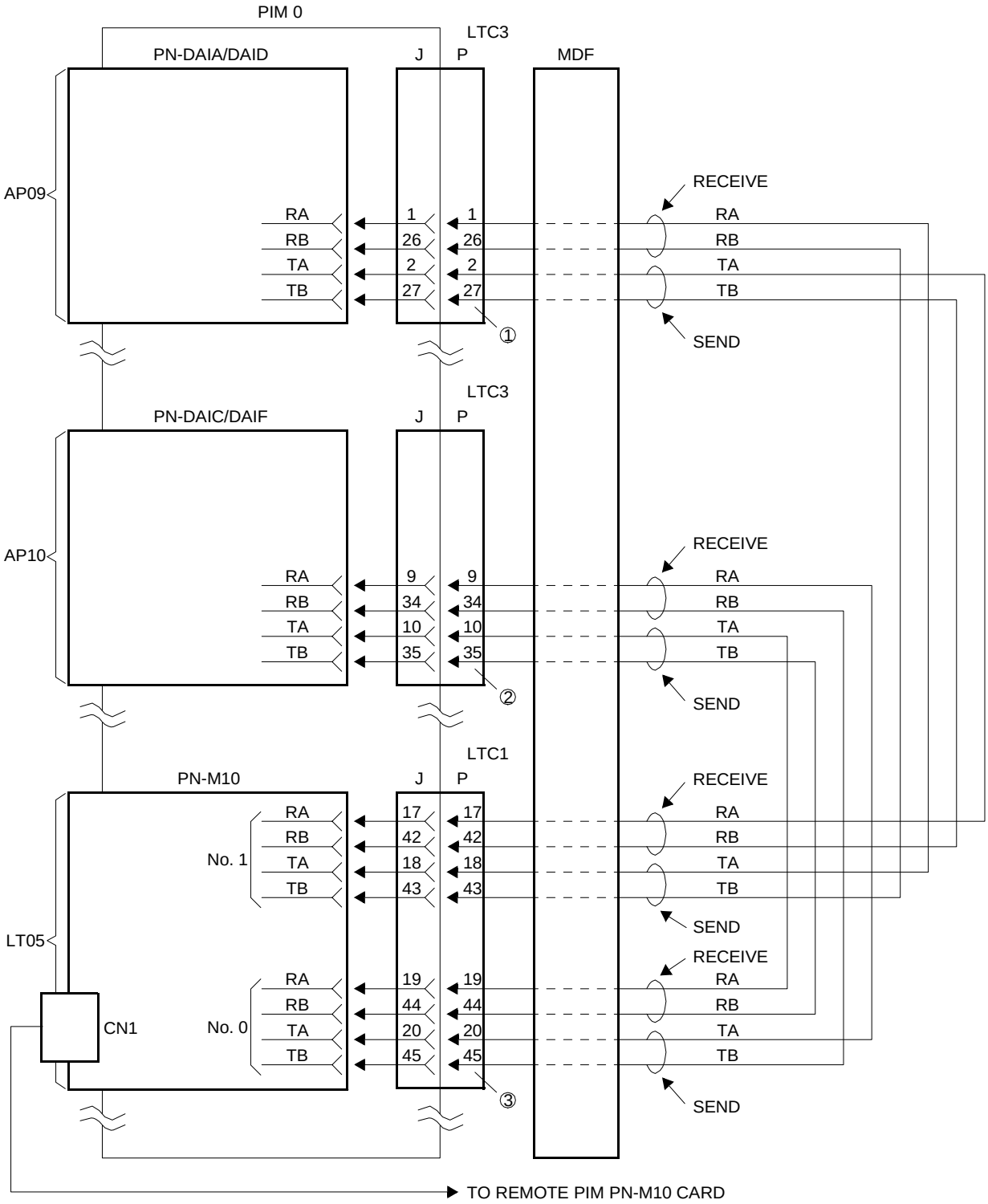
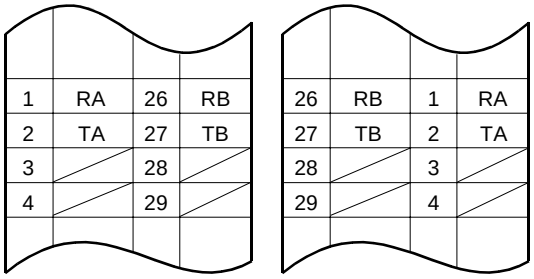


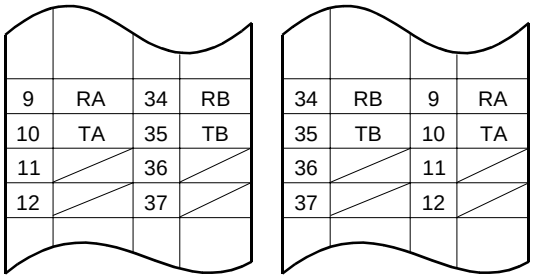
Figure 2-26 Example of M10 MDF Cross Connection via LTC Connector (Main Site) (2 of 2)

① LTC3 CONNECTOR



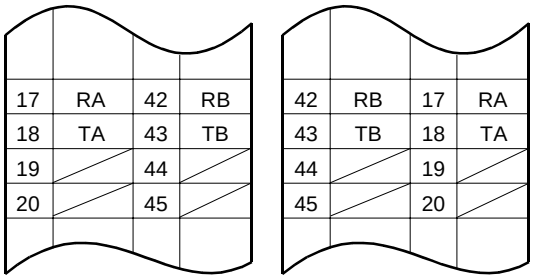
LTC (J)				(P)			
1	RA	26	RB	26	RB	1	RA
2	TA	27	TB	27	TB	2	TA
3		28		28		3	
4		29		29		4	

② LTC3 CONNECTOR



LTC (J)				(P)			
9	RA	34	RB	34	RB	9	RA
10	TA	35	TB	35	TB	10	TA
11		36		36		11	
12		37		37		12	

③ LTC1 CONNECTOR



LTC (J)				(P)			
17	RA	42	RB	42	RB	17	RA
18	TA	43	TB	43	TB	18	TA
19		44		44		19	
20		45		45		20	

Figure 2-27 Example of M10 MDF Cross Connection via CN Connector (Remote Site) (1 of 2)

