SONY

CENTER CONTROL PANEL PACK

CCP-9000-C

MKS-9011

MKS-9012

MKS-8011

MKS-8031TB

MKS-8032

MKS-8033

MKS-8035

MKS-8041

MKS-8075

SWC-5002

SWC-5005

SWC-5010

INSTALLATION MANUAL

1st Edition (Revised 1)

⚠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-8011	Serial No. 10001 and Higher
MKS-8031TB	Serial No. 10001 and Higher
MKS-8032	Serial No. 10001 and Higher
MKS-8033	Serial No. 10001 and Higher
MKS-8035	Serial No. 10001 and Higher
MKS-8041	Serial No. 10001 and Higher
MKS-8075	Serial No. 10001 and Higher
MKS-9011	Serial No. 10001 and Higher
MKS-9012	Serial No. 10001 and Higher
SWC-5002	Serial No. 10001 and Higher
SWC-5005	Serial No. 10001 and Higher
SWC-5010	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.**

WARNING
This unit has no power switch.
When installing the unit, incorporate a readily accessible disconnect device in the fixed wiring, or connect the power cord to a socket-outlet which must be provided near the unit and easily accessible, so that the user can turn off the power in case a fault should occur.

WARNUNG
Dieses Gerät hat keinen Netzschalter.
Beim Einbau des Geräts ist daher im Festkabel ein leicht zugänglicher Unterbrecher einzufügen, oder das Netzkabel mu*ß* mit einer in der Nähe des Geräts befindlichen, leicht zugänglichen Wandsteckdose verbunden werden, damit sich bei einer Funktionsstörung die Stromversorgung zum Gerät jederzeit unterbrechen lä*ß*t.

When using a LAN cable:
For safety,do not connect to the connector for peripheral device wiring that might have excessive voltage.

Table of Contents

Manual Structure

1. Installation

2. Service Overview

Manual Structure

Purpose of this manual

This manual is the installation manual of Center Control Panel Pack CCP-9000-C 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-9000-C.

Related manuals

The following manuals are prepared for CCP-9000-C and the optional boards and units.

- **Operation Manual (Supplied with CCP-9000-C)**
  This manual describes the overview, system connection example and specifications of options of CCP-9000-C.

- **User's Guide (Volume 1, Volume 2) (Supplied with CCP-9000-C)**
  This manual describes the application and operation of CCP-9000-C.

- **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.

- **"Semiconductor Pin Assignments" CD-ROM (Available on request)**
  This "Semiconductor Pin Assignments" CD-ROM allows you to search for semiconductors used in B&P Company equipment.
  Semiconductors that cannot be searched for on this CD-ROM are listed in the maintenance manual for the corresponding unit. The maintenance manual contains a complete list of all semiconductors and their ID Nos., and thus should be used together with the CD-ROM.
  Part number: 9-968-546-XX

Contents

This manual is organized by following section.

Section 1 Installation

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

Section 2 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-9011 :	Approx. 11.5 kg
MKS-9012 :	Approx. 12.5 kg
MKS-8011 :	Approx. 2.5 kg
MKS-8031TB :	Approx. 0.7 kg
MKS-8032 :	Approx. 0.8 kg
MKS-8033 :	Approx. 0.7 kg
MKS-8035 :	Approx. 0.6 kg
MKS-8041 :	Approx. 0.4 kg
MKS-8075 :	Approx. 0.9 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-9011/9012 is cooled by a fan.
The power supply can be damaged if the exhaust vent (on the rear) and air intake (on the front) are blocked or the fan is stopped.
Therefore, leave a blank space of more than 10 cm in the front and back of the MKS-9011/9012.

1-2. Power Supply

1. Power specifications

A switching regulator is used for the power supply of MKS-9011/9012. 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-9011:	1.0 to 0.5 A
MKS-9012:	1.1 to 0.5 A

Note

As the inrush current at turn-on is a maximum 20 A (at 100 V)/60 A (at 230 V), 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.

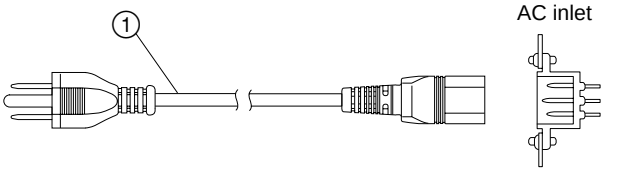
2. Recommended power cord

WARNING

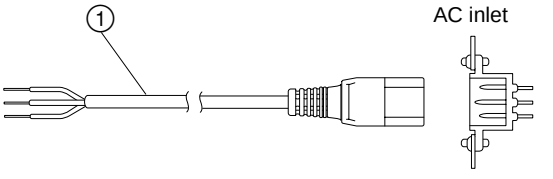
- The power cord is not supplied with the MKS-9011/9012.
  Be sure to use the power cord that is applicable to places in the area.
  To avoid a fire or an electric shock, be sure to use the designated power cord.
- Do not damage the power cord otherwise a fire or electric shock may result.

Designated power cord

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



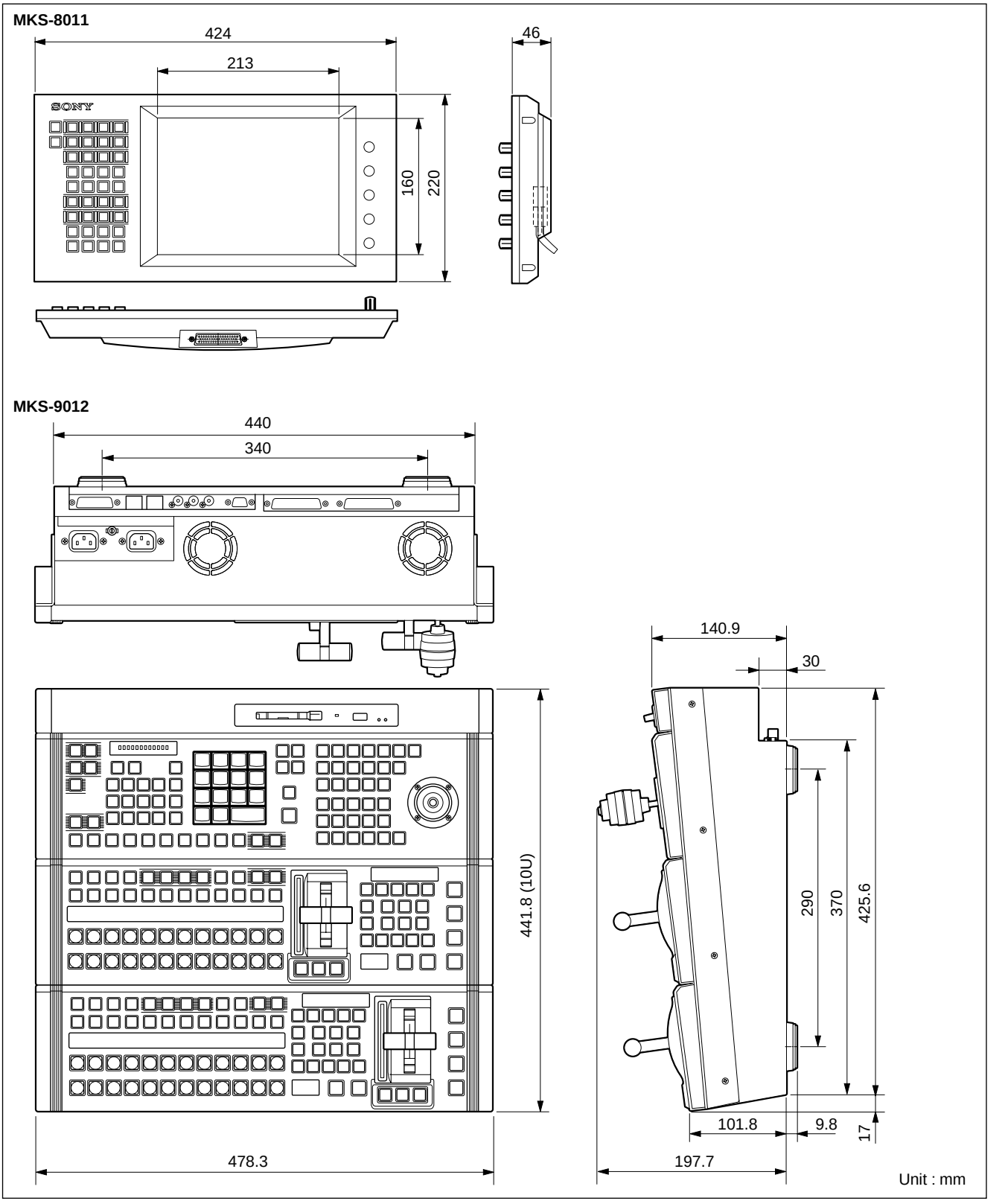
For customers in the all European countries
① Power cord, 250 V 10 A (2.4 m) : ⚠1-782-929-21



