

2. LOCATION SECTION

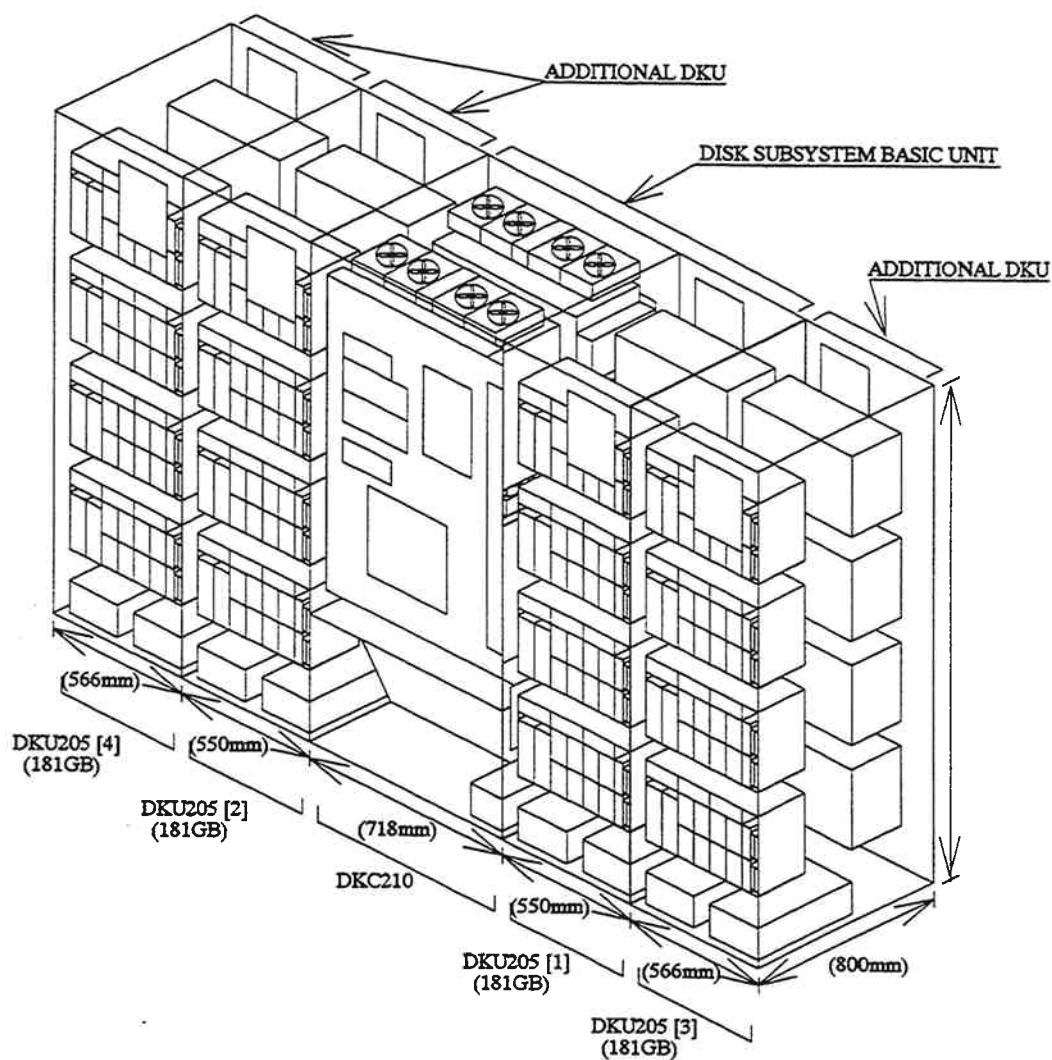
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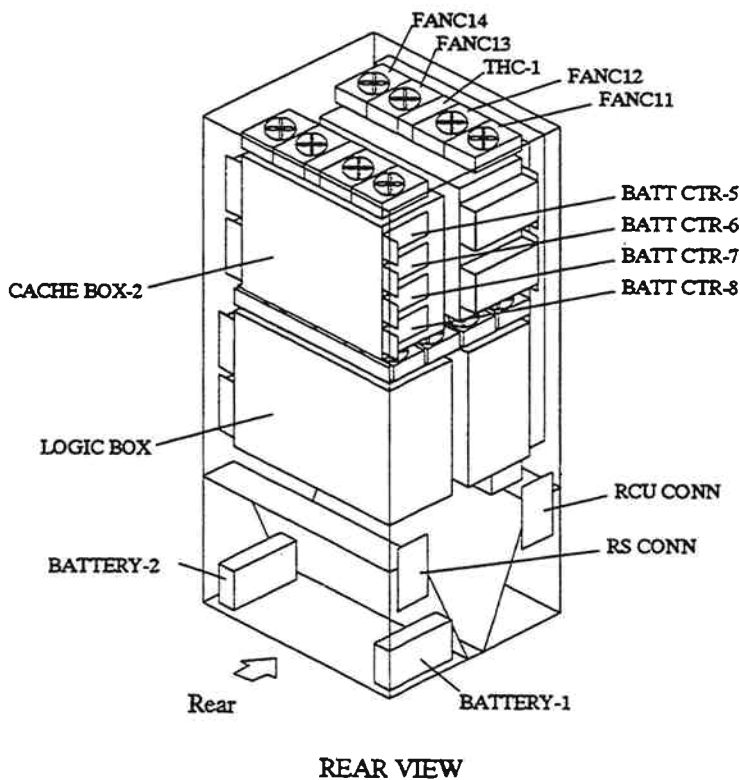
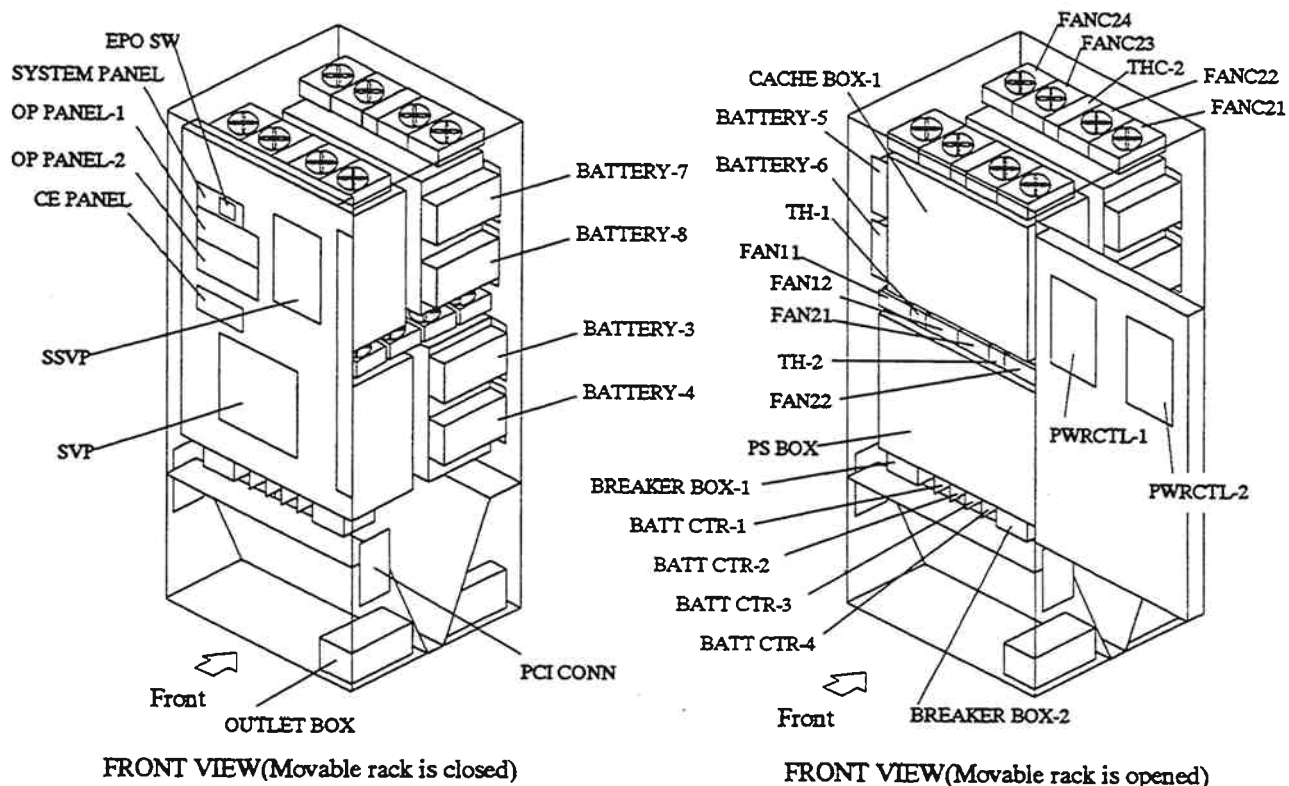
2 Location

2.1 Overview of Disk Subsystem



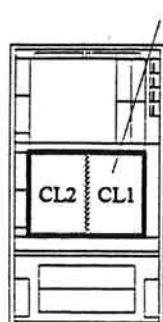
2.2 Parts Location

2.2.1 Disk Controller Unit



2.2.2 PCB and Power Supply Location

LOGIC BOX PCB LOCATION (DKC210I-5/0)



Rear View of Disk Controller

K J H G				F																E																D C B A																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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V	U	T	S	R								Q								P	N	M	L
W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W
P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	5	4	8	2	1	9	1	7	1	7	1	9	1	7	1	7	1	9	1	7	2	2	2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
D	C	A	B	A	A	A	A	B	A	A	A	A	A	B	A	A	A	A	B	A	A	A	A
/	/	/	/																				
	W	W	W							W	W	W	W	W	W					W	W	W	W
	P	P	P							P	P	P	P	P	P					P	P	P	P
	0	0	0							0	0	0	0	0	0					0	0	0	0
	1	1	1							2	1	2	2	2	2					2	2	2	2
	4	8	8							1	9	1	7	1	7					1	9	1	7
	-	-	-							-	-	-	-	-	-					-	-	-	-
	A	A	B							A	A	B	A	A	A					A	A	A	A
*B	*A*	a*a	*Z*	Y*Y*	X*X*	W*W*	V*V*	J*J*	U*U*	T*T*	S*S*	R*R*	Q*Q*	P*P*	N*N*	M*M*	L*L*	K*K*	J*J*	E*E*	H*D*	G*C*	F*
L	L	C	C	CHA-2R								CHA-2Q								D	D	D	D
T	T	C	C																	K	K	K	K
M	M	A	A																	A	A	A	A
-	-	E	E																	-	-	-	-
2	2	-	-																	2	2	2	2
V	V	2	2																	P	N	M	L

- *A: DKC-F210I-20
*B: DKC-F210I-40
*C: DKC-F210I-50 ×1set
*D: DKC-F210I-50 ×2sets
*E: DKC-F210I-50 ×3sets
*F: DKC-F210I-5E
*G: DKC-F210I-50E ×1set
*H: DKC-F210I-50E ×2sets
*J: DKC-F210I-50E ×3sets
*K: DKC-F210I-8S Basic Location
*L: DKC-F210I-4S Basic location
*M: DKC-F210I-8P Basic Location
*N: DKC-F210I-8SE Basic Location
*P: DKC-F210I-4SE Basic Location
*Q: DKC-F210I-8PE Basic Location
*R: DKC-F210I-8C Basic Location
*S: DKC-F210I-8CD Basic Location
*T: DKC-F210I-8S Additional Location
*U: DKC-F210I-4S Additional location
*V: DKC-F210I-8P Additional Location
*W: DKC-F210I-8SE Additional Location
*X: DKC-F210I-4SE Additional Location
*Y: DKC-F210I-8PE Additional Location
*Z: DKC-F210I-8C Additional Location
*a: DKC-F210I-8CD Additional Location

CACHE BOX-1 PCB and PS LOCATION

N	M	L	K	J	H	G	F	E	D	C	B	A
W	W	W	W	W	W	W	W	W	W	W	5	5
P	P	P	P	P	P	P	P	P	P	P	V	V
0	0	0	0	0	0	0	0	0	0	0	P	P
1	0	0	0	0	0	0	0	0	0	1	S	S
0	4	8	8	8	8	8	8	8	8	0		
A	B	B	B	B	B	B	B	B	B	A	*1	
/	/	/	/	/	/	/	/	/	/	/		
W	W	W	W	W	W	W	W	W	W	W	3	3
P	P	P	P	P	P	P	P	P	P	P	V	V
0	0	0	0	0	0	0	0	0	0	0	P	P
1	1	1	1	1	1	1	1	1	1	1	S	S
4	8	8	8	8	8	8	8	8	8	8		
B	B	B	B	B	B	B	B	B	B	A		
		*7	*6	*5	*4	*3	*2	*8	*8		*1	
C	C	C	C	C	C	C	C	C	C	C	5VPS	5VPS
T	P	A	A	A	A	A	A	A	A	T	-C11	-C10
M	S	H	H	H	H	H	H	H	H	M		
											3VPS	3VPS
C	C	C	C	C	C	C	C	C	C	C	-C11	-C10
1	1	1	1	1	1	1	1	1	1	1		
N	M	L	K	J	H	G	F	E	D	C		

*1: DKC-F210I-72

*2: DKC-F210I-2048 × 1set

*3: DKC-F210I-2048 × 2sets

*4: DKC-F210I-2048 × 3sets

*5: DKC-F210I-2048 × 4sets

*6: DKC-F210I-2048 × 5sets

*7: DKC-F210I-2048 × 6sets

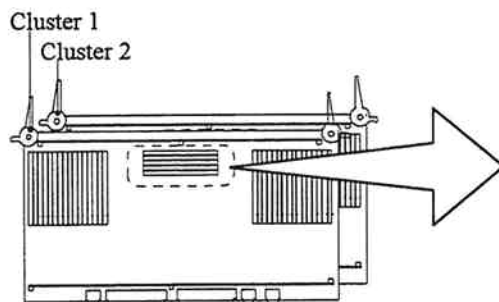
*8: DKC-F210I-40 (Moved from Logic Box)

CACHE BOX-2 PCB and PS LOCATION

N	M	L	K	J	H	G	F	E	D	C	B	A
W	W	W	W	W	W	W	W	W	W	W	5	5
P	P	P	P	P	P	P	P	P	P	P	V	V
0	0	0	0	0	0	0	0	0	0	0	P	P
1	0	0	0	0	0	0	0	0	0	1	S	S
0	4	8	8	8	8	8	8	8	8	0		
A	B	B	B	B	B	B	B	B	B	A	*1	
/	/	/	/	/	/	/	/	/	/	/		
W	W	W	W	W	W	W	W	W	W	W	3	3
P	P	P	P	P	P	P	P	P	P	P	V	V
0	0	0	0	0	0	0	0	0	0	0	P	P
1	1	1	1	1	1	1	1	1	1	1	S	S
4	8	8	8	8	8	8	8	8	8	8		
B	B	B	B	B	B	B	B	B	B	A		
		*7	*6	*5	*4	*3	*2	*8	*8		*1	
C	C	C	C	C	C	C	C	C	C	C	5VPS	5VPS
T	P	A	A	A	A	A	A	A	A	T	-C21	-C20
M	S	H	H	H	H	H	H	H	H	M		
											3VPS	3VPS
C	C	C	C	C	C	C	C	C	C	C	-C21	-C20
2	2	2	2	2	2	2	2	2	2	2		
N	M	L	K	J	H	G	F	E	D	C		

2.2.3 Shared Memory Module Location

1. Standard Cache Memory PCB



Cache Memory PCB (WP008-A / WP018-A)

Shared Memory Module Location

SM00	: 16MB/module, SZ635-B or SH024-B
SM01	: 16MB/module, SZ635-B or SH024-B *1
SM02	: 16MB/module, SZ635-B or SH024-B *2
SM03	: 16MB/module, SZ635-B or SH024-B *3
SM04	: 16MB/module, SZ635-B or SH024-B *4

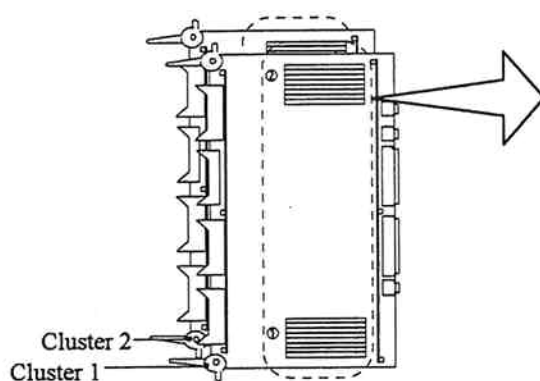
*1 DKC-F210I-32/DKC-F310I-32 × 1set

*2 DKC-F210I-32/DKC-F310I-32 × 2sets

*3 DKC-F210I-32/DKC-F310I-32 × 3sets

*4 DKC-F210I-32/DKC-F310I-32 × 4sets

2. CMP PCB Constituting DKC-F210I-40



CPM PCB(WP004-A/WP014-A)

Shared Memory Module Location

②	SM08	:	—
②	SM09	:	—
②	SM10	:	—
②	SM11	:	—
②	SM12	:	—
②	SM13	:	—
②	SM14	:	—
②	SM15	:	—
①	SM07	:	16MB/module, SZ635-B or SH024-B *C
①	SM06	:	16MB/module, SZ635-B or SH024-B *B
①	SM05	:	16MB/module, SZ635-B or SH024-B *A
①	SM04	:	16MB/module, SZ635-B or SH024-B *9
①	SM03	:	16MB/module, SZ635-B or SH024-B *8
①	SM02	:	16MB/module, SZ635-B or SH024-B *7
①	SM01	:	16MB/module, SZ635-B or SH024-B *6
①	SM00	:	16MB/module, SZ635-B or SH024-B *5