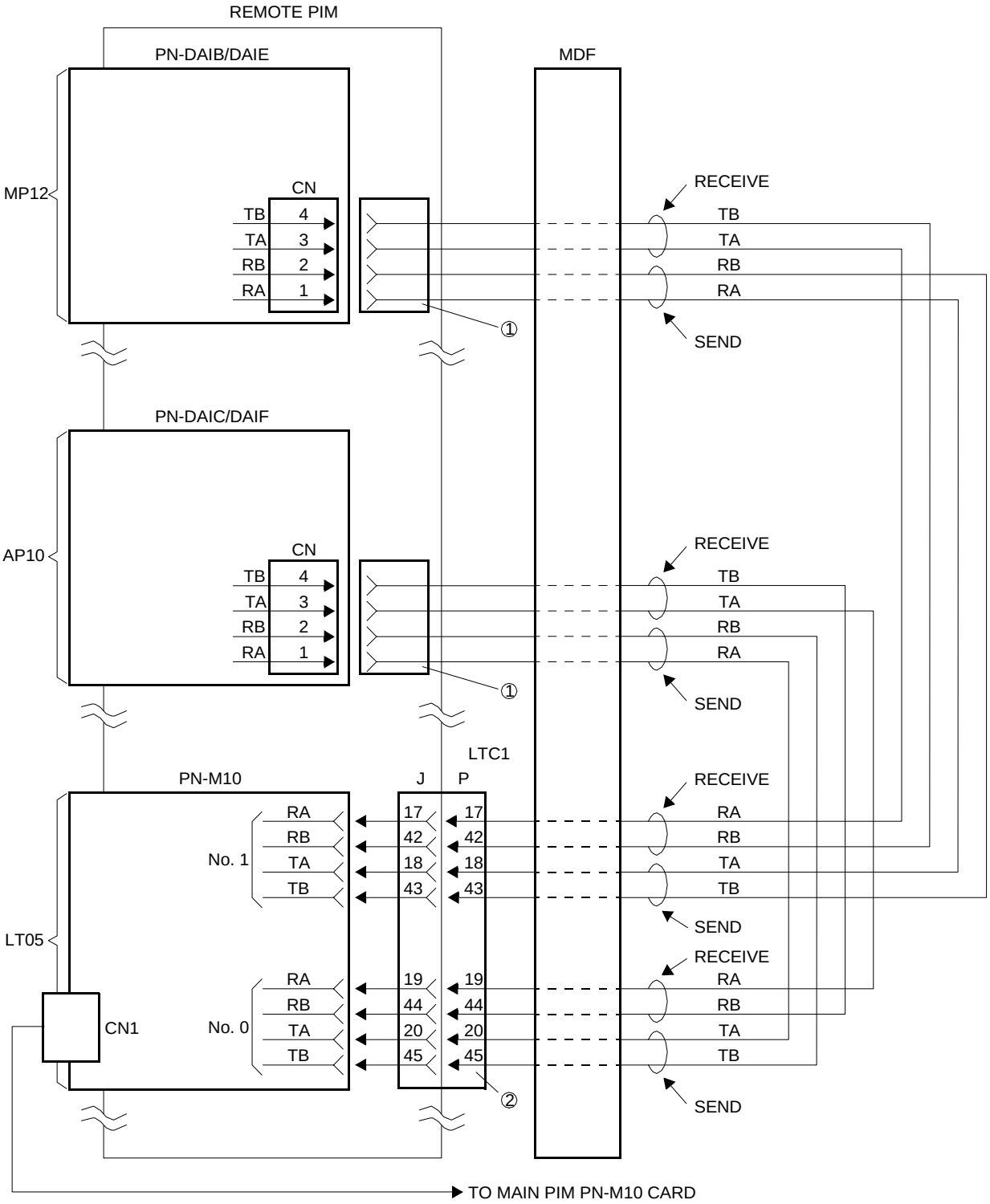
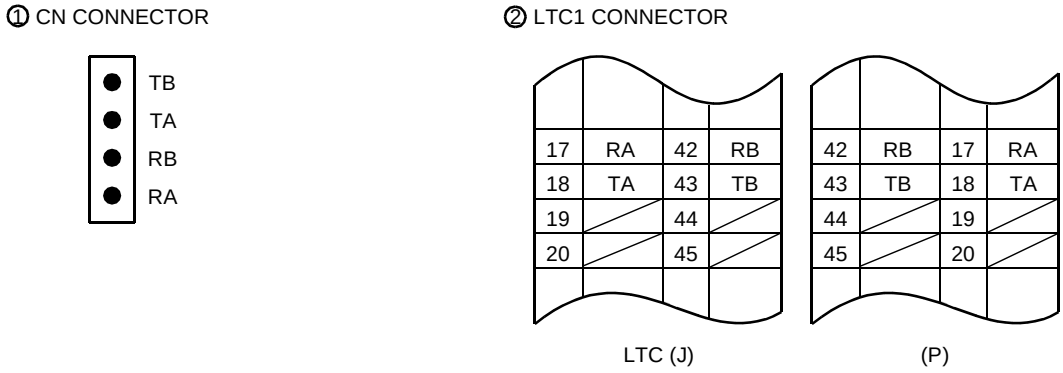


Figure 2-27 Example of M10 MDF Cross Connection via CN Connector (Remote Site) (2 of 2)



MP RESET

After mounting all DAI cards/M10 cards and establishing the connection between the Main Site and the Remote Site, press SW1 switch on the MP card.

This page is for your notes.

CHAPTER 3

TROUBLESHOOTING

This chapter explains the method for fault diagnosis and troubleshooting when maintenance personnel detects fault occurrences by lamp indication on DAIA/DAIB/DAIC/DAID/DAIE/DAIF and M10 cards. For other system faults, refer to the Maintenance Manual.

Table 3-1 shows contents of the faults and the remedial action on each lamp status.

Table 3-1 Remedial Action on Each Lamp Status

CARD NAME	LAMP STATUS	FAULT CONTENT	REMEDIAL ACTION
PN-DAIA (DAIA)	RUN lamp is not flashing.	Abnormal operation of DAIA card	1 Reset the MB switch. (Down→Up→Down) 2 Check the setting of SW1. 1: FP No. 1 2: FP No. 2 3: FP No. 3 0, 4-F: Not used 3 If the fault cannot be cleared, replace the card.
	LINK lamp is not on.	Layer 2 link connection failure between DAIA and DAIB	1 Check to see if the cable between DAIA and DAIB is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47. 2 Reset the MB switch. (Down→Up→Down)
	RED lamp is on.	PCM signal loss or Frame Alignment signal loss	Check to see if the cable between DAIA and DAIB is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.
	RMT lamp is on.	Remote alarm	Check to see if the cable between DAIA and DAIB (sending side) is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.

Table 3-1 Remedial Action on Each Lamp Status (Continued)

CARD NAME	LAMP STATUS	FAULT CONTENT	REMEDIAL ACTION
PN-DAIB (DAIB)	RUN lamp is not flashing.	Abnormal operation of DAIB card	1 Reset the MB switch. (Down→Up→Down) 2 If the fault cannot be cleared, replace the card.
	LINK lamp is not on.	Layer 2 link connection failure between DAIA and DAIB	1 Check to see if the cable between DAIA and DAIB is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47. 2 Reset the MB switch. (Down→Up→Down)
	RED lamp is on.	PCM signal loss or Frame Alignment signal loss	1 Check to see if the cable between DAIA and DAIB is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47. 2 Reset the MB switch of DAIA card on the Main Site. (Down→Up→Down)
	RMT lamp is on.	Remote alarm	Check to see if the cable between DAIA and DAIB (sending side) is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.

Table 3-1 Remedial Action on Each Lamp Status (Continued)

CARD NAME	LAMP STATUS	FAULT CONTENT	REMEDIAL ACTION
PN-DAIC (DAIC)	RUN lamp is not flashing.	Abnormal operation of DAIC card	1 Reset the MB switch. (Down→Up→Down) 2 If the fault cannot be cleared, replace the card.
	LINK lamp is not on.	Layer 2 link connection failure between DAIA and DAIB	1 Check to see if the cable between DAIA and DAIB is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47. 2 Reset the MB switch. (Down→Up→Down) 3 Check whether cable between DAIC cards is correctly connected. "Connection Between Main Site and Remote Site" on Page 47.
	RED lamp is on.	PCM signal loss or Frame Alignment signal loss	Check to see if the cable between DAIC cards is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.
	RMT lamp is on.	Remote alarm	Check to see if the cable between DAIC cards (sending side) is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.

Table 3-1 Remedial Action on Each Lamp Status (Continued)

CARD NAME	LAMP STATUS	FAULT CONTENT	REMEDIAL ACTION
PN-DAID (DAID)	RUN lamp is not flashing.	Abnormal operation of DAID card	1 Reset the MB switch. (Down→Up→Down) 2 Check the setting of SW1. 1: FP No. 1 2: FP No. 2 3: FP No. 3 0, 4-F: Not used 3 If the fault cannot be cleared, replace the card.
	LINK lamp is not on.	Layer 2 link connection failure between DAID and DAIE	1 Check to see if the cable between DAID and DAIE is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47. 2 Reset the MB switch. (Down→Up→Down)
	RMT lamp is on.	Remote alarm	Check to see if the cable between DAID and DAIE (sending side) is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.
	PWR lamp is on.	PCM signal loss	Check to see if the cable between DAID and DAIE is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.

Table 3-1 Remedial Action on Each Lamp Status (Continued)

CARD NAME	LAMP STATUS	FAULT CONTENT	REMEDIAL ACTION
PN-DAIE (DAIE)	RUN lamp is not flashing.	Abnormal operation of DAIE card	1 Reset the MB switch. (Down→Up→Down) 2 If the fault cannot be cleared, replace the card.
	LINK lamp is not on.	Layer 2 link connection failure between DAID and DAIE	1 Check to see if the cable between DAID and DAIE is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47. 2 Reset the MB switch. (Down→Up→Down)
	RMT lamp is on.	Remote alarm	Check to see if the cable between DAID and DAIE (sending side) is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.

Table 3-1 Remedial Action on Each Lamp Status (Continued)

CARD NAME	LAMP STATUS	FAULT CONTENT	REMEDIAL ACTION
PN-DAIF (DAIF)	RUN lamp is not flashing.	Abnormal operation of DAIF card	1 Reset the MB switch. (Down→Up→Down) 2 If the fault cannot be cleared, replace the card.
	LINK lamp is not on.	Layer 2 link connection failure between DAID and DAIE	1 Check to see if the cable between DAID and DAIE is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47. 2 Reset the MB switch. (Down→Up→Down) 3 Check whether cable between DAIF cards is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.
	RMT lamp is on.	Remote alarm	Check to see if the cable between DAIF cards (sending side) is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.
PN-DAIF (DAIF)	PWR lamp is on.	PCM signal loss	Check to see if the cable between DAID and DAIE is correctly connected. Refer to "Connection Between Main Site and Remote Site" on Page 47.

