SONY

CENTER CONTROL PANEL PACK

CCP-8000

MKS-8010 **MKS-8010A**

HK-PSU02 **HK-PSU03**

MKS-8011 **MKS-8013** **MKS-8013B**

MKS-8014 **MKS-8014B** **MKS-8015**

MKS-8015B **MKS-8017** **MKS-8017B**

MKS-8018 **MKS-8018B** **MKS-8019**

MKS-8019B **MKS-8020** **MKS-8021**

MKS-8022 **MKS-8023** **MKS-8024**

MKS-8025 **MKS-8025MS** **MKS-8026**

MKS-8027 **MKS-8028** **MKS-8030**

MKS-8031JS **MKS-8031TB** **MKS-8032**

MKS-8033 **MKS-8034DK** **MKS-8034FB**

MKS-8035 **MKS-8040** **MKS-8041**

MKS-8075 **MKS-8076**

SWC-5005 **SWC-5010**

MEMORY STICK

INSTALLATION MANUAL

1st Edition (Revised 7)

⚠警告

このマニュアルは，サービス専用です。
お客様が，このマニュアルに記載された設置や保守，点検，修理などを行うと感電や火災，人身事故につながることがあります。
危険をさけるため，サービストレーニングを受けた技術者のみご使用ください。

⚠ WARNING

This manual is intended for qualified service personnel only.
To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

⚠ WARNUNG

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.
Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegeben Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manual est destiné uniquement aux personnes compétentes en charge de l’entretien. Afin de réduire les risques de décharge électrique, d’incendie ou de blessure n’effectuer que les réparations indiquées dans le mode d’emploi à moins d’être qualifié pour en effectuer d’autres. Pour toute réparation faire appel à une personne compétente uniquement.

MKS-8010	Serial No. 10001 and Higher	MKS-8025MS	Serial No. 10001 and Higher
MKS-8010A	Serial No. 10001 and Higher	MKS-8026	Serial No. 10001 and Higher
MKS-8011	Serial No. 10001 and Higher	MKS-8027	Serial No. 10001 and Higher
MKS-8013	Serial No. 10001 and Higher	MKS-8028	Serial No. 10001 and Higher
MKS-8013B	Serial No. 10001 and Higher	MKS-8030	Serial No. 10001 and Higher
MKS-8014	Serial No. 10001 and Higher	MKS-8031JS	Serial No. 10001 and Higher
MKS-8014B	Serial No. 10001 and Higher	MKS-8031TB	Serial No. 10001 and Higher
MKS-8015	Serial No. 10001 and Higher	MKS-8032	Serial No. 10001 and Higher
MKS-8015B	Serial No. 10001 and Higher	MKS-8033	Serial No. 10001 and Higher
MKS-8017	Serial No. 10001 and Higher	MKS-8034DK	Serial No. 10001 and Higher
MKS-8017B	Serial No. 10001 and Higher	MKS-8034FB	Serial No. 10001 and Higher
MKS-8018	Serial No. 10001 and Higher	MKS-8035	Serial No. 10001 and Higher
MKS-8018B	Serial No. 10001 and Higher	MKS-8040	Serial No. 10001 and Higher
MKS-8019	Serial No. 10001 and Higher	MKS-8041	Serial No. 10001 and Higher
MKS-8019B	Serial No. 10001 and Higher	MKS-8075	Serial No. 10001 and Higher
MKS-8020	Serial No. 10001 and Higher	MKS-8076	Serial No. 10001 and Higher
MKS-8021	Serial No. 10001 and Higher	HK-PSU02	Serial No. 10001 and Higher
MKS-8022	Serial No. 10001 and Higher	HK-PSU03	Serial No. 10001 and Higher
MKS-8023	Serial No. 10001 and Higher	SWC-5005	Serial No. 10001 and Higher
MKS-8024	Serial No. 10001 and Higher	SWC-5010	Serial No. 10001 and Higher
MKS-8025	Serial No. 10001 and Higher		

Attention-when the product is installed in Rack:

1. **Prevention against overloading of branch circuit**
   When this product is installed in a rack and is supplied power from an outlet on the rack, please make sure that the rack does not overload the supply circuit.

2. **Providing protective earth**
   When this product is installed in a rack and is supplied power from an outlet on the rack, please confirm that the outlet is provided with a suitable protective earth connection.

3. **Internal air ambient temperature of the rack**
   When this product is installed in a rack, please make sure that the internal air ambient temperature of the rack is within the specified limit of this product.

4. **Prevention against achieving hazardous condition due to uneven mechanical loading**
   When this product is installed in a rack, please make sure that the rack does not achieve hazardous condition due to uneven mechanical loading.

5. **Install the equipment while taking the operating temperature of the equipment into consideration**
   For the operating temperature of the equipment, refer to the specifications of the Operation Manual.

6. **When performing the installation, keep the rear of the unit 10 cm (4 inches) or more away from walls in order to obtain proper exhaust and radiation of heat.**

When using a LAN cable:

For safety,do not connect to the connector for peripheral device wiring that might have excessive voltage.

Voor de Klanten in Nederland

Gooi de batterij niet weg, maar lever hem in als KCA. Voor het verwijderen van de batterij kunt u contact opnemen met uw Sony onderhoudsdienst.

Für Kunden in Deutschland

Batterien und Akkus gehören in den Sondermüll. Unter keinen Umständen mit dem normalen Haushaltsmüll entsorgen.
Zum Entnehmen der Batterie wenden Sie sich bitte an Ihren Sony Kundendienst.

Table of Contents

Manual Structure

1. Installation

2. Installing the Options

3. Service Overview

Manual Structure

Purpose of this manual

This manual is the installation manual of Center Control Panel Pack CCP-8000 and the optional boards and units.
This manual is intended for use by trained system and service engineers, and describes the information on installing the CCP-8000.

Related manuals

The following manuals are prepared for CCP-8000 and the optional boards and units.

- **Operation Manual (Supplied with CCP-8000)**
  This manual describes the overview, system connection example and specifications of options of CCP-8000.

- **User's Guide (Volume 1, Volume 2) (Supplied with CCP-8000)**
  This manual describes the application and operation of CCP-8000.

- **System Setup Manual (Available on request)**
  This manual describes the information that is required to connect the MVS-8xxx/MVE-8000/DCU-8000/CCP-8000 to the MVS-8000 system, and to start up the system.
  If this manual is required, please contact your local Sony Sales Office/Service Center.

- **Maintenance Manual (Available on request)**
  This manual describes the detailed service information.
  If this manual is required, please contact your local Sony Sales Office/Service Center.

Contents

This manual is organized by following section.

Section 1 Installation

This section describes the operating environment, power supply, installation space, rack mounting, connectors, input and output signals of connectors, checking upon completion of installation, system configuration, and setup.

Section 2 Installing the Options

This section describes the installation of option.

Section 3 Service Overview

This section describes the troubleshooting and periodic inspection and maintenance.

Section 1
Installation

1-1. Operating Environment (Common)

Operating guaranteed temperature : +5 °C to +40 °C
Performance guaranteed temperature : +10 °C to +35 °C
Operating humidity : 10 % to 90 %
Storage temperature : −20 °C to +60 °C
Mass
MKS-8010 : Approx. 12 kg
MKS-8010A : Approx. 11 kg
Main panel (4ME): Approx. 42 kg
(3ME): Approx. 24 kg
(2ME): Approx. 20 kg

Prohibited locations for installation

- Areas where the unit will be exposed do direct sunlight or any other strong lights.
- Dusty areas
- Areas subject to vibration.
- Areas with strong electric or magnetic fields.
- Areas near heat sources.
- Areas where is subject to electrical noise.
- Areas subject to static electricity.

Ventilation

The inside of the MKS-8010/8010A is cooled by a fan (side on the rear).
The power supply can be damaged if the exhaust vent (side on the rear) and air intake (front panel) are blocked or the fan is stopped.
For the MKS-8010, leave a blank space of more than each 10 cm in the front, back, right and left sides.
For the MKS-8010A, leave a blank space of more than 10 cm in the front and back sides, and more than 5 cm in the right and left sides.

1-2. Power Supply

1. Power specifications

A switching regulator is used for the power supply of MKS-8010/8010A. A voltage within the range of 100 V to 240 V can be used without changing the supply voltage.

Power requirements: AC 100 to 240 V ± 10 %
Power frequency: 50/60 Hz
Current consumption: MKS-8010: Maximum 3.3 A
MKS-8010A: Maximum 3.0 A

Note

As the inrush current flows at turn-on, the capacity of the AC power source must be commensurate with this load. If the capacity of the AC power is not adequately large, the AC power source breaker will operate or the unit will abnormally operate.

Inrush current
MKS-8010: Maximum 20 A (at 100 V)/90 A (at 230 V)
MKS-8010A: Maximum 14 A (at 100 V)/64 A (at 240 V)

2. Recommended power cord

This unit does not come with a power cord.
To get a power cord, please contact your local Sony Sales Office/Service Center.

WARNING

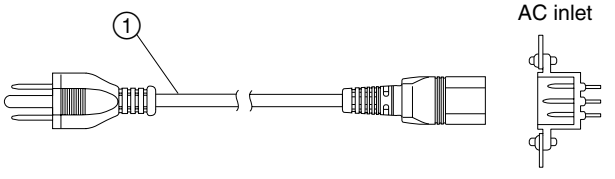
- Use the approved Power Cord (3-core mains lead)/ Appliance Connector/Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.
- Use the Power Cord (3-core mains lead)/Appliance Connector/Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord/ Appliance Connector/Plug, please contact your local Sony Sales Office/Service Center.

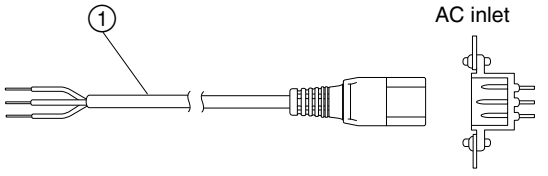
WARNING

- Never use an injured power cord.
- Plugging the power cord in the AC inlet, push as far as it will go.

For customers in the U.S.A. and Canada
① Power cord, 125 V 10 A (2.4 m) : ⚠1-557-377-11



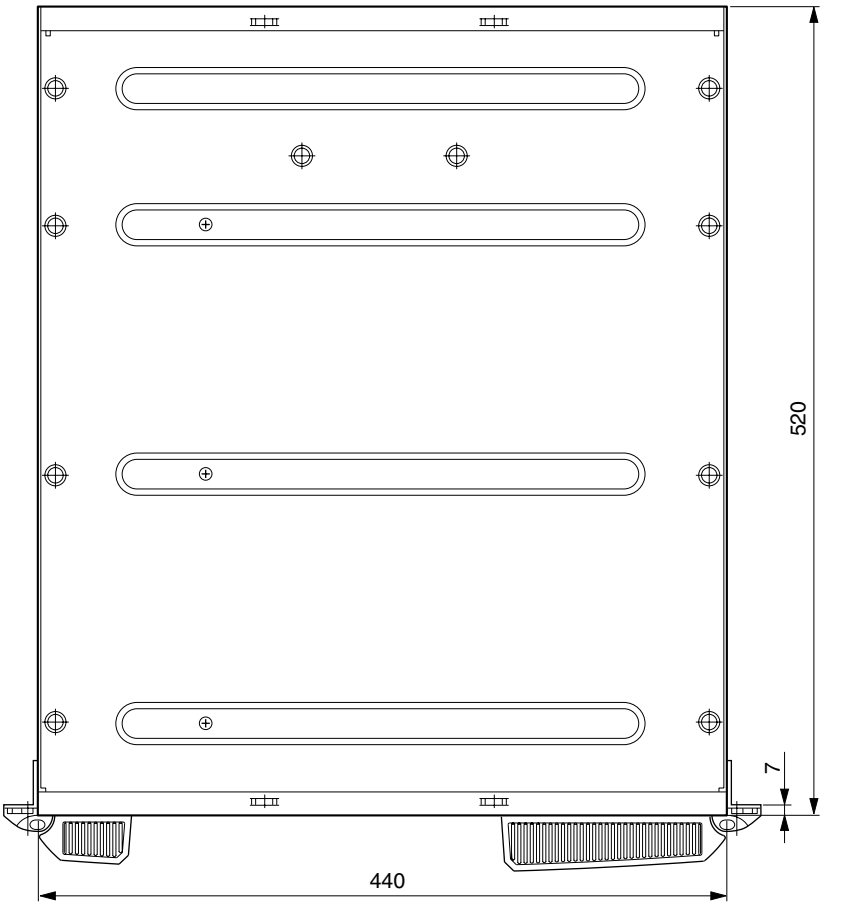
For customers in the all European countries
① Power cord, 250 V 10 A (2.4 m) : ⚠1-782-929-21