*5 Moved from Cache Memory PCB

*6 DKC-F210I-32/DKC-F310I-32 × 1set
or Moved from Cache Memory PCB*7 DKC-F210I-32/DKC-F310I-32 × 2sets
or Moved from Cache Memory PCB*8 DKC-F210I-32/DKC-F310I-32 × 3sets
or Moved from Cache Memory PCB*9 DKC-F210I-32/DKC-F310I-32 × 4sets
or Moved from Cache Memory PCB

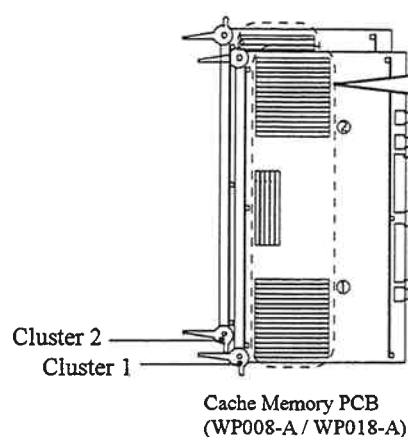
*A DKC-F210I-32/DKC-F310I-32 × 5sets

*B DKC-F210I-32/DKC-F310I-32 × 6sets

*C DKC-F210I-32/DKC-F310I-32 × 7sets

2.2.4 Cache Memory Module Location

1. Standard Cache Memory PCB

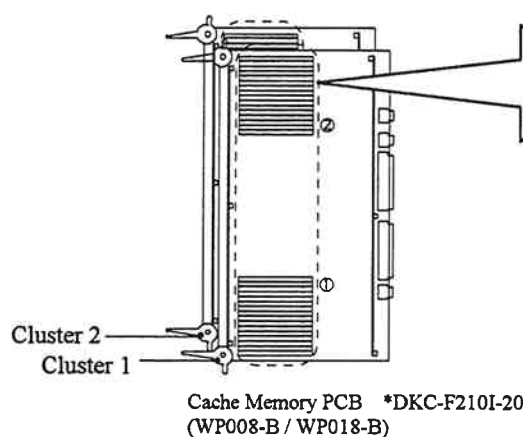


- *1 DKC-F210I-256/DKC-F310I-256 × 1 set
- *2 DKC-F210I-256/DKC-F310I-256 × 2 sets
- *3 DKC-F210I-256/DKC-F310I-256 × 3 sets
- *4 DKC-F210I-256/DKC-F310I-256 × 4 sets
- *5 DKC-F210I-256/DKC-F310I-256 × 5 sets
- *6 DKC-F210I-256/DKC-F310I-256 × 6 sets
- *7 DKC-F210I-256/DKC-F310I-256 × 7 sets

Cache Memory Module Location

CM03	: 32MB/module, SZ635-A or SH024-A
CM13	: 32MB/module, SZ635-A or SH024-A *1
CM23	: 32MB/module, SZ635-A or SH024-A *2
CM33	: 32MB/module, SZ635-A or SH024-A *3
CM43	: 32MB/module, SZ635-A or SH024-A *4
CM53	: 32MB/module, SZ635-A or SH024-A *5
CM63	: 32MB/module, SZ635-A or SH024-A *6
CM73	: 32MB/module, SZ635-A or SH024-A *7
CM01	: 32MB/module, SZ635-A or SH024-A
CM11	: 32MB/module, SZ635-A or SH024-A *1
CM21	: 32MB/module, SZ635-A or SH024-A *2
CM31	: 32MB/module, SZ635-A or SH024-A *3
CM41	: 32MB/module, SZ635-A or SH024-A *4
CM51	: 32MB/module, SZ635-A or SH024-A *5
CM61	: 32MB/module, SZ635-A or SH024-A *6
CM71	: 32MB/module, SZ635-A or SH024-A *7
CM70	: 32MB/module, SZ635-A or SH024-A *7
CM60	: 32MB/module, SZ635-A or SH024-A *6
CM50	: 32MB/module, SZ635-A or SH024-A *5
CM40	: 32MB/module, SZ635-A or SH024-A *4
CM30	: 32MB/module, SZ635-A or SH024-A *3
CM20	: 32MB/module, SZ635-A or SH024-A *2
CM10	: 32MB/module, SZ635-A or SH024-A *1
CM00	: 32MB/module, SZ635-A or SH024-A
CM72	: 32MB/module, SZ635-A or SH024-A *7
CM62	: 32MB/module, SZ635-A or SH024-A *6
CM52	: 32MB/module, SZ635-A or SH024-A *5
CM42	: 32MB/module, SZ635-A or SH024-A *4
CM32	: 32MB/module, SZ635-A or SH024-A *3
CM22	: 32MB/module, SZ635-A or SH024-A *2
CM12	: 32MB/module, SZ635-A or SH024-A *1
CM02	: 32MB/module, SZ635-A or SH024-A

2. Cache Memory PCB Constituting DKC-F210I-20

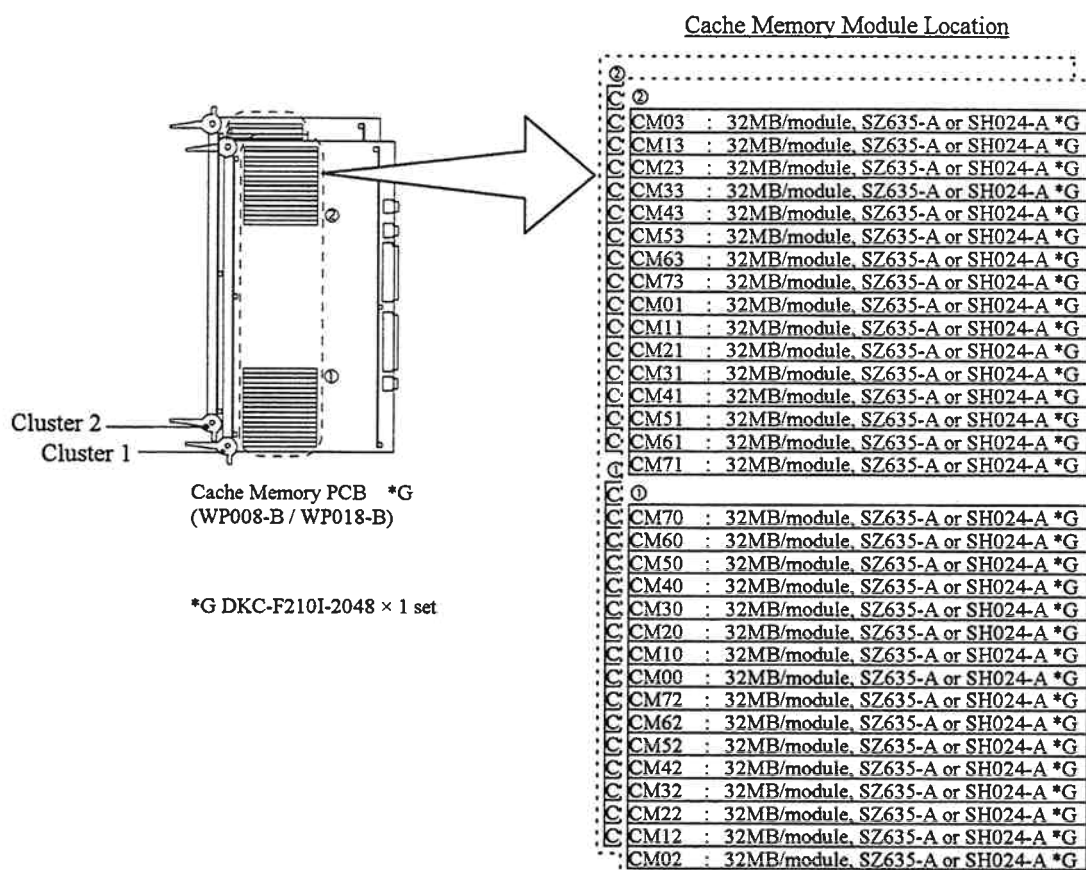


- *8 DKC-F210I-256/DKC-F310I-256 × 8 sets
- *9 DKC-F210I-256/DKC-F310I-256 × 9 sets
- *A DKC-F210I-256/DKC-F310I-256 × 10 sets
- *B DKC-F210I-256/DKC-F310I-256 × 11 sets
- *C DKC-F210I-256/DKC-F310I-256 × 12 sets
- *D DKC-F210I-256/DKC-F310I-256 × 13 sets
- *E DKC-F210I-256/DKC-F310I-256 × 14 sets
- *F DKC-F210I-256/DKC-F310I-256 × 15 sets

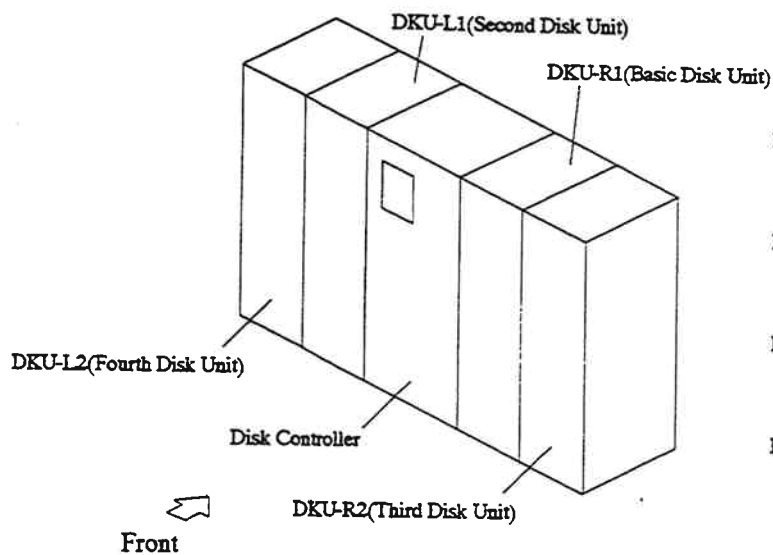
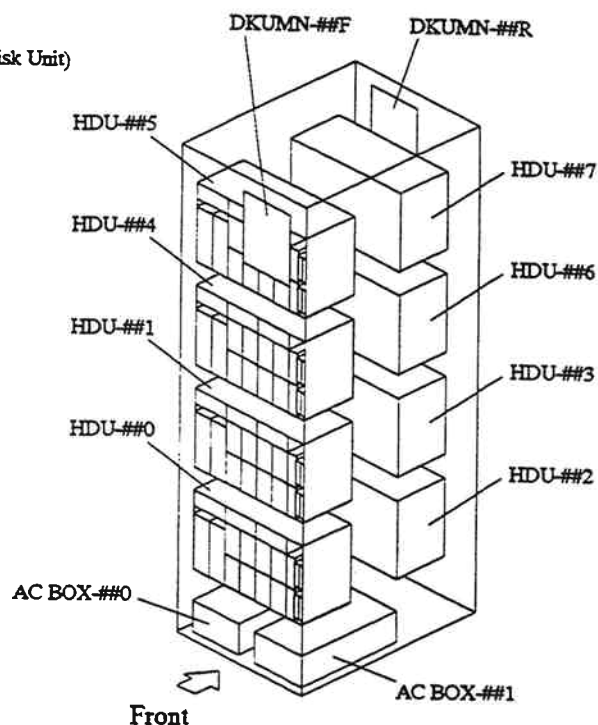
Cache Memory Module Location

CM03	: 32MB/module, SZ635-A or SH024-A *8
CM13	: 32MB/module, SZ635-A or SH024-A *9
CM23	: 32MB/module, SZ635-A or SH024-A *A
CM33	: 32MB/module, SZ635-A or SH024-A *B
CM43	: 32MB/module, SZ635-A or SH024-A *C
CM53	: 32MB/module, SZ635-A or SH024-A *D
CM63	: 32MB/module, SZ635-A or SH024-A *E
CM73	: 32MB/module, SZ635-A or SH024-A *F
CM01	: 32MB/module, SZ635-A or SH024-A *8
CM11	: 32MB/module, SZ635-A or SH024-A *9
CM21	: 32MB/module, SZ635-A or SH024-A *A
CM31	: 32MB/module, SZ635-A or SH024-A *B
CM41	: 32MB/module, SZ635-A or SH024-A *C
CM51	: 32MB/module, SZ635-A or SH024-A *D
CM61	: 32MB/module, SZ635-A or SH024-A *E
CM71	: 32MB/module, SZ635-A or SH024-A *F
CM70	: 32MB/module, SZ635-A or SH024-A *F
CM60	: 32MB/module, SZ635-A or SH024-A *E
CM50	: 32MB/module, SZ635-A or SH024-A *D
CM40	: 32MB/module, SZ635-A or SH024-A *C
CM30	: 32MB/module, SZ635-A or SH024-A *B
CM20	: 32MB/module, SZ635-A or SH024-A *A
CM10	: 32MB/module, SZ635-A or SH024-A *9
CM00	: 32MB/module, SZ635-A or SH024-A *8
CM72	: 32MB/module, SZ635-A or SH024-A *F
CM62	: 32MB/module, SZ635-A or SH024-A *E
CM52	: 32MB/module, SZ635-A or SH024-A *D
CM42	: 32MB/module, SZ635-A or SH024-A *C
CM32	: 32MB/module, SZ635-A or SH024-A *B
CM22	: 32MB/module, SZ635-A or SH024-A *A
CM12	: 32MB/module, SZ635-A or SH024-A *9
CM02	: 32MB/module, SZ635-A or SH024-A *8

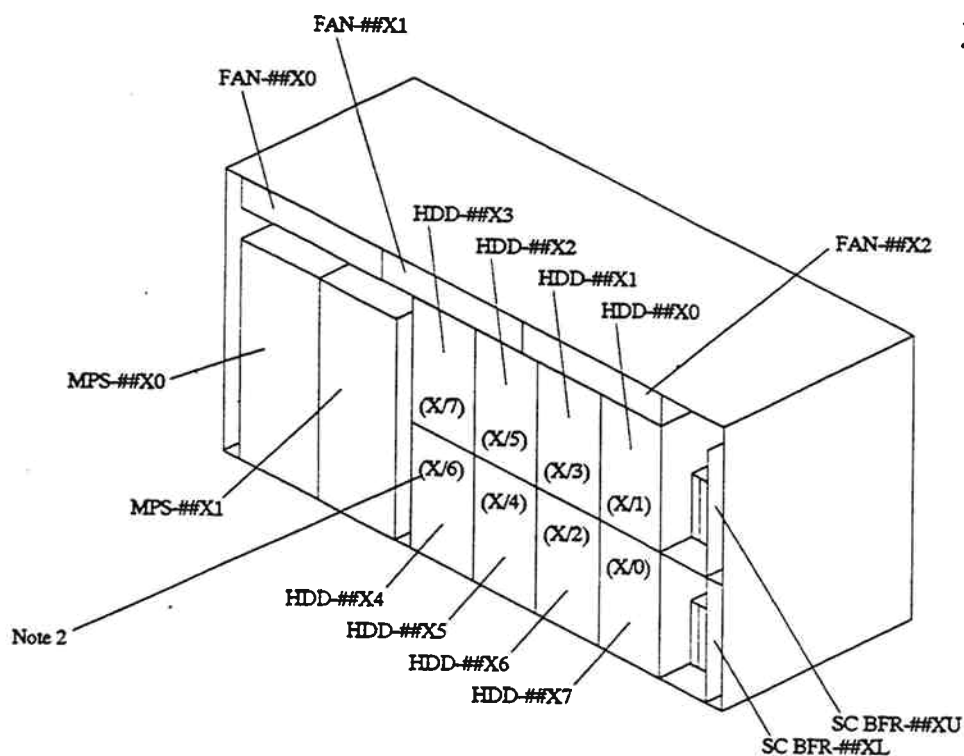
3. Cache Memory PCB Constituting DKC-F210I-2048



2.2.5 Disk Unit

Disk Subsystem

Note: ##=Disk Unit Location(R1,R2,L1,L2)

Disk Unit

Note 1: ##X=HDU Box Location(R10,R11;... ,L27)

Note 2: The HDD canister location is expressed in the form "(Column/raw)" in the SSB/SIM LOG.
 Column No. : Last digit of the HDU Box location.
 Raw No. : 0, 1, 2, ... , 7

HDU BOX

2.3 Panel

2.3.1 Operator Panel

[1] Operator Panel 1

Fig. 2.3.1-1 and Table 2.3.1-1 show the Operator Panel 1 and its functions respectively.

Circled numbers in Fig. 2.3.1-1 correspond to the numbers in Table 2.3.1-1.