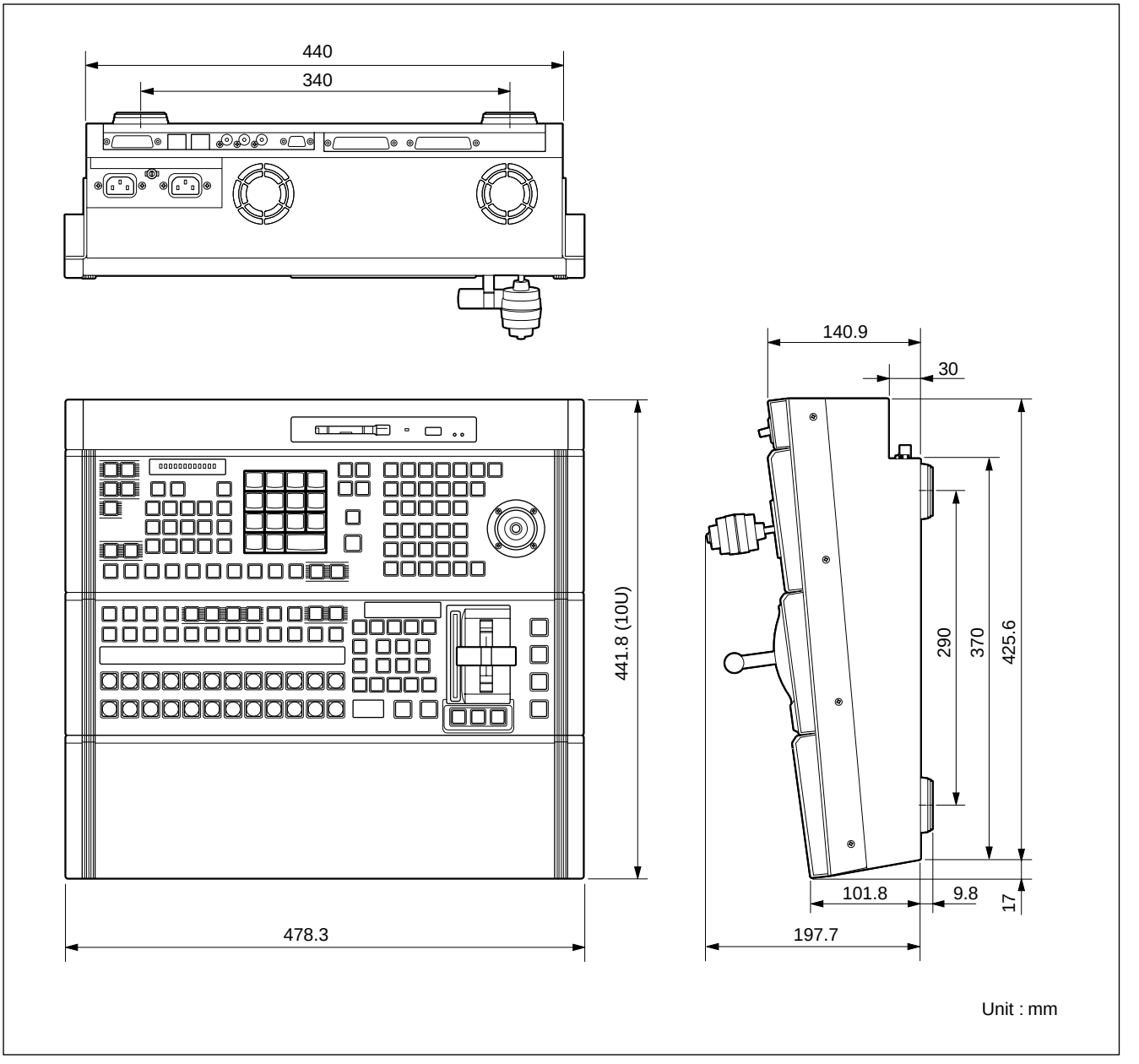
1-3. Installation Space

1-3-1. External Dimensions

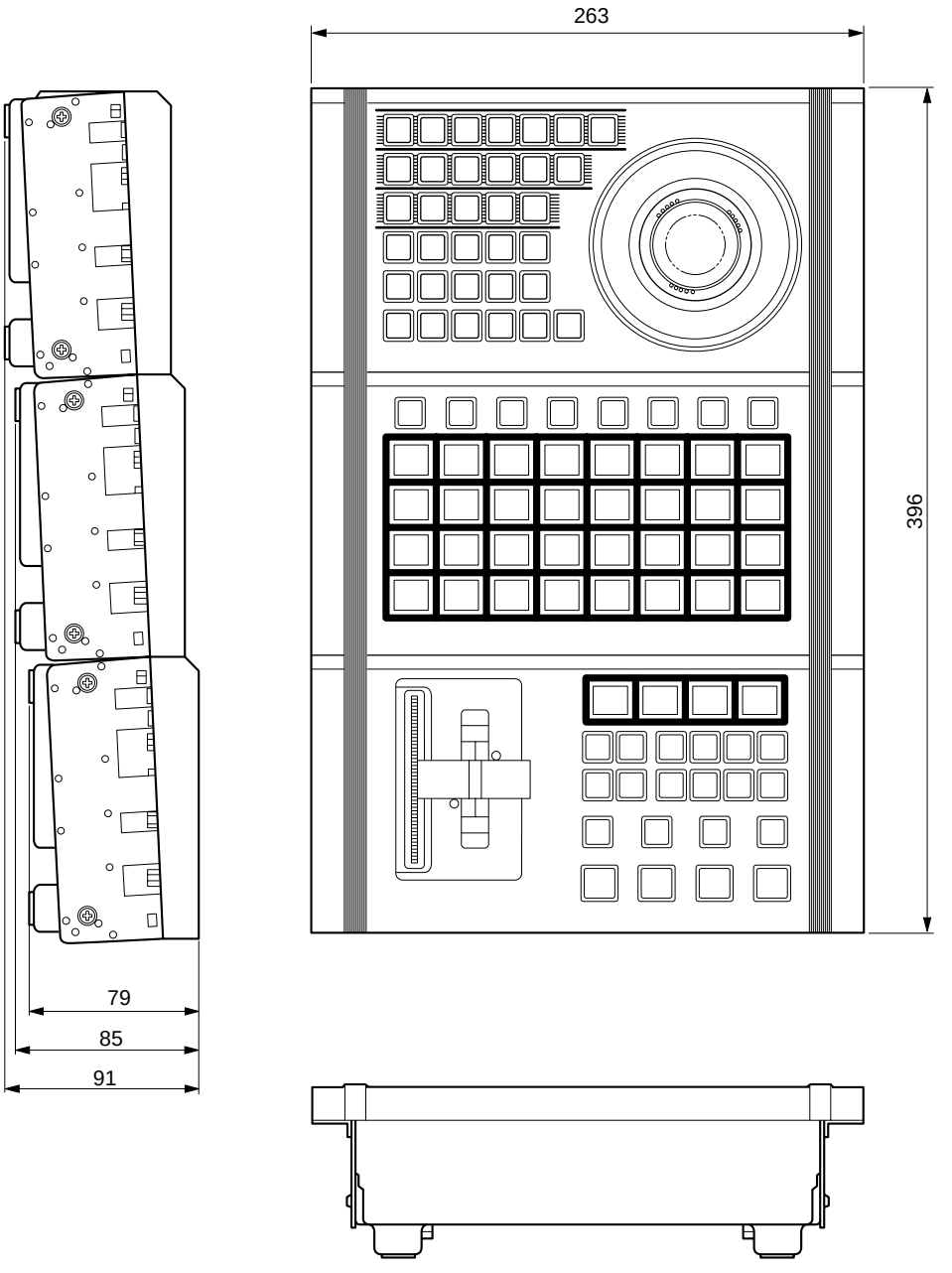
Center controll panel MKS-9012/Menu panel MKS-8011



Center controll panel MKS-9011

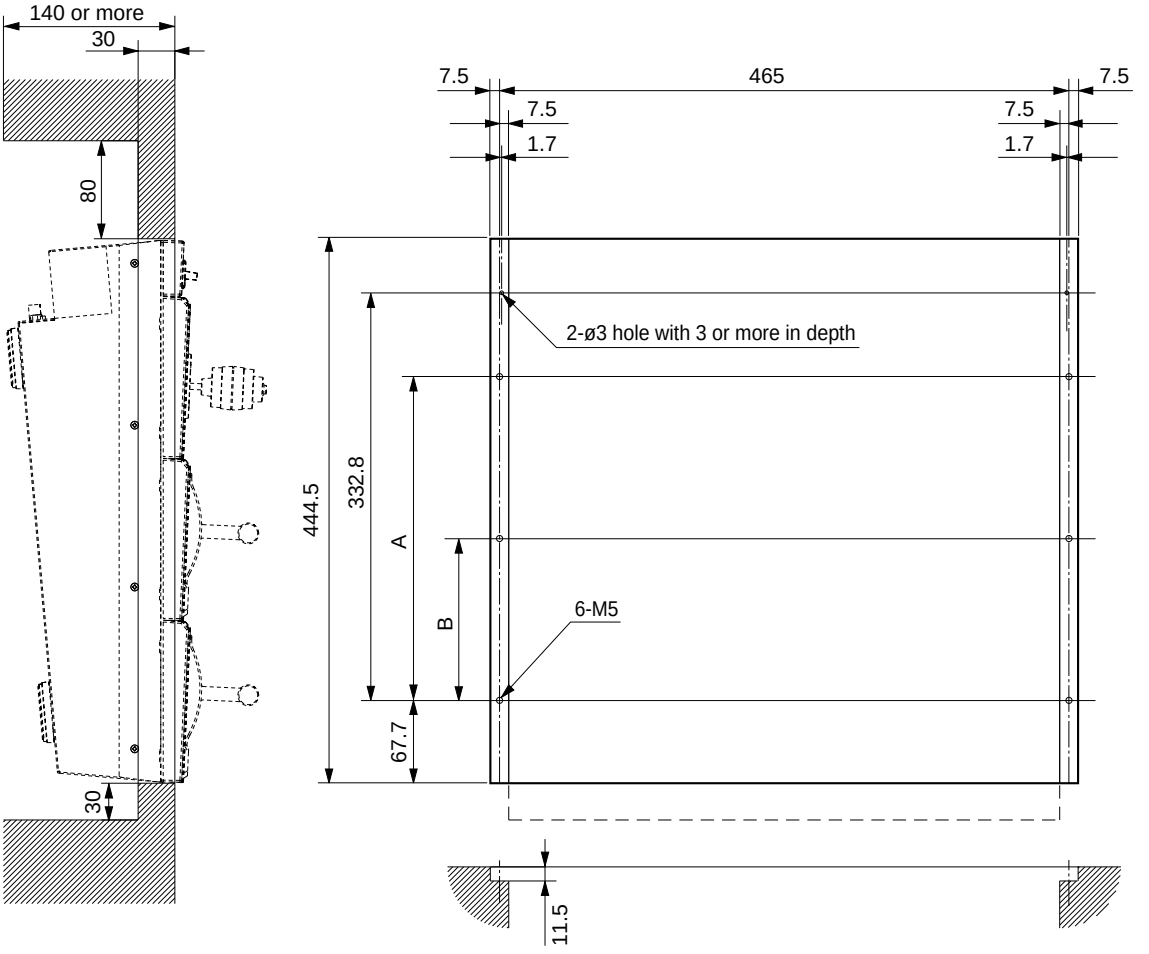


Extension adaptor MKS-8075



1-3-2. Installation Space

When the controll panel is recessed into a control console or similar, make holes as shown below into the control console with the following dimensions.



Model name	Serial No.	A	B
MKS-9011	10001 - 10012	264.3	132.1
	10013 -	266.7	133.4
MKS-9012	10001 - 10044	264.3	132.1
	10045 -	266.7	133.4

Unit : mm

1-4. Installing the Control Panel

1-4-1. Installing into the Control Console

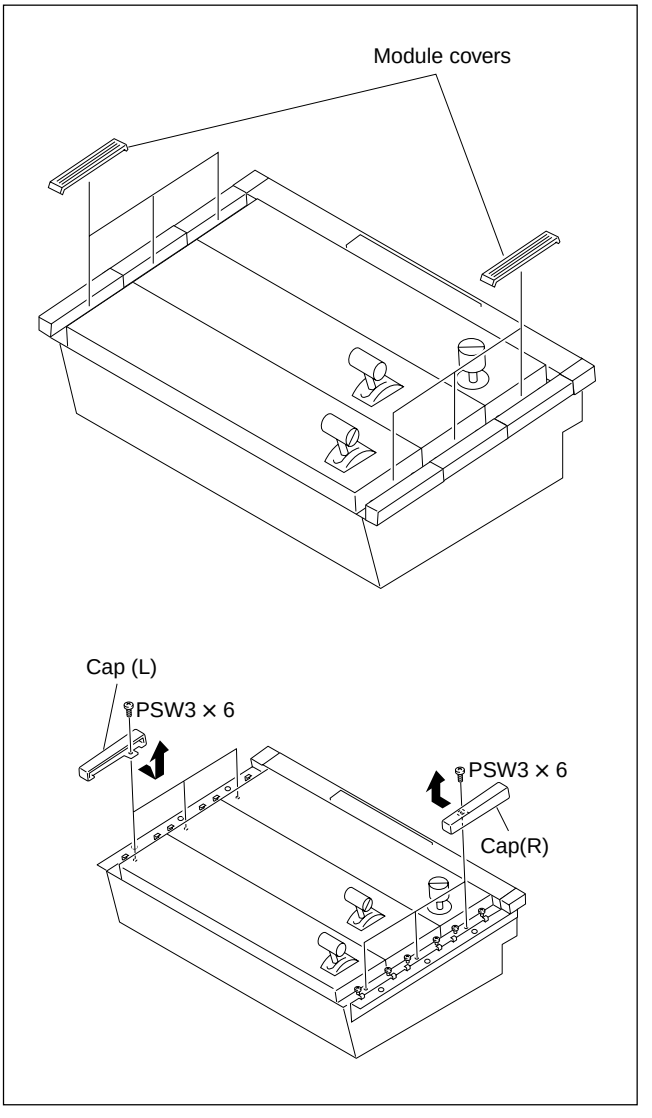
Note

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

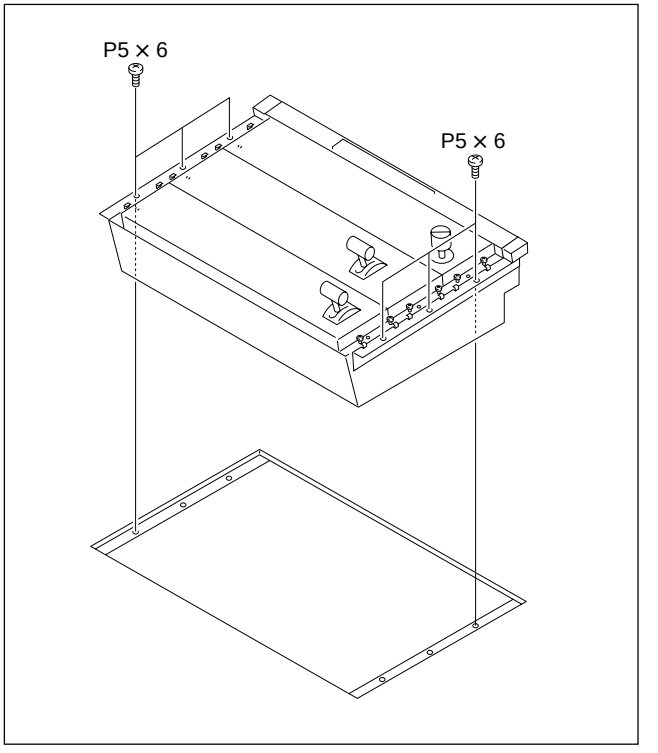
Tool required

- Screws (P5 × 6): 6 pcs

1. Remove the six module covers on both sides.
2. Remove the six screws and remove the three caps (L) and (R) each on both sides in the direction of the arrow.