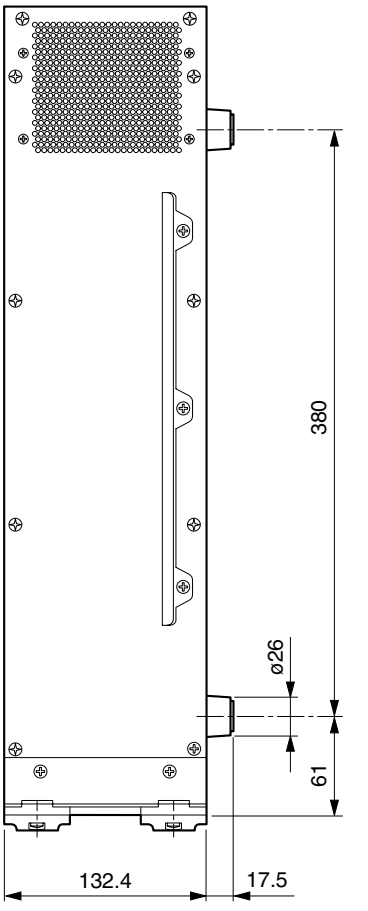


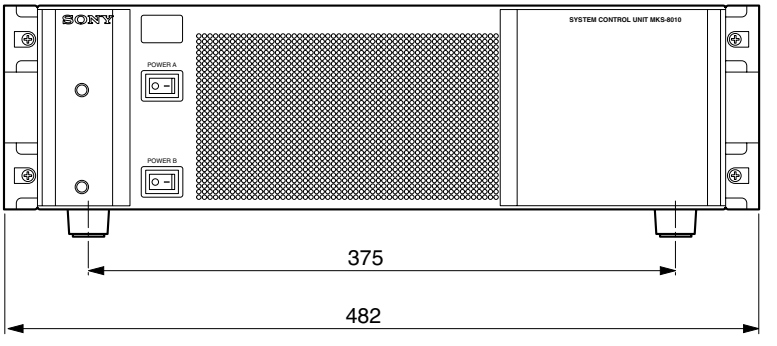
1-3. Installation Space

1-3-1. External Dimensions

System control unit MKS-8010

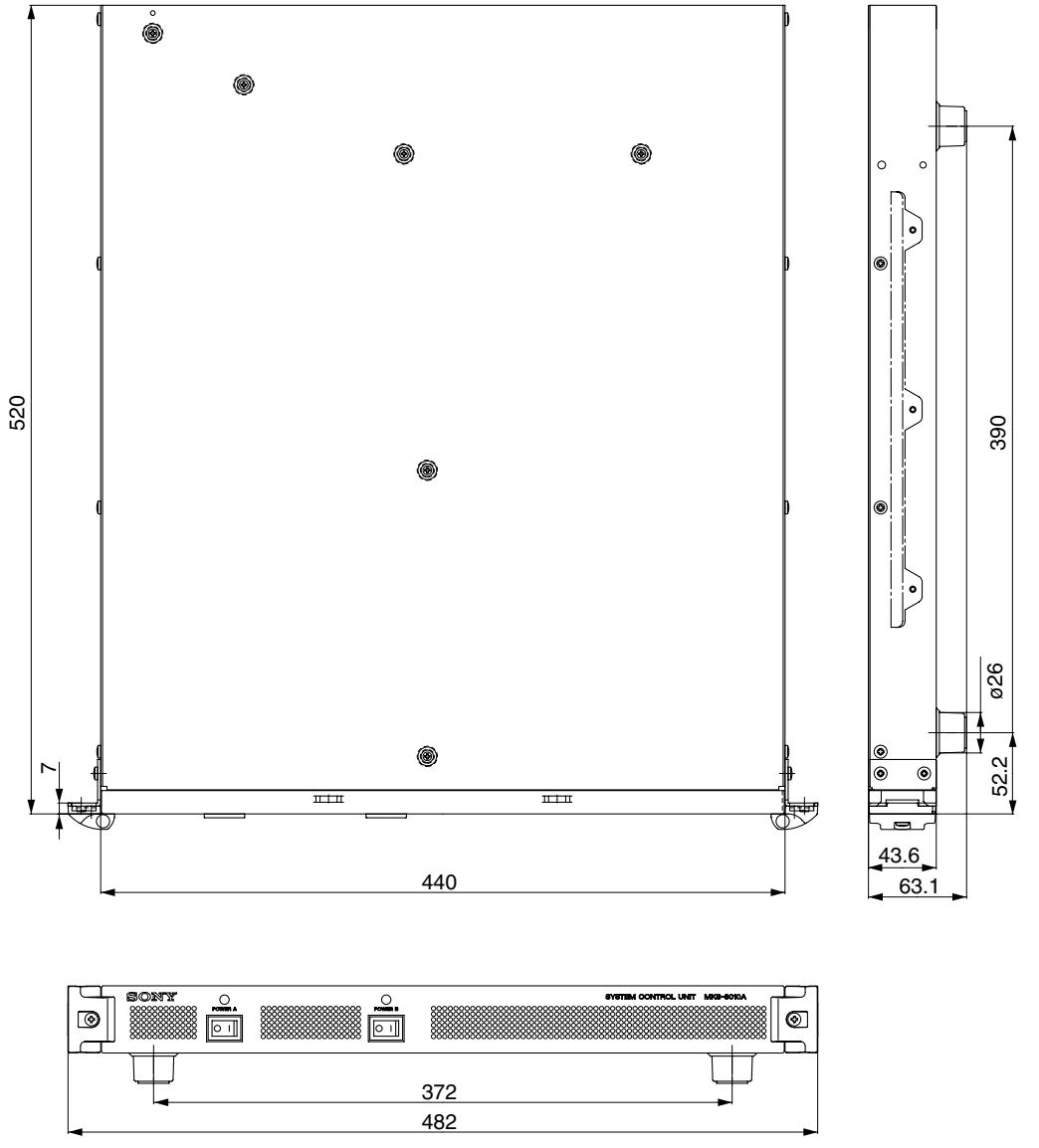






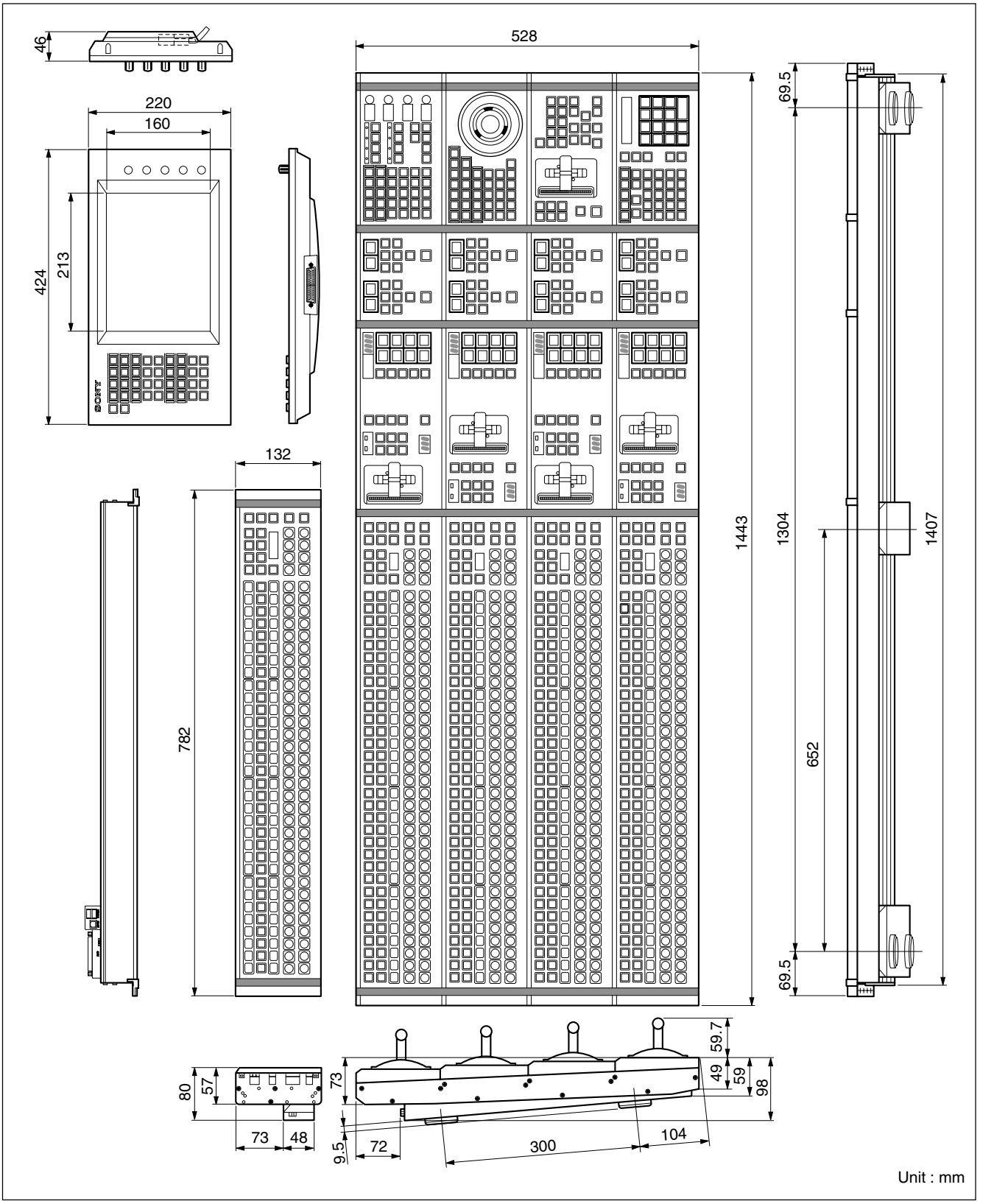
Unit : mm

System control unit MKS-8010A

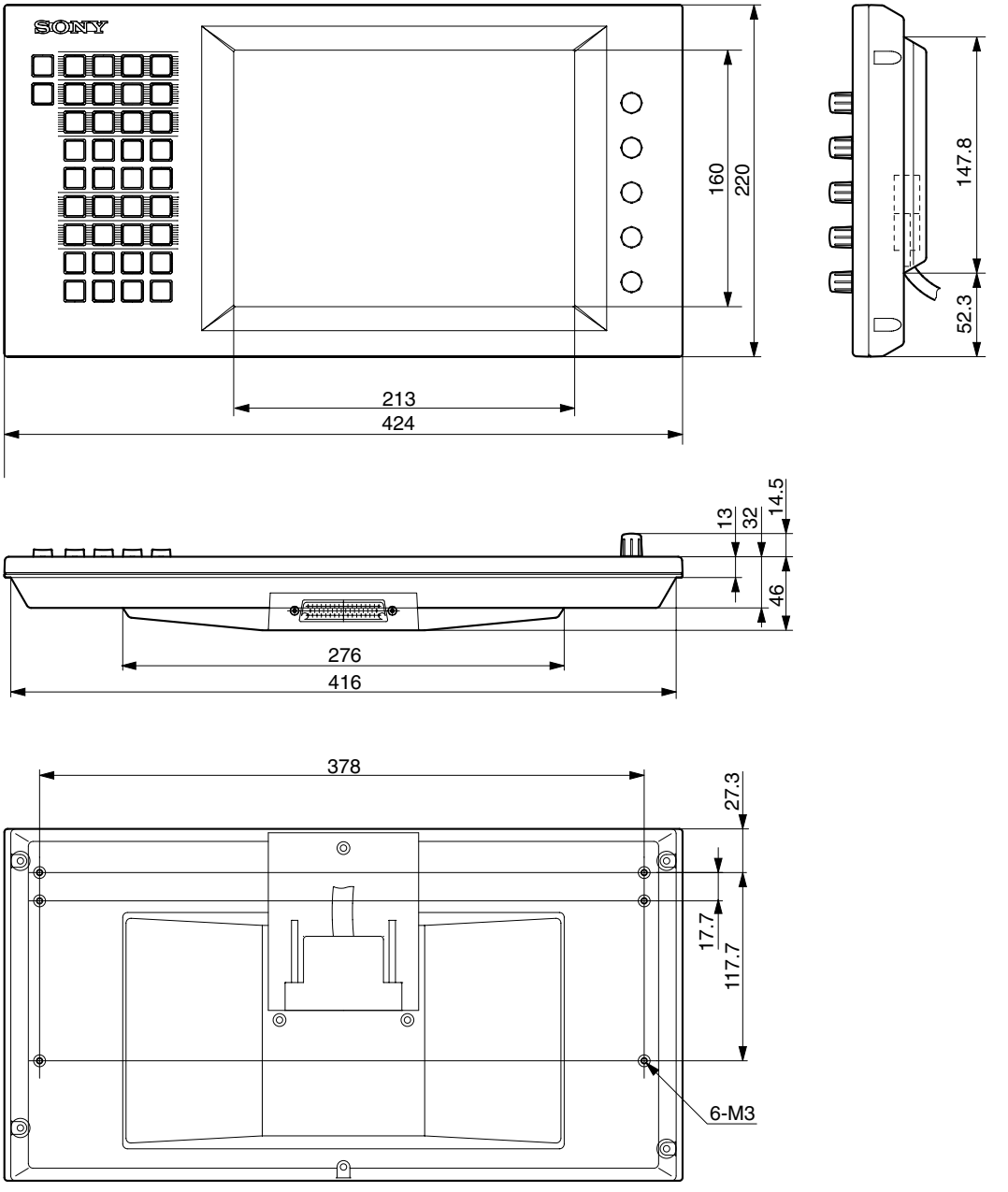


Unit : mm

Main panel/AUX panel/Menu panel MKS-8011

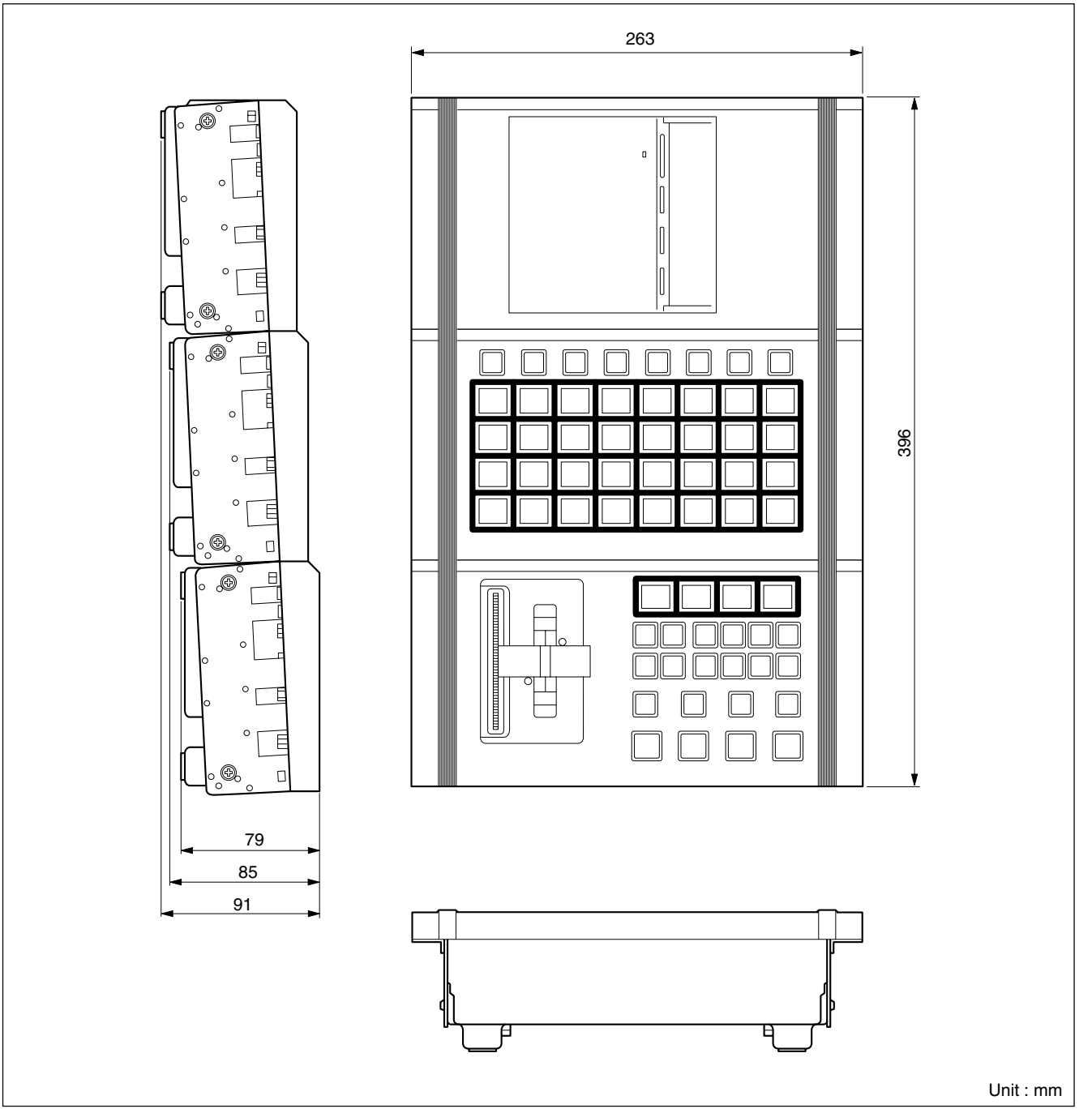


Menu panel MKS-8011 detailed dimensions

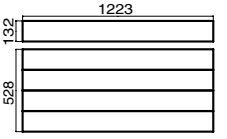
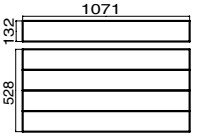
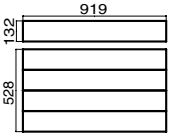
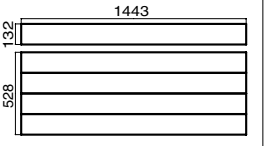
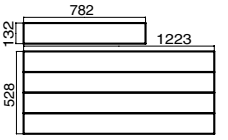
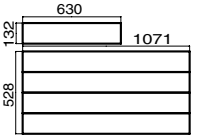
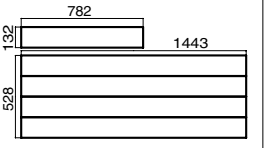
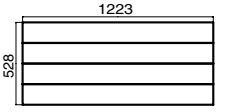
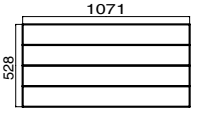
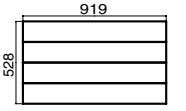
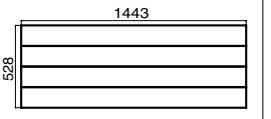
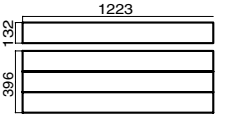
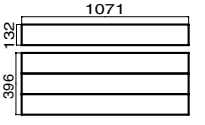
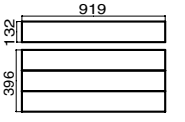
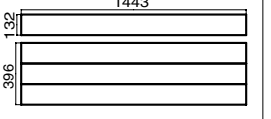
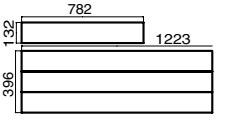
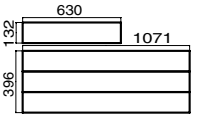
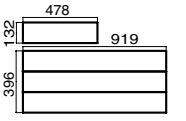
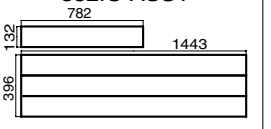
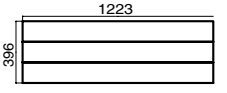
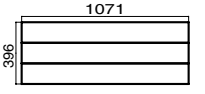
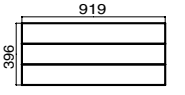
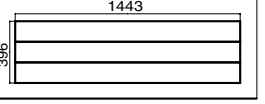


Unit : mm

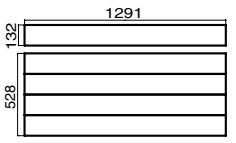
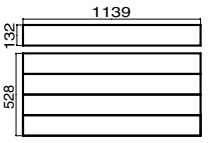
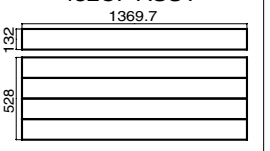
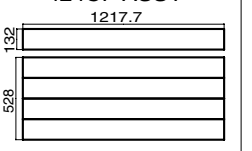
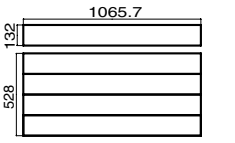
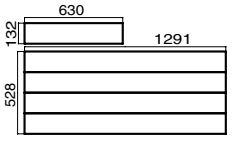
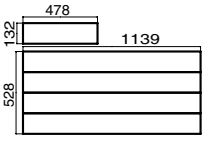
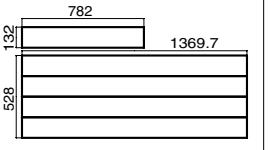
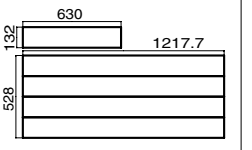
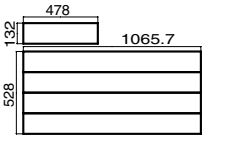
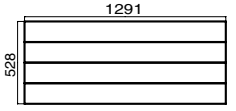
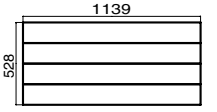
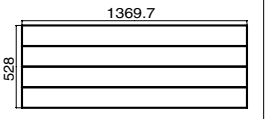
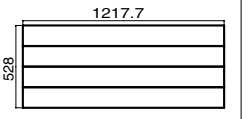
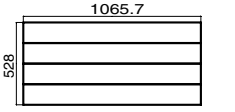
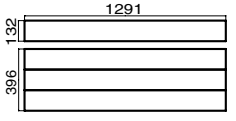
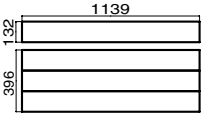
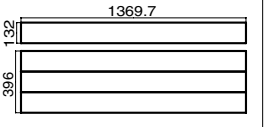
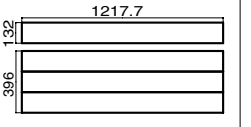
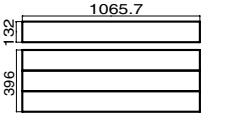
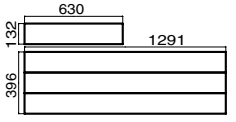
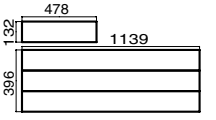
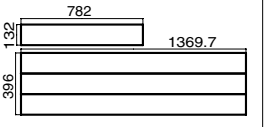
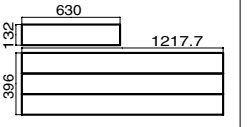
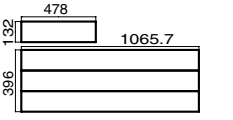
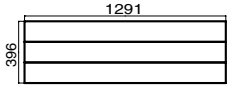
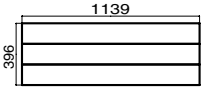
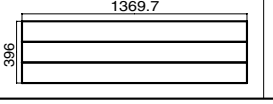
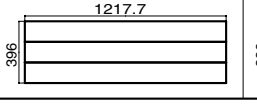
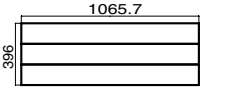
Extension adaptor MKS-8075/Memory card/USB adaptor MKS-8076



1-3-2. Main Panel/AUX Panel Configuration Example

ME	AUX	SEPARATED			
		32XPT	24XPT	16XPT	32XPT
4ME	FULL SIZE	432SF ASSY 	424SF ASSY 	416SF ASSY 	432IF ASSY 
	SHORT SIZE	432SO ASSY 	424SO ASSY 	416SO ASSY 	432IO ASSY 
3ME	BUILT -IN	332SB ASSY 	324SB ASSY 	316SB ASSY 	332IB ASSY 
	FULL SIZE	332SF ASSY 	324SF ASSY 	316SF ASSY 	332IF ASSY 
	SHORT SIZE	332SO ASSY 	324SO ASSY 	316SO ASSY 	332IO ASSY 
2ME	BUILT -IN	232SB ASSY 	224SB ASSY 	216SB ASSY 	232IB ASSY 

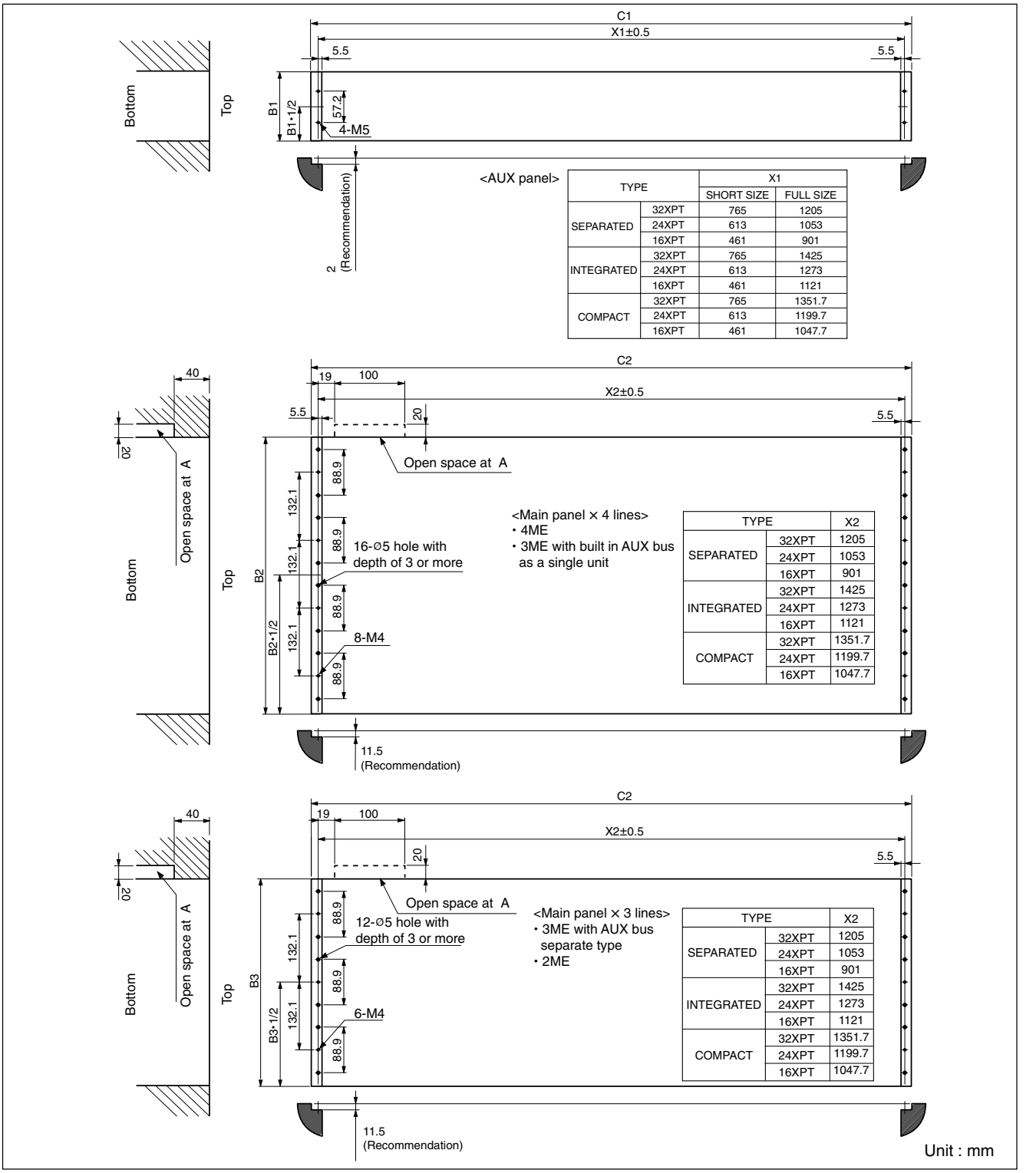
SEPARATED: Configuration that a module having width of 220 mm such as 10 Key Pad Module MKS-8026 is installed outside of the panel with the use of the Extension Adaptor MKS-8075.
INTEGRATED: Configuration that a module having width of 220 mm such as 10 Key Pad Module MKS-8026 is installed inside the panel.
COMPACT: Configuration that the Compact Transition Module MKS-8027 / 8028 is going to be used.

INTEGRATED		COMPACT		
24XPT	16XPT	32XPT	24XPT	16XPT
424IF ASSY 	416IF ASSY 	432CF ASSY 	424CF ASSY 	416CF ASSY 
424IO ASSY 	416IO ASSY 	432CO ASSY 	424CO ASSY 	416CO ASSY 
324IB ASSY 	316IB ASSY 	332CB ASSY 	324CB ASSY 	316CB ASSY 
324IF ASSY 	316IF ASSY 	332CF ASSY 	324CF ASSY 	316CF ASSY 
324IO ASSY 	316IO ASSY 	332CO ASSY 	324CO ASSY 	316CO ASSY 
224IB ASSY 	216IB ASSY 	232CB ASSY 	224CB ASSY 	216CB ASSY 

Unit : mm

1-3-3. Installation Space

- When the main panel or the AUX panel are recessed into a control console or similar, make holes as shown below into the control console with the following dimensions.
- Be sure to have an open space behind the cables of the connectors on the main panel, shown as the open space at “A” in the illustrations.
- For the dimensions B1, B2, B3, C1 and C2 shown in the illustrations, refer to “Main Panel / AUX Panel Detailed Dimensions” in this section.



