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NEAX[®] 2000 IVS

Remote PIM System Manual

SEPTEMBER, 1998

NEC America, Inc.

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NEAX2000 IVS Remote PIM System Manual

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This page is for your notes.

CHAPTER 1 INTRODUCTION

1. OUTLINE OF THIS MANUAL

This manual provides the system description and installation procedure for providing the Remote PIM System to the NEAX2000 IVS.

2. REFERENCE MANUALS

Refer to the following manuals for additional information on equipment and programming installation:

- Installation Procedure Manual
- Small Platform System Manual
- Circuit Card Manual
- Command Manual
- Office Data Programming Manual
- Maintenance Manual

This page is for your notes.

CHAPTER 2 SYSTEM DESCRIPTION

1. SYSTEM OUTLINE

Remote PIMs can be installed separately in the same 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) digital interface.

Figure 2-1 shows an outline of the Remote PIM System.

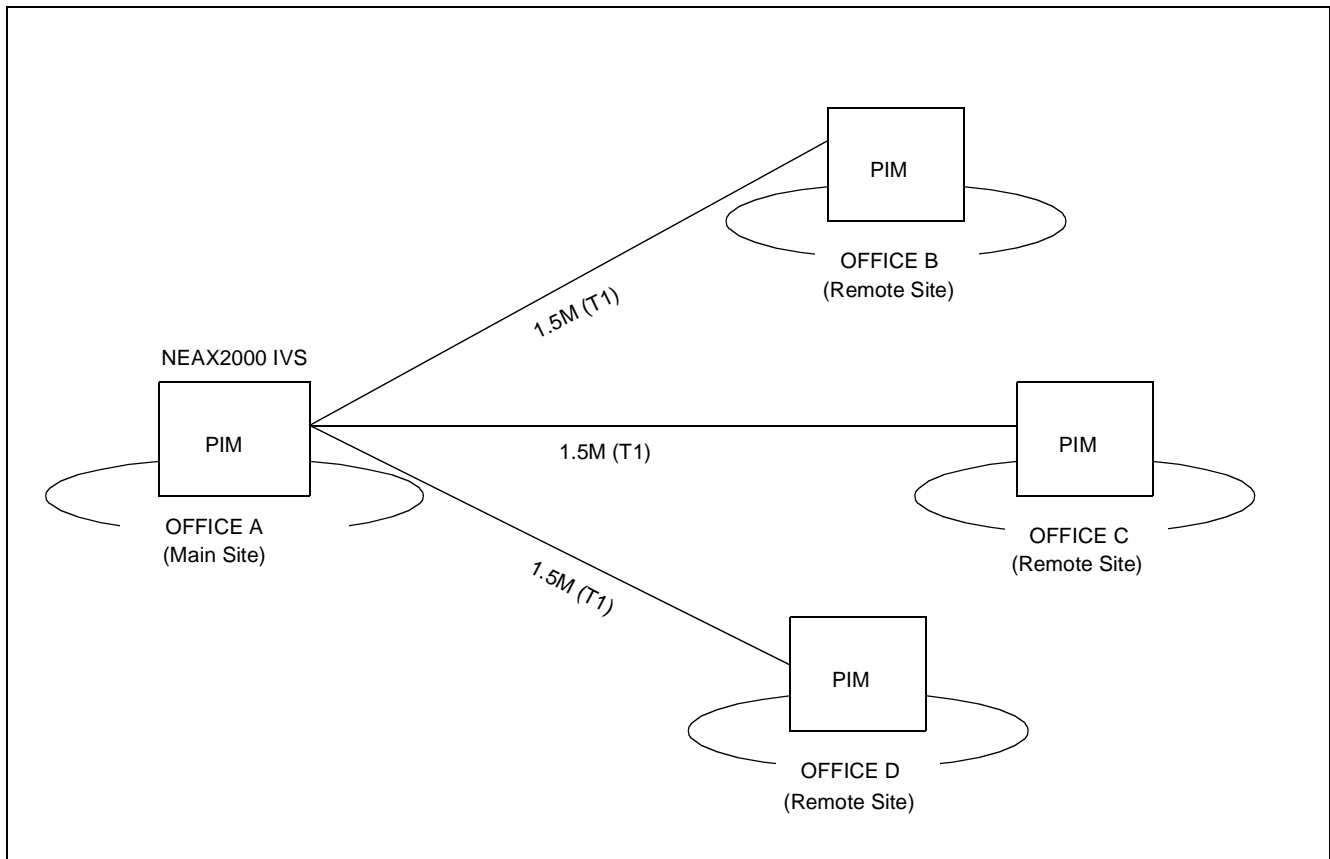





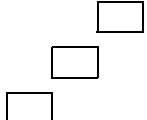


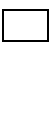
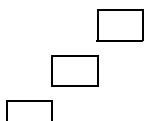






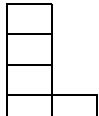

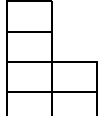

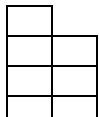
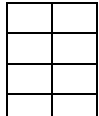
Figure 2-1 Remote PIM System Outline

Note: *The remote PIM contains station and trunk cards. A CPU card is not required in the remote offices.*

2. PIM CONFIGURATION

One PIM can be installed respectively as a remote site. A maximum of 3 remote sites can be provided. The number of remote sites determines the number of PIMs in one system. [Table 2-1](#) shows the available PIM configuration for the Remote PIM System.

Table 2-1 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) 	-	-	-

3. SYSTEM CONFIGURATION

Figure 2-2 shows the system configuration.

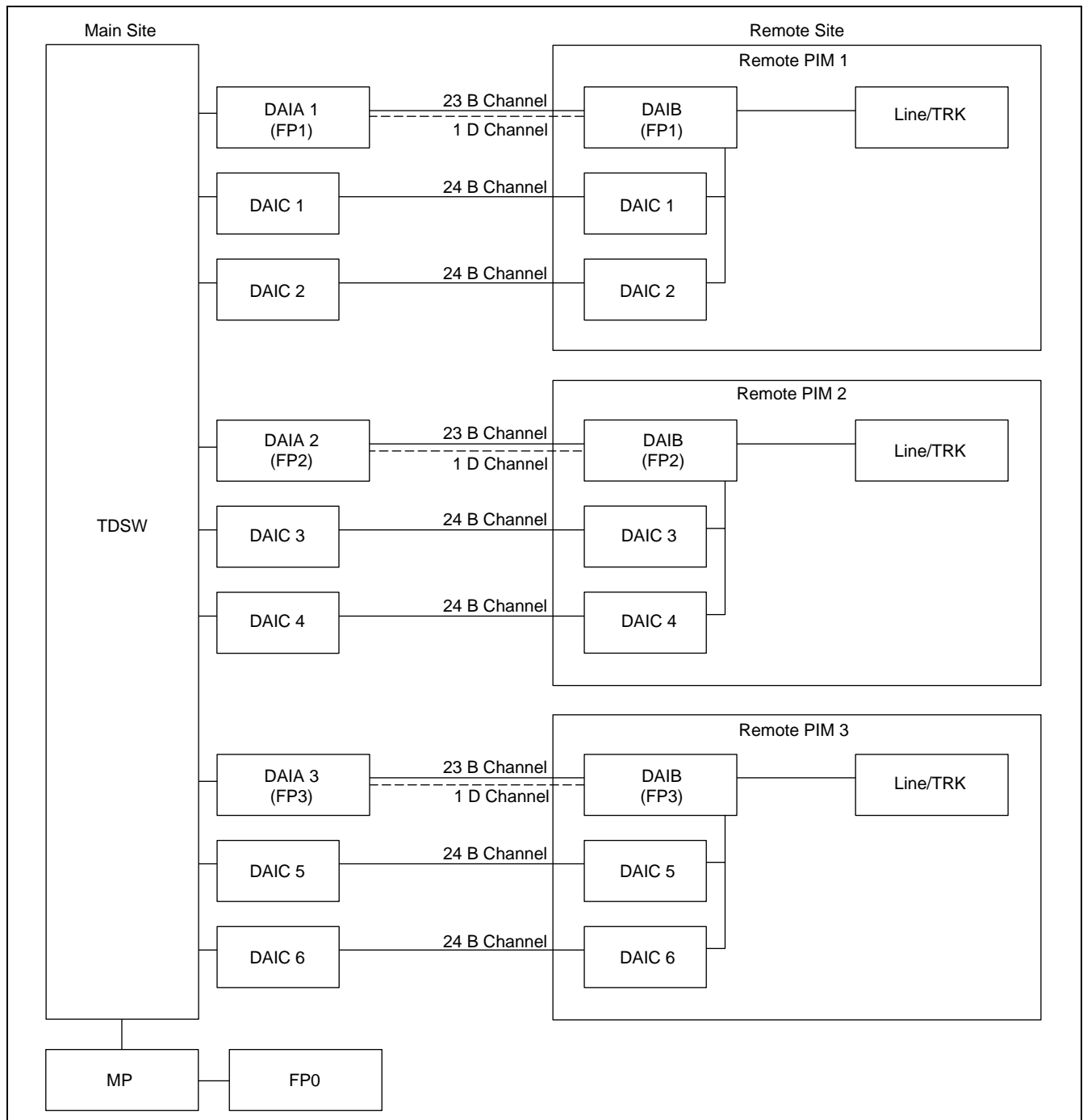


Figure 2-2 System Configuration

4. REQUIRED EQUIPMENT

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

Table 2-2 Required Equipment

EQUIPMENT NAME	DESCRIPTION
SN1308 PIM P-A (PIM Q-UA)	<p>Port Interface Module for Small Platform System/Remote PIM system (remote site)</p> <p>A PIM provides 13 card slot for common control, Line/Trunk cards. It also houses a AC/DC power supply and optional batteries for protection from short-term power interruption.</p> <p>Three champ connectors for line/trunk (LTC0 to 2) and a connector for Power (PWR) are located at the lower front side of the PIM.</p>
SN1420 PIMAB-A	<p>Port Interface Module (PIM) for 1000 IVS/Remote PIM system (remote site).</p> <p>A PIM provides 10 card slots for common control, Line/Trunk, and Application Processor (AP) cards. It is also houses a AC/DC Power Supply and batteries for protection from short-term power interruption. Two champ connectors for line/trunk (LTC0 to 1) and a connector for Power (PWR) are located at the lower front side of the PIM.</p>
PN-DAIA (DAIA Card)	<p>Interface card for Remote PIM System at main site</p> <p>This card provides 1.5 Mbps (24 channel) digital interface, firmware processor, and BUS interface; 1 through 3 DAIA cards must be provided at main site, which corresponds to the number of the remote site.</p>
PN-DAIB (DAIB Card)	<p>Interface card for the Remote PIM System at remote site</p> <p>This card provides 1.5 Mbps (24 channel) digital interface, firmware processor; 1 card is required per Remote PIM at the remote site.</p>
PIM N-UB	<p>Port Interface Module for 128/512 port systems/Remote PIM system. This PIM can be a Remote PIM or main office PIM.</p> <p>This PIM provides 19 slots for common control line and trunk cards. This PIM houses an AC/DC power supply and optional batteries for short-term power interruption.</p> <p>Three champ connectors for line/trunk (LTC0 to 2) and a connector for Power (PWR) are located at the lower front side of the PIM.</p>

Table 2-2 Required Equipment (Continued)

EQUIPMENT NAME	DESCRIPTION
PN-DAIC (DAIC Card)	<p>Digital Interface Channel Expansion Card. This card provides the 1.5Mbps (24 channel) digital interface. 1 through 6 DAIC cards can be provided at main site. In Remote PIM, 2 DAIC cards can be provided. Small Platform PIM: up to 64 line/trunks can be accommodated. 1000 IVS PIM: up to 47 line/trunks can be accommodated.</p>
PN-BS00/BS01 (BUS interface Card)	<p>BUS interface cards for PIM0 or PIM1 through PIM7</p> <p>For Remote PIM System, BS00 card is required at the main site, even if the system is 1-PIM configuration.</p>
PN-CP01 (FP Card)	<p>Firmware processor card</p> <p>For Remote PIM System, CP01 card must be mounted on PIM0 at the main site, even if the system is 1-PIM configuration.</p>
RMT PCM-0.3 CA	<p>1 ft. (30 cm) PCM signal cable</p> <p>This cable is used for connection between DAIA card and BUS interface card.</p>
17-TW-0.3 CONN CA-A	<p>1 ft. (30 cm) connection cable between DAIA cards</p> <p>This cable is required when plural DAIA cards are mounted in a PIM at the main site.</p>
48-TW-0.2 CONN CA	<p>1ft. (30 cm) connection cable.</p> <p>This cable is used for connecting between DAIA card and DAIC card or DAIB card and DAIC card.</p>

5. SYSTEM CAPACITY

Table 2-3 shows the system capacity.

Table 2-3 System Capacity

DESCRIPTION	CAPACITY			REMARKS
	MAIN PIM	REMOTE PIM		
	2000 IVS	SMALL PLATFORM (72 Port)	1000 IVS (48 Port)	
Max. number of DAIA card	3	-	-	
Max. number of DAIB card	-	1	1	
Max. number of DAIC card	6	2	1	
Max. number of ports on Remote Site	-	24 Note 1	24 Note 1	Main PIM :DAIA Remote PIM :DAIB
		48 Note 1	48 Note 1	Main PIM :1 DAIA, 2 DAIC Remote PIM :1 DAIB, 2 DAIC
		64 Note 1	-	Main PIM :1 DAIA, 2 DAIC Remote PIM :1 DAIB, 2 DAIC
Number of PIM	1, 2	3 Note 2	3	Number of PIM depends on the number of Main PIM and Remote PIM. (Refer to Chapter, Section 2.)
	3, 4	2 Note 2	2 Note 2	
	5, 6	1	1 Note 2	
	7, 8	0 Note 3	0 Note 3	

Note 1: 1 port is used for the control signaling channel.

Note 2: This number refers to the maximum number of remote offices. The remote office can have only one remote PIM.

Note 3: When the main site consists of 7 or 8 PIMs, a Remote PIM cannot be provided.

6. SYSTEM CONDITIONS

For providing the Remote PIM System to the NEAX2000 IVS, observe the following conditions:

- (1) The main site must be the NEAX2000 IVS. The Small Platform System cannot be the main site. The main site must be a medium platform (320 ports) or a large platform (512 ports). The small platform (72 ports) cannot be used.
- (2) The Remote PIM can be a PIM N-UB, a PIM Q-UA, or a PIM AB-A.
- (3) The Remote PIM can be installed at a maximum of 1312 ft. (399 m) distance from the main site. Using line extension equipment (repeater, MUX etc.), the distance can be extended.
- (4) A maximum of 23 lines/trunks can be accommodated in one Remote PIM.
- (5) On the remote site, the line/trunk circuit cards can be used as same as the main site, except the CSI card for wireless system according to UTAM regulation. However, the application circuit cards cannot be used at the remote site. When providing the ILC card to the remote site, the ICH card must be installed on the main site.
- (6) For the Remote PIM System, the installation procedures for modules, circuit cards and peripheral equipment are the same as those for the regular NEAX2000 IVS, except the DAIA card and the DAIB card installation and the BUS cable connection. Refer to the applicable manuals for detailed information.
- (7) When the link between the main site and the remote site is lost, the system activates PFT (Power Failure Transfer) automatically on the remote site, if provided.
- (8) The resident system programming cannot be set to the remote site while the main site can be set.
- (9) When the LC cards that use an AP card directly (i.e., ILC requires ICH, and 4COTB requires 4RSTC.) If ILC or COTB are mounted in the Remote PIM, the T1 link between the main and remote sites must be configured as 64 Kbps with ESF and B8ZS.
- (10) In the remote site, if the Remote PIM is a 72-port PIM or a 48-port PIM, when installing a 4-circuit card (LC, DLC, COT, etc.), assign a phantom DK00 to Level 4 and Level 6 of that LT slot. This assignment will shift the time slots over enabling the use of additional card slots. (This action is not required if the Remote PIM is a 64-port PIM.)

7. TIME SLOT ALLOCATION

One time slot of the last 24 time slots provided by the DAIA-DAIB connection is used for the control signaling channels. [Figure 2-3](#) shows an example of time slot allocation when mounting 8 port cards to the Small Platform PIM.

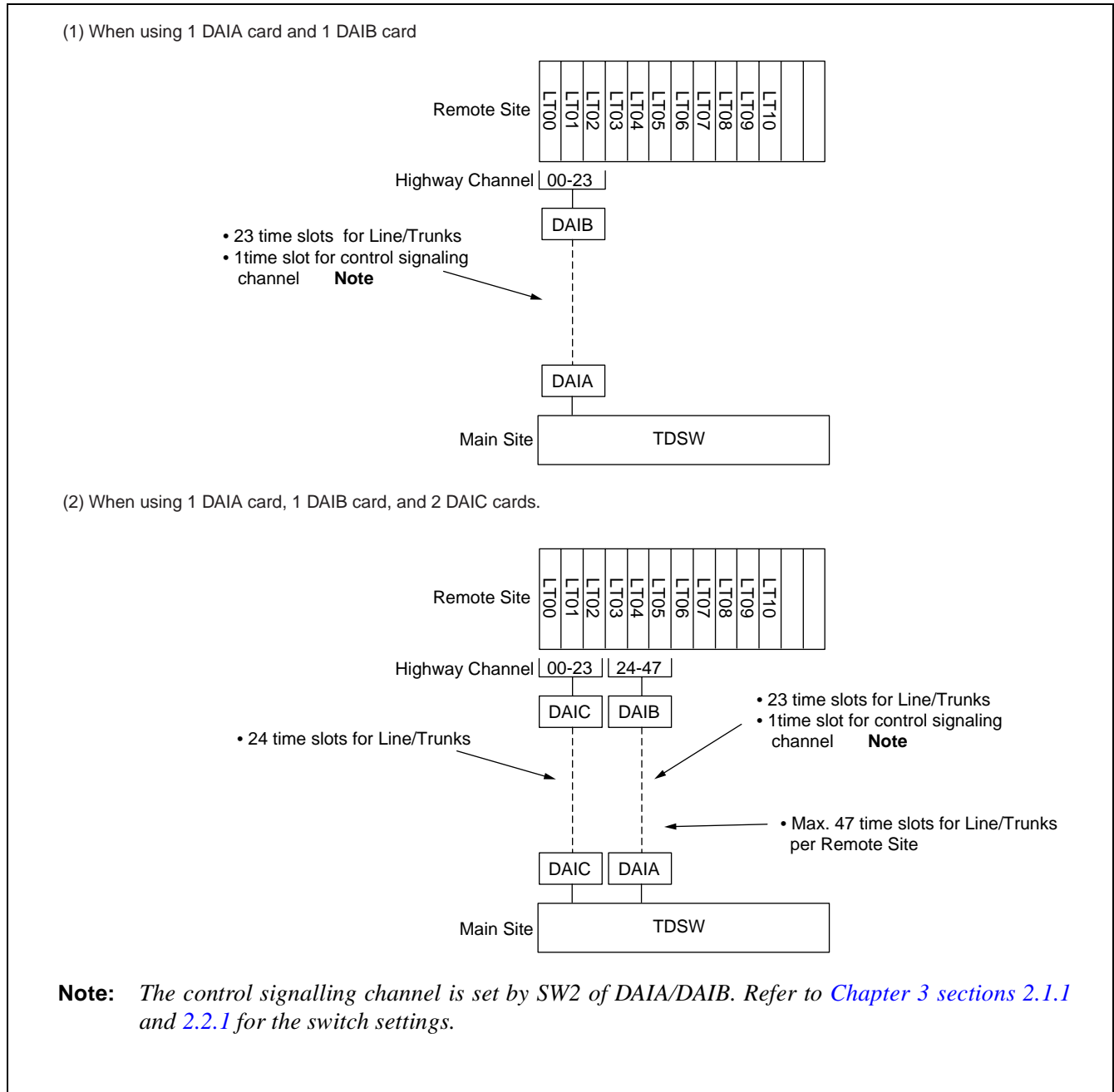
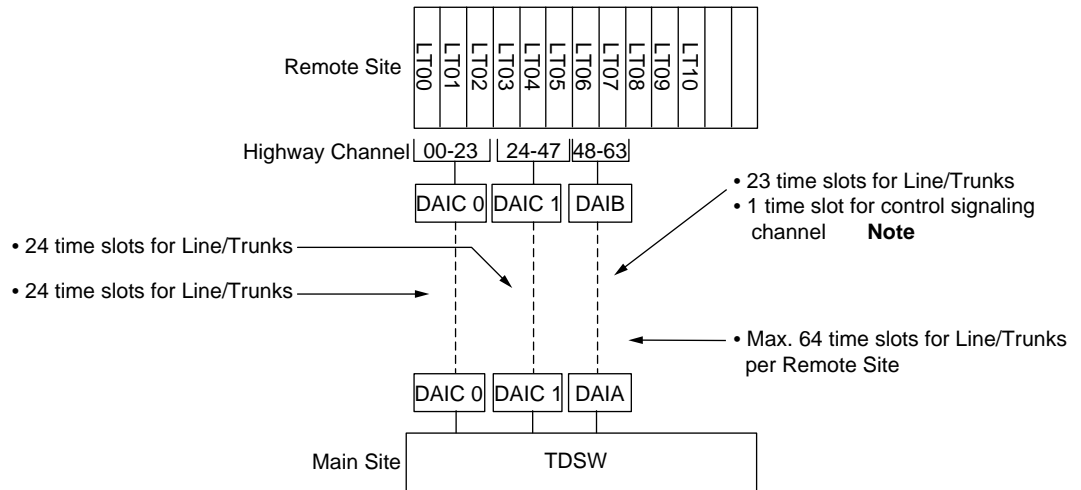


Figure 2-3 Time Slot Allocation

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



Note: The control signalling channel is set by SW2 of DAIA/DAIB card. Refer to [Chapter 3 sections 2.1.1 and 2.2.1](#) for the switch settings.

Figure 2-4 Time Slot Allocation (Continued)

This page is for your notes.

CHAPTER 3 INSTALLATION

1. PRECAUTION IN HANDLING

When handling cards, the installer must wear a grounded wrist strap to protect the circuit card from static electricity, and the installer must engage in the work on a grounded conductive work surface. [Figure 3-1](#) illustrates the actions to take while handling circuit cards.

