

SONY®

NETWORK RX STATION

PWS-110RX1

OPTIONAL POWER SUPPLY

PWSK-101

HDMI™
HIGH-DEFINITION MULTIMEDIA INTERFACE

INSTALLATION MANUAL

1st Edition

Serial No. 120001 and Higher: PWS-110RX1 (SY)



4596995010

⚠ 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可能性があります。
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.

⚠ WARNING

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 angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

⚠ AVERTISSEMENT

Ce manuel 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.

安全のために、周辺機器を接続する際は、過大電圧を持つ可能性があるコネクタを以下のポートに接続しないでください。
: LAN 1 コネクタ
: LAN 2 コネクタ
: REMOTE 1/2 コネクタ
: REMOTE 3/4 コネクタ
: REMOTE 5 コネクタ
上記のポートについては本書の指示に従ってください。

For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to the following port(s).

: LAN 1 connector
: LAN 2 connector
: REMOTE 1/2 connector
: REMOTE 3/4 connector
: REMOTE 5 connector

Follow the instructions for the above port(s).

本機をラックに設置するとき

熱の適切な排気・発散を得るために、ラックと本機の間には、以下の空間を確保してください。

- 左右両側面4 cm以上
- 後面10 cm以上

For kundene i Norge

Dette utstyret kan kobles til et IT-strømfordelingssystem.

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 following space away from walls in order to obtain proper exhaust and radiation of heat.

Right, Left: 4 cm (1.6 inches) or more

Rear: 10 cm (3.9 inches) or more

設置時には、通気やサービス性を考慮して設置スペースを確保してください。

- ファンの排気部（リアパネル面、右側面後ろ側、トップパネル後ろ側）や通気孔（フロントパネル面、左側面フロント側）をふさがない。
- 通気のために、セット周辺に空間をあける。
- 作業エリアを確保するため、セットの左側面および右側面は 4 cm 以上、セット後方は 40 cm 以上の空間をあける。

机上などの平面に設置する場合は、左側面および右側面は 4 cm 以上の空間をそれぞれ確保してください。ただし、セット上部はサービス性を考慮し 40 cm 以上の空間を確保することを推奨します。

When installing, the installation space must be secured in consideration of the ventilation and service operation.

- Do not block the fan exhaust areas (rear panel and rear part of the right side panel and rear part of the top panel) and vents (front panel, front part of the left side panel) with objects.
- Leave a space around the unit for ventilation.
- Secure working spaces (at least 4 centimeters from the left panel and right panel and at least 40 centimeters from the rear panel of the unit).

When the unit is installed on the desk or the like, leave at least 4 centimeters of space in the left and right sides.

Leaving 40 centimeters or more of space above the unit is recommended for service operation.

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Manual Structure

Purpose of this manual

This manual is the installation manual of Network RX Station PWS-110RX1. This manual is intended for use by system engineers and service engineers, and provides helpful information for installing PWS-110RX1, such as operating environment, installation space, connection information, initial settings and so on.

Related manuals

Besides this Installation Manual, the following manuals are available for PWS-110RX1.

- **Operation Manual (Supplied with this unit)**

This manual contains information required to operate and use the unit.

- **Service Manual (Available on request)**

This manual describes service overview, error messages, periodic maintenance and inspection, replacement of main parts, and so on of the unit to provide information required for block-level service.

- **Installation manual for RMM-10 (Supplied with RMM-10)**

This is necessary to install the unit to a 19 inch equipment rack.

Trademarks

Trademarks and registered trademarks described in this manual are as follows.

- The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries.

Other system names and product names written in this manual are usually registered trademarks or trademarks of respective development manufacturers.