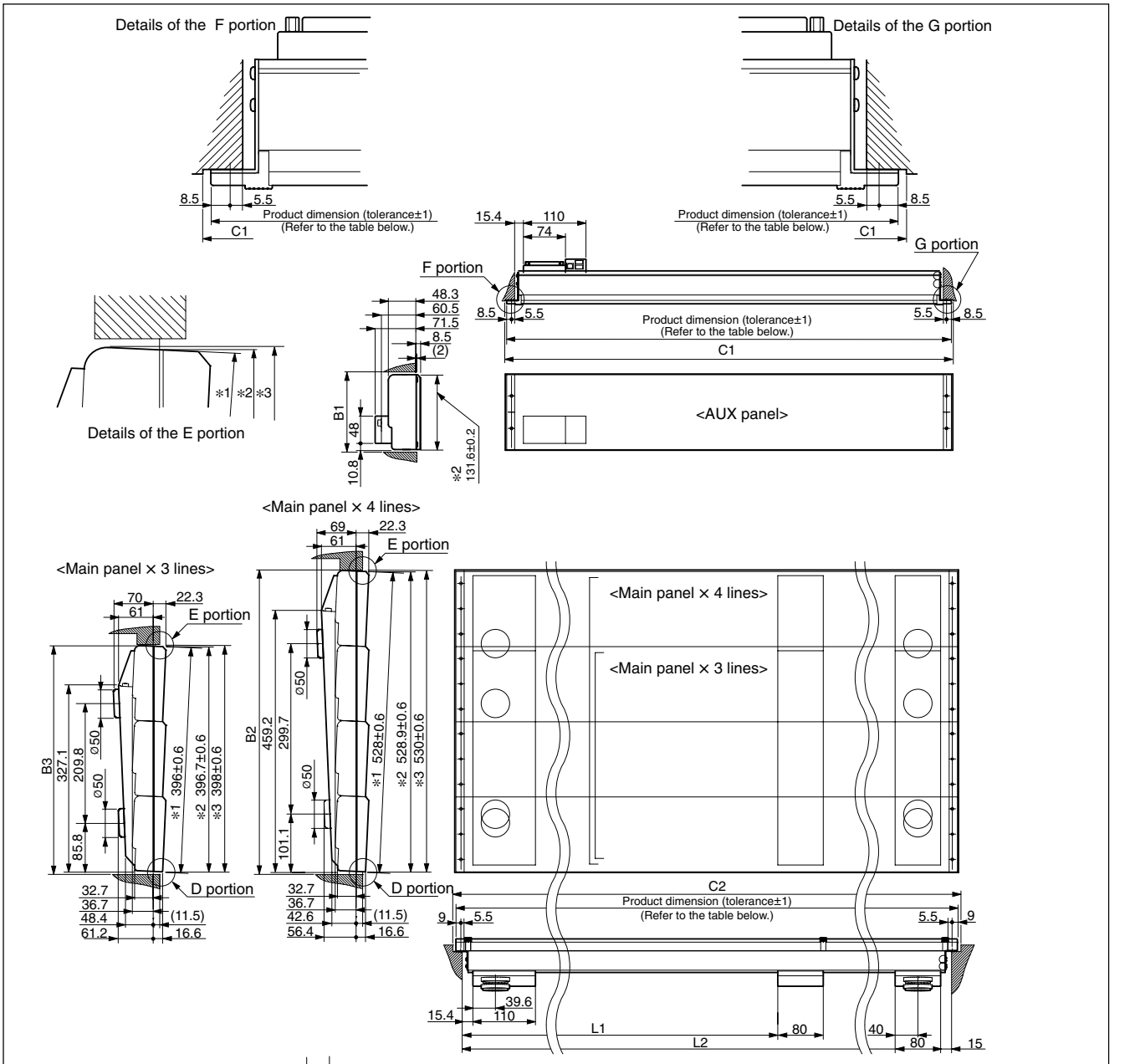
TYPE		X1 SHORT SIZE	X1 FULL SIZE
SEPARATED	32XPT	765	1205
	24XPT	613	1053
	16XPT	461	901
INTEGRATED	32XPT	765	1425
	24XPT	613	1273
	16XPT	461	1121
COMPACT	32XPT	765	1351.7
	24XPT	613	1199.7
	16XPT	461	1047.7

TYPE		X2
SEPARATED	32XPT	1205
	24XPT	1053
	16XPT	901
INTEGRATED	32XPT	1425
	24XPT	1273
	16XPT	1121
COMPACT	32XPT	1351.7
	24XPT	1199.7
	16XPT	1047.7

TYPE		X2
SEPARATED	32XPT	1205
	24XPT	1053
	16XPT	901
INTEGRATED	32XPT	1425
	24XPT	1273
	16XPT	1121
COMPACT	32XPT	1351.7
	24XPT	1199.7
	16XPT	1047.7

Main panel/AUX panel detailed dimensions

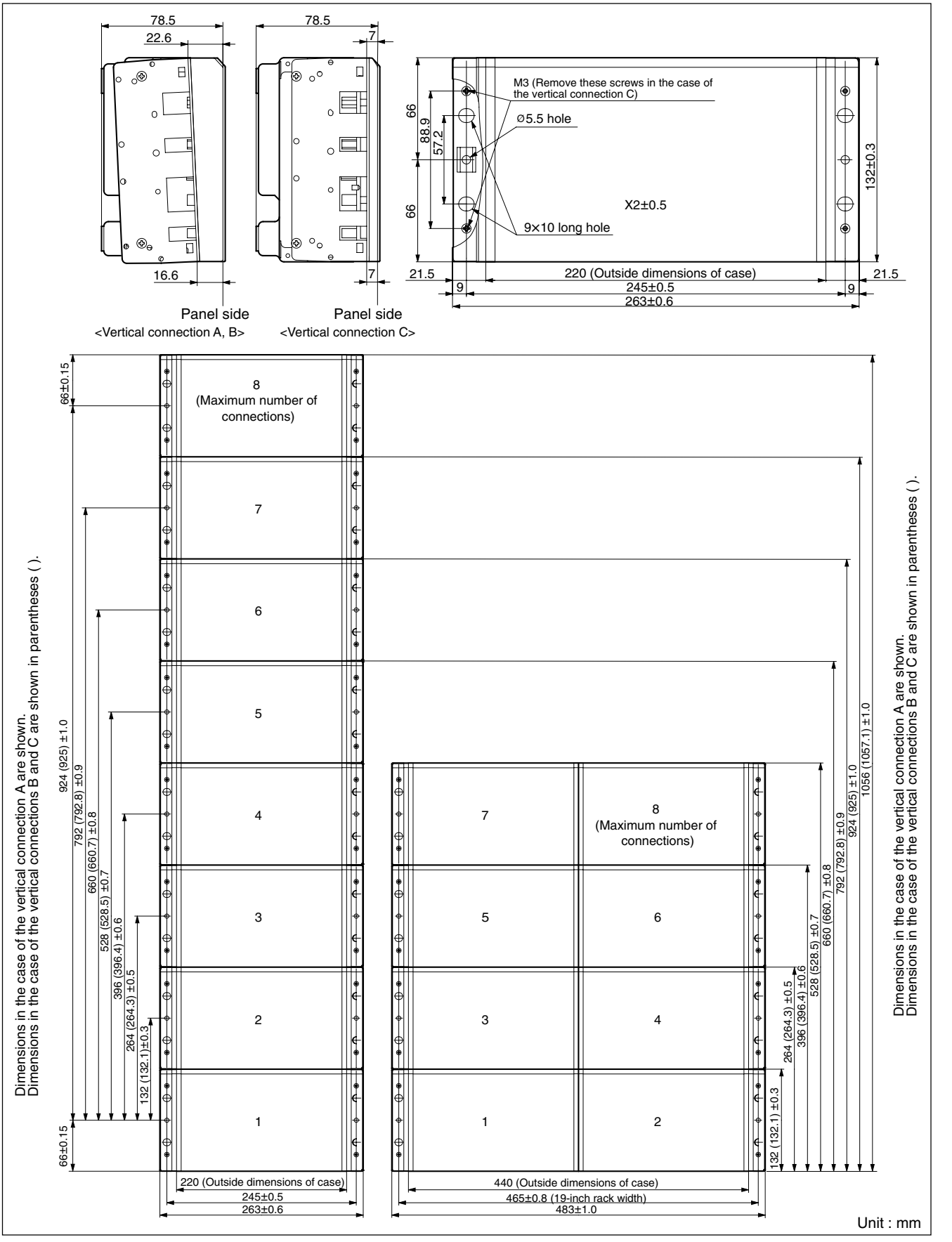
The dimensions B1, B2, B3, C1, and C2 shown in the illustrations vary depending on the product dimensions, the product dimensions on the installation surface, and the maximum external dimensions during installation. Determine the above five dimensions so that the appropriate clearance can be obtained between the panel and the console.



TYPE		L1	L2	Product dimensions of the MAIN PANEL	Product dimensions of the AUX PANEL	
					FULL/BUILD-IN	SHORT
SEPARATED	32XPT	557	1099	1223	1223	782
	24XPT	466	947	1071	1071	630
	16XPT	384	795	919	919	478
INTEGRATED	32XPT	667	1319	1443	1443	782
	24XPT	585	1167	1291	1291	630
	16XPT	515	1015	1139	1139	478
COMPACT	32XPT	667	1245.7	1369.7	1369.7	782
	24XPT	585	1093.7	1217.7	1217.7	630
	16XPT	515	941.7	1065.7	1065.7	478

Unit : mm

Extension adaptor MKS-8075/Memory card/USB adaptor MKS-8076 detailed dimensions



1-4. Installing the Main Panel

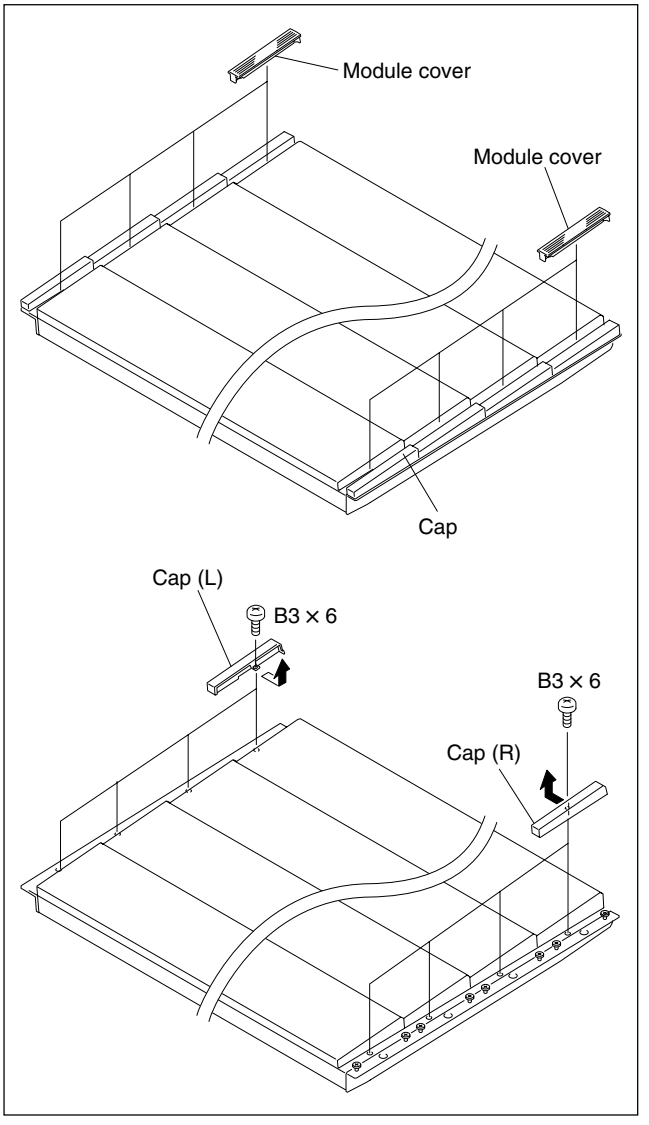
Note

When installing the main panel into the control console, be sure to install it with three persons or more.
Install the main panel by following the procedure described below.

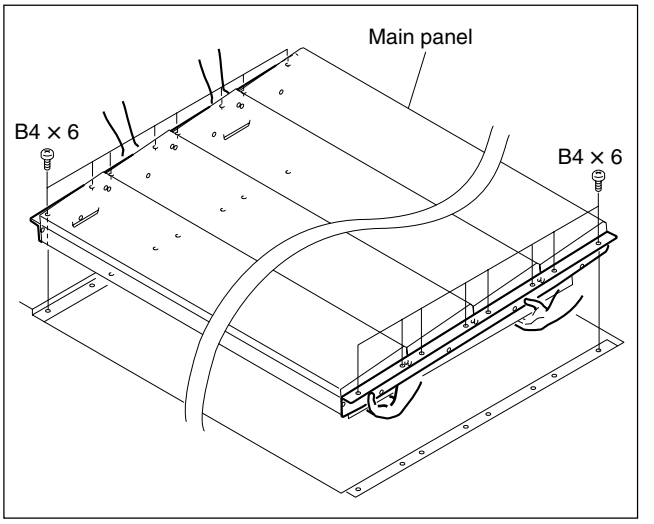
Tools required

For the 4-line configuration (4ME/3ME with built-in AUX bus, as a single unit)
Screws (B4 × 6) : 8 pcs
For the 3-line configuration (3ME with AUX bus separate type/2ME)
Screws (B4 × 6) : 6 pcs

1. Remove the module covers in the right and left.
2. Remove the screws and remove the cap (L) and (R) respectively.



3. Two persons should hold the main panel while a third person positions into the control console.
4. Fix the main panel to the control console with the screws.
   (The illustration below shows the 4-row configuration.)



5. Install all of the right and left module covers, and the caps (L) and (R) by reversing the steps 1 and 2 of removal.

1-5. Installing the AUX Panel

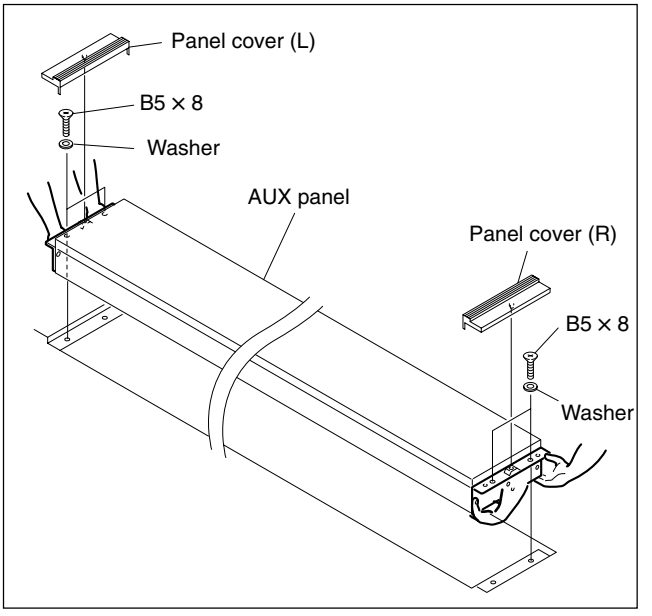
Note

When installing the AUX panel into the control console, be sure to install it with two persons or more.
Install the AUX panel by following the procedure described below.

Tools required

- Screws (B5 × 8) : 4 pcs
- Washer for M5 : 4 pcs
  (Sony part No. : 7-688-005-11)

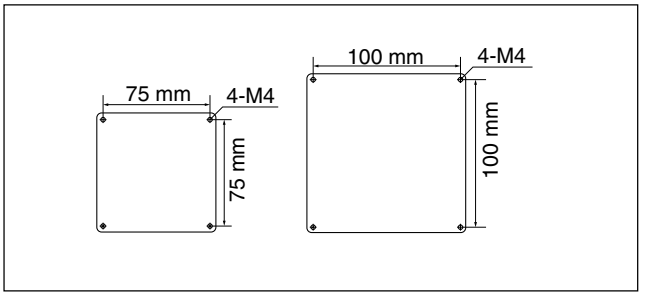
1. Remove the panel covers (L) and (R).
2. Two persons or more should hold the AUX panel and install it into the control console.
3. Fix the AUX panel to the control console with the screws.
4. Install the panel covers (L) and (R).



1-6. Installing Menu Panel

The menu panel MKS-8011 can be installed to the monitor arm compliant with VESA Standard using the adapter supplied with CCP-8000. See the dimensions for installation below.

Adapter installation dimensions (compliant with VESA Standard)



The following parts supplied with CCP-8000 are required to install the menu panel.

Note

Use the specified accessories when installing the menu panel.

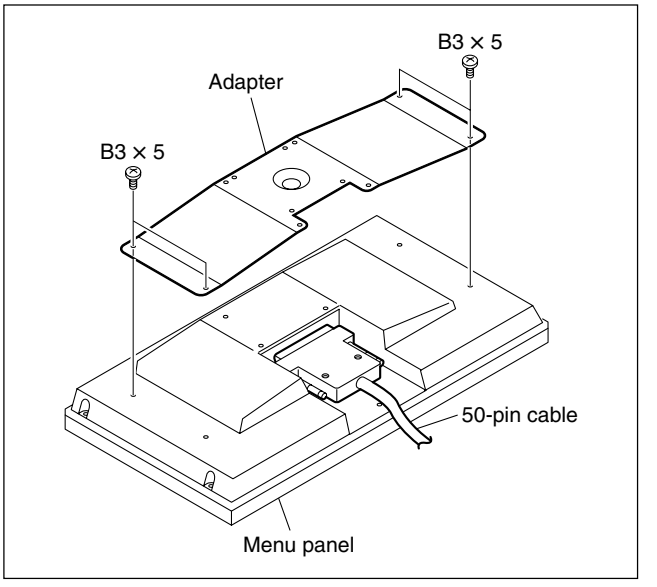
- Adapter
- 50-pin cable
- Screws B3 × 5 (4)
- Screws B4 × 8 (4)

Installation

Note

Connect the attached 50-pin cable to the menu panel, and then perform the following steps.

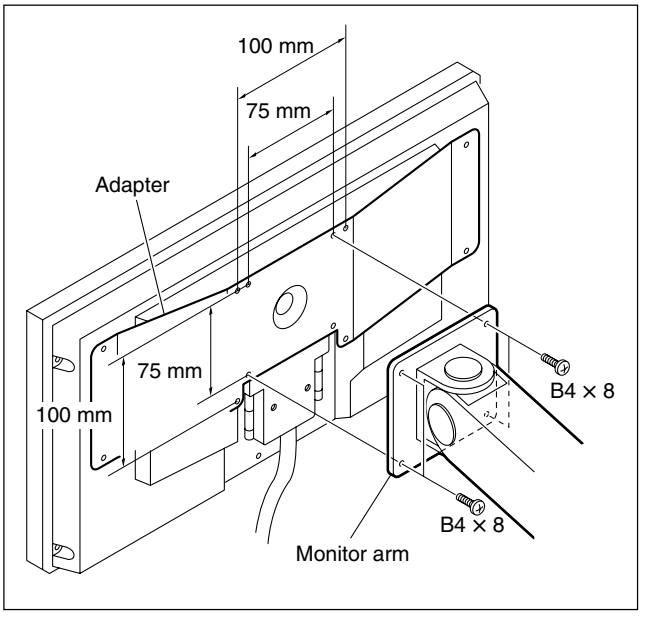
1. Install the adapter to the menu panel with the attached four screws (B3 × 5).



2. Install a commercially available monitor arm to the adapter with the attached four screws (B4 × 8).

   Note

   For installation of monitor arm, refer to its operation manual.



1-7. Rack Mounting

1-7-1. Rack Mounting the System Control Unit MKS-8010/8010A

The MKS-8010/8010A installs in a 19-inch standard rack. To mount the MKS-8010/8010A in a rack, use the specified rack mount kit and follow the procedure described below.

Specified rack mount kit : RMM-10

Note

If a rack mount kit other than the specified one is used, the unit may not correctly install in a 19-inch standard rack.

Parts of the RMM-10

- Rack tools 2 pcs
- Right rack mount adaptor 1 pc
- Left rack mount adaptor 1 pc
- Rack tool attaching screws 6 pcs
  (B4 × 6 : 7-682-560-09)
- Rack tool attaching screws 6 pcs
  (B4 × 10 : 7-682-560-10)

1. Precautions for rack mounting

WARNING

- To prevent the rack from falling or moving, fix the rack on a flat and steady floor using bolts or other fixings. If the rack falls due to the weight of the equipment, it may cause death or injury.
- Be sure to use the specified rack mount kit. If not, injury may result and the equipment may fall due to insufficient strength.
- After rack mounting, be sure to tighten the screws on the rack angle and fix the unit in the rack.

CAUTION

When mounting the unit in the rack, note the following:

- Be sure to mount in the rack with two persons or more.
- Mount in the rack in a stable position.

Note

If several units are mounted in a rack, it is recommended that a ventilation fan is installed to prevent temperature rise inside the rack.

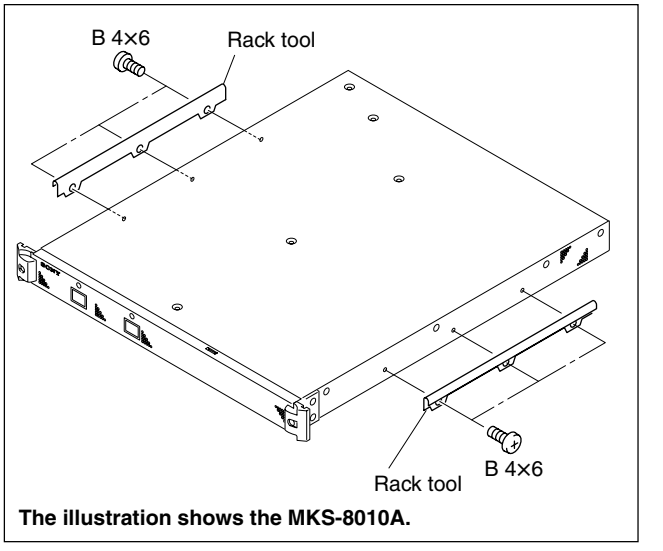
2. Rack mounting procedure

This section describes the rack mounting procedure using the RMM-10 rack mount kit.

Note

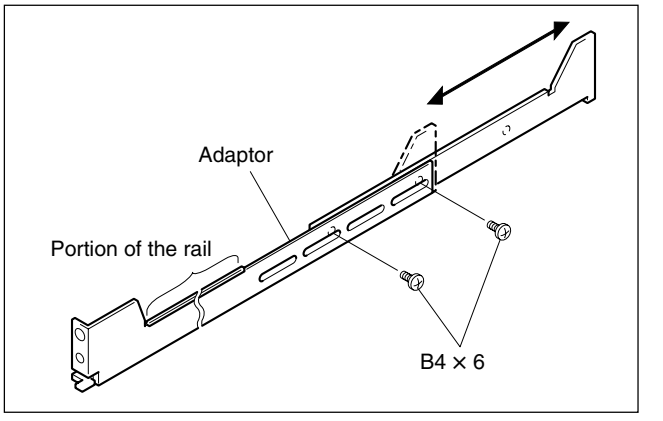
Tighten the screws to the following torque.
Tightening torque : 120×10^{-2} N•m (12.2 kgf•cm)

1. Attach the rack tool to the side of the equipment using the specified six screws.
   Note
   Use B4 × 6 screws.



The illustration shows the MKS-8010A.

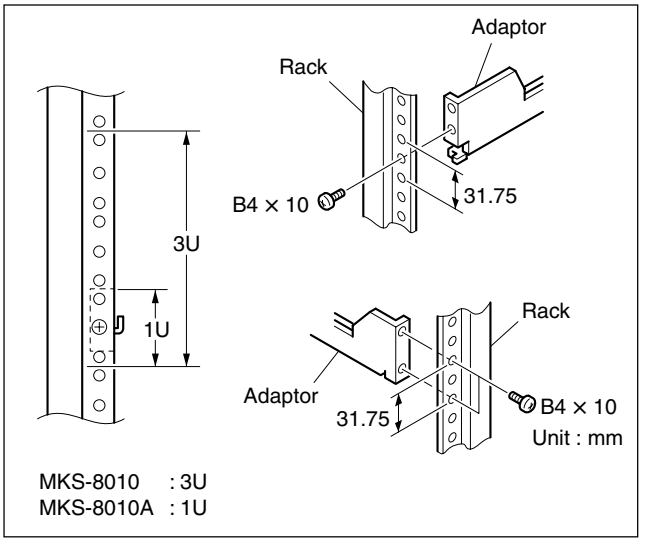
2. Loosen the screws on the rear of the right and left adaptors and adjust the length of the adaptor according to the depth of the rack.
   (The illustration below shows the left adaptor.)