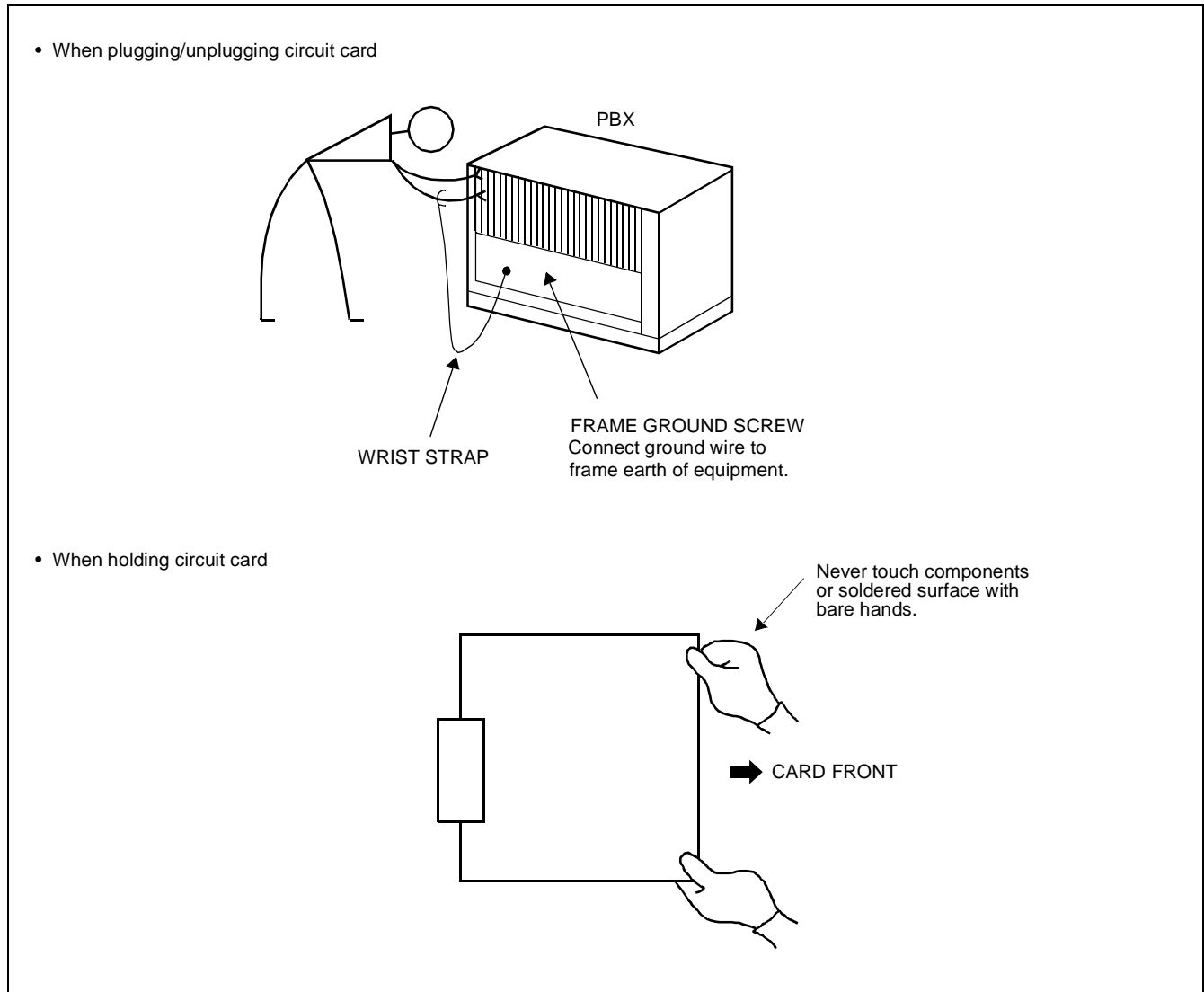


Figure 3-1 Static Electricity Guard

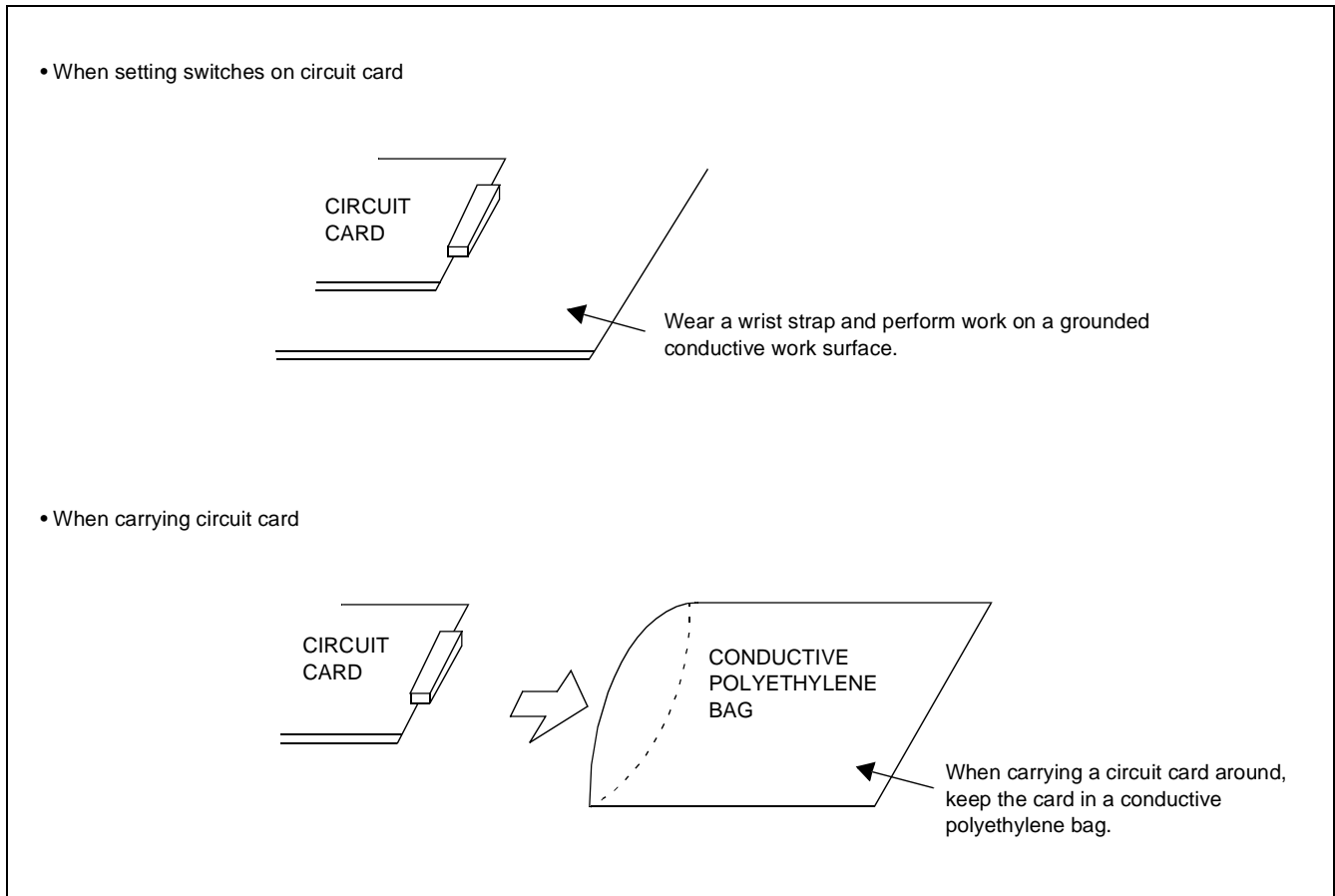


Figure 3-1 Static Electricity Guard (Continued)

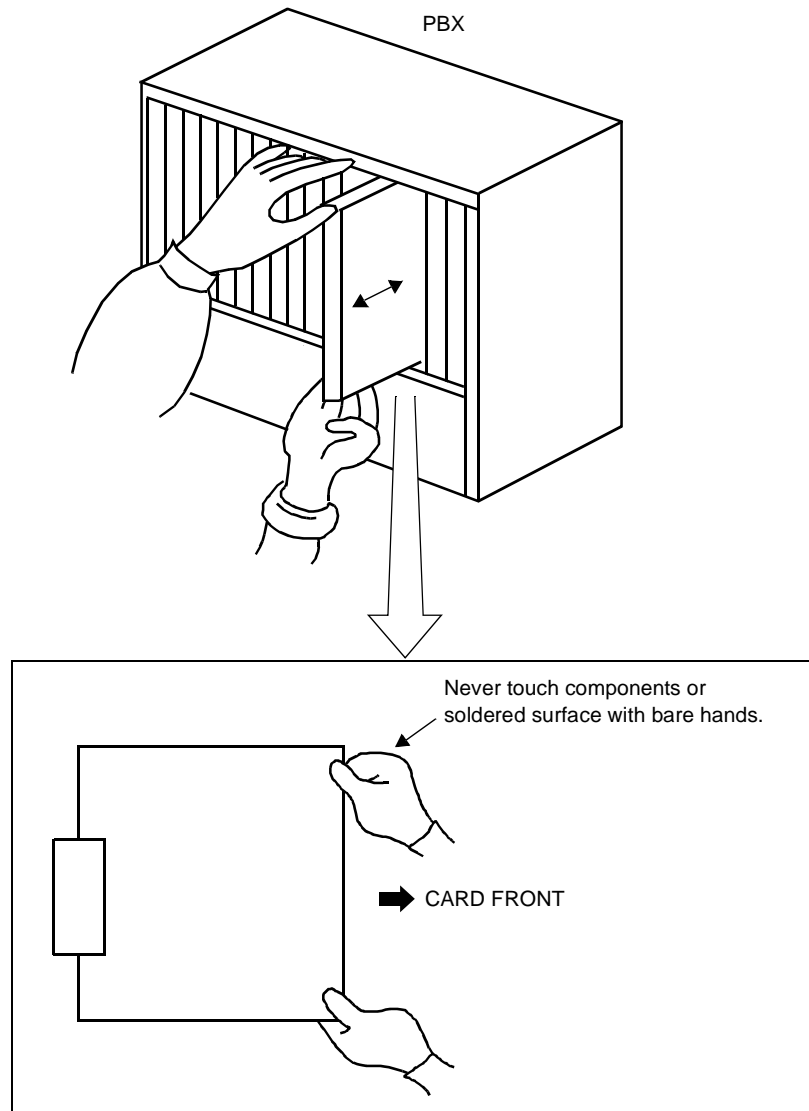
The symbol shown in [Figure 3-2](#) designates procedures in which circuit cards are handled. When engaging in such work, the installer must be careful not to cause damage by static electricity.



Figure 3-2 Static-Sensitive Attention Symbol

CAUTION

When plugging or unplugging the circuit card, always hold the circuit card by its edge. If you touch another area, you may be exposed to hazardous voltages.



2. INSTALLATION PROCEDURE

Install the Remote PIM System according to the following procedure. [Figure 3-3](#) and [Figure 3-4](#) show the installation procedure for the main site and the remote site.

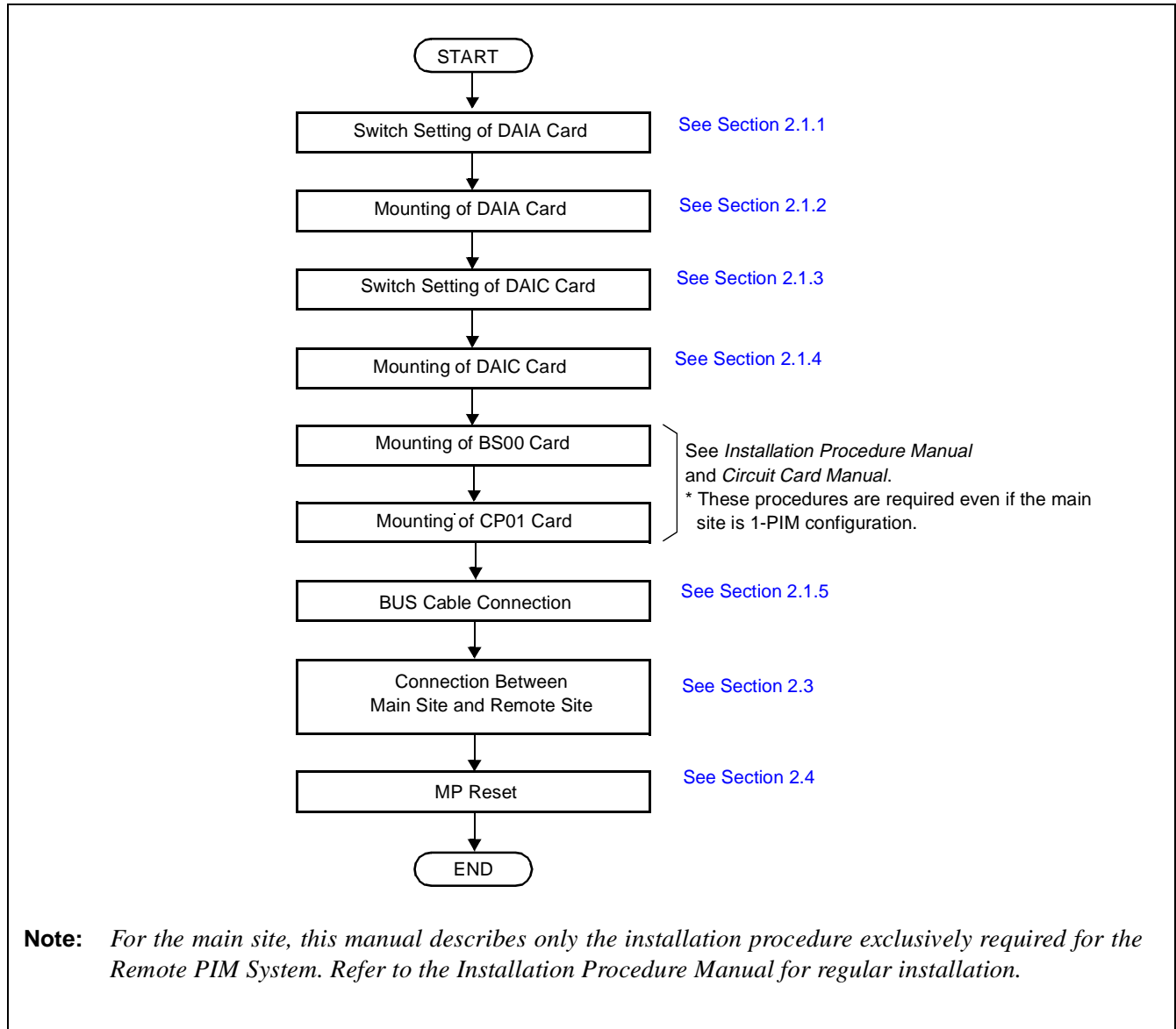


Figure 3-3 Installation Procedure for Main Site

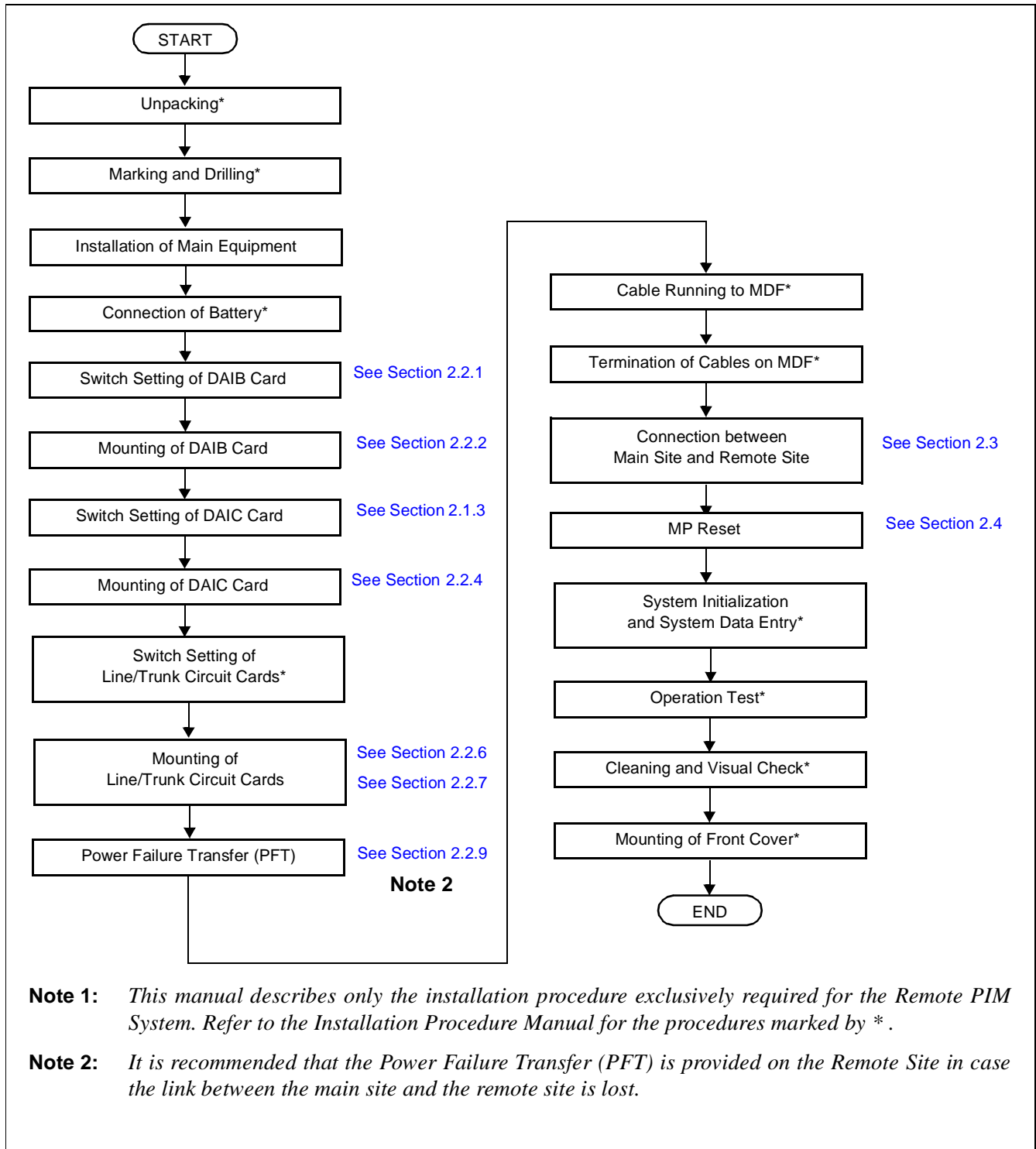


Figure 3-4 Installation Procedure for Remote Site

2.1 Installation Procedure for Main Site

2.1.1 Switch Setting of DAIA Card

- (1) Location of Lamps, Switches, and Connectors (see [Figure 3-5](#))

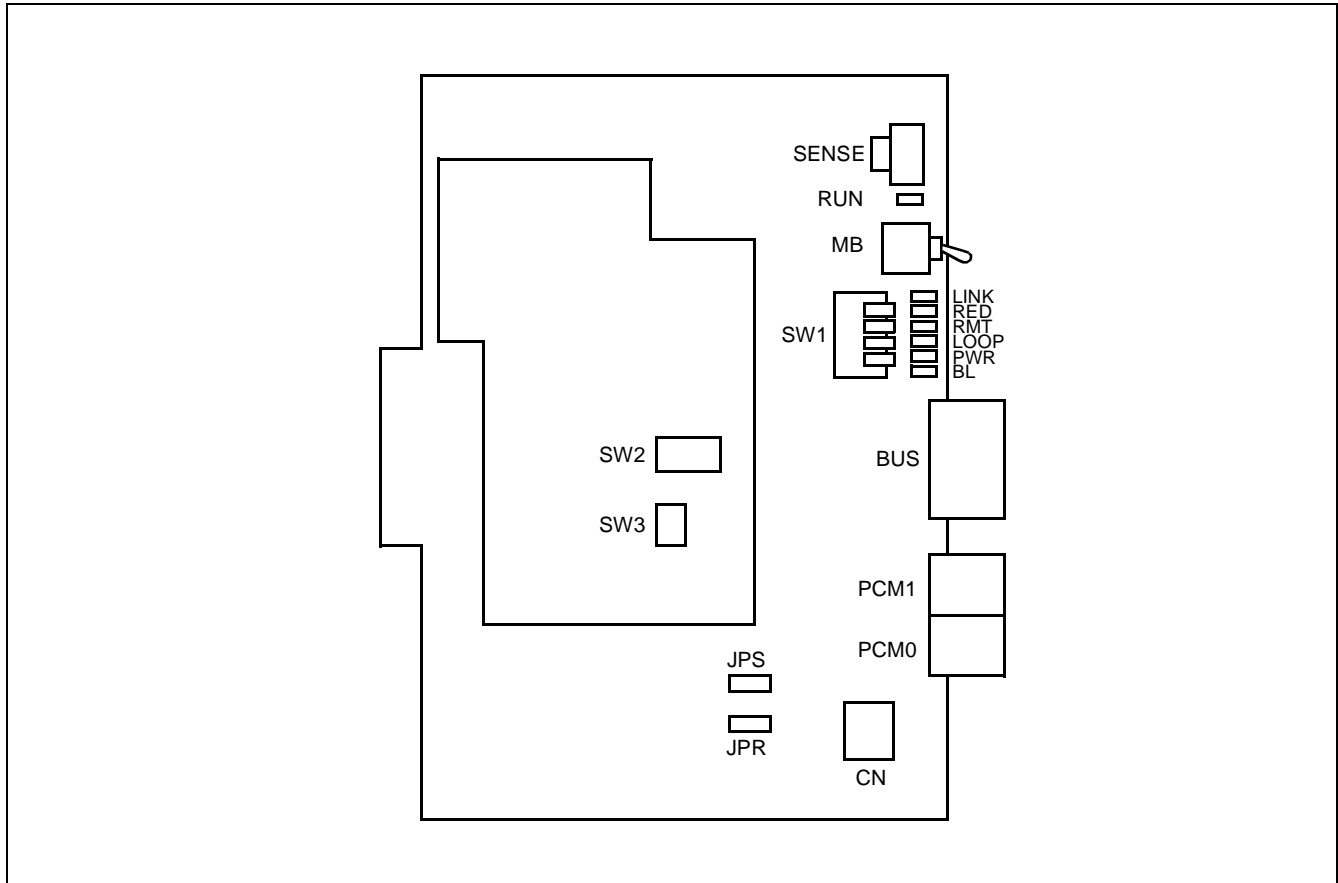


Figure 3-5 PN-DAIA Card

(2) Lamp Indications (see [Table 3-1](#))

Table 3-1 Lamp Indications on PN-DAIA Card

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

(3) Switch Settings



In Table 3-2, 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.