3. While lifting up the control panel with one person, and holding it with another person, and then install the control panel into the control console.
4. Fix the control panel to the control console by tightening the six screws.



5. Install the caps (L) and (R), and module covers in the reverse order of removal.

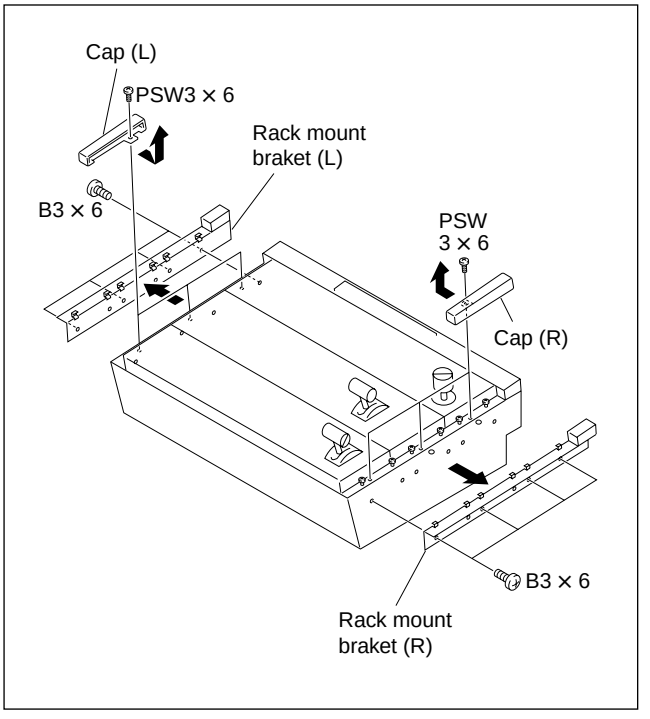
1-4-2. Installing the Side Caps (L) and (R)

The width of the MKS-9011/9012 can be made below into the width of the opening of the 19-inch standard rack by attaching the side caps (L) and (R) to the MKS-9011/9012.

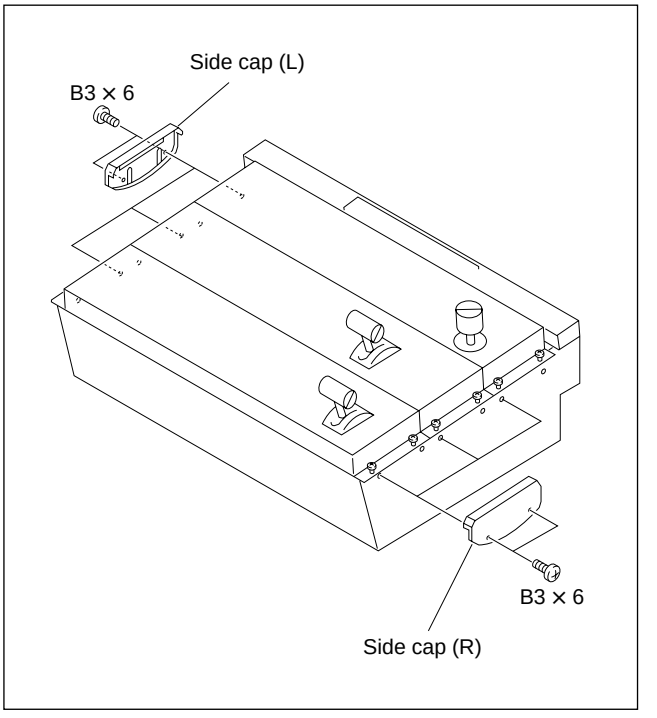
Tool required

- Side caps (L) and (R): 3 pcs each (Supplied)
- Screws (B3 × 6): 12 pcs

1. Remove the six module panels on both sides. (Refer to Section 1-4-1.)
2. Remove the six screws, and remove the three caps (L) and (R) each on both sides in the direction of the arrow.
3. Remove the eight screws, and remove the rack mount brackets (L) and (R).



4. Install the three side caps (L) and (R) each on both sides by tightening the twelve screws.
5. Install the caps (L) and (R), and module covers in the reverse order of removal.

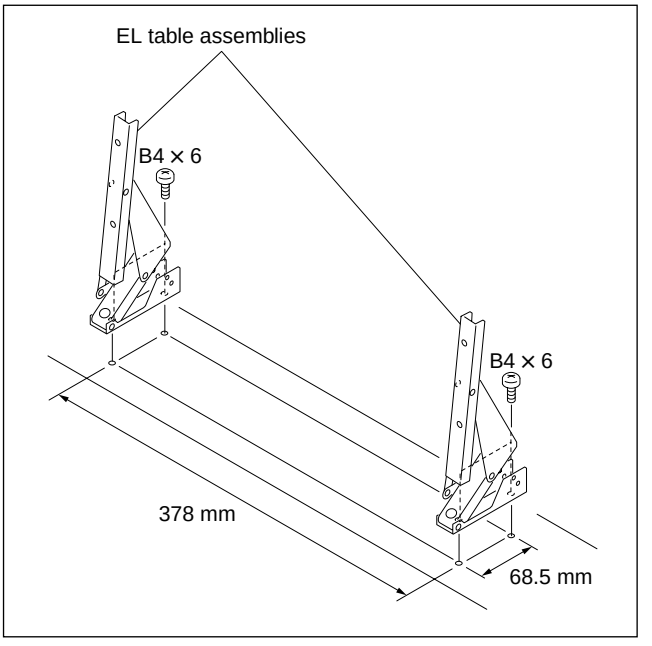


1-5. Installing the Menu Panel

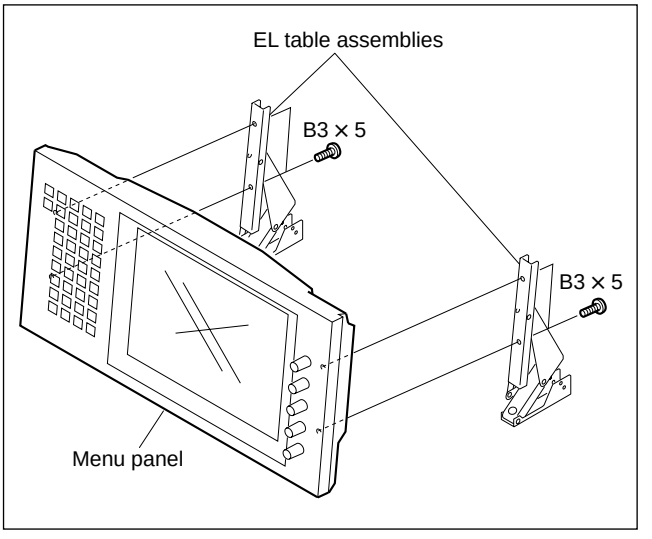
Tools required

- Screws (B4 × 6) : 4 pcs
- Screws (B3 × 5) : 4 pcs
- EL table assemblies : 2 pcs (Sony Part No. : X-3167-779-1)

1. Open the screw holes (M4) as shown in the illustration into the positions to which the menu panel is going to be installed.
2. Install the EL table assemblies to the screw holes that are opened in step 1 using the four screws.



3. Install the menu panel using the four screws (B3 × 5).



1-6. Installation of Options

The CCP-9000-C system is comprised of the following models according to the system to be used, and shipped from the factory.

Model name	
MKS-9011	1-M/E CONTROL PANEL
MKS-9012	2-M/E CONTROL PANEL
MKS-8011	MENU PANEL
MKS-8031TB	TRACKBALL MODULE
MKS-8032	DSK FADER MODULE
MKS-8033	UTILITY/SHOTBOX MODULE
MKS-8035	KEY CONTROL MODULE
MKS-8041	BLANK PANEL (1/2)
MKS-8075	EXTENSION ADAPTOR
SWC-5002	PANEL CABLE (2 m)
SWC-5005	PANEL CABLE (5 m)
SWC-5010	PANEL CABLE (10 m)

1-6-1. Installation to MKS-8075 (Extension Adaptor)

CAUTION

Be sure to disconnect the power cord before starting to install modules.
If installation of modules is started with the POWER switch left on, it may cause electrical shock damage printed circuit boards.

Applicable modules

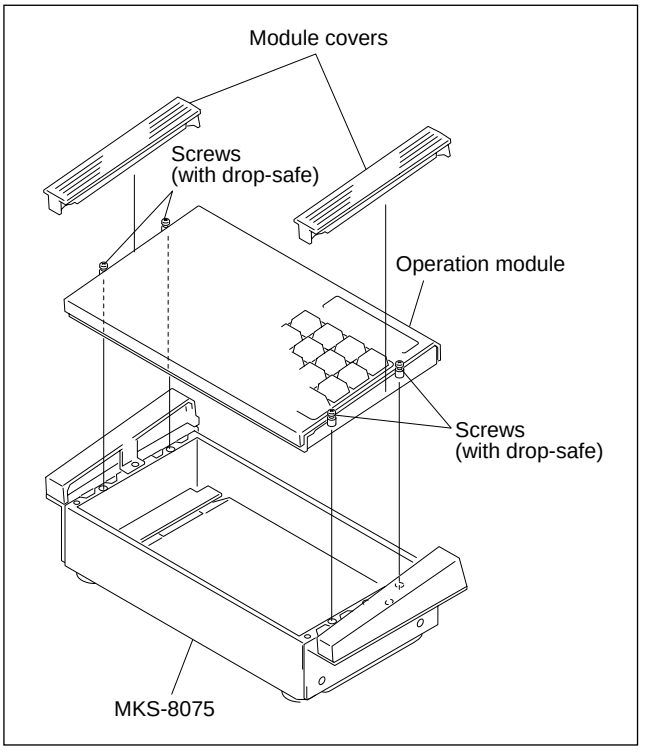
- MKS-8031TB Track Ball Module
- MKS-8032 DKS Fader Module
- MKS-8033 Utility/Shotbox Module
- MKS-8035 Key Control Module

Installation

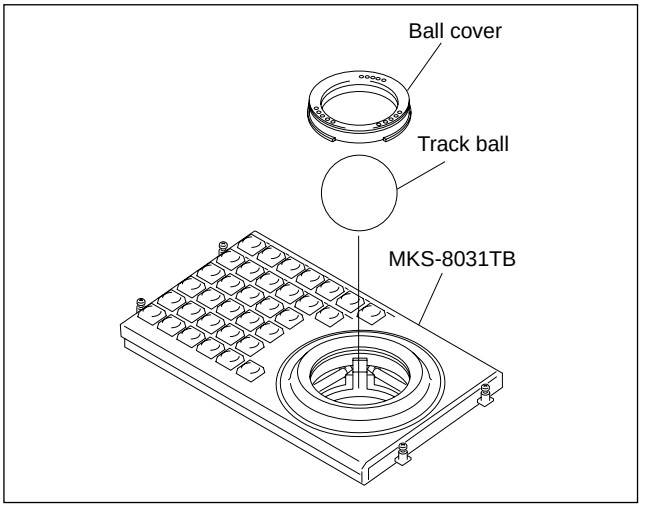
1. Remove the module cover on both sides of the operation module that you want to remove, as shown.
2. Loosen the four screws (with drop-safe) fixing the operation module.
3. Remove the operation module by holding the two screws on the sides of the operation module.
4. Fit the operation module that you 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.