Section 1

Installation

1-1. Installation Procedure

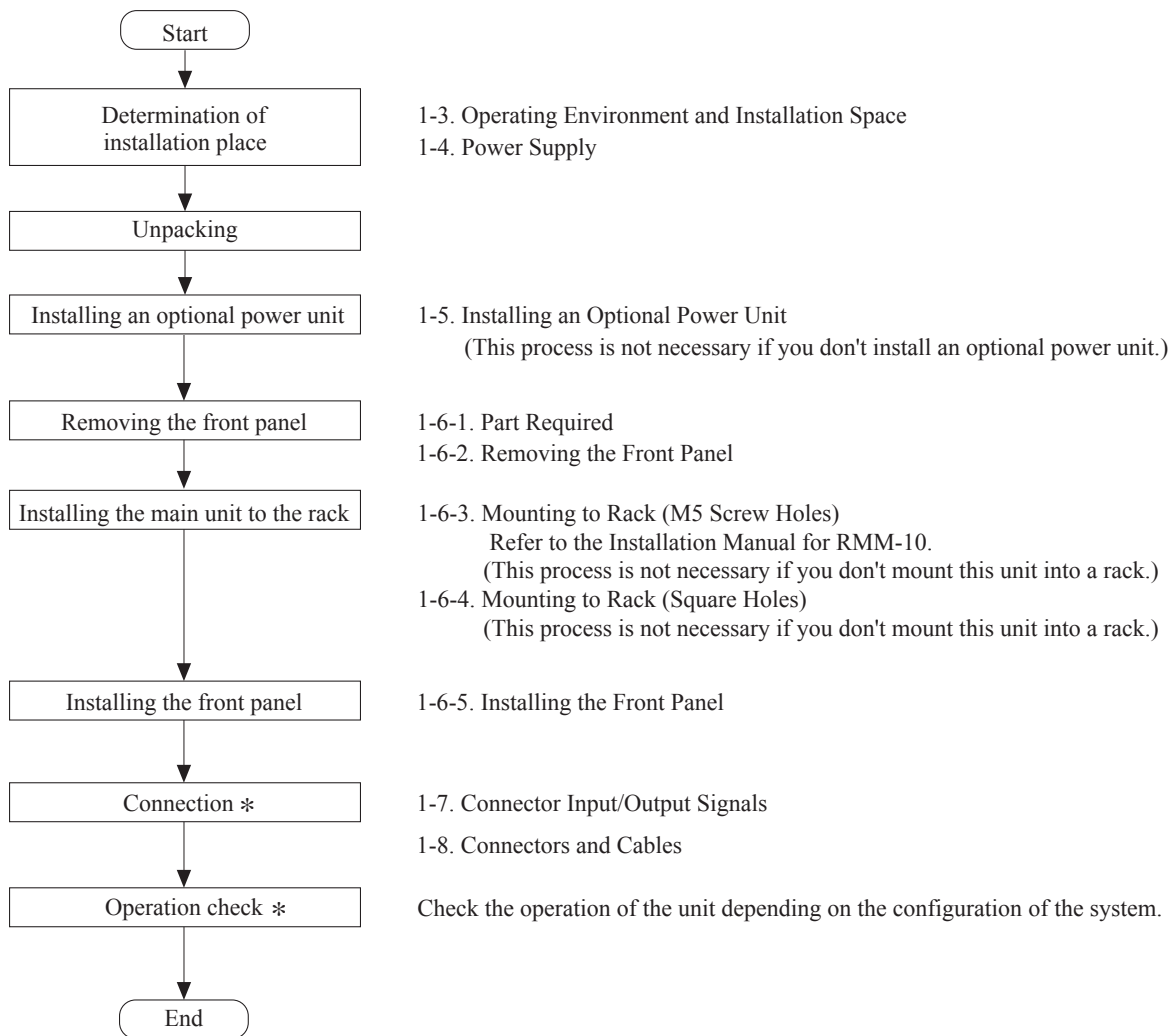
The following flowchart shows the installation procedure of the unit.

For details of each work, refer to the relevant section.

The Operation Manual is also required for the items marked with an asterisk (*).

1-2. Accessories

- Operation Manual (1)
- Installation Manual (this manual) (1)
- Operation Guide (1)
- Screws for Rack Mount (4)



1-3. Operating Environment and Installation Space

1-3-1. Operating Environment

Note

Do not block any air vents of the cabinet and exhaust vents for fans to reduce temperature rise in the unit.

Furthermore, arrange cooling air to flow through the unit sufficiently.

Operating temperature: 5 to 35 °C

Operating humidity: 20 to 90 % (no condensation)

Storage temperature: -20 to 60 °C

Prohibited installation places:

- Places exposed to direct sunlight or intense light
- Places near a heat source
- Dusty places or places subject to constant vibration
- Places in strong magnetic field
- Places subject to much electrical noise
- Places where electrostatic noise is likely to be generated
- Places where specified installation space cannot be provided (Refer to “1-3-2. Installation Space”)
- Sealed places

Maximum inclination angle:

30 degrees

Do not incline the unit from front to back at an angle of 30 degrees or more.

CAUTION

Unless you use the unit on horizontal plane, secure it so that it will not slip down.

1-3-2. Installation Space

When installing, the installation space must be secured in consideration of the ventilation and service operation.

- Do not block the ventilation slots at the left side and right side panels, and vents of the fans.
- Leave a space around the unit for ventilation.
- Leave more than 40 centimeters of space in the rear of the unit to secure the work area.

When the unit is installed on the desk or the like, leave at least 4 centimeters of space in the left and right sides.

Leaving 40 centimeters or more of space above the unit is recommended for service operation.