Table 3-1 Remedial Action on Each Lamp Status (Continued)

CARD NAME	LAMP STATUS	FAULT CONTENT	REMEDIAL ACTION
PN-M10 (M10)	CK0 lamp is not on.	Cable connection failure between Digital Trunk Interface and No. 0 circuit of M10	1 Check to see if the cable between Digital Trunk Interface and M10 is correctly connected. 2 Check the switch setting of M10. 3 If the fault cannot be cleared, replace the card.
	CK1 lamp is not on.	Cable connection failure between Digital Trunk Interface and No. 1 circuit of M10	1 Check to see if the cable between Digital Trunk Interface and M10 is correctly connected. 2 Check the switch setting of M10. 3 If the fault cannot be cleared, replace the card.
	TALM lamp is on.	Optical output line fault	1 Check to see if the cable between Digital Trunk Interface and M10 is correctly connected. 2 Check the switch setting of M10. 3 If the fault cannot be cleared, replace the card.
	RALM lamp is on.	Optical input line fault	1 Check to see if the optical cable between the own side M10 and remote side M10 is correctly connected. 2 Check the switch setting of M10s on both side. 3 If the fault cannot be cleared, replace the card.

CHAPTER 4

CIRCUIT CARD INFORMATION

This chapter explains the mounting location, the meaning of lamp indications, and the method of switch settings of each circuit card for the Remote PIM.

HOW TO READ THIS CHAPTER

This chapter explains each circuit card used in this system. Explanations are given in alphabetical order of the circuit card names within each circuit card category (Control, Application Processor, and Line/Trunk).

(1) Locations of Lamps, Switches, and Connectors
The locations of lamps, switches, and connectors of each circuit card are shown by a face layout.

(2) Lamp Indications
The name, color, and functions of each indicator lamp equipped on each circuit card are described in a table.

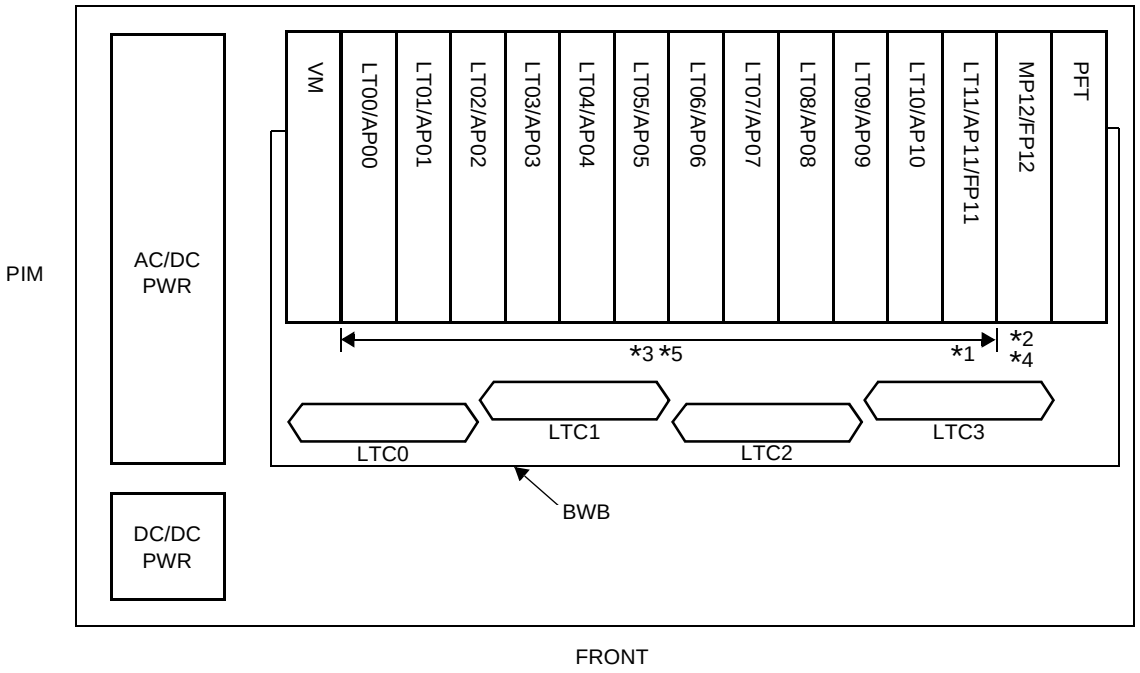
(3) Switch Settings
The name, settings, and functions of each switch equipped on each circuit card are described in a table.

Each switch setting table has a CHECK column. Make necessary entries in the CHECK column during and/or after the system installation and maintenance, and use each table as a reference for subsequent system maintenance and operations.

MOUNTING LOCATION OF CIRCUIT CARD

This section explains the conditions for mounting circuit cards for the Remote PIM. Figure 4-1 shows circuit card mounting slots allocated in the PIM.

Figure 4-1 Mounting Location of Circuit Card



***1** PN-CP15 card must be mounted in FP11 slot on Main Site PIM0 for Remote PIM system.

***2** PN-CP15 card in FP12 slot on Main Site PIM2, 4.

***3** PN-DAIA/PN-DAID card in the AP00-AP11 slots on Main Site PIM0, 2, 4.
For mounting the DAIA/DAID card on the AP11 slot, the CN connector on the DAIA/DAID card should be used.
When the clock signal is supplied from the T1/E1 line, mount DAIA/DAID cards (DAIA0/DAID0, DAIA1/DAID1) on PIM0 in order to receive the clock signal.

***4** PN-DAIB/PN-DAIE card in the MP slot on the Remote PIM.

***5** PN-DAIC/PN-DAIF card in the AP00-AP11 slots on Main Site PIM0, 2, 4, and in the AP00-AP11 slots on the Remote PIM.

***6** PN-M10 card in the LT00-LT11 slots on Main Site PIM0, 2, 4, and on the Remote PIM.

LIST OF REQUIRED CARDS

Table 4-1 shows the required cards that are explained in this section.

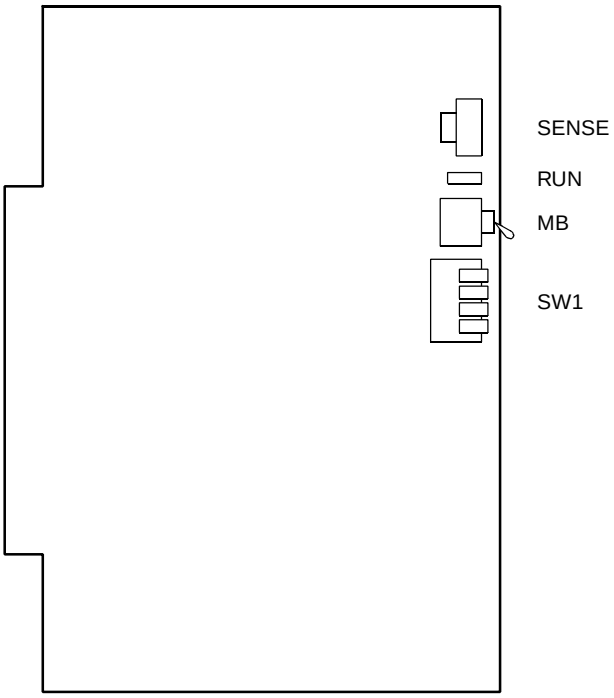
Table 4-1 List of Required Cards

NAME (FUNCTIONAL NAME)	LAMP X: PROVIDED –: NOT PROVIDED	SWITCH X: PROVIDED –: NOT PROVIDED	EXTRACTION/ INSERTION WITH POWER ON X: ALLOWED Δ: ALLOWED AFTER MB* –: NOT ALLOWED	REFERENCE PAGE
PN-CP15 (FP)	X	X	Δ	Page 69
PN-DAIA (DAI)	X	X	Δ	Page 71
PN-DAIB (DAI)	X	X	Δ	Page 76
PN-DAIC (DAI)	X	X	Δ	Page 80
PN-DAID (DAI)	X	X	Δ	Page 83
PN-DAIE (DAI)	X	X	Δ	Page 89
PN-DAIF (DAI)	X	X	Δ	Page 93
PN-M10 (M10)	X	X	Δ	Page 97