   Note

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



1-6-2. How to Connect the MKS-8075

Structure of MKS-8075 (Extension adaptor)

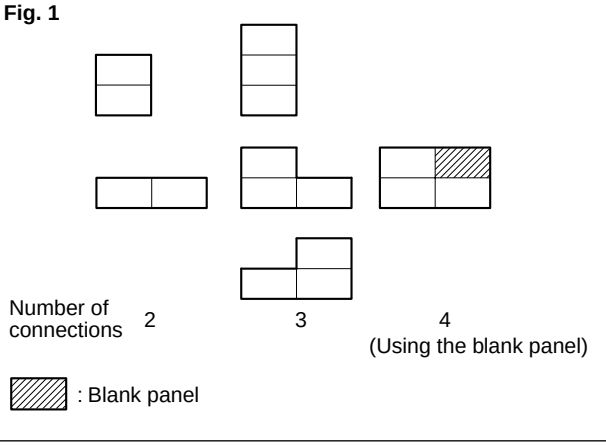
Adaptor case :	1
Screw (BV3 × 10) :	4
Connecting plate A :	1
Connecting plate B :	1
Connecting plate C :	2
Panel cover (L) :	1
Panel cover (R) :	1
Cable (D-sub 50-pin):	1

Notes

- A maximum of three extension adaptors (maximum of four when using the blank panel) 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. (on page 1-13.))
  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.)

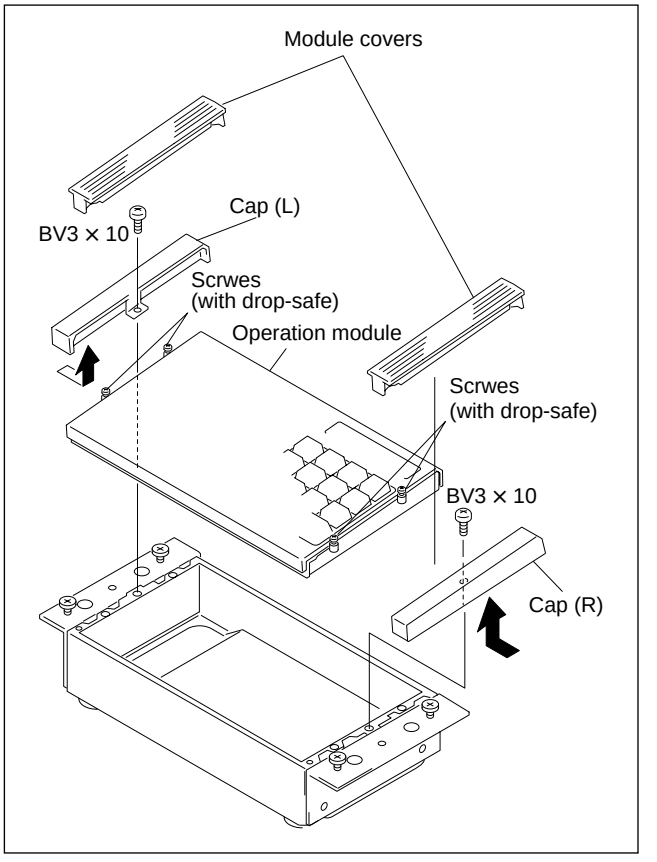
- When extension adaptors are installed using both horizontal and vertical connections, be sure to perform the vertical connections first then perform the horizontal connections.
- When the vertical connection (A) is selected, be sure to secure all of the side panels with screws. Never panel it a table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

Fig. 1

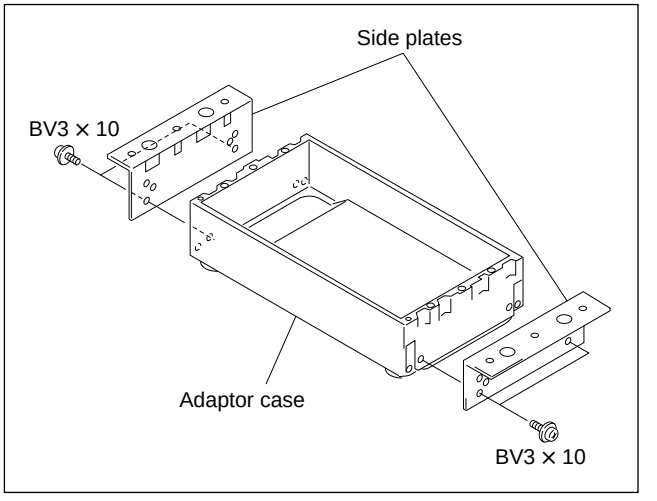


Connecting procedure

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.



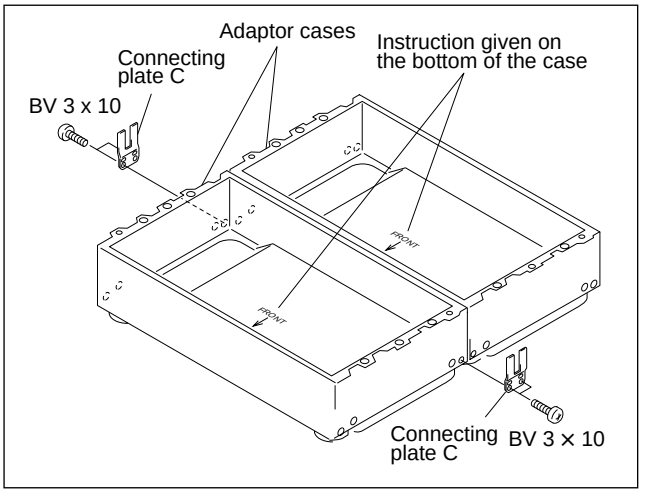
4. Remove the screws (BV3 × 10) fixing the side plates to the adaptor case, and remove the side plates.



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.)

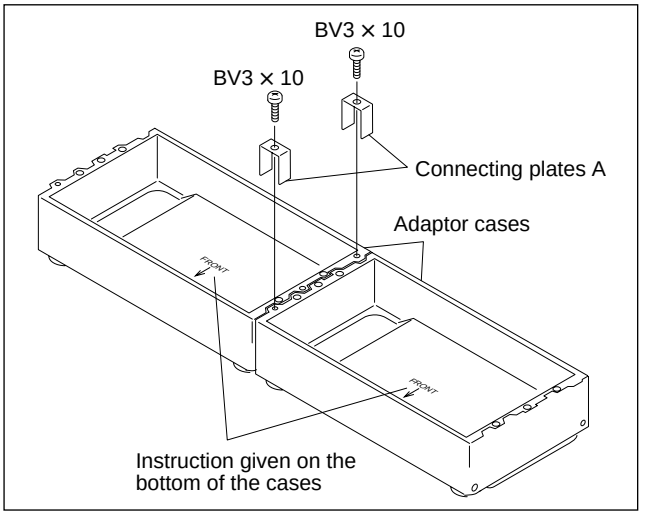
(2) Fix the right sides and left sides of the adaptor cases as shown in the illustration using the two pieces of the connecting plate C.
- When fixing the adaptor cases, you can select either the flat connection or the connection like a flight of steps.
- When selecting the connection like steps of the 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.)

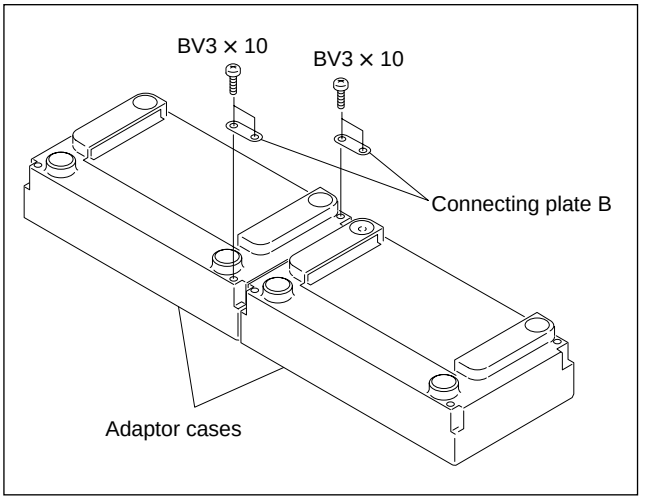
(2) Fix the top plate of the adaptor cases at the locations shown in the illustration using the two connecting screws and the two connecting plates A for every two adaptor cases.



(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.



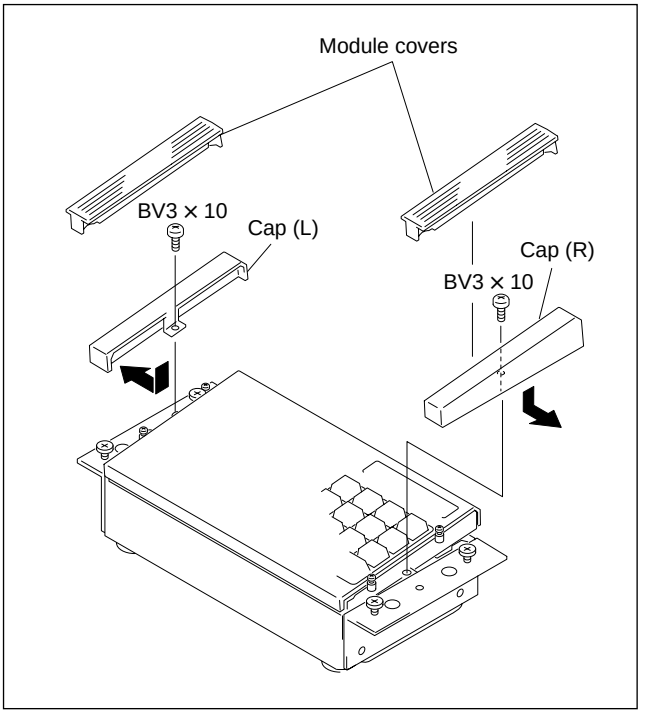
5. Install the side panel.

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 1-13.))

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 1-13.)), 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 1-13.)), remove the four stepped screws and install the panel covers (L) and (R).

