SONY

DIGITAL CINEMA PROJECTOR

SRX-R320

CINEALTA 4K

INSTALLATION MANUAL

1st Edition

⚠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.

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ーを以下のポートに接続しないでください。
: NETWORKコネクター
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.
: NETWORK connector
Follow the instructions for the above port.

For kundene i Norge

Dette utstyret kan kobles til et IT-strømfordelingssystem.

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1. Installation

2. Adjustment

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Manual Structure

Purpose of this manual

This manual is the installation manual of Digital Cinema Projector SRX-R320.
This manual is intended for use by trained system and service engineers, and describes the information for installation of the unit.

The DIF-188 board mounted on this unit as standard equipment is equivalent of LKRI-005.
For the service information on the DIF-188 board, refer to the LKRI-005 service manual.

Related manuals

The following manuals are prepared for this unit.

- **Operating Instructions (supplied with this unit)**
  This manual describes the information required for the actual management and operation of this unit.

- **Service Manual (available on request)**
  This manual describes the information for periodic maintenance and detailed service.

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- Intel and Pentium are registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.
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Other system names, product names, and company names appearing in this manual are trademarks or registered trademarks of their respective holders.

Section 1
Installation

Outline

The light source lamp bulb and projection lens are optionally available. You can incorporate them in the system as required. For selecting the light source lamp and projection lens, please contact your local Sony Sales Office/Service Center.

Before turning on the power of the main unit, perform the following procedure as required. (For details, refer to the description of each section.)
For the removal of the cabinet panel required for each procedure, refer to Section 1-1.

Notes

- It is not required to perform steps 1 to 11 sequentially. However, do not perform the connection of power cord in step 12 before completing steps 1 to 11.
- Be sure to remove the lamp bulb when moving this unit.

1. Adjust the tilt angle. (Refer to Section 1-2.)
2. Install the duct. (Refer to Section 1-3.)
3. Install the projection lens. (Refer to Section 1-4.)
4. Install the lens cover. (Refer to Section 1-5.)
5. Install the status light assembly. (Refer to Section 1-6.)
6. Install the touch panel adapter. (Refer to Section 1-7.)
7. Install the lamp bulb. (Refer to Section 1-8.)
8. Install LMT-300 and connect with this unit. (Refer to Section 1-9.)
9. Install the optional board to INPUT A and INPUT B slot. (Refer to Section 1-10.)
10. Connect the interlock connector. (Refer to Section 1-11.)
11. Connect and wire the external device. (Refer to Section 1-12.)
12. Connect the power cord. (Refer to Section 1-13.)

1-1. Removing/Installing the Cabinet Panel

Note The four (each two) keys of the panel (U7) block assembly and two panel (U4) block assembly described in this section are supplied with this unit.

1-1-1. Name of Cabinet Panel

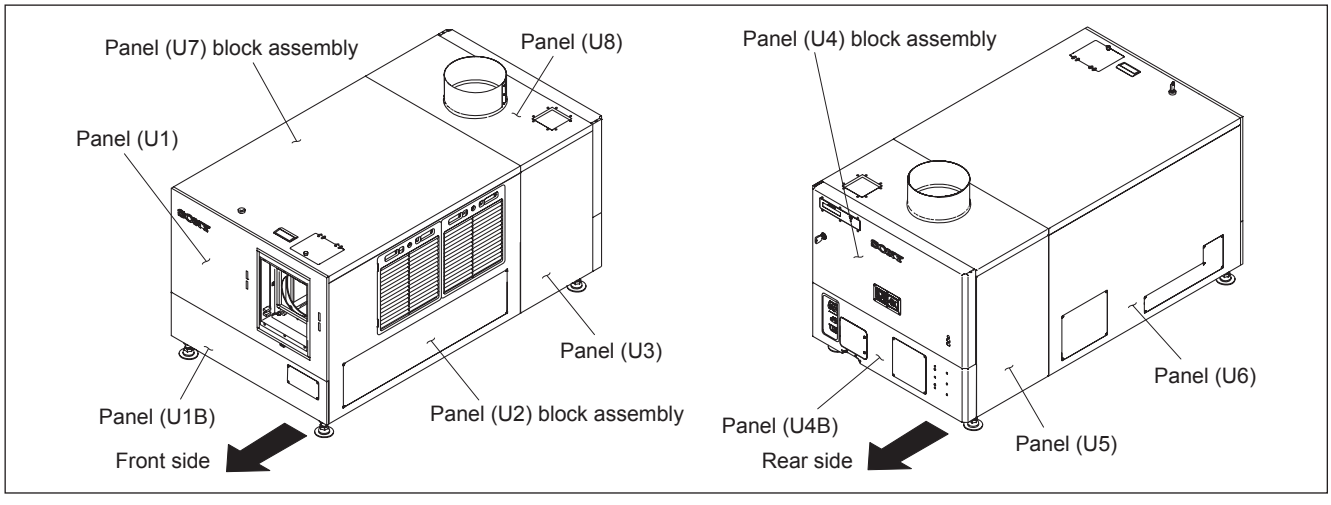


Fig. 1-1-1

1-1-2. Panel (U7) Block Assembly

1. Release the lock on the panel (U7) block assembly.
2. Remove the panel (U7) block assembly in the direction of the arrow with attention to the three hooks.

3. To install, reverse the removal procedure.

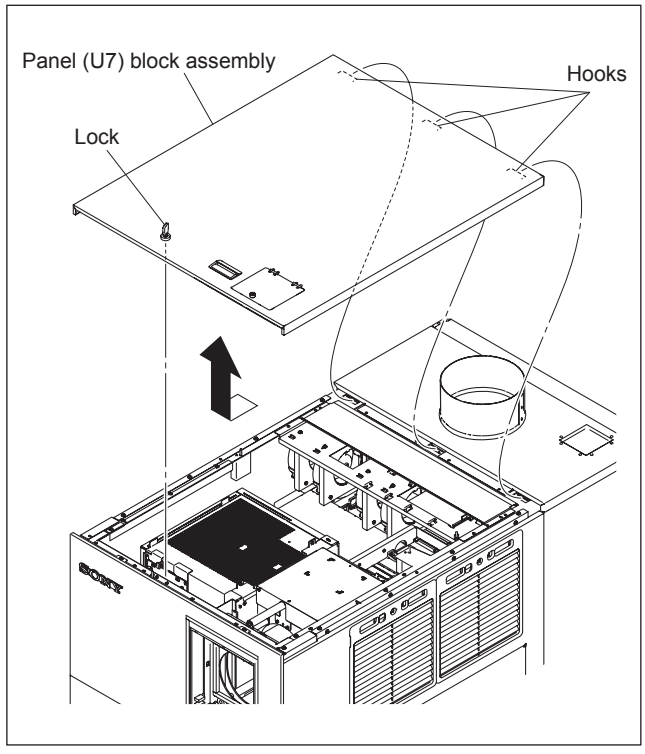


Fig. 1-1-2

1-1-3. Panel (U2) Block Assembly

1. Remove the panel (U7) block assembly.
(Refer to Section 1-1-2.)

2. Loosen the two screws (with drop-safe), then remove the two grilles.
3. Remove the five screws, then raise the panel (U2) block assembly in the direction of arrow ① with attention to the twelve hooks.
4. Remove the panel (U2) block assembly in the direction of arrow ②.

5. To install, reverse the removal procedure.

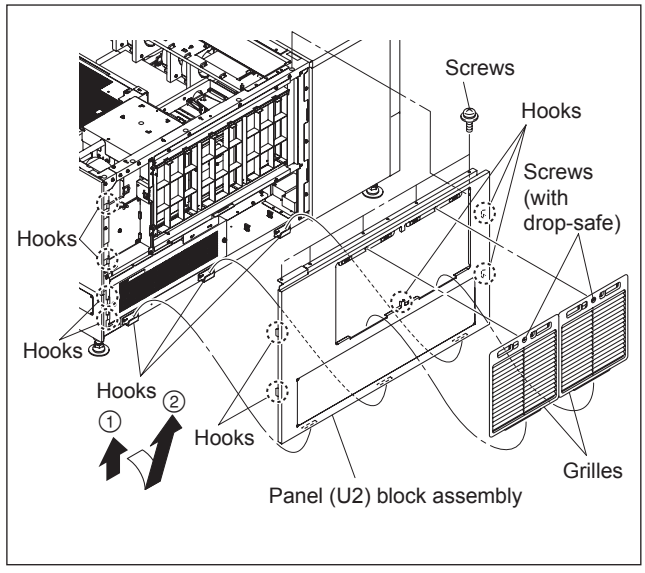


Fig. 1-1-3

1-1-4. Panel (U3)

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)

3. Remove the three screws, then remove the panel (U3) in the direction of the arrow.

4. To install, reverse the removal procedure.

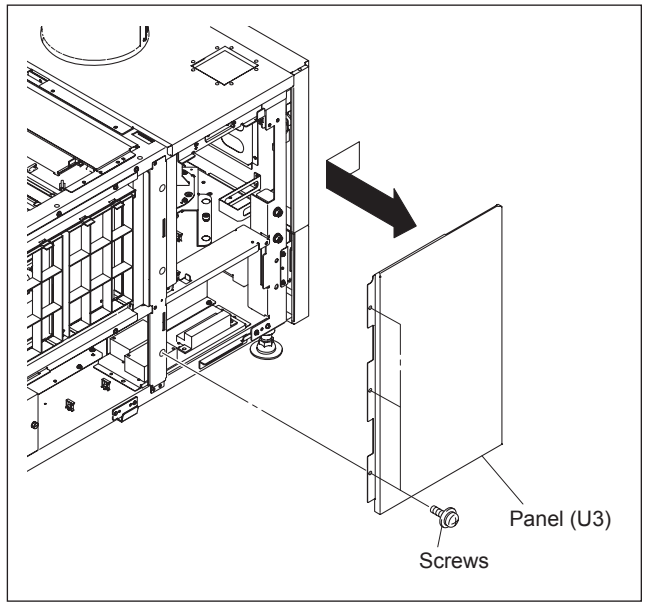


Fig. 1-1-4

1-1-5. Panel (U6)

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)

2. Remove the five screws, then raise the panel (U6) in the direction of arrow ① with attention to the eleven hooks.
3. Remove the panel (U6) in the direction of arrow ②.

4. To install, reverse the removal procedure.

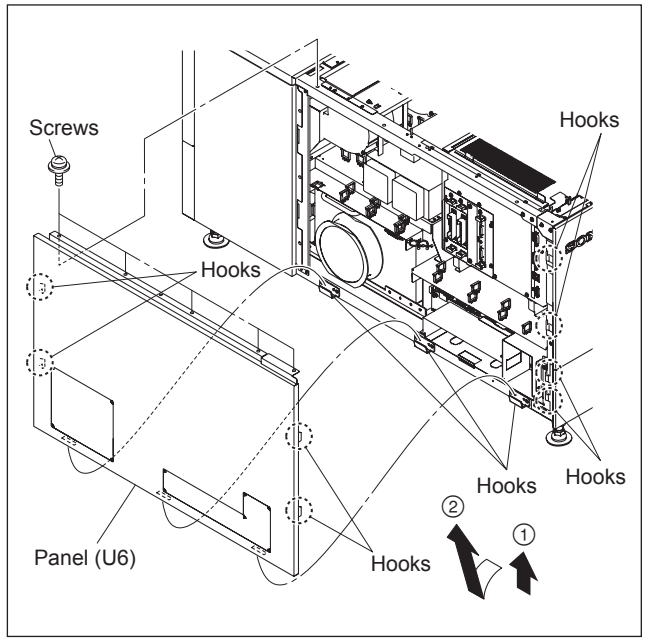


Fig. 1-1-5

1-1-6. Panel (U5)

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U6). (Refer to Section 1-1-5.)