Note

Maximum depth of adaptor : 750 mm
Minimum depth of adaptor : 595 mm

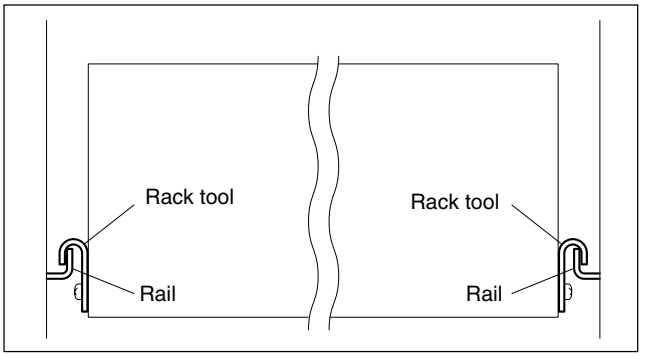
3. Attach the right and left adaptors to the rack completely using the specified six screws.
   (The illustration below shows the left adaptor.)



4. Tighten the screws (B4 × 6 : two screws each on the right and left) for adjusting the length of the adaptor completely (the screws that were loosened in step2).
5. Align the groove of the rack tool at the side of the equipment with the rail, and slide the equipment to the rear.

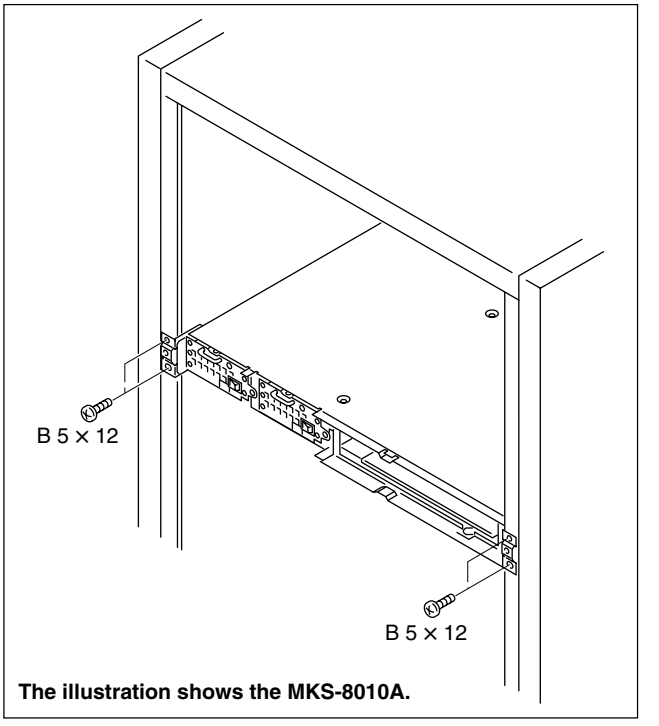
Note

The rack tools are hooked on the rails as shown below.



6. Remove the front panel. (Refer to Section 2-1.)

7. Fix the rack angle in the rack using the specified screws.



The illustration shows the MKS-8010A.

8. Attach the front panel to the equipment.

1-7-2. Rack Mounting the MKS-8075 (Extension Adaptor)/MKS-8076 (Memory Card/USB Adaptor)

The MKS-8075 and MKS-8076 can be mounted in a 19-inch standard rack.
To mount them in a rack, use the recommended rack mount parts and follow the procedure described below.

Note

In order to rack mount the MKS-8075 and MKS-8076, the following conditions must be met.

- Two or more adaptors must be configured to the two rows as shown in the illustration by connecting them horizontally together.
- Number of adaptors connected must be either 2, 4, 6 or 8.
- The connection method C (flat) must be used.
- For the connection method, refer to "2-5. Connecting the MKS-8075/MKS-8076".

Tools required

- Screws (B5 × 8)
- Washers for M5 (Sony part No.: 7-688-005-11)
  When 2 adaptors are connected : Each 4 pcs
  When 4 adaptors are connected : Each 8 pcs
  When 6 adaptors are connected : Each 12 pcs
  When 8 adaptors are connected : Each 16 pcs

1. Precautions for rack mounting

WARNING

- To prevent the rack from falling or moving, fix the rack on a flat and steady floor using bolts or other fixings.
  If the rack falls due to the weight of the equipment, it may cause death or injury.
- Be sure to use the side panels of the adaptor itself for rack mounting.
  If not, injury may result and the equipment may fall due to insufficient strength.
- After rack mounting, be sure to tighten the screws on the side panels and fix the unit in the rack.

CAUTION

When mounting the unit in the rack, note the following:

- Be sure to mount in the rack with two persons or more.
- Mount in the rack in a stable position.

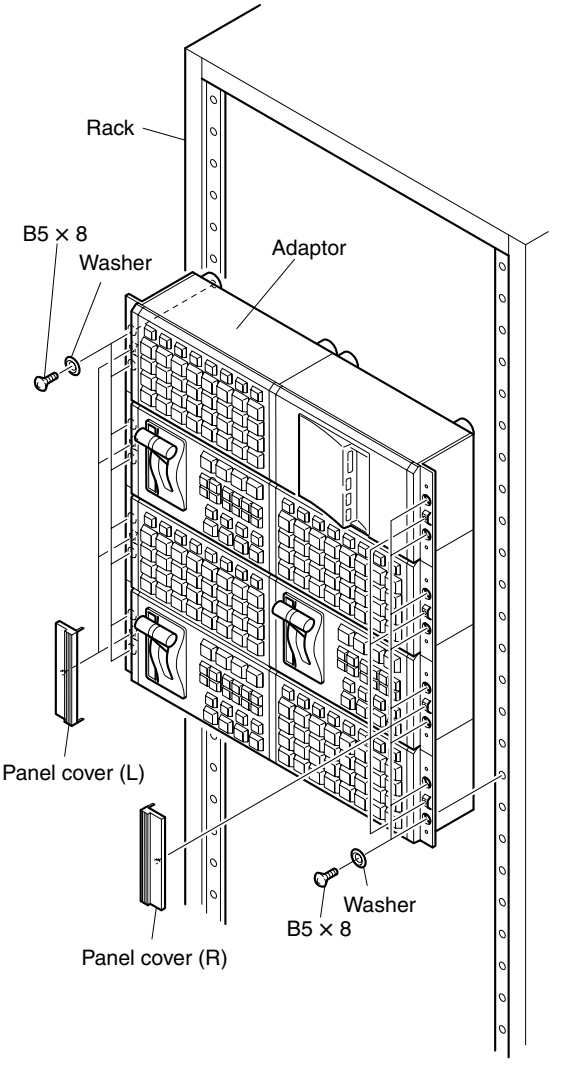
2. Rack mounting procedure

1. Remove the panel covers (L) and (R).
2. Install the adaptor into the rack using screws (B5 × 8) and washers.

   Note

   The required number of screws are different with the numbers of adaptors connected.

3. Install the panel covers (L) and (R).



When 8 adaptors are connected

1-8. Matching Connectors and Cables

Use the following connectors, cables or equivalents when connecting cables to the unit.

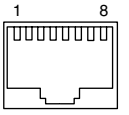
Model name	Panel indication	Connector name	Matching connector and cable	
			Name	Sony part No.
MKS-8010 MKS-8010A	EXT PANEL1 to 3 MENU PANEL MAIN PANEL	D-sub 50-pin, Female	Use the dedicated cable*1 specified by Sony Corp.	
	GPI	D-sub 25-pin, Female	D-sub 25-pin, Male Connector 25-pin, Male Junction Shell 25-pin	 1-566-356-11*2 1-563-377-11
	EXT DISPLAY	D-sub Miniature 15-pin, Female	Use the display cable that is commercially available on market.	
	(MKS-8010) LTC IN EDITOR PANEL	D-sub 9-pin, Female	D-sub 9-pin, Male Connector 9-pin, Male Junction Shell 9-pin	 1-560-651-00*2 1-561-749-00
	(MKS-8010A) LTC IN	BNC, 75 Ω	BNC, 75 Ω Belden 8281 coaxial cable	
	(MKS-8010A) EDITOR PANEL	D-sub 15-pin, Female	Use the display cable that is commercially available on market.	
	REMOTE REF IN	BNC, 75 Ω	BNC, 75 Ω Belden 8281 coaxial cable	
	CTRL PERIPH DATA	RJ-45 modular jack*3	–	
	DEVICE	USB Type A receptacle	Use the cable supplied or the USB cable that is commercially available on market. (with plug) (5 m or less)	
MKS-8011	SCU	D-sub 50-pin, Male	Use the dedicated cable*1 specified by Sony Corp.	
MAIN PANEL/ AUX PANEL	SCU	D-sub 50-pin, Male	Use the dedicated cable*1 specified by Sony Corp.	
	DEVICE	USB Type A receptacle	Use the cable supplied or the USB cable that is commercially available on market. (with plug) (5 m or less)	
	HOST	USB Type B receptacle		
MKS-8075	SCU IN	D-sub 50-pin, Male	Use the dedicated cable, supplied with the MKS-8075 or dedicated cable*1 specified by Sony Corp.	
	SCU OUT	D-sub 50-pin, Female		
MKS-8076	HOST	USB Type B receptacle	Use the cable supplied or the USB cable that is commercially available on market. (with plug) (5 m or less)	

*1 : SWC-5005 (5 m)
SWC-5010 (10 m)
*2 : The following crimp contact is required for the plug.
AWG#18 to #22: 1-566-493-11
AWG#22 to #24: 1-564-774-11
AWG#24 to #28: 1-564-775-11
*3 : Conforms to IEEE 802.3 Ethernet 100BASE-TX standard.

1-9. Input/Output Signals of Connectors

Input and output signals of the connectors on the rear panel are as follows.

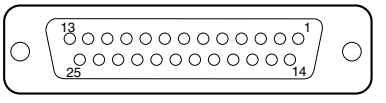
CTRL/DATA/PERIPH : 100BASE-TX, RJ-45 (8-pin)



– EXT VIEW –

Pin No.	Signal Name	Function
1	TX+	Transmitted data (+)
2	TX–	Transmitted data (–)
3	RX+	Received data (+)
4	–	No Connection
5	–	No Connection
6	RX–	Received data (–)
7	–	No Connection
8	–	No Connection

GPI : (D-sub 25-pin, Female)
INPUT × 8, TTL
OUTPUT × 4, relay contacts 30 V 0.1 A
(resistive load)
OUTPUT × 4, open collector 30 V rated voltage



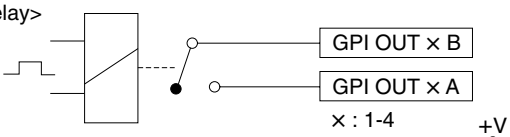
— EXT VIEW —

Pin No.	Signal Name	Function
1	GND	Ground
2	GND	Ground
3	GPI IN 2	General-purpose input
4	GPI IN 4	
5	GPI IN 6	
6	GPI IN 8	
7	GPI OUT 1B	General-purpose relay
8	GPI OUT 2B	output (B)(*1)
9	GPI OUT 3B	
10	GPI OUT 4B	
11	GPI OUT 6	General-purpose open collector
12	GPI OUT 8	output (B)(*2)
13	GPI OUT COM	Ground for open collector output
14	GND	Ground
15	GPI IN 1	General-purpose input
16	GPI IN 3	
17	GPI IN 5	
18	GPI IN 7	
19	GPI OUT 1A	General-purpose relay output (A)(*1)
20	GPI OUT 2A	
21	GPI OUT 3A	
22	GPI OUT 4A	
23	GPU OUT 5	General-purpose open collector
24	GPI OUT 7	output (*2)
25	GPI OUT COM	Ground for open collector output

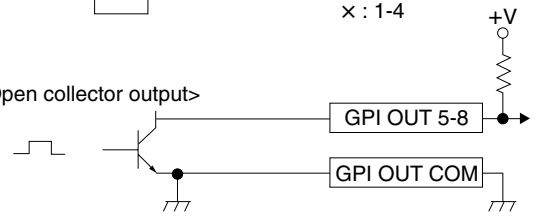
Note

A and B of the same number constitute a pair of relay contacts.

(*1) <Relay>



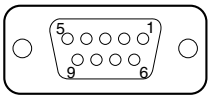
(*2) <Open collector output>



EDITOR PANEL

<CONTROLLER> (*3)

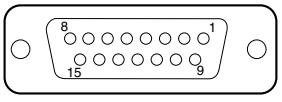
• MKS-8010 : RS-422A (D-sub 9-pin, Female)



– EXT VIEW –

Pin No.	Signal Name	Function
1	FG	Frame ground
2	RX–	Received data (–)
3	TX+	Transmitted data (+)
4	GND	Common ground
5	–	No Connection
6	GND	Common ground
7	RX+	Received data (+)
8	TX–	Transmitted data (–)
9	–	No Connection

• MKS-8010A : (D-Sub 15-pin, Female)



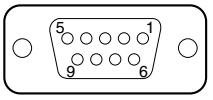
— EXT VIEW —

Pin No.	Signal Name	Function
1	GND	Ground
2	RX–	Received data (–)
3	TX+	Transmitted data (+)
4	GND	Ground
5	–	No Connection
6	+12V	+12V
7	+12V	+12V
8	+12V	+12V
9	–	No Connection
10	RX+	Received data (+)
11	TX–	Transmitted data (–)
12	GND	Ground
13	GND	Ground
14	GND	Ground
15	GND	Ground

(*3) <CONTROLLER> : Indicates a controlling device.

LTC IN

• MKS-8010 : (D-sub 9-pin, Female) to External Device



– EXT VIEW –

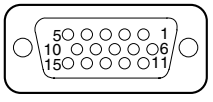
Pin No.	Signal Name	Function
1	–	No Connection
2	–	No Connection
3	–	No Connection
4	GND	Ground
5	LTC (+)	Linear Time Code +
6	–	No Connection
7	GND	Ground
8	–	No Connection
9	LTC (–)	Linear Time Code –

• MKS-8010A : (BNC Connector) to External Device

DEVICE : USB Type A

Pin No.	Signal Name	Function
1	VBUS	USB Vcc
2	D–	USB–
3	D+	USB+
4	GND	Ground

EXT DISPLAY : (High-density D-sub 15-pin, analog RGB, Female) to External Display



– EXT VIEW –

Pin No.	Signal Name	Function
1	RED	Video Red
2	GREEN	Video Green
3	BLUE	Video Blue
4	–	No Connection
5	GND	Ground
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	–	No Connection
10	GND	Ground
11	–	No Connection
12	–	No Connection
13	HSYNC	Horizontal Sync
14	VSYNC	Vertical Sync
15	–	No Connection

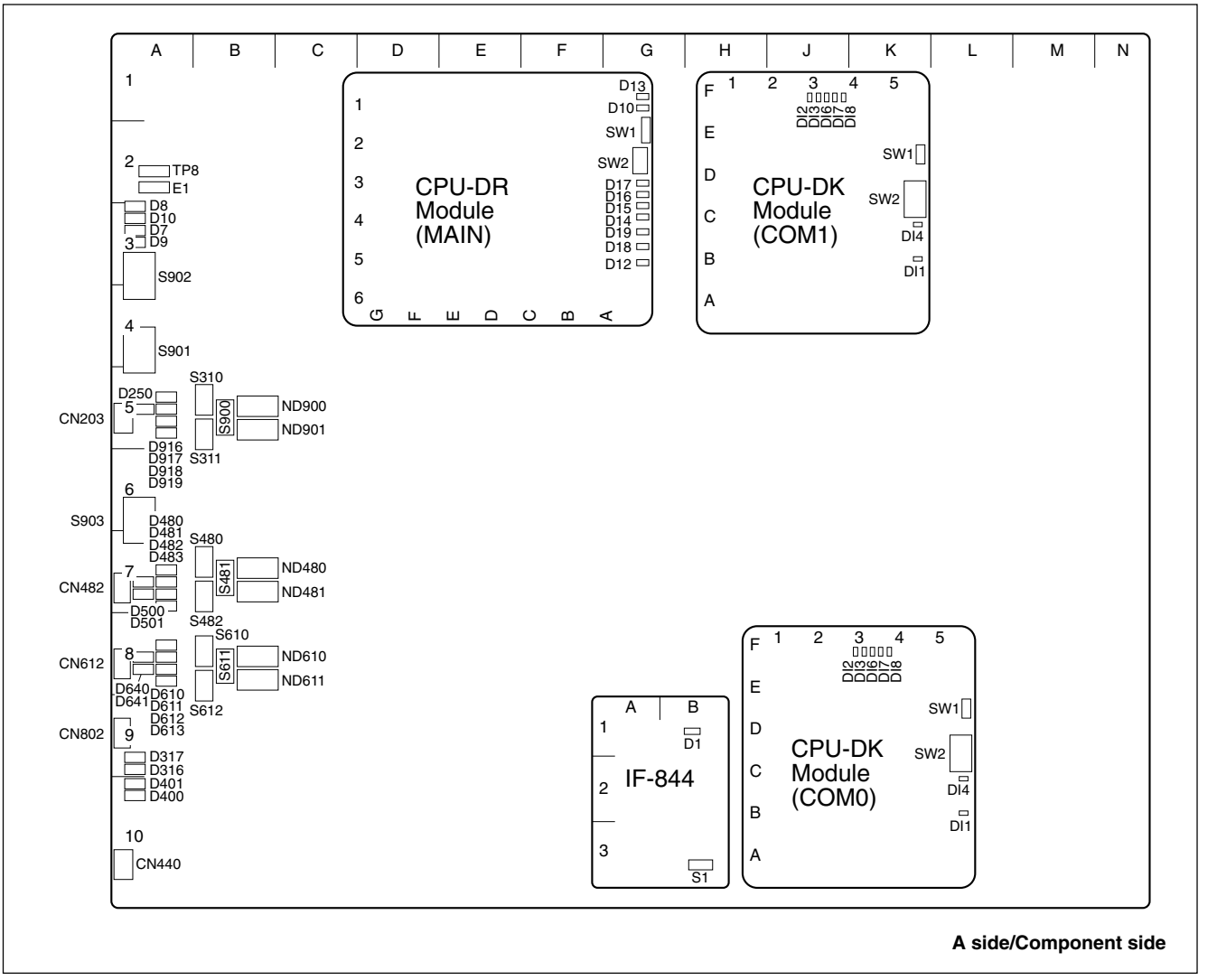
1-10. Checks on Completion of Installation

1-10-1. Description of On-board Switches and LEDs

Note

The number shown in the parentheses ( ) indicated the address on the circuit board.

1. CA-45 board (MKS-8010)



<LED>

D7 (A-3) : +3.3 V
+3.3 V power supply status indication.
Lit when the +3.3 V power is supplied.

D8 (A-3) : +12 V
+12 V power supply status indication.
Lit when the +12 V power is supplied.
If this LED does not light, the fuse may have blown.

D9 (A-3) : +2.5 V
+2.5 V power supply status indication.
Lit when the +2.5 V power is supplied.

D10 (A-3) : +5 V
+5 V power supply status indication.
Lit when the +5 V power is supplied.

D251 (A-5) : 100/RESET/S-BUS TX/S-BUS RX
Lit while the 100 Mb/s communication with the MENU CPU is in progress.

D316 (A-9) : HD
Lit when the reference signal that is connected to the REF IN connector is an HD signal.

D317 (A-9) : REF_OK status LED
REF IN signal presence/absence status indication.
Lit when an REF signal is input via the REF IN connector.

D400 (A-10) : CH0
Flashes while communication with the equipment that is connected to the EDITOR PANEL terminal is in progress.

D401 (A-10) : SIO
EDITOR PANEL communication IC status indication
Lit : The IC has not started up correctly.
Not lit : The IC has started up correctly.
Flashing : Memory is faulty.

D480 (A-7) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D481 (A-7) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D482 (A-7) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D483 (A-7) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D500 (A-7) : LAN status LED
LAN status indication.
Flashes while communication with the equipment that is connected to the CTRL terminal is in progress.

D501 (A-7) : 100
Lit while the 100 Mb/s communication with the equipment that is connected to the CTRL terminal is in progress.

D610 (A-8) : PERIPH CPU status LED
PERIPH terminal communication IC status indication.
Used only for production in the assembly factory.

D611 (A-8) : PERIPH CPU status LED
PERIPH terminal communication IC status indication.
Used only for production in the assembly factory.

D612 (A-8) : PERIPH CPU status LED
PERIPH terminal communication IC status indication.
Used only for production in the assembly factory.

D613 (A-8) : PERIPH CPU status LED
PERIPH terminal communication IC status indication
Used only for production in the assembly factory.

D640 (A-8) : LAN status LED
LAN status indication.
Flashes while communication with the equipment that is connected to the PERIPH terminal is in progress.

D641 (A-8) : 100
Lit while the 100 Mb/s communication with the equipment that is connected to the PERIPH terminal is in progress.

D916 (A-5) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

D917 (A-5) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

D918 (A-5) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

D919 (A-5) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

ND480 (B-7) : COM0 CPU status LED
CTRL LAN control IC status indication.

ND481 (B-7) : COM0 CPU status LED
CTRL LAN control IC status indication.

ND610 (B-8) : COM1 CPU status LED
PERIPH LAN control IC status indication.

ND611 (B-8) : COM1 CPU status LED
PERIPH LAN control IC status indication.

ND900 (B-5) : MAIN CPU status LED
Main CPU status indication.

ND901 (B-5) : MAIN CPU status LED
Main CPU status indication.

<Switch>
S310 (B-5) : MAIN RESET switch
Reset switch for the entire CA-45 board.

S311 (B-5) : Monitor reset switch for the main CPU
Reset switch that is used during maintenance of the main CPU from the TERMINAL pin.

S480 (B-7) : C0-RESET switch
Independent reset switch for the CTRL LAN control IC.

S481 (B-7) : Modes setting switch for COM0 CPU
Used only for production in the assembly factory.
Default setup when shipped from the factory is all OFF.

S482 (B-7) : Monitor reset switch for the COM0 CPU
Reset switch that is used during maintenance of the CTRL LAN control IC from the TERMINAL pin.

S610 (B-8) : C1-RESET switch
Independent reset switch for the PERIPH LAN control IC CPU.