Table 3-2 Switch Settings on PN-DAIA Card


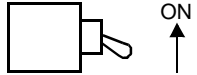

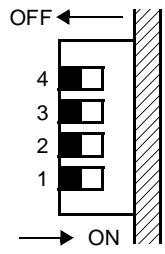




SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW1 (Rotary SW)  Note 1 Note 2	0 – F		FP (Firmware Processor) Number setting for DAIA card. By this setting, system regards DAIA card and the opposite DAIB card as one firmware processor.	
		0	Not used	
		1	FP No. 1	
		2	FP No. 2	
		3	FP No. 3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

Table 3-2 Switch Settings on PN-DAIA Card (Continued)

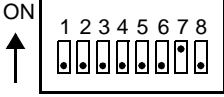
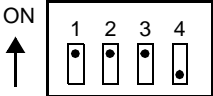


SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK																																																																																																																																				
SW2 (Dip SW) 	1	ON	Control channel signaling data transmission speed: 48 Kbps																																																																																																																																					
		OFF	Control channel signaling data transmission speed: 64 Kbps																																																																																																																																					
	2	ON	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	ON	Setting of control signal time slot																																																																																																																																					
		OFF																																																																																																																																						
	5	ON	<table border="1"> <thead> <tr> <th colspan="5">SWITCH NUMBER</th> <th>TIME SLOT NUMBER</th> </tr> <tr> <th>4</th> <th>5</th> <th>6</th> <th>7</th> <th>8</th> <th></th> </tr> </thead> <tbody> <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> </tbody> </table>	SWITCH NUMBER					TIME SLOT NUMBER	4	5	6	7	8		OFF	ON	ON	ON	ON	TS1	ON	OFF	ON	ON	ON	TS2	OFF	OFF	ON	ON	ON	TS3	ON	ON	OFF	ON	ON	TS4	OFF	ON	OFF	ON	ON	TS5	ON	OFF	OFF	ON	ON	TS6	OFF	OFF	OFF	ON	ON	TS7	ON	ON	ON	OFF	ON	TS8	OFF	ON	ON	OFF	ON	TS9	ON	OFF	ON	OFF	ON	TS10	OFF	OFF	ON	OFF	ON	TS11	ON	ON	OFF	OFF	ON	TS12	OFF	ON	OFF	OFF	ON	TS13	ON	OFF	OFF	OFF	ON	TS14	OFF	OFF	OFF	OFF	ON	TS15	ON	ON	ON	ON	OFF	TS16	OFF	ON	ON	ON	OFF	TS17	ON	OFF	ON	ON	OFF	TS18	OFF	OFF	ON	ON	OFF	TS19	OFF	OFF	OFF	ON	OFF	TS23	
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8	ON																																																																																																																																							
	OFF																																																																																																																																							
			* Time slot number 0, 20, 21, and 22 (TS0/20/21/22) cannot be used for control signal.																																																																																																																																					
			** This setting must be identical with the opposite DAIB card.																																																																																																																																					

Table 3-2 Switch Settings on PN-DAIA Card (Continued)

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK																												
SW3 (Dip SW) 	1	<input type="radio"/> ON	Set equalizer according to cable length between system and CSU. <table border="1" data-bbox="727 390 1268 621"> <thead> <tr> <th>SW-1</th> <th>SW-2</th> <th>SW-3</th> <th>CABLE LENGTH</th> </tr> </thead> <tbody> <tr> <td>ON</td> <td>ON</td> <td>ON</td> <td>0 - 131.2 ft. (0 - 40 m)</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>OFF</td> <td>131.2 - 262.5 ft. (40 - 80 m)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>ON</td> <td>262.5 - 394 ft. (80 - 120 m)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>394 - 525 ft. (120 - 160 m)</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>ON</td> <td>525 - 656 ft. (160 - 200 m)</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>Signal is not sent</td> </tr> </tbody> </table>	SW-1	SW-2	SW-3	CABLE LENGTH	ON	ON	ON	0 - 131.2 ft. (0 - 40 m)	ON	ON	OFF	131.2 - 262.5 ft. (40 - 80 m)	ON	OFF	ON	262.5 - 394 ft. (80 - 120 m)	ON	OFF	OFF	394 - 525 ft. (120 - 160 m)	OFF	ON	ON	525 - 656 ft. (160 - 200 m)	OFF	OFF	OFF	Signal is not sent	
		SW-1		SW-2	SW-3	CABLE LENGTH																										
	ON	ON		ON	0 - 131.2 ft. (0 - 40 m)																											
	ON	ON		OFF	131.2 - 262.5 ft. (40 - 80 m)																											
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	OFF	ON		ON	525 - 656 ft. (160 - 200 m)																											
	OFF	OFF		OFF	Signal is not sent																											
	<input type="radio"/> OFF																															
	2	<input type="radio"/> ON																														
<input type="radio"/> OFF																																
3	<input type="radio"/> ON																															
	<input type="radio"/> OFF																															
4	<input type="radio"/> OFF	Always set to OFF																														
JPS (Jumper pin) 	Right	For mounting this card on PIM1 ~ PIM7																														
	Left	For mounting this card on PIM0																														
JPR (Jumper pin) 	Right	Neutral grounding on the receiving line is provided.																														
	<input type="radio"/> Left	Neutral grounding on the receiving line is not provided.																														

Note 1: Set the groove on the switch knob to the desired switch position.

Note 2: Since DAIA card acts like an FP, the SW1 for DAIA in FPs cannot be set to the same number.

Note 3: When power is on, flip MB switch to ON (UP position) before plugging/unplugging the circuit card.

Note 4: When the clock signal from a master office is supplied via the line between the Main Site and the Remote Site, set the SW1-1 and SW1-2 according to settings in [Table 3-3](#). In this case, DAIA cards (DAIA0, DAIA1) must be mounted in PIM0.

Table 3-3 Switch Settings When Clock Signal Supplied From Master Office

CONDITIONS	DAIA0		DAIA1		DAIA2		REMARKS
	SW1-1	SW1-2	SW1-1	SW1-2	SW1-1	SW1-2	
Only 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 is automatically changed to route 1 (DAIA1) if transmission line failure occurs on supply route 0.

2.1.2 Mounting of DAIA Card

STEP 1: Set MB switch on the DAIA card to up position.

STEP 2: Mount DAIA card in the AP slots (AP0-AP7) on the Main Site PIM0-PIM5. A maximum of three DAIA cards can be mounted. Figure 3-6 shows the mounting location of the DAIA card.



On the multiple PIM configuration, the DAIA card(s) must be mounted on the first/last PIM due to the number of connectors of a BUS card. After mounting the card, set MB switch to down position.

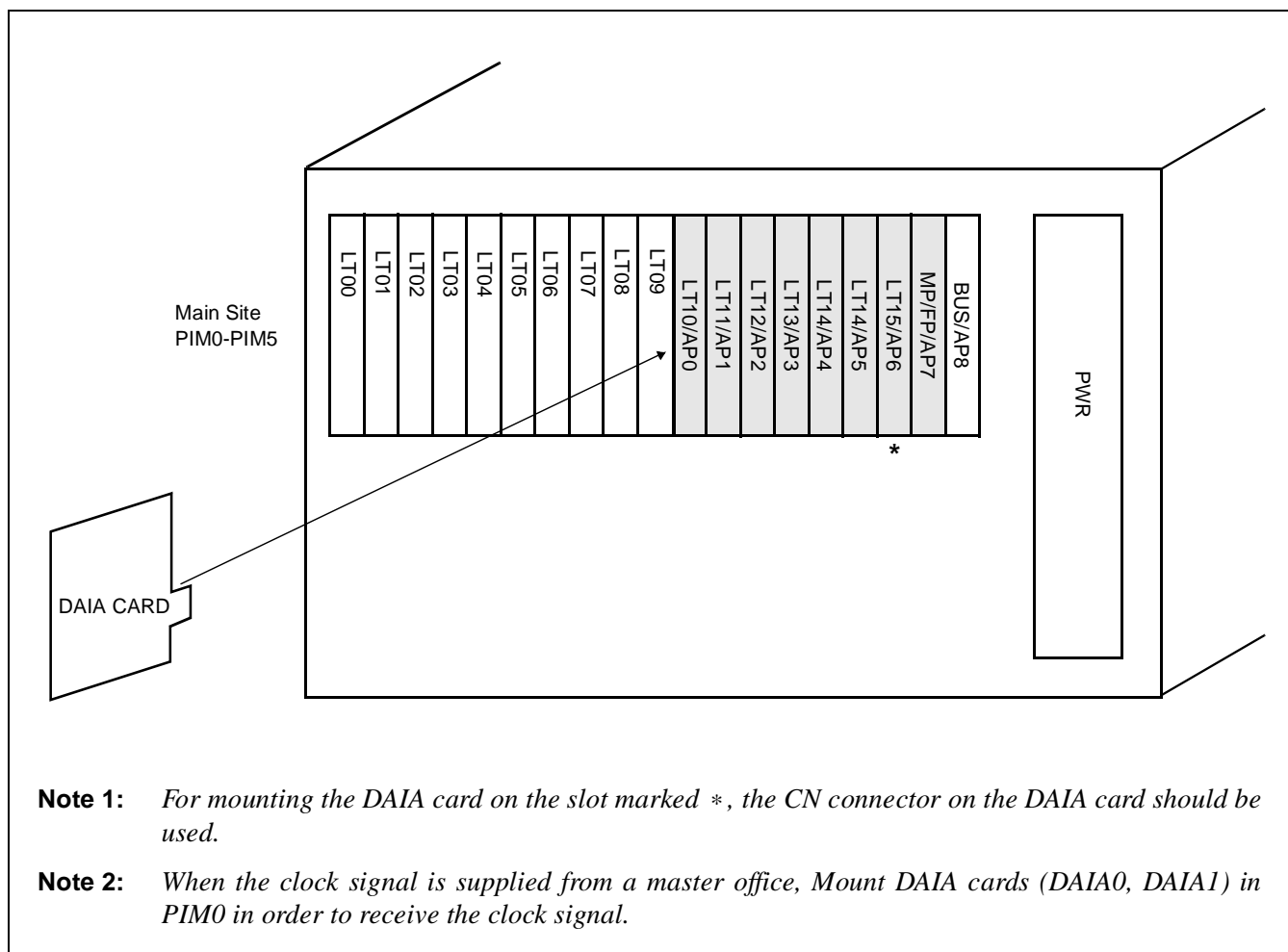


Figure 3-6 Mounting Location of DAIA Card

2.1.3 Switch Setting of DAIC Card

(1) Location of Lamps, Switches, and Connectors (See [Figure 3-7.](#))

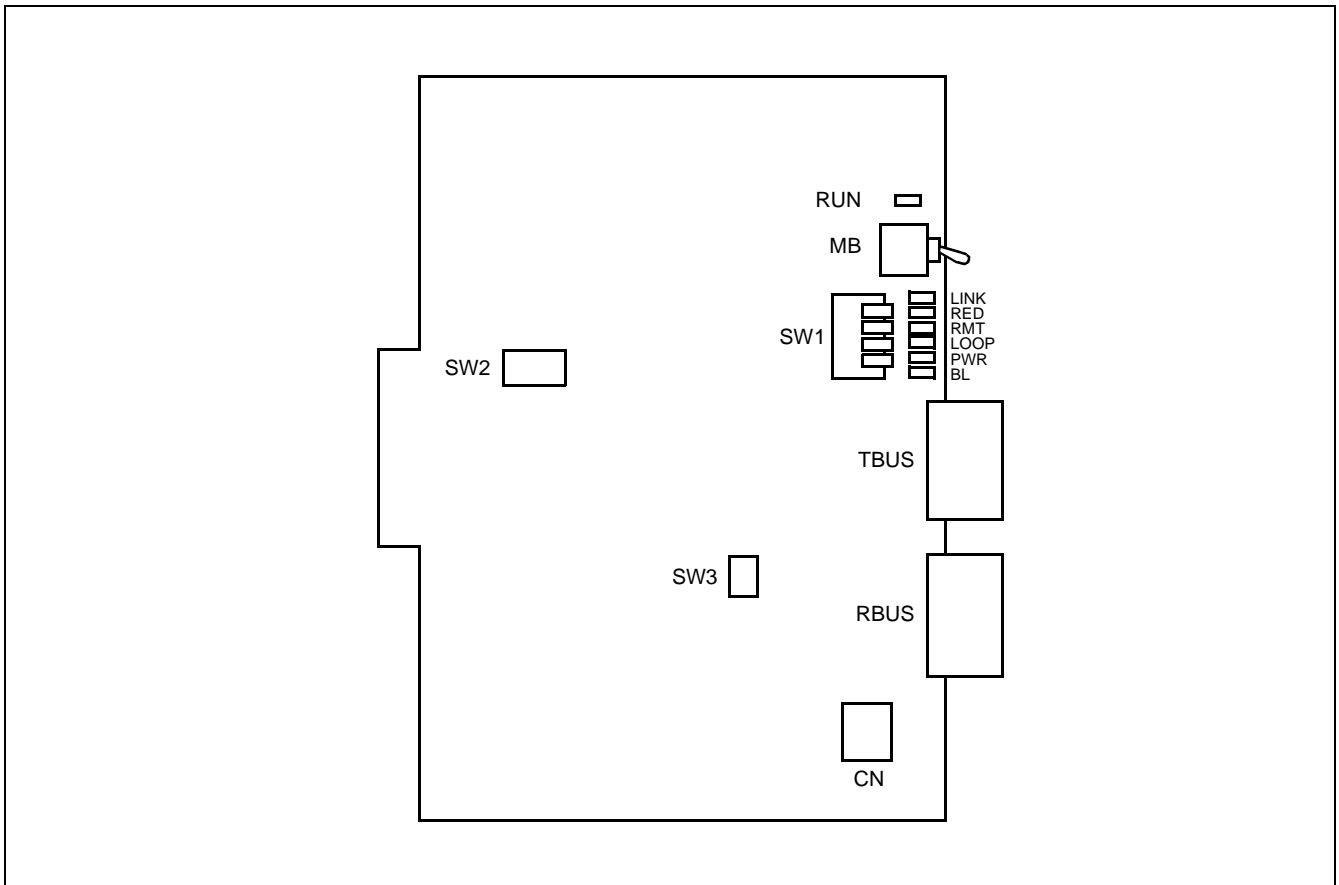


Figure 3-7 PN-DAIC Card

(2) Lamp Indications (See [Table 3-4.](#))

Table 3-4 Lamp Indications on PN-DAIC Card

LAMP NAME	COLOR	FUNCTION
RUN	Green	Flashes at 120 IPM while this card is operating normally.
LINK	Green	Lights when the following connections are normal. <ul style="list-style-type: none"> • 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	Lights when detecting PCM signal loss or Frame Alignment signal loss.
RMT	Red	Lights when receiving an alarm signal from a distant office.
LOOP	–	Not used
PWR	–	Not used
BL	–	Not used

(3) Switch Settings

Table 3-5 Switch Settings on PN-DAIC Card

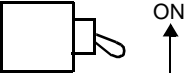
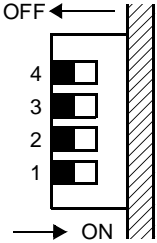
SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
MB (Toggle SW)  Note	/	UP	For make-busy	
		DOWN	For normal operation	
SW1 (Piano Key SW) 	1	OFF	Always set to OFF	
	2	OFF	Always set to OFF	
	3	OFF	Always set to OFF	
	4	OFF	Always set to OFF	

Table 3-5 Switch Settings on PN-DAIC Card (Continued)

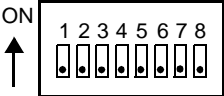
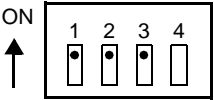
SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW2 (Dip SW) 	1	OFF	Not used	
	2	ON	DTI frame configuration: 12-Multi Frame	
		OFF	DTI frame configuration: 24-Multi Frame	
	3	ON	Line code: AMI with ZCS	
		OFF	Line code: B8ZS	
	4	OFF	Not used	
	5	OFF	Not used	
	6	OFF	Not used	
	7	OFF	Not used	
8	OFF	Not used		

Table 3-5 Switch Settings on PN-DAIC Card (Continued)

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK																												
SW3 (Dip SW) 	1	<input type="radio"/>	Set the equalizer according to the cable length between the system and the CSU. <table border="1" data-bbox="857 394 1328 604"> <thead> <tr> <th>SW-1</th> <th>SW-2</th> <th>SW-3</th> <th>CABLE LENGTH</th> </tr> </thead> <tbody> <tr> <td>ON</td> <td>ON</td> <td>ON</td> <td>0 - 131.2 ft (0 - 40 m)</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>OFF</td> <td>131.2 - 262.5 ft. (40 - 80 m)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>ON</td> <td>262.5 - 394 ft. (80 - 120 m)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>394 - 525 ft. (120 - 160 m)</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>ON</td> <td>525 - 656 ft. (160 - 200 m)</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>Signal is not sent</td> </tr> </tbody> </table>	SW-1	SW-2	SW-3	CABLE LENGTH	ON	ON	ON	0 - 131.2 ft (0 - 40 m)	ON	ON	OFF	131.2 - 262.5 ft. (40 - 80 m)	ON	OFF	ON	262.5 - 394 ft. (80 - 120 m)	ON	OFF	OFF	394 - 525 ft. (120 - 160 m)	OFF	ON	ON	525 - 656 ft. (160 - 200 m)	OFF	OFF	OFF	Signal is not sent	
		SW-1		SW-2	SW-3	CABLE LENGTH																										
	ON	ON		ON	0 - 131.2 ft (0 - 40 m)																											
	ON	ON		OFF	131.2 - 262.5 ft. (40 - 80 m)																											
	ON	OFF		ON	262.5 - 394 ft. (80 - 120 m)																											
	ON	OFF		OFF	394 - 525 ft. (120 - 160 m)																											
	OFF	ON		ON	525 - 656 ft. (160 - 200 m)																											
	OFF	OFF		OFF	Signal is not sent																											
	OFF																															
	2	<input type="radio"/>																														
		OFF																														
	3	<input type="radio"/>																														
OFF																																
4	ON	When mounting this card on remote site.																														
	OFF	When mounting this card on main site.																														

In [Table 3-5](#), 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.

2.1.4 Mounting of DAIC Card



STEP 1: Set MB switch on the DAIC card to up position.

STEP 2: Mount DAIC card in the AP slots (AP0-AP7) to the LT slot (LT09) on the Main Site PIM0-PIM5.

A maximum of six DAIC cards can be mounted.

After mounting the card, set MB switch to down position.

STEP 3: After mounting all DAIC cards, set MB switch on DAIA card to up, and then down.

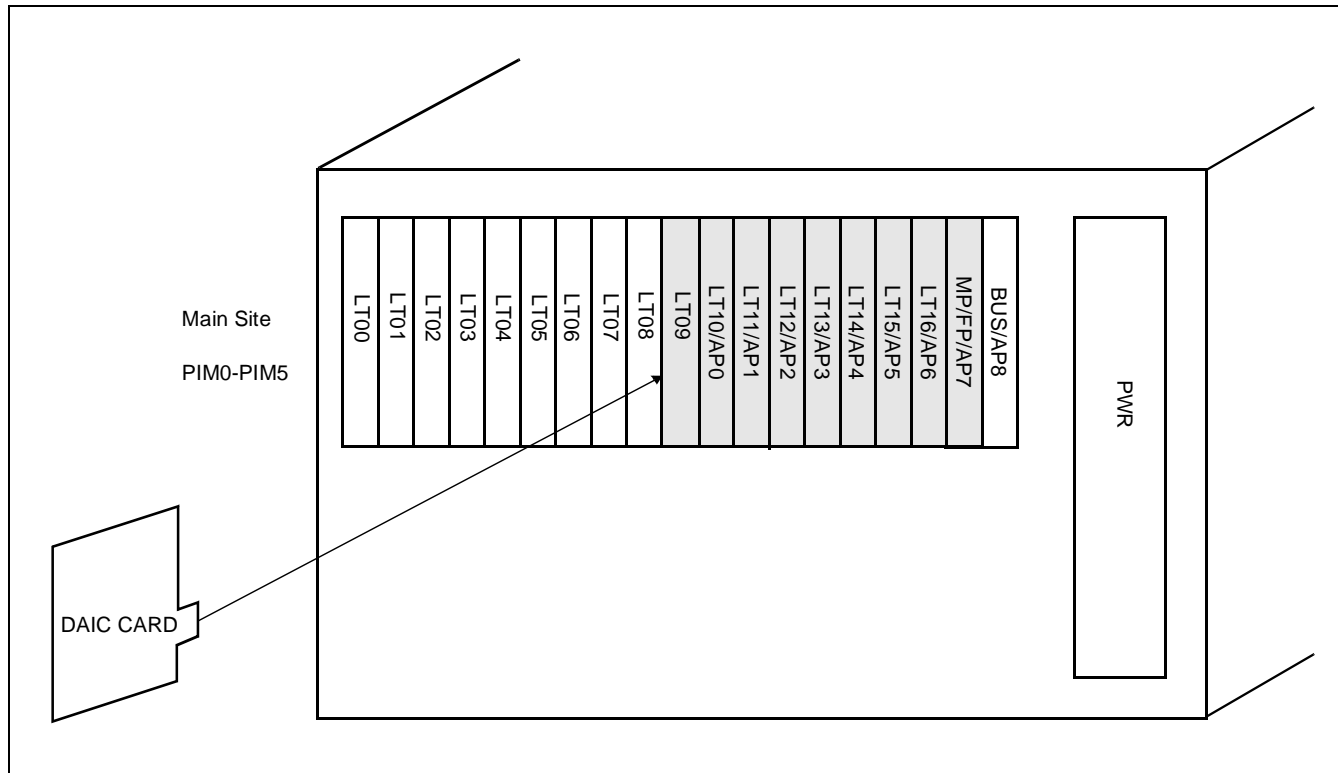


Figure 3-8 Mounting Location of DAIC Card (Main Site)

2.1.5 BUS Cable Connection

(1) Cable connection between BUS Card and the DAIA Card

Connect the DAIA card to the BUS card by the RMT PCM-0.3 CA and 17-TW-0.3 CONN CA-A, as shown in Figure 3-9.

Note: Up to three DAIA cards can be connected directly by a daisy chain connection on one PIM. If two or three DAIA cards are mounted on one PIM, the 17-TW-0.3 CONN CA-A is required. When the system is more than one PIM configuration, the DAIA cards must be mounted on the first/last PIM due to the number of connectors of a BUS card.

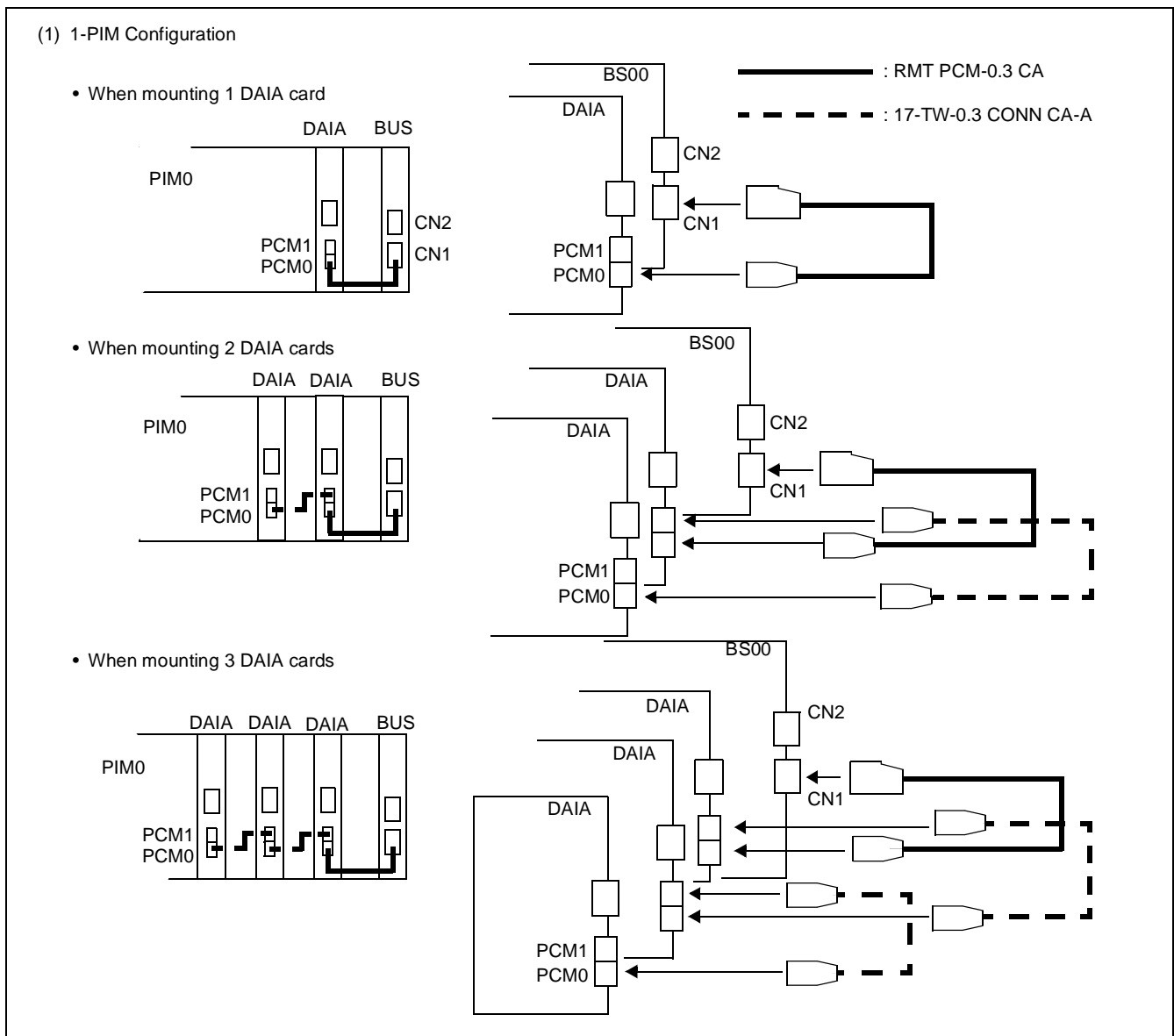


Figure 3-9 BUS-DAIA Cable Connection

(2) Cable Connection between DAIA Card and DAIC Card

Connect the DAIC card to the DAIA card by the 48-TW-0.2 CONN CA, as shown in [Figure 3-10](#).