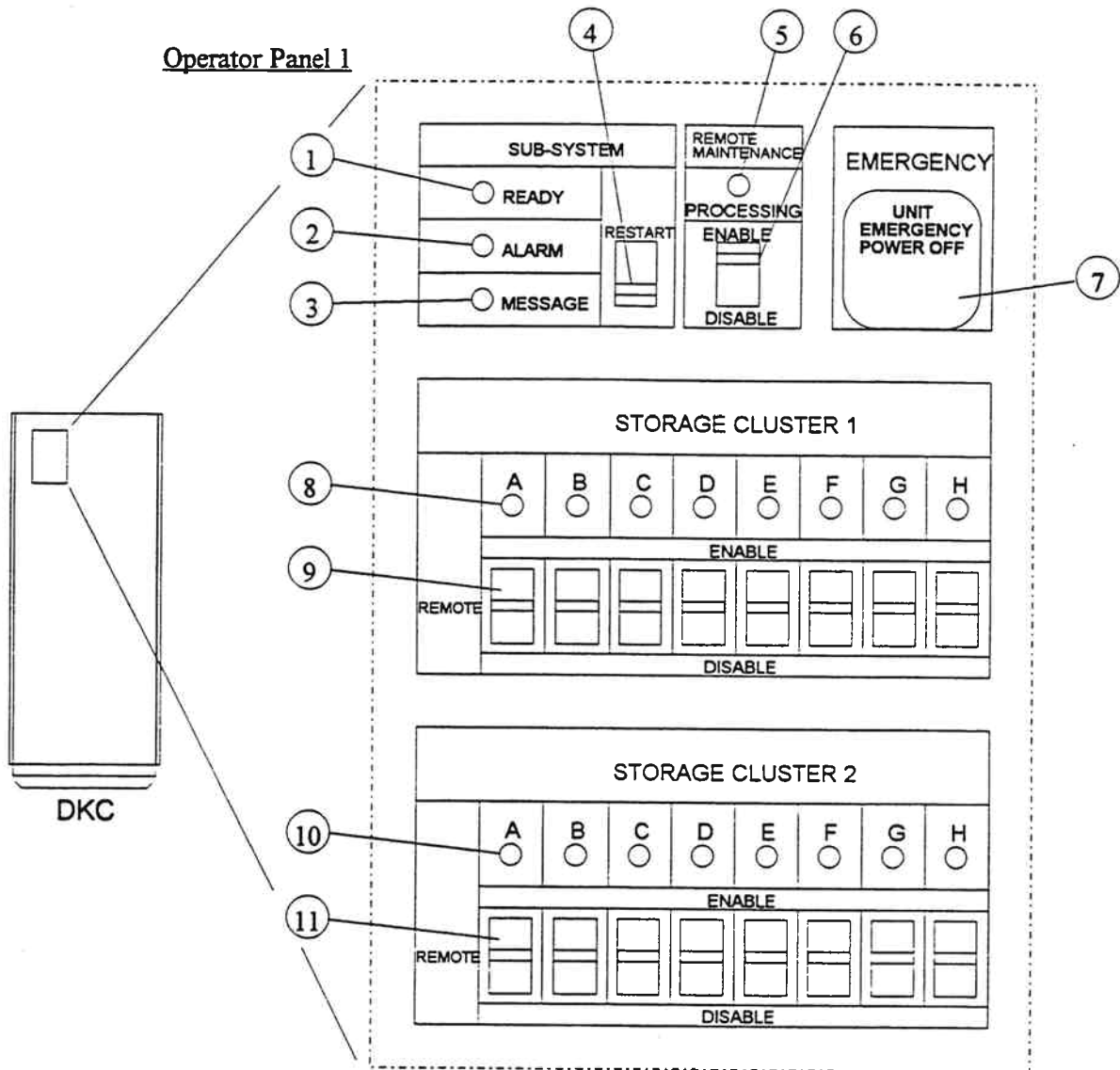


Fig. 2.3.1-1 Operator Panel 1

Table 2.3.1-1 Part Function on Operator Panel

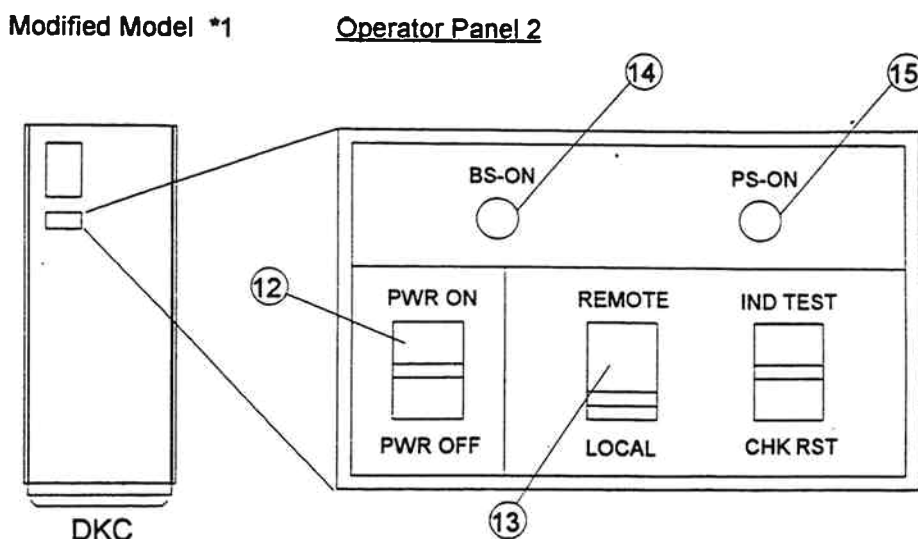
No.	Parts Name	Class	Function
1	SUBSYSTEM READY	LED (Green)	Indicates that input/output operation on the channel interface is enable.
2	SUBSYSTEM ALARM	LED (Red)	Indicates DC under voltage, DC over current, abnormally high temperature, or an unrecoverable failure occurred.
3	SUBSYSTEM MESSAGE	LED (Amber)	Indicates that any message has been issued from Clusters.
4	SUBSYSTEM RESTART	Switch	Used to unfence the fenced drive path and to release Write Inhibit.
5	REMOTE MAINTENANCE PROCESSING	LED (Amber)	Indicates that remote maintenance is being processed.
6	REMOTE MAINTENANCE ENABLE/DISABLE	Switch	Used to permit remote maintenance.
7	EMERGENCY POWER OFF	Switch	Used to power off the storage subsystem in an emergency situation.
8	STORAGE CLUSTER 1 CHANNEL A-H ENABLE	LED (Green)	Parallel Channel: Indicates that corresponding channel route is enabled. Serial Channel: (1) On : Indicates some of the logical paths are established. (2) Fast blinking : Indicates that the corresponding channel route is executing the channel command. (3) Slow blinking : Indicates none of the logical path is established. (4) Off : Indicates that the corresponding channel route is not enabled. SCSI Channel: On : Indicates the SCSI cable and terminator are connected correctly to the corresponding channel route and channel route gets ready. Off : Indicates the some of the following conditions occurred. • None of Logical Unit is set up to the corresponding channel route • SCSI cable or terminator is not connected correctly. • Corresponding channel route does not get ready after powered on.
9	STORAGE CLUSTER 1 CHANNEL A-H ENABLE	Switch	Parallel Channel: Used to enable or disable the corresponding channel routes. (1) Enable : Make enable the corresponding channel route. (2) Disable : Make disable the corresponding channel route. (3) Remote : Enable/Disable control is made by remote switch. Serial Channel/SCSI Channel: This switch has no mean.

Table 2.3.1-1 Part Function on Operator Panel

No.	Parts Name	Class	Function
10	STORAGE CLUSTER 2 CHANNEL A-H ENABLE	LED (Green)	Parallel Channel: Indicates that corresponding channel route is enabled. Serial Channel: (1) On : Indicates some of the logical paths are established. (2) Fast blinking : Indicates that the corresponding channel route is executing the channel command. (3) Slow blinking : Indicates none of the logical path is established. (4) Off : Indicates that the corresponding channel route is not enabled. SCSI Channel: On : Indicates the SCSI cable and terminator are connected correctly to the corresponding channel route and channel route gets ready. Off : Indicates the some of the following conditions occurred. • None of Logical Unit is set up to the corresponding channel route • SCSI cable or terminator is not connected correctly. • Corresponding channel route does not get ready after powered on.
11	STORAGE CLUSTER 2 CHANNEL A-H ENABLE/REMOTE/DISABLE	Switch	Parallel Channel: Used to enable or disable the corresponding channel routes. (1) Enable : Make enable the corresponding channel route. (2) Disable : Make disable the corresponding channel route. (3) Remote : Enable/Disable control is made by remote switch. Serial Channel/SCSI Channel: This switch has no mean.

[2] Operator Panel 2

Fig. 2.3.1-2 and Table 2.3.1-2 show the Operator Panel 2 and its functions respectively.
Circled numbers in Fig. 2.3.1-2 correspond to the numbers in Table 2.3.1-2.



*1 : This model modified the front door to enable powering-ON/OFF the subsystem without opening the front door.

Fig. 2.3.1-2 Operator Panel 2

Table 2.3.1-2 Part Function on Operator Panel

No.	Parts Name	Class	Function
12	PWR ON/PWR OFF	Switch	Used to power on/off the subsystem. This switch is valid when the REMOTE/LOCAL switch is set to the LOCAL position.
13	PWR ON/PWR OFF REMOTE/LOCAL	Switch	REMOTE position : Subsystem is powered on/off by the instructions from the CPU. LOCAL position : Subsystem is powered on/off by PWR ON/PWR OFF switch.
14	BS ON	LED (Yellow)	Indicates that the Sub-PS is on.(CL 1 or CL 2)
15	PS ON	LED (Green)	Indicates that the subsystem is powered on.

2.3.2 Other Switches and LEDs

Fig. 2.3.2-1 and Table 2.3.2-1 show the Panels and its functions respectively.
Circled numbers in Fig. 2.3.2-1 correspond to the numbers in Table 2.3.2-1.

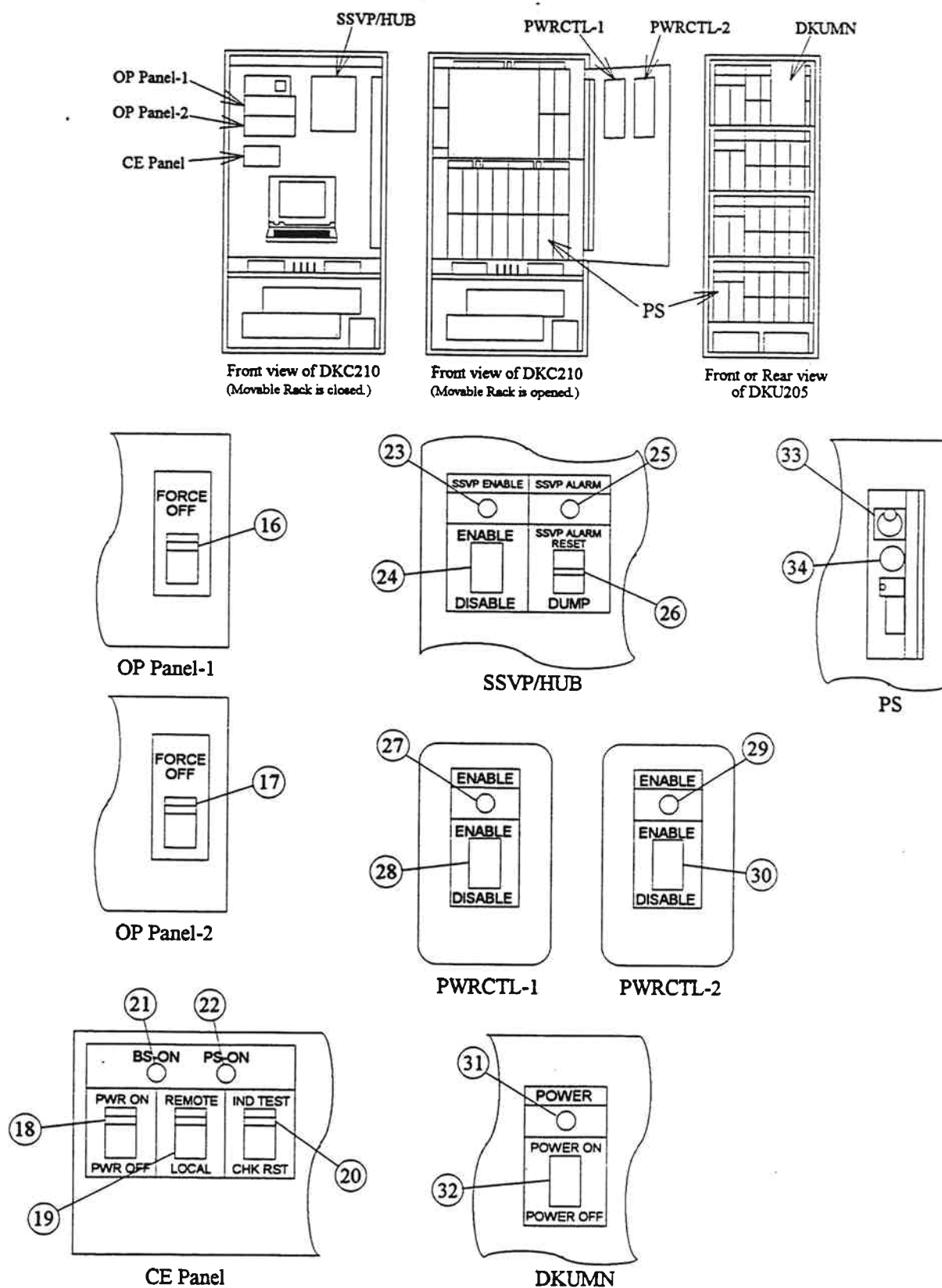


Fig. 2.3.2-1 Other Switches and LEDs

Table 2.3.2-1 Function of Other Switches and LEDs

No.	Parts Name	Class	Function
16	STORAGE CLUSTER 1 FORCE OFFLINE	Switch	Parallel Channel: Used to inhibit channel interface operations for all channel routes of storage cluster 1. Serial channel/SCSI channel: This switch has no mean.
17	STORAGE CLUSTER 2 FORCE OFFLINE	Switch	Parallel Channel: Used to inhibit channel interface operations for all channel routes of Storage Cluster 2. Serial channel/SCSI channel: This switch has no mean.
18	PWR ON/PWR OFF	Switch	Used to power on/off the subsystem. This switch is valid when the REMOTE/LOCAL switch is set to the LOCAL position.
19	PWR ON/PWR OFF REMOTE/LOCAL	Switch	REMOTE position: Subsystem is powered on/off by the instructions from the CPU. LOCAL position: Subsystem is powered on/off by PWR ON/ PWR OFF switch.
20	IND TEST/CHK RESET	Switch	IND TEST position: The LEDs on Operator panel and CE panel go on. CHK RESET position: The PS ALARM and TH ALARM is reset.
21	BS ON	LED (Yellow)	Indicates that the Sub-PS is on.(CL 1 or CL 2)
22	PS ON	LED (Green)	Indicates that the subsystem is powered on.
23	SSVP ENABLE	LED (Green)	Indicates that the SSVP is powered on.
24	SSVP ENABLE/DISABLE	Switch	Used to power on/off the SSVP.
25	SSVP ALARM	LED (Red)	This LED shows the state of SSVP. Lighting BOOT detected abnormality of hardware. Slow blinking The dump acquisition of SSVP ended. Early blinking Micro Code of SSVP ended abnormally.
26	SSVP ALARM RESET/DUMP	Switch	ALARM RESET position: The SSVP detection alarm is reset. Then IMPL of the SVP is executed. DUMP position: The data in SVP memory is written to the HDD.
27	PWRCTL-1 ENABLE	LED (Green)	Indicates that the PWRCTL-1 is powered on.
28	PWRCTL-1 ENABLE/DISABLE	Switch	Used to power on/off the PWRCTL-1.

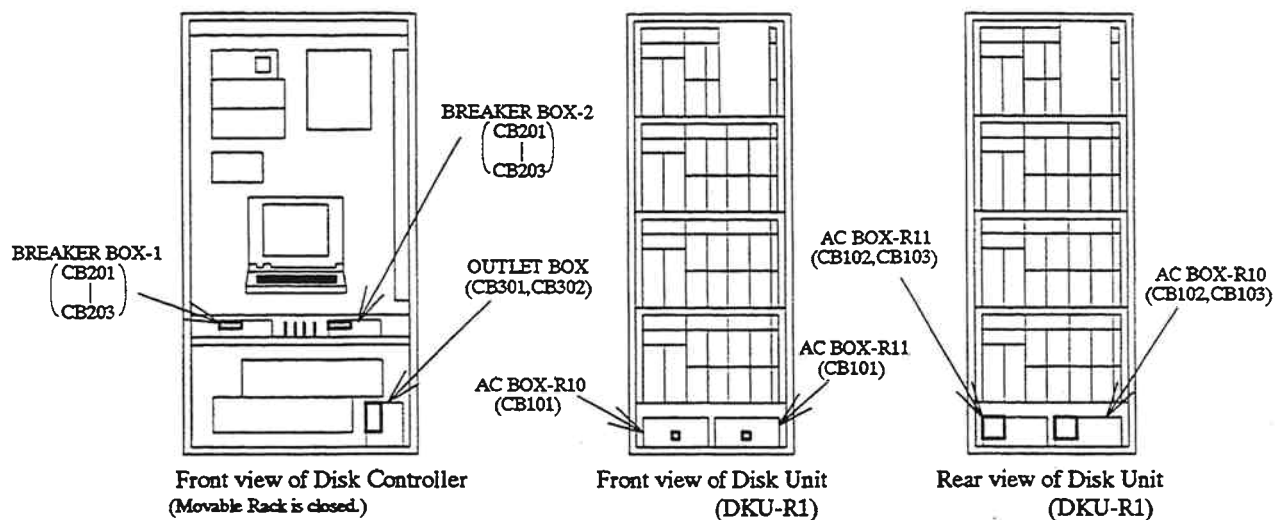
Table 2.3.2-1 Function of Other Switches and LEDs

No.	Parts Name	Class	Function
29	PWRCTL-2 ENABLE	LED (Green)	Indicates that the PWRCTL-2 is powered on.
30	PWRCTL-2 ENABLE/DISABLE	Switch	Used to power on/off the PWRCTL-2.
31	DKUMN POWER ON	LED (Green)	Indicates that each DKUMN is powered on.
32	DKUMN POWER ON/OFF	Switch	Used to power on/off each DKUMN.
33	PS Enable/Disable	Switch	Used to power on/off the PS.
34	PS Enable	LED (Green)	Indicates that the PS is providing output voltage.

2.3.3 Circuit Breakers

Fig. 2.3.3-1 show the locations of Circuit Breakers.

Fig. 2.3.3-2, Fig. 2.3.3-3 and Fig. 2.3.3-4 show the connection of power supplies.



Note: The locations of breakers are the same with DKU-R2, L1, and L2.