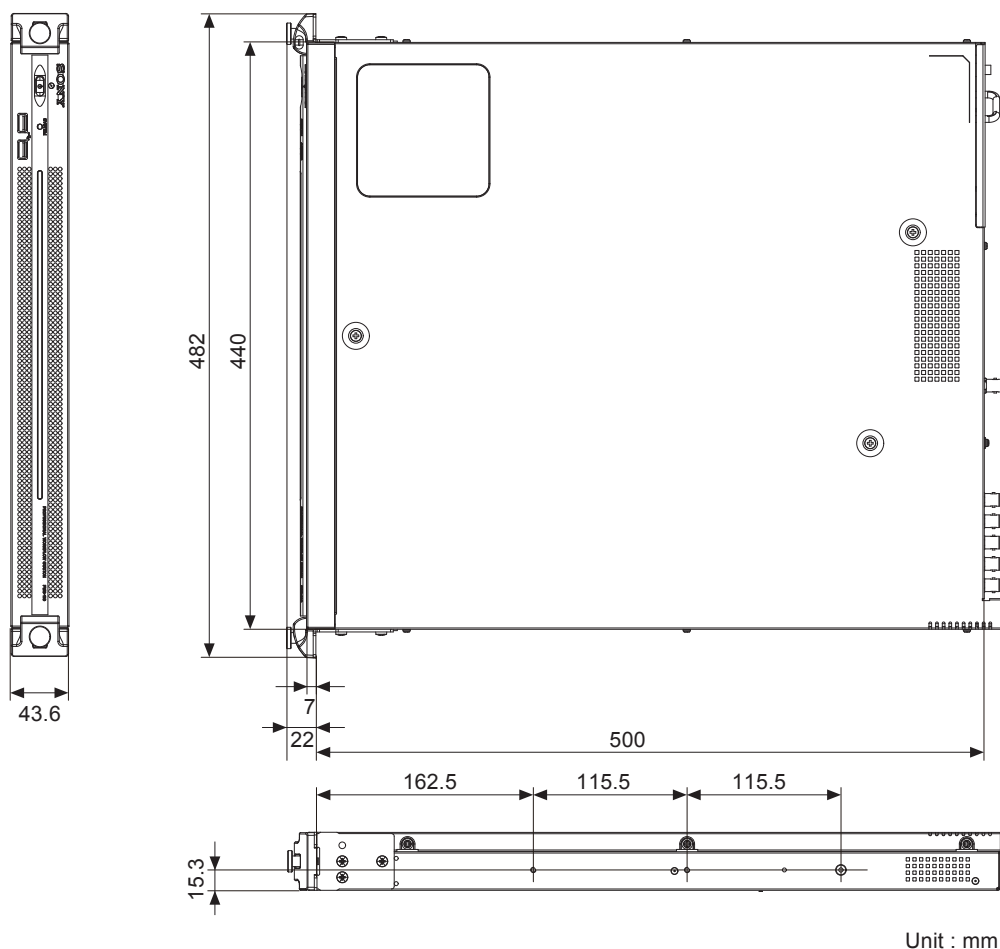
Moreover, an air flow that is effective in cooling the unit is essential. If the ventilation is not enough, the unit may be damaged because of an increase of the internal temperature.

Note

This unit is air-cooled by the fans. The operation with the upper lid is removed affects the air cooling by the fans. Complete the work in a short time as possible when operating the unit for inspection with the upper lid removed.

In case of a work with the unit turned on for a long time, take an action, such as cooling by electric fan, to avoid rise in temperature.

Mass of this unit (not including option) : approx. 9.8 kg



1-4. Power Supply

1-4-1. Power Supply Specifications

A switching regulator is used in the power supply unit of the unit.

Note

Be sure to use the unit within the following power-supply voltage range.

Power voltage: 100 to 240 VAC (nominal voltage)

Power frequency: 50 or 60 Hz

Power consumption: 235 W max. (including options)

Inrush current: 50 A at 100 VAC

Note

The AC power supply requires capacity including inrush current.

If the AC power capacity is insufficient, the circuit breaker of the AC power supply on the supply side may trip or the unit may malfunction.

1-4-2. 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 any damaged power cord.

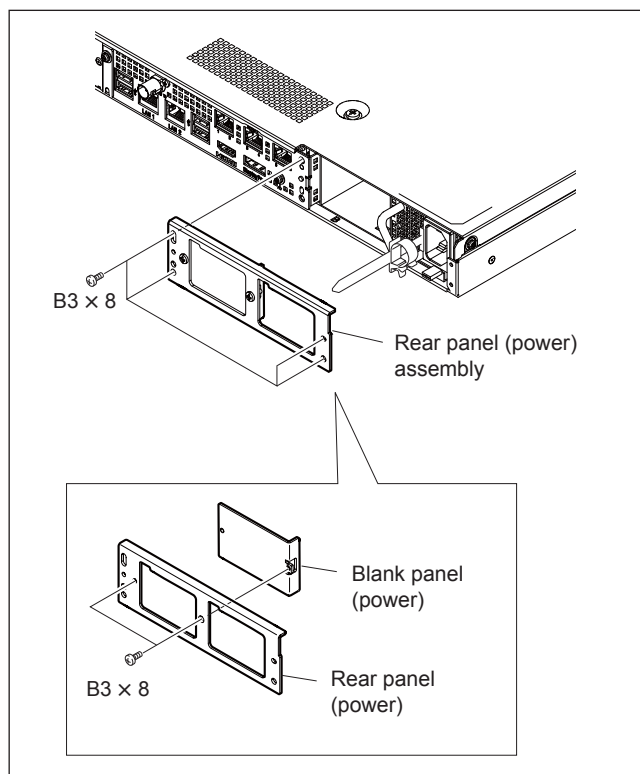
1-5. Installing an Optional Power Unit

This process is not necessary when no power unit is added.