*MB = Make Busy

PN-CP15 (FP)

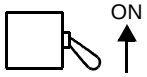
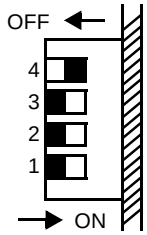
Locations of Lamps, Switches, and Connectors



Lamp Indications

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while the circuit card is operating normally

Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SENSE (Rotary SW)  **NOTE 1**	0-3	For setting FP No.		
		0	For mounting this card in PIM0	
		1	For mounting this card in PIM2	
		2	For mounting this card in PIM4	
		3	For mounting this card in PIM6	
	4-F		Not used	
MB (Toggle SW)  **NOTE 2**		UP	For make-busy	
		(DOWN)	For normal operation	
SW1 (Piano Key SW) 	1-3	(OFF)	Not used	
	4	(ON)	For normal operation	
		OFF	Not used	

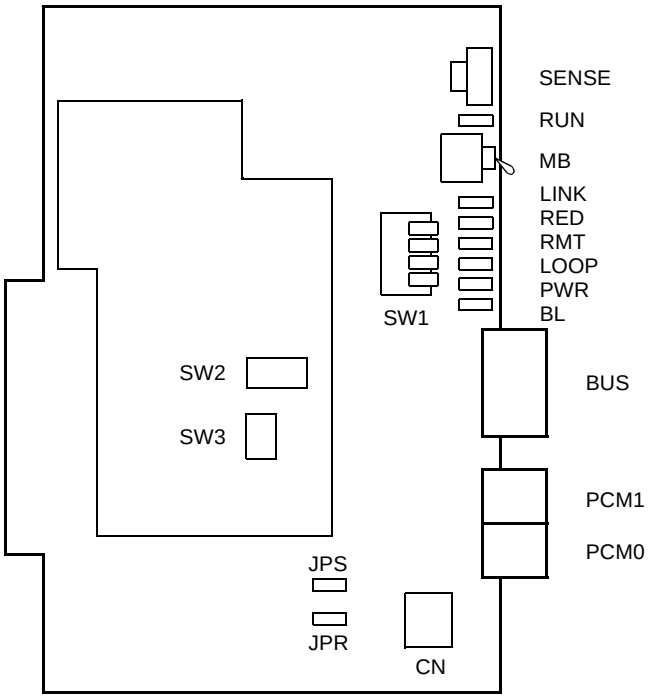
The figure in the SWITCH NAME column and the position in ( ) in the SETTING POSITION column indicate the standard setting of the switch. When the switch is not set as shown by the figure and ( ), the setting of the switch varies with the system concerned.

NOTE 1: Set the groove on the switch to the desired position.

NOTE 2: When the power is on, flip the MB switch to ON (UP position) before plugging/unplugging the circuit card.

PN-DAIA (DAI)

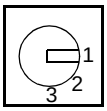
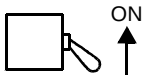
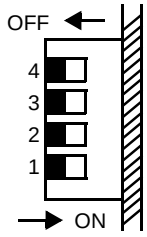
Location of Lamps, Switches, and Connectors



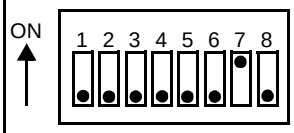
Lamp Indications

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while this card is operating normally
LINK	Green	Remains lit when a link between this card and a distant office is normally connected Goes out after 15 seconds of link disconnection
RED	Red	Remains lit when detecting PCM signal loss or Frame Alignment signal loss
RMT	Red	Remains lit when receiving the alarm signal from a distant office
LOOP	–	Not used
PWR	–	Not used
BL	Red	Remains lit while data transmission on control channel (D ch) Flashes while FP data downloading

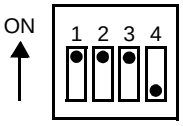
Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SENSE (Rotary SW)  **NOTE 1**	0-F	FP (Firmware Processor) Number setting for the DAIA card By this setting, the system regards the DAIA card and the opposite DAIB card as one Firmware Processor		
		0	Not used	
		1	FP No. 1	
		2	FP No. 2	
		3	FP No. 3	
		4 – F	Not used	
MB (Toggle SW)  **NOTE 2**		UP	For make-busy	
		DOWN	For normal operation	
SW1 (Piano Key SW)  	1 **NOTE 3**	ON	For supplying 1.5 MHz clock to PLO 0	
		OFF	No clock supply to PLO 0	
	2 **NOTE 3**	ON	For supplying 1.5 MHz clock to PLO 1	
		OFF	No clock supply to PLO 1	
	3	OFF	Always set to OFF	
	4	OFF	Always set to OFF	

(Continued)

<table>
<tr><th>SWITCH NAME</th><th>SWITCH NUMBER</th><th>SETTING POSITION</th><th>FUNCTION</th><th>CHECK</th></tr>
<tr><td rowspan="16">SW2 (DIP SW)
 
</td><td rowspan="2">1</td><td>ON</td><td>Control channel signaling data transmission speed: 48 kbps</td><td></td></tr>
<tr><td>OFF</td><td>Control channel signaling data transmission speed: 64 kbps</td><td></td></tr>
<tr><td rowspan="2">2</td><td>ON</td><td>DTI frame configuration:
12-Multi Frame</td><td></td></tr>
<tr><td>OFF</td><td>DTI frame configuration:
24-Multi Frame</td><td></td></tr>
<tr><td rowspan="2">3</td><td>ON</td><td>Line code: AMI with ZCS</td><td></td></tr>
<tr><td>OFF</td><td>Line code: B8ZS</td><td></td></tr>
<tr><td rowspan="2">4</td><td>ON</td><td rowspan="9">Setting of control signal time slot
<table><tr><th colspan="5">SWITCH NUMBER</th><th rowspan="2">TIME SLOT NUMBER</th></tr><tr><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>TS1</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS2</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS3</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS4</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS5</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS6</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS7</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS8</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS9</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS10</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS11</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS12</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS13</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS14</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS15</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS16</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS17</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS18</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS19</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS23</td></tr></table></td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">5</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">6</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">7</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">8</td><td>ON</td><td>NOTE 4, NOTE 5</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
</table>

(Continued)

<table>
<tr><th>SWITCH NAME</th><th>SWITCH NUMBER</th><th>SETTING POSITION</th><th>FUNCTION</th><th>CHECK</th></tr>
<tr><td rowspan="8">SW3 (DIP SW)
 
</td><td rowspan="2">1</td><td>ON</td><td rowspan="8">Set the equalizer according to the cable length between the system and the CSU.
<table><tr><th>SW -1</th><th>SW -2</th><th>SW -3</th><th>CABLE LENGTH</th></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>0 - 40 m (0 - 131.2 ft.)</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>40 - 80 m (131.2 - 262.5 ft.)</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>80 - 120 m (262.5 - 394 ft.)</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>120 - 160 m (394 - 525 ft.)</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>160 - 200 m (525 - 656 ft.)</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>Signal is not sent</td></tr></table></td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">2</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">3</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td>4</td><td>OFF</td><td>Always set to OFF</td><td></td></tr>
<tr><td rowspan="2">JPS (Jumper Pin)
  </td><td rowspan="2"></td><td>Right</td><td>For mounting this card on PIM1 - PIM7</td><td></td></tr>
<tr><td>Left</td><td>For mounting this card on PIM0</td><td></td></tr>
<tr><td rowspan="2">JPR (Jumper Pin)
  </td><td rowspan="2"></td><td>Right</td><td>Neutral grounding on the receiving line is provided.</td><td></td></tr>
<tr><td>Left</td><td>Neutral grounding on the receiving line is not provided.</td><td></td></tr>
</table>

(Continued)

The figure in the SWITCH NAME column and the position in ( ) in the SETTING POSITION column indicate the standard setting of the switch. When the switch is not set as shown by the figure and ( ), the setting of the switch varies with the system concerned.

NOTE 1: Set the groove on the switch to the desired position.
NOTE 2: When the power is on, flip the MB switch to ON (UP position) before plugging/unplugging the circuit card.