S611 (B-8) : Modes setting switch for COM1 CPU
Used only for production in the assembly factory.
Default setup when shipped from the factory is all OFF.

S612 (B-8) : Monitor reset switch for the COM1 CPU
Reset switch that is used during maintenance of the PERIPH LAN control IC from the TERMINAL pin.

S900 (B-5) : Mode setting switch for the main CPU
Used only for production in the assembly factory.
Default setup when shipped from the factory is all OFF.

S901 (A-4) : Unit ID setting switch for LAN
Sets the unit ID of the equipment inside the network.
Used to set the unit ID for the CTRL, PERIPH and DATA terminals.
Refer to the System Setup Manual for details.

S902 (A-3) : Group ID setting switch for LAN
Sets the ID of the network group.
Used to set the group ID for the CTRL, PERIPH and DATA terminals.
Refer to the System Setup Manual for details.

S903 (A-6) : STATION ID
Used to set the REMOTE terminal.
Refer to the System Setup Manual for details.

<Connector>
CN203 (A-5) : TERMINAL pin
Main CPU connection terminal.
Used only for production in the assembly factory.

CN440 (A-10) : TERMINAL pin
Main CPU connection terminal.
Used only for production in the assembly factory.

CN482 (A-7) : TERMINAL pin
Main CPU connection terminal.
Used only for production in the assembly factory.

CN612 (A-8) : TERMINAL pin
Main CPU connection terminal.
Used only for production in the assembly factory.

CN802 (A-9) : JTAG connector
Used only for production in the assembly factory.

<TEST terminal>
E1 (A-2) : GND pin
Used for GND when measuring each check terminal.

TP8 (A-2) : +12 V check pin
+12 V measuring terminal.

<LED on the CPU DR module> : Main CPU
D10 (green) (A-1) : RUN status LED
RUN status indication.
Lit when the CPU-DR module starts operating.

D12 (green) (A-4) : CD (Card Detect) status LED
Lit when the CPU-DR module is inserted correctly to the parent board.

D13 (green) (A-1) : +2.5 V
Indicates the statue of the +2.5 V power that is generated by the VCC (CORE) and supplied to the CPU-DR module.
Lit while the specified power is turned on.

D14, D15, D16, D17 (A-3) (green) : STATUS1 to STATUS4 status LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

D18 (green) (A-4) : +3.3 V
Indicates the status of the VCC (I/O) power that is supplied to the CPU-DR module.
Lit while the specified power is turned on.

D19 (green) (A-4) : CORE status LED
Indicates the status of the VCC (CORE) power that is supplied to the CPU-DR module.
Lit while the specified power is turned on.

<Switch on the CPU DR module> : Main CPU
SW1 (A-2) : RESET switch
Pressing this switch resets the CPU-DR module.
Note
In some machines in which the CPU-DR module is installed, the system reset may be activated.

SW2 (A-2) : MODE switch
8-pin DIP switch
Used only for production in the assembly factory. All switches are set to OFF for normal operation.

<LED on the CPU DK module> (COM0) (COM1)
DI1 (green) (B-5) : CD (Card Detect) status LED
Lit when the CPU-DK module is inserted correctly to the parent board.

DI2 (green) (F-3) : RUN status LED
Lit when the CPU-DK module starts operating.

DI3 (F-3) (green) : STATUS4 LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

DI6 (F-3) (green) : STATUS3 LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

DI7 (F-3) (green) : STATUS2 LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

DI8 (F-4) (green) : STATUS1 LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

DI4 (green) (B-5) : +3.3 V
Indicates the status of the VCC (CORE) and VCC (I/O) powers that are supplied to the CPU-DK module.

<Switch on the CPU DK module> (COM0) (COM1)
SW1 (D-5) : RESET switch
Pressing this switch resets the CPU-DK module.
Note
In some machines in which the CPU-DK module is installed, the system reset may be activated.

SW2 (C-5) : MODE switch
8-pin DIP switch
Used only for production in the assembly factory. All switches are set to OFF for normal operation.
Default setting when shipped from the factory is all OFF.

<LED on the IF-844 board> (G-9) : S-BUS
D1 (B-1) : S-BUS RX status LED
Lit when receiving data.

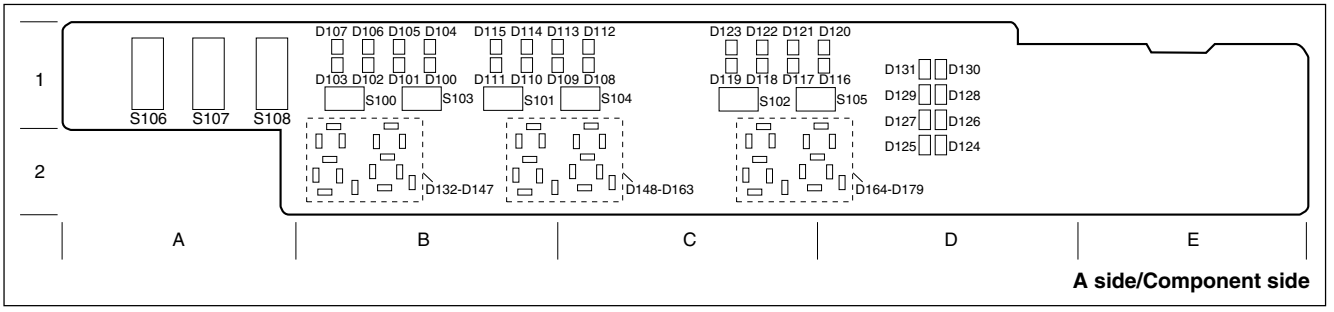
<Switch on the IF-844 board> (G-9) : S-BUS
S1 (B-3) : RESET switch
Pressing this switch resets the IF-844 board.

<TEST terminal on the IF-844 board> (G-9) : S-BUS
E1 (B-3) : GND terminal
Use this terminal as the earth point for measuring the respective check terminals.

TP1 (A-2) : RX check terminal
S-BUS communication line measuring terminal.

TP2 (A-3) : TEST terminal
Terminal for testing.

2. FP-141 board (MKS-8010A)



<LED>

D100 to D103 (B-1) : MAIN CPU status LED

Main CPU status indication.
Used only for production in the assembly factory.

D104 (B-1) : SIO ACT

Flashes while the communication with the equipment that is connected to the EDITOR PANEL terminal is in progress.

D105 (B-1) : SBUS ACT

Lit while the communication with the equipment that is connected to the REMOTE terminal is in progress.

D106 (B-1) : LAN ACT

Lit while the communication between the CPU-DR module and the MPU-302B board is in progress.

D107 (B-1) : LAN 100M

Lit while the 100 Mb/s communication with MENU CPU is in progress.

D108 (C-1) to D115 (B-1) : C01 to C08

CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D116 (D-1) to D123 (C-1) : C11 to C18

PERIPH terminal communication IC status indication.
Used only for production in the assembly factory.

D124 (D-2) : SBUS CH1

Lit when an equipment is connected to the REMOTE terminal.

D125 (D-2) : SBUS RUN

Displays the status of the circuit for processing a signal in the REMOTE terminal. Lit during a normal operation.

D126 (D-2) : SBUS TX

Flashes while transmitting the communication data to an equipment that is connected to the REMOTE terminal.

D127 (D-2) : SBUS RX

Flashes while receiving the communication data from the equipment that is connected to the REMOTE terminal.

D128 (D-1) : HD

Lit when the reference signal that is input via the REF IN terminal is an HD signal.

D129 (D-1) : REF OK

REF IN signal presence/absence status indication.
Lit when the reference signal is input via the REF IN terminal.

D130 (D-1) : MCONFIG

Lit when the direct configuration mode is performed.
Used only for production in the assembly factory.

D131 (D-1) : USER

Used only for production in the assembly factory.

D132 to D147 (B-2) : MAIN CPU status LED

Main CPU (CPU-DR module) status indication.
Displays the initialization steps of the main CPU at power-on.
"A0" is displayed when the initialization is completed and the main CPU is booted correctly.

D148 (C-2) to D163 (B-2) : COM0 CPU status LED

CTRL LAN control IC status indication.
Displays the initialization steps of the COM0 CPU at power-on. LED flashes rotatingly when the initialization is completed and the COM0 CPU is booted correctly.

D164 (D-2) to D179 (C-2) : COM1 CPU status LED

PERIPH LAN control IC status indication.
Displays the initialization steps of the COM1 CPU at power-on. LED flashes rotatingly when the initialization is completed and the COM1 CPU is booted correctly.

<Switch>

S100 (B-1) : MAIN RESET switch

Reset switch for the entire this unit.

S101 (B-1) : C0-RESET switch

Independent reset switch for the CTRL LAN control IC.

S102 (C-1) : C1-RESET switch

Independent reset switch for the PERIPH LAN control sub CPU.

S103 (B-1) : Monitor reset switch for the main CPU

Reset switch that is used during maintenance of the main CPU from the TERMINAL pin.

S104 (C-1) : Monitor reset switch for the COM0 CPU

Reset switch that is used during maintenance of the CTRL LAN control IC from the TERMINAL pin.

S105 (D-1) : Monitor reset switch for the COM1 CPU

Reset switch that is used during maintenance of the PERIPH LAN control IC from the TERMINAL pin.

S106 (A-1) : Unit ID setting switch for LAN

Sets the unit ID of the equipment inside the network.
Used to set the unit ID for the CTRL, PERIPH and DATA terminals.
Refer to the System Setup Manual for details.

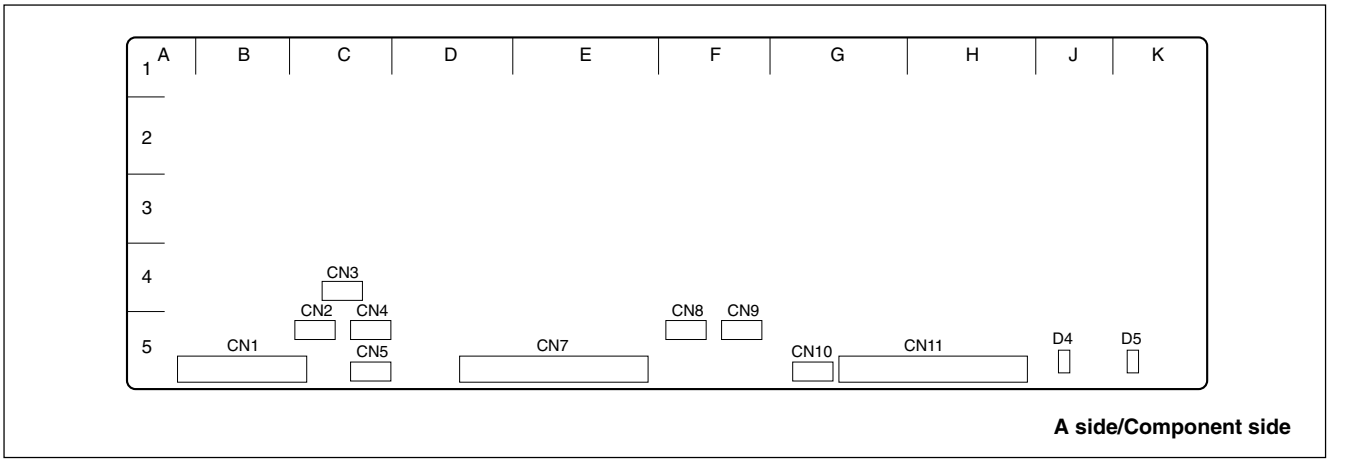
S107 (A-1) : Group ID setting switch for LAN

Sets the ID of the network group.
Used to set the group ID for the CTRL, PERIPH and DATA terminals.
Refer to the System Setup Manual for details.

S108 (A-1) : STATION ID

Used to set the REMOTE terminal.
Refer to the System Setup Manual for details.

3. IF-855 board (MKS-8010)



<LED>

D4 (green) (J-5) : IDE

Flashes and flashes while the hard disk is being accessed. D4 is turned off while the hard disk is not being accessed or when D5 is turned off.

D5 (green) (K-5) : +5 V

Indicates the status of the +5 V power that is supplied to the PC boards.
Lit while the +5 V power is being supplied. Turned off when the +12 V power is not supplied to the IF-855 board or when the DC-DC converter on the IF-855 board is defective.

<Connector>

CN1 (B-5) : DC

Supplies the +5 V and +12 V power to the PC board.

CN2 (C-5) : P/P

Used to control the hard disk access LED (D4).

CN3 (C-4) : TEMP

The interface with the temperature sensor (THP1) on the IF-855 board.

CN4 (C-5) : USB

Used to control the USB equipment such as memory card, USB module and others.

CN5 (C-5) : COM3

The RS-232C interface that is used to control the touch-panel of the Menu Panel.

CN7 (E-5) : IDE2/Secondary

The Compact Flash interface.

CN8 (F-5) : LAN2

Used for data communication between the Menu CPU (PC Board) and the Control CPU.
This is an SCU internal LAN.

CN9 (F-5) : LAN1

DATA LAN

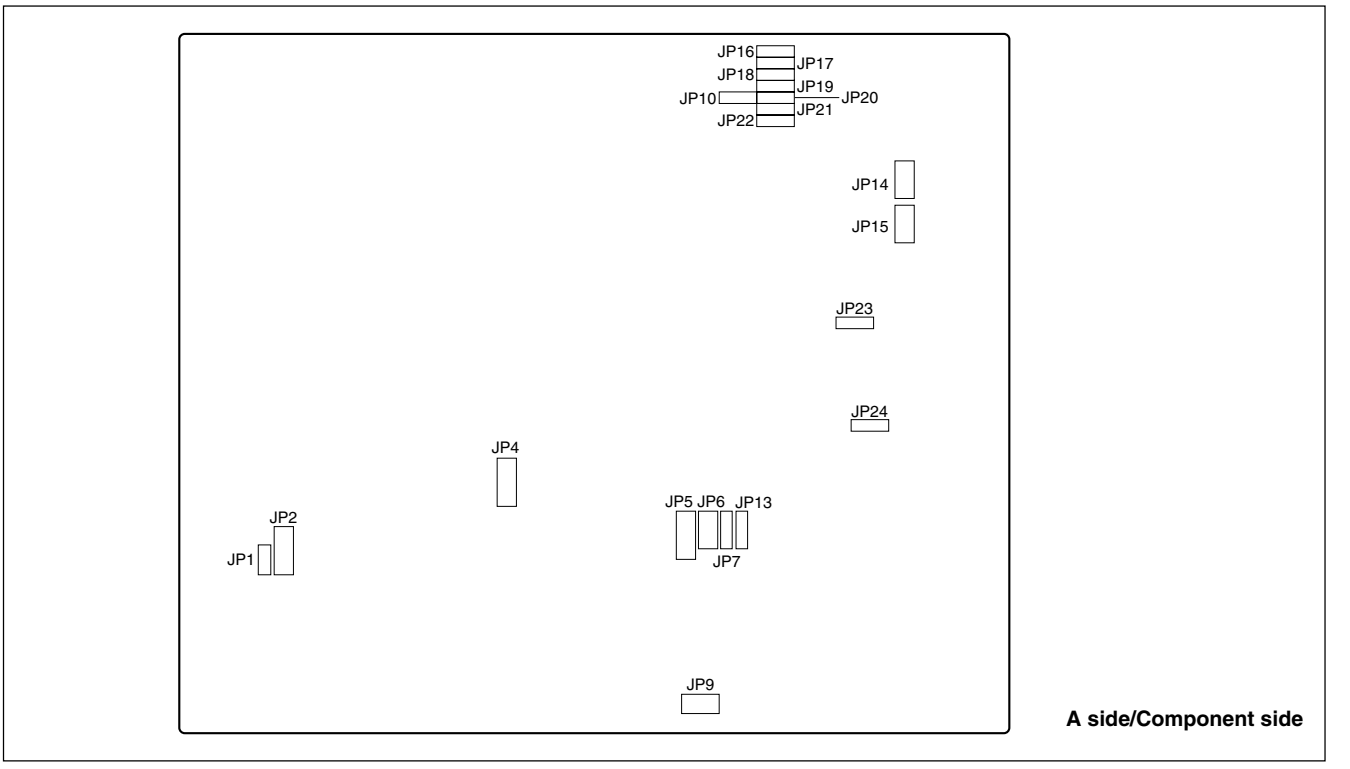
CN10 (G-5) : VGA

The analog RGB (VGA) output for extension display.

CN11 (H-5) : LCD

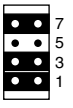
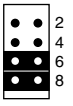
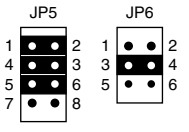
Controls the LCD panel on the Menu Panel.

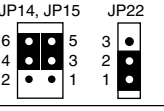
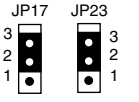
4. MAGIC-765 board (MKS-8010)



Note

Use the system with the default setup when shipped from the factory as stated below.

Jumper	Factory setting	Setup contents
JP1		LCD Power Setting
JP2		LCD Panel Type Selection
JP4		CPU Multiplier Setting
JP5, JP6		DiskOnChip Memory Address Setting
JP7		DIO & Port 80 Setting
JP9		Speaker Volume Control Setup
JP10		AT and ATX Power Selection

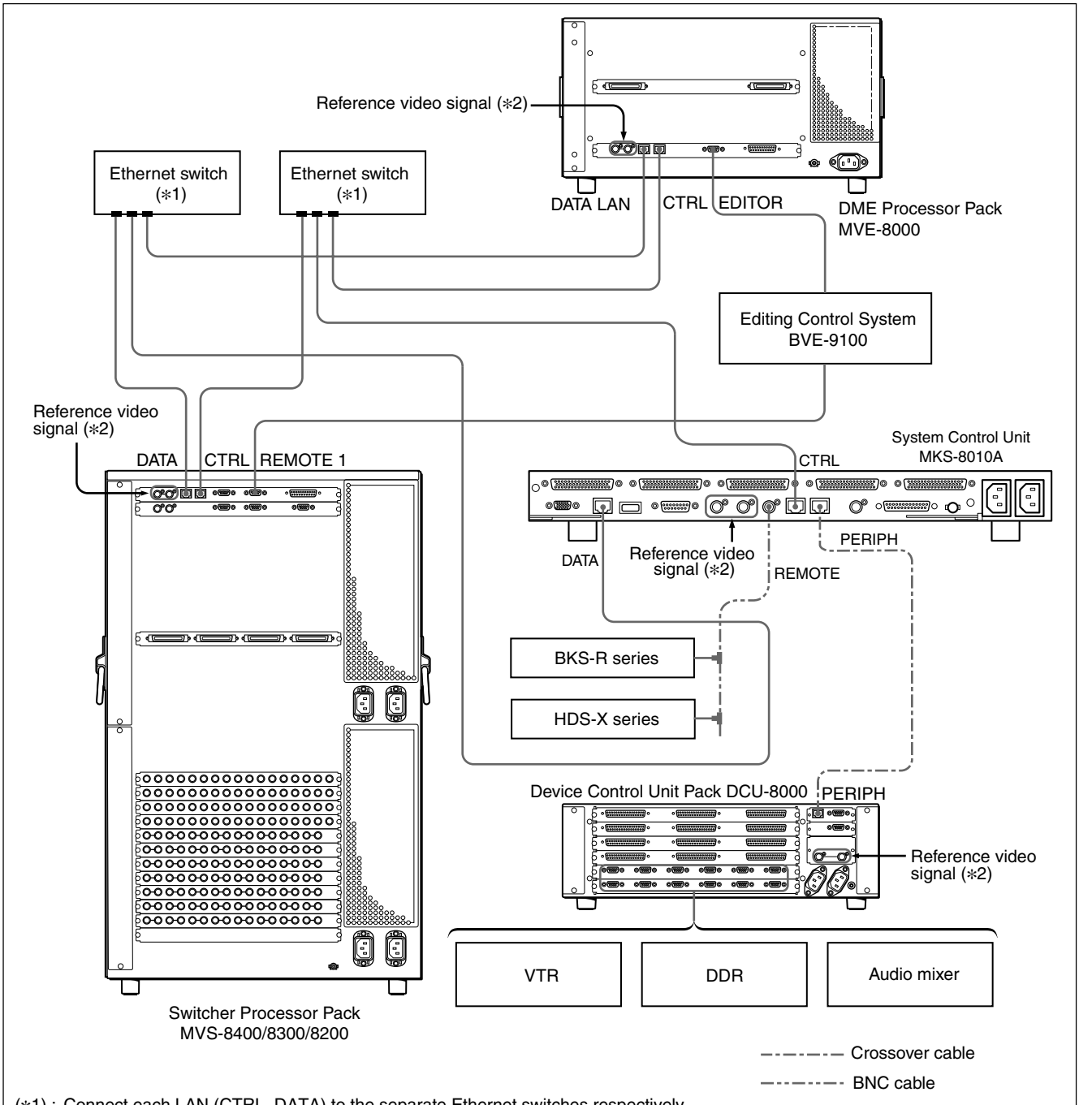
Jumper	Factory setting	Setup contents
JP13		Watch-Dog Timer Type Setting
JP14, JP15, JP22		COM3 Mode Selection
JP16, JP24		COM1 Port RI & Voltage Setup
JP17, JP23		COM4 Port R1 and Voltage Setup
JP18, JP20		COM3 Port RI & Voltage Setup
JP19, JP21		COM2 Port RI & Voltage Setup

1-11. System Connection

1-11-1. System Connection of the MVS-8000 Series

Configure the MVS-8000 series system connection referring to the connection example as shown below.
(This connection example uses MKS-8010A. The same terminals are used for MKS-8010.)