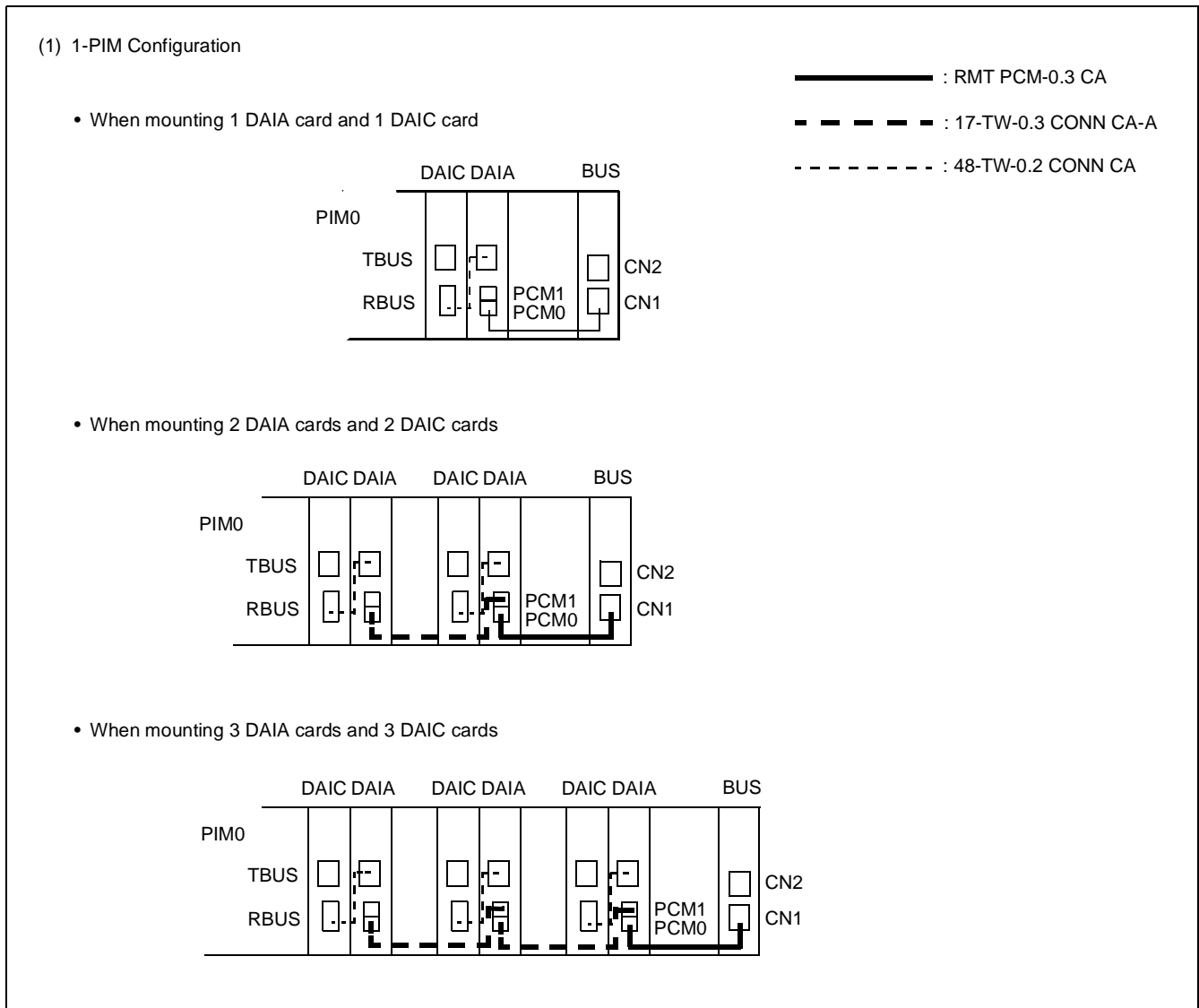
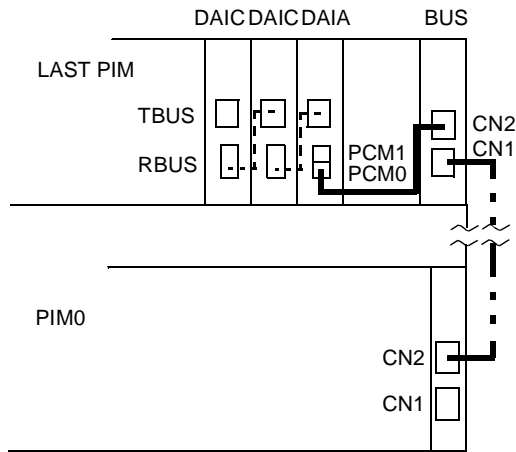


Figure 3-10 DAIA-DAIC Cable Connection

(2) Multiple PIM Configuration

- When mounting 1 DAIA card and 2 DAIC cards on upper PIM



————— : RMT PCM-0.3 CA
 - - - - - : 48-TW-0.2 CONN CA
 - · - · - : 48 TW-0.7 CONN CA

- When mounting 2 DAIA cards and 4 DAIC cards on 2 PIMs

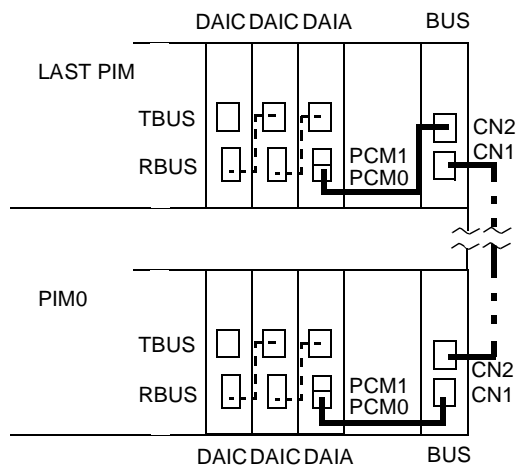
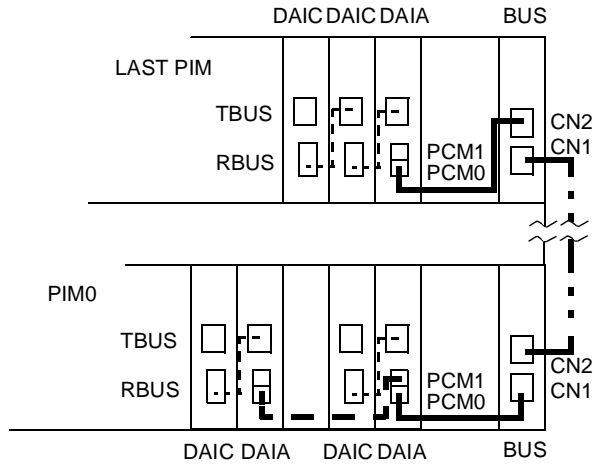


Figure 3-11 DAIA-DAIC Cable Connection (Continued)

(2) Multiple PIM Configuration (continued)

- When mounting 3 DAIA cards and 4 DAIC cards on 2 PIMs



- : RMT PCM-0.3 CA
- . - . - . - . : 17-TW-0.3 CONN CA-A
- - - - - : 48-TW-0.2 CONN CA
- : 48 TW-0.7 CONN CA

- When mounting 3 DAIA cards and 5 DAIC cards on 2 PIMs

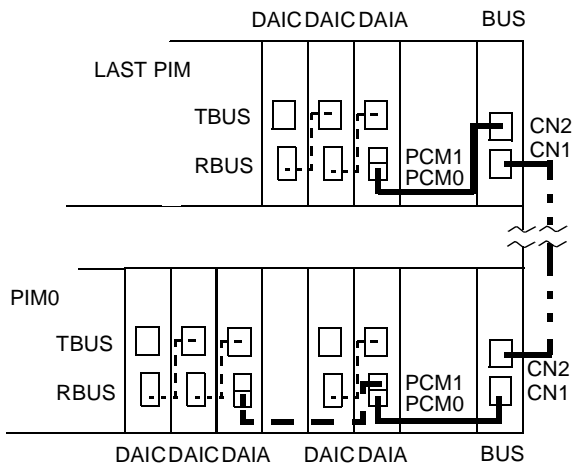


Figure 3-12 DAIA-DAIC Cable Connection (Continued)

(2) Multiple PIM Configuration (continued)

- When mounting 3 DAIA cards and 6 DAIC cards on last PIM

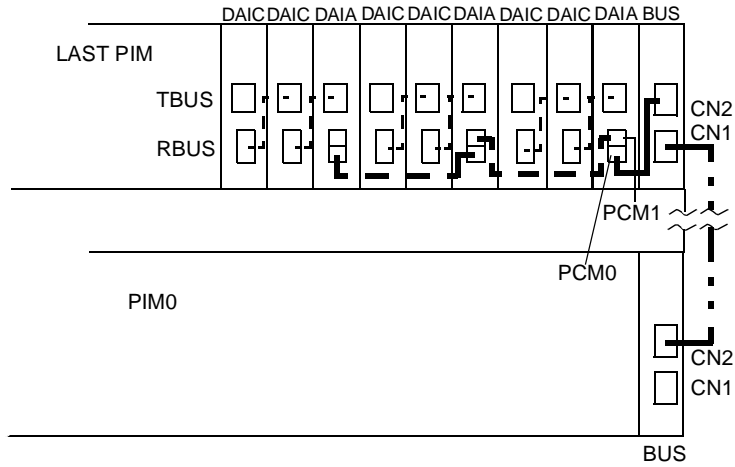
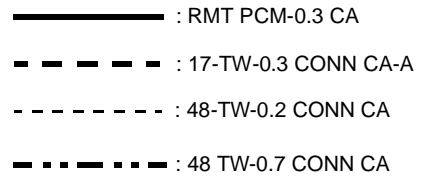


Figure 3-13 DAIA-DAIC Cable Connection (Continued)

2.2 Installation Procedure for Remote Site

2.2.1 Switch Setting of DAIB Card

- (1) Location of Lamps, Switches, and Connectors (see [Figure 3-14](#))

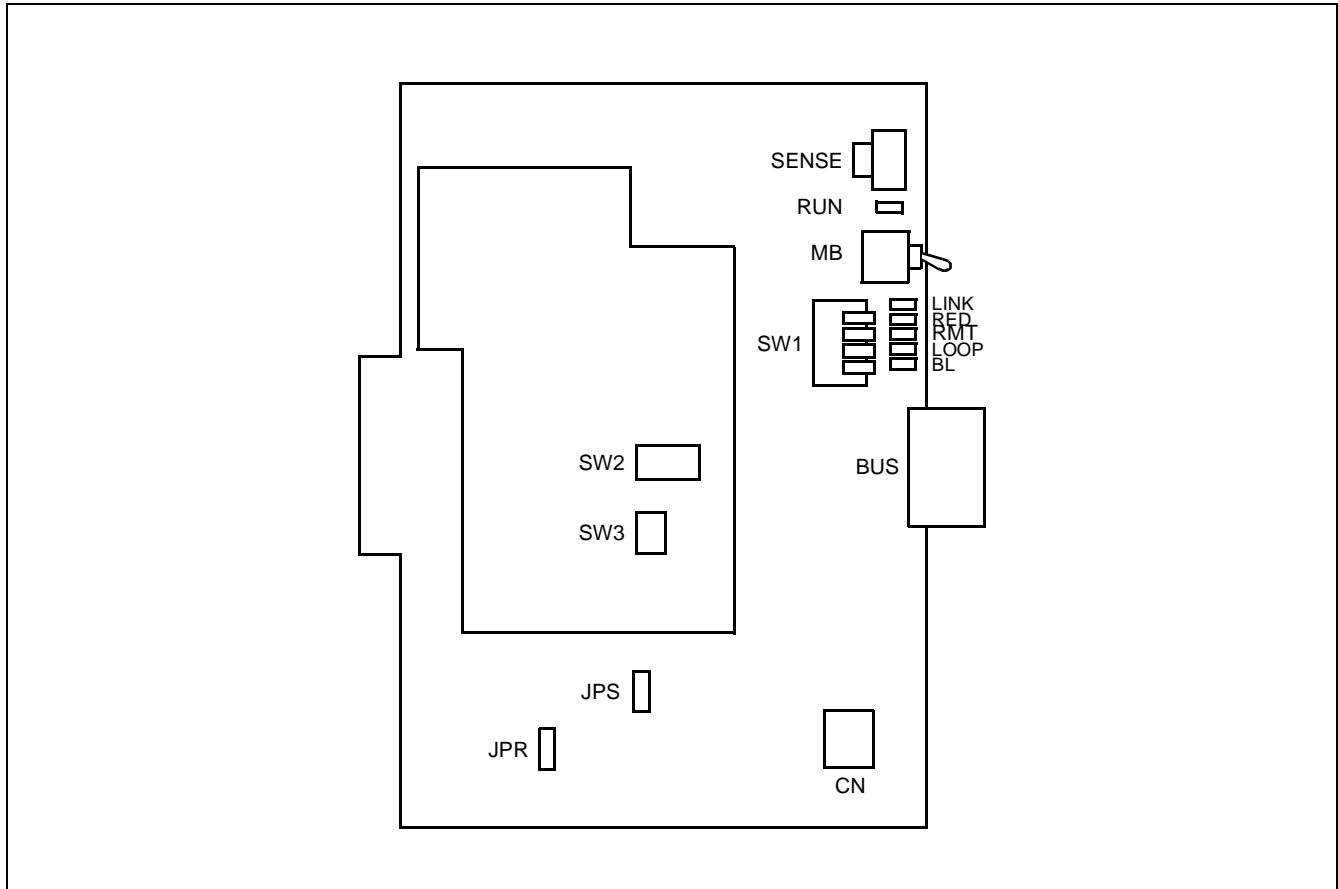


Figure 3-14 PN-DAIB Card

(2) Lamp Indications (see [Table 3-6](#))

Table 3-6 Lamp Indications on PN-DAIB Card

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

(3) Switch Settings



In Table 3-7, 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.

Table 3-7 Switch Settings on PN-DAIB Card

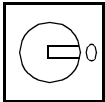

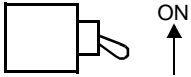

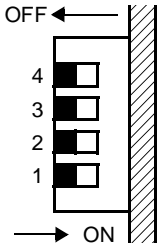




SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK
SW1 (Rotary SW) 	0 – F		Always set to 0	
		1 – F	Not used	
MB (Toggle SW)  Note		UP	For make-busy	
			For normal operation	
SW1 (Piano Key SW) 	1		Always set to OFF	
	2		Always set to OFF	
	3		Always set to OFF	
	4		Always set to OFF	

Table 3-7 Switch Settings on PN-DAIB Card (Continued)

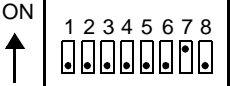
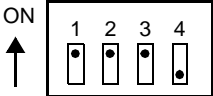


SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK																																																																																																																																			
SW2 (Dip SW) 	1	ON	Control channel signaling data transmission speed: 48 Kbps																																																																																																																																				
		OFF	Control channel signaling data transmission speed: 64 Kbps																																																																																																																																				
	2	ON	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	ON	Setting of control signal time slot																																																																																																																																				
		OFF																																																																																																																																					
	5	ON	<table border="1" data-bbox="750 766 1279 1486"> <thead> <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> </thead> <tbody> <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> </tbody> </table>	SWITCH NUMBER					TIME SLOT NUMBER	4	5	6	7	8	OFF	ON	ON	ON	ON	TS1	ON	OFF	ON	ON	ON	TS2	OFF	OFF	ON	ON	ON	TS3	ON	ON	OFF	ON	ON	TS4	OFF	ON	OFF	ON	ON	TS5	ON	OFF	OFF	ON	ON	TS6	OFF	OFF	OFF	ON	ON	TS7	ON	ON	ON	OFF	ON	TS8	OFF	ON	ON	OFF	ON	TS9	ON	OFF	ON	OFF	ON	TS10	OFF	OFF	ON	OFF	ON	TS11	ON	ON	OFF	OFF	ON	TS12	OFF	ON	OFF	OFF	ON	TS13	ON	OFF	OFF	OFF	ON	TS14	OFF	OFF	OFF	OFF	ON	TS15	ON	ON	ON	ON	OFF	TS16	OFF	ON	ON	ON	OFF	TS17	ON	OFF	ON	ON	OFF	TS18	OFF	OFF	ON	ON	OFF	TS19	OFF	OFF	OFF	ON	OFF	TS23	
		SWITCH NUMBER					TIME SLOT NUMBER																																																																																																																																
	4	5	6	7	8																																																																																																																																		
	OFF	ON	ON	ON	ON	TS1																																																																																																																																	
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	ON	OFF	OFF	ON	ON	TS6																																																																																																																																	
	OFF	OFF	OFF	ON	ON	TS7																																																																																																																																	
	ON	ON	ON	OFF	ON	TS8																																																																																																																																	
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	OFF	ON	OFF	OFF	ON	TS13																																																																																																																																	
ON	OFF	OFF	OFF	ON	TS14																																																																																																																																		
OFF	OFF	OFF	OFF	ON	TS15																																																																																																																																		
ON	ON	ON	ON	OFF	TS16																																																																																																																																		
OFF	ON	ON	ON	OFF	TS17																																																																																																																																		
ON	OFF	ON	ON	OFF	TS18																																																																																																																																		
OFF	OFF	ON	ON	OFF	TS19																																																																																																																																		
OFF	OFF	OFF	ON	OFF	TS23																																																																																																																																		
6	ON	* Time slot number 0, 20, 21, and 22 (TS0/20/21/22) cannot be used for control signal. ** This setting must be identical with the opposite DAIA card.																																																																																																																																					
	OFF																																																																																																																																						
7	ON																																																																																																																																						
	OFF																																																																																																																																						
8	ON																																																																																																																																						
	OFF																																																																																																																																						

Table 3-7 Switch Settings on PN-DAIB Card (Continued)

SWITCH NAME	SWITCH NUMBER	SETTING POSITION	FUNCTION	CHECK																												
SW3 (Dip SW) 	1	<input type="radio"/> ON	Set the equalizer according to the cable length between the system and the CSU. <table border="1" data-bbox="743 411 1269 638"> <thead> <tr> <th>SW-1</th> <th>SW-2</th> <th>SW-3</th> <th>CABLE LENGTH</th> </tr> </thead> <tbody> <tr> <td>ON</td> <td>ON</td> <td>ON</td> <td>0 - 131.2 ft. (0 - 40 m)</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>OFF</td> <td>131.2 - 262.5 ft. (40 - 80 m)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>ON</td> <td>262.5 - 394 ft. (80 - 120 m)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>OFF</td> <td>394 - 525 ft. (120 - 160 m)</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>ON</td> <td>525 - 656 ft. (160 - 200 m)</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>OFF</td> <td>Signal is not sent</td> </tr> </tbody> </table>	SW-1	SW-2	SW-3	CABLE LENGTH	ON	ON	ON	0 - 131.2 ft. (0 - 40 m)	ON	ON	OFF	131.2 - 262.5 ft. (40 - 80 m)	ON	OFF	ON	262.5 - 394 ft. (80 - 120 m)	ON	OFF	OFF	394 - 525 ft. (120 - 160 m)	OFF	ON	ON	525 - 656 ft. (160 - 200 m)	OFF	OFF	OFF	Signal is not sent	
		SW-1		SW-2	SW-3	CABLE LENGTH																										
	ON	ON		ON	0 - 131.2 ft. (0 - 40 m)																											
	ON	ON		OFF	131.2 - 262.5 ft. (40 - 80 m)																											
	ON	OFF		ON	262.5 - 394 ft. (80 - 120 m)																											
	ON	OFF		OFF	394 - 525 ft. (120 - 160 m)																											
	OFF	ON		ON	525 - 656 ft. (160 - 200 m)																											
	OFF	OFF		OFF	Signal is not sent																											
	<input type="radio"/> OFF																															
	2	<input type="radio"/> ON																														
<input type="radio"/> OFF																																
3	<input type="radio"/> ON																															
	<input type="radio"/> OFF																															
4	<input type="radio"/> OFF	Always set to OFF.																														
JPS (Jumper pin) 	UP	Neutral grounding on the transmitting line is provided.																														
	<input type="radio"/> DOWN	Neutral grounding on the transmitting line is not provided.																														
JPR (Jumper pin) 	UP	Neutral grounding on the receiving line is provided.																														
	<input type="radio"/> DOWN	Neutral grounding on the receiving line is not provided.																														

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

2.2.2 Mounting of DAIB Card

STEP 1: Set MB switch on the DAIB card to up position.

STEP 2: Mount DAIB card in the MP slot on the Remote PIM.

STEP 3: After mounting the card, set MB switch to down position.