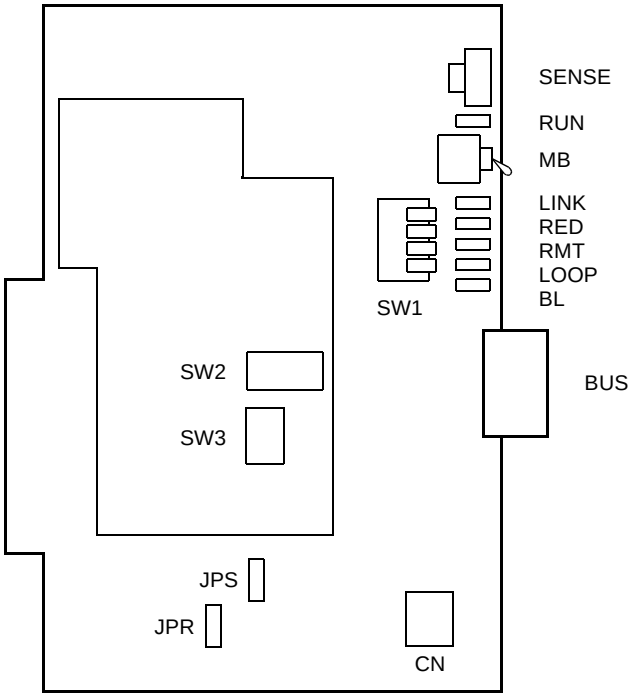
NOTE 3: When the source clock signal is supplied via the line between the Main Site and the Remote Site, set the SW1-1 and SW1-2 as indicated in the following table. In this case, DAIA cards (DAIA0, DAIA1) must be mounted in PIM0.

CONDITIONS	DAIA0		DAIA1		DAIA2		REMARKS
	SW 1-1	SW 1-2	SW 1-1	SW 1-2	SW 1-1	SW 1-2	
One DAIA card is provided.	ON	OFF	–	–	–	–	Clock signal is sent to PLO0 of MP card via Supply Route 0 (DAIA0).
Two or three DAIA cards are provided.	ON	OFF	OFF	ON	OFF	OFF	Clock signal supply route automatically changes to Route 1 (DAIA1), if a transmission line failure occurs on Supply Route 0.

NOTE 4: Time Slot Number 0, 20, 21, and 22 (TS0/20/21/22) cannot be used for control signal.
NOTE 5: This setting must be identical with the opposite DAIB card.

PN-DAIB (DAI)

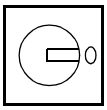
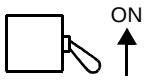
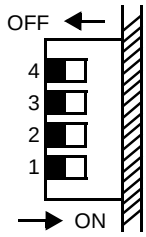
Location of Lamps, Switches, and Connectors



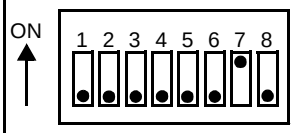
Lamp Indications

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while this card is operating normally
LINK	Green	Remains lit when a link between this card and a distant office is normally connected Goes out after 15 seconds of link disconnection
RED	Red	Remains lit when detecting PCM signal loss or Frame Alignment signal loss
RMT	Red	Remains lit when receiving the alarm signal from a distant office
LOOP	–	Not used
BL	Red	Remains lit while data transmission on control channel (D ch) Flashes while FP data downloading

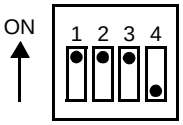
Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SENSE (Rotary SW) 	0-F	0	Always set to 0	
		1-F	Not used	
MB (Toggle SW)  **NOTE 1**		UP	For make-busy	
		DOWN	For normal operation	
SW1 (Piano Key SW) 	1	OFF	Always set to OFF	
	2	OFF	Always set to OFF	
	3	OFF	Always set to OFF	
	4	OFF	Always set to OFF	

(Continued)

<table>
<tr><th>SWITCH NAME</th><th>SWITCH NUMBER</th><th>SETTING POSITION</th><th>FUNCTION</th><th>CHECK</th></tr>
<tr><td rowspan="16">SW2 (DIP SW)
 
</td><td rowspan="2">1</td><td>ON</td><td>Control channel signaling data transmission speed: 48 kbps</td><td></td></tr>
<tr><td>OFF</td><td>Control channel signaling data transmission speed: 64 kbps</td><td></td></tr>
<tr><td rowspan="2">2</td><td>ON</td><td>DTI frame configuration:
12-Multi Frame</td><td></td></tr>
<tr><td>OFF</td><td>DTI frame configuration:
24-Multi Frame</td><td></td></tr>
<tr><td rowspan="2">3</td><td>ON</td><td>Line code: AMI with ZCS</td><td></td></tr>
<tr><td>OFF</td><td>Line code: B8ZS</td><td></td></tr>
<tr><td rowspan="2">4</td><td>ON</td><td rowspan="8">Setting of control signal time slot
<table><tr><th colspan="5">SWITCH NUMBER</th><th rowspan="2">TIME SLOT NUMBER</th></tr><tr><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>TS1</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS2</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS3</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS4</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS5</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS6</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS7</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS8</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS9</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS10</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS11</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS12</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS13</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS14</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS15</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS16</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS17</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS18</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS19</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS23</td></tr></table></td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">5</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">6</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">7</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">8</td><td>ON</td><td>NOTE 2, NOTE 3</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
</table>

(Continued)

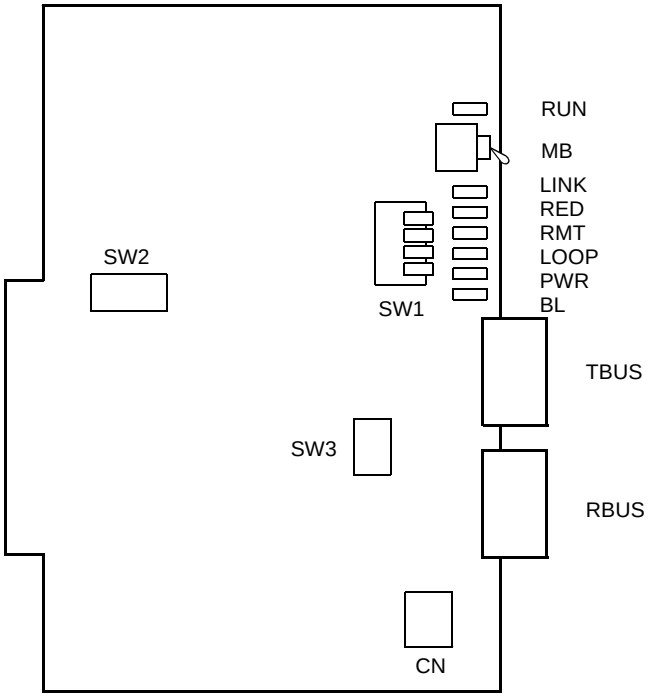
<table>
<tr><th>SWITCH NAME</th><th>SWITCH NUMBER</th><th>SETTING POSITION</th><th>FUNCTION</th><th>CHECK</th></tr>
<tr><td rowspan="8">SW3 (DIP SW)
 
</td><td rowspan="2">1</td><td>ON</td><td rowspan="8">Set the equalizer according to the cable length between the system and the CSU.
<table><tr><th>SW -1</th><th>SW -2</th><th>SW -3</th><th>CABLE LENGTH</th></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>0 - 40 m
(0 - 131.2 ft.)</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>40 - 80 m
(131.2 - 262.5 ft.)</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>80 - 120 m
(262.5 - 394 ft.)</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>120 - 160 m
(394 - 525 ft.)</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>160 - 200 m
(525 - 656 ft.)</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>Signal is not sent.</td></tr></table></td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">2</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">3</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td>4</td><td>OFF</td><td>Always set to OFF</td><td></td></tr>
<tr><td rowspan="2">JPS (Jumper Pin)
  </td><td rowspan="2"></td><td>UP</td><td>Neutral grounding on the transmitting line is provided.</td><td></td></tr>
<tr><td>DOWN</td><td>Neutral grounding on the transmitting line is not provided.</td><td></td></tr>
<tr><td rowspan="2">JPR (Jumper Pin)
  </td><td rowspan="2"></td><td>UP</td><td>Neutral grounding on the receiving line is provided.</td><td></td></tr>
<tr><td>DOWN</td><td>Neutral grounding on the receiving line is not provided.</td><td></td></tr>
</table>

The figure in the SWITCH NAME column and the position in ( ) in the SETTING POSITION column indicate the standard setting of the switch. When the switch is not set as shown by the figure and ( ), the setting of the switch varies with the system concerned.

NOTE 1: When the power is on, flip the MB switch to ON (UP position) before plugging/unplugging the circuit card.
NOTE 2: Time Slot Number 0, 20, 21, and 22 (TS0/20/21/22) cannot be used for control signal.
NOTE 3: This setting must be identical with the opposite DAIA card.