3. Remove the three screws, then remove the panel (U5) in the direction of arrow.

4. To install, reverse the removal procedure.

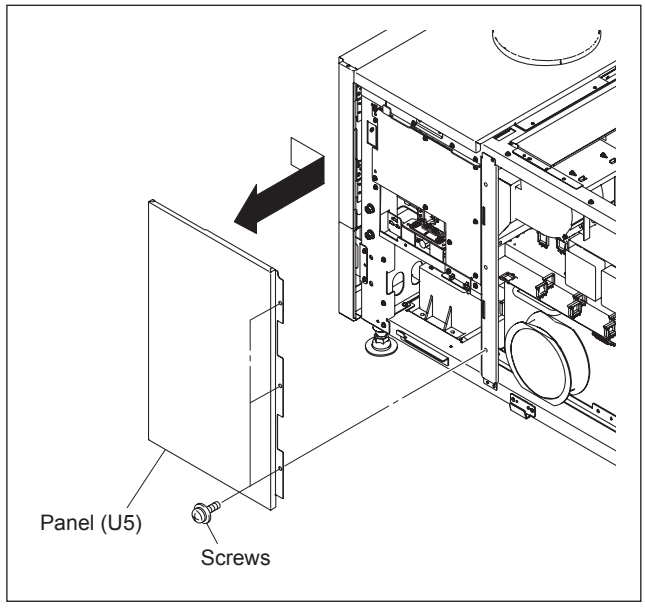


Fig. 1-1-6

1-1-7. Panel (U1B)

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)
3. Remove the panel (U6). (Refer to Section 1-1-5.)

4. Remove the six screws, then lower the panel (U1B) in the direction of arrow ①.
5. Remove the panel (U1B) in the direction of arrow ②.

6. To install, reverse the removal procedure.

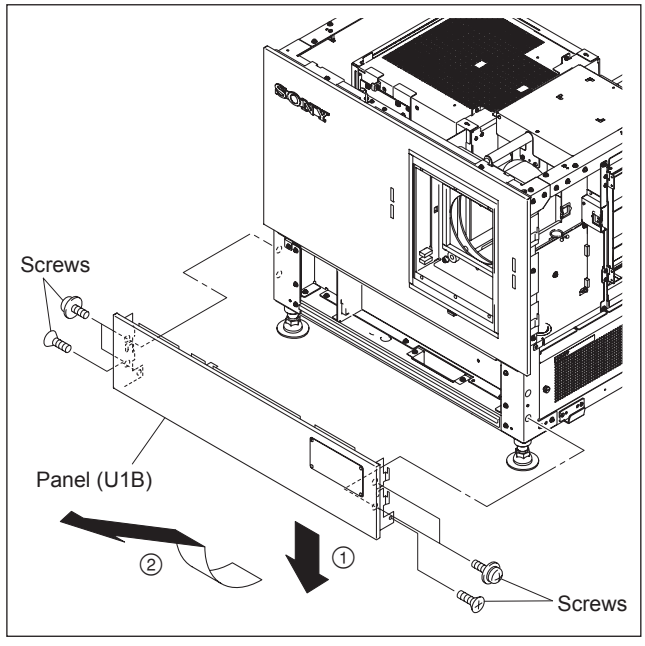


Fig. 1-1-7

1-1-8. Panel (U1)

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)
3. Remove the panel (U6). (Refer to Section 1-1-5.)
4. Remove the panel (U1B). (Refer to Section 1-1-7.)

5. Remove the eight screws, then remove the panel (U1) in the direction of arrow.

6. To install, reverse the removal procedure.

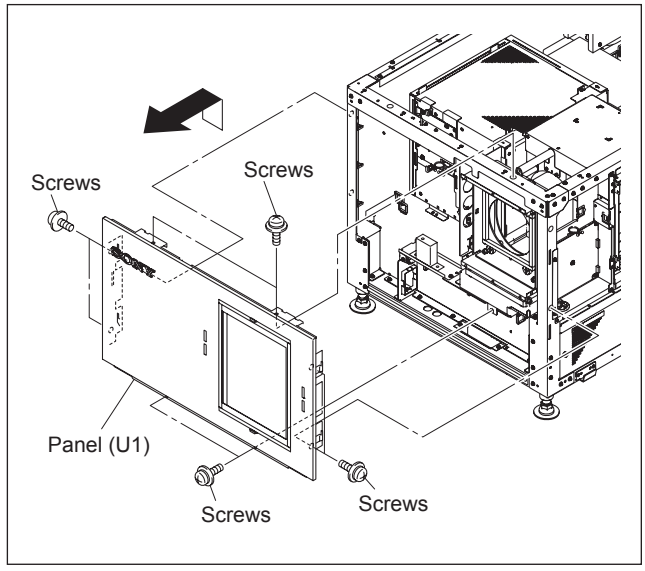


Fig. 1-1-8

1-1-9. Panel (U4) Block Assembly

1. Release the lock on the panel (U4) block assembly.
2. Open the panel (U4) block assembly at an angle of about eighty degrees.
3. Raise to remove the panel (U4) block assembly from the two hinge portions.

4. To install, reverse the removal procedure.

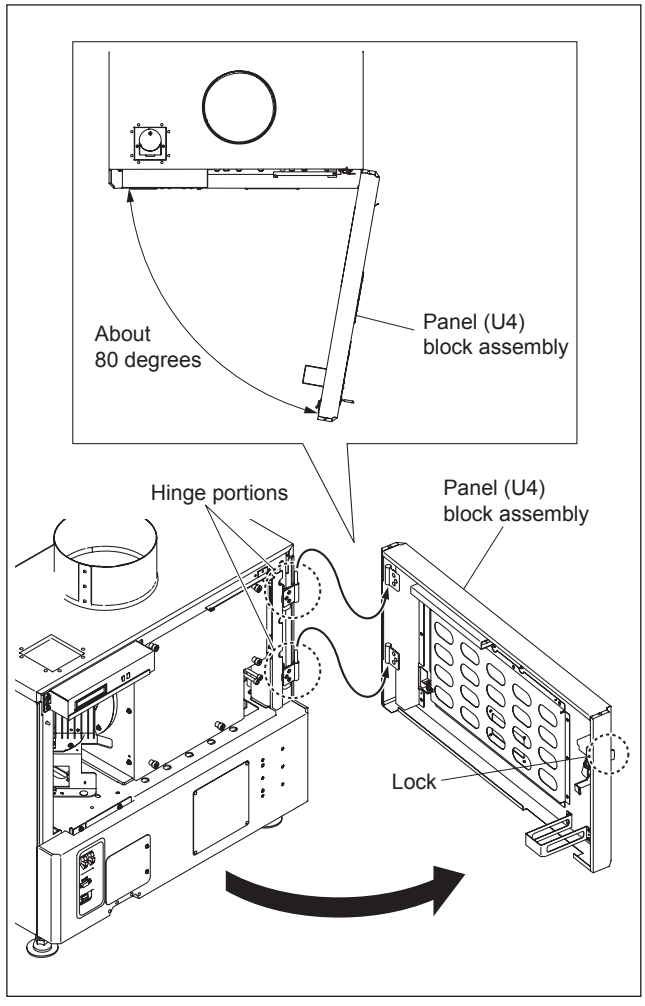


Fig. 1-1-9

1-1-10. Panel (U4B)

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)
3. Remove the panel (U3). (Refer to Section 1-1-4.)
4. Remove the panel (U6). (Refer to Section 1-1-5.)
5. Remove the panel (U5). (Refer to Section 1-1-6.)
6. Open the panel (U4) block assembly. (Refer to steps 1 and 2 in Section 1-1-9.)

7. Remove the four screws, then remove the panel (U4B) in the direction of arrow with attention to the two hooks.

8. To install, reverse the removal procedure.

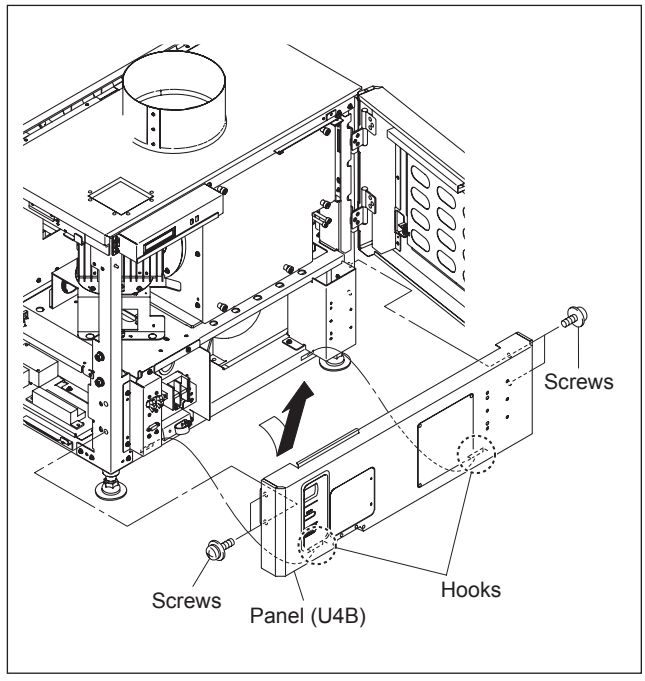


Fig. 1-1-10

1-1-11. Panel (U8)

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)
3. Remove the panel (U3). (Refer to Section 1-1-4.)
4. Remove the panel (U6). (Refer to Section 1-1-5.)
5. Remove the panel (U5). (Refer to Section 1-1-6.)

6. Remove the two screws, then remove the STL cover.
7. Remove the eight screws, then remove the panel (U8).

8. To install, reverse the removal procedure.

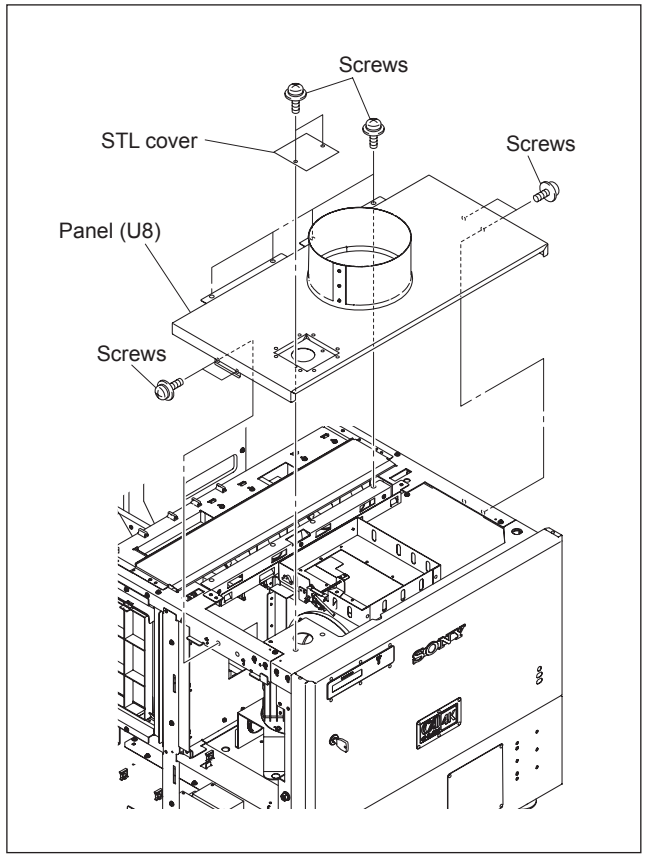


Fig. 1-1-11

1-2. Tilt Angle Adjustment

Note

For further adjustment, “2-6. Field Angle Adjustment” is required.

In the case of tilt angle under 5 degrees:

Adjust the tilt angle using the adjuster in the lower portion of this unit.

1. Loosen the nut.
2. Adjust the tilt angle by rotating the adjuster in the lower portion of this unit.
3. Secure the adjuster by tightening the nut to the adjuster pipe side.

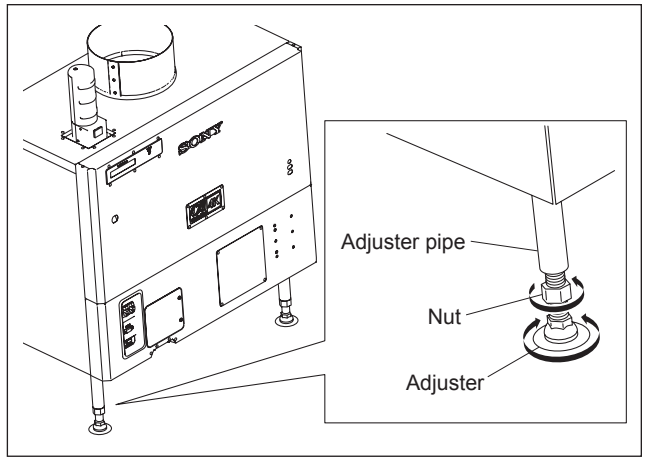


Fig. 1-2a

In the case of tilt angle from 5 to 10 degrees:

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)
3. Remove the panel (U3). (Refer to Section 1-1-4.)
4. Remove the panel (U6). (Refer to Section 1-1-5.)
5. Remove the panel (U5). (Refer to Section 1-1-6.)