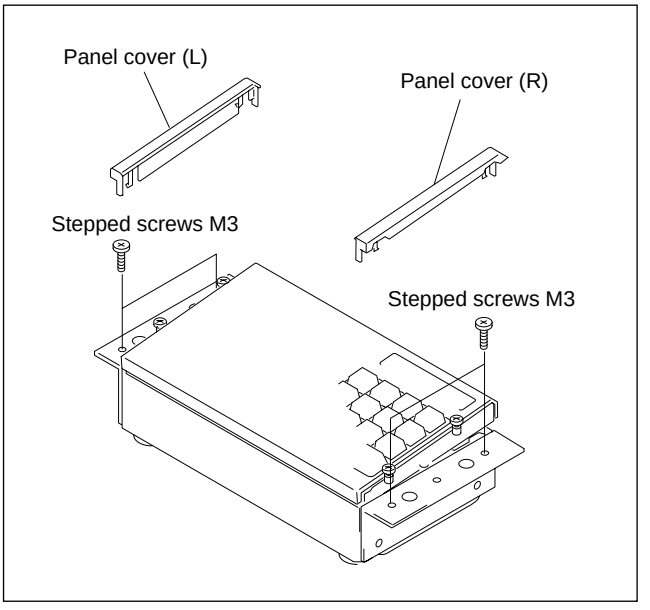
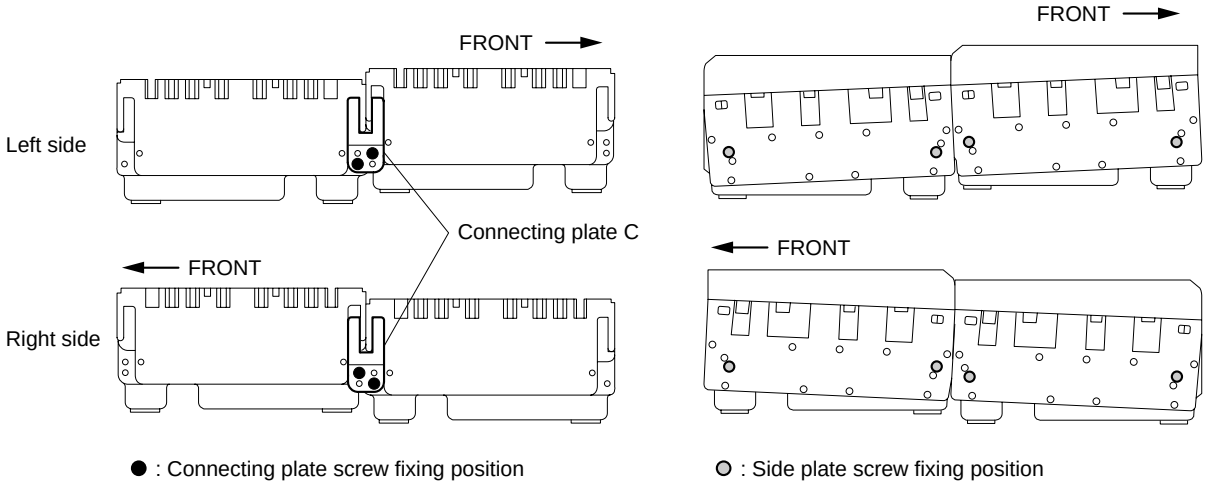
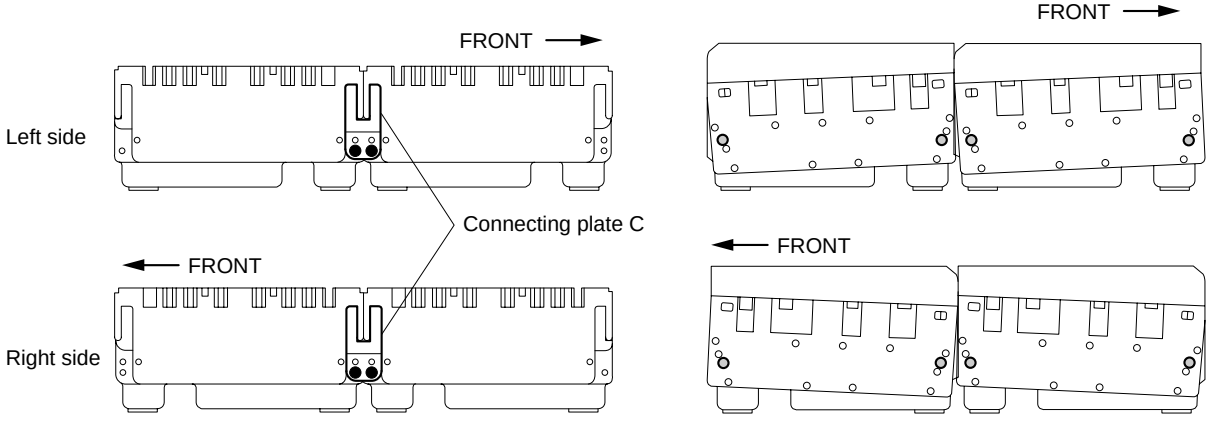


Fig. 2 : Side panel installation methods



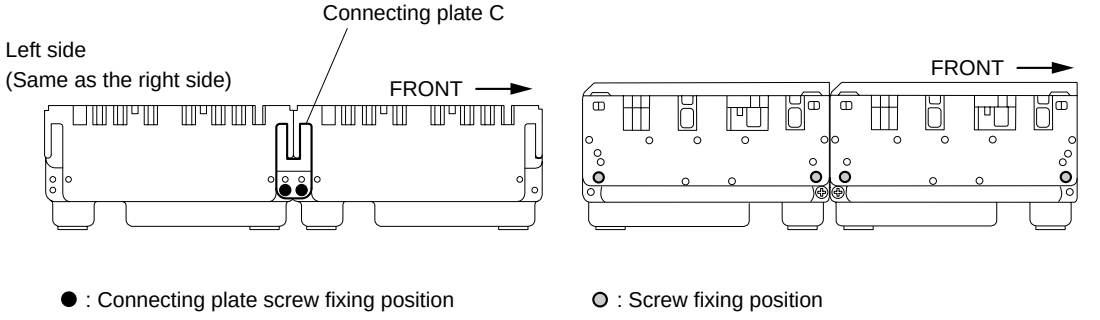
● : Connecting plate screw fixing position ○ : Side plate screw fixing position

Connection method (A)



● : Connecting plate screw fixing position ○ : Screw fixing position

Connection method (B)



● : Connecting plate screw fixing position ○ : Screw fixing position

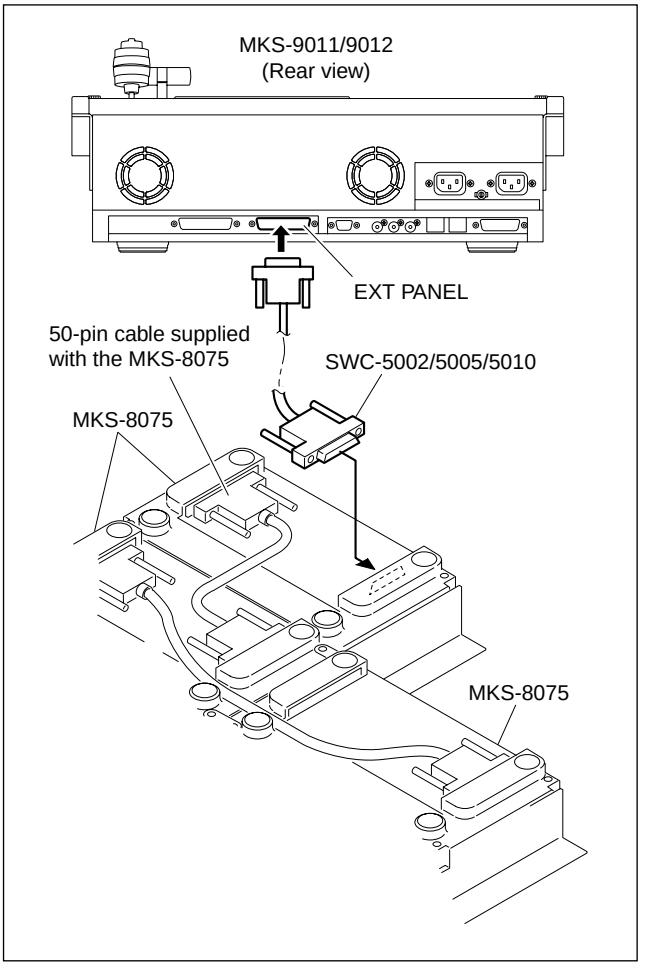
Connection method (C)

1-6-3. How to Connect the Cables

Parts used

- 50-pin cable supplied with the MKS-8075
- SWC-5002 Panel cable (2 m)
- SWC-5005 Panel cable (5 m)
- SWC-5010 Panel cable (10 m)

1. Connect the EXT PANEL connector of the control panel MKS-9011/9012 to the SCU IN connector of the MKS-8075 using the panel cable SWC-5002/5005/5010.
2. Connect the SCU OUT connector of the MKS-8075 to the SCU IN connecor of the adjacent MKS-8075 using the 50-pin cable supplied with the MKS-8075, as shown in the illustration.



1-6-4. Rack Mounting the MKS-8075 (Extension Adaptor)

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

Note

In order to rack mount the MKS-8075, 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 or 4.
- The connection method C (flat) must be used.
- For the connection method, refer to “1-6-2. How to Connect the Extension Adaptor MKS-8075”.

Tools required

- Screws (RK5 × 16) for rack mounting
- Ornamental washers for rack mount
  (Sony part No.: 2-297-913-01)
  When 2 adaptors are connected : Each 4 pcs
  When 4 adaptors are connected : Each 8 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.

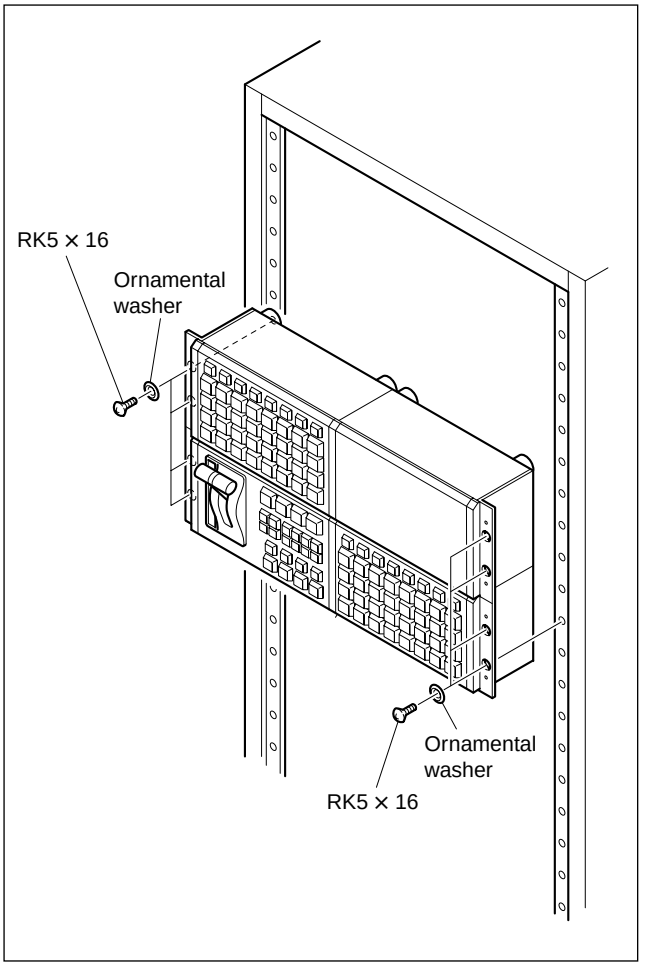
CAUTION

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 procedures

Install the adaptor into the rack using rack mounting screws (RK5 × 16) and ornamental washers as shown in the illustration.
(The illustration below shows the configuration when 4 adaptors are installed.)