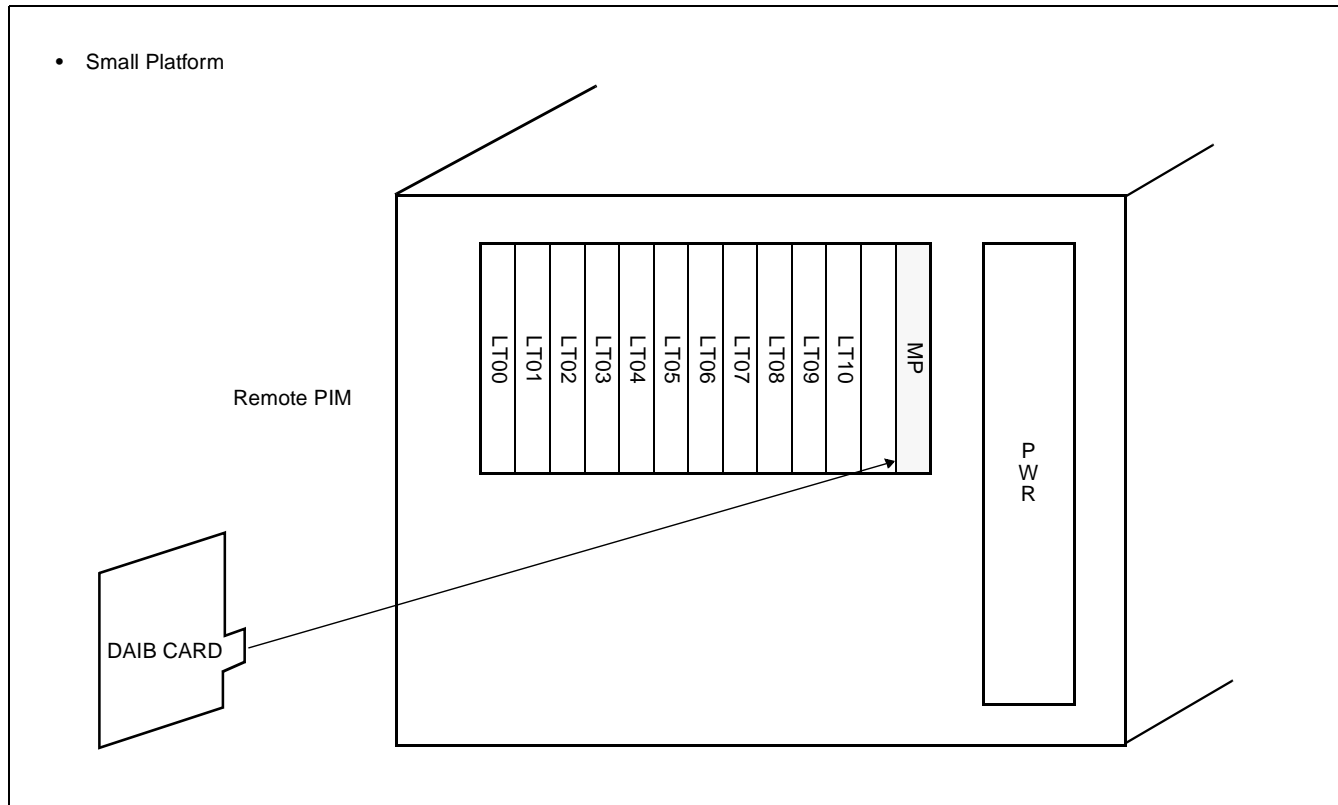


Figure 3-15 Mounting Location of DAIB Card

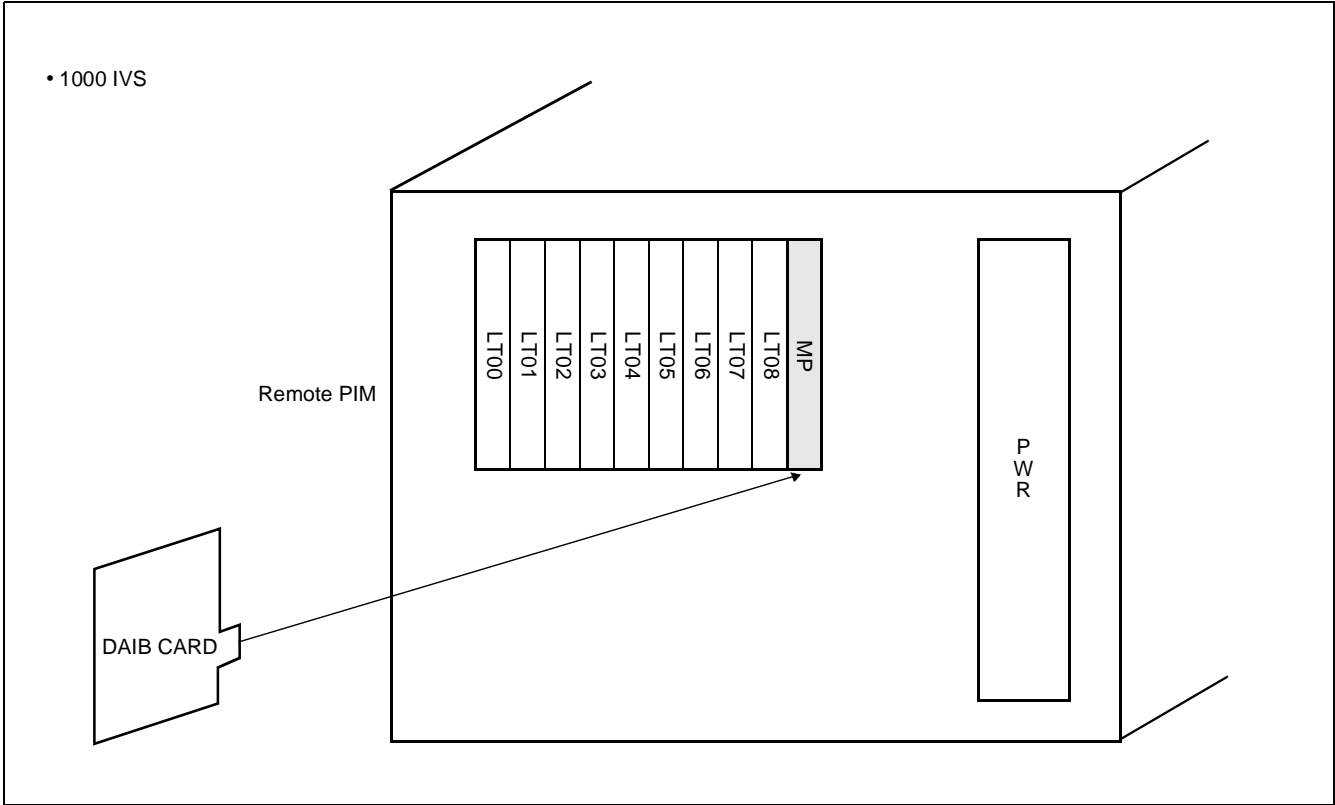


Figure 3-16 Mounting Location of DAIB Card (Continued)

2.2.3 Switch Setting of DAIC Card

Refer to [Chapter 3, Section 2.1.3](#).

2.2.4 Mounting of DAIC Card



STEP 1: Set MB switch on DAIC card to up position.

STEP 2: Mount DAIC card in the AP slot on the Remote PIM.
A maximum of two DAIC cards can be mounted.
After mounting the card, set MB switch to down position.

STEP 3: After mounting all DAIC cards, set MB switch on DAIB card to up, and then down.

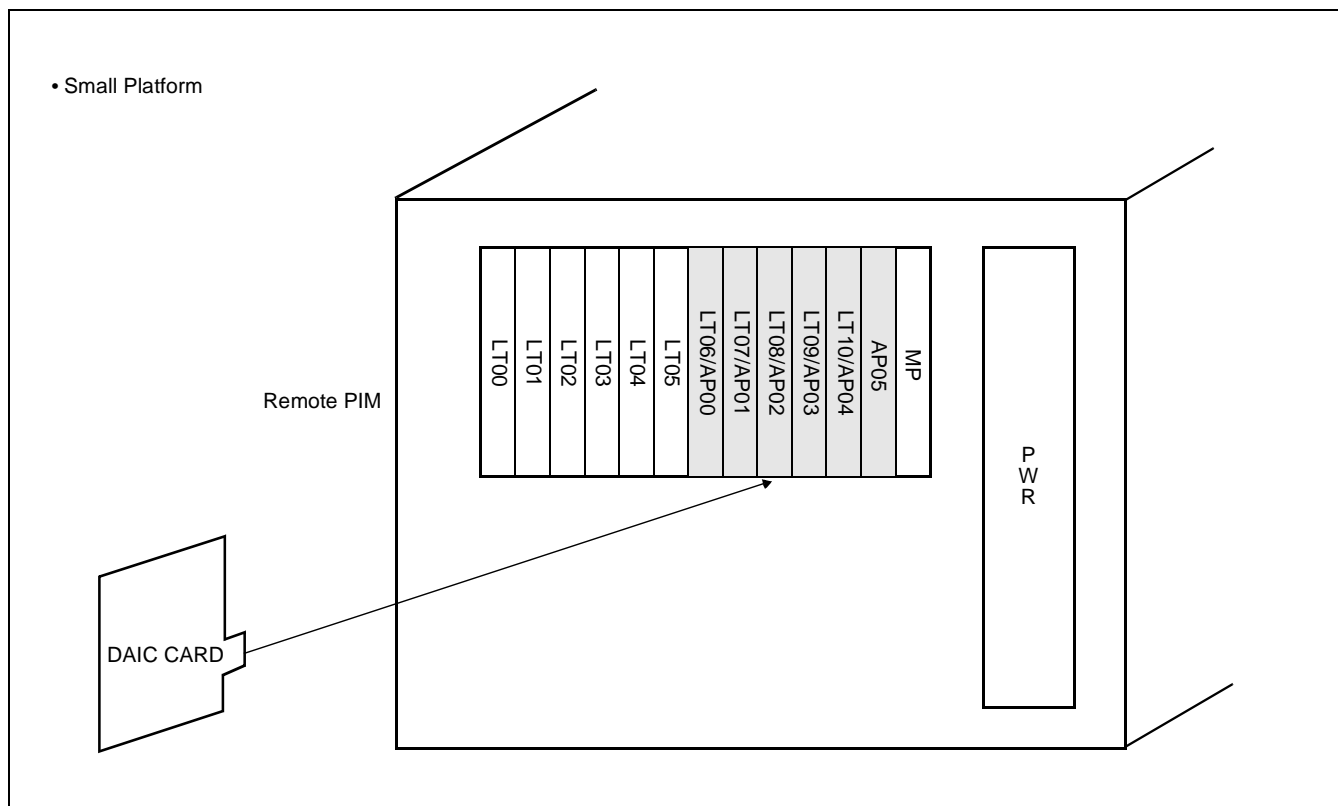


Figure 3-17 Mounting Location of DAIC Card (Remote PIM)

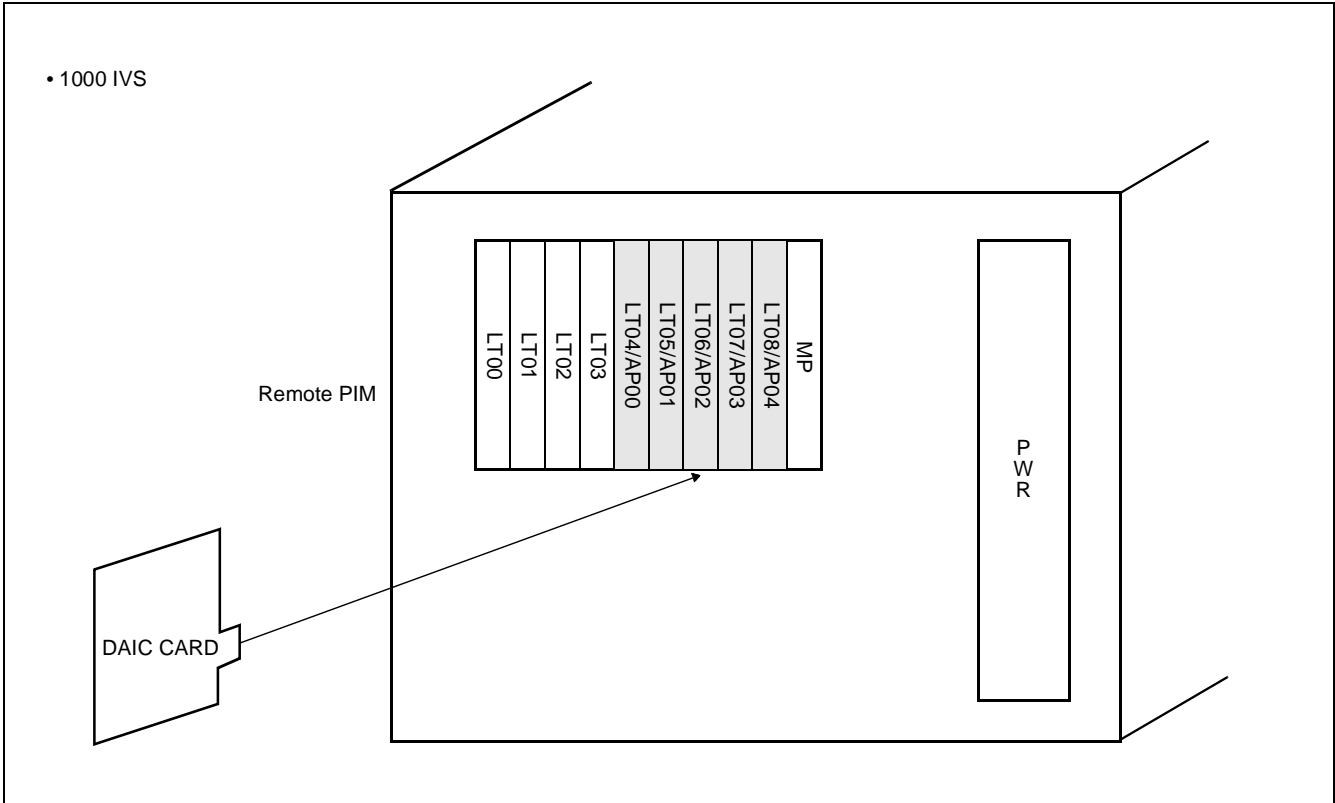


Figure 3-18 Mounting Location of DAIC Card (Remote PIM) (Continued)

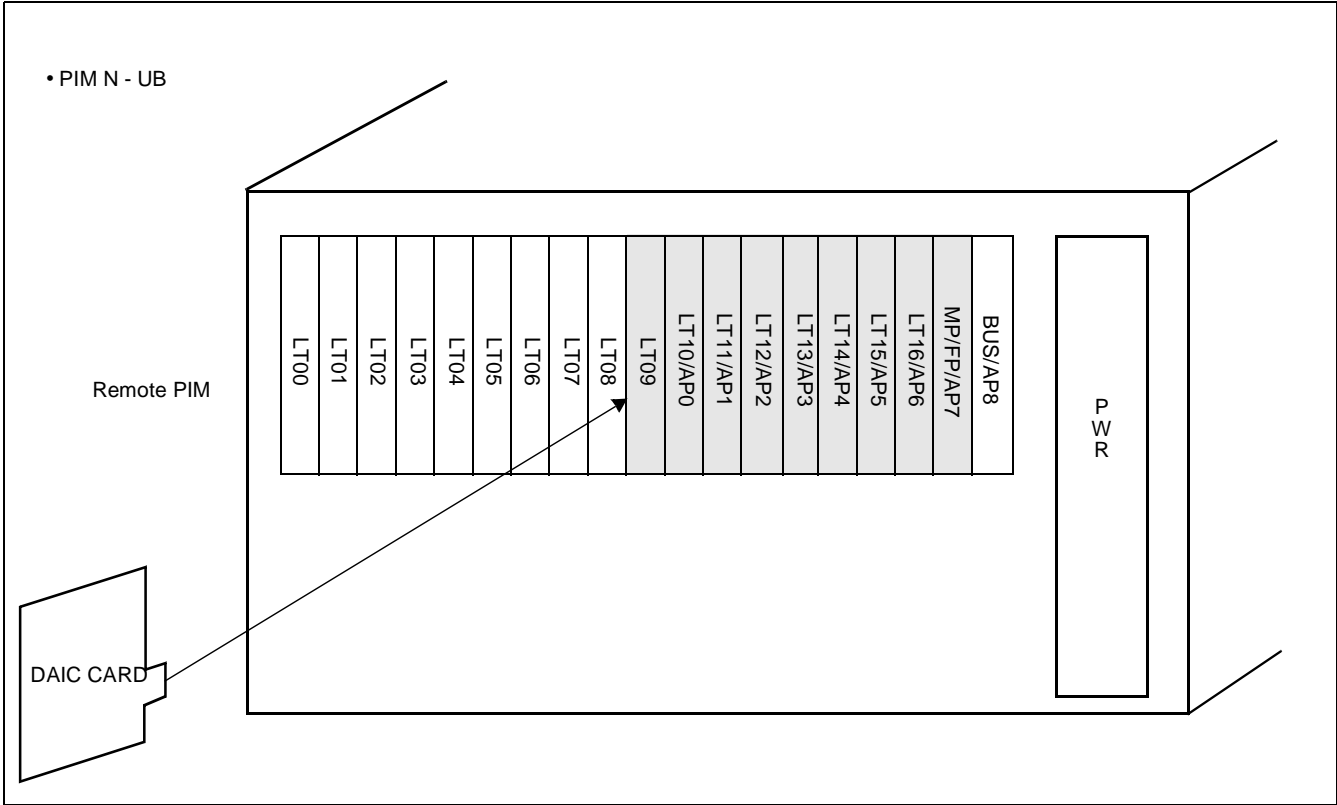


Figure 3-19 Mounting Location of DAIC Card (Remote PIM) (Continued)

2.2.5 BUS Cable Connection

Connect the DAIB card to the DAIC card by the 48-TW-0.2 CONN CA, as shown in [Figure 3-20](#).

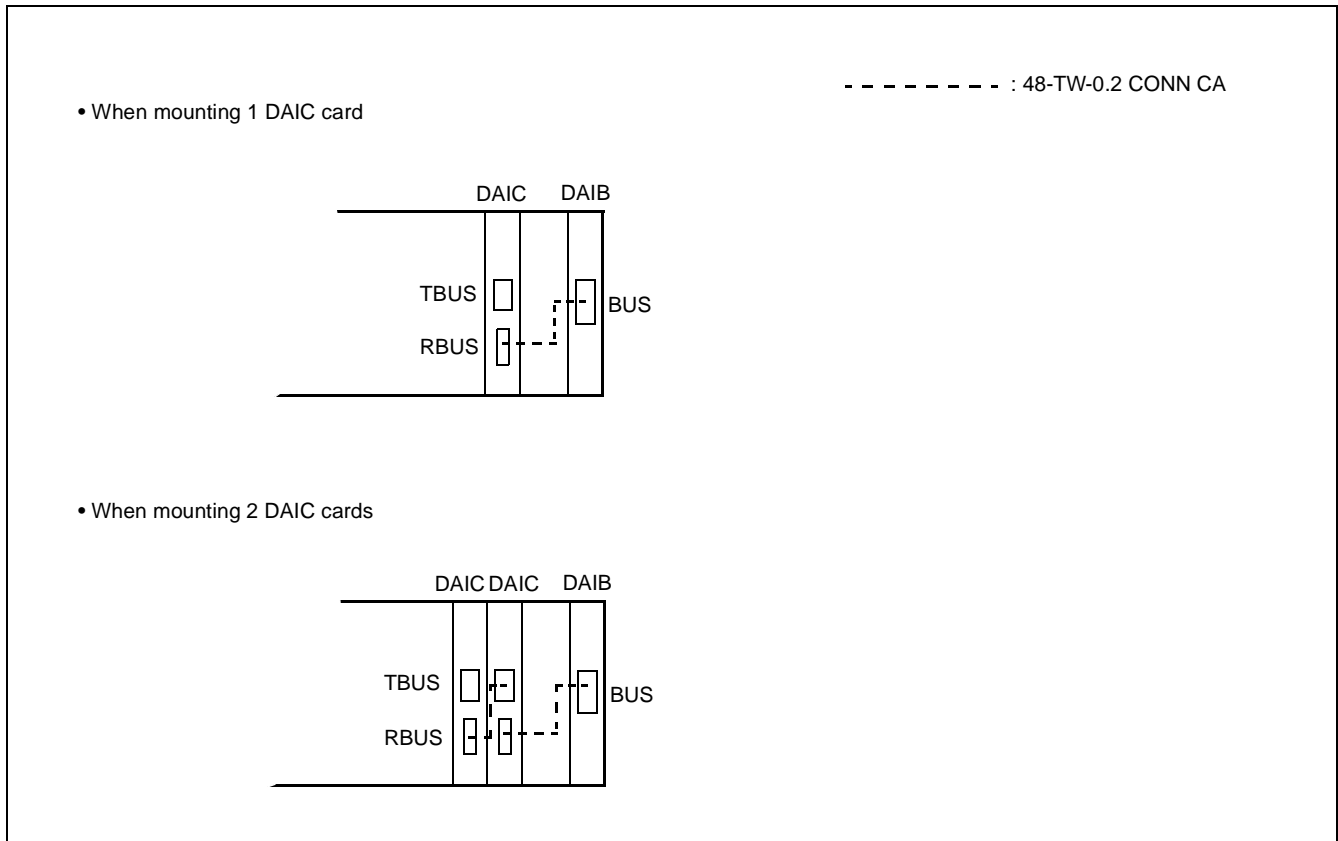


Figure 3-20 DAIB-DAIC Cable Connection

2.2.6 Mounting of Line/Trunk Card on Small Platform PIM

Mount the Line/Trunk cards in the following slots on the Remote PIM. Connect the line cables referring to [Figure 3-21](#) through [Figure 3-23](#) and [Table 3-8](#).

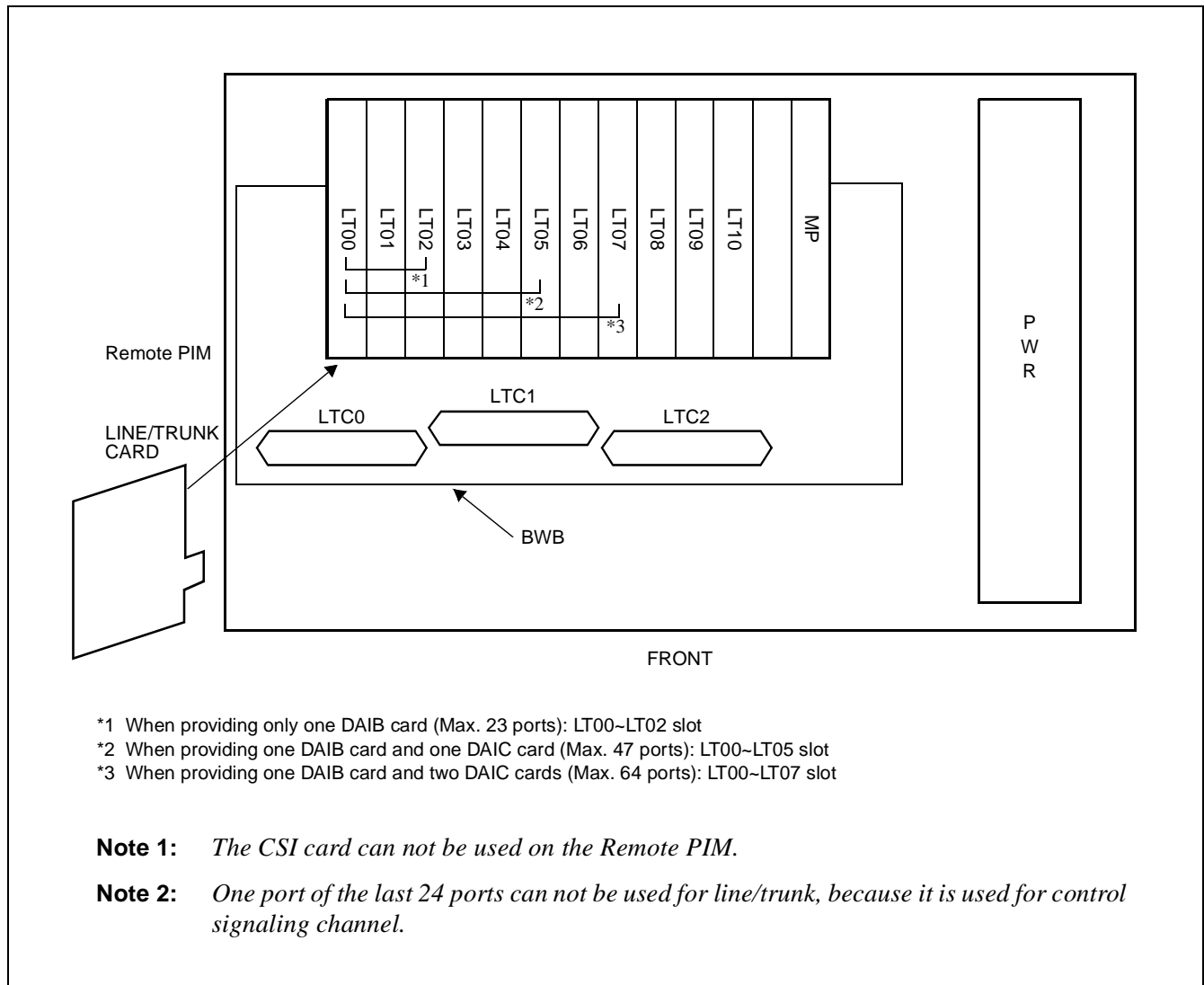


Figure 3-21 Mounting Location of Line/Trunk Card (Small Platform)

Table 3-8 LTC Connector Accommodation (Small Platform)

REMOTE PIM TYPE	LTC CONNECTOR	CARD SLOT NUMBER
Small Platform	LTC0	LT00~LT02
	LTC1	LT03~LT05
	LTC2	LT06~LT07

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

LEN	0135	0143	0151	0159	0167	0175	0183	0191
	0134	0142	0150	0158	0166	0174	0182	0190
	0133	0141	0149	0157	0165	0173	0181	0189
	0132	0140	0148	0156	0164	0172	0180	0188
	0131	0139	0147	0155	0163	0171	0179	0187
	0130	0138	0146	0154	0162	0170	0178	0186
	0129	0137	0145	0153	0161	0169	0177	0185
	0128	0136	0144	0152	0160	0168	0176	0184
SLOT No.	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07

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

LEN	0263	0271	0279	0287	0295	0303	0311	0319
	0262	0270	0278	0286	0294	0302	0310	0318
	0261	0269	0277	0285	0293	0301	0309	0317
	0260	0268	0276	0284	0292	0300	0308	0316
	0259	0267	0275	0283	0291	0299	0307	0315
	0258	0266	0274	0282	0290	0298	0306	0314
	0257	0265	0273	0281	0289	0297	0305	0313
	0256	0264	0272	0280	0288	0296	0304	0312
SLOT No.	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07

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

LEN	0391	0399	0407	0415	0423	0431	0439	0447
	0390	0398	0406	0414	0422	0430	0438	0446
	0389	0397	0405	0413	0421	0429	0437	0445
	0388	0396	0404	0412	0420	0428	0436	0444
	0387	0395	0403	0411	0419	0427	0435	0443
	0386	0394	0402	0410	0418	0426	0434	0442
	0385	0393	0401	0409	0417	0425	0433	0441
	0384	0392	0400	0408	0416	0424	0432	0440
SLOT No.	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07

Note: A maximum of 64 line/trunks can be accommodated in one Remote PIM.