6. Set the tools such as jack at both sides of frame, then raise the rear portion of the main unit.
7. Remove the four M8 bolts.
8. Move the adjuster pipe assembly downward and insert the four M8 bolts into the four holes to secure it.
9. Lower the jack and attach the panel (U5), panel (U6), panel (U3), panel (U2) block assembly and panel (U7) block assembly.

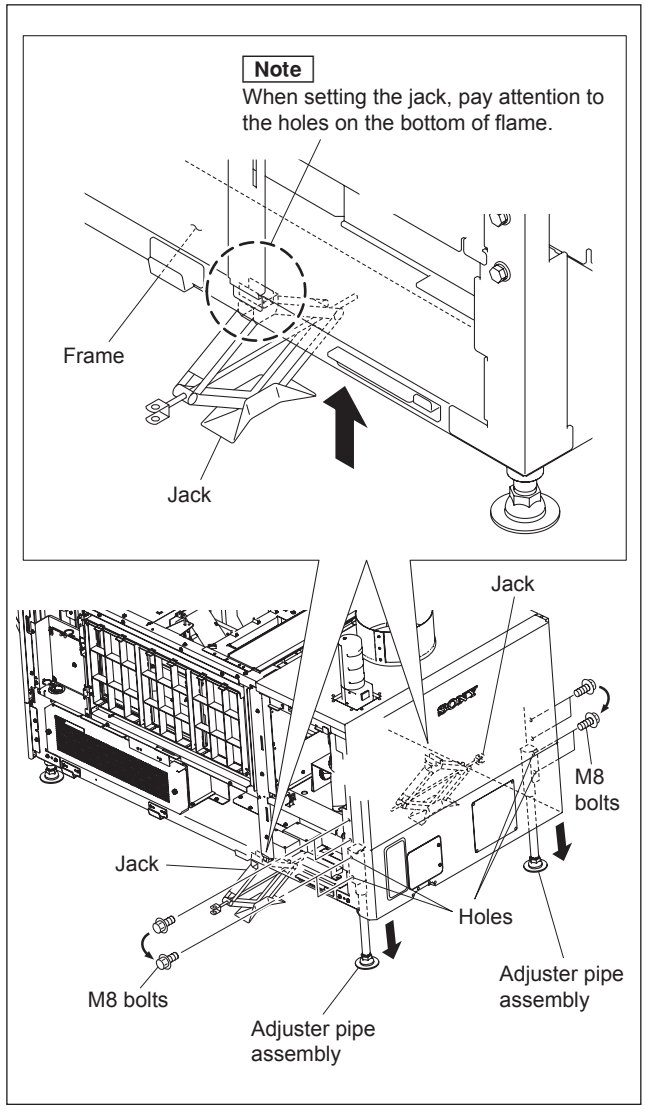


Fig. 1-2b

In the case of fixing this unit:

This unit can be fixed to the floor using the anchor BKT. When fixing this unit, attach the anchor BKT to the adjuster as shown in the illustration.

Part name

Anchor BKT (optionally available): 3-294-224-01

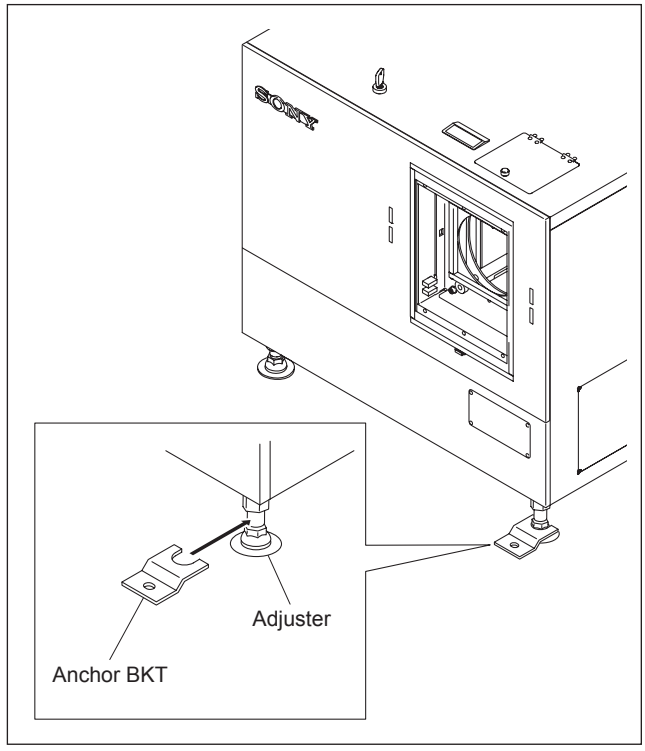


Fig. 1-2c

1-3. Installing the Duct

Attach the commercially available 8-inch duct to the duct connection of the panel (U8) of this unit.

Note

When attaching the duct, be careful not to bend it so that the exhaust air flows smoothly.

External fan (exhaust air) air volume specification

The following exhaust air volume is required for the 8-inch duct.

Exhaust air volume: 450 to 550 ft^3/min
(12.7 to 15.6 m^3/min)

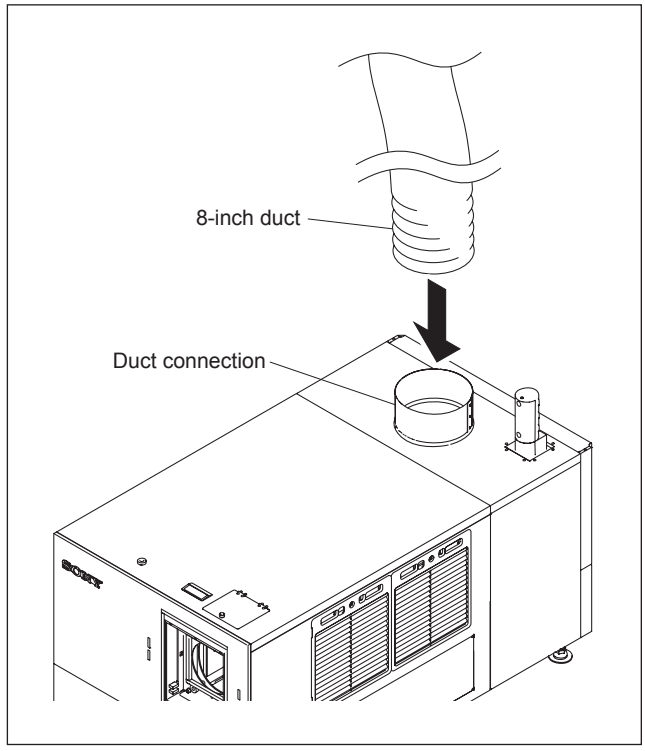


Fig. 1-3

1-4. Installing the Projection Lens

1. Attach the projection lens.
2. Align the notch of lens bracket with the line of projection lens and tighten the supplied four bolts in the order from ① to ④.
3. Connect the three cables (focus, zoom and POTENTIO).

Note

Do not attach the lens cover before completing the lens adjustment. (Refer to Section 2-3.)

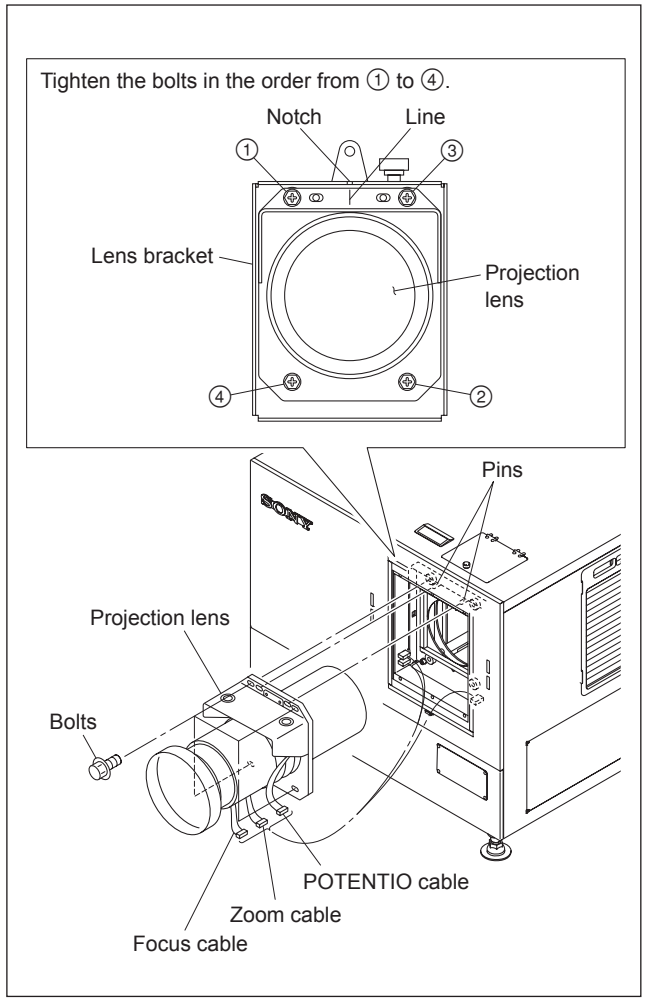


Fig. 1-4

1-5. Installing the Lens Cover

1. Attach the lens cover in the direction of arrow with attention to the three hooks.

   Note

   The lens covers are same parts, so they can be attached both upper and lower.

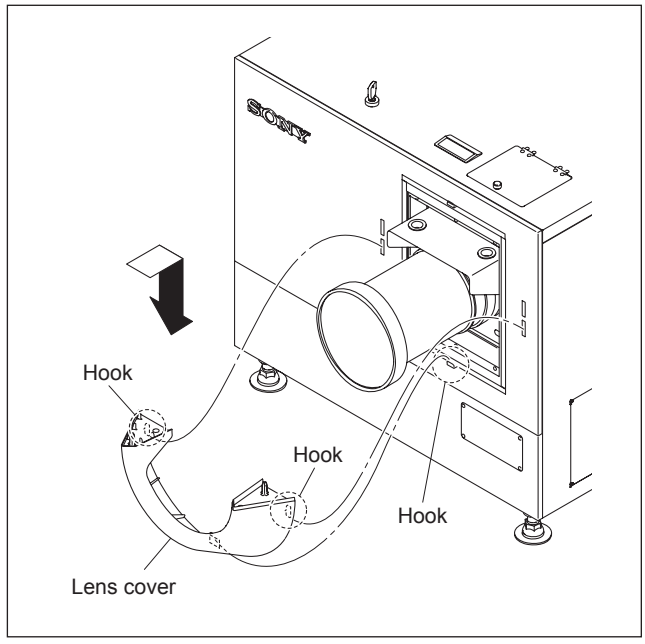


Fig. 1-5a

2. Attach the lens cover in the direction of arrow with attention to the three hooks.

   Note

   When attaching the lens cover, align the four convex portions with the four holes.