Connection example

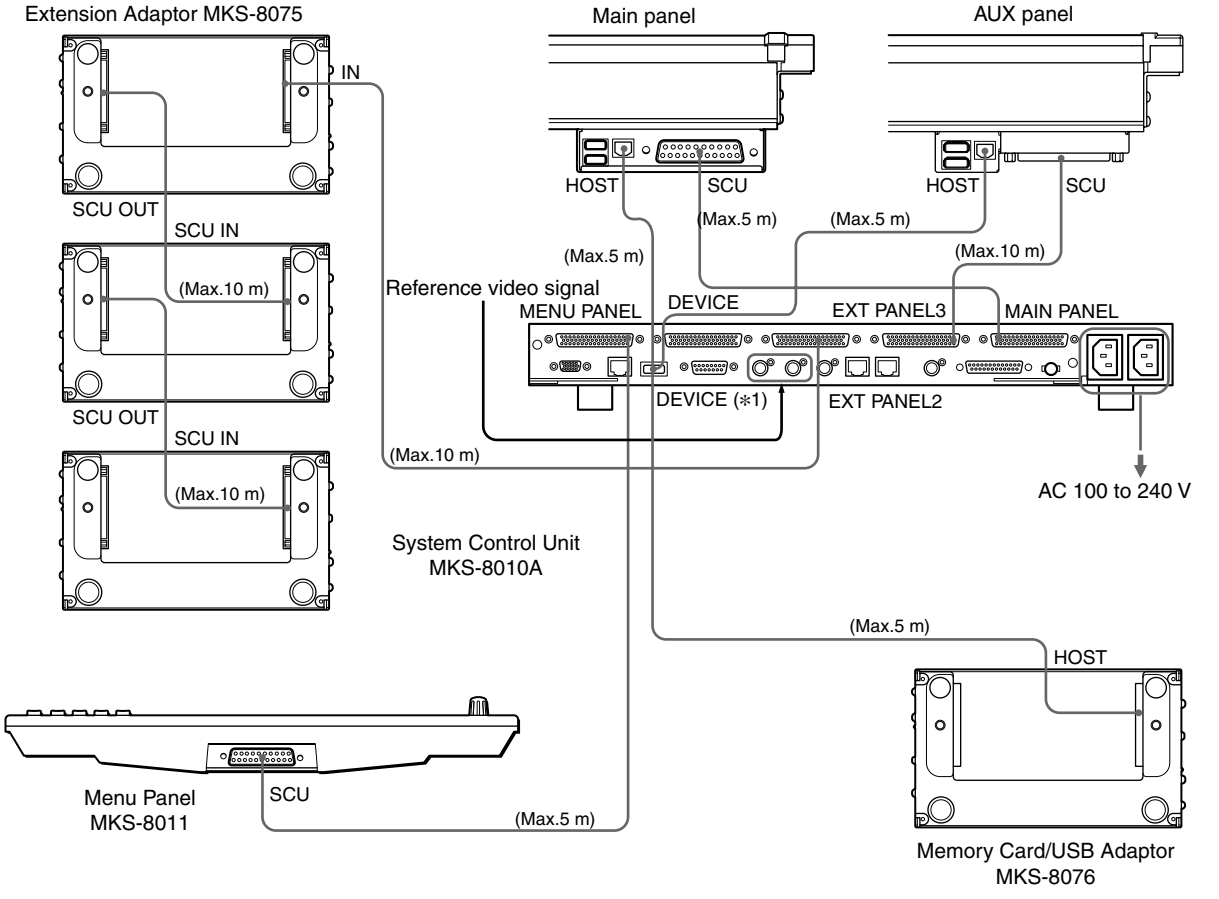


(∗1) : Connect each LAN (CTRL, DATA) to the separate Ethernet switches respectively.
However, a single Ethernet switch can be used for connecting each LAN.
For information about Ethernet switches that can be used in an MVS system, contact your local Sony Sales Office/Service Center.
For detailed information about setting up the Ethernet switch, refer to the documentation supplied with the switch.
(∗2) : Terminate the system with the 75Ω terminators supplied. The 75Ω terminators are supplied with the equipment.

1-11-2. Connecting the Center Control Panel

Connect the center control panel such as MKS-8010/8010A, MKS-8011 and others referring to the following connection example. (This connection example uses MKS-8010A. The same terminals are used for MKS-8010.)

Connection example



(∗1) : There are three methods as described below to install the memory card/USB module MKS-8025 and Memory Stick/USB module MKS-8025MS.

- In order to install the MKS-8025/8025MS into the main panel, connect the DEVICE terminal of the MKS-8010/8010A to the HOST terminal of the main panel.
- In order to install the MKS-8025/8025MS into the AUX panel, connect the DEVICE terminal of the MKS-8010/8010A to the HOST terminal of the AUX panel.
- In order to install the MKS-8025/8025MS outside the system using the MKS-8076, connect the DEVICE terminal of the MKS-8010/8010A to the HOST terminal of the MKS-8076.

Section 2
Installing the Options

CCP-8000

The CCP-8000 is shipped from the factory with the necessary modules (see below) already installed in the CCP-8000 in accordance with the system configuration for use.
The following options are available for the CCP-8000.

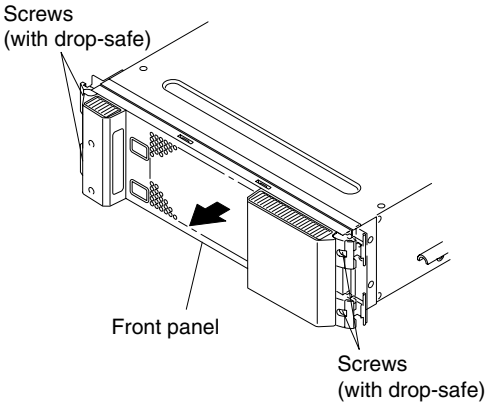
Model name	
MKS-8010	SYSTEM CONTROL UNIT
MKS-8010A	
MKS-8011	MENU PANEL
MKS-8013	32 AUX BUS MODULE
MKS-8013B	
MKS-8014	24 AUX BUS MODULE
MKS-8014B	
MKS-8015	16 AUX BUS MODULE
MKS-8015B	
MKS-8017	32 XPT MODULE
MKS-8017B	
MKS-8018	24 XPT MODULE
MKS-8018B	
MKS-8019	16 XPT MODULE
MKS-8019B	
MKS-8020	STANDARD TRANSITION MODULE
MKS-8021	SIMPLE TRANSITION RIGHT MODULE
MKS-8022	SIMPLE TRANSITION LEFT MODULE
MKS-8023	COMPACT KEY TRANSITION MODULE
MKS-8024	FLEXIPAD MODULE
MKS-8025	MEMORY CARD/USB MODULE
MKS-8025MS	MEMORY STICK/USB MODULE
MKS-8026	10 KEY PAD MODULE
MKS-8027	COMPACT TRANSITION RIGHT MODULE
MKS-8028	COMPACT TRANSITION LEFT MODULE
MKS-8030	KEY FRAME MODULE
MKS-8031JS	JOYSTICK MODULE
MKS-8031TB	TRACKBALL MODULE
MKS-8032	DSK FADER MODULE
MKS-8033	UTILITY/SHOTBOX MODULE
MKS-8034DK	DSK/FTB MODULE
MKS-8034FB	FTB MODULE
MKS-8035	KEY CONTROL MODULE
MKS-8040	BLANK PANEL (1/3)
MKS-8041	BLANK PANEL (1/2)
MKS-8075	EXTENSION ADAPTOR
MKS-8076	MEMORY CARD/USB ADAPTOR
HK-PSU02	BACKUP POWER SUPPLY UNIT (for MKS-8010A)
HK-PSU03	BACKUP POWER SUPPLY UNIT (for MKS-8010)

2-1. Opening and Closing the Front Panel

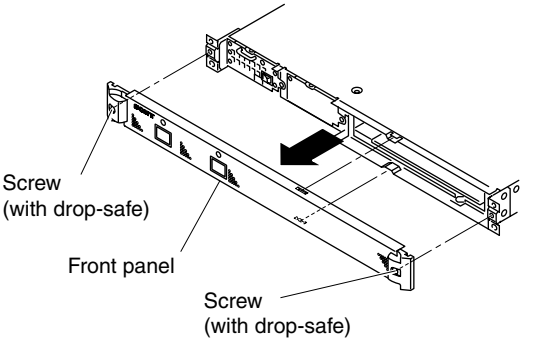
Opening/Closing

1. Turn off the main power of the MKS-8010/8010A and disconnect the AC power cord from the outlet.
2. Loosen the four screws (MKS-8010A : two screws) (with drop-safe) and remove the front panel in the direction of the arrow.

MKS-8010



MKS-8010A



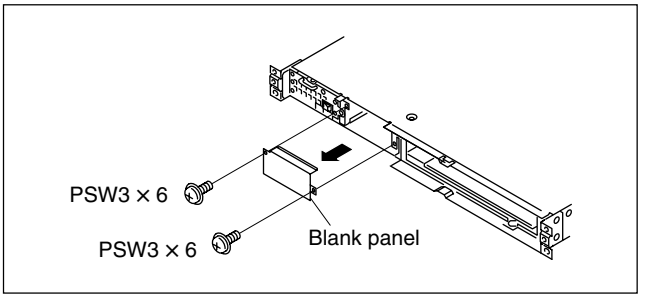
2-2. Installing the HK-PSU02

CAUTION

Before installing the backup power supply unit HK-PSU02 in MKS-8010A, set the POWER switch of HK-PSU02 to the "O" position (OFF).

Installation

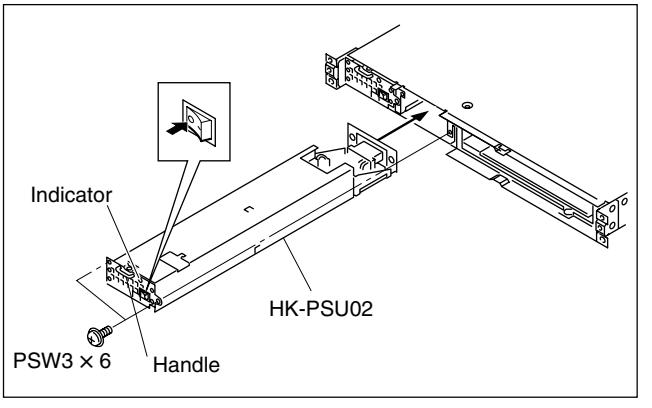
1. Turn off the main power of the MKS-8010A and disconnect the AC power cord from the outlet.
2. Remove the front panel. (Refer to Section 2-1.)
3. Remove the two screws that fix the blank panel to the HK-PSU02 installation location, and remove the blank panel.



Note

Store the removed blank panel in a safe place.

4. Insert the HK-PSU02 securely into the deep end.
5. Secure the HK-PSU02 with the two screws.



6. Reinstall the front panel.

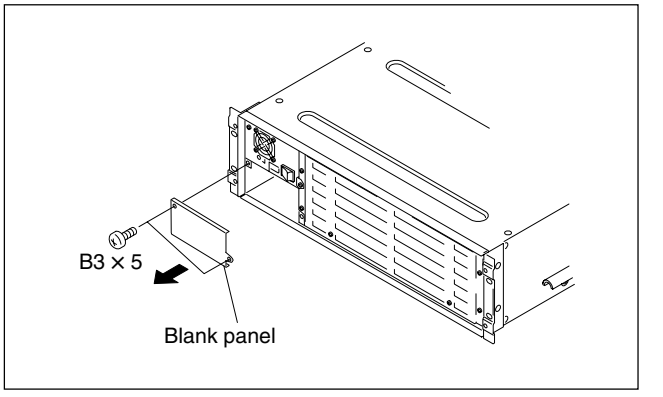
2-3. Installing the HK-PSU03

CAUTION

Before installing the backup power supply unit HK-PSU03 in MKS-8010, set the POWER switch of HK-PSU03 to the "O" position (OFF).

Installation

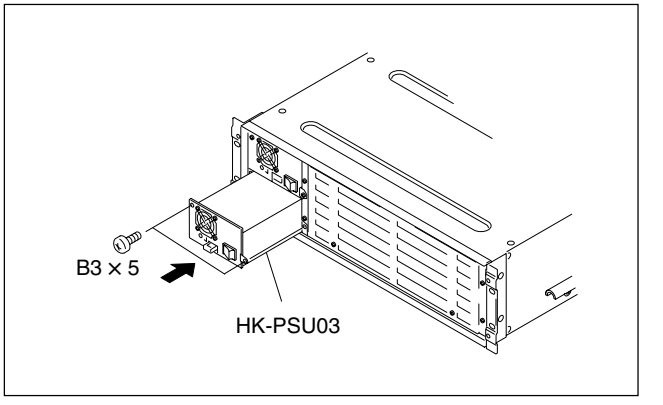
1. Turn off the main power of the MKS-8010 and disconnect the AC power cord from the outlet.
2. Remove the front panel. (Refer to Section 2-1.)
3. Remove the two screws that fix the blank panel to the HK-PSU03 installation location, and remove the blank panel.



Note

Store the removed blank panel in a safe place.

4. Insert the HK-PSU03 securely into the deep end.
5. Secure the HK-PSU03 with the two screws.



6. Reinstall the front panel.

2-4. Installing the Operation Modules

2-4-1. Installing Modules

CAUTION

Be sure to turn off the POWER switch before starting to install modules.

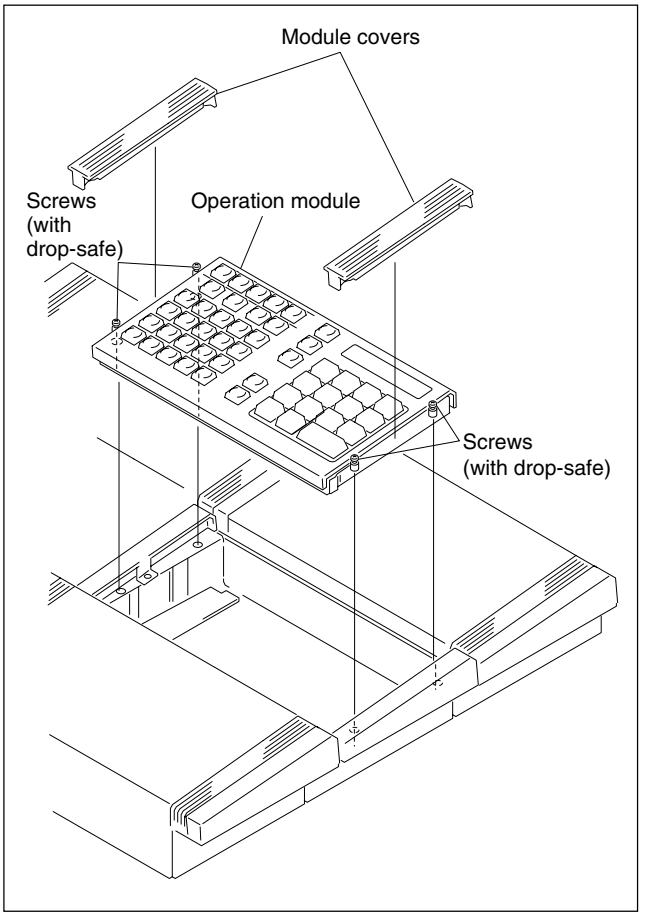
1. Installation to the main panel

Applicable modules

- MKS-8013 32 AUX Bus Module
- MKS-8013B 32 AUX Bus Module
- MKS-8014 24 AUX Bus Module
- MKS-8014B 24 AUX Bus Module
- MKS-8015 16 AUX Bus Module
- MKS-8015B 16 AUX Bus Module
- MKS-8017 32 XPT Module
- MKS-8017B 32 XPT Module
- MKS-8018 24 XPT Module
- MKS-8018B 24 XPT Module
- MKS-8019 16 XPT Module
- MKS-8019B 16 XPT Module
- MKS-8020 Standard Transition Module
- MKS-8021 Simple Transition Right Module
- MKS-8022 Simple Transition Left Module
- MKS-8023 Compact Key Transition Module
- MKS-8024 Flexipad Module
- MKS-8025 Memory Card/USB Module[*1] (Refer to page 2-4.)
- MKS-8025MS Memory Stick/USB Module[*1] (Refer to page 2-4.)
- MKS-8026 10 Key Pad Module
- MKS-8027 Compact Transition Right Module
- MKS-8028 Compact Transition Left Module
- MKS-8030 Key Frame Module
- MKS-8031JS Joystick Module
- MKS-8031TB Track Ball Module[*2] (Refer to page 2-4.)
- MKS-8032 DSK Fader Module
- MKS-8033 Utility/Shotbox Module
- MKS-8034DK DSK/FTB Module
- MKS-8034FB FTB Module
- MKS-8035 Key Control Module

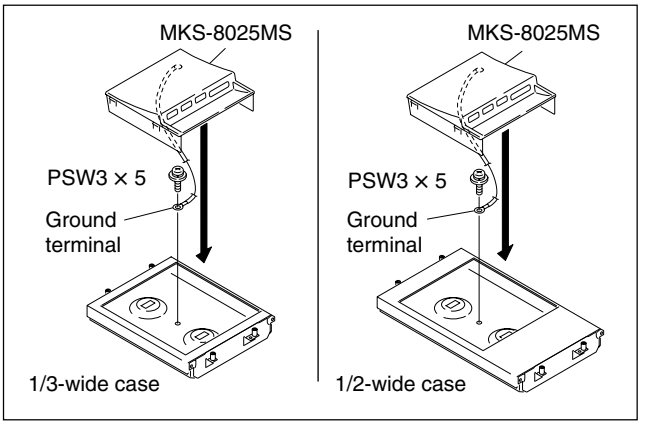
Installation

1. Remove the module covers on both sides of the operation module that you want to remove or of the blank panel.
2. Loosen the four screws (with drop-safe) fixing the operation module or the blank panel.
3. Hold the two screws on the sides of the operation module or the blank panel of both sides. Then remove the operation module or the blank panel.
   (When you want to install the MKS-8025/8025MS, go to ∗1 on next page.)
4. Install the desired operation module to the position where the operation module is removed in step 3. Tighten the four screws (with drop-safe) and fix it.
5. Install the module cover.
   (when you want to install the MKS-8031TB, go to ∗2 on next page.)



∗1 : When installing an MKS-8025/8025MS, and steps 1 to 3 described on the previous page have been completed, connect the connectors by following the procedure described below.

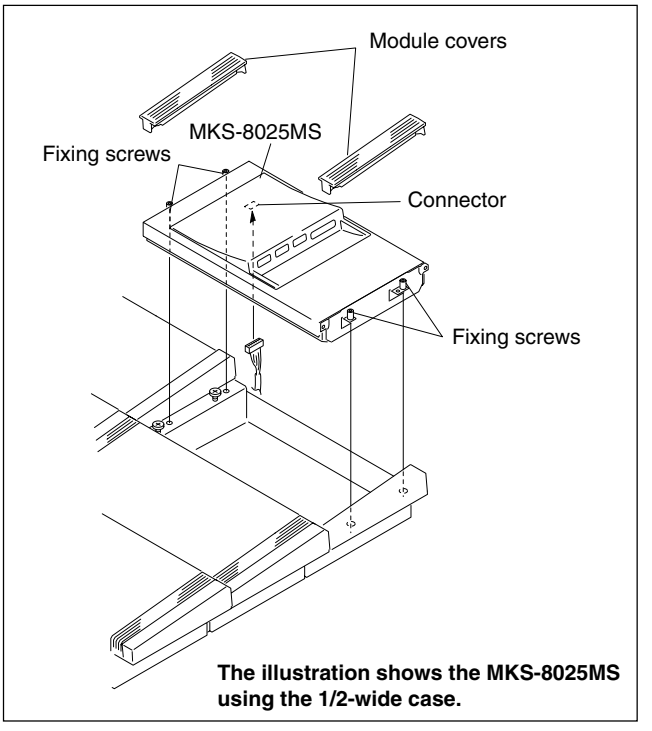
4. For MKS-8025MS, select a 1/2-wide case or 1/3-wide case according to the installing space in the CCP-8000. Secure the ground terminal by the screw (PSW3 × 5) supplied with MKS-8025MS, then install the MKS-8025MS into the selected case.



5. Connect the harness coming from the inside of the main panel to the connector of the MKS-8025/8025MS.
6. Install the MKS-8025/8025MS and fix the four screws on both sides.
7. Install the module covers.

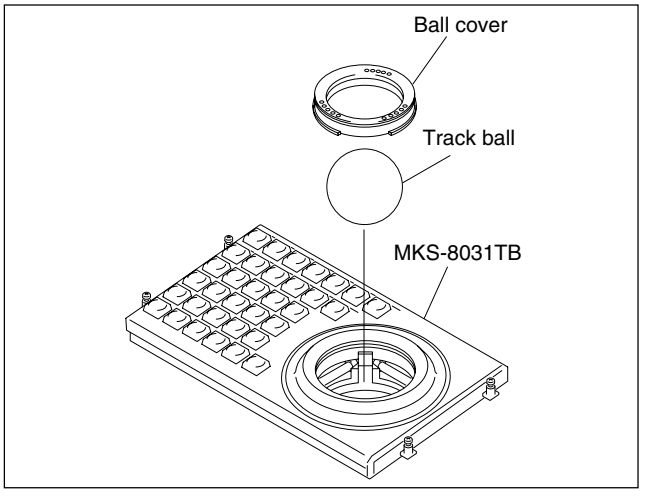
Note

The MKS-8025/8025MS can be installed in the right end of the top-most line of the panel.



∗2 : For the MKS-8031TB, the track ball installation work is required upon completion of the above steps 1 to 5. Install the track ball by following the procedure described below.

6. Rotate the ball cover counter-clockwise and release the lock.
7. Install the track ball and the ball cover.
8. Rotate the ball cover clockwise until it is locked.



2. Installation to the AUX Panel

Applicable Modules

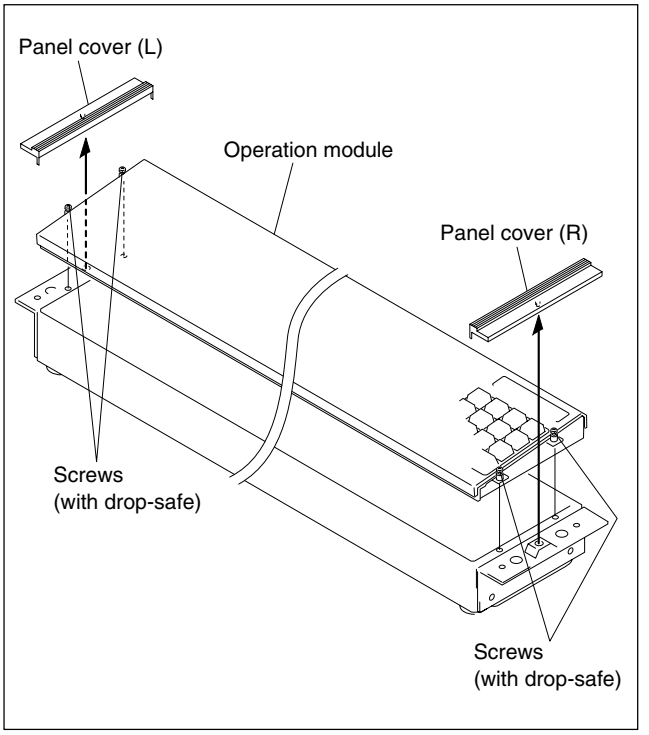
Refer to subsection “Applicable modules” of “1. Installation to the main panel”.