Figure 3-22 Location of Each LEN (Small Platform)

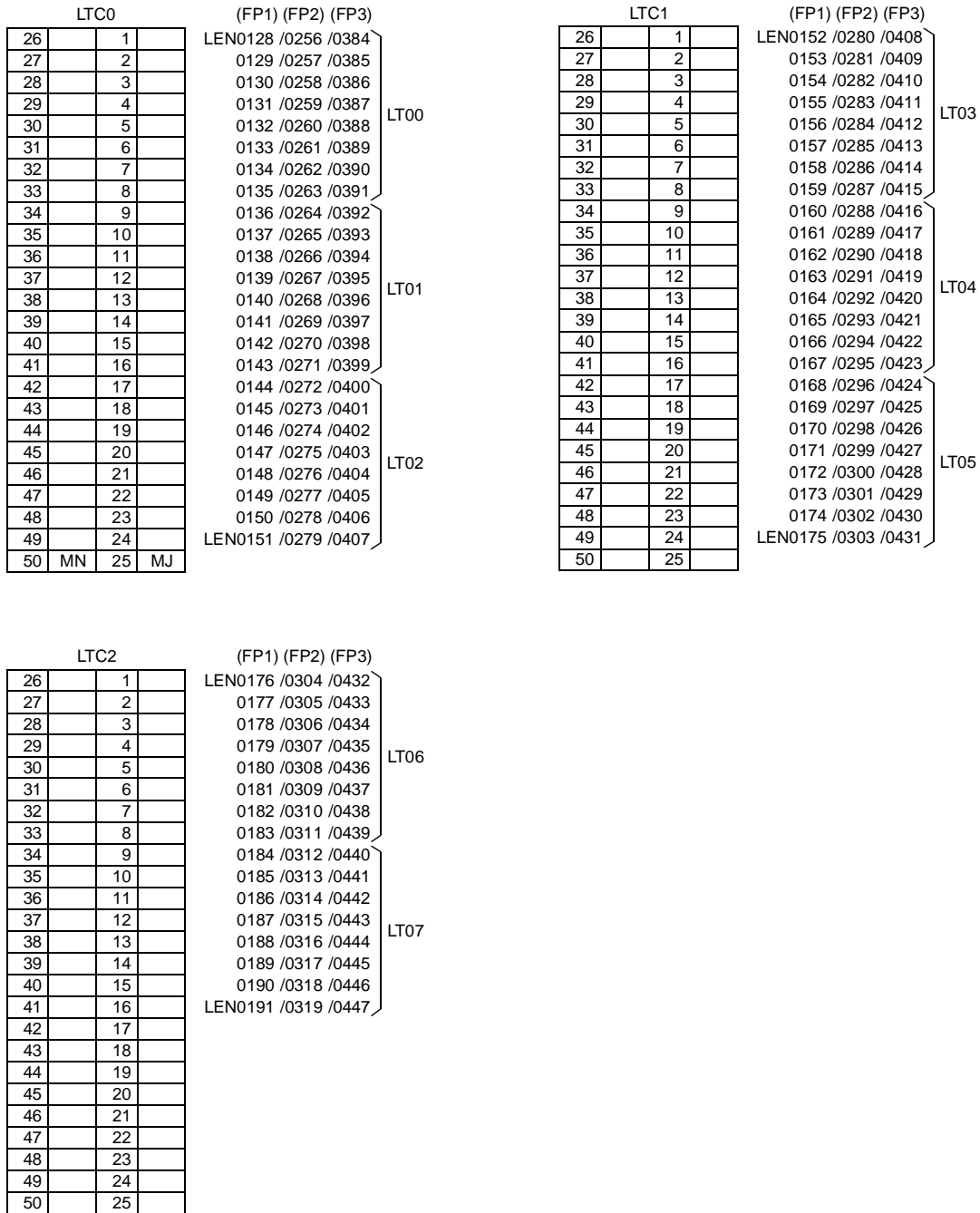


Figure 3-23 LTC Connector Pin Arrangement (Small Platform)

2.2.7 Mounting of Line/Trunk Card on 1000 IVS PIM

Mount the Line/Trunk cards in the following slots on the Remote PIM. Connect the line cables referring to [Figure 3-24](#) through [Figure 3-26](#) and [Table 3-9](#).

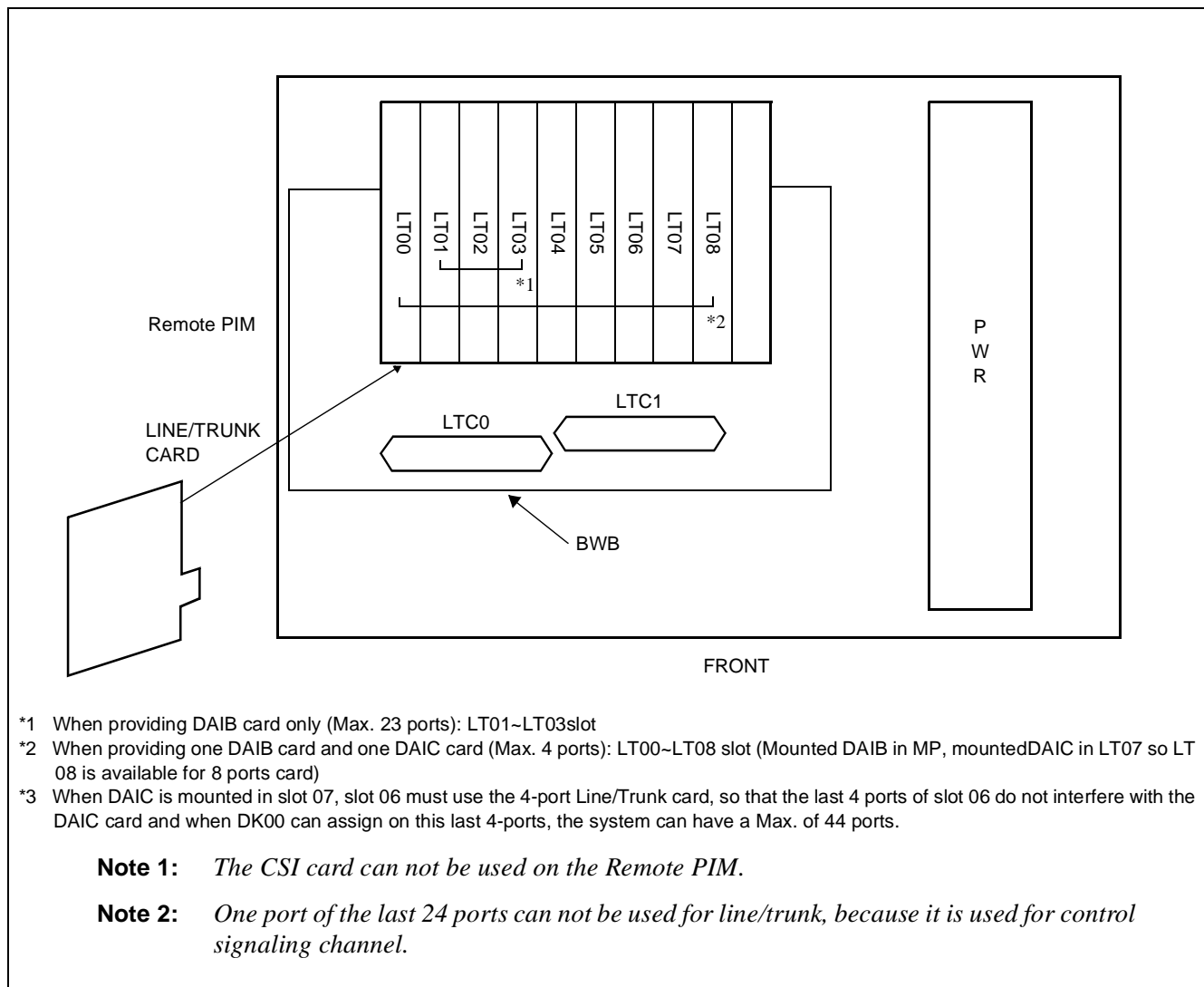


Figure 3-24 Mounting Location of Line/Trunk Card (1000 IVS)

Table 3-9 LTC Connector Accommodation (1000 IVS)

REMOTE PIM TYPE	LTC CONNECTOR	CARD SLOT NUMBER
1000 IVS (48 Port PIM)	LTC0	LT01~LT03
	LTC1	LT04~LT08, LT00

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

LEN	0191	0135	0143	0151	0159		0167		0175
	0190	0134	0142	0150	0158		0166		0174
	0189	0133	0141	0149	0157		0165		0173
	0188	0132	0140	0148	0156		0164		0172
	0187	0131	0139	0147	0155	0159	0163	0167	0171
	0186	0130	0138	0146	0154	0158	0162	0166	0170
	0185	0129	0137	0145	0153	0157	0161	0165	0169
	0184	0128	0136	0144	0152	0156	0160	0164	0168
	SLOT No.	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07
	Note 2				Note 3		Note 4		

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

LEN	0319	0263	0271	0279	0287		0295		0303
	0318	0262	0270	0278	0286		0294		0302
	0317	0261	0269	0277	0285		0293		0301
	0316	0260	0268	0276	0284		0292		0300
	0315	0259	0267	0275	0283	0287	0291	0295	0299
	0314	0258	0266	0274	0282	0286	0290	0294	0298
	0313	0257	0265	0273	0281	0285	0289	0293	0297
	0312	0256	0264	0272	0280	0284	0288	0292	0296
	SLOT No.	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07
	Note 2				Note 3		Note 4		

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

LEN	0447	0391	0399	0407	0415		0423		0431
	0446	0390	0398	0406	0414		0422		0430
	0445	0389	0397	0405	0413		0421		0429
	0444	0388	0396	0404	0412		0420		0428
	0443	0387	0395	0403	0411	0415	0419	0423	0427
	0442	0386	0394	0402	0410	0414	0418	0422	0426
	0441	0385	0393	0401	0409	0413	0417	0421	0425
	0440	0384	0392	0400	0408	0412	0416	0420	0424
	SLOT No.	LT00	LT01	LT02	LT03	LT04	LT05	LT06	LT07
	Note 2				Note 3		Note 4		

Note 1: A maximum of 44 line/trunks can be accommodated in one Remote PIM.

Note 2: Do not mount line/trunk circuit card with cabling in this slot; this slot has no connection to the MDF via the backplane (LTC cables).

Note 3: When an 8-port line/trunk card, which requires cabling to MDF, is mounted in Slot 04, Slot 05 must be left vacant or mounted with circuit cards* that do not interfere with the 8-port card mounted in LT04.

Note 4: When DAIC is mounted in slot LT07, slot LT06 must use 4-port Line/Trunk card.

* When an 8-port card is mounted in Slot 04, Slot 05 can only be mounted with the following card: PN-M03

Figure 3-25 Location of Each LEN (1000 IVS)

LTC0				(FP1) (FP2) (FP3)	LTC1				(FP1) (FP2) (FP3)
26		1		LEN0128 /0256 /0384	26		1		LEN0152 /0280 /0408
27		2		0129 /0257 /0385	27		2		0153 /0281 /0409
28		3		0130 /0258 /0386	28		3		0154 /0282 /0410
29		4		0131 /0259 /0387	29		4		0155 /0283 /0411
30		5		0132 /0260 /0388	30		5		0156 /0284 /0412
31		6		0133 /0261 /0389	31		6		0157 /0285 /0413
32		7		0134 /0262 /0390	32		7		0158 /0286 /0414
33		8		0135 /0263 /0391	33		8		0159 /0287 /0415
34		9		0136 /0264 /0392	34		9		0160 /0288 /0416
35		10		0137 /0265 /0393	35		10		0161 /0289 /0417
36		11		0138 /0266 /0394	36		11		0162 /0290 /0418
37		12		0139 /0267 /0395	37		12		0163 /0291 /0419
38		13		0140 /0268 /0396	38		13		0164 /0292 /0420
39		14		0141 /0269 /0397	39		14		0165 /0293 /0421
40		15		0142 /0270 /0398	40		15		0166 /0294 /0422
41		16		0143 /0271 /0399	41		16		0167 /0295 /0423
42		17		0144 /0272 /0400	42		17		0168 /0296 /0424
43		18		0145 /0273 /0401	43		18		0169 /0297 /0425
44		19		0146 /0274 /0402	44		19		0170 /0298 /0426
45		20		0147 /0275 /0403	45		20		0171 /0299 /0427
46		21		0148 /0276 /0404	46		21		0172 /0300 /0428
47		22		0149 /0277 /0405	47		22		0173 /0301 /0429
48		23		0150 /0278 /0406	48		23		0174 /0302 /0430
49		24		LEN0151 /0279 /0407	49		24		LEN0175 /0303 /0431
50	MN	25	MJ		50	*	25	*	

* When NEAXMail AD-8 is mounted in the LT00, pin 25 and 50 of the LTC1 bring out the NEAXMail AD-8 internal modem leads.

Figure 3-26 LTC Connector Pin Arrangement (1000 IVS)

2.2.8 Mounting of Line/Trunk Card on PIM N - UB (64 port PIM)

Mounting of Line/Trunk cards in the slots on the Remote PIM. Connect the line cables referring to [Figure 3-27](#) through [Figure 3-29](#) and [Table 3-10](#).

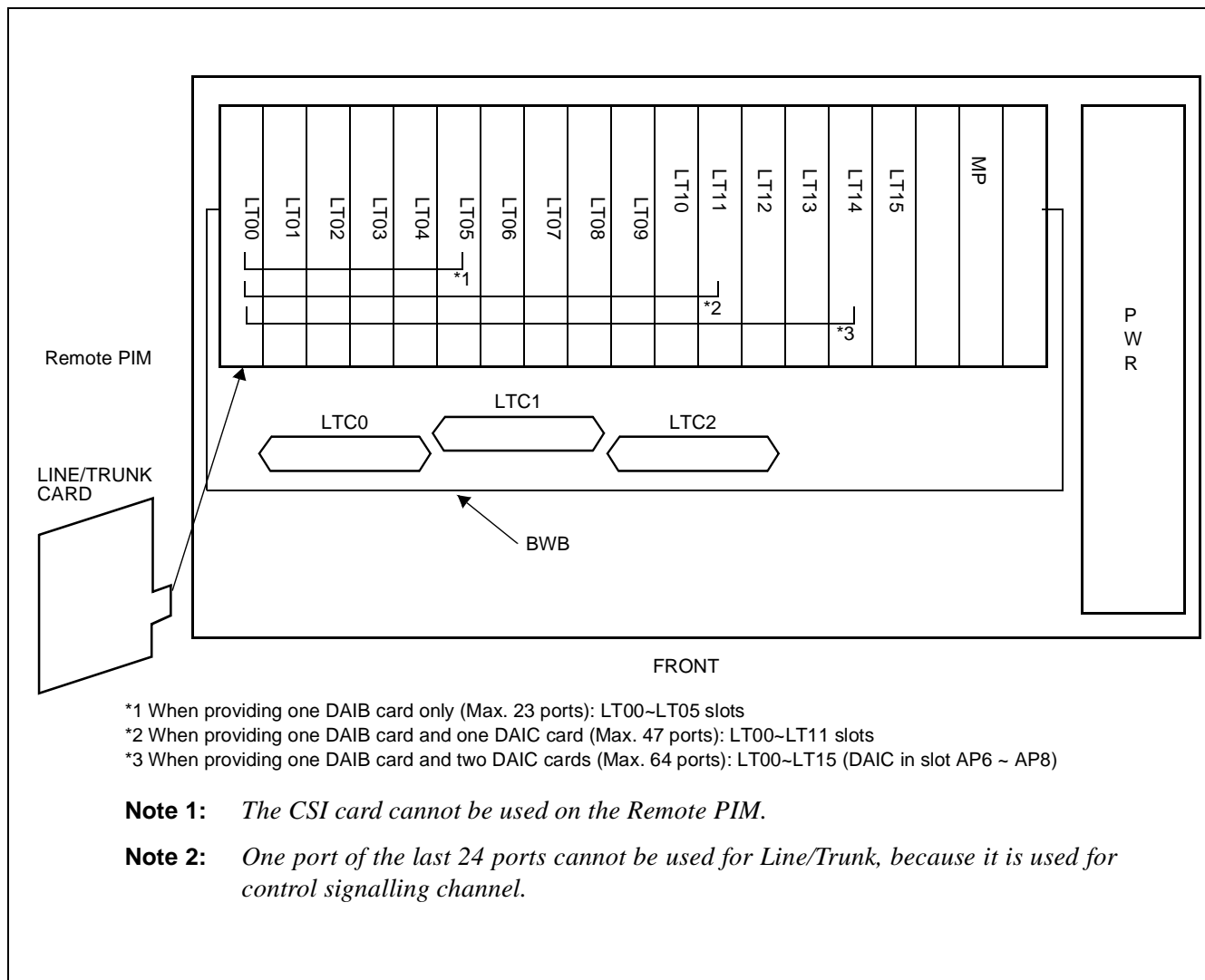


Figure 3-27 Mounting Location of Line/Trunk Card

Table 3-10 LTC Connector Accommodation

REMOTE PIM TYPE	LTC CONNECTOR	CARD SLOT NUMBER
PIM N-UB	LTC0	LT00~LT05
	LTC1	LT06~LT09, LT10, LT11
	LTC2	LT12~LT15

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

LEN	0131	0135	0139	0143	0147	0151	0155	0159	0193	0167	0171	0175	0179	0183	0187	0191
	0130	0134	0138	0142	0146	0150	0154	0158	0162	0166	0170	0174	0178	0182	0186	0190
	0129	0133	0137	0141	0145	0149	0153	0157	0161	0165	0169	0173	0177	0181	0185	0189
	0128	0132	0136	0140	0144	0148	0152	0156	0160	0164	0168	0172	0176	0180	0184	0188
Slot No.	(LT00)	(LT01)	(LT02)	(LT03)	(LT04)	(LT05)	(LT06)	(LT07)	(LT08)	(LT09)	(LT10)	(LT11)	(LT12)	(LT13)	(LT14)	(LT15)

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

LEN	0259	0263	0267	0271	0275	0279	0283	0287	0291	0295	0299	0303	0307	0311	0315	0319
	0258	0262	0266	0270	0274	0278	0282	0286	0290	0294	0298	0302	0306	0310	0314	0318
	0257	0261	0265	0269	0273	0277	0281	0285	0289	0293	0297	0301	0305	0309	0313	0317
	0256	0260	0264	0268	0272	0276	0280	0284	0288	0292	0296	0300	0304	0308	0312	0316
Slot No.	(LT00)	(LT01)	(LT02)	(LT03)	(LT04)	(LT05)	(LT06)	(LT07)	(LT08)	(LT09)	(LT10)	(LT11)	(LT12)	(LT13)	(LT14)	(LT15)

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

LEN	0387	0391	0395	0399	0403	0407	0411	0415	0419	0423	0427	0431	0435	0439	0443	0447
	0386	0390	0394	0398	0402	0406	0410	0414	0418	0422	0426	0430	0434	0438	0442	0446
	0385	0389	0393	0397	0401	0405	0409	0413	0417	0421	0425	0429	0433	0437	0441	0445
	0384	0388	0392	0396	0400	0404	0408	0412	0416	0420	0424	0428	0432	0436	0440	0444
Slot No.	(LT00)	(LT01)	(LT02)	(LT03)	(LT04)	(LT05)	(LT06)	(LT07)	(LT08)	(LT09)	(LT10)	(LT11)	(LT12)	(LT13)	(LT14)	(LT15)

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

Figure 3-28 Location of Each LEN (PIM N_UB)

LTC0			
26		1	
27		2	
28		3	
29		4	
30		5	
31		6	
32		7	
33		8	
34		9	
35		10	
36		11	
37		12	
38		13	
39		14	
40		15	
41		16	
42		17	
43		18	
44		19	
45		20	
46		21	
47		22	
48		23	
49		24	
50	MN	25	MJ

(FP1)	(FP2)	(FP3)
LEN0128	/0256	/0384
0129	/0257	/0385
0130	/0258	/0386
0131	/0259	/0387
0132	/0260	/0388
0133	/0261	/0389
0134	/0262	/0390
0135	/0263	/0391
0136	/0264	/0392
0137	/0265	/0393
0138	/0266	/0394
0139	/0267	/0395
0140	/0268	/0396
0141	/0269	/0397
0142	/0270	/0398
0143	/0271	/0399
0144	/0272	/0400
0145	/0273	/0401
0146	/0274	/0402
0147	/0275	/0403
0148	/0276	/0404
0149	/0277	/0405
0150	/0278	/0406
LEN0151	/0279	/0407

LTC1		
26		1
27		2
28		3
29		4
30		5
31		6
32		7
33		8
34		9
35		10
36		11
37		12
38		13
39		14
40		15
41		16
42		17
43		18
44		19
45		20
46		21
47		22
48		23
49		24
50		25

(FP1)	(FP2)	(FP3)
LEN0152	/0280	/0408
0153	/0281	/0409
0154	/0282	/0410
0155	/0283	/0411
0156	/0284	/0412
0157	/0285	/0413
0158	/0286	/0414
0159	/0287	/0415
0160	/0288	/0416
0161	/0289	/0417
0162	/0290	/0418
0163	/0291	/0419
0164	/0292	/0420
0165	/0293	/0421
0166	/0294	/0422
0167	/0295	/0423
0168	/0296	/0424
0169	/0297	/0425
0170	/0298	/0426
0171	/0299	/0427
0172	/0300	/0428
0173	/0301	/0429
0174	/0302	/0430
LEN0175	/0303	/0431

LTC2			
26		1	
27		2	
28		3	
29		4	
30		5	
31		6	
32		7	
33		8	
34		9	
35		10	
36		11	
37		12	
38		13	
39		14	
40		15	
41		16	
42		17	
43		18	
44		19	
45		20	
46		21	
47		22	
48		23	
49		24	
50		25	

(FP1)	(FP2)	(FP3)
LEN0176	/0304	/0432
0177	/0305	/0433
0178	/0306	/0434
0179	/0307	/0435
0180	/0308	/0436
0181	/0309	/0437
0182	/0310	/0438
0183	/0311	/0439
0184	/0312	/0440
0185	/0313	/0441
0186	/0314	/0442
0187	/0315	/0443
0188	/0316	/0444
0189	/0317	/0445
0190	/0318	/0446
LEN0191	/0319	/0447

Figure 3-29 LTC Connector Pin Arrangement (PIM B - UB)

2.2.9 Power Failure Transfer (PFT)

The PN-AUCA card or the PZ-8PFTA card can be used as the PFT card at the remote site.