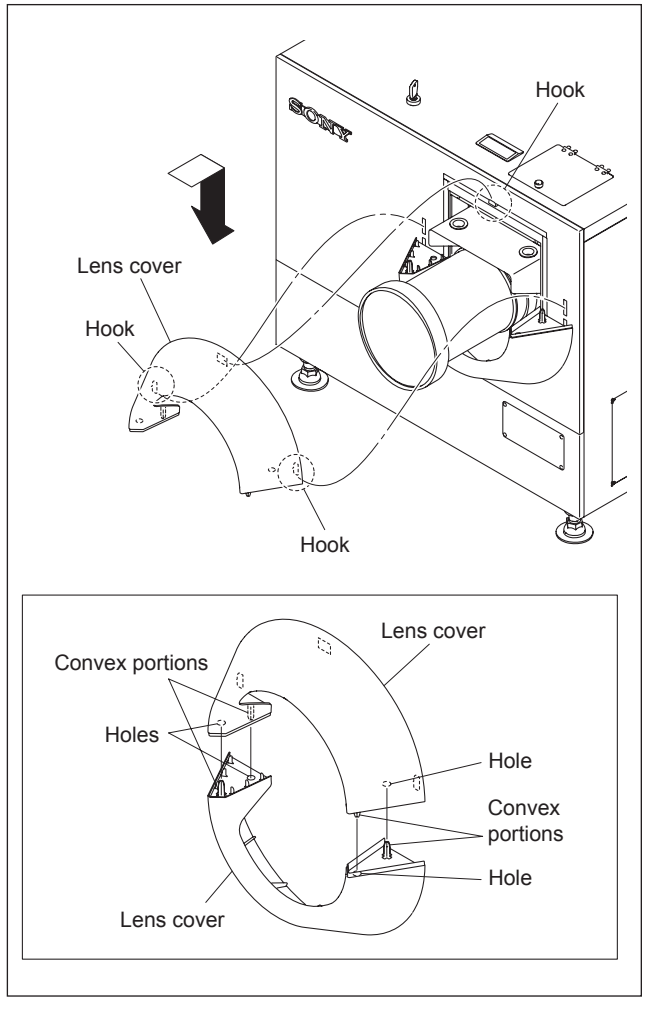


Fig. 1-5b

1-6. Installing the Status Light Assembly

1. Open the panel (U4) block assembly. (Refer to steps 1 and 2 in Section 1-1-9.)

2. Remove the two screws, then remove the STL cover.
   Note
   Store the removed STL cover.

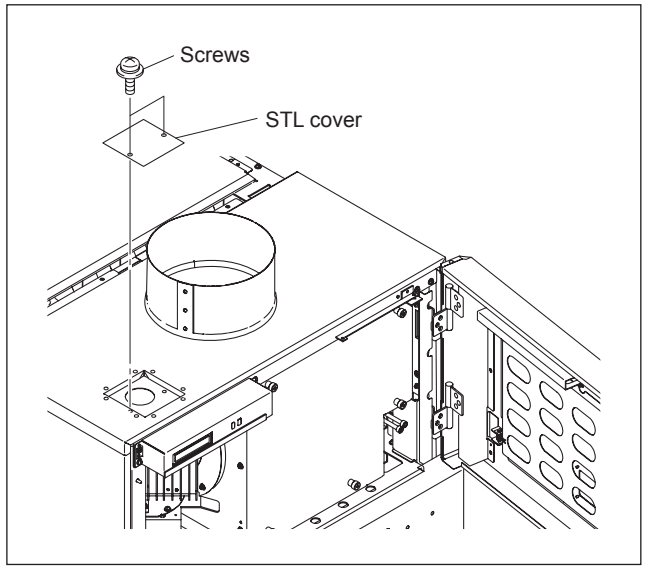


Fig. 1-6a

3. Attach the one-touch bush (supplied with the unit) to the hole in the upper area of this unit.
4. Route the harnesses through the hole in the upper area of the unit, then connect the two harnesses of the status light assembly and the two harnesses of the unit.
   Note
   The tags are attached on the harnesses (4-pin).
   Connect them with the following combination of the indication on the tag.

Status light side	This unit side
LIGHT	LIGHT
(none)	SW

5. Attach the status light assembly with the two screws.
6. Close the panel (U4) block assembly.

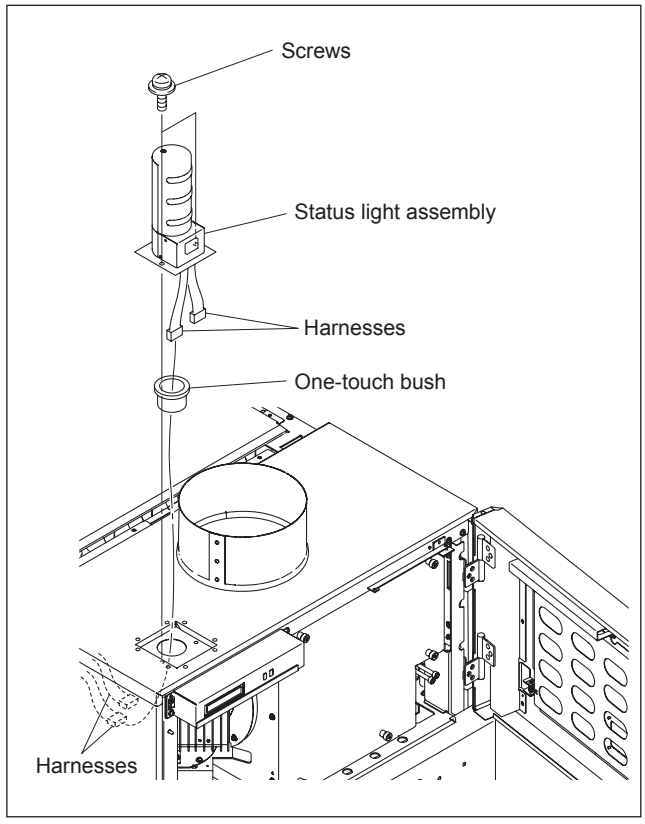


Fig. 1-6b

1-7. Installing the Touch Panel Adapter

Note

The recommended operating monitor manufactured by ADVANTECH can be attached to the supplied touch panel adapter. For details, contact your local Sony Sales Office/Service Center.

1. Attach the TPC base to the panel (U4B) with the six M4 screws.

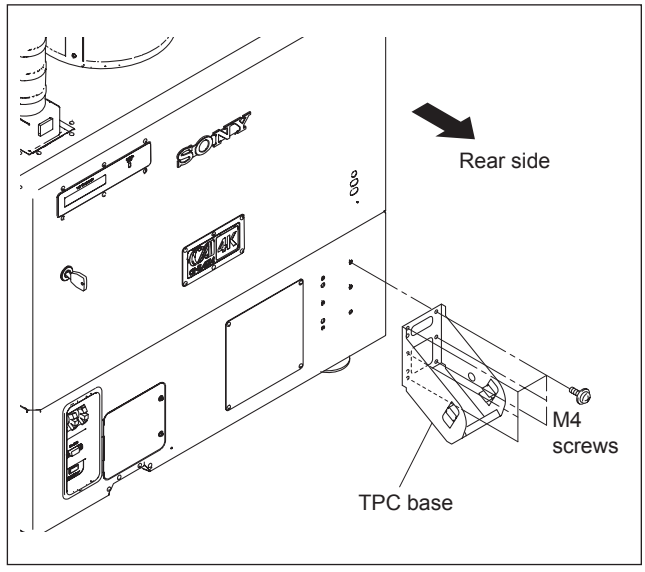


Fig. 1-7a

2. Attach the TPC bracket to the operating monitor with the six M3 screws.

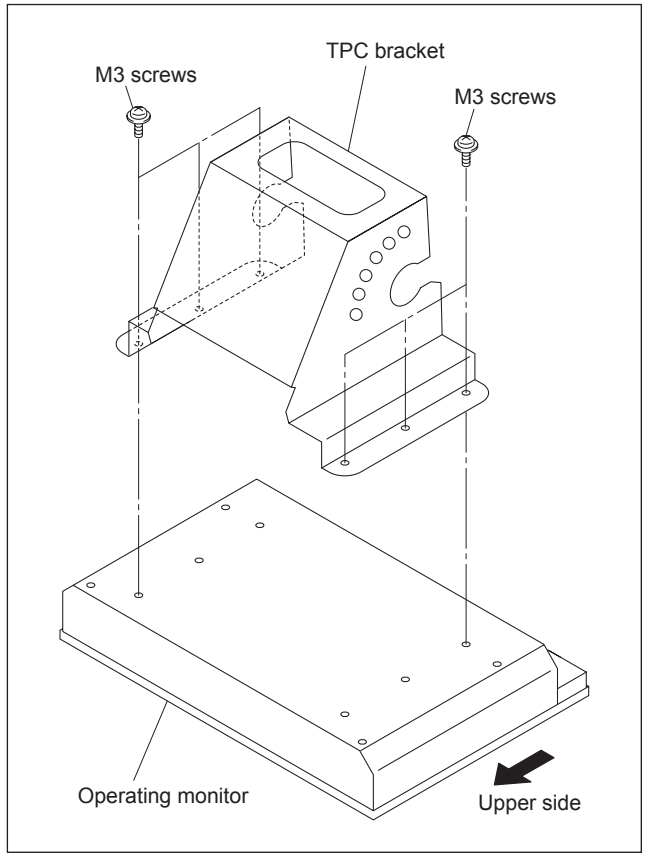


Fig. 1-7b

3. Pull the knob of the TPC base in the direction of the arrow ①, then fix it by rotating in the direction of the arrow ②.
4. Attach the operating monitor to the TPC base as shown in the illustration.
5. Align the knob with the angular adjustment hole, then return the knob to the original position in the reverse order of step 3.

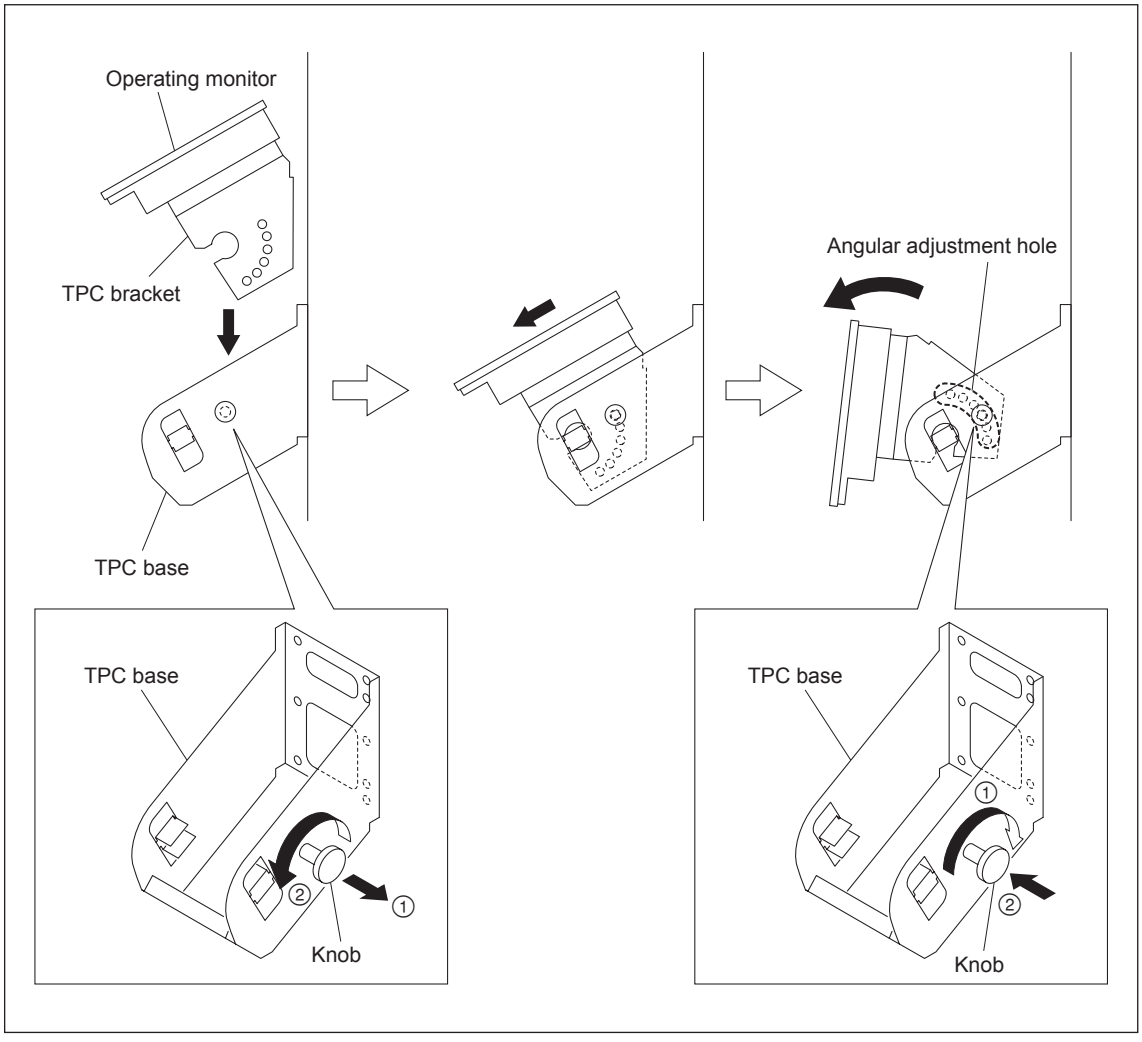


Fig. 1-7c

1-8. Installing the Lamp Bulb

WARNING

- Be sure to turn off the power of this unit before installing the lump bulb.
- Be sure that only the qualified service personnel can install the lamp bulb. For the qualification, please contact your local Sony Sales Office/Service Center.
- When installing the lamp bulb, be sure to wear the protection suit kit (J-7120-330-A (M size), J-7120-340-A (L size), or J-7120-460-A (XL size)). Also, wear the shoes that cover the instep of the foot completely.
- Be extremely careful when handling the xenon lamp bulb because a high voltage is applied to it.
- Do not touch the lamp bulb with bear hands. Otherwise, it may break the lamp bulb.