Power unit

Optional power supply PWSK-101

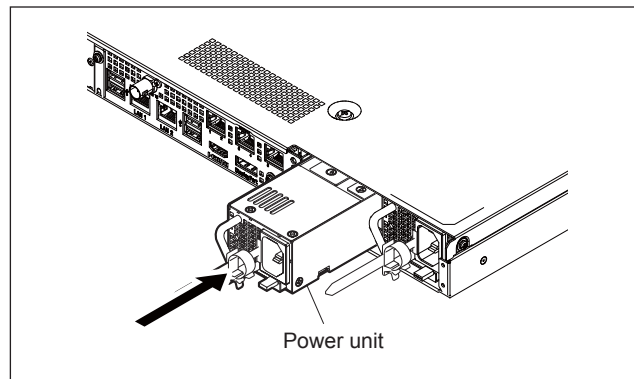
1. Remove the four screws (B3 × 8), and then remove the rear panel (power) assembly.
2. Remove the two screws (B3 × 8), and then remove the blank panel (power) from the rear panel (power).



3. Insert the power unit.

Note

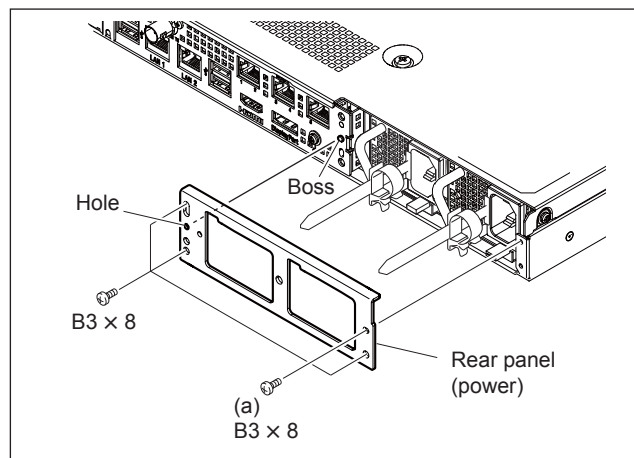
Make sure that the power unit has been locked after the insertion. (The power unit cannot be drawn out by pulling the handle without pulling up the lever.)



4. Align the hole to the boss, attach the rear panel (power), and then tighten the four screws (B3 × 8).

Note

First tighten the screw (a) shown in the illustration, and then tighten the other three screws.

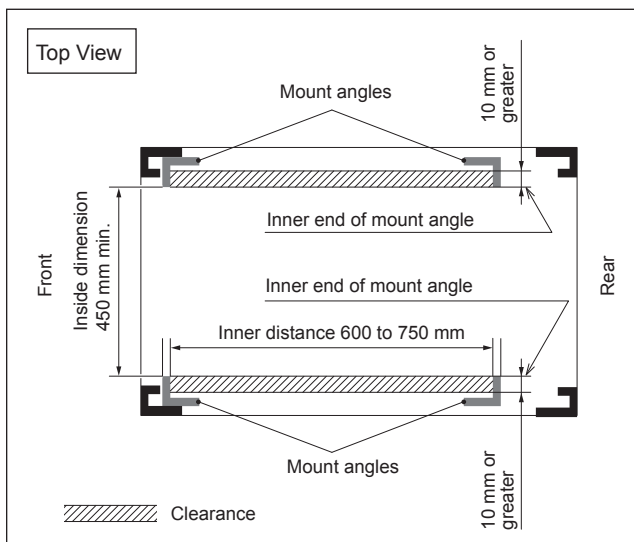
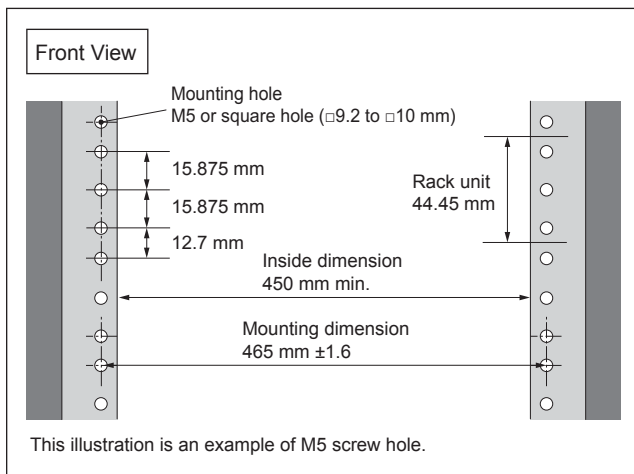


1-6. Rack Mounting

This process is not necessary if you do not mount this unit into a rack.

This unit can be mounted to a 19-inch rack conforming to the ANSI/EIA-310-D standard, which meets the following conditions.

1. Hole pitch: Universal pitch
2. Mounting hole: M5 screw hole or square hole ($\square 9.2$ to $\square 10$ mm)
3. Holes of the front and rear mount angles meet the conditions 1 and 2 above.
4. The inner distance between these mount angles is within a range of 600 to 750 mm.
5. A space of at least 10 mm is provided from the inner end of each mount angle to the right and left sides outward.



Be sure to mount this unit into a rack accurately following the procedure and notes mentioned below.

WARNING

- To prevent toppling over the rack, fix it on the horizontal and firm floor securely with bolts or some anchoring materials.