Fig. 2.3.3-1 Locations of Circuit Breakers

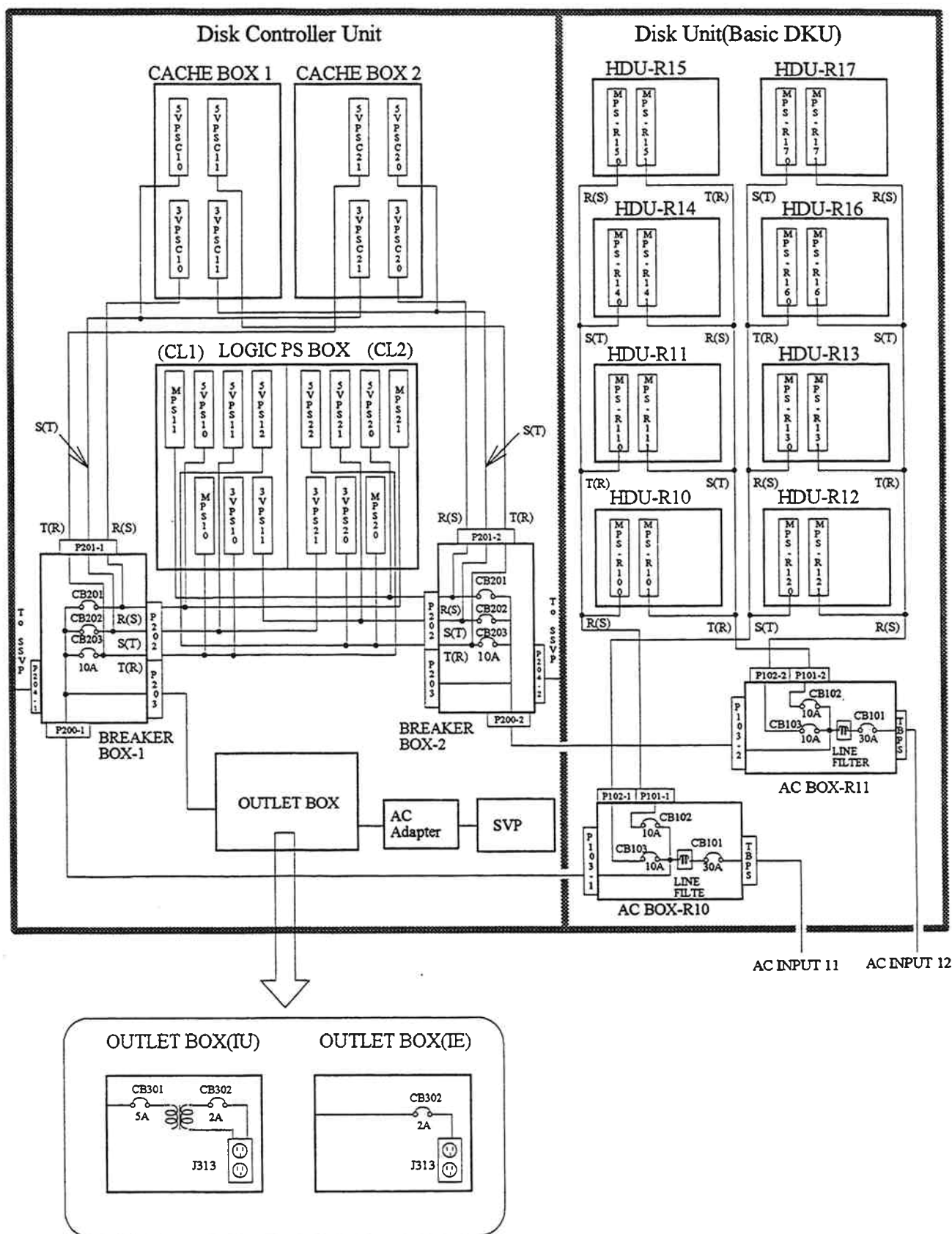


Fig. 2.3.3-2 Connection of POWER SUPPLIES (1/3)

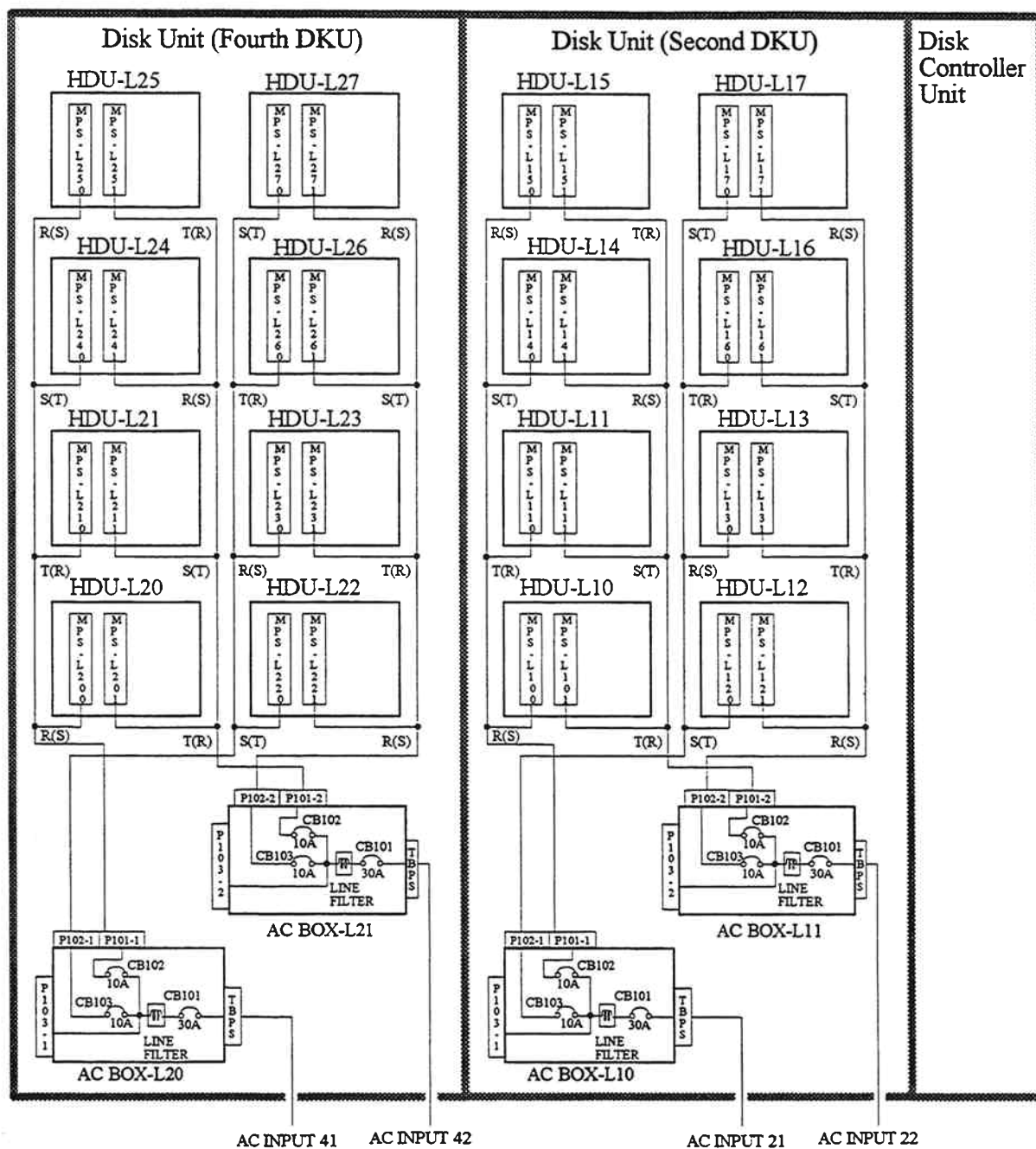


Fig. 2.3.3-3 Connection of POWER SUPPLIES (2/3)

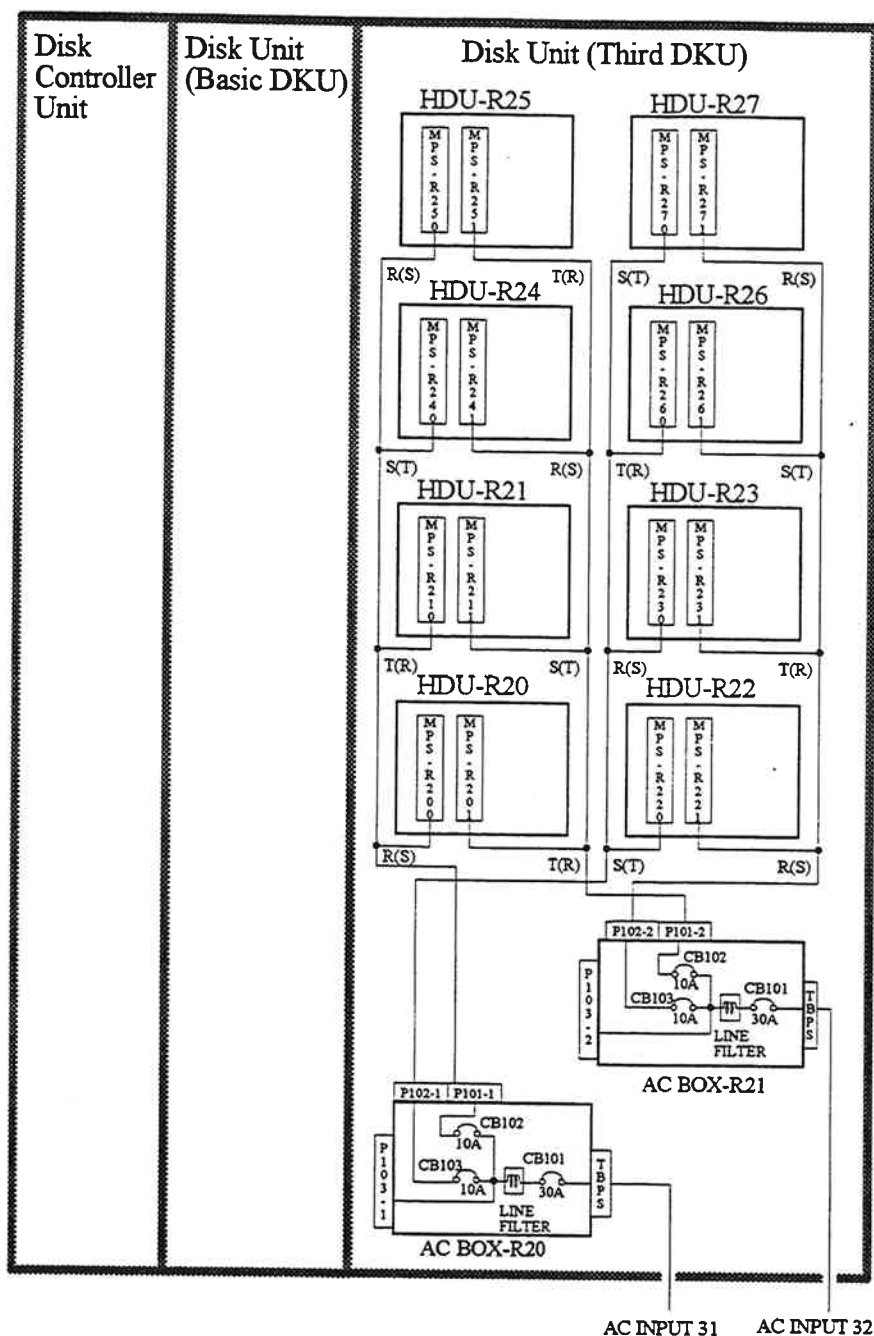
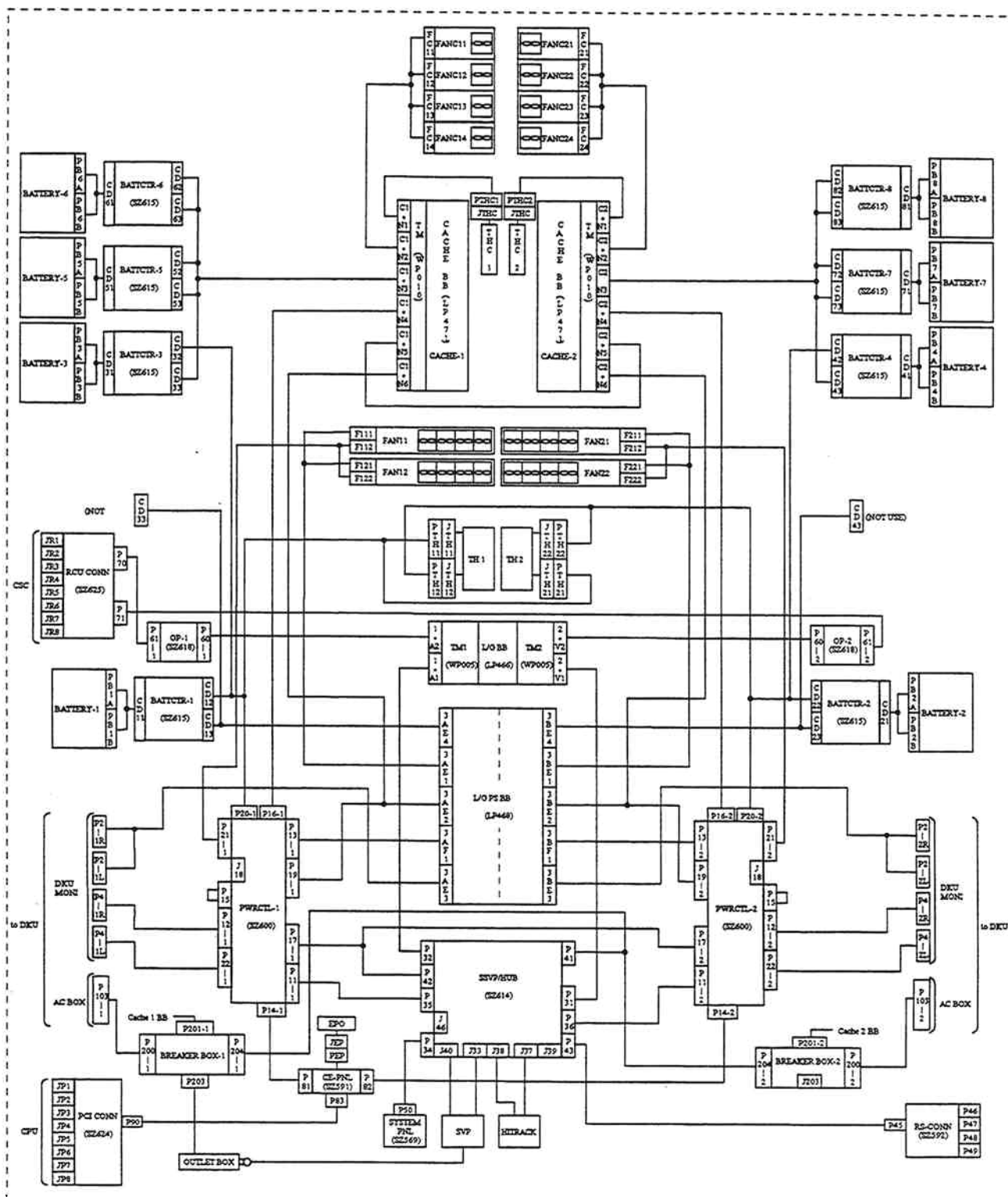
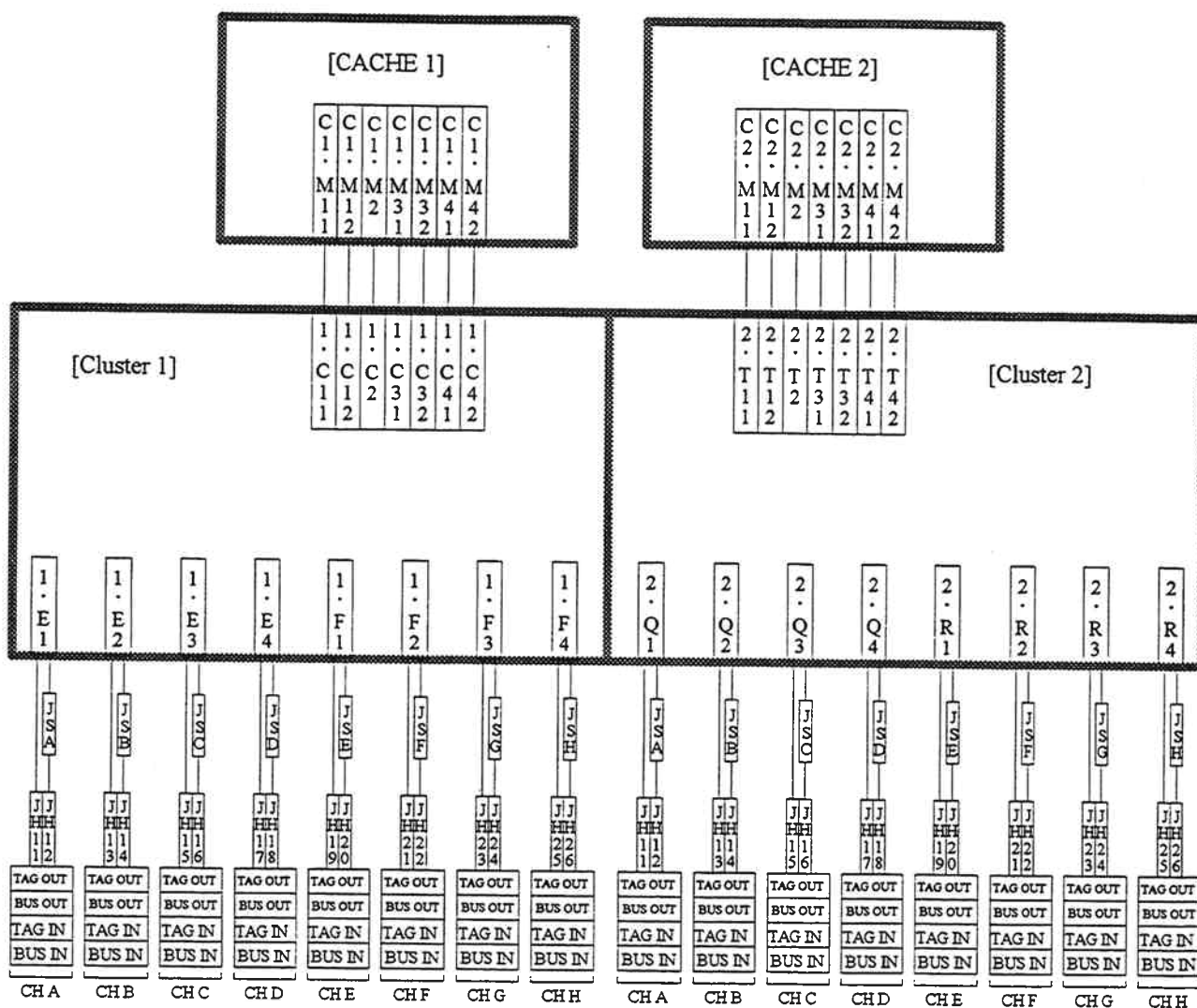