Wearing of protection suit kit

1. Wear the jacket and trousers.
2. Wear the arm cover on both hands so that the wrists are completely covered.
3. Wear the hood and attach the face shield.
4. Adjust the face shield to the head size using the adjuster on the back of the face shield.
5. Wear the glove on both hands.

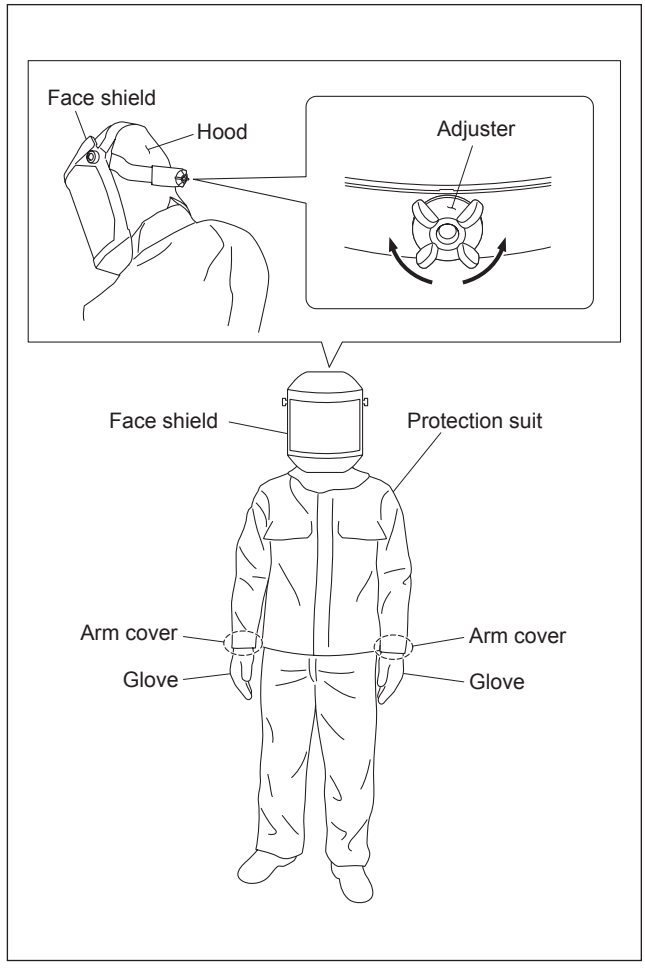


Fig. 1-8a

Procedure

Notes

- Keep the serial code label affixed on the Operating Instructions of the lamp bulb which is required for installation.
- Keep the materials such as packaging box, case, protection sheet because they are used when disposing of the used lamp bulb.
- As for the anode harness integrated lamp bulb, steps 1 and 2 are not required.

1. Loosen the screw and bend portion A of the anode harness.

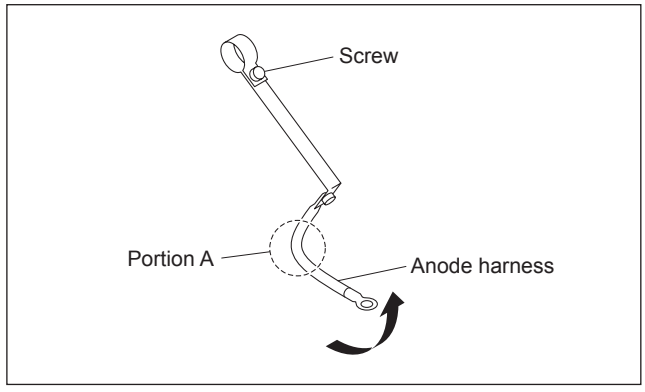


Fig. 1-8b

2. Attach the anode harness to the anode side of the lamp bulb, then tighten the screw.
   (Tightening torque: 1.2 N•m)

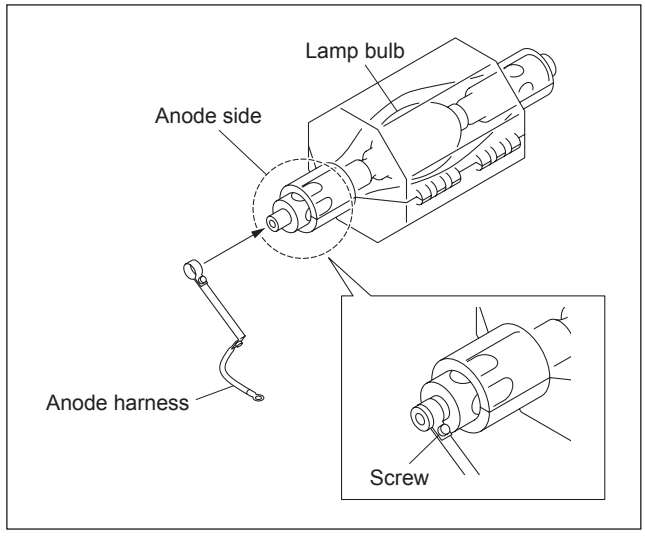


Fig. 1-8c

3. Open the panel (U4) block assembly.
   (Refer to steps 1 and 2 in Section 1-1-9.)
4. Loosen the screw (with drop-safe), then rotate the cold mirror assembly in the direction of the arrow.
5. Loosen the five screws (with drop-safe), then remove the maintenance cover.

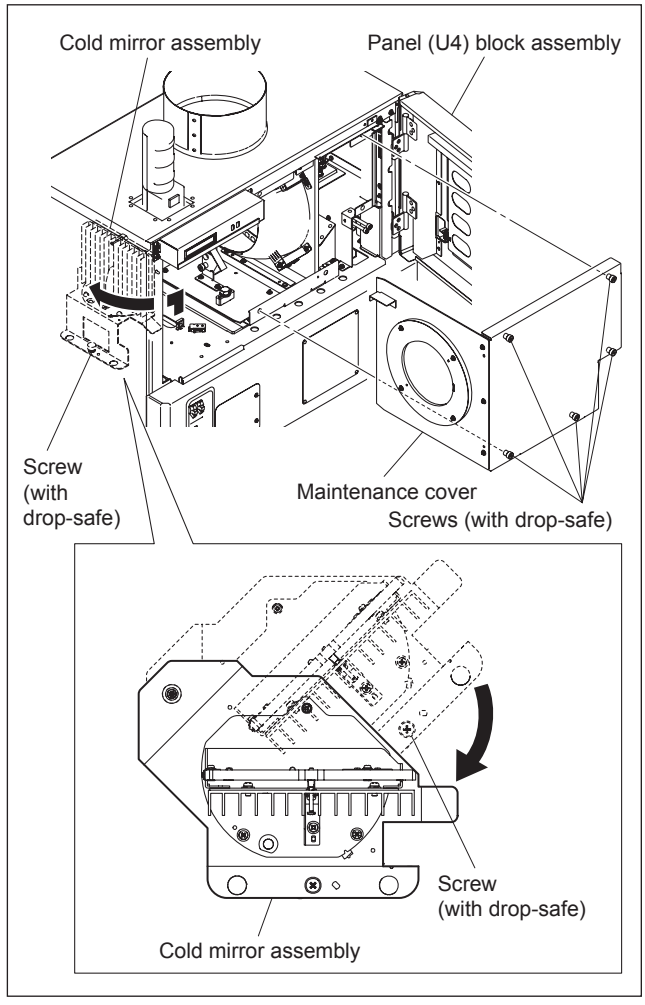


Fig. 1-8d

6. Remove the bolt from the anode terminal.
7. Loosen the hexagon socket set screw of the cathode terminal.

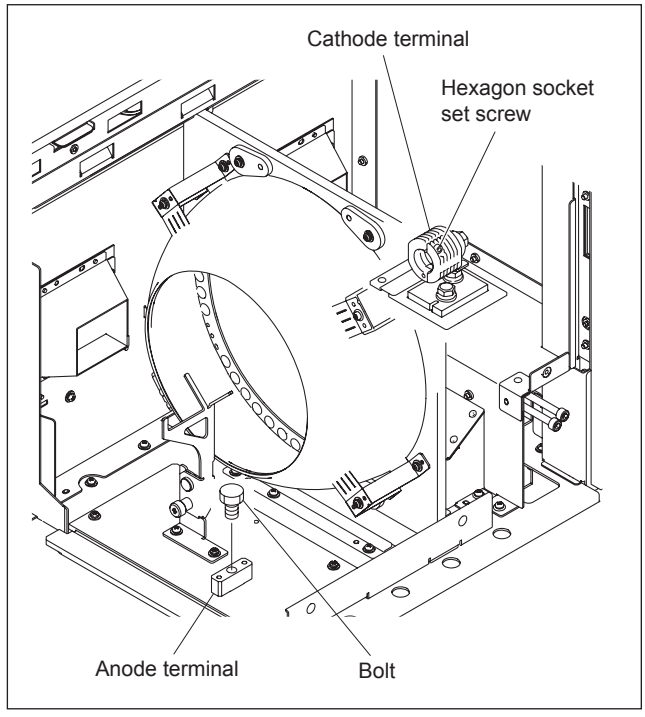


Fig. 1-8e

8. Remove the plastic cover from the lamp bulb.

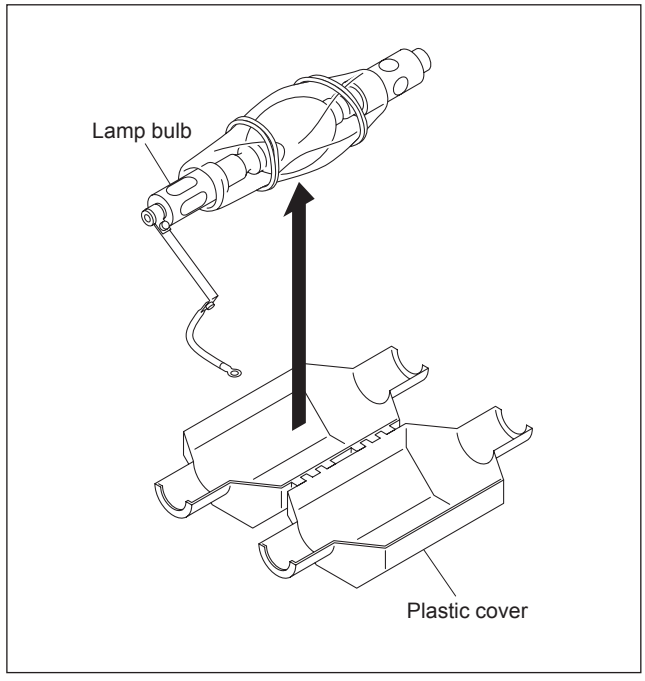


Fig. 1-8f

9. Remove the protection sheet from the lamp bulb.

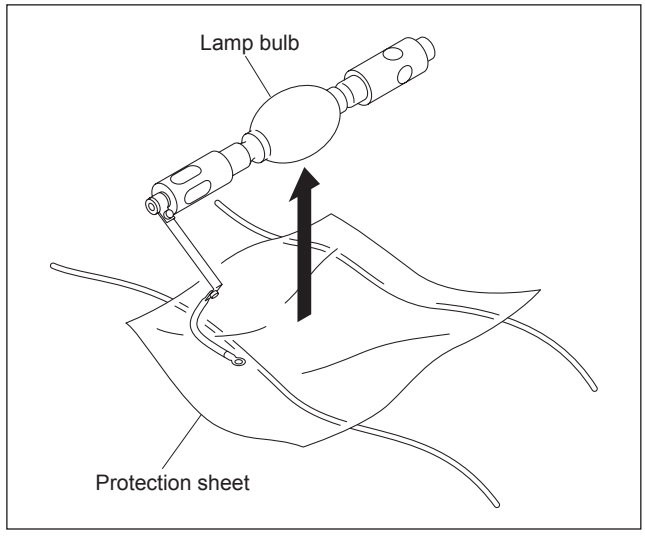


Fig. 1-8g

10. Loosen the knob, then move the anode holder in the direction of the arrow.
11. Insert portion A of the lamp into the cathode terminal.