Installation

1. Remove the panel covers (L) and (R) from both sides of the operation module that you want to remove. (Pull the operation panel up by inserting fingers into the recessed handle on the sides.)
2. Loosen the four screws (with drop-safe) fixing the operation module.
3. Remove the operation module by holding the two screws on the sides of the operation module.
4. Fit the operation module that you want to install into the position as described in step 3. Fix the operation module by tightening the four screws (with drop-safe) on both sides.
5. Install the panel cover.

Note

When two or more operation modules have already been installed in the AUX panel, follow the procedure as described in subsection “Applicable modules” of “1. Installation to the main panel” to install the side that sits next to the adjoining operation module.



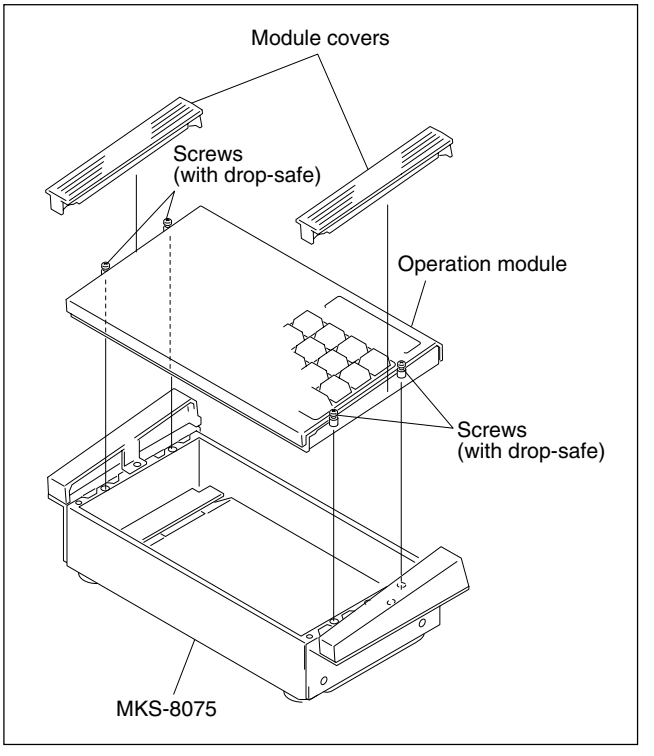
3. Installation to the MKS-8075 (Extension adaptor)

Applicable modules

- MKS-8026 10 Key Pad Module
- MKS-8030 Key Frame Module
- MKS-8031JS Joystick Module
- MKS-8031TB Track Ball Module*1 (Refer to page 2-6.)
- MKS-8032 DKS Fader Module
- MKS-8033 Utility/Shotbox Module
- MKS-8035 Key Control Module

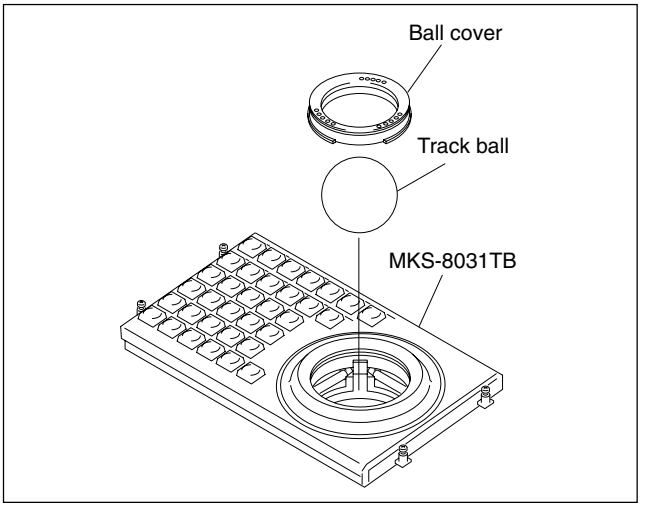
Installation

1. Remove the module cover on both sides of the operation module that you want to remove, as shown.
2. Loosen the four screws (with drop-safe) fixing the operation module.
3. Remove the operation module by holding the two screws on the sides of the operation module.
4. Fit the operation module that you want to install into the position as described in step 3. Fix the operation module by tightening the four screws (with drop-safe) on both sides.
5. Install the module cover. (When you want to install the MKS-8031TB, go to ∗1 on next page.)



∗1 : Installation of the MKS-8031TB requires installation of the track ball after the module is installed in steps 1 to 5.
Install the track ball by following the procedure below.

6. Rotate the ball cover counter-clockwise to release the lock.
7. Remove the ball cover and the track ball.
8. Rotate the ball cover clockwise until it is locked.



4. Installation of the MKS-8025 to the MKS-8076 (Memory Card/USB Adapter)

Applicable module

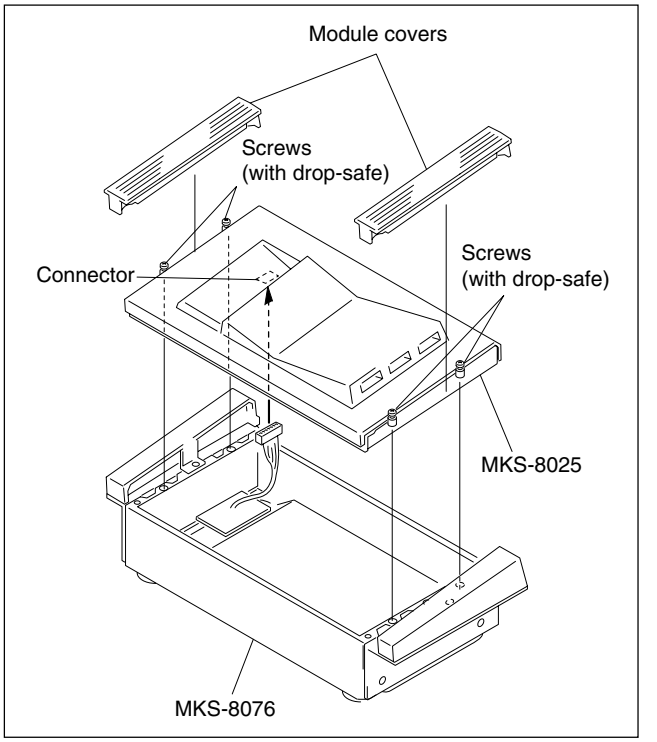
• MKS-8025 Memory Card/USB Module

Installation

1. Remove the module covers from the both sides of the MKS-8025.
2. Loosen the four screws (with drop-safe) fixing the MKS-8025.
3. Remove the MKS-8025 by holding the two screws on the sides of the MKS-8025.
4. Disconnect the harness from the MKS-8025 connector.
5. Connect the harness of the MKS-8076 to the connector of the MKS-8025 (new).
6. Install the MKS-8025 (new) and fix it by tightening the four screws (with drop-safe) on both sides.
7. Install the module cover.

Notes

• The number of the MKS-8025 that can be connected to the MKS-8010/8010A is only one unit.
• When you want to joint it, install MKS-8025 at the top end. (Refer to Fig. 1 (on page 2-8.))



5. Installation of the MKS-8025MS to the MKS-8076 (Memory Card/USB Adapter)

Applicable module

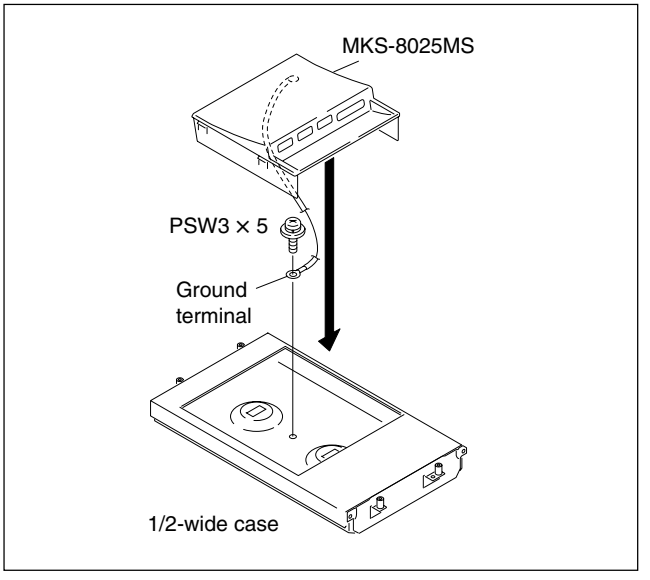
• MKS-8025MS Memory Stick/USB Module

Note

1/2-wide and 1/3-wide cases are supplied with MKS-8025MS. When you install the MKS-8025MS to the MKS-8076, only the 1/2-wide case can be used.

Installation

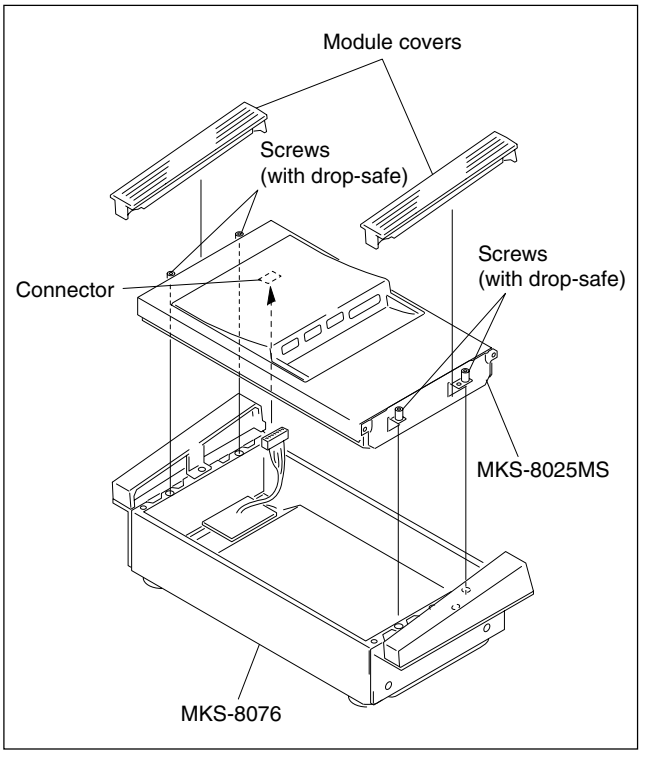
1. Remove the module covers from the both sides of the MKS-8025/8025MS.
2. Loosen the four screws (with drop-safe) fixing the MKS-8025/8025MS.
3. Remove the MKS-8025/8025MS by holding the two screws on the sides of the MKS-8025/8025MS.
4. Disconnect the harness from the MKS-8025/8025MS connector.
5. Secure the ground terminal to an MKS-8025MS (new) by the supplied screw (PSW3 x 5), then install the MKS-8025MS (new) into the 1/2-wide case.



6. Connect the harness of the MKS-8076 to the connector of the MKS-8025MS (new).
7. Install the MKS-8025MS (new) and fix it by tightening the four screws (with drop-safe) on both sides.
8. Install the module covers.

Notes

- The number of the MKS-8025MS that can be connected to the MKS-8010/8010A is only one unit.
- When you want to joint it, install MKS-8025MS at the top end. (Refer to Fig. 1 (on page 2-8.))



2-5. Connecting the MKS-8075/MKS-8076

Structure of MKS-8075 (Connecting the extension adaptor)

Adaptor case :	1
Screw (BV3 × 10) :	4
Connecting plate A :	1
Connecting plate B :	1
Connecting plate C :	2
Panel cover (L) :	1
Panel cover (R) :	1
Cable (D-sub 50-pin):	1

Structure of MKS-8076 (Memory card/USB adaptor)

Adaptor case :	1
Screw (BV3 × 10) :	4
Connecting plate A :	1
Connecting plate B :	1
Connecting plate C :	2
Panel cover (L) :	1
Panel cover (R) :	1

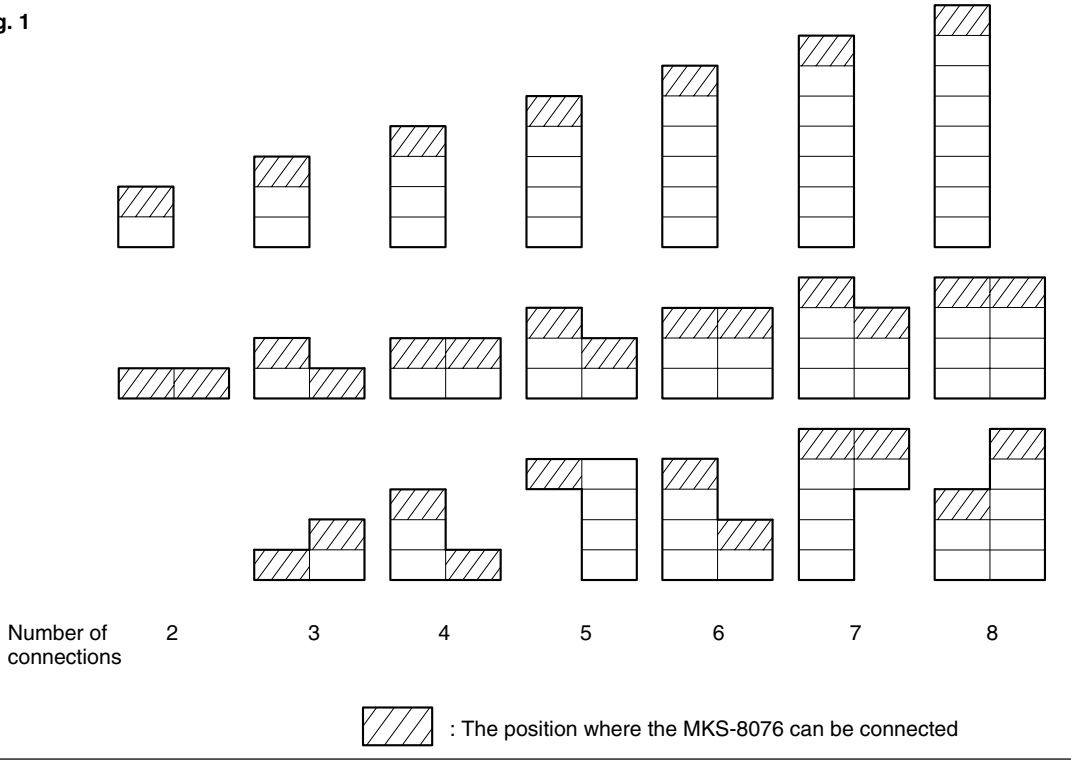
2-5-1. How to Connect the MKS-8075 and the MKS-8076

Notes

- A maximum of eight extension adaptors can be connected either horizontally, or vertically.
  (Up to two extension adaptors can be connected horizontally.)
  (For an example of connection, refer to Fig. 1.)
- There are three methods of vertical connection as described below. (Refer to Fig. 2. (page 2-11))
  Method A : Install the extension adaptors on the panel so that they have differences in height like a flight of steps and with the same outside appearance as that of the main panel.
  Method B : Install the extension adaptors flat on the panel with no difference in height.
  (In such a case as installed on tabletop)
  Method C : Install the extension adaptors in the rack.
  (Horizontal connection is also required.)

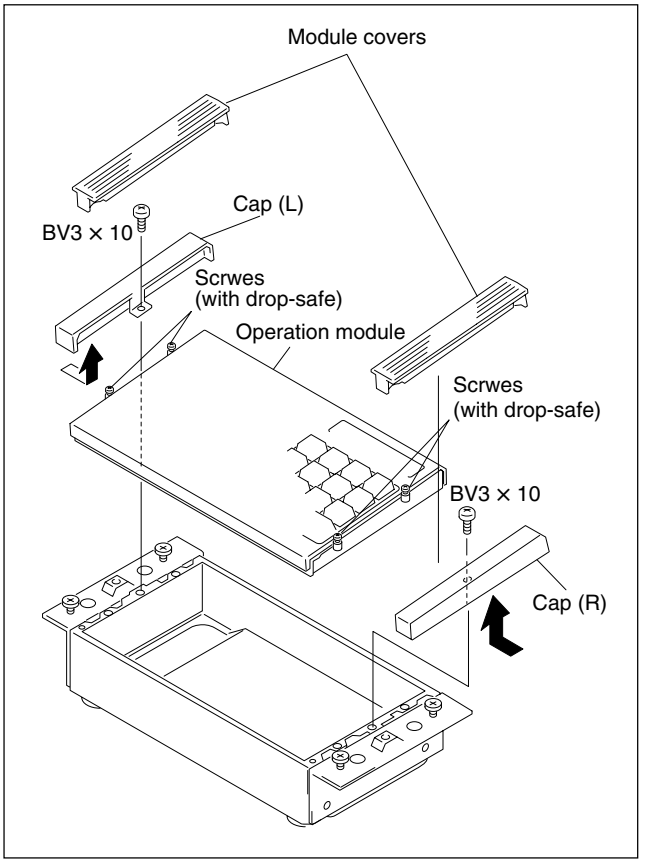
- When extension adaptors are installed using both horizontal and vertical connections, be sure to perform the vertical connections first then perform the horizontal connections.
- When an MKS-8076 is to be installed, install it in the top-most position. (Refer to Fig. 1.)
- When the vertical connection (A) is selected, be sure to secure all of the side panels with screws. Never panel it a table top. (The fixing method is same as that of the main panel.)

Fig. 1

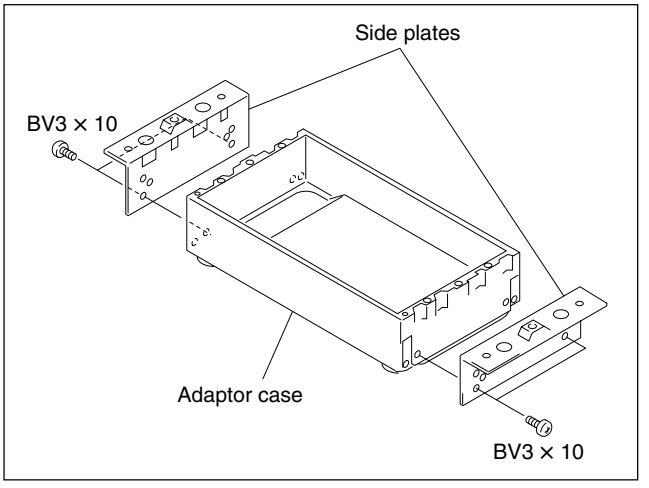


Connecting procedure

1. Remove the module cover. Remove the screws (BV3 × 10) fixing the caps (L) and (R), and remove the caps in the direction of the arrow.
2. Loosen the four screws (with drop-safe) fixing the operation module.
3. Hold the two screws (with drop-safe) in the front of the both sides of the operation module, and remove the operation module.



4. Remove the screws (BV3 × 10) fixing the side plates to the adaptor case, and remove the side plates.

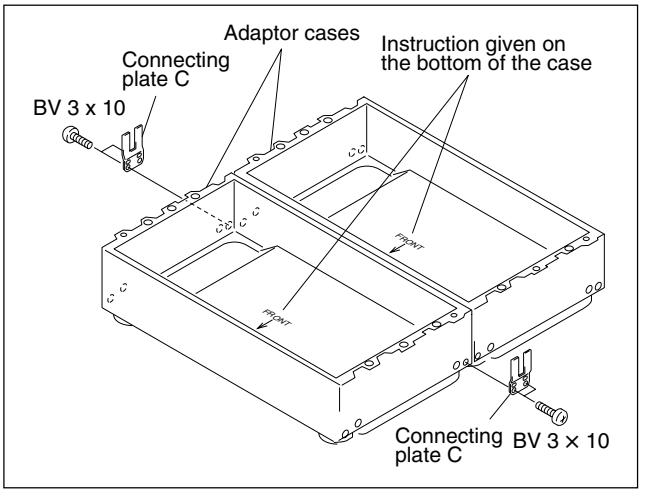


When the Vertical connection is selected

(1) Connect the adaptor cases together.
(Be careful of the direction of the adaptor cases. See the instruction given on the bottom of the adaptor case.)

(2) Fix the right sides and left sides of the adaptor cases as shown in the illustration using the two pieces of the connecting plate C.

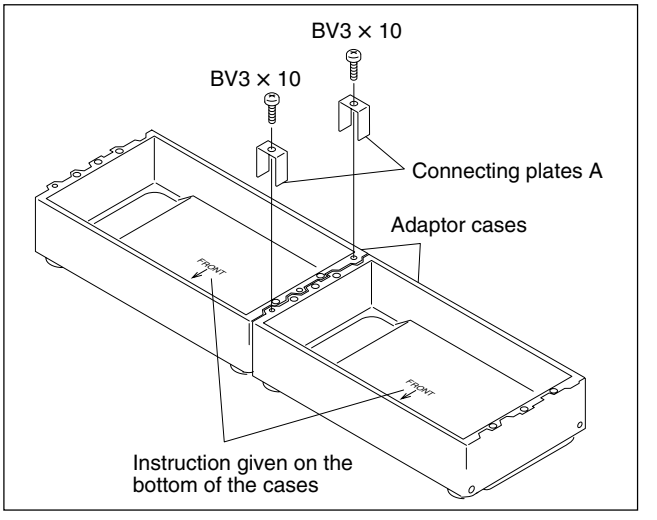
- When fixing the adaptor cases, you can select either the flat connection or the connection like a flight of steps.
- When selecting the connection like steps of the connection method (A), (see Fig. 2) the two screws are secured with one notch offset each other.
- When the flat connection method (B, C) is selected, (see Fig. 2) the two screws are secured in the same height.



When the Horizontal connection is selected

(1) Connect the adaptor cases together.
(Be careful of the direction of the adaptor cases. See the instruction given on the bottom of the adaptor case.)