Fig. 2.3.3-4 Connection of POWER SUPPLIES (3/3)

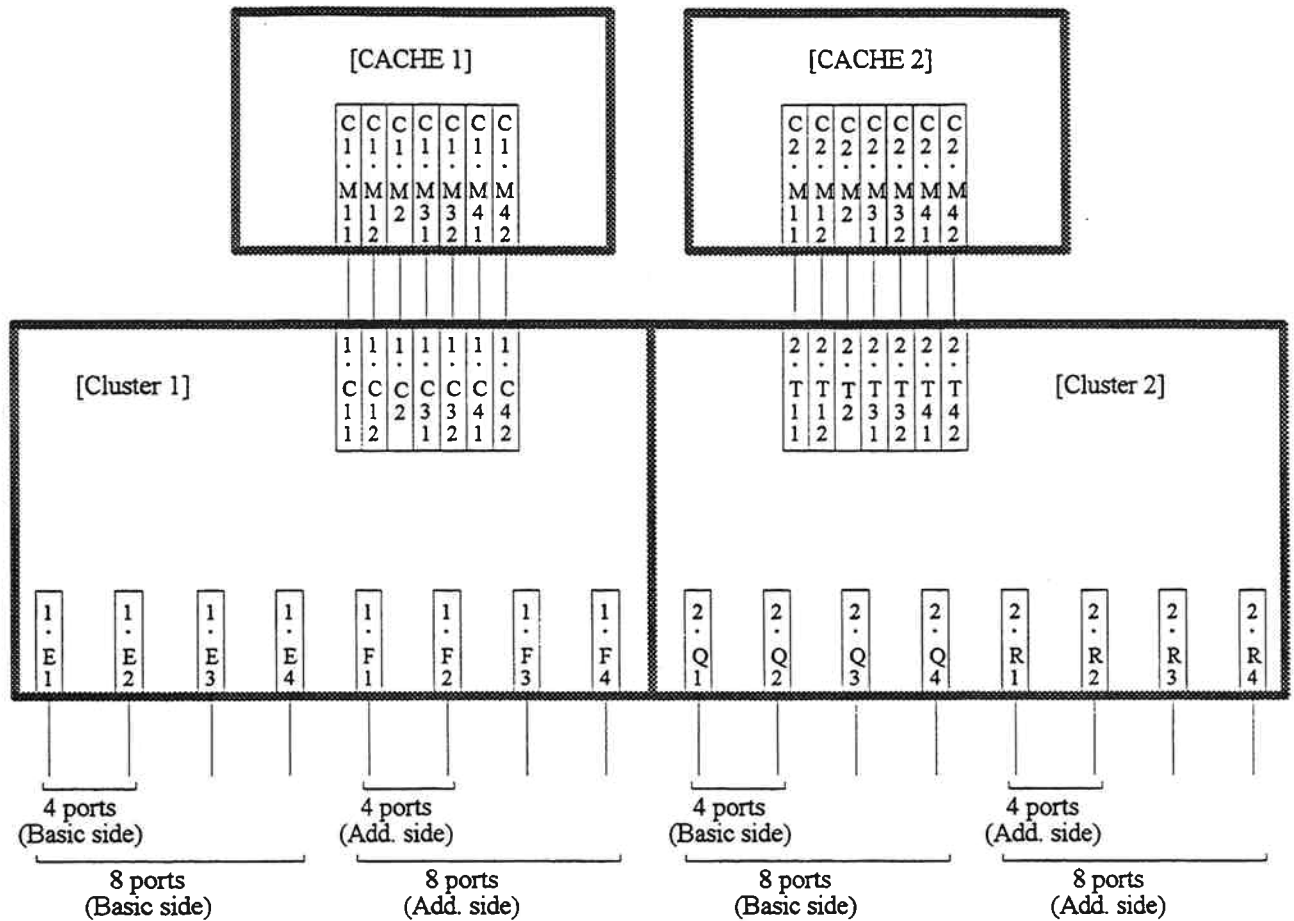
2.4 Internal Cabling Block Diagram



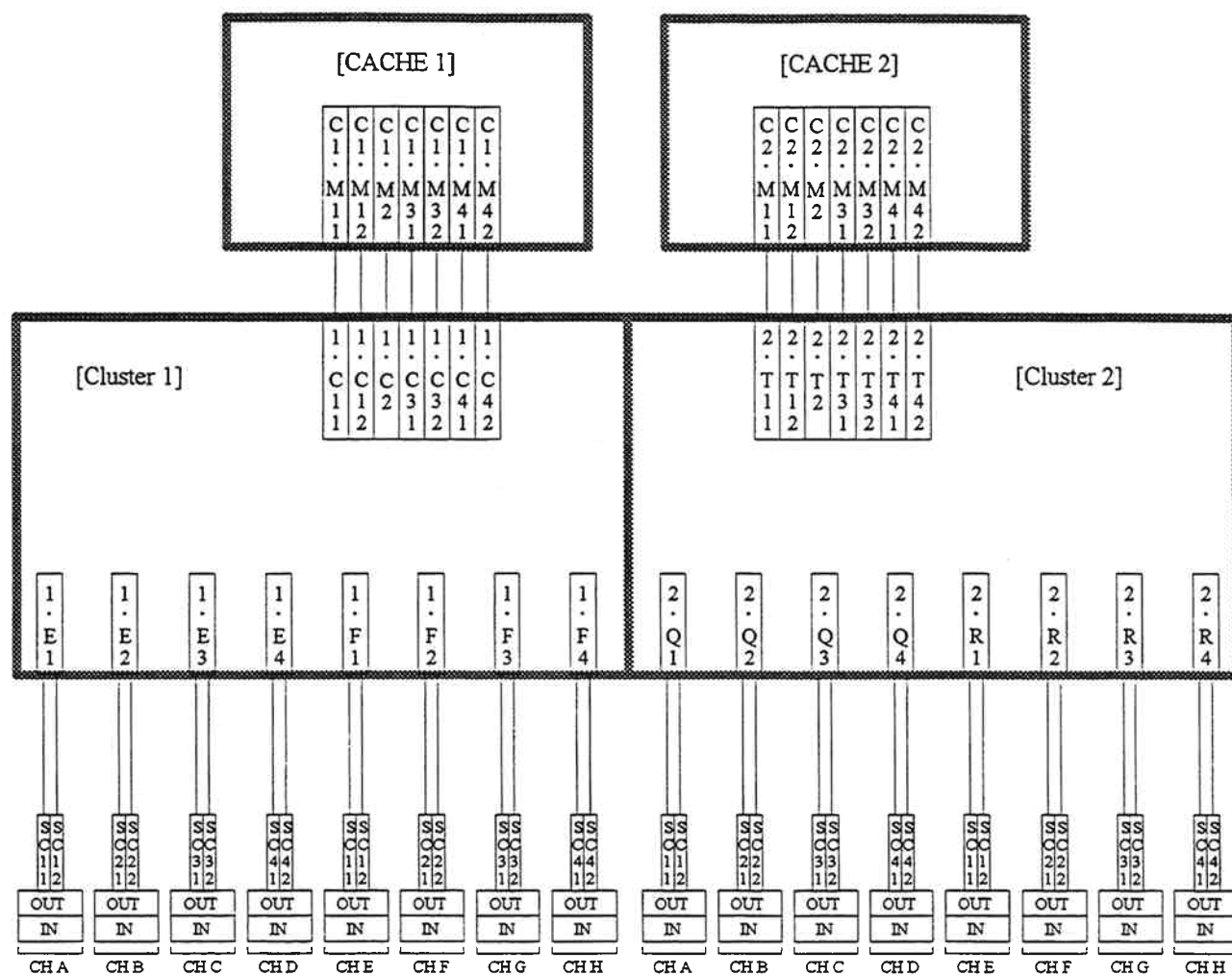
Disk Subsystem Internal Cabling Diagram (1/6)



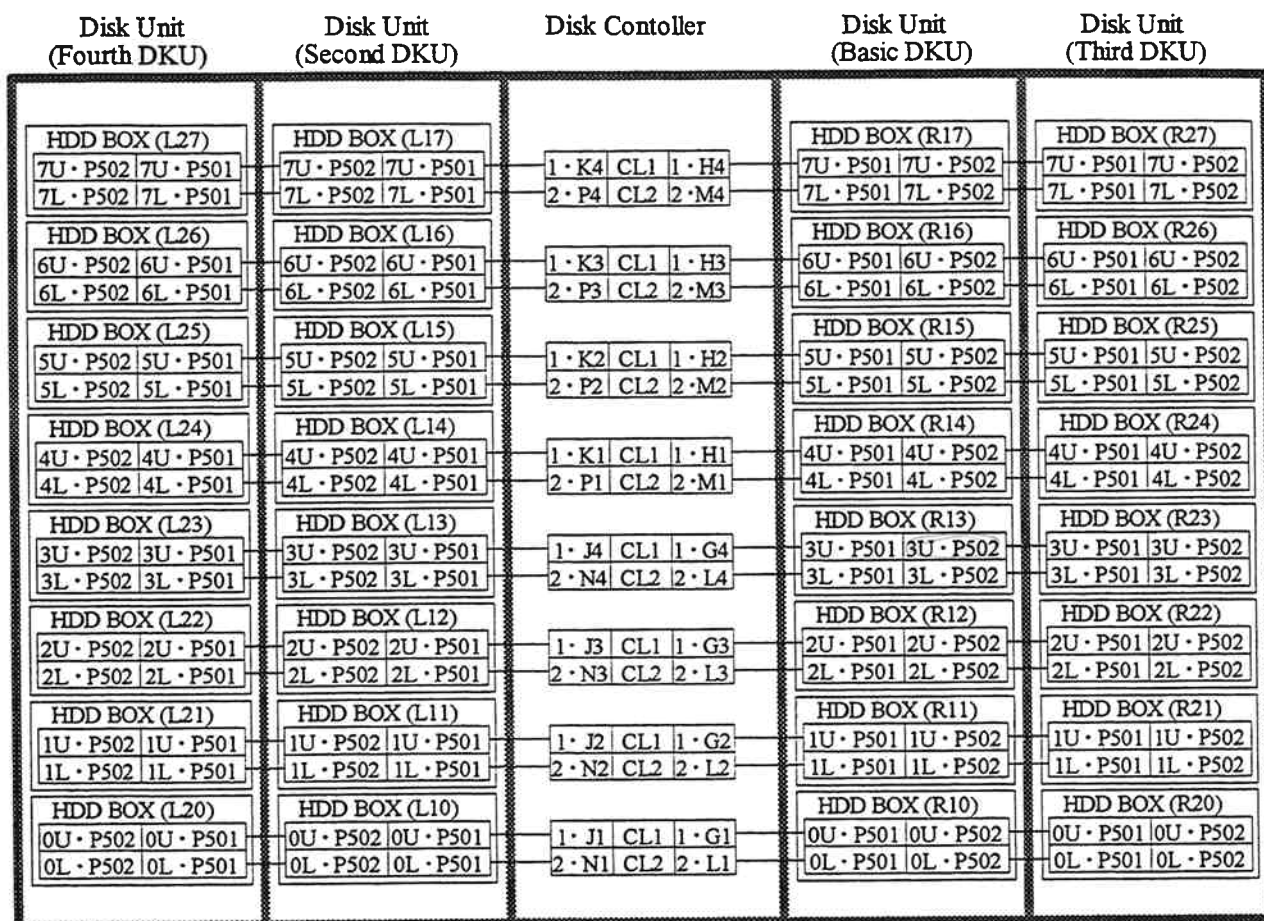
Disk Subsystem Internal Cabling Diagram (2/6)



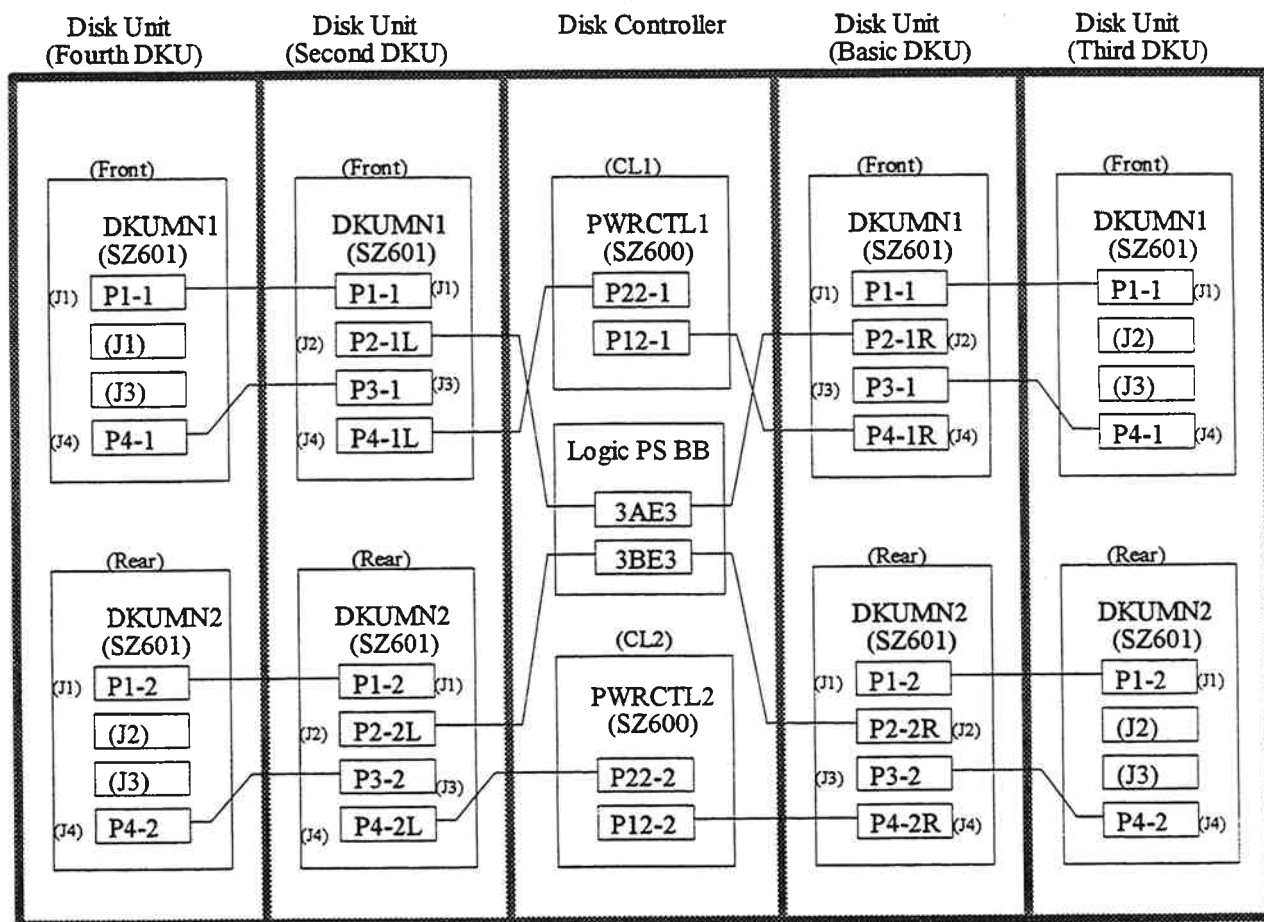
Disk Subsystem Internal Cabling Diagram (3/6)



Disk Subsystem Internal Cabling Diagram (4/6)



Disk Subsystem Internal Cabling Diagram (5/6)



Disk Subsystem Internal Cabling Diagram (6/6)

2.5 Connection of External Cable

2.5.1 AC Cabling

2.5.1.1 DKC210IU/DKU205IU

DANGER

The DKC and the basic DKU commonly have Two Main Disconnect Devices (Two Main Breaker CB101s for Dual Power Lines) so that AC Power of the unit can be supplied from the separate power distribution board with Two Power Supply Cords. Similarly, each of the 2nd DKU, the 3rd DKU and, the 4th DKU also has Two Main Disconnect Devices. Refer to LOCATION03-60 "Circuit Breakers".

Observe all instructions described in this manual before connecting the equipment to the power source and before servicing.

A. Connection of Power Supply Cord

The unit has two power supply cords with attachment plug type R&S 3760 or 3760PDG. Be sure to prepare the following socket receptacles and power cords between the power distribution board of the building and the attachment plugs for the unit.

Socket Receptacle : R&S 3754 or 3934

Power Cord : Type ST or equivalent, shielded type, with four min. #8 AWG conductors. Terminated at one end with an assembled on above socket receptacle cap.

B. Requirements to Branch Circuit

This unit relies on the building installation for protection of the internal components of the equipment. Each line (R/S/T line) should be protected by a short circuit protective device and by an overcurrent protective device rated 30 amp on building installation.