Note

When attaching the lamp bulb, be careful not to damage the reflector portion. Also, be careful not to damage the glass of lamp bulb. Otherwise, it may break the lamp bulb.

12. Hold the cathode side of the lamp bulb firmly and raise the anode side. Then, return the anode holder to the original position and tighten the knob.

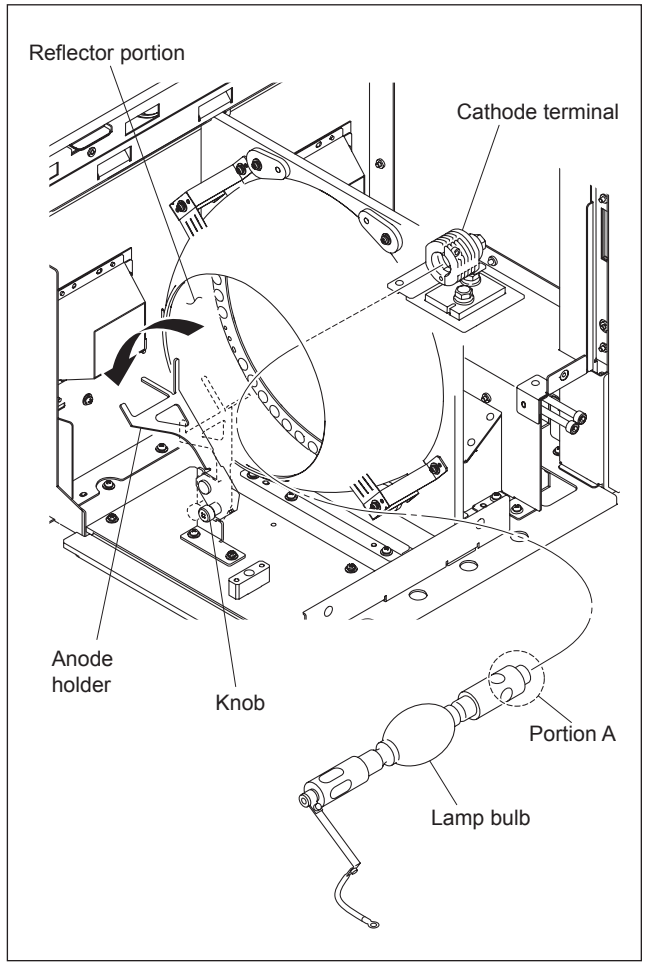


Fig. 1-8h

13. Place the anode side of the lamp bulb on the anode holder.
14. Attach the anode harness to the anode terminal, then tighten the bolt. (Tightening torque: 1.5 N•m).

    Note

    After installing the anode harness separated lamp bulb, if there is a clearance in portion A of the anode holder, adjust it by bending the anode harness so that there is no clearance between the anode holder and the lamp bulb.
15. Tighten the hexagon socket set screw of the cathode terminal.
    (Tightening torque: 1.2 N•m)

    Note

    Be sure that there is no clearance between the end face of the cathode terminal and the surface C of the lamp bulb.

16. Attach the panel (U4) block assembly in the reverse order of steps 3 to 5.

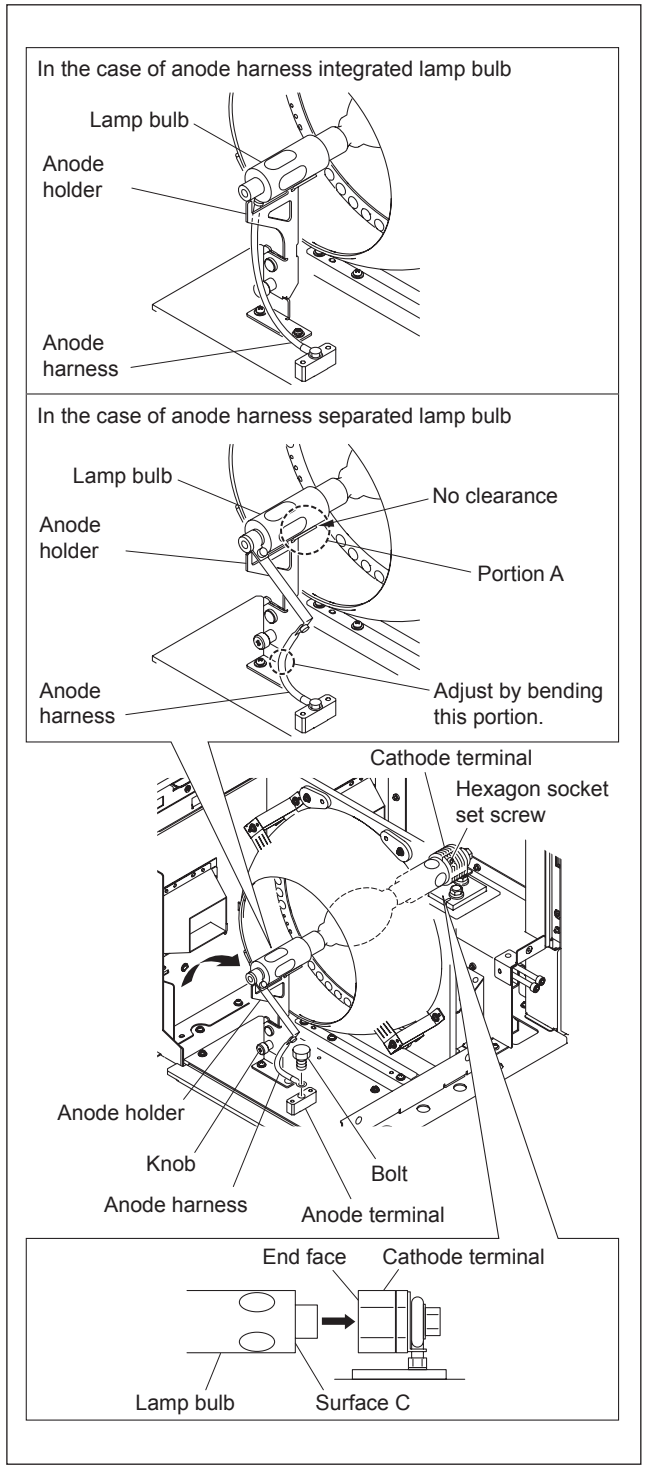


Fig. 1-8i

1-9. Installing LMT-300 and Connecting with the Unit

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)
3. Remove the panel (U6). (Refer to Section 1-1-5.)
4. Remove the panel (U1B). (Refer to Section 1-1-7.)

5. Loosen the two screws (with drop-safe), then remove the front panel from the LMT-300.

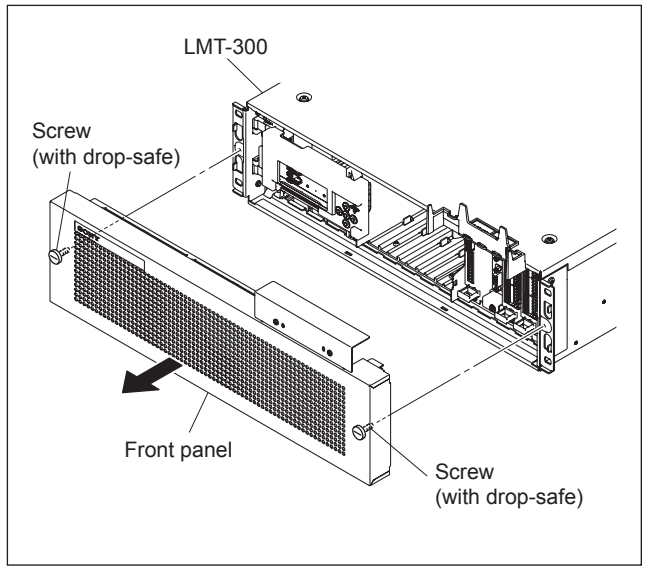


Fig. 1-9a

6. Install LMT-300 in this unit.
7. Secure LMT-300 with the four installation screws (B5 × 12) supplied with LMT-300.
8. Attach the HDD unit supplied with LMT-300. (Refer to LMT-300 Installation Manual.)
9. Connect the harness of this unit to the STATUS LIGHT connector in the front panel.
10. Attach the front panel.

Note

Tighten the screws (with drop-safe).
Tightening torque: 0.8 N•m

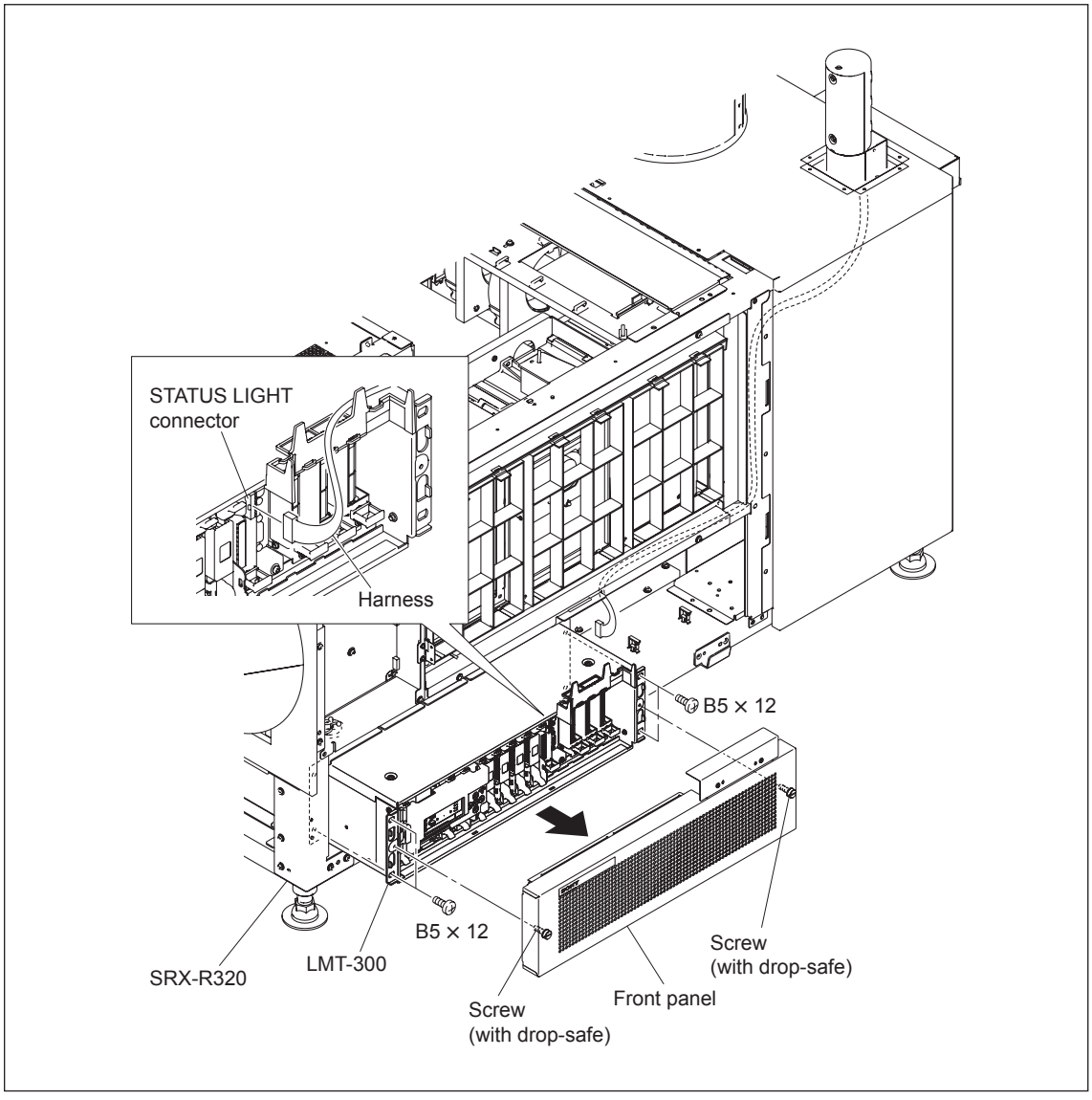


Fig. 1-9b

11. Attach the power cord to LMT-300.
12. Attach the LMT duct (A) with the screw.

    Note

    When attaching the LMT duct (A), route the power cord through the notch.
13. Attach the LMT duct (B) with the three screws.