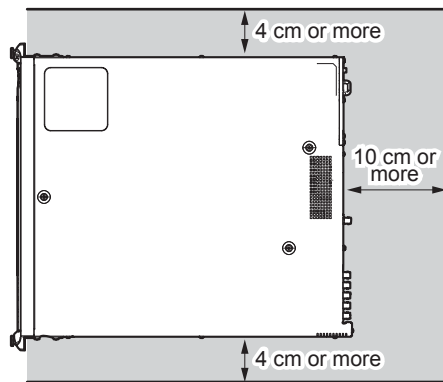
CAUTION

- More than two person for rack mount.
If you perform rack mount alone, you can hurt your back.
- Use the specified rack mount kit.
The use of other kit of low strength may drop the unit and cause the risk of injury.
- Fix the rack to the floor.
When the rack turns over with the heaviness of the unit, it causes the death and the serious injury.
- After rack mounting, fix the unit to the rack securely.
If the screws of rack angle are not fastened, the unit may slip down and dropped from the rack, and you may get injured. After rack mounting, be sure to tighten the screws.
- Entrust the installation to a specialized contractor.
When mounting the unit to the rack, confirm the enough strength, if not, the unit may be dropped and you may get injured.
Installation to the rack, entrust to a specialized contractor.

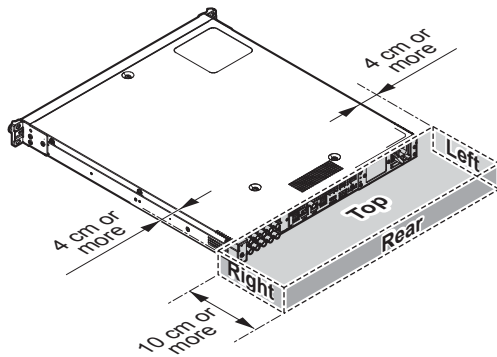
Note

- When other equipment with built-in hard disk drive is already mounted in the same rack to which this unit is going to be mounted. Turn off the power of the equipment before mounting this unit.
- Do not install the unit to the rack without exterior parts.
- Cables connected to the connector panel must be long enough to pull out the unit from the rack.
- To suppress the internal temperature rise of the unit, reserve a space of 4 cm or more on both sides and 10 cm or more on the rear side between the rack and the unit. (Refer to Fig. 1)
To ensure proper airflow, keep at least one of the four spaces (up, rear, right, and left) at the rear of the unit so as not to block airflow. (Refer to Fig. 2)
- Adjust the temperature inside the rack within the range of the unit's operating temperature. (Refer to Section 1-3)

(Fig.1)



(Fig.2)



1-6-1. Parts Required

Specified Rack Mount Kit

RMM-10 (Optional accessory)

Note

When you use any other rack mount kit than the specified one, you may fail to mount the unit to the specified 19 inch rack.

Parts packed in RMM-10

- Rack bracket 2 pcs
- Rack mount adaptor right 1 pc
[Including screw (B4 × 6: 7-682-560-09) 2 pcs]
- Rack mount adaptor left 1 pc
[Including screw (B4 × 6: 7-682-560-09) 2 pcs]
- Rack bracket attachment screw
(B4 × 6: 7-682-560-09) 6 pcs
- Adaptor attachment screw
(B4 × 10: 7-682-560-10) 6 pcs

Screws for Rack Mount

- Screw for rack mount (B5 × 12: 7-682-576-04) 4 pcs

Tip

These parts are supplied with this unit.

Parts for square holes

The following part is necessary to mount the unit to the square-hole rack.

Rack mount parts assembly (A-2126-310-A)

Components of rack mount parts assembly

- Positioning plate 4 pcs
- Plate nut (M5) 2 pcs



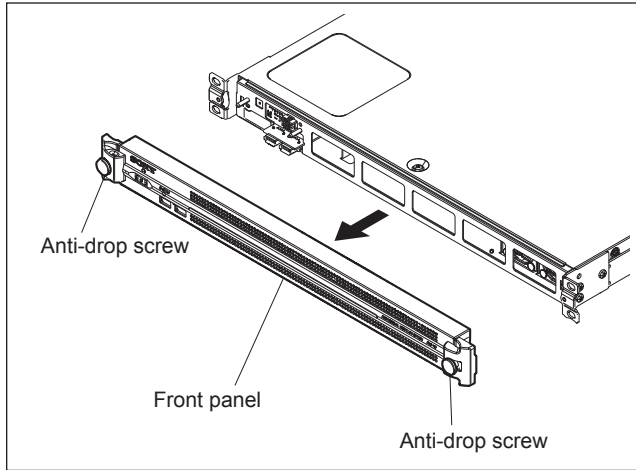
Positioning plate



Plate nut (M5)

1-6-2. Removing the Front Panel

Loosen the two anti-drop screws, and remove the front panel.