1-7. Matching Connectors and Cables

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

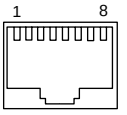
Model name	Panel indication	Connector name	Matching connector and cable	
			Name	Sony part No.
MKS-9011/9012	EXT PANEL MENU PANEL	D-sub 50-pin, Female	Use the dedicated cable*1 specified by Sony Corp.	
	GPI	D-sub 25-pin, Female	D-sub 25-pin, Male Connector 25-pin, Male Junction Shell 25-pin	 1-566-356-11*2 1-563-377-11
	EXT DISPLAY	D-sub Miniature 15-pin, Female	Use the display cable that is commercially available on market.	
	EDITOR PANEL		Connector 9-pin, Male Junction Shell 9-pin	1-560-651-00*2 1-561-749-00
	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.	
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		

*1 : SWC-5002 (2 m)
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.

1-8. Input/Output Signals of Connectors

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

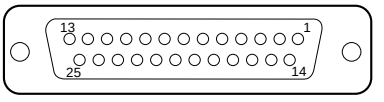
CTR/DATA/PERIPH : 100BASE-TX, RJ-45 (8-pin)



– 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



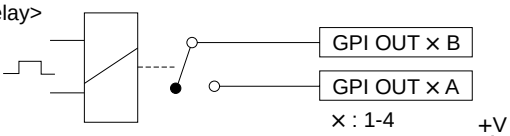
— EXT VIEW —

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

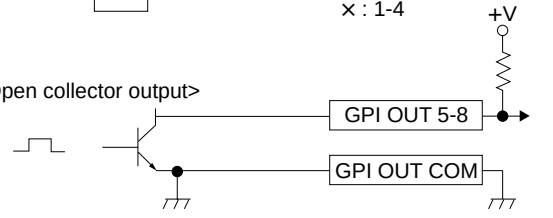
Note

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

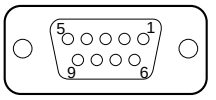
(*1) <Relay>



(*2) <Open collector output>



EDITOR PANEL : RS-422A (D-sub 9-pin, Female) <CONTROLLER> (*3)



– EXT VIEW –

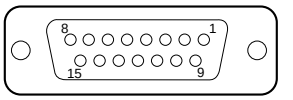
Pin No.	Signal Name	Function
1	FG	Frame ground
2	RX–	Received data (–)
3	TX+	Transmitted data (+)
4	GND	Common ground
5	–	No Connection
6	GND	Common ground
7	RX+	Received data (+)
8	TX–	Transmitted data (–)
9	–	No Connection

(*3) <CONTROLLER> : Indicates a controlling 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 —

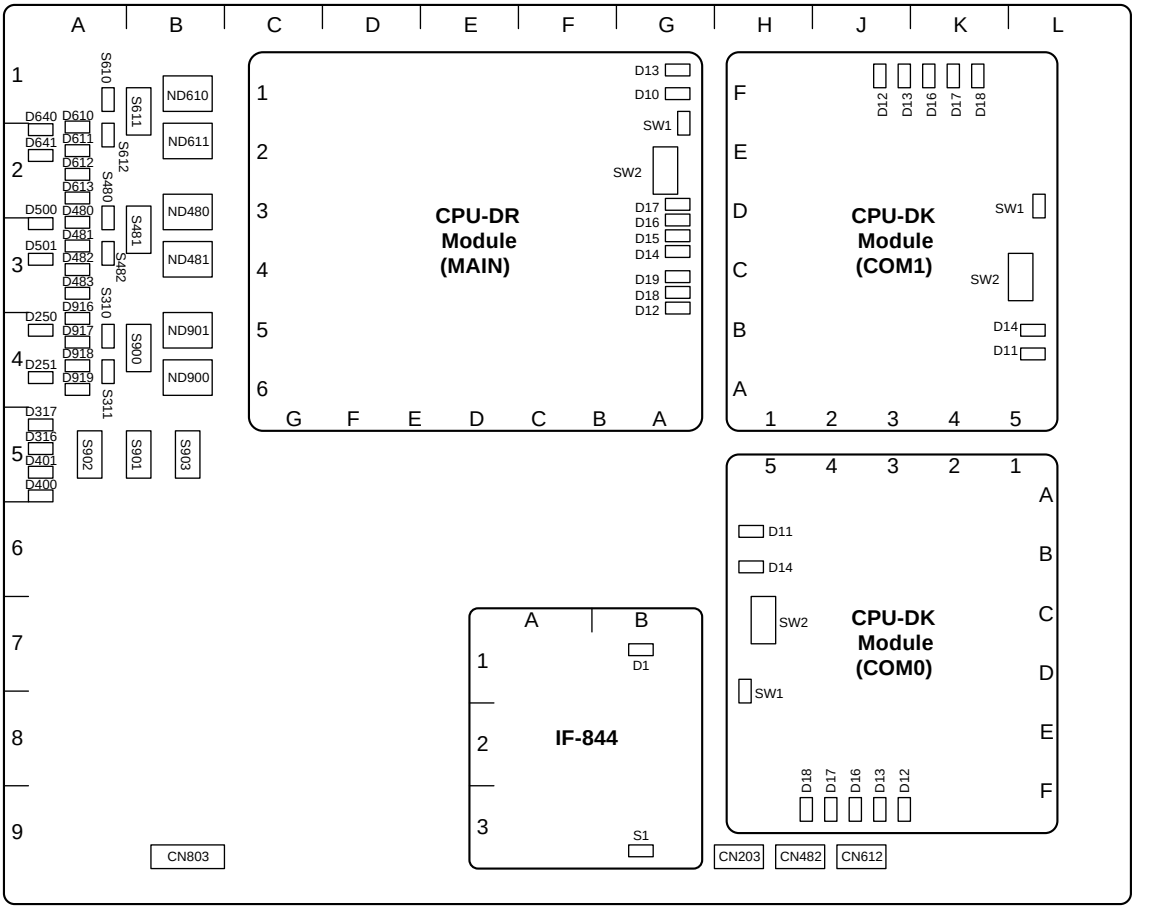
Pin No.	Signal Name	Function
1	RED	Video Red
2	GREEN	Video Green
3	BLUE	Video Blue
4	–	No Connection
5	GND	Ground
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	–	No Connection
10	GND	Ground
11	–	No Connection
12	–	No Connection
13	HSYNC	Horizontal Sync
14	VSYNC	Vertical Sync
15	–	No Connection

1-9. Setting of On-board Switches and Function of LEDs

Note

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

1. CA-52 board



<LED>

D250 (A-4) : LAN status LED
LAN status indication.
Flashes while communication with MENU CPU.

D251 (A-4) : 100
Lit while the 100 Mb/s communication with the MENU CPU is in progress.

D316 (A-5) : HD
Lit when the reference signal that is connected to the REF IN connector is an HD signal.

D317 (A-5) : 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-5) : CH0
Flashes while communication with the equipment that is connected to the EDITOR PANEL terminal is in progress.

D401 (A-5) : 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-3) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D481 (A-3) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D482 (A-3) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D483 (A-3) : CTRL CPU status LED
CTRL terminal communication IC status indication.
Used only for production in the assembly factory.

D500 (A-3) : LAN status LED
LAN status indication.
Flashes while communication with the equipment that is connected to the CTRL terminal is in progress.

D501 (A-3) : 100
Lit while the 100 Mb/s communication with the equipment that is connected to the CTRL terminal is in progress.

D610 (A-2) : PERIPH CPU status LED
PERIPH terminal communication IC status indication.
Used only for production in the assembly factory.

D611 (A-2) : PERIPH CPU status LED
PERIPH terminal communication IC status indication.
Used only for production in the assembly factory.

D612 (A-2) : PERIPH CPU status LED
PERIPH terminal communication IC status indication.
Used only for production in the assembly factory.

D613 (A-2) : PERIPH CPU status LED
PERIPH terminal communication IC status indication
Used only for production in the assembly factory.

D640 (A-2) : LAN status LED
LAN status indication.
Flashes while communication with the equipment that is connected to the PERIPH terminal is in progress.

D641 (A-2) : 100
Lit while the 100 Mb/s communication with the equipment that is connected to the PERIPH terminal is in progress.

D916 (A-4) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

D917 (A-4) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

D918 (A-4) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

D919 (A-4) : MAIN CPU status LED
Main CPU status indication.
Used only for production in the assembly factory.

ND480 (B-3) : COM0 CPU status LED
CTRL LAN control IC status indication.

ND481 (B-3) : COM0 CPU status LED
CTRL LAN control IC status indication.

ND610 (B-2) : COM1 CPU status LED
PERIPH LAN control IC status indication.

ND611 (B-2) : COM1 CPU status LED
PERIPH LAN control IC status indication.

ND900 (B-4) : MAIN CPU status LED
Main CPU status indication.

ND901 (B-4) : MAIN CPU status LED
Main CPU status indication.

<Switch>
S310 (A-4) : MAIN RESET switch
Reset switch for the entire CA-45 board.

S311 (A-4) : Monitor reset switch for the main CPU
Reset switch that is used during maintenance of the main CPU from the TERMINAL pin.

S480 (A-3) : C0-RESET switch
Independent reset switch for the CTRL LAN control IC.

S481 (A-3) : 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 (A-3) : 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 (A-2) : C1-RESET switch
Independent reset switch for the PERIPH LAN control IC CPU.

S611 (A-2) : 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 (A-2) : 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 (A-4) : 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-5) : 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-5) : 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 (B-5) : STATION ID
Used to set the REMOTE terminal.
Refer to the System Setup Manual for details.

<Connector>
CN203 (H-9) : TERMINAL pin
Main CPU connection terminal.
Used only for production in the assembly factory.

CN482 (H-9) : TERMINAL pin
CTRL LAN control CPU connection terminal.
Used only for production in the assembly factory.

CN612 (J-9) : TERMINAL pin
PERIPH LAN control IC CPU connection terminal.
Used only for production in the assembly factory.

CN803 (B-9) : JTAG connector
Used only for production in the assembly factory.

<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 LEDs
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.
Default setting when shipped from the factory is all OFF.

<LED on the CPU DK module> (COM0) (COM1)
D11 (green) (B-5) : CD (Card Detect) status LED
Lit when the CPU-DK module is inserted correctly to the parent board.

D12 (green) (F-3) : RUN status LED
Lit when the CPU-DK module starts operating.

D13 (F-3) (green) : STATUS4 status LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

D14 (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.
Lit while the specified power is turned on.

D16 (F-3) (green) : STATUS3 status LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

D17 (F-3) (green) : STATUS2 status LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

D18 (F-4) (green) : STATUS1 status LED
Used for maintenance purpose. Only the STATUS1 LED is lit in normal operation.