PN-DAIC (DAI)

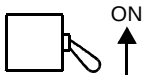
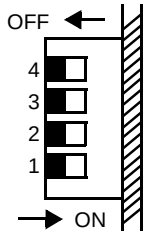
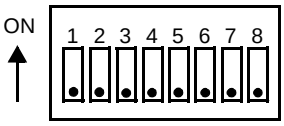
Location of Lamps, Switches, and Connectors



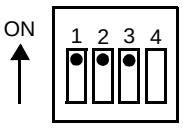
Lamp Indications

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while this card is operating normally
LINK	Green	Remains lit when the following connections are normal: • Control channel link between the DAIA card and DAIB card • Connection between the opposite DAIC card Goes out after 15 seconds of link disconnection
RED	Red	Remains lit when detecting PCM signal loss or Frame Alignment signal loss
RMT	Red	Remains lit when receiving the alarm signal from a distant office
LOOP	–	Not used
PWR	–	Not used
BL	–	Not used

Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
MB (Toggle SW)  **NOTE**		UP	For make-busy	
		DOWN	For normal operation	
SW1 (Piano Key SW)  	1	OFF	Always set to OFF	
	2	OFF	Always set to OFF	
	3	OFF	Always set to OFF	
	4	OFF	Always set to OFF	
SW2 (DIP SW)  	1	OFF	Not used	
	2	ON	DTI frame configuration: 12-Multi Frame	
		OFF	DTI frame configuration: 24-Multi Frame	
	3	ON	Line code: AMI with ZCS	
		OFF	Line code: B8ZS	
	4	OFF	Not used	
	5	OFF	Not used	
	6	OFF	Not used	
	7	OFF	Not used	
	8	OFF	Not used	

(Continued)

<table>
<tr><th>SWITCH NAME</th><th>SWITCH NUMBER</th><th>SETTING POSITION</th><th>FUNCTION</th><th>CHECK</th></tr>
<tr><td rowspan="8">SW3 (DIP SW)
 
</td><td rowspan="2">1</td><td>ON</td><td rowspan="8">Set the equalizer according to the cable length between the system and the CSU.
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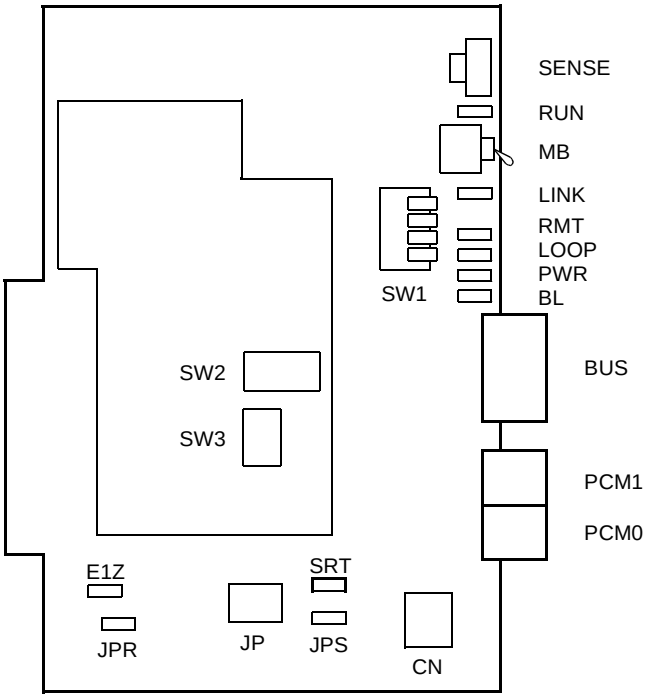
<tr><td rowspan="2">2</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">3</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">4</td><td>ON</td><td>When mounting this card on Remote Site</td><td></td></tr>
<tr><td>OFF</td><td>When mounting this card on Main Site</td><td></td></tr>
</table>

The figure in the SWITCH NAME column and the position in ( ) in the SETTING POSITION column indicate the standard setting of the switch. When the switch is not set as shown by the figure and ( ), the setting of the switch varies with the system concerned.

NOTE: When the power is on, flip MB switch to ON (UP position) before plugging/unplugging the circuit card.

PN-DAID (DAI)

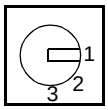
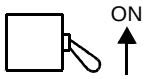
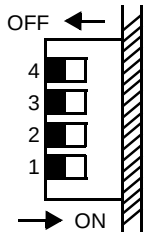
Location of Lamps, Switches, and Connectors



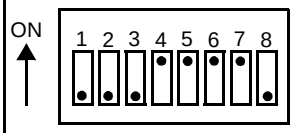
Lamp Indications

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while this card is operating normally
LINK	Green	Remains lit when a link between this card and a distant office is normally connected Goes out after 15 seconds of link disconnection
RMT	Red	Remains lit when receiving the alarm signal from a distant office
LOOP	–	Not used
PWR	Red	Remains lit when detecting PCM signal loss
BL	Red	Remains lit while data transmission on control channel (D ch) Remains lit while FP data downloading

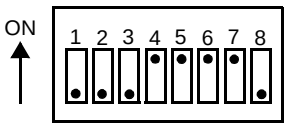
Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SENSE (Rotary SW)  **NOTE 1**	0-F	FP (Firmware Processor) Number setting for the DAID card By this setting, the system regards the DAID card and the opposite DAIE card as one Firmware Processor.		
		0	Not used	
		1	FP No. 1	
		2	FP No. 2	
		3	FP No. 3	
		4-F	Not used	
MB (Toggle SW)  **NOTE 2**		UP	For make-busy	
		DOWN	For normal operation	
SW1 (Piano Key SW)  	1 **NOTE 3**	ON	For supplying 2.0 MHz clock to PLO 0	
		OFF	No clock supply to PLO 0	
	2 **NOTE 3**	ON	For supplying 2.0 MHz clock to PLO 1	
		OFF	No clock supply to PLO 1	
	3	OFF	Always set to OFF	
	4	OFF	Always set to OFF	

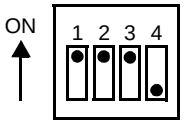
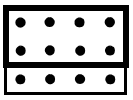
(Continued)

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW2 (DIP SW) 	1	ON	Control channel signaling data transmission speed: 48 kbps	
		OFF	Control channel signaling data transmission speed: 64 kbps	
	2	ON	CRC Synchronization Detection Timer is provided.	
		OFF	CRC Synchronization Detection Timer is not provided.	
	3	ON	CRC4 Check is provided.	
		OFF	CRC4 Check is not provided.	

(Continued)

<table>
<tr><th>SWITCH NAME</th><th>SWITCH NUMBER</th><th>SETTING POSITION</th><th>FUNCTION</th><th>CHECK</th></tr>
<tr><td rowspan="9">SW2 (DIP SW)
 
</td><td rowspan="2">4</td><td>ON</td><td rowspan="9">Setting of control signal time slot
<table><tr><th colspan="5">SWITCH NUMBER</th><th rowspan="2">TIME SLOT NUMBER</th></tr><tr><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>TS1</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS2</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS3</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS4</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS5</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS6</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS7</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS8</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS9</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS10</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS11</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS12</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS13</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS14</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS15</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS16</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS17</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS18</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS19</td></tr><tr><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS20</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS21</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS22</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS23</td></tr><tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS24</td></tr><tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS25</td></tr><tr><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS26</td></tr><tr><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS27</td></tr><tr><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>TS29</td></tr><tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>TS30</td></tr><tr><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>TS31</td></tr></table>
NOTE 4, NOTE 5</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">5</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">6</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">7</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
<tr><td rowspan="2">8</td><td>ON</td><td></td></tr>
<tr><td>OFF</td><td></td></tr>
</table>

(Continued)

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW3 (DIP SW) 	1	ON	Always set to ON	
	2	ON	Always set to ON	
	3	ON	Always set to ON	
	4	ON	Always set to OFF	
JPS (Jumper Pin) 		Right	Balanced transmission: 120 ohms (for twisted-pair cable)	
		Left	TA is grounded on the transmission line: 75 ohms (for coaxial cable)	
JPR (Jumper Pin) 		Right	Balanced transmission: 120 ohms (for twisted-pair cable)	
		Left	RA is grounded on the transmission line: 75 ohms (for coaxial cable)	
E1Z (Jumper Pin) 		Right	Line impedance: 120 ohms (for twisted-pair cable)	
		Left	Line impedance: 75 ohms (for coaxial cable)	
SRT (Jumper Pin) 		Right	For mounting this card on PIM0	
		Left	For mounting this card on PIM1-PIM7	
JP (Jumper Pin) 		UP	Line impedance: 120 ohms (for twisted-pair cable)	
		DOWN	Line impedance: 75 ohms (for coaxial cable)	

(Continued)

The figure in the SWITCH NAME column and the position in ( ) in the SETTING POSITION column indicate the standard setting of the switch. When the switch is not set as shown by the figure and ( ), the setting of the switch varies with the system concerned.