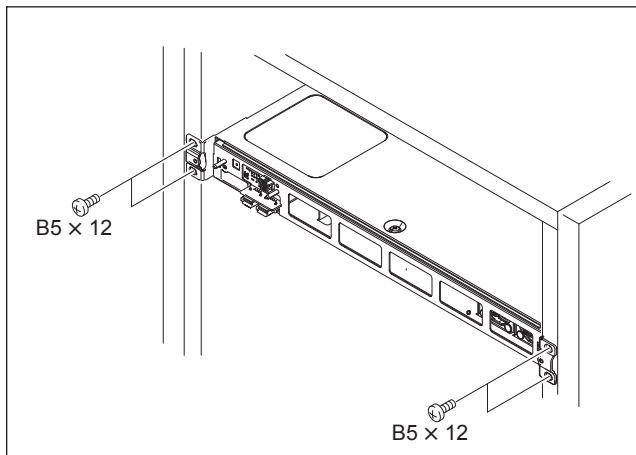


1-6-3. Mounting to Rack (M5 Screw Holes)

Refer to the RMM-10 Installation Manual.

Note

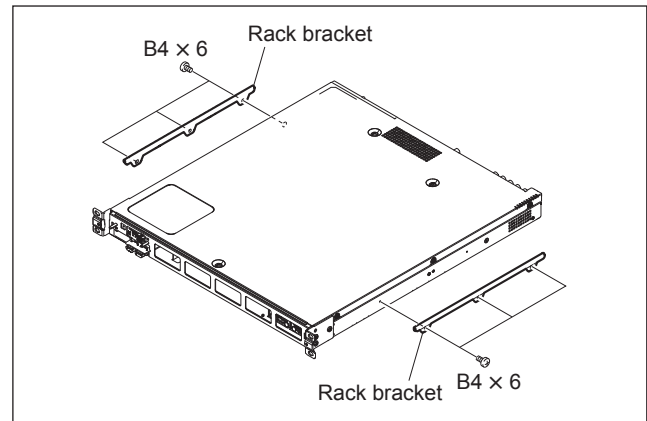
When fixing the rack angles of the unit to the rack, use the screws (B5 × 12) supplied with the unit.



1-6-4. Mounting to Rack (Square Holes)

Tighten the screws at the tightening torque below.
Tightening torque: $120 \times 10^{-2} \text{ N}\cdot\text{m}$ {12.2 kgf·cm}

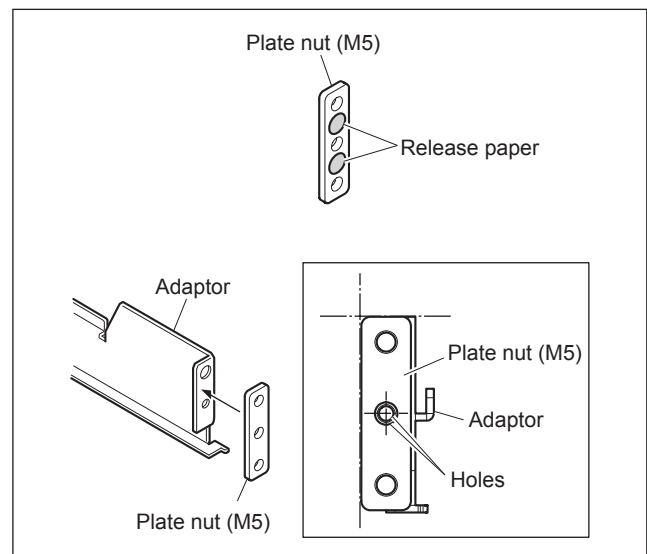
1. Attach the rack brackets in the side panels of the unit with the specified six screws (B4 × 6).



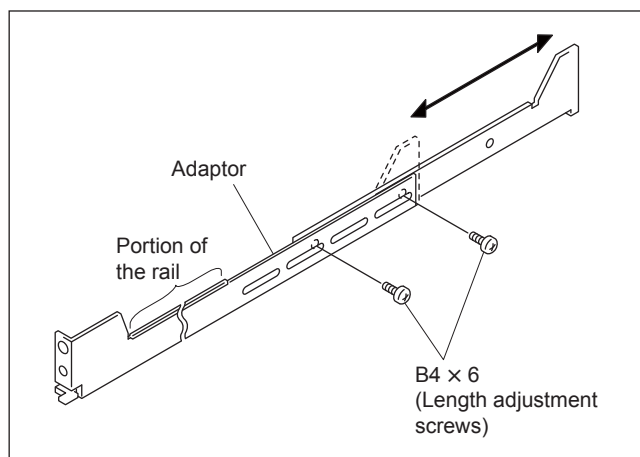
2. Remove the release paper of the plate nut (M5) and stick the plate nut to the front of the adaptor.

Note

- Align the adaptor with the plate nut (M5) at the top edges and at the lateral edges.
- Make sure that the centers of holes of the adaptor and the plate nut (M5) are aligned.
(The following figure shows the left adaptor.)



- Loosen the screws at the rear of the each adaptor, and then adjust each adaptor length to the rack depth.
(The illustration below shows the left adaptor.)