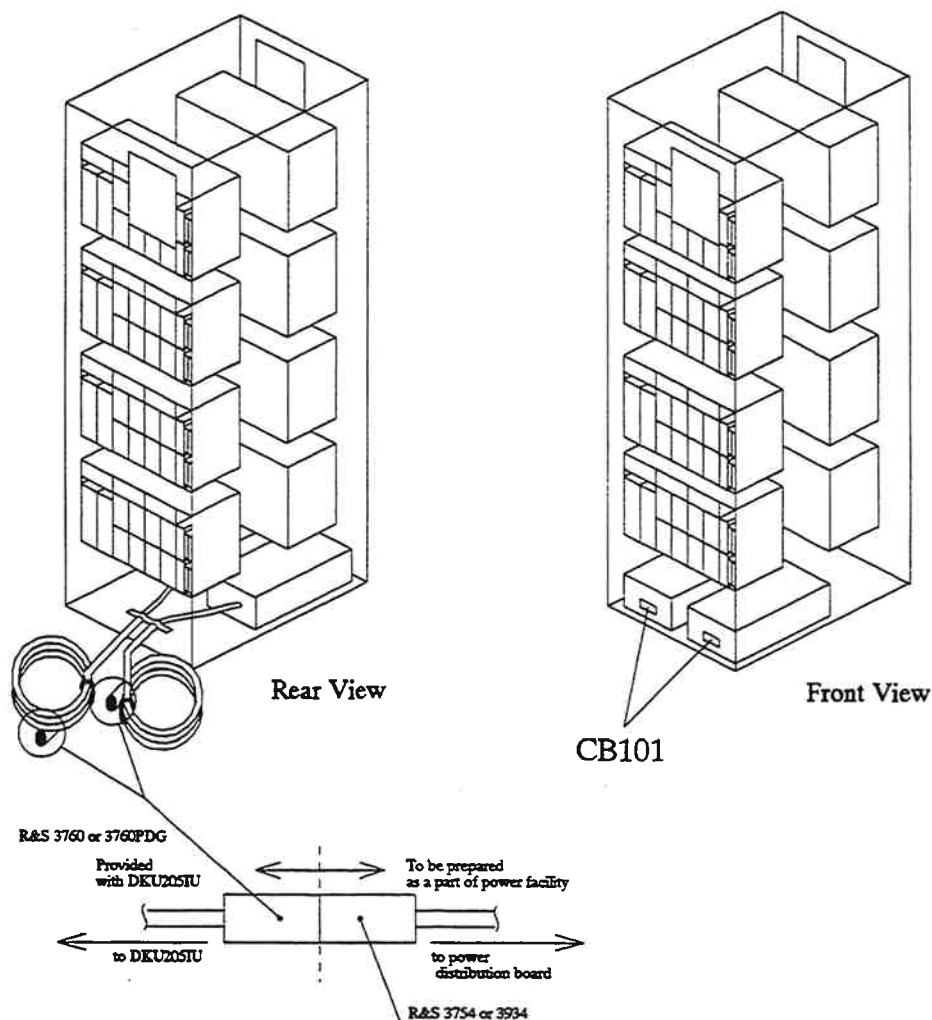
The protective device on building installation shall comply with the NEC requirements (or CEC requirements when installed in Canada), and if a protective device interrupts a conductor, it shall also interrupt all other supply conductors.

This protection is not required for the neutral line of this unit.

C. Disconnection from Power Supply

Each unit has Two Main Disconnect Device(Two Main Breaker CB101s for Dual Power Lines).

To remove all utility power from the unit, turn off both main disconnect device CB101s at the same time.



2.5.1.2 DKC210IE/DKU205IE

⚠ DANGER

The DKC and the basic DKU commonly have Two Main Disconnect Devices (Two Main Breaker CB101s for Dual Power Lines) so that AC Power of the unit can be supplied from the separate power distribution board with Two Power Supply Cords. Similarly, each of the 2nd DKU, the 3rd DKU, and the 4th DKU also has Two Main Disconnect Devices. Refer to LOCATION03-60 "Circuit Breakers".

Observe all instructions described in this manual before connecting the equipment to the power source and before servicing.

A. Connection of Power Supply Cord

The unit has two power supply cords. Be sure to prepare the following socket receptacles and power cords between the power distribution board of the building and the power cords for the unit.

Socket Receptacle : As shown in the following figure.

Power Cord : Type H07RN-F or equivalent, with five 6.0 mm² conductors. Terminated at one end with an assembled on above socket receptacle cap.

Be sure to connect a power cord to the distribution box as illustrated in the following figure. The wrong connection of neutral line may cause damages or fire of the equipment.

To reduce the risk of wrong connection, you should use approved type attachment plug and socket for power cord connection.

High leakage current may be caused between the power supply and this unit. To avoid an electric shock by high leakage current, perform the protective earthing connection before the supply connections and disconnect it after the supply connections.

B. Requirements to Branch Circuit

This unit relies on the building installation for protection of the internal components of the equipment. Each line (R/S/T line) should be protected by a short circuit protective device and by an overcurrent protective device rated 30 amp on building installation.

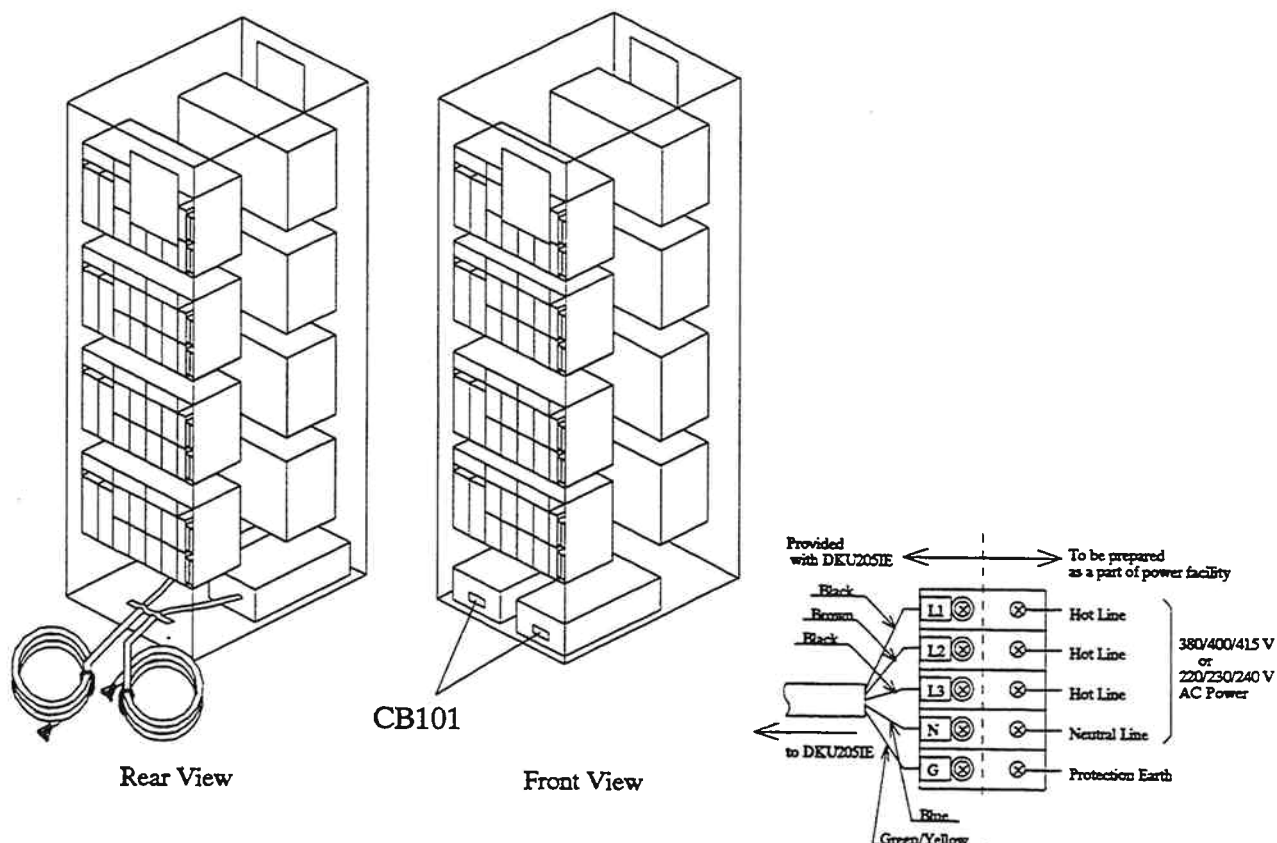
The protective device on building installation shall be comply with National Standards of the country where the units shall be installed, and if a protective device interrupts a conductor, it shall also interrupt all other supply conductors.

This protection is also required for the neutral line of this unit.

C. Disconnection from Power Supply

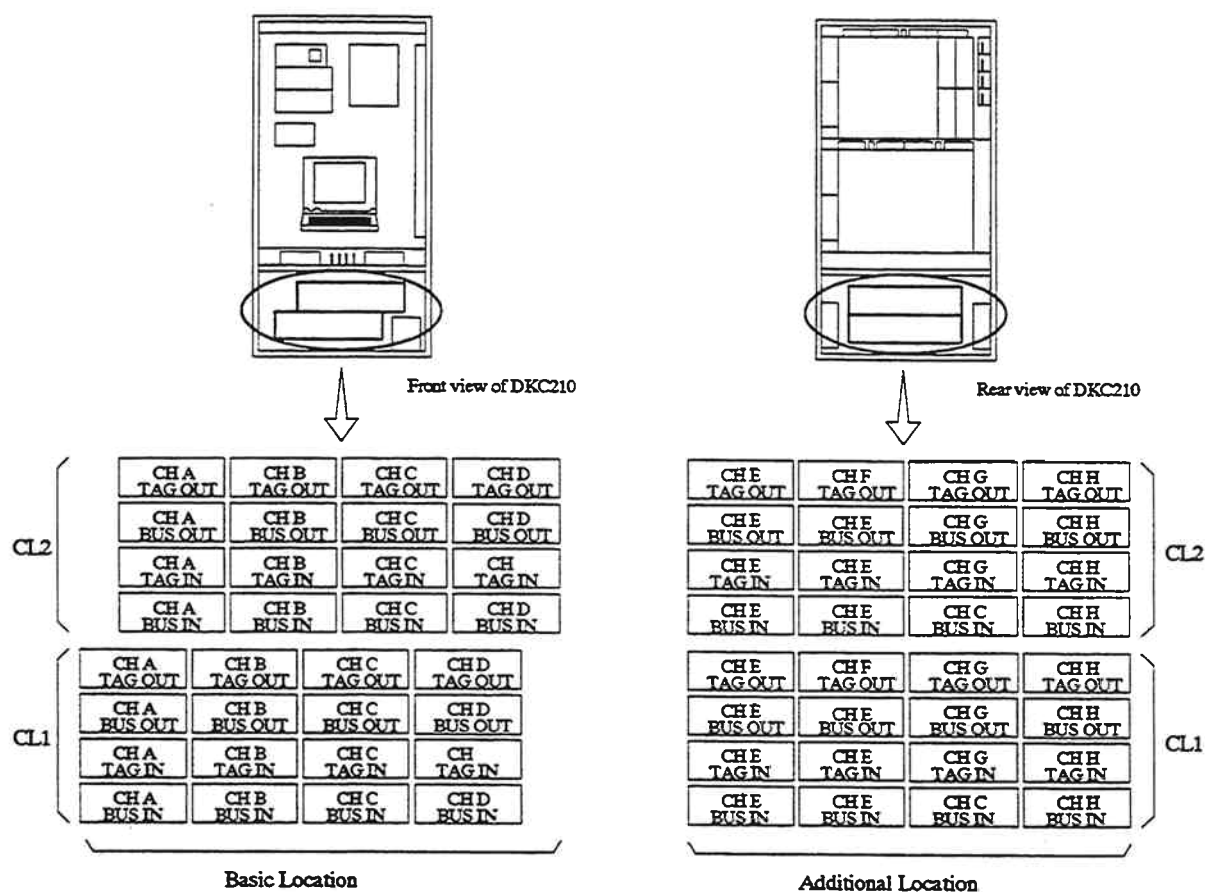
Each unit has Two Main Disconnect Device (Two Main Breaker CB101s for Dual Power Lines).

To remove all utility power from the unit, turn off both main disconnect device CB101s at the same time.