NOTE 1: Set the groove on the switch to the desired position.

NOTE 2: When the power is on, flip the MB switch to ON (UP position) before plugging/unplugging the circuit card.

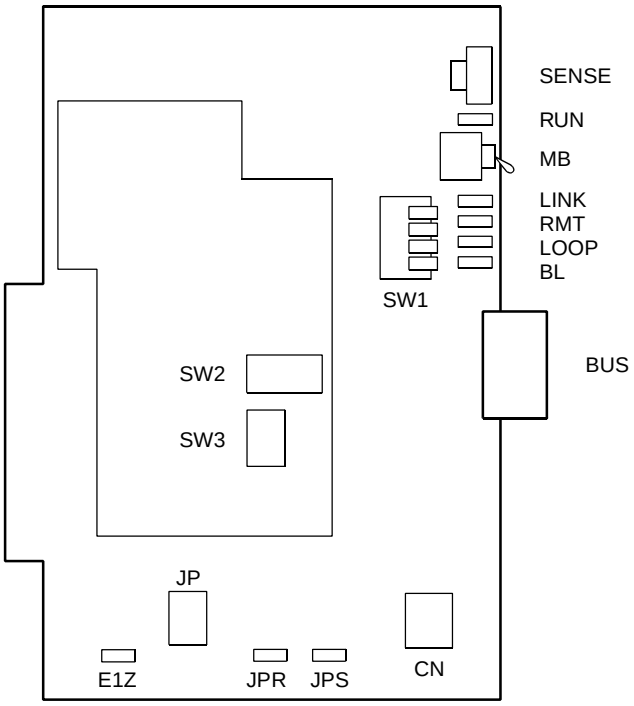
NOTE 3: When the source clock signal is supplied via the line between the Main Site and the Remote Site, set the SW1-1 and SW1-2 as the following table. In this case, DAID cards (DAID0, DAID1) must be mounted in PIM0.

CONDITIONS	DAID0		DAID1		DAID2		REMARKS
	SW 1-1	SW 1-2	SW 1-1	SW 1-2	SW 1-1	SW 1-2	
One DAID card is provided.	ON	OFF	–	–	–	–	Clock signal is sent to PLO0 of MP card via Supply Route 0 (DAID0).
Two or three DAID cards are provided.	ON	OFF	OFF	ON	OFF	OFF	Clock signal supply route automatically changes to Route 1 (DAID1), if a transmission line failure occurs on Supply Route 0.

NOTE 4: Time Slot Number 0 and 28 (TS0/28) cannot be used for control signal.
NOTE 5: This setting must be identical with the opposite DAIE card.

PN-DAIE (DAI)

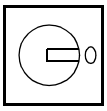
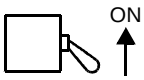
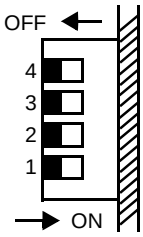
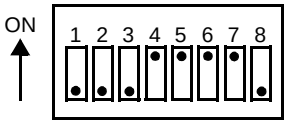
Location of Lamps, Switches, and Connectors



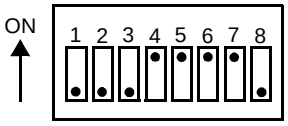
Lamp Indications

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while this card is operating normally
LINK	Green	Remains lit when a link between this card and a distant office is normally connected Goes out after 15 seconds of link disconnection
RMT	Red	Remains lit when receiving the alarm signal from a distant office
LOOP	–	Not used
BL	Red	Remains lit while data transmission on control channel (D ch) Remains lit while FP data downloading

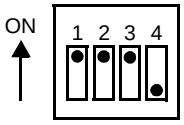
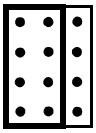
Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SENSE (Rotary SW) 	0-F	0	Always set to 0	
		1-F	Not used	
MB (Toggle SW)  **NOTE 1**		UP	For make-busy	
		DOWN	For normal operation	
SW1 (Piano Key SW) 	1	OFF	Always set to OFF	
	2	OFF	Always set to OFF	
	3	OFF	Always set to OFF	
	4	OFF	Always set to OFF	
SW2 (DIP SW) 	1	ON	Control channel signaling data transmission speed: 48 kbps	
		OFF	Control channel signaling data transmission speed: 64 kbps	
	2	ON	CRC Synchronization Detection Timer is provided.	
		OFF	CRC Synchronization Detection Timer is not provided.	
	3	ON	CRC4 Check is provided.	
		OFF	CRC4 Check is not provided.	

(Continued)

<table>
<tr><th>SWITCH NAME</th><th>SWITCH NUMBER</th><th>SETTING POSITION</th><th>FUNCTION</th><th>CHECK</th></tr>
<tr>
<td>SW2 (DIP SW)
 
</td>
<td>4</td><td>ON</td>
<td rowspan="9">Setting of control signal time slot
<table>
<tr><th colspan="5">SWITCH NUMBER</th><th rowspan="2">TIME SLOT NUMBER</th></tr>
<tr><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr>
<tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>TS1</td></tr>
<tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS2</td></tr>
<tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>TS3</td></tr>
<tr><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS4</td></tr>
<tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>TS5</td></tr>
<tr><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS6</td></tr>
<tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>TS7</td></tr>
<tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS8</td></tr>
<tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>TS9</td></tr>
<tr><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS10</td></tr>
<tr><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>TS11</td></tr>
<tr><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS12</td></tr>
<tr><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS13</td></tr>
<tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS14</td></tr>
<tr><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>TS15</td></tr>
<tr><td>ON</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS16</td></tr>
<tr><td>OFF</td><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>TS17</td></tr>
<tr><td>ON</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS18</td></tr>
<tr><td>OFF</td><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>TS19</td></tr>
<tr><td>ON</td><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS20</td></tr>
<tr><td>OFF</td><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS21</td></tr>
<tr><td>ON</td><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS22</td></tr>
<tr><td>OFF</td><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>TS23</td></tr>
<tr><td>ON</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS24</td></tr>
<tr><td>OFF</td><td>ON</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS25</td></tr>
<tr><td>ON</td><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS26</td></tr>
<tr><td>OFF</td><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>TS27</td></tr>
<tr><td>OFF</td><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>TS29</td></tr>
<tr><td>ON</td><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>TS30</td></tr>
<tr><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>OFF</td><td>TS31</td></tr>
</table>
NOTE 2, NOTE 3</td>
<td></td>
</tr>
<tr><td></td><td></td><td>OFF</td><td></td></tr>
<tr><td></td><td>5</td><td>ON</td><td></td><td></td></tr>
<tr><td></td><td></td><td>OFF</td><td></td><td></td></tr>
<tr><td></td><td>6</td><td>ON</td><td></td><td></td></tr>
<tr><td></td><td></td><td>OFF</td><td></td><td></td></tr>
<tr><td></td><td>7</td><td>ON</td><td></td><td></td></tr>
<tr><td></td><td></td><td>OFF</td><td></td><td></td></tr>
<tr><td></td><td>8</td><td>ON</td><td></td><td></td></tr>
<tr><td></td><td></td><td>OFF</td><td></td><td></td></tr>
</table>

(Continued)