Tip

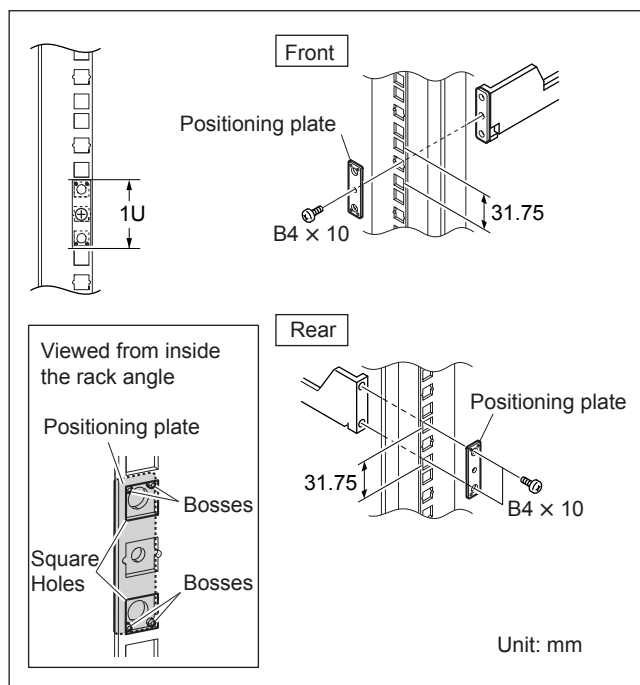
Maximum depth of adaptor: 750 mm

Minimum depth of adaptor: 600 mm

- Mount four positioning plates and the right and left adaptors with the specified six screws (B4 x 10).
(The following figure shows the left adaptor.)

Note

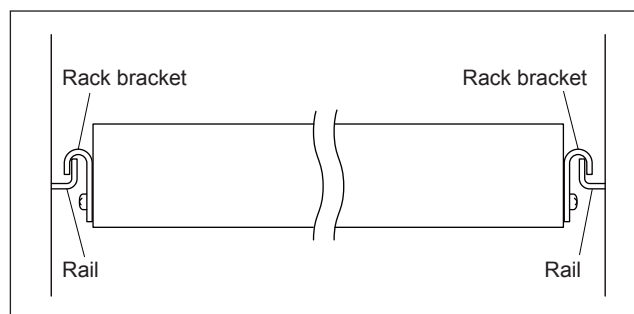
Insert the four bosses on each positioning plate into the square holes of the rack.



- Tighten the length adjustment screws (B4 x 6, two screws for each bracket) which are loosened in step 3.
- Align the bent section of the each rack bracket on the side panels of the unit to the rail, and then slide the unit backward.

Tip

Each rack bracket covers the rails as shown in the figure below.



Note

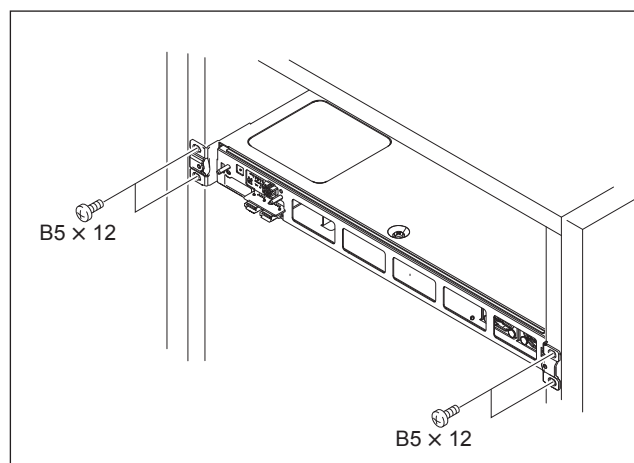
When the unit is pulled out about 270 mm, the rack brackets are disengaged from the rails.

When you pull out the unit, support the bottom of the unit firmly so that you do not drop it.

- Secure the rack angles to the rack with the specified four screws (B5 x 12).

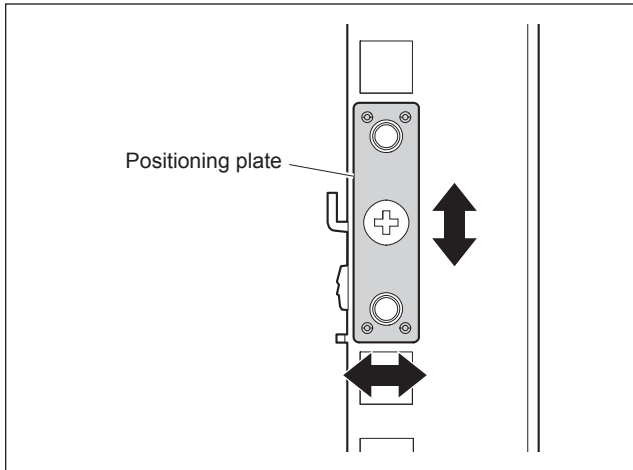
Note

Use the screws (B5 x 12) supplied with the unit.