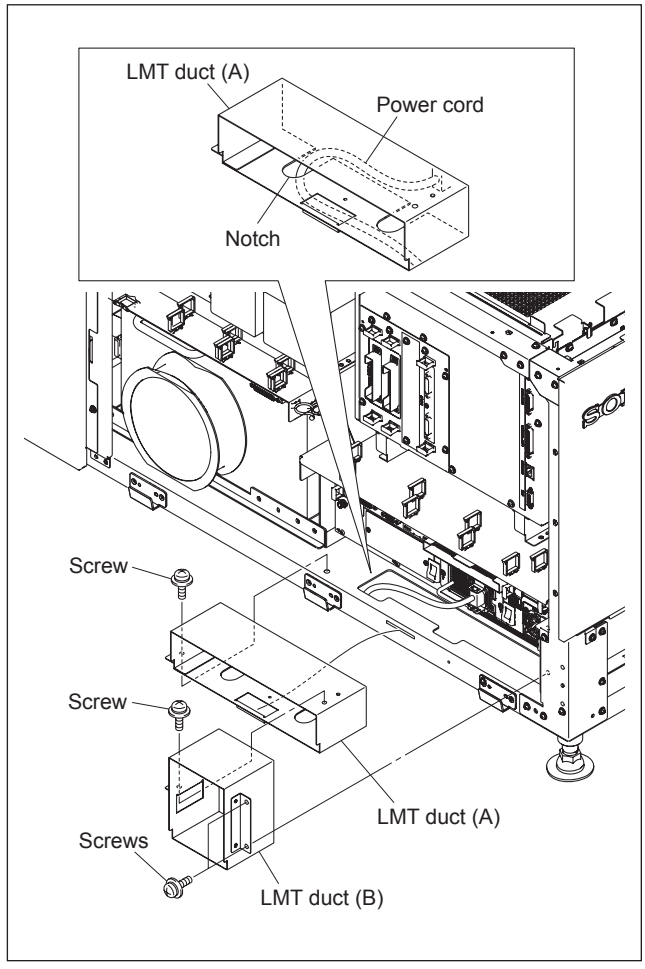


Fig. 1-9c

14. Connect INPUT-C A of the unit with PROJECTOR OUTPUT A of LMT-300 and INPUT-C B with PROJECTOR OUTPUT B using the supplied connection codes.
15. Connect the network connector of this unit with the PRJ CTRL connector of LMT-300 using the supplied LAN cable.
16. Connect the connector (CN6) on the CN-3225 board of this unit with the CSS connector of LMT-300 using the supplied CSS cable.

17. Attach the panel (U1B) in the reverse order of step 4.
18. Attach the panel (U6) in the reverse order of step 3.
19. Attach the panel (U2) block assembly in the reverse order of step 2.
20. Attach the panel (U7) block assembly in the reverse order of step 1.

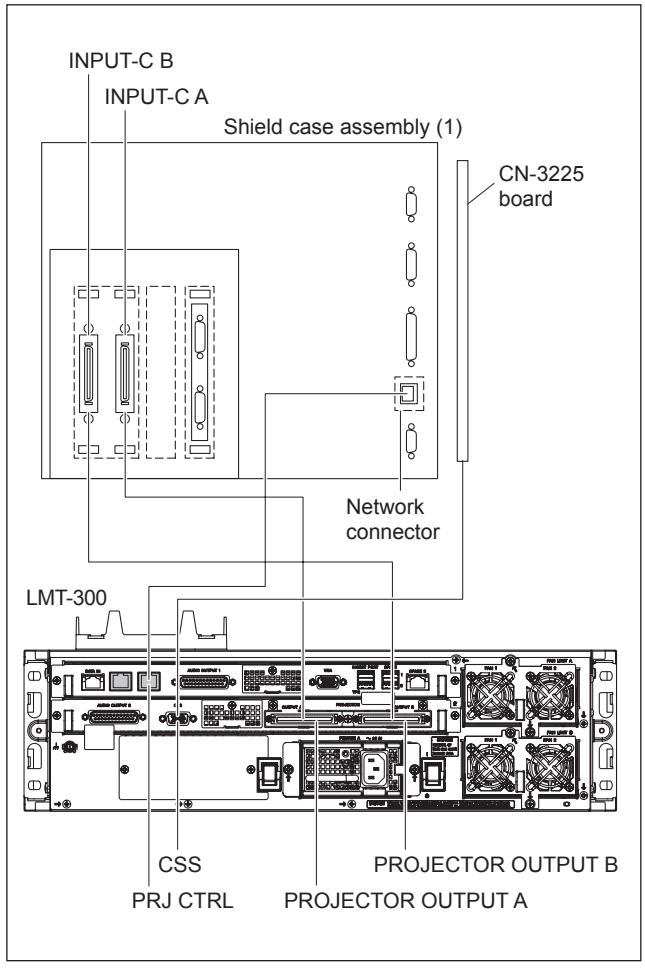


Fig. 1-9d

1-10. Installing the Optional Board to INPUT A and INPUT B

For both INPUT A and INPUT B slots, the optional board, LKRI-003 or LKRI-005 can be installed.
The installing procedure for each slot is same.

Note

For INPUT A slot, LKRI-005 is installed before shipment. Replace it as necessary.

Parts information

- Fixed Plate (HIF) 320: 4-159-161-01 (For LKRI-003)
- Fixed Plate (DIF) 320: 4-159-162-01 (For LKRI-005)
- Handle: 3-172-089-01 (Using 2 pcs)

Procedure (LKRI-003)

1. Remove the six screws, then remove the panel (HIF-44) and finger holder (HIF).

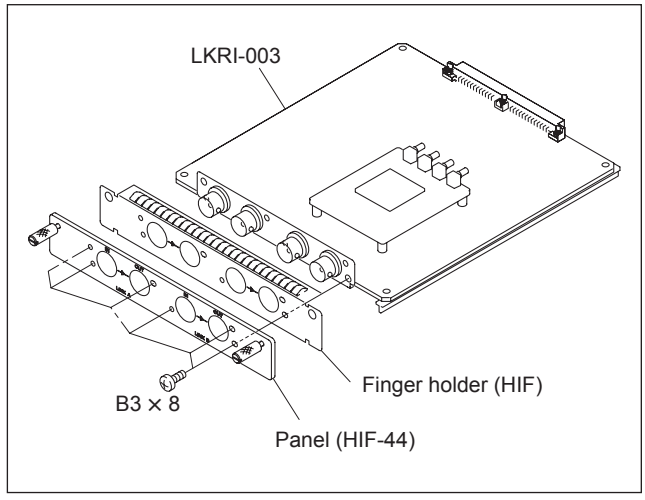


Fig. 1-10a

2. Attach the fixed plate (HIF) 320 using the six screws removed in step 1.
3. Attach the two handles to the fixed plate (HIF) 320.

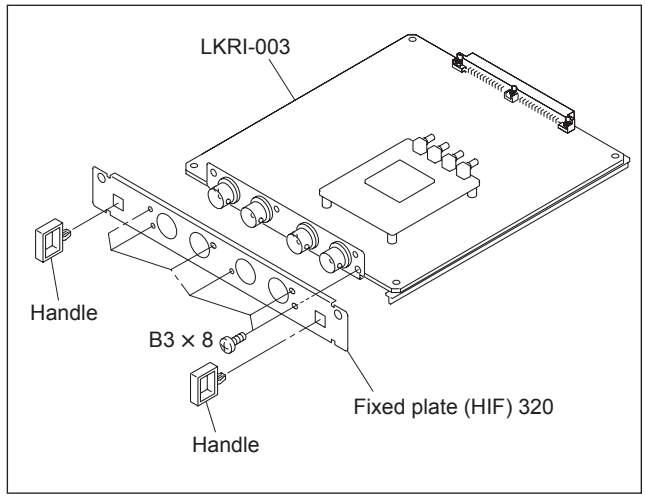


Fig. 1-10b

4. Remove the two screws, then remove the blank panel.

Note

Store the removed blank panel.

5. Remove the ten screws, then remove the panel cover (IF).

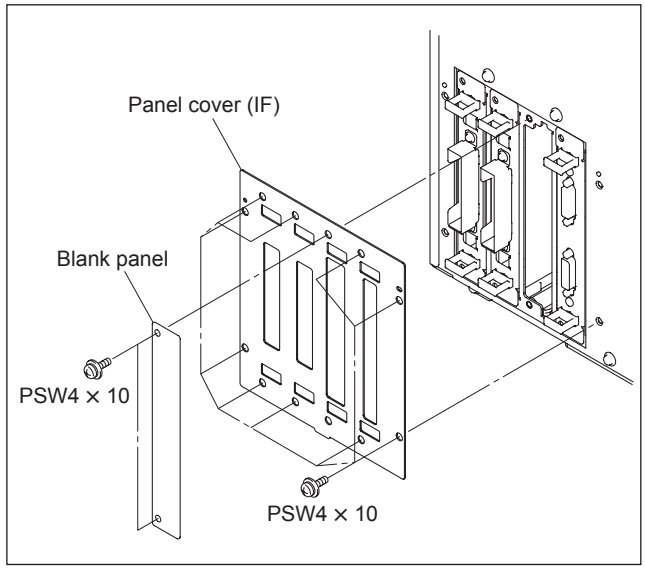


Fig. 1-10c

6. Insert the LKRI-003 board into INPUT B slot, and connect it securely.
7. Attach the panel cover (IF) using the twelve screws.