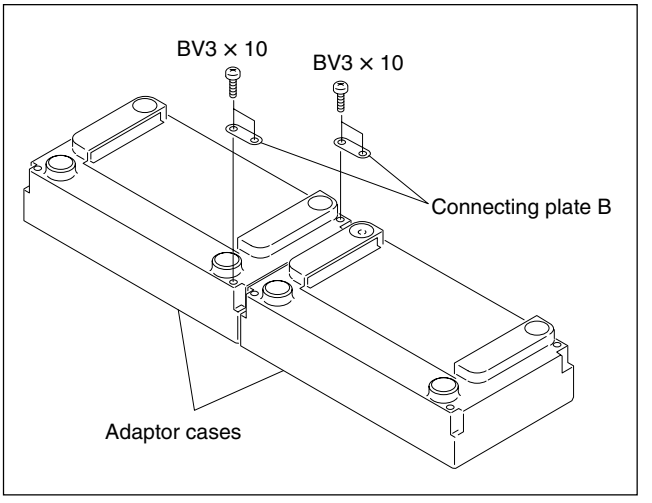
(2) Fix the top plate of the adaptor cases at the locations shown in the illustration using the two connecting screws and the two connecting plates A for every two adaptor cases.



(3) Fix the bottom plate of the adaptor cases at the locations shown in the illustration using the 4 connecting screws (BV3 × 10) and 2 of the connecting plates B for every 2 adaptor cases.

Note

When the Vertical connection (A) is selected, there are several locations where the connecting plate B cannot be fixed.



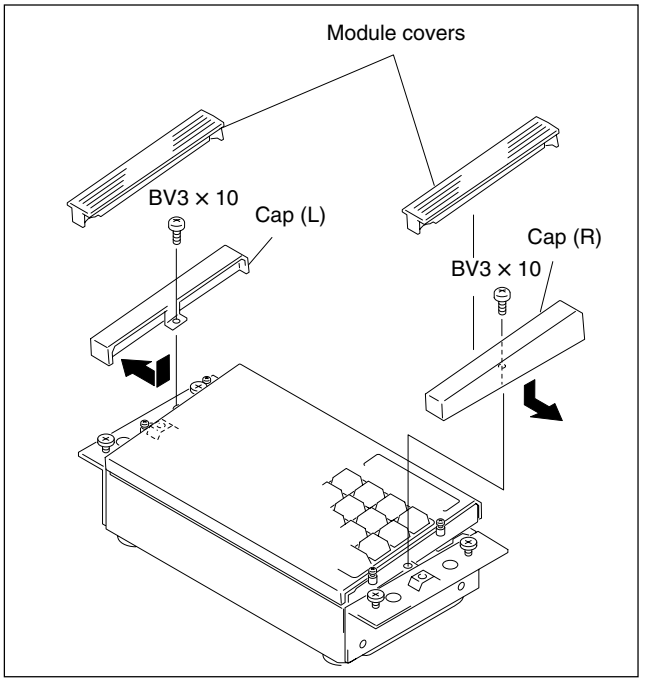
5. Install the side panel.

Note

The screw positions that fix the side panel are different in the connection methods (A), (B) and (C) respectively. (refer to Fig. 2 (on page 2-11).)

6. Install the operation module and fix it by tightening the four screws on the sides.

7. For connection methods (A) and (B) (refer to Fig. 2 (on page 2-11).), install the caps (L) and (R), and the module cover in the direction of the arrow.



For connection method (C) (refer to Fig. 2 (on page 2-11).), remove the four stepped screws and install the panel covers (L) and (R).

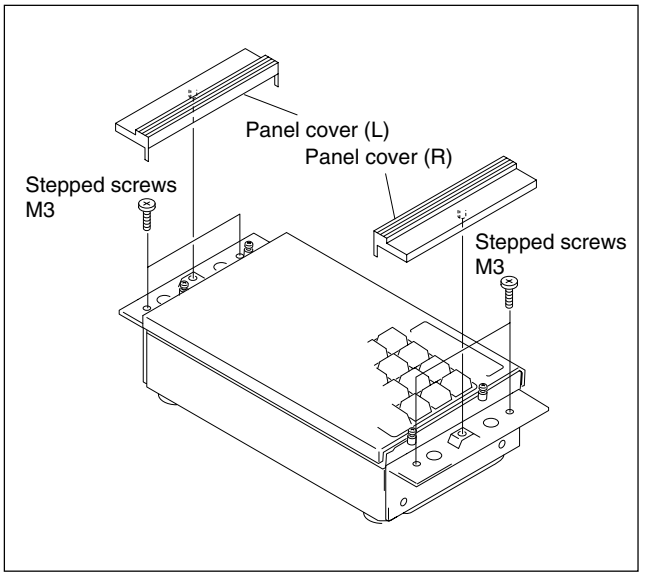
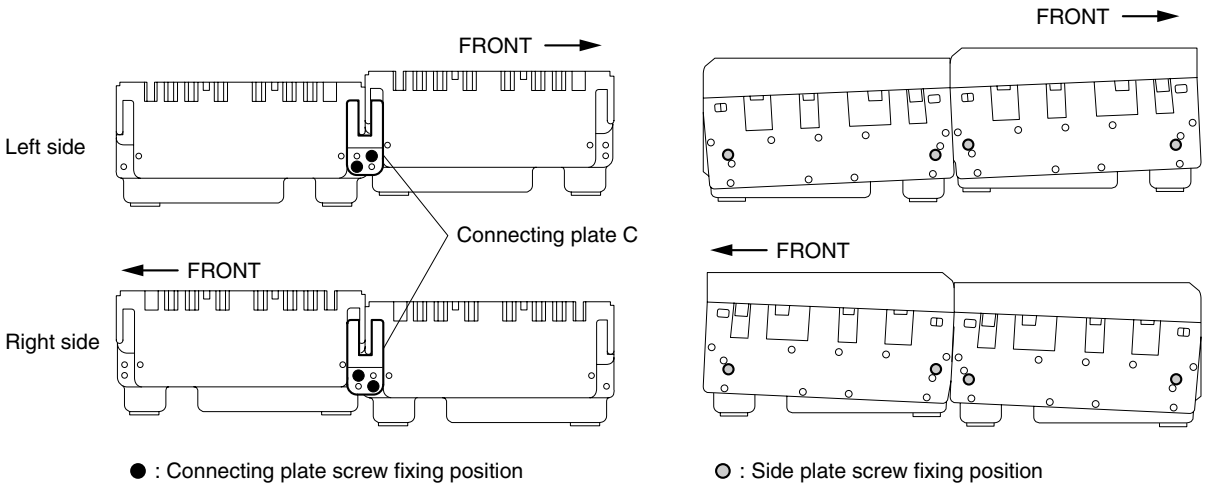
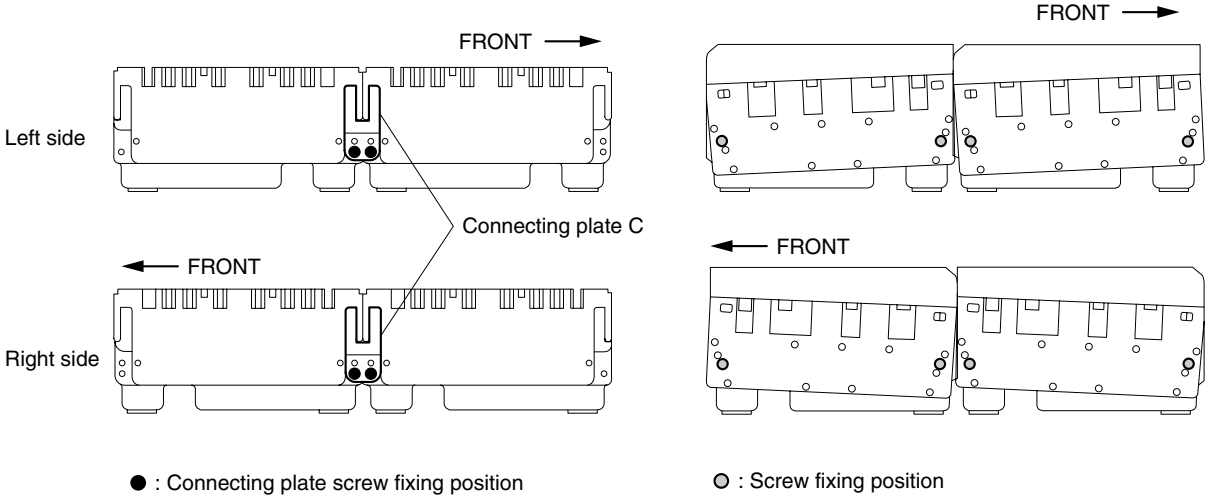


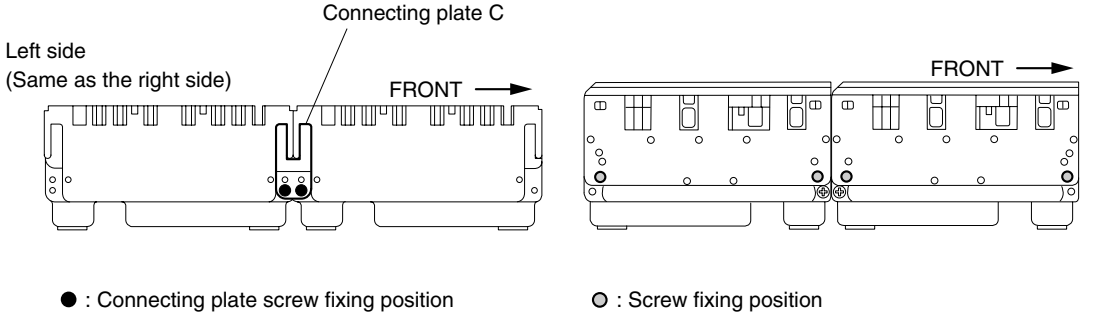
Fig. 2 : Side panel installation methods



Connection method (A)



Connection method (B)



Connection method (C)

2-5-2. How to Connect the Cables

Parts required

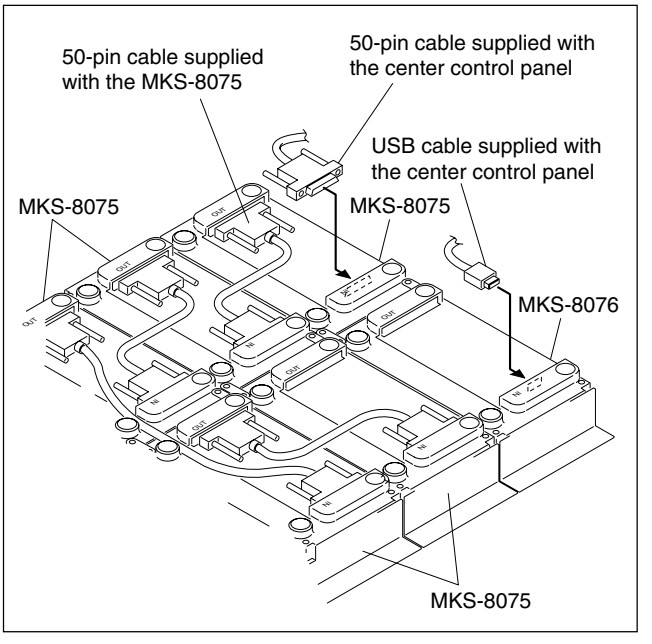
- 50-pin cable supplied with the center control panel
- 50-pin cable supplied with the MKS-8075
- USB cable (5 m) supplied with the center control panel

Connecting cables for the MKS-8075

1. Connect the EXT PANEL connectors 1 to 3 of the system control unit MKS-8010/8010A to the SCU IN connectors of the MKS-8075 using the 50-pin cable supplied with the center control panel.
2. Connect the SCU OUT connector of the MKS-8075 to the SCU IN connecor of the adjacent MKS-8075 using the cable supplied with the MKS-8075, as shown in the illustration.

Connecting cables for the MKS-8076

Connect the DEVICE connector of the system control unit MKS-8010/8010A to the HOST of the MKS-8076 using the USB cable supplied with the center control panel.



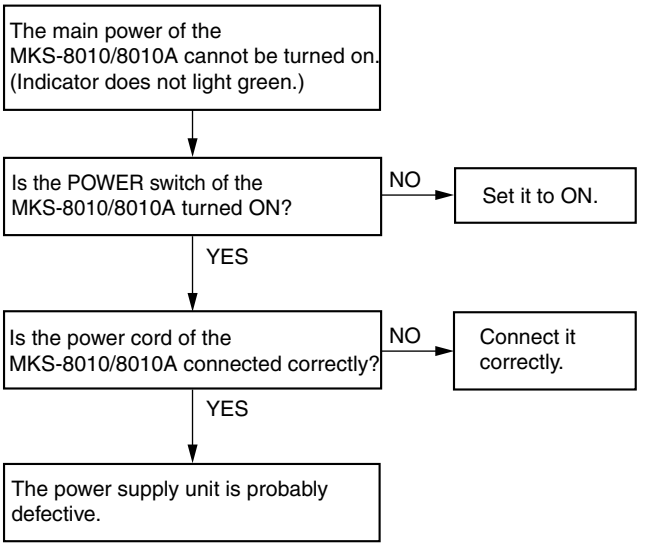
Section 3
Service Overview

3-1. Troubleshooting

3-1-1. MKS-8010/8010A

The main power cannot be turned on. (Indicator does not light green.)

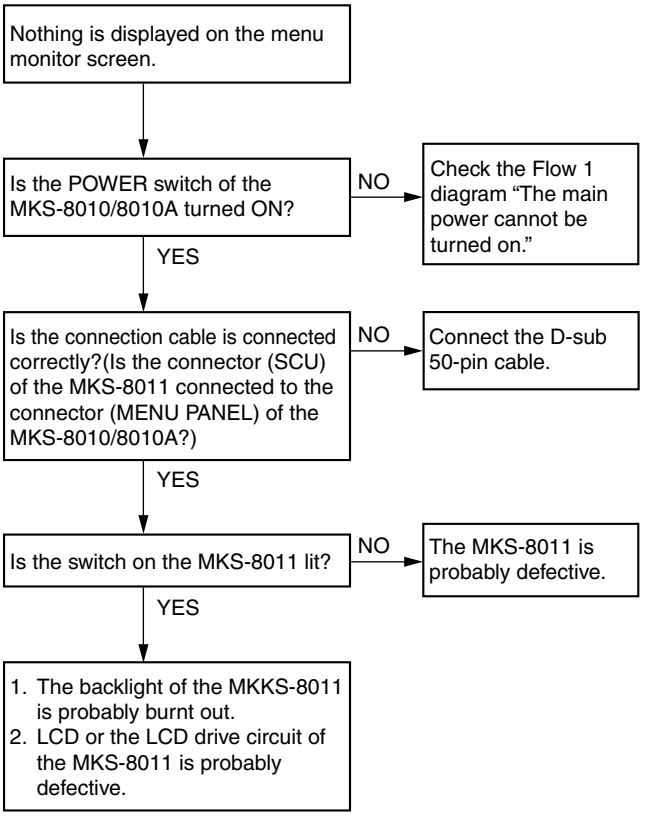
Flow 1



3-1-2. MKS-8011

Nothing is displayed on the menu monitor screen.

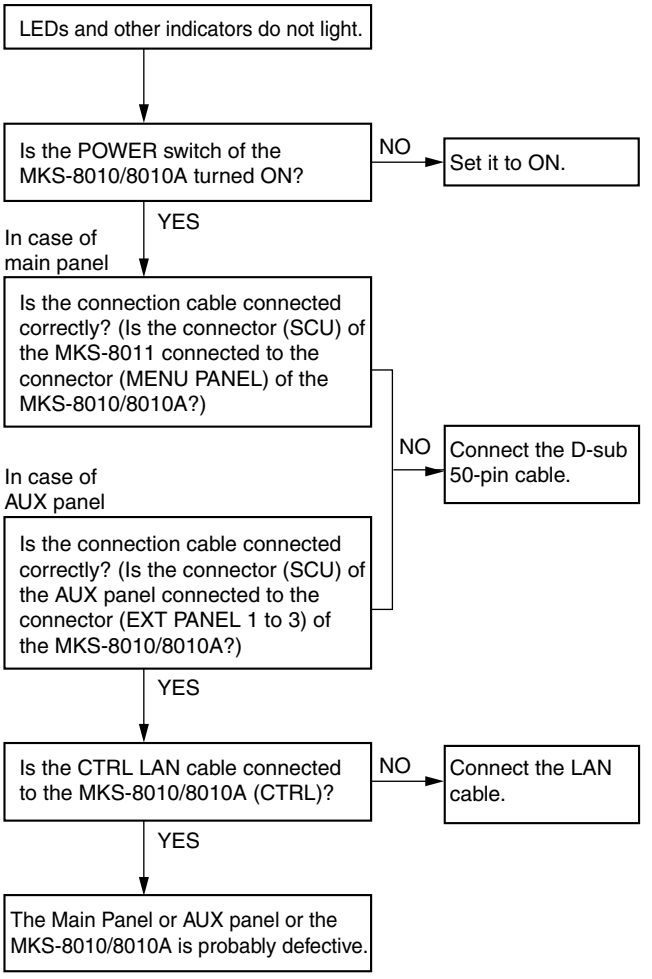
Flow 2



3-1-3. Main Panel/AUX Panel

LEDs and other indicators do not light.

Flow 3



3-2. Periodic Inspection and Maintenance

3-2-1. Periodic Inspection

The following parts require periodic maintenance.
Refer to the period indicated in the following list for maintenance.

Part	Location	Maintenance	Suggested period
Fan	Side on the rear of the MKS-8010/8010A	Cleaning	Once in a month
Track ball	MKS-8031TB	Cleaning	Once in a month
Filter	Front panel on the MKS-8010/8010A	Cleaning	Once in two months
Backup capacitor	The menu CPU assembly in the MKS-8010	Replacement	Once in five years
	The MPU-302B board (BT1301) in the MKS-8010A	Replacement	Once in five years

3-2-2. Cleaning

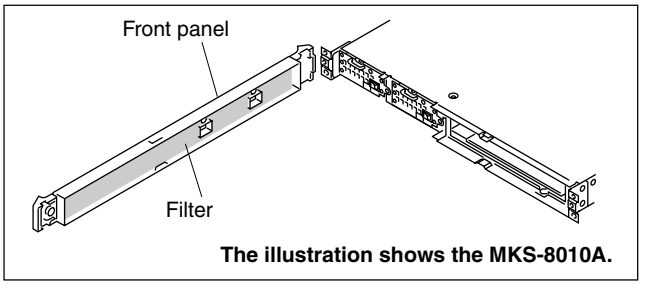
Front panel

The filter on the rear of the front panel of the MKS-8010/8010A can easily accumulate dust. Be sure to remove dust by cleaning it about once in two months.

1. Remove the front panel. (Refer to Section 2-1.)
2. Remove the dust accumulated on the filter with a vacuum cleaner.

Note

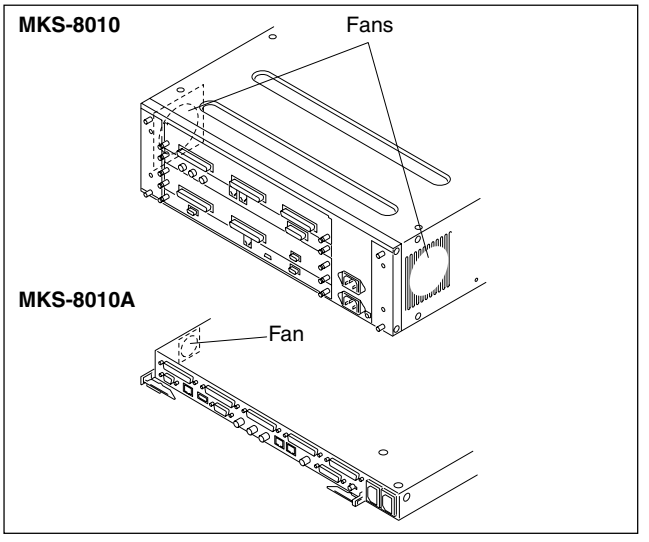
Cleaning the filter by washing in water is recommended when there is a heavy accumulation of dust.
Be sure to dry the filter completely after it has been washed.



The illustration shows the MKS-8010A.

Fan

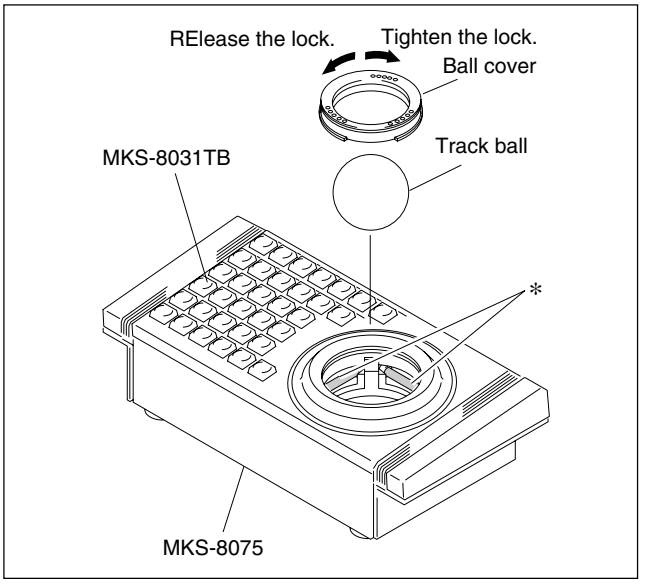
The inside of the MKS-8010/8010A is cooled by a fan (side on the rear).
If dust has accumulated in the intake of the fan, air is prevented from flowing smoothly and this may result in a temperature rise inside the machine. This may have an adverse effect on performance and life of the machine.
Cleaning of the fan every month is recommended.
Contact your local Sony Sales Office/Service Center for information cleaning the fan.



Track ball (MKS-8031TB)

If the track ball becomes dirty, it may result in adverse effects, typically the image does not move even though the track ball is manipulated.
Cleaning the track ball every month is recommended.

1. Rotate the ball cover counter-clockwise and release the lock. Then remove the ball cover.
2. Remove the track ball.
3. Clean the track ball and the portion shown by the asterisk (*) in the illustration with a soft cloth.
4. Install the track ball and the ball over.
5. Rotate the ball cover clockwise until it is locked.



3-3. About the Data Backup Capacitor

A large capacitor is installed on the CA-45/CA-57 board in order to backup the memory storing the setup data and the real time clock in the MKS-8010/8010A machine.
Leave the main power of the MKS-8010/8010A turned on for an hour or longer in order to charge this capacitor. The data is backed up for about one week when the capacitor is fully charged under normal operating temperature.

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