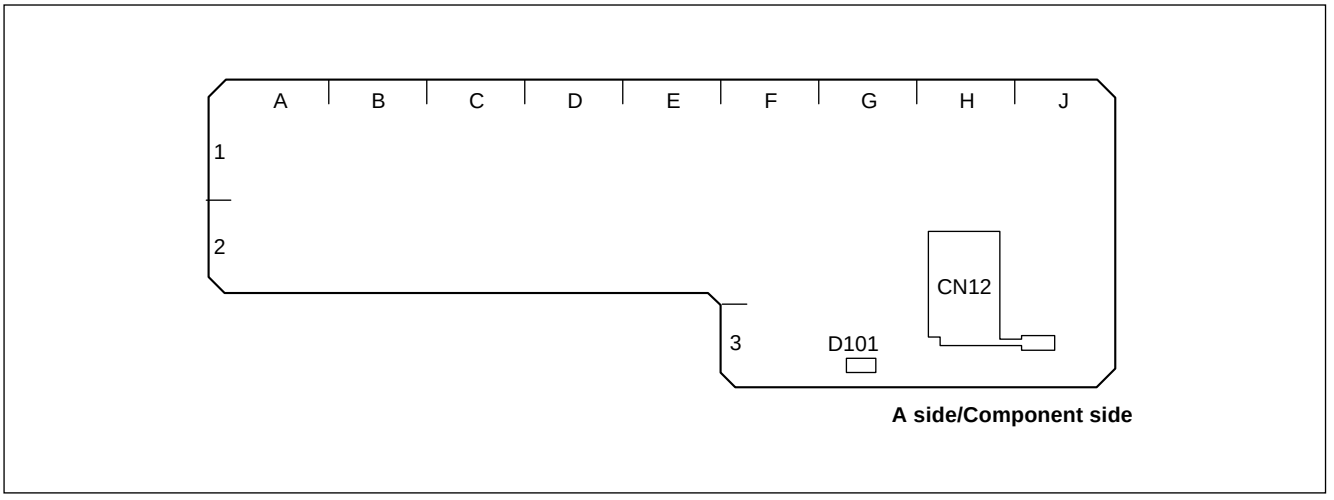
<Switch on the CPU DK module> (COM0) (COM1)
SW1 (D-5) : RESET switch
Pressing this switch resets the CPU-DK module.
Note
In some machines in which the CPU-DK module is installed, the system reset may be activated.

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
S-BUS receiving status indication.
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.

2. IF-897 board



<LED>

D101 (green) (G-3) : IDE

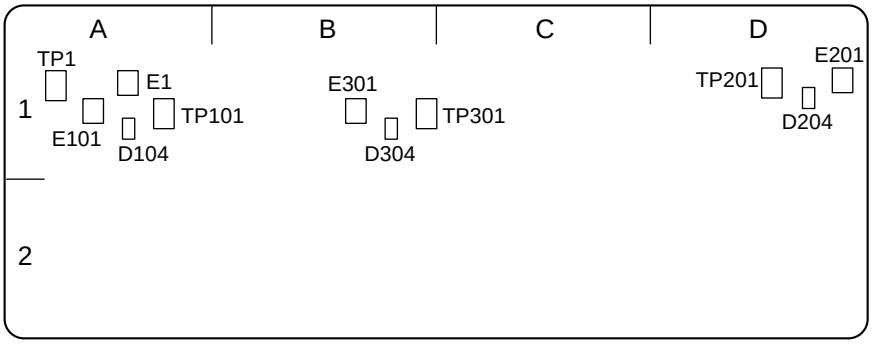
Flashes and lit while the hard disk is being accessed.

<Connector>

CN12 (H-3) : CF

The Compact Flash interface that is used to control the menu screen.

3. PS-639 board



A side/Component side

<LED>

D104 (green) (A-1) : +5 V

Indicates the status of the +5 V power that is supplied to each board.
Lit when the specified power is turned on, but turned off when the +12 V power is not supplied to the PS-639 board or the DC-DC converter circuit on the PS-639 board is faulty.

D204 (green) (D-1) : +7 V

Indicates the status of the +7 V power that is supplied to each board.
Lit when the specified power is turned on, but turned off when the +12 V power is not supplied to the PS-639 board or the DC-DC converter circuit on the PS-639 board is faulty.

D304 (green) (B-1) : +3.3 V

Indicates the status of the +3.3 V power that is supplied to each board.
Lit when the specified power is turned on, but turned off when the +12 V power is not supplied to the PS-639 board or the DC-DC converter circuit on the PS-639 board is faulty.

<TEST terminal>

E1 (A-1) : GND terminal

Use this terminal as the ground point for measuring TP1 check terminal.

E101 (A-1) : GND terminal

Use this terminal as the ground point for measuring TP101 check terminal.

E201 (D-1) : GND terminal

Use this terminal as the ground point for measuring TP201 check terminal.

E301 (B-1) : GND terminal

Use this terminal as the ground point for measuring TP301 check terminal.

TP1 (A-1) : +12 V check terminal

Use this terminal for measuring +12 V power.

TP101 (A-1) : +5 V check terminal

Use this terminal for measuring +5 V power.

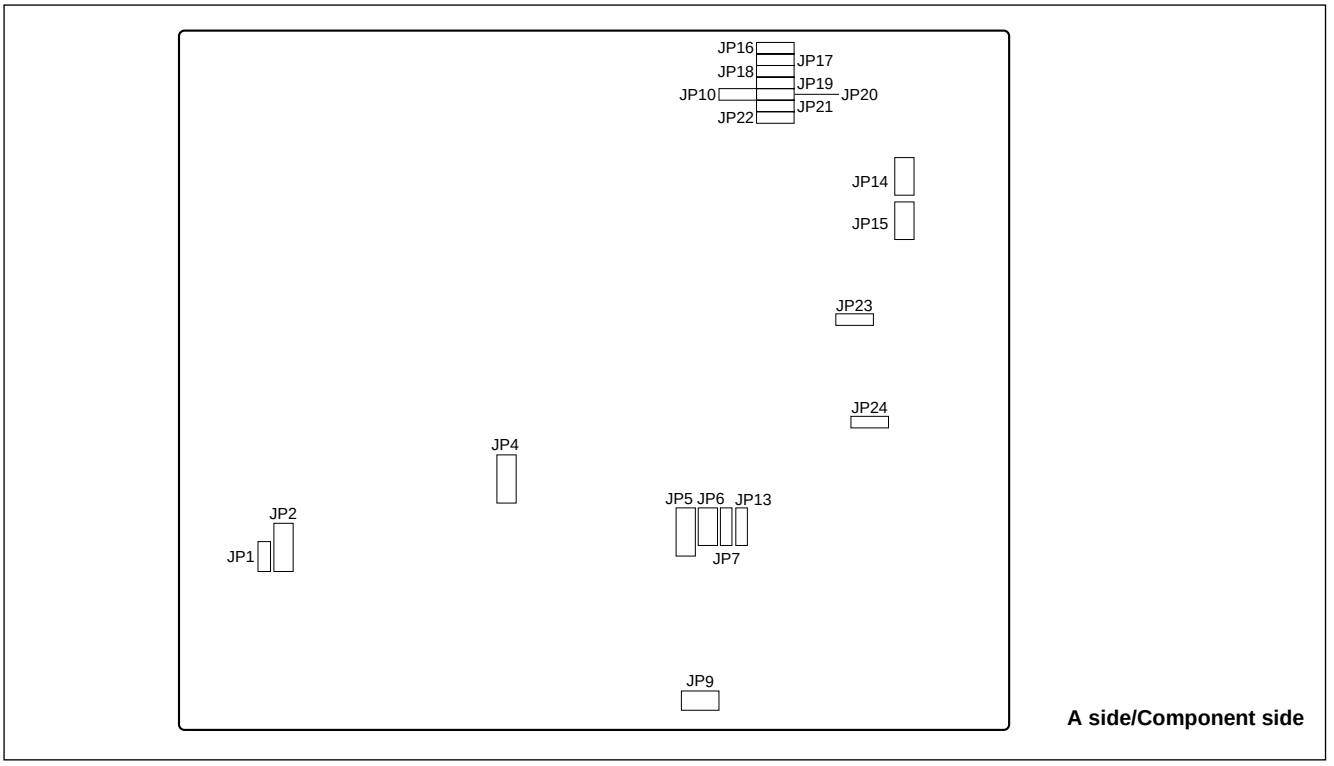
TP201 (D-1) : +7 V check terminal

Use this terminal for measuring +7 V power.

TP301 (B-1) : +3.3 V check terminal

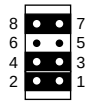
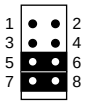
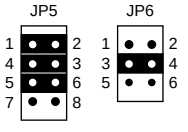
Use this terminal for measuring +3.3 V power.

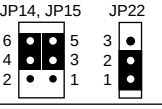
4. MAGIC-765 board



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

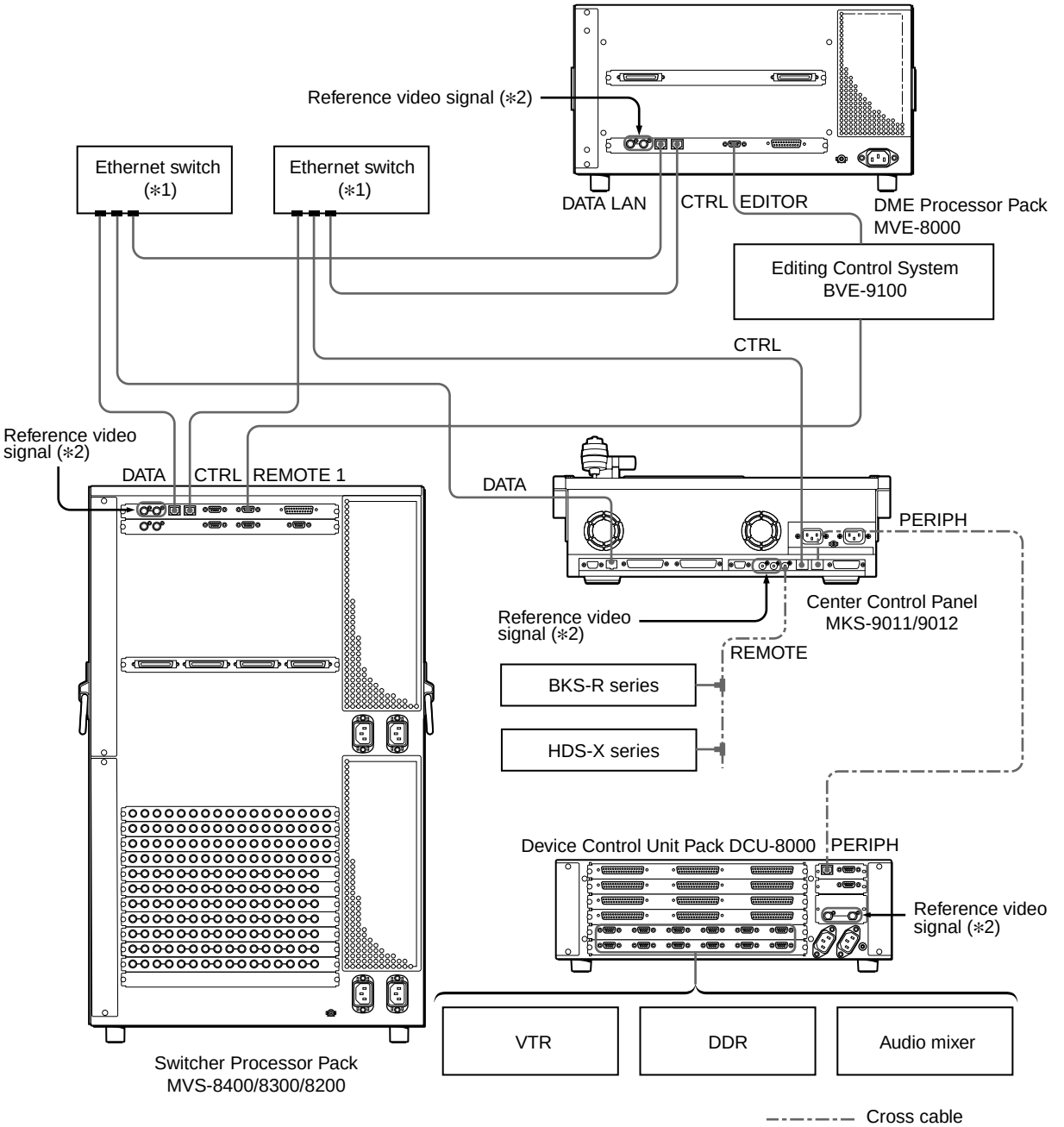
Jumper	Factory setting	Setup contents
JP13		Watch-Dog Timer Type Setting
JP14, JP15, JP22		COM3 Mode Selection
JP16, JP24		COM1 Port RI & Voltage Setup
JP17, JP23		COM4 Port R1 and Voltage Setup
JP18, JP20		COM3 Port RI & Voltage Setup
JP19, JP21		COM2 Port RI & Voltage Setup

1-10. System Connection

1-10-1. System Connection of the MVS-8000 Series

Configure the MVS-8000 series system connection referring to the connection example as shown below.