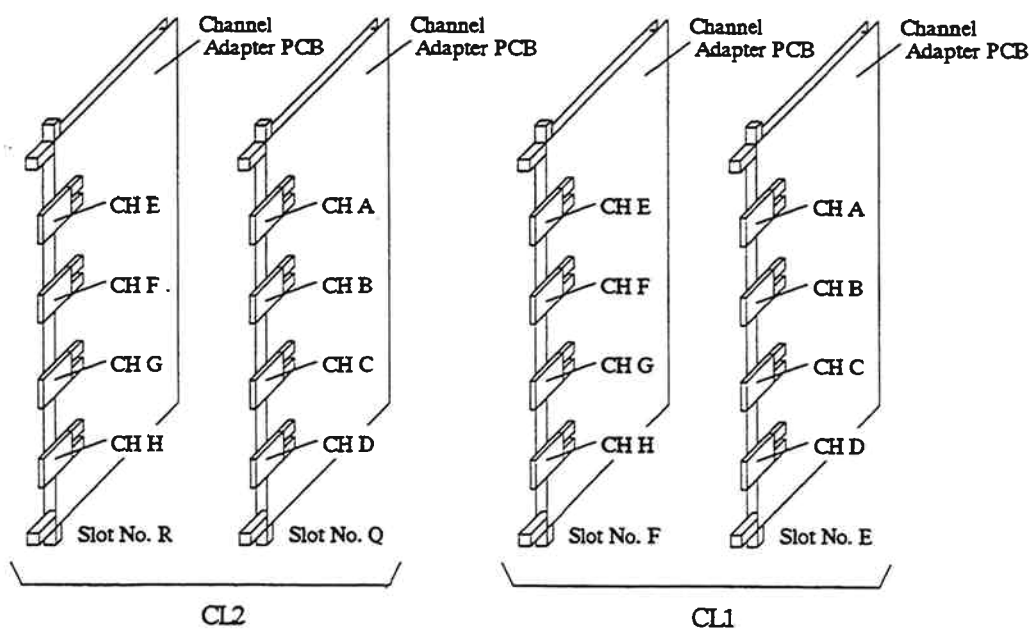


2.5.2 Channel Interface

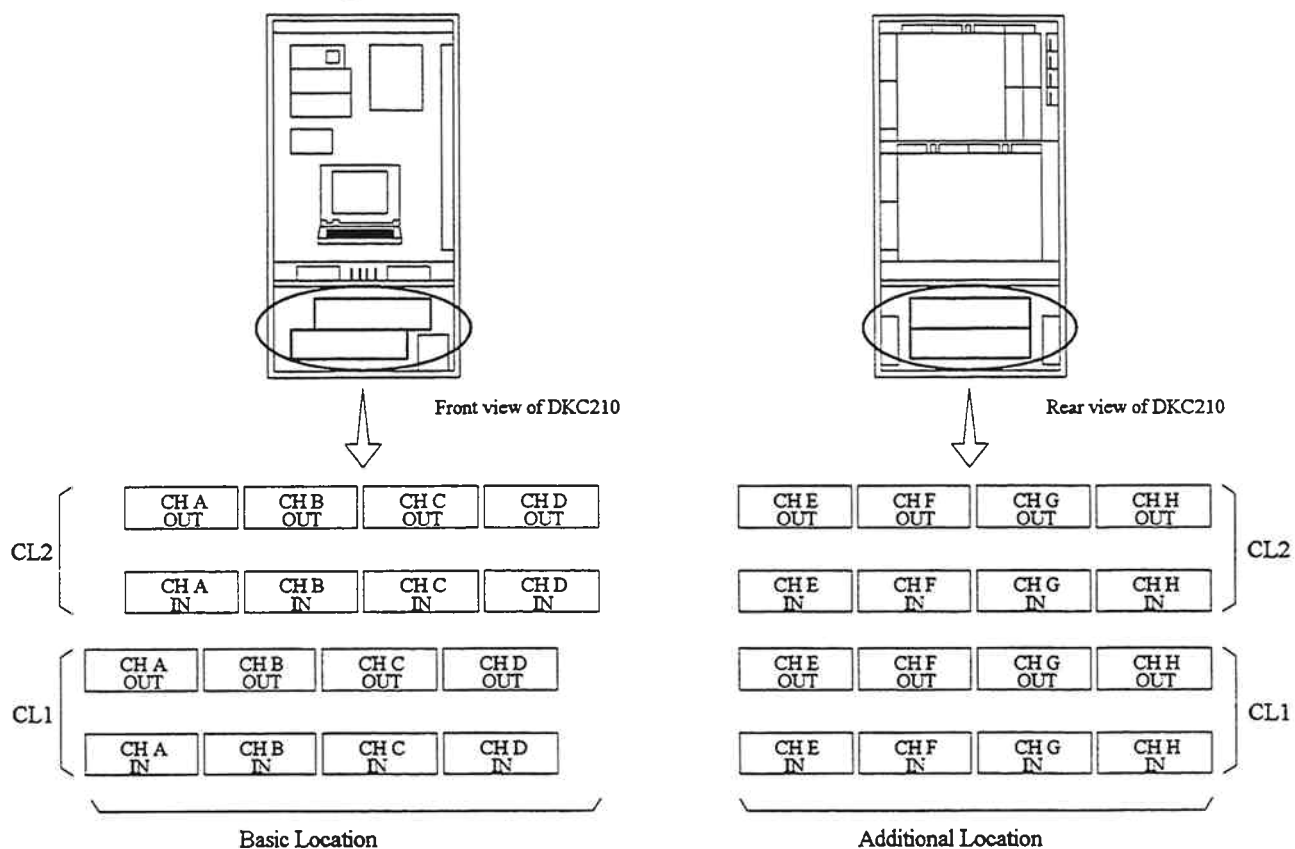
2.5.2.1 Parallel Channel Interface



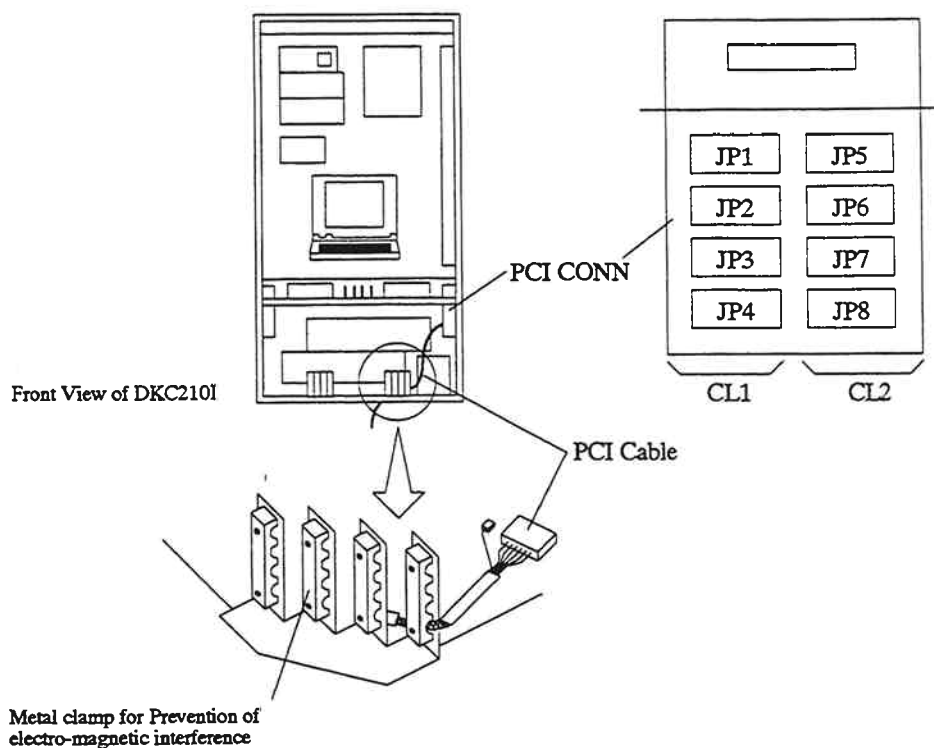
2.5.2.2 Serial Channel Interface



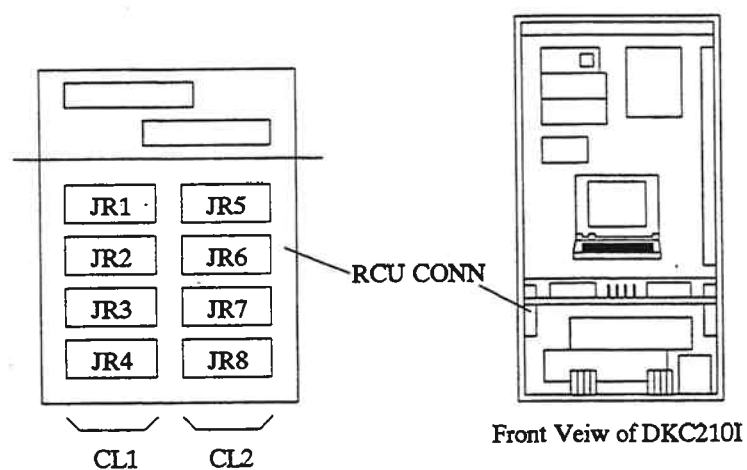
2.5.2.3 SCSI Channel Interface



2.5.3 PCI Cabling



2.5.4 RCU Cabling



Connector No.	Enable/Disable Route
JR1	CL1 CH A,B
JR2	CL1 CH C,D
JR3	CL1 CH E,F
JR4	CL1 CH G,H
JR5	CL2 CH A,B
JR6	CL2 CH C,D
JR7	CL2 CH E,F
JR8	CL2 CH G,H

2.6 Jumper Setting

2.6.1 Shut Down Jumpers

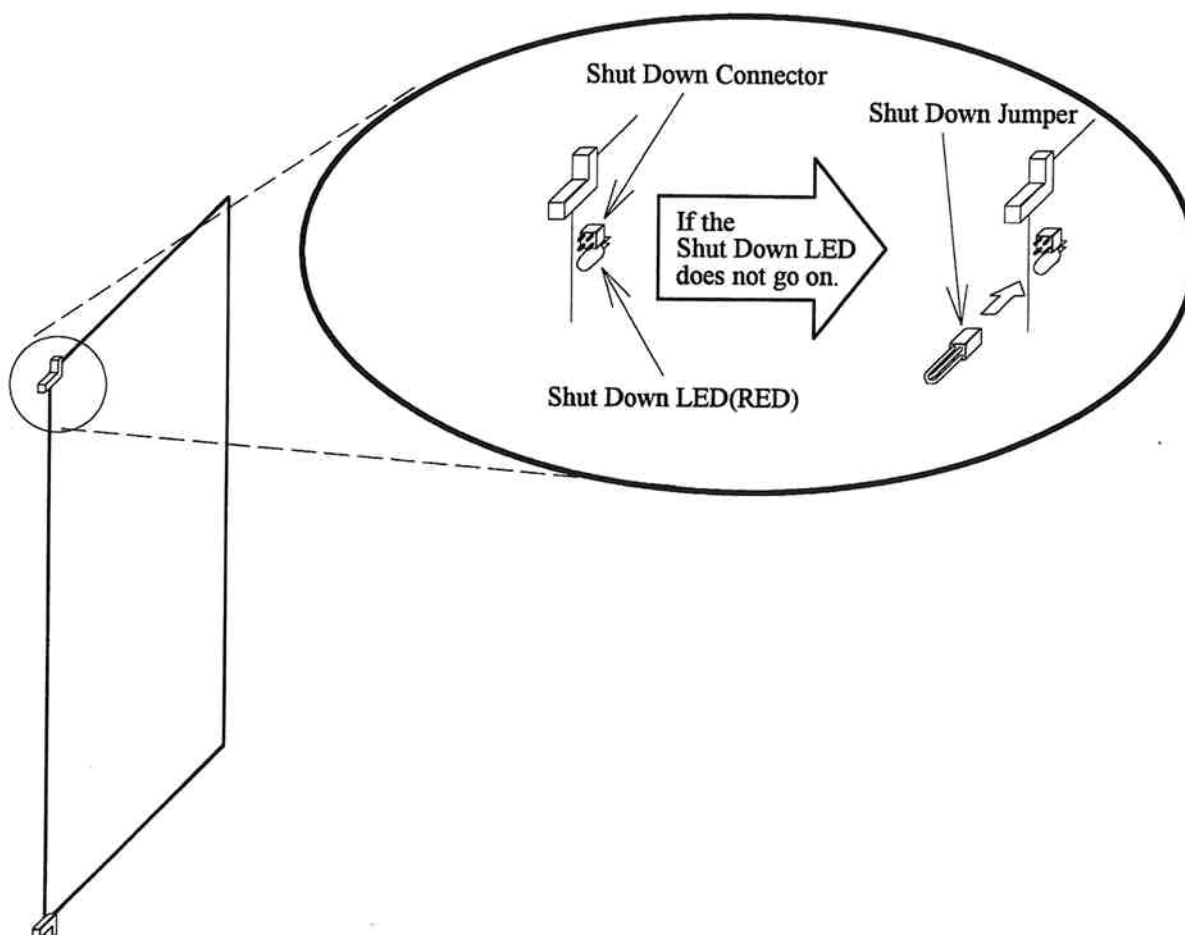
Check that the Shut Down LED is turned on. If not, connect the Shut Down Jumper to the Shut Down Connector.
(Only hot replace procedure)

CAUTION

A system down may be caused if the Shut Down jumper is inserted in a PCB other than that to be replaced. Make sure that it is the PCB to be replaced.

Table 2.6.1-1 Shut Down Jumpers List

No.	Function Name	Function	Remarks
1	Channel Adapter	Shut down jumper	
2	Disk Adapter		
3	Cache		
4	CPM		
5	CPS		
6	LTM		



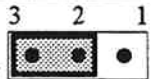
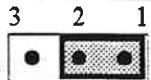
2.6.2 Other Jumpers

Jumper Setting List

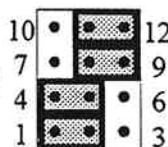
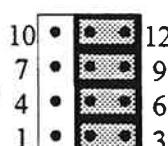
No.	Function Name	Jumper No.	Settings	Remarks
1	PWRCTL	JP1	Specification of cluster number	
		JP3	Additional Cache Box	
2	CE PANEL	JP1	EPO signal	
		JP2	EPO signal	
3	RS CONN	JP2	Termination	
4	BATT CTR	J2	Battery jumper plug	
5	Channel Adapter	JP1 - JP4	Priority	Parallel 8 Channel Switch Only
6	Cache	JP2	Non-diagnosis mode (Fixed)	
		JP3	Cache memory module (Fixed)	
		JP4	Shared memory module (Fixed)	
7	CPM	JP1	Diagnosis mode (Fixed)	
8	CPS	JP1	Diagnosis mode (Fixed)	
9	DKUMN	JP1	Specification of address number	
		JP3	Additional Platform for Canister mount	
10	HDU Box	JP01	Specification of SCSI ID	
11	SSVP	JP2	Watch Dock Timer	

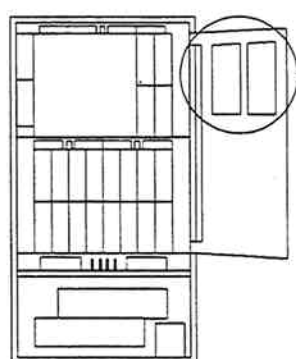
[1] PWRCTL

JP1: Specification of Cluster Number

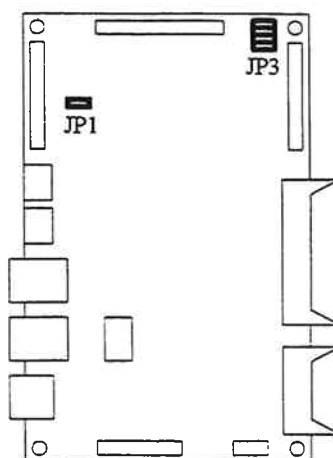
PWRCTL-1	Specification of cluster number	Cluster: 1	JP1 
PWRCTL-2		Cluster: 2	JP1 

JP3: Additional Cache Box

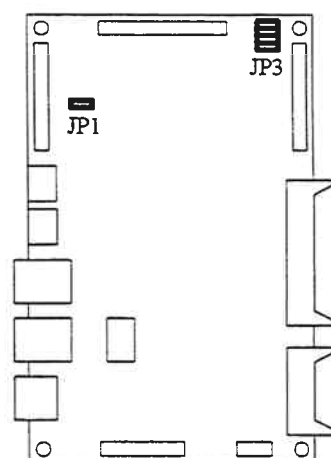
No Additional Cache Box Installed	PWRCTL-1 PWRCTL-2	JP3 
Additional Cache Box Installed	PWRCTL-1 PWRCTL-2	JP3 



Front View of Disk Controller



PWRCTL-1

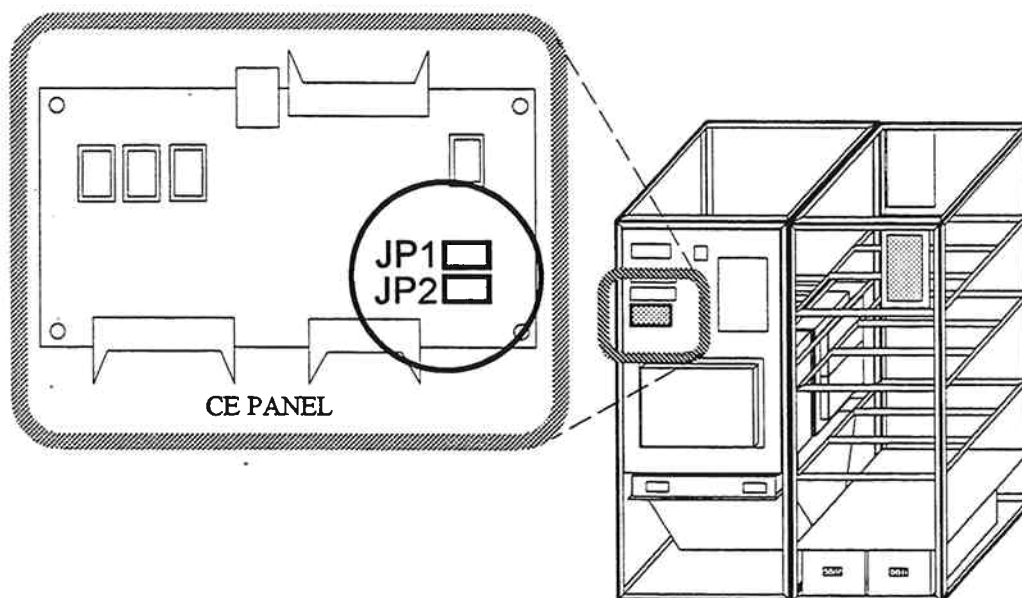


PWRCTL-2

[2] CE PANEL

JP1, 2: EPO Signal

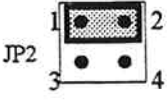
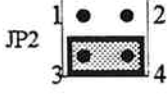
Enables PCI At least one PCI Cable attached JP1 - JP8 on PCI CONN PCB.	1 2 3 JP1  1 2 3 JP2 
Disables PCI or No PCI Cable attached JP1 - JP8 PCI CONN PCB.	1 2 3 JP1  1 2 3 JP2 

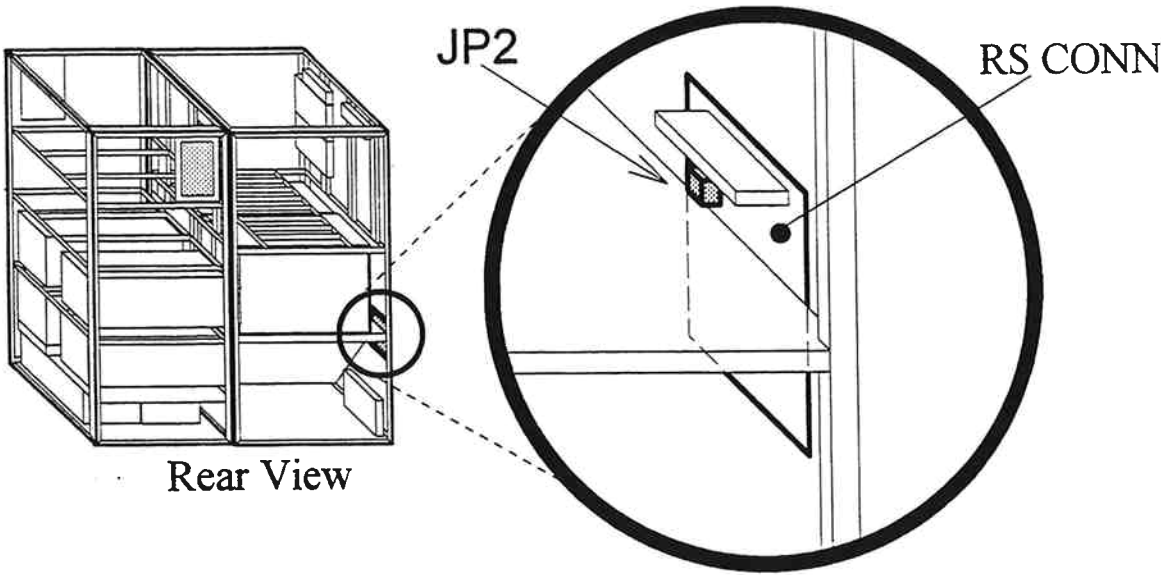


Front View

[3] RS CONN

JP2: Termination

This setting attaches terminator to RS-422.	
This setting detaches terminator to RS-422.	



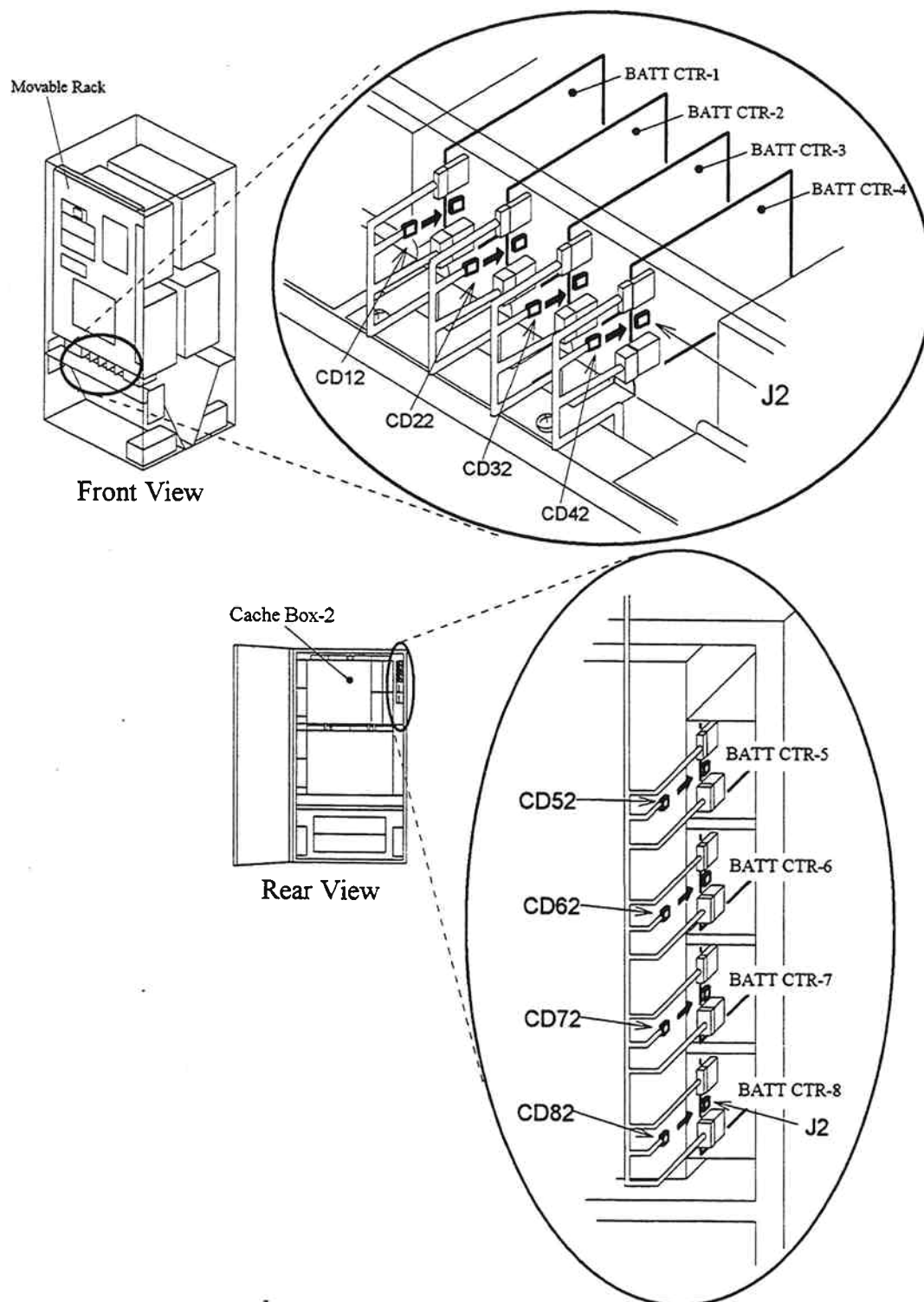
[4] BATT CTR

Install the jumper connectors in the BATT CTR PCBs as indicated in the figure below.