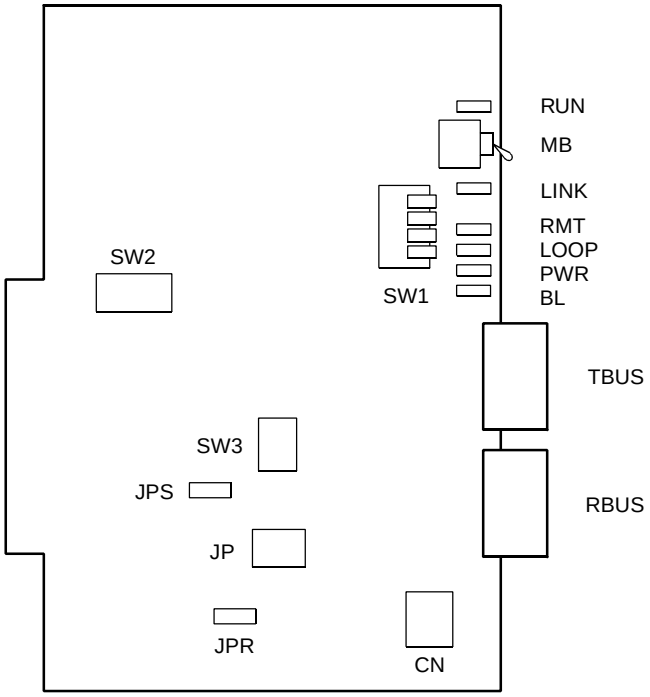
SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW3 (DIP SW) 	1	ON	Always set to ON	
	2	ON	Always set to ON	
	3	ON	Always set to ON	
	4	OFF	Always set to OFF	
JPS (Jumper Pin) 		Right	Balanced transmission: 120 ohms (for twisted-pair cable)	
		Left	TA is grounded on the transmission line: 75 ohms (for coaxial cable)	
JPR (Jumper Pin) 		Right	RA is grounded on the transmission line: 75 ohms (for coaxial cable)	
		Left	Balanced transmission: 120 ohms (for twisted-pair cable)	
E1Z (Jumper Pin) 		Right	Line impedance: 75 ohms (for coaxial cable)	
		Left	Line impedance: 120 ohms (for twisted-pair cable)	
SRT (Jumper Pin) 		Right	Line impedance: 75 ohms (for coaxial cable)	
		Left	Line impedance: 120 ohms (for twisted-pair cable)	

The figure in the SWITCH NAME column and the position in ( ) in the SETTING POSITION column indicate the standard setting of the switch. When the switch is not set as shown by the figure and ( ), the setting of the switch varies with the system concerned.

NOTE 1: When the power is on, flip the MB switch to ON (UP position) before plugging/unplugging the circuit card.
NOTE 2: Time Slot Number 0 and 28 (TS0/28) cannot be used for control signal.
NOTE 3: This setting must be identical with the opposite DAID card.

PN-DAIF (DAI)

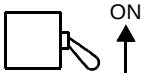
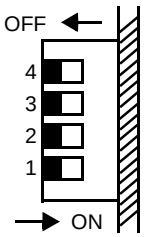
Location of Lamps, Switches, and Connectors



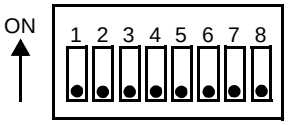
Lamp Indications

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while this card is operating normally
LINK	Green	Remains lit when the following connections are normal: • Control channel link between the DAID card and DAIE card • Connection between the opposite DAIF card Goes out after 15 seconds of link disconnection
RMT	Red	Remains lit when receiving the alarm signal from a distant office
LOOP	–	Not used
PWR	Red	Remains lit when detecting PCM signal loss (Only on the DAIF card mounted on the Main Site)
BL	–	Not used

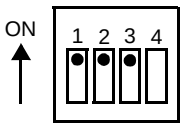
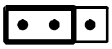
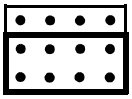
Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
MB (Toggle SW)  **NOTE**		UP	For make-busy	
		DOWN	For normal operation	
SW1 (Piano Key SW)  	1	OFF	Always set to OFF	
	2	ON	Line impedance: 75 ohms (for coaxial cable)	
		OFF	Line impedance: 120 ohms (for twisted-pair cable)	
	3	OFF	Always set to OFF	
	4	OFF	Always set to OFF	

(Continued)

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW2 (DIP SW) 	1	ON	Control channel signaling data transmission speed: 48 kbps	
		OFF	Control channel signaling data transmission speed: 64 kbps	
	2	ON	CRC Synchronization Detection Timer is provided.	
		OFF	CRC Synchronization Detection Timer is not provided.	
	3	ON	CRC4 Check is provided.	
		OFF	CRC4 Check is not provided.	
	4	OFF	Not used	
	5	OFF	Not used	
	6	OFF	Not used	
	7	OFF	Not used	
	8	OFF	Not used	

(Continued)

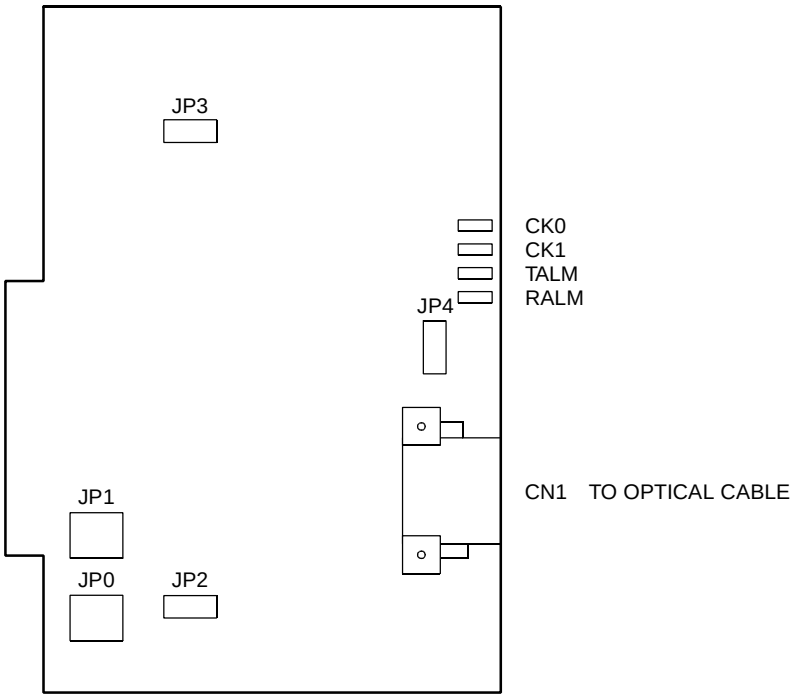
SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW3 (DIP SW) 	1	(ON)	Always set to ON	
	2	(ON)	Always set to ON	
	3	(ON)	Always set to ON	
	4	ON	When mounting this card on Remote Site.	
		OFF	When mounting this card on Main Site	
JPS (Jumper Pin) 		Right	TA is grounded on the transmission line: 75 ohms (for coaxial cable)	
		(Left)	Balanced transmission: 120 ohms (for twisted-pair cable)	
JPR (Jumper Pin) 		Right	RA is grounded on the transmission line: 75 ohms (for coaxial cable)	
		(Left)	Balanced transmission: 120 ohms (for twisted-pair cable)	
JP (Jumper Pin) 		UP	Line impedance: 75 ohms (for coaxial cable)	
		(DOWN)	Line impedance: 120 ohms (for twisted-pair cable)	

The figure in the SWITCH NAME column and the position in ( ) in the SETTING POSITION column indicate the standard setting of the switch. When the switch is not set as shown by the figure and ( ), the setting of the switch varies with the system concerned.

NOTE: When the power is on, flip the MB switch to ON (UP position) before plugging/unplugging the circuit card.

PN-M10 (M10)

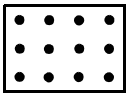
Location of Lamps, Switches, and Connectors



Lamp Indications

LAMP NAME	COLOR	FUNCTION
CK0	Green	Remains lit when a Digital Trunk Interface is connected to No. 0 circuit on this card
CK1	Green	Remains lit when a Digital Trunk Interface is connected to No. 1 circuit on this card
TALM	Red	Remains lit when optical output is stopped
RALM	Red	Remains lit when optical input is lost or stopped

Switch Settings

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
JP0, 1 (Jumper Pin) 		UP	When connected to E1 (2 M) Digital Trunk Interface	
		DOWN	When connected to T1 (1.5 M) Digital Trunk Interface	
JP2 (Jumper Pin) 		Right	Line code: B8ZS* is provided. (For T1 interface) *B8ZS: Bipolar Eight Zero Substitution	
		Left	Line code: B8ZS* is not provided. (For T1 interface) *B8ZS: Bipolar Eight Zero Substitution	
JP3 (Jumper Pin) 		Right	When connected to E1 (2 M) Digital Trunk Interface	
		Left	When connected to T1 (1.5 M) Digital Trunk Interface	
JP4 (Jumper Pin) 		UP	When connected to E1 (2 M) Digital Trunk Interface	
		DOWN	When connected to T1 (1.5 M) Digital Trunk Interface	