Connection example



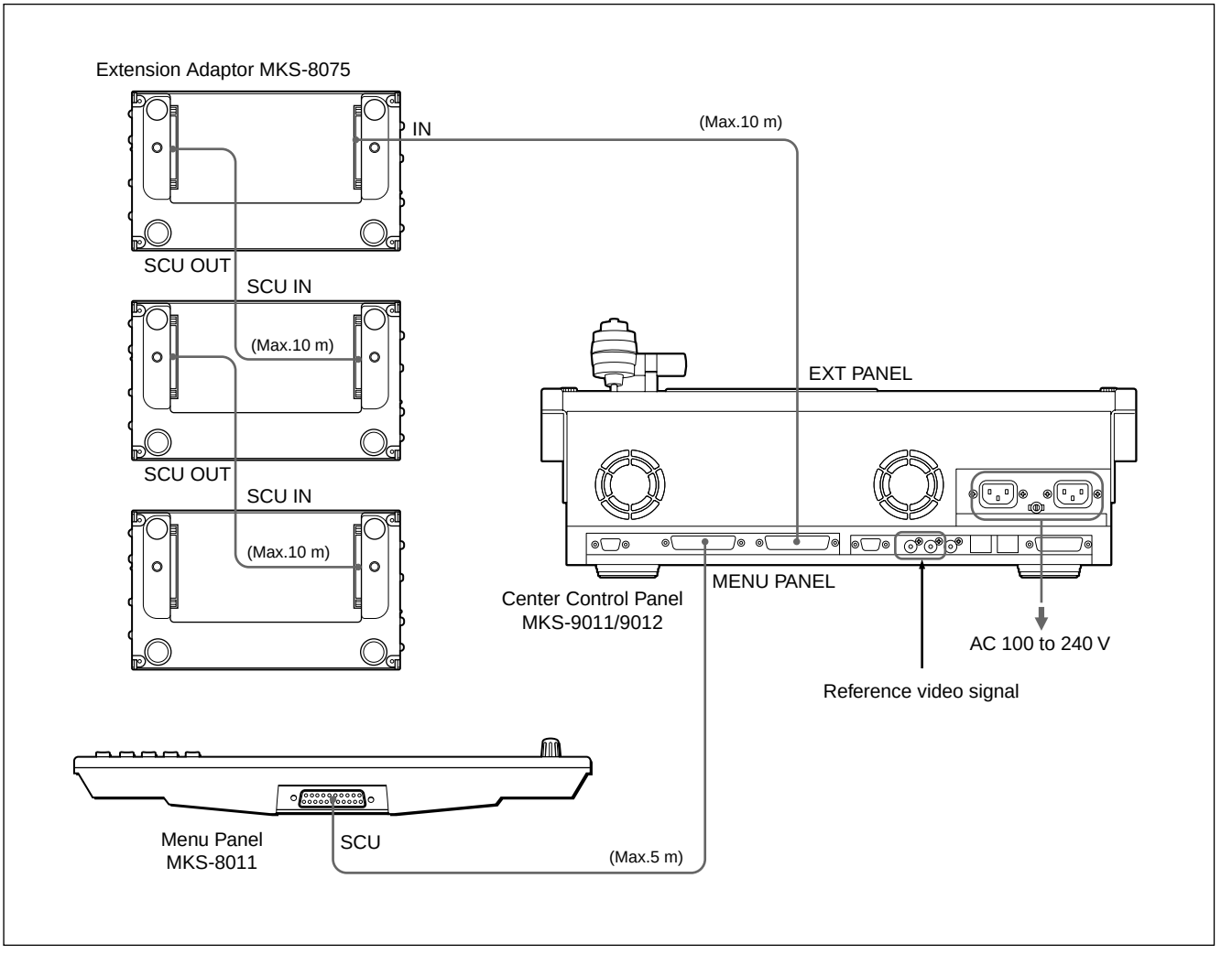
(∗1) : Connect each LAN (CTRL, DATA) to the separate Ethernet switches respectively.
However, a single Ethernet switch can be used for connecting each LAN.
For information about Ethernet switches that can be used in an MVS system, contact your local Sony Sales Office/Service Center.
For detailed information 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.

1-10-2. Connecting the Center Control Panel

Connect the center control panel such as MKS-9011/9012, MKS-8011 and others referring to the following connection example.

Connection example



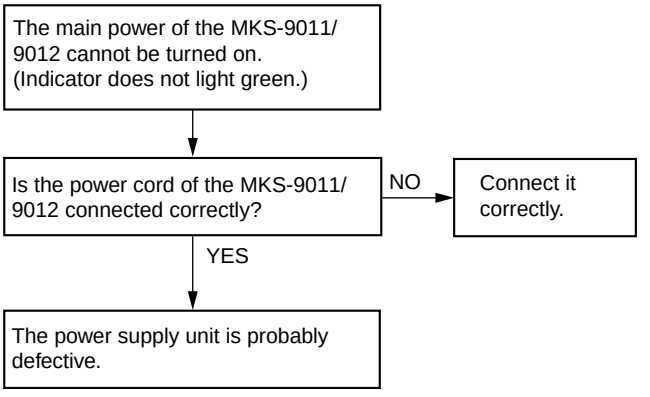
Section 2
Service Overview

2-1. Troubleshooting

2-1-1. Center Control Panel MKS-9011/9012

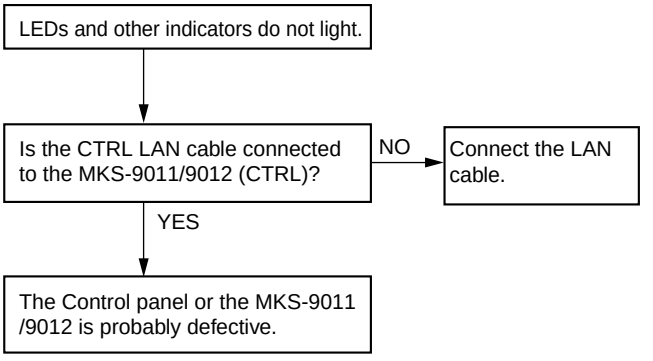
The main power cannot be turned on. (Indicator does not light green.)

Flow 1



LEDs and other indicators do not light.

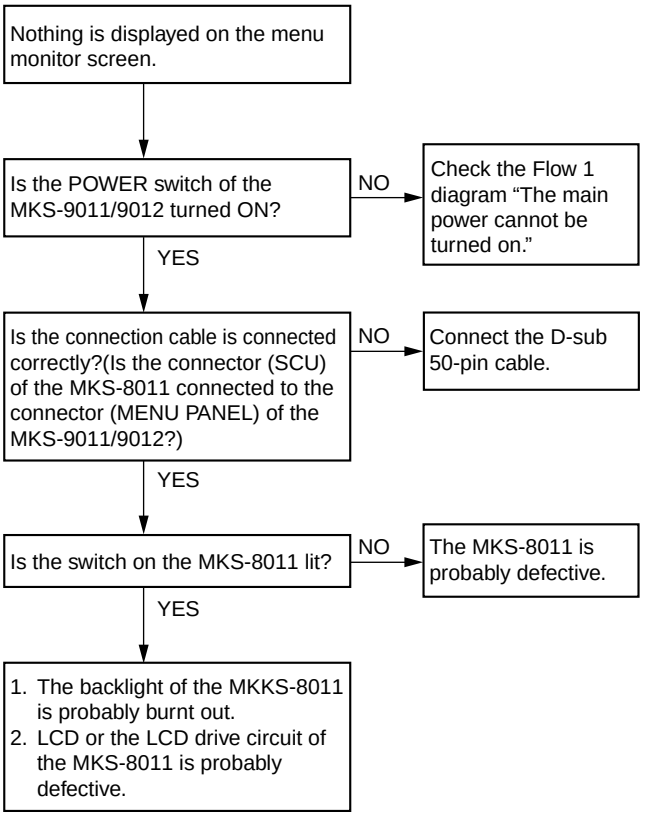
Flow 2



2-1-2. Menu Panel MKS-8011

Nothing is displayed on the menu monitor screen

Flow 3

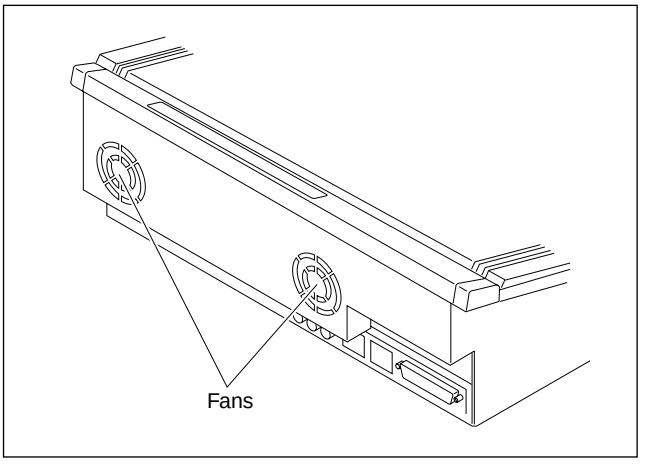


2-2. Periodic Inspection and Maintenance

2-2-1. Cleaning

1. Fan

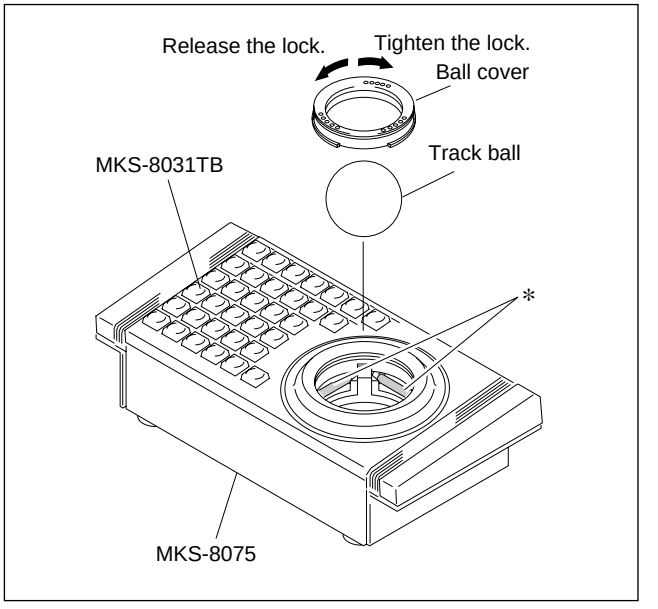
The inside of the CCP-9000-C is cooled by a fan on the rear.
If dust has accumulated in the intake of the fan, air is prevented from flowing smoothly and this may result in a temperature rise inside the machine. This may have an adverse effect on performance and life of the machine.
Cleaning of the fan every month is recommended.
Contact your local Sony Sales Office/Service Center for information cleaning the fan.



2. 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 counterclockwise 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 cover.
(5) Rotate the ball cover clockwise until it is locked.



2-3. About the Data Backup Capacitor

A large capacitor is installed on the CA-52 board in order to backup the memory storing the setup data and the real time clock in the MKS-9011/9012 machine.
Leave the main power of the MKS-9011/9012 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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