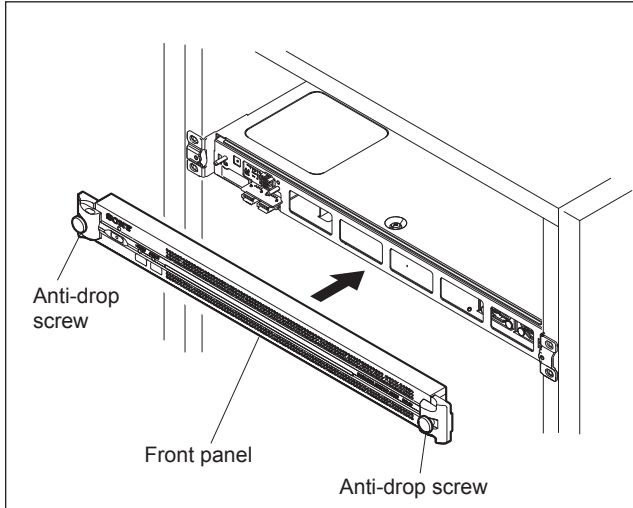


Tip

If you have trouble engaging the rack bracket with the rail or trouble attaching the front panel to the unit, adjust the position of positioning plate.

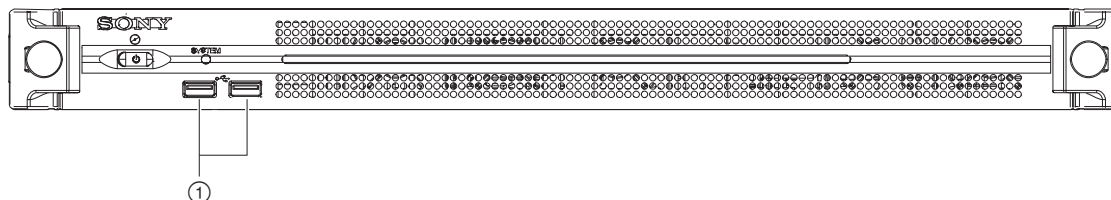
**1-6-5. Installing the Front Panel**

Attach the front panel to the main unit, and tighten the two anti-drop screws.



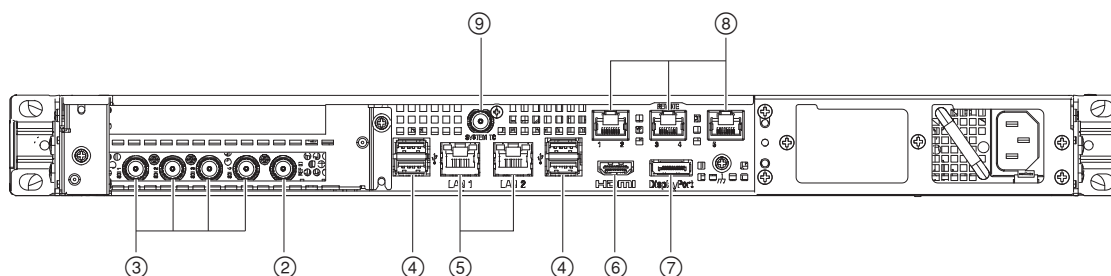
1-7. Connector Input/Output Signals

Front panel



No.	Name	Remarks
①	USB	Super Speed USB (USB 3.0) Type A × 2 Power delivery supported

Rear panel



No.	Name	Remarks
②	REF IN	BNC (1) Conforms to SMPTE ST 318, HD tri-level sync (0.6 Vp-p/75 Ω/sync negative) or SD black burst/composite sync (0.286 Vp-p/75 Ω/sync negative)
③	SDI1 to 4	BNC (4) Impedance: 75 Ω ±1 % Voltage: 0.8 V p-p HD: SMPTE ST 292-1 compatible SD: SMPTE ST 259 compatible
④	USB	Super Speed USB (USB 3.0) Type A (4) Among four, right lower connector supports to the power supply. (900 mA) Others do not support to the power supply.
⑤	LAN1/2	RJ-45 8-pin (2) 1000BASE-T, 100BASE-TX
⑥	HDMI	Type A (1) HDMI Ver. 1.4a, 1920 × 1200 maximum resolution, 60 Hz
⑦	DisplayPort	This connector is not used.
⑧	Remote 1/2, 3/4, 5	These connectors are not used.
⑨	SYSTEM TC	BNC (1) SMPTE ST 12-1 compatible 0.5 to 18 Vp-p, 10 kΩ, unbalanced

1-8. Connectors and Cables

Use the following connectors (or cables) or equivalents for cable connection.

Panel Indication	Applicable Connector (Cable)	Sony Part No.	Remarks
REF IN	BNC 75 Ω , MALE	1-569-370-12	—
SDI 1 to 4	BNC 75 Ω , MALE	1-569-370-12	—
HDMI	HDMI type A The HDMI cable, use a product made in Sony. Recommended: HIGH SPEED HDMI cable DLC-HE20XF (2 m)	—	—
USB	Use a cable for super speed USB.	—	—
SYSTEM	BNC 75 Ω , MALE	1-569-370-12	—
LAN1/2	Network cable STP* cable is recommended.	—	Commercially available

*STP: Shielded Twisted Pair

Section 2



Service Overview

2-1. Onboard Switches

2-1-1. Settings of Onboard Switch

Note

Be sure not to change the default settings of switches on the board.

Board	Ref. No.	Factory Setting (■: Knob position)
MB-1204	S800	
	S2201 (CFG)	
HPR-48	S4002	