(1) When using PN-AUCA card

- [Figure 3-30](#) shows an outline of a PFT (PN-AUCA) connection.
- [Figure 3-31](#) shows the MDF cross connection for a PFT (PN-AUCA).

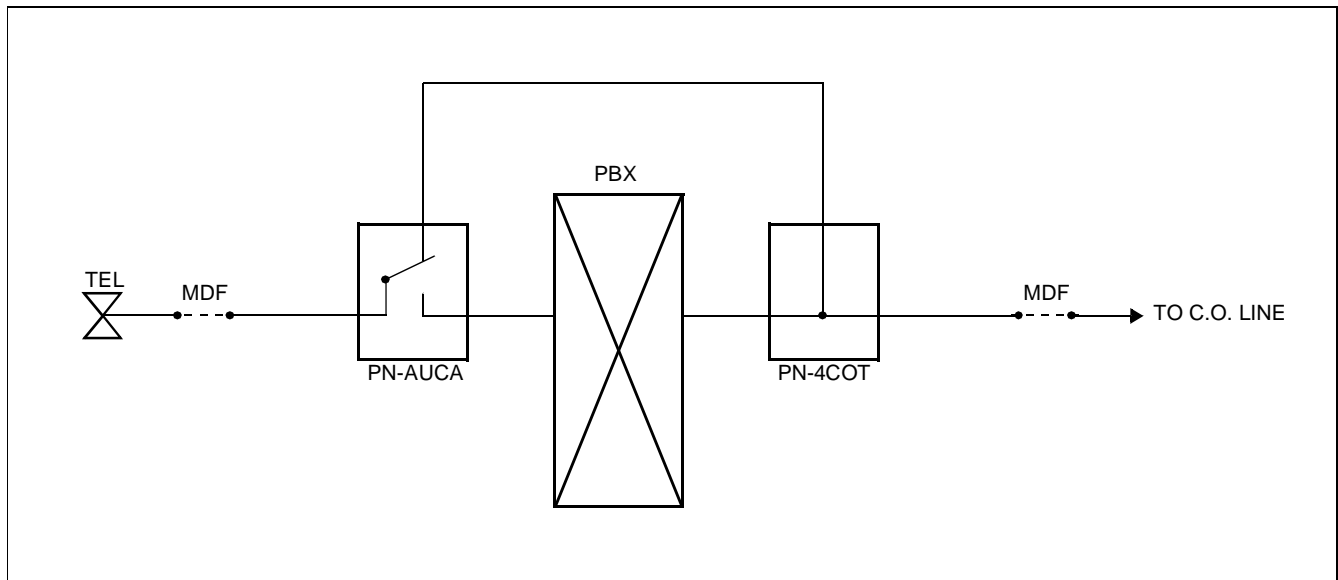


Figure 3-30 PFT Connection Outline (PN-AUCA)

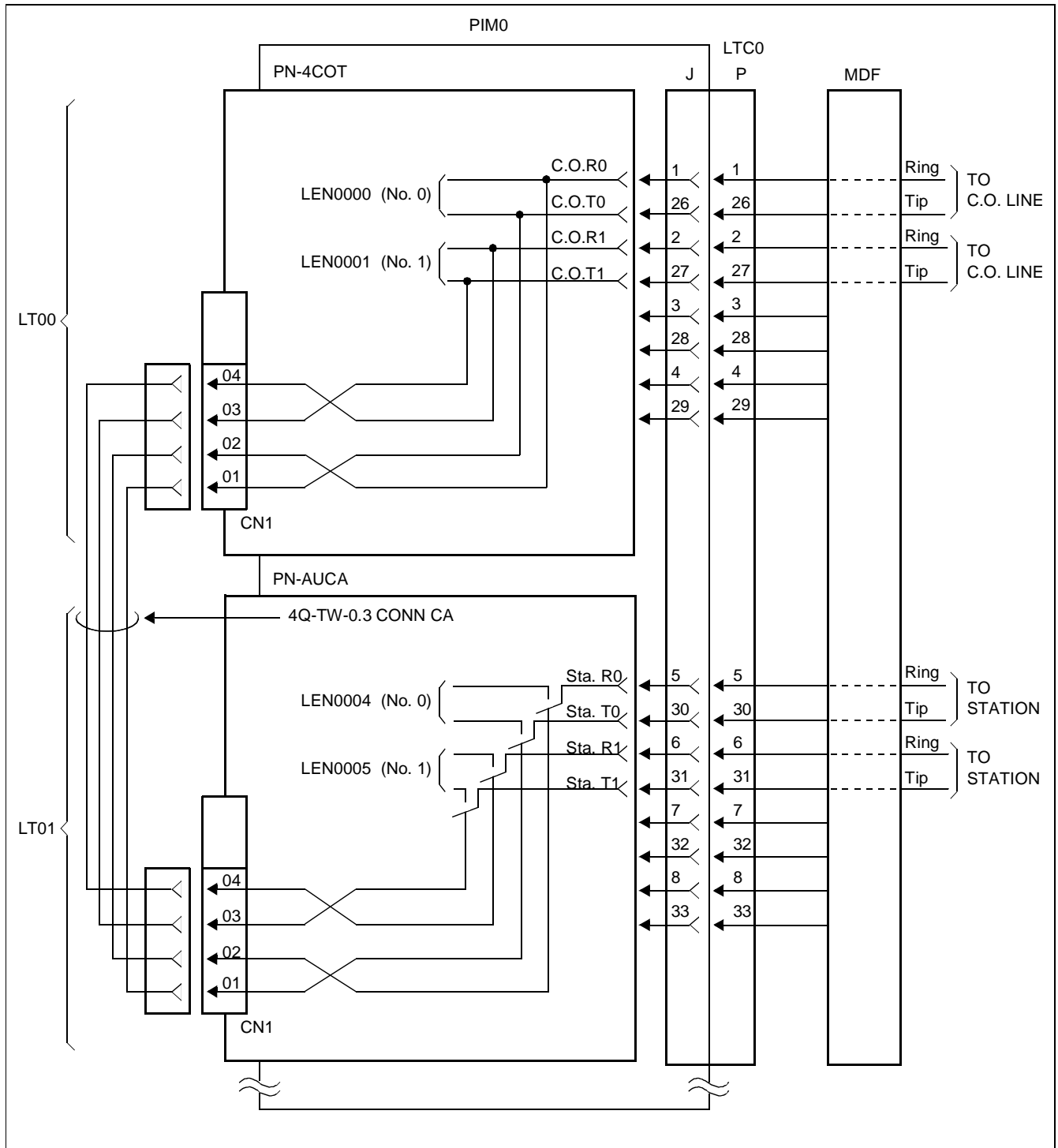


Figure 3-31 MDF Cross Connection for PFT (PN-AUCA)

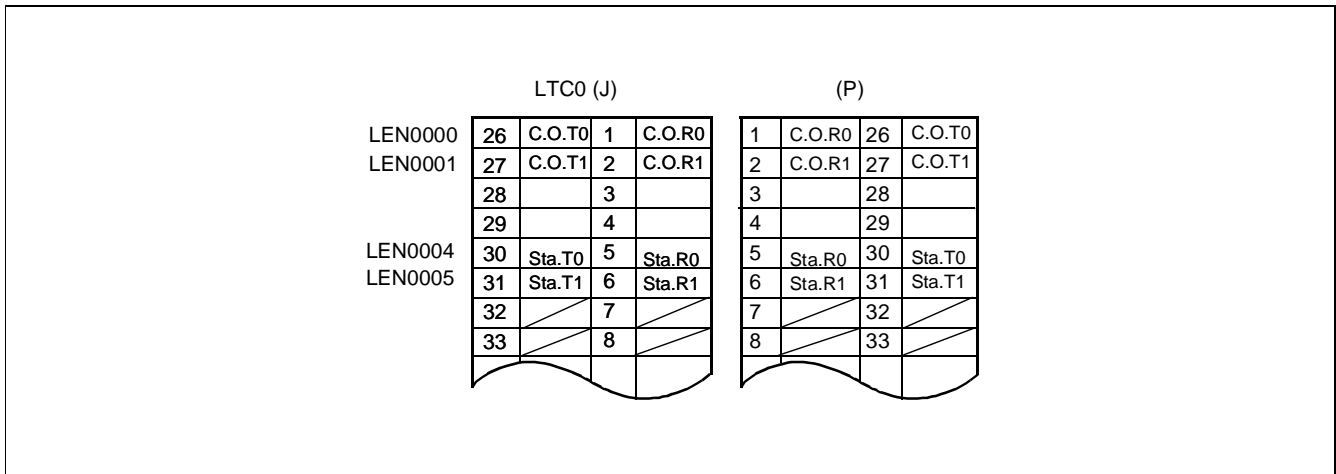


Figure 3-31 MDF Cross Connection for PFT (PN-AUCA) (Continued)

Note 1: The No. 2 and No. 3 circuits 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.

(2) When using PZ-8PFTA card at a remote site

- [Figure 3-32](#) shows an outline of a PFT (PZ-8PFTA) connection.

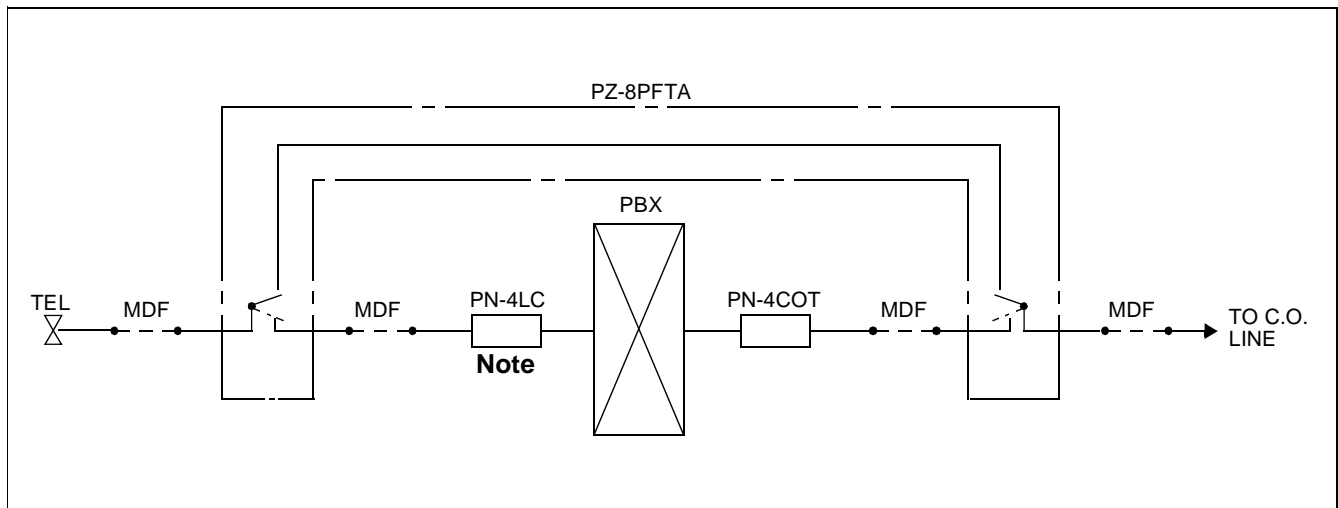


Figure 3-32 PFT (PZ-8PFTA) Connection Outline

Note: Using the PN-AUCA card (long line card) instead of the PN-4LC card is not recommended due to the variations from Central Office to the PBX; line quality cannot be assured.

- Install the PZ-8PFTA card to the PIM according to the following steps.

STEP 1: Connect the champ connectors of 25-pair cables to the PFT0 and PFT1 connectors on the PZ-8PFTA card as shown in [Figure 3-33](#). Then, secure them to each other using screws and tie wraps.

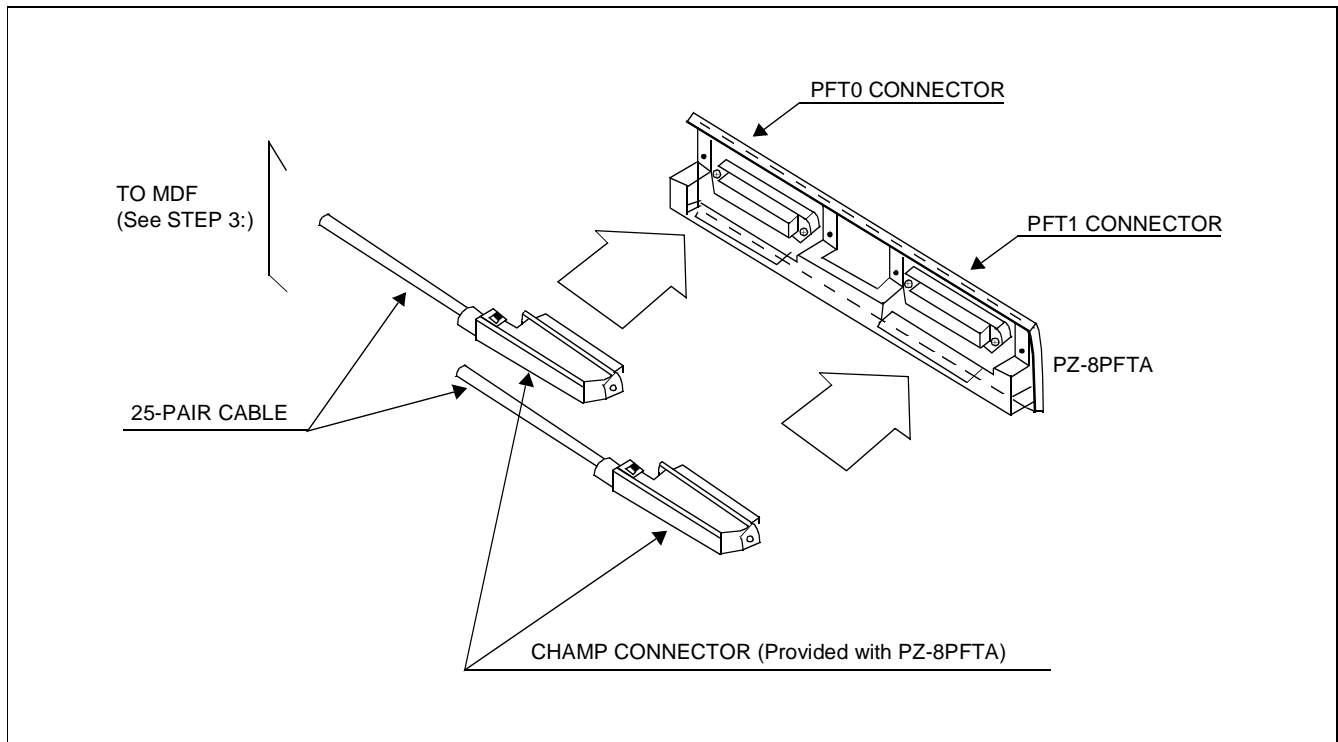


Figure 3-33 Connection of 25-Pair Cable and PZ-8PFTA

STEP 2: Hook the PZ-8PFTA card at the front bracket on the PIM, and secure them to each other using screws and SPL washers, as shown in [Figure 3-34](#).

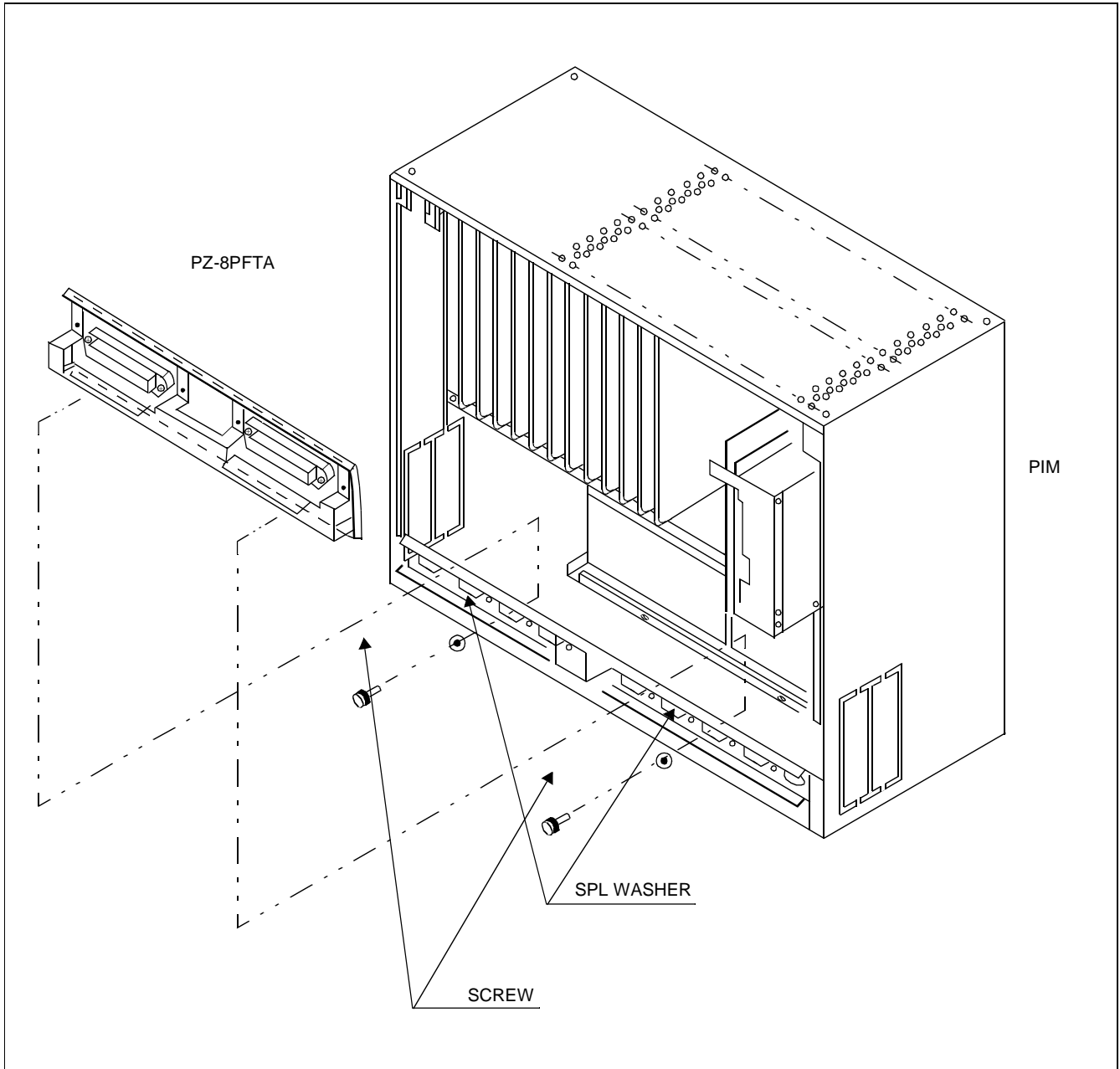


Figure 3-34 Mounting PZ-8PFTA Card to PIM

STEP 3: Connect the 25-pair cables on the MDF referring to [Figure 3-35](#) and [Figure 3-36](#).

- [Figure 3-35](#) shows the PFT connector pin assignment for each PFT circuit number (No. 0 - No. 7).

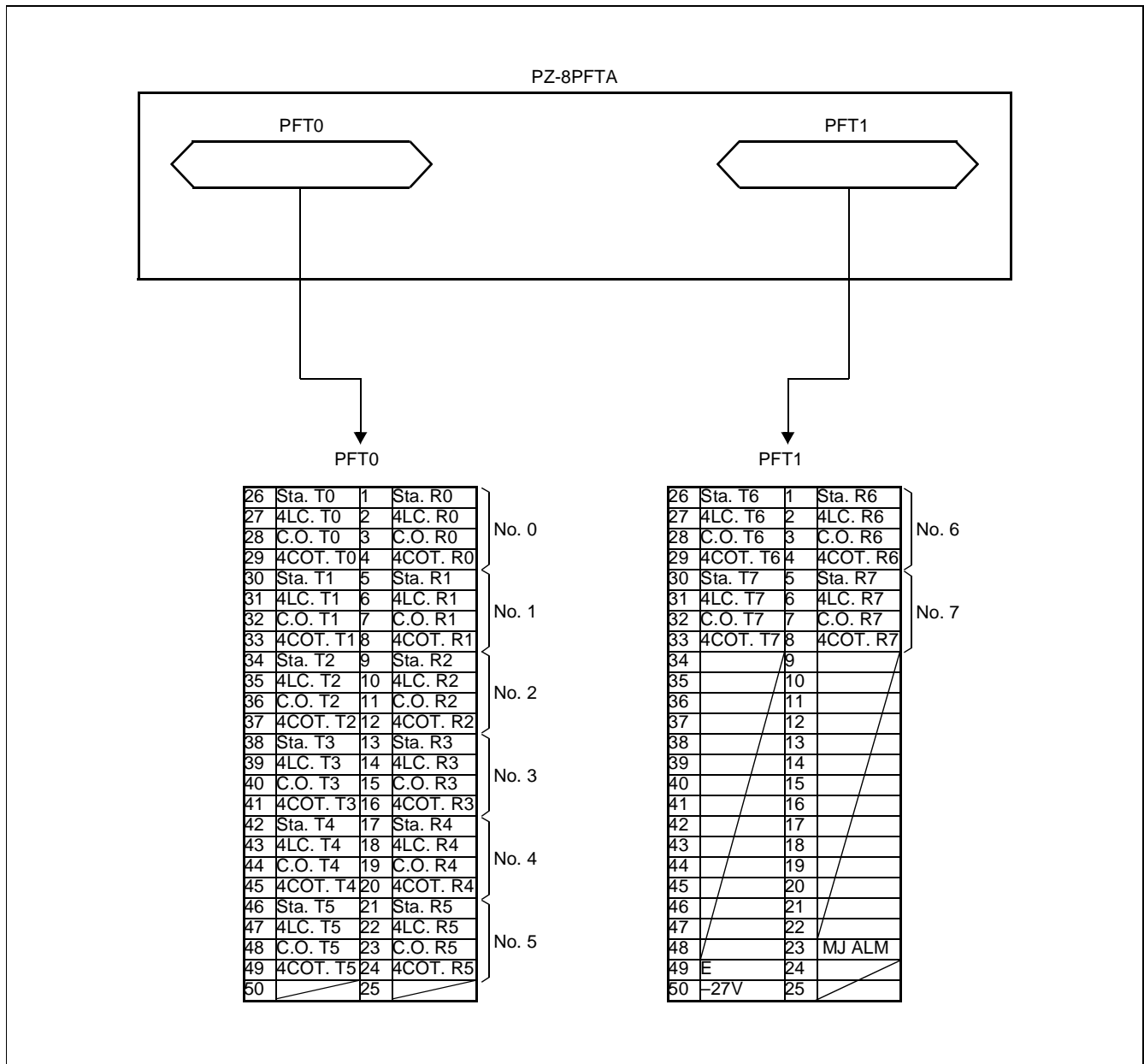


Figure 3-35 PFT Connector Pin Assignment

- Figure 3-36 shows the MDF cross connection for the No. 0 circuit on the PFT (PZ-8PFTA), as an example.