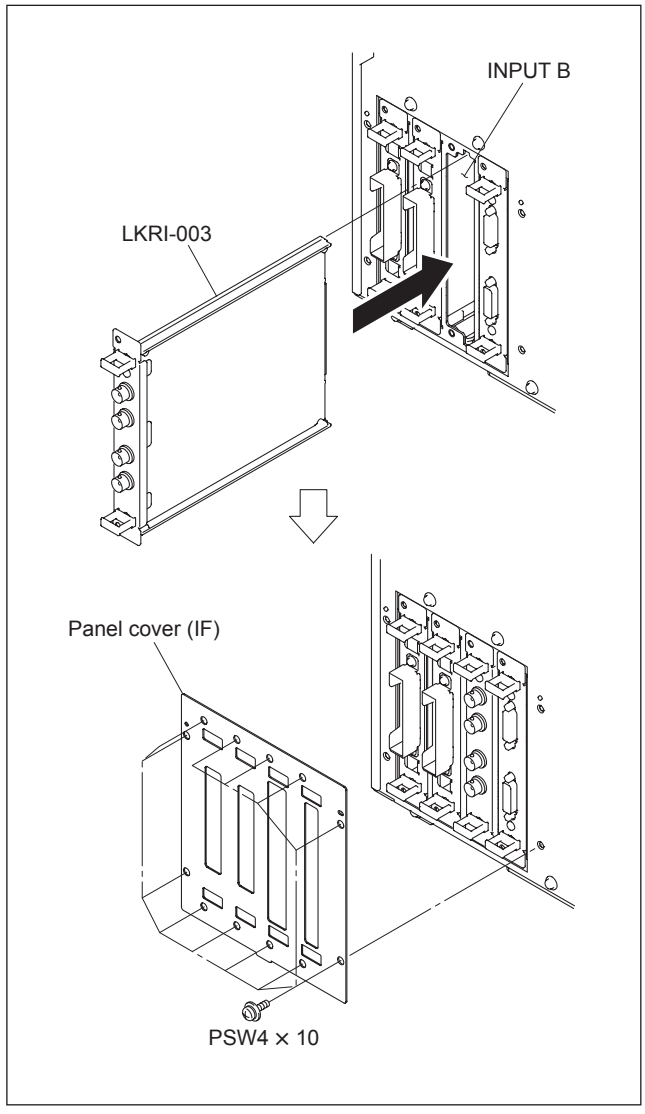


Fig. 1-10d

Procedure (LKRI-005)

1. Remove the two screws, then remove the panel (DIF-188) and finger holder (DIF).

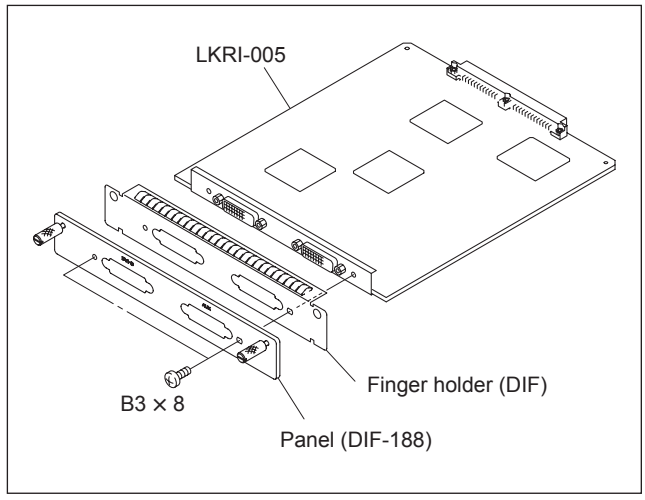


Fig. 1-10e

2. Attach the fixed plate (DIF) 320 using the two screws removed in step 1.
3. Attach the two handles to the fixed plate (DIF) 320.

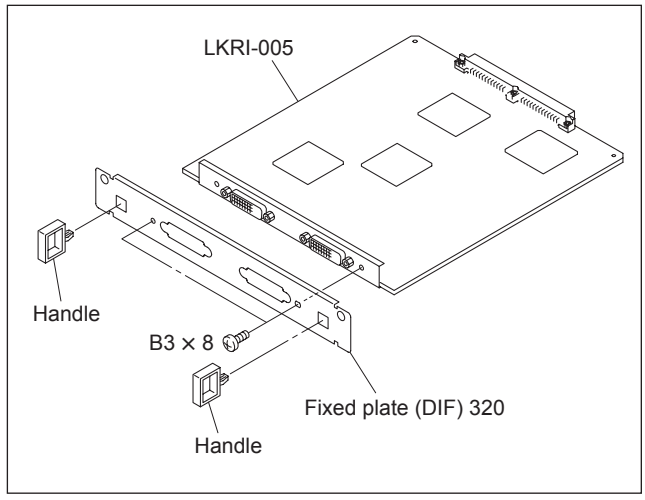


Fig. 1-10f

4. Remove the two screws, then remove the blank panel.

   Note

   Store the removed blank panel.
5. Remove the ten screws, then remove the panel cover (IF).

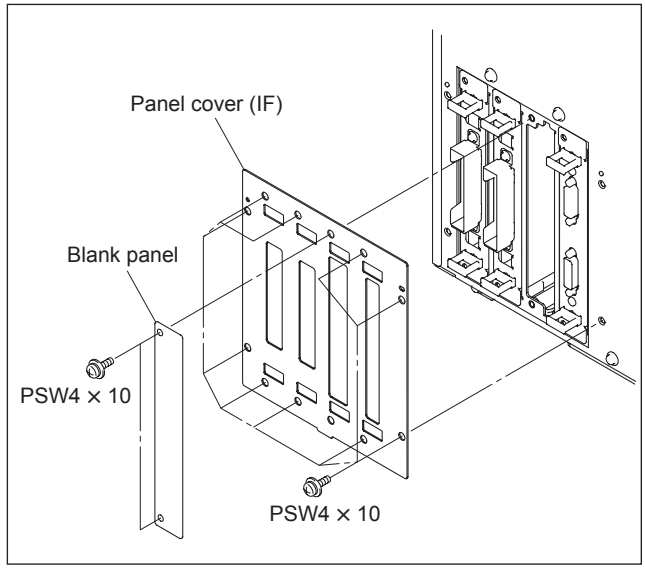


Fig. 1-10g

6. Insert the LKRI-005 board into INPUT B slot, and connect it securely.
7. Attach the panel cover (IF) using the twelve screws.

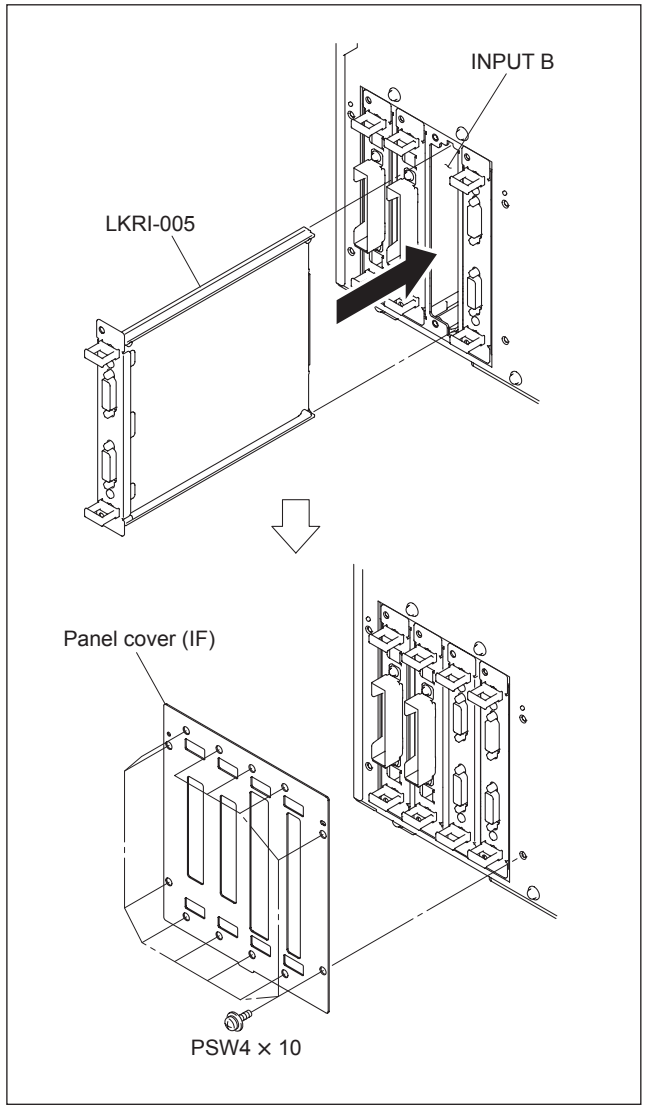


Fig. 1-10h

Connection with each equipment

Notes

- Connect each equipment with the power turned off state.
- Use the connecting cables applicable to each terminal.
- Insert the plug securely. Incomplete connection may cause an image trouble.
  When disconnecting the plug, be sure to hold the plug with your hand.
- Refer to the Operating Instructions of the equipment to be connected.

In case of LKRI-003

Input

BNC type (2)

HD-SDI:	Serial digital (1.485 Gbps) Compliant to SMPTE-292M/ITU-R, BT709/BTA-S004
Dual-link HD-SDI:	Serial digital (1.485 Gbps) Compliant to SMPTE-372M
DC-SDI:	Serial digital (1.485 Gbps) Compliant to 23.98 PsF, 24 PsF, 24P

Output

BNC type (2)

Loop-through output

Quantization characteristics

10 bits/sampling

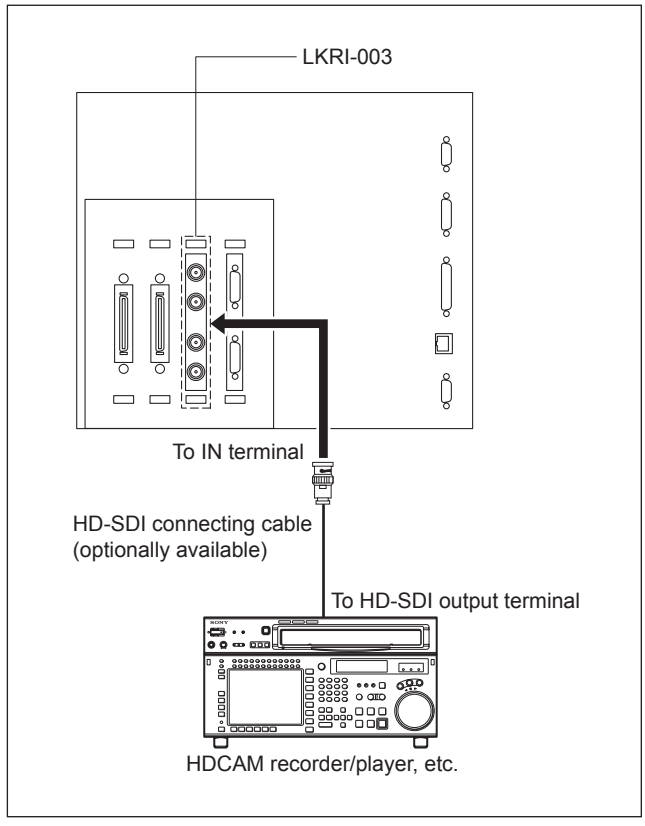


Fig. 1-10i

In case of LKRI-005

Notes

- For INPUT A slot, LKRI-005 is installed by default. However, LKRI-003 can be installed.
- When using a long cable, the image may not be displayed properly due to the signal attenuation.
- When the 10 bit single mode is selected, the DVI cable applicable to Dual-link is required.

1. Connect the commercially available DVI cable to the terminal according to the input signal.

Input signal	Used terminal
During normal operation DVI1.0 compliant Signal level: Full Range	DVI-D terminal
10 bit signal of its own specification During input (10 bit twin mode) Signal level: Full Range	DVI-D terminal and AUX terminal
10 bit signal of its own specification During input (10 bit single mode) Signal level: Full Range	DVI-D terminal
Used during signal input of DTV standard DVI1.0 compliant Signal level: Limited Range	DVI-D terminal
10 bit signal of its own specification During input (10 bit twin mode) Signal level: Limited Range	DVI-D terminal and AUX terminal
10 bit signal of its own specification During input (10 bit single mode) Signal level: Limited Range	DVI-D terminal

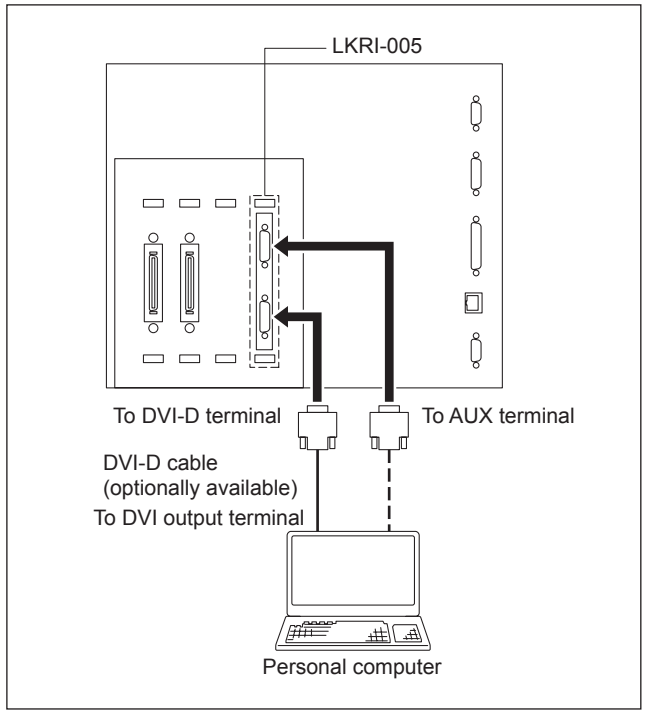