When the power is off over 48 hours.

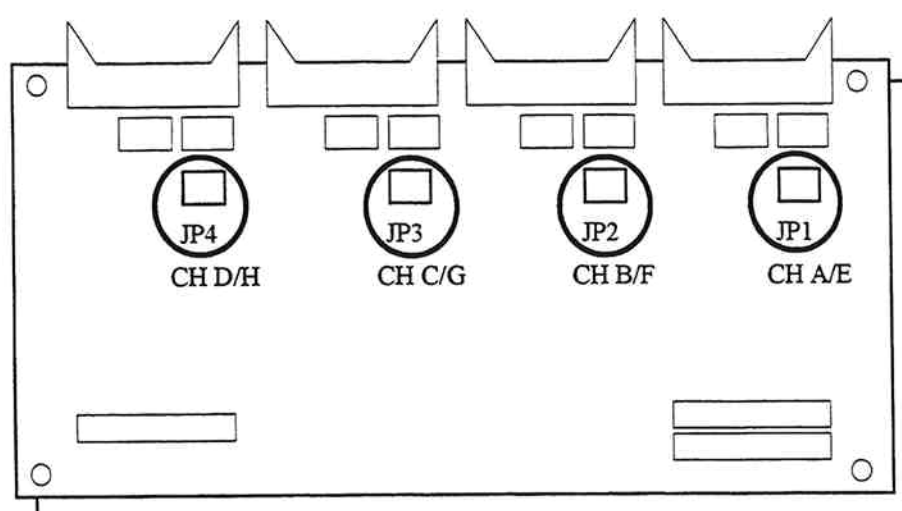
Be sure to save the data in the cache and shared memories before disconnecting the jumper plugs.

Note: The data in the cache and shared memories is deleted when turning off the power and disconnecting the jumper plugs before saving the data.



[5] CHANNEL ADAPTER (Parallel 8 Channel Switch)

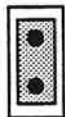
JP1 - JP4: Priority	
Selected by SELECT OUT	
Selected by SELECT IN	



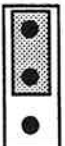
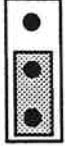
Channel Adapter PCB (Parallel 8 Channel Switch)

[6] CACHE

JP2: Non-Diagnosis Model (Fixed)

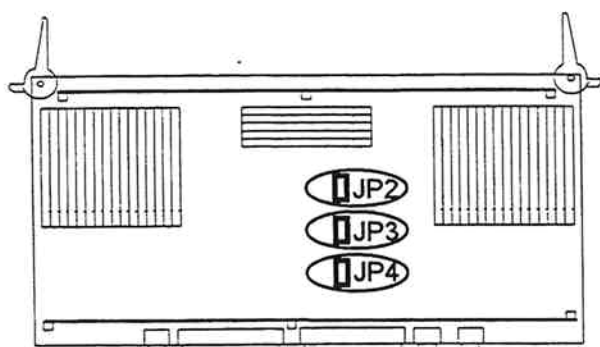
Setting PCB non-diagnosis mode (Fixed)	WP008-A/B WP018-A/B/C	JP2 
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JP3: Cache Memory Module (Fixed)

Cache memory module : 32MB (Fixed)	WP018-A WP018-B	JP3 
Cache memory module : 8MB (Fixed)	WP018-C	JP3 

JP4: Shared Memory Module (Fixed)

Shared memory module : 16MB (Fixed)	WP018-A WP018-C	JP4 
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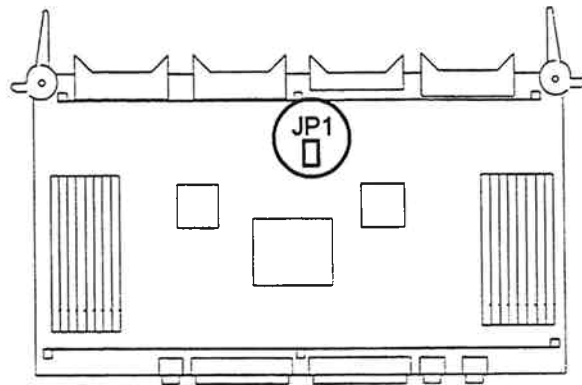
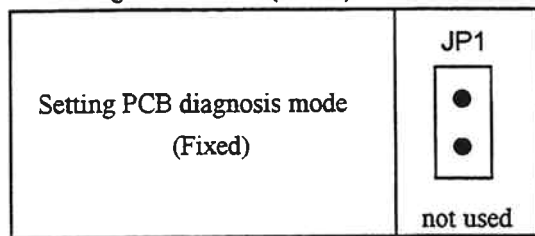
Cache PCB

Cache PCB Jumper List

Jumper No.	JP2	JP3	JP4
PCB Name			
WP008-A	○	—	—
WP008-B	○	—	—
WP018-A	○	○	○
WP018-B	○	○	—
WP018-C	○	○	○

[7] CPM

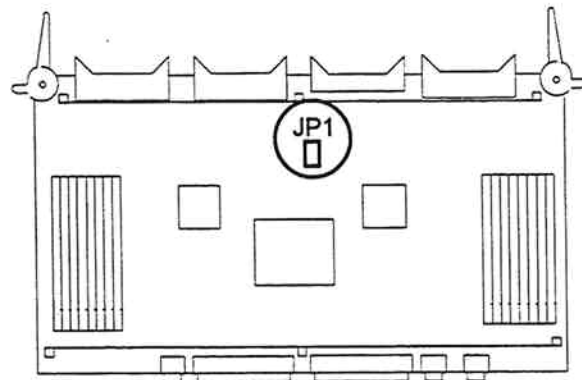
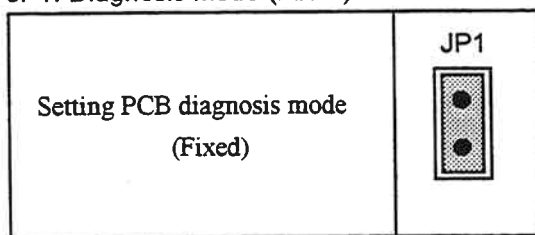
JP1: Diagnosis Mode (Fixed)



CPM PCB

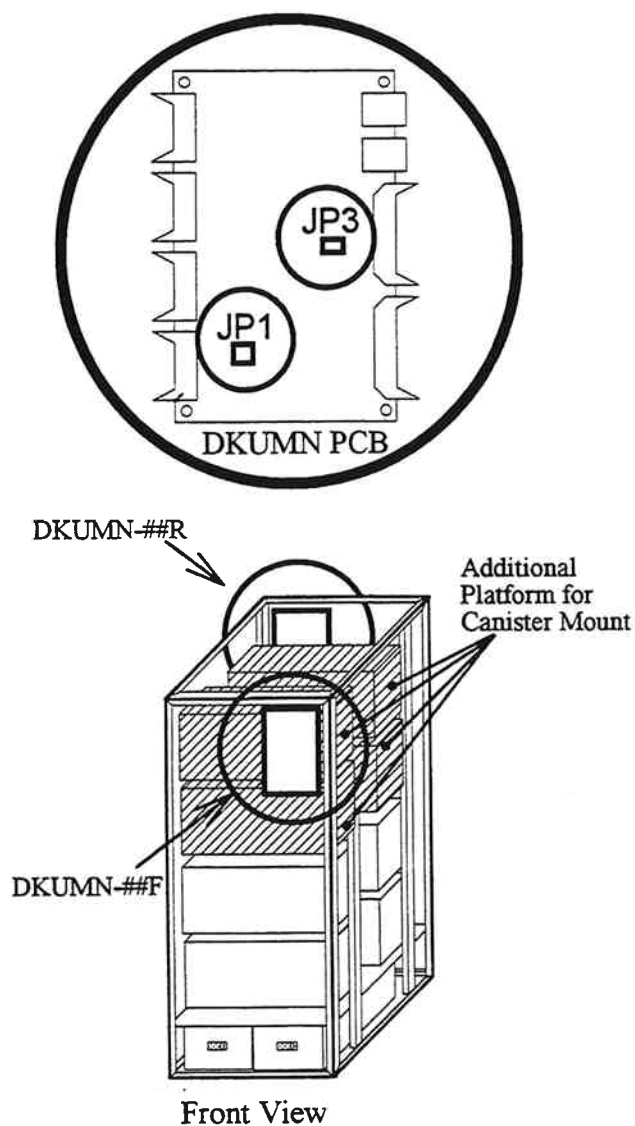
[8] CPS

JP1: Diagnosis Mode (Fixed)



CPS PCB

[9] DKUMN



JP1: Specification of Address Number

DKUMN-R1F	Specification of Address Number	Basic Disk Unit	Cluster : 1	*10 JP1	12	3
DKUMN-R1R			Cluster : 2	*10 JP1	12	3
DKUMN-L1F		Second Disk Unit	Cluster : 1	*10 JP1	12	3
DKUMN-L1R			Cluster : 2	*10 JP1	12	3
DKUMN-R2F		Third Disk Unit	Cluster : 1	*10 JP1	12	3
DKUMN-R2R			Cluster : 2	*10 JP1	12	3
DKUMN-L2F		Fourth Disk Unit	Cluster : 1	*10 JP1	12	3
DKUMN-L2R			Cluster : 2	*10 JP1	12	3

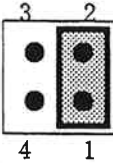
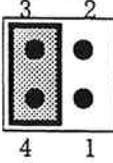
* #10 - #12: Reserved

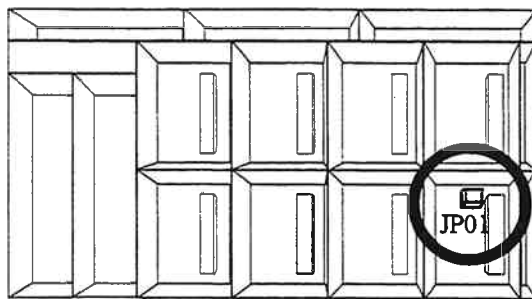
JP3: Additional Platform for Canister Mount

DKUMN-##F	No Additional Platform for Canister Mount (DKU-F205I-B4) Installed (Four HDU Boxes)	Cluster : 1	JP3	4 1	6 3
DKUMN-##R		Cluster : 2	JP3	4 1	6 3
DKUMN-##F	Additional Platform for Canister Mount (DKU-F205I-B4) Installed (Eight HDU Boxes)	Cluster : 1	JP3	4 1	6 3
DKUMN-##R		Cluster : 2	JP3	4 1	6 3

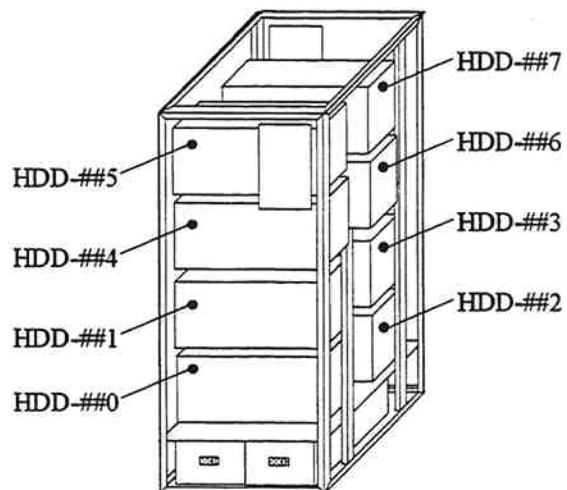
[10] HDU BOX

JP01: Specification of SCSI ID

HDU-R10 to R17 HDU-L10 to L17	Specification of SCSI ID	Basic Disk Unit Second Disk Unit	JP01 	SCSI ID: 8 to F
HDU-R20 to R27 HDU-L20 to L27		Third Disk Unit Fourth Disk Unit	JP01 	SCSI ID: 0 to 6

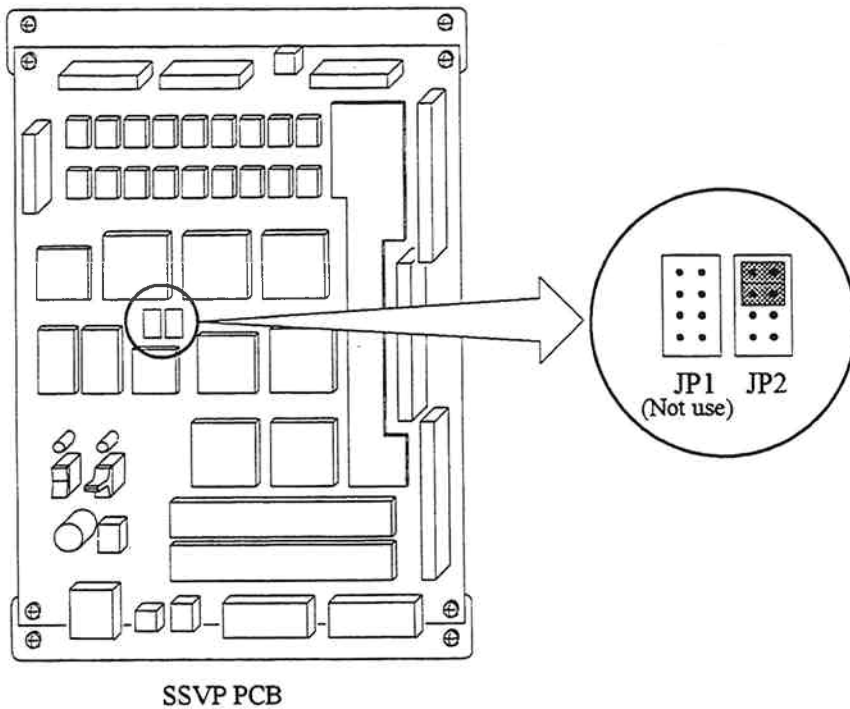
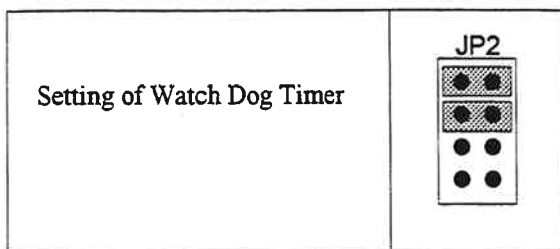


HDD Box



Front View

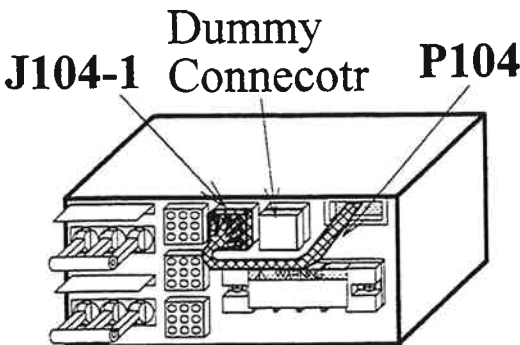
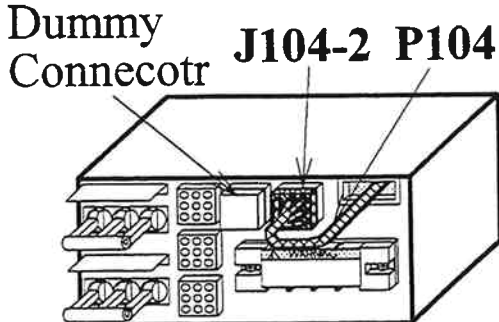
[11] SSVF

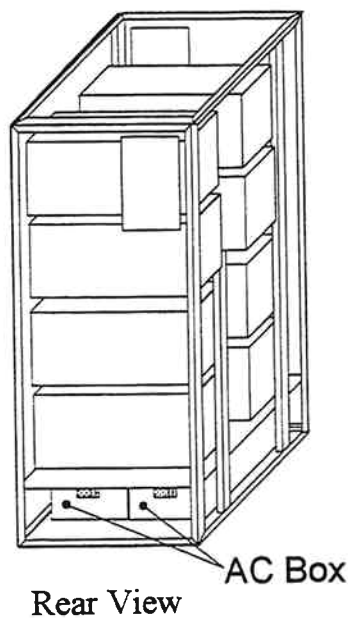


2.6.3 Voltage Selector

[1] AC BOX

P104: AC Input Voltage

AC Input Voltage	200 - 240 Vac		(DKU205IU-14) J104-2: dummy connector
	380 - 415 Vac		(DKU205IE-14) J104-1: dummy connector



[2] OUTLET BOX

Input voltage 200-240 Vac (DKC210IU / DKC210ID) ONLY

J311: AC Input Voltage

J312: AC Output Voltage

DKC210IU

Input		Jumper Connectors		Output Voltage
Input Voltage	Frequency	J311	J312	
208 Vac	60 Hz	P311 208 V	P312 115 V	115 Vac
230 Vac		P311 230 V	P312 115 V	

DKC210ID

Input		Jumper Connectors		Output Voltage
Input Voltage	Frequency	J311	J312	
200 Vac	50 / 60 Hz	P311 200 V	P312 100 V	100 Vac
208 Vac		P311 208 V		
220 Vac		P311 220 V		
230 Vac		P311 230 V		
240 Vac		P311 240 V		