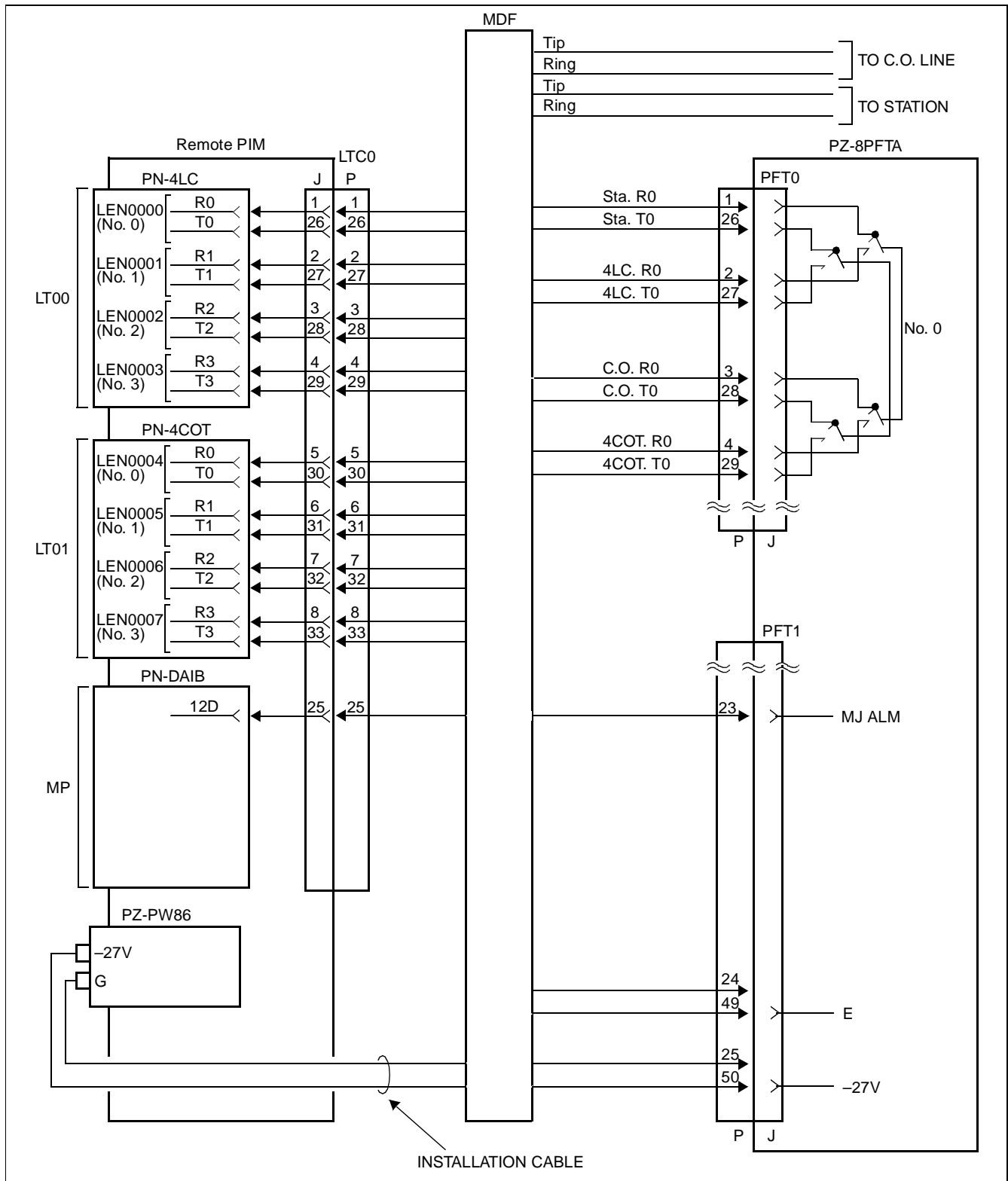
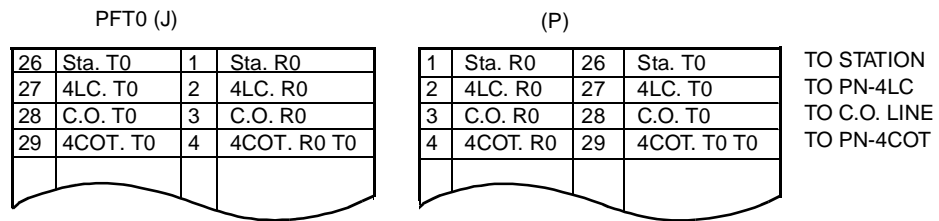
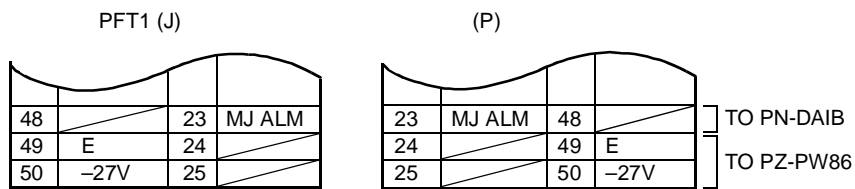


Figure 3-36 MDF Cross Connection for PFT (PZ-8PFTA)

① PFT0 CONNECTOR



② PFT1 CONNECTOR



③ LTC0 CONNECTOR

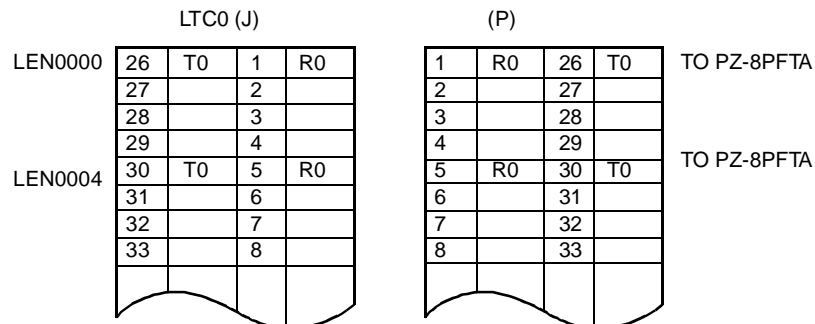


Figure 3-36 MDF Cross Connection for PFT (PZ-8PFTA) (Continued)

2.3 Connection Between Main Site and Remote Site

2.3.1 DTI Connection at Main Site

- (1) When using the LTC connector on BWB

Connect the cable to a CSU or directly to the Remote PIM via the MDF as shown in [Figure 3-37](#). [Figure 3-38](#) shows an example of cable connections when the DAIA/DAIC card is mounted in the AP0 slot of PIM0. Connection of DAIC cards between the Main PIM and the Remote PIM is available in the same manner as the DAIA-DAIB connection

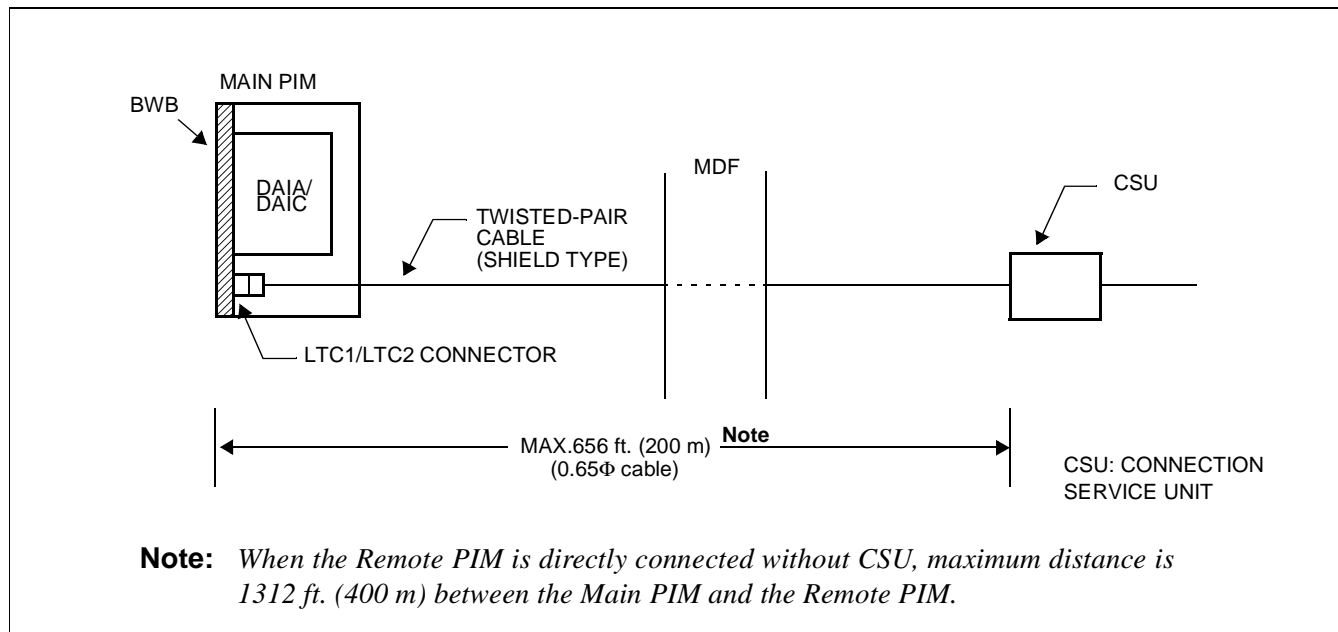


Figure 3-37 DTI Cable Connection via LTC Connector

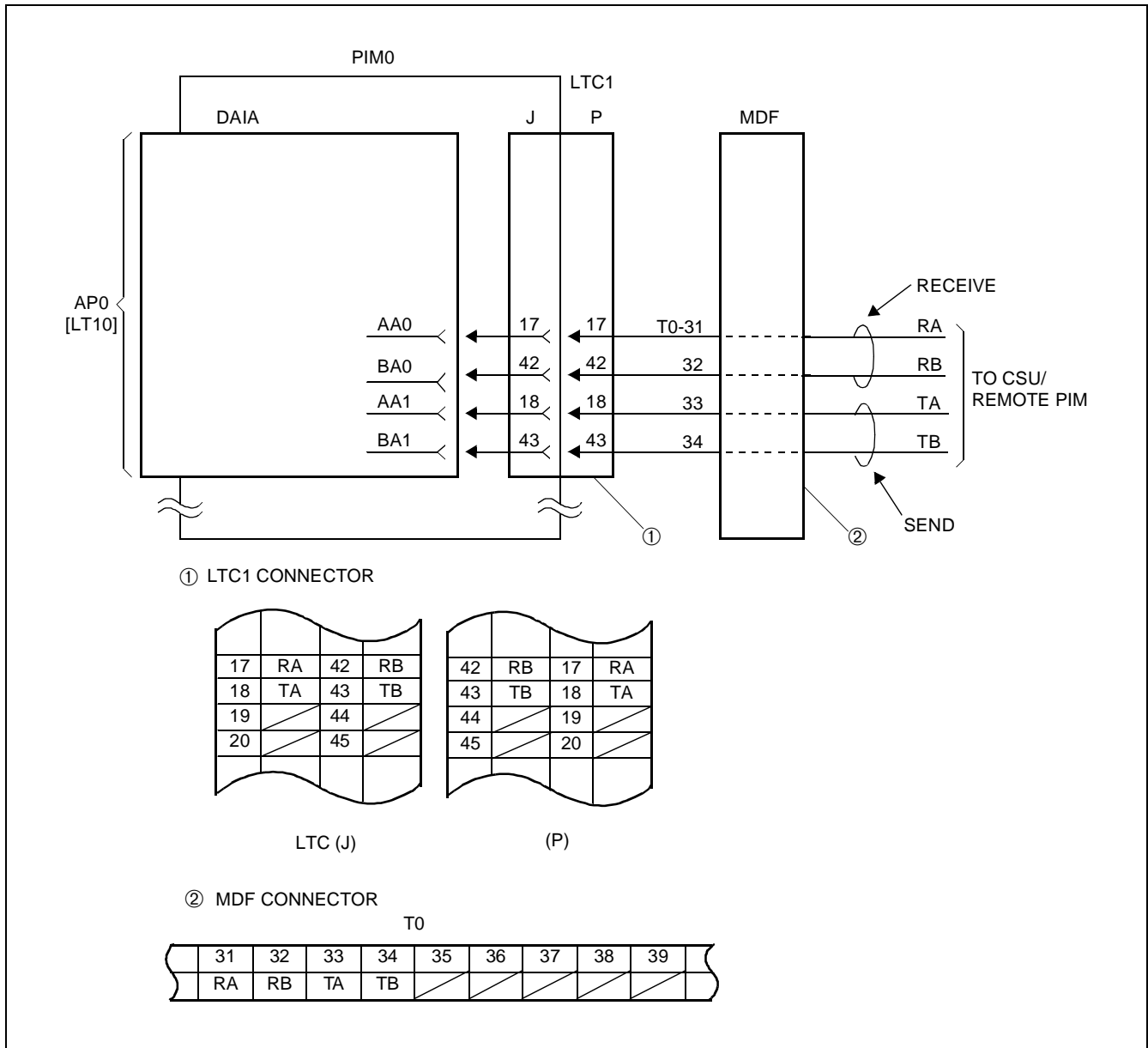


Figure 3-38 Example of DTI Cable Connection via LTC Connector

(2) When using CN connector on DAIA Card

Connect the cable to a CSU or directly to the Remote PIM via the CN connector on the DAIA/DAIC card as shown in Figure 3-39. Connection of DAIC cards between the Main PIM and the Remote PIM is available in the same manner as the DAIA-DIAB connection.

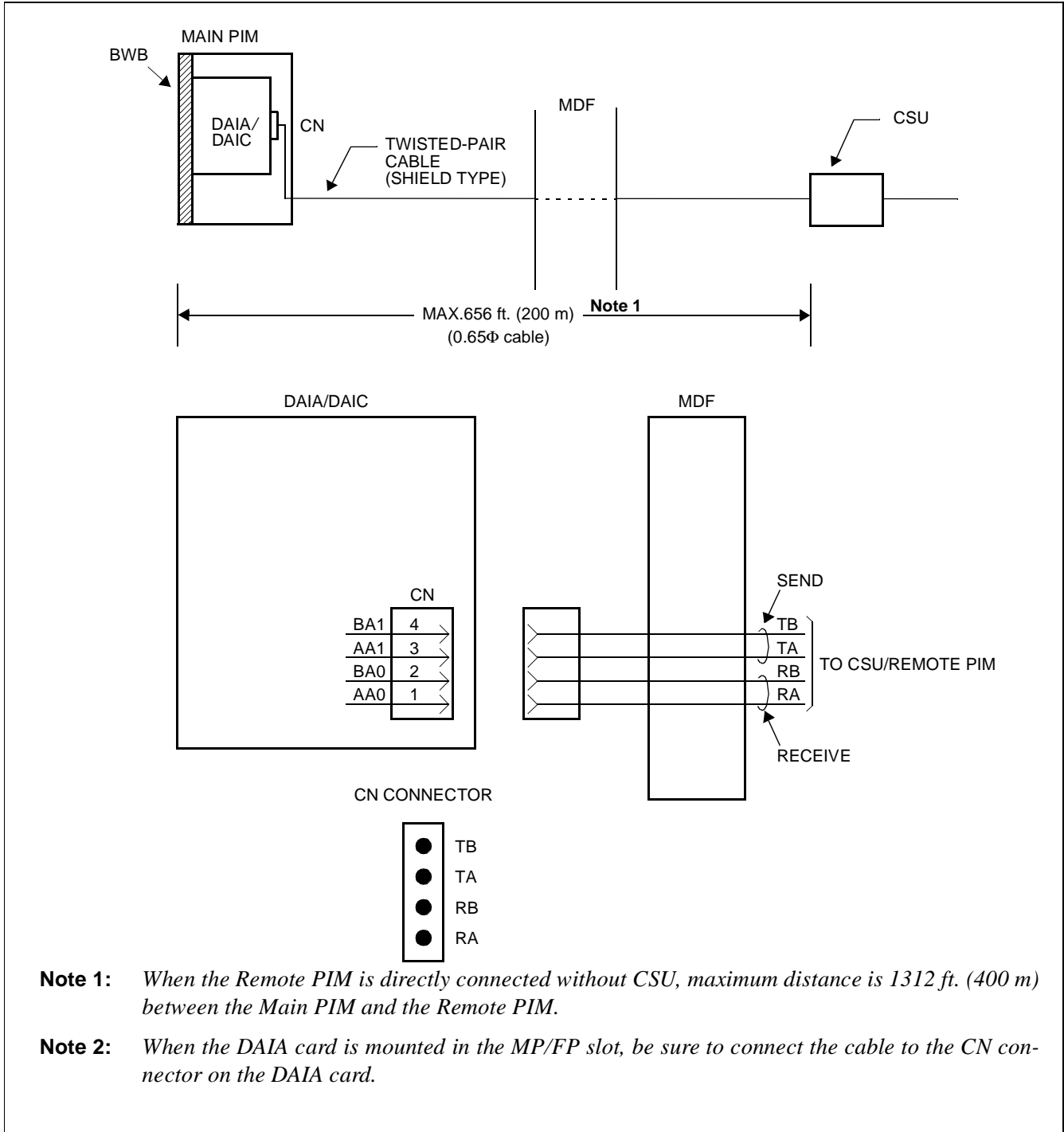


Figure 3-39 DTI Cable Connection via CN Connector (Main Site)

2.3.2 DTI Connection at Remote Site

Connect the cable to a CSU or directly to the Main PIM via the CN connector on the DAIB/DAIC card as shown in Figure 3-40. Connection of DAIC cards between the Main PIM and the Remote PIM is available in the same manner as the DAIA-DAIB connection.

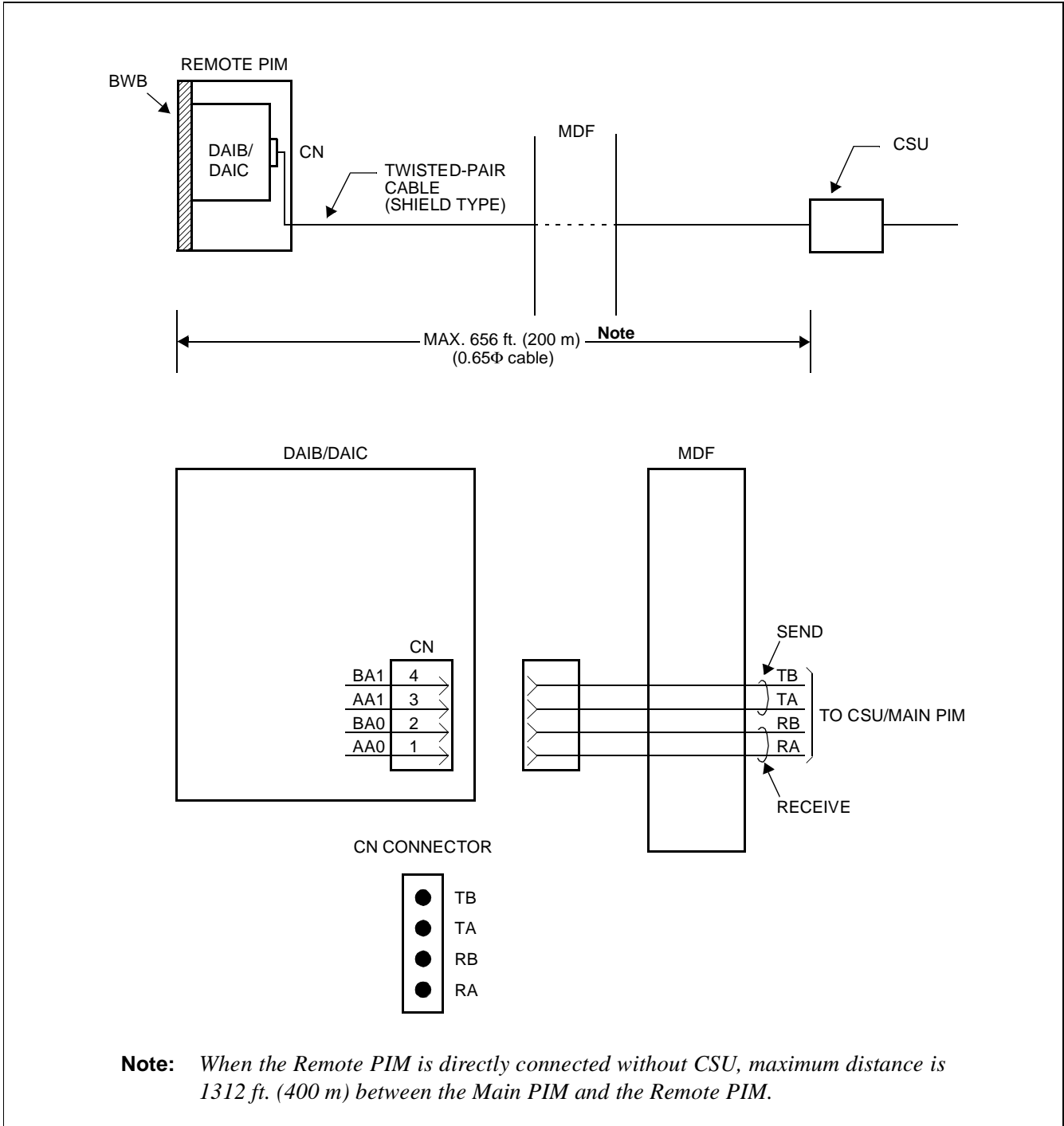


Figure 3-40 DTI Cable Connection via CN Connector (Remote Site)

2.4 MP Reset

After mounting all DAIC cards and connecting between the main site and the remote site, press the SW1 switch on the MP card.

CHAPTER 4 TROUBLESHOOTING

This chapter describes the method for fault diagnosis and troubleshooting when maintenance personnel detected the fault occurrence by lamp indication on DAIA, DAIB, and DAIC cards. For other system faults, refer to the Maintenance Manual. [Table 4-1](#) shows contents of the fault and the remedial action on each lamp status.

Table 4-1 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 MB switch. (Down→Up→Down) ② Check setting of SW1. 1: FP No.1 2: FP No.2 3: FP No.3 0, 4-F: Not used ③ If fault cannot be cleared, replace card.
	LINK lamp is not on	Layer 2 link connection failure between DAIA and DAIB	① Check whether cable between DAIA and DAIB is correctly connected. (Refer to Chapter 3, Section 2.3.) ② Reset MB switch. (Down→Up→Down)
	RED lamp is on	PCM signal loss or Frame Alignment signal loss	① Check whether cable between DAIA and DAIB is correctly connected. (Refer to Chapter 3, Section 2.3.)
	RMT lamp is on	Remote alarm	① Check whether cable between DAIA and DAIB (sending side) is correctly connected. (Refer to Chapter 3, Section 2.3.)

Table 4-1 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 MB switch. (Down→Up→Down) ② If fault cannot be cleared, replace card.
	LINK lamp is not on	Layer 2 link connection failure between DAIA and DAIB	① Check whether cable between DAIA and DAIB is correctly connected. (Refer to Chapter 3, Section 2.3.) ② Reset MB switch (Down→Up→Down)
	RED lamp is on	PCM signal loss or Frame Alignment signal loss	① Check whether cable between DAIA and DAIB is correctly connected. (Refer to Chapter 3, Section 2.3.) ② Reset MB switch of DAIA card on main site. (Down→Up→Down)
	RMT lamp is on	Remote alarm	① Check whether cable between DAIA and DAIB (sending side) is correctly connected. (Refer to Chapter 3, Section 2.3.)

Table 4-1 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 MB switch. (Down→Up→Down) ② If the fault can not be cleared, replace card.
	LINK lamp is not on	Layer 2 link connection failure between DAIA and DAIB	① Check whether cable between DAIA and DAIB is correctly connected. (Refer to CHAPTER 3, Section 2.3.) ② Reset MB switch (Down→Up→Down) ③ Check whether cable between DAIC cards is correctly connected. (Refer to CHAPTER 3, Section 2.3.)
	RED lamp is on	PCM signal loss or Frame Alignment signal loss	① Check whether cable between DAIC cards is correctly connected. (Refer to CHAPTER 3, Section 2.3.)
	RMT lamp is on	Remote alarm	① Check whether cable between DAIC cards (sending side) is correctly connected. (Refer to CHAPTER 3, Section 2.3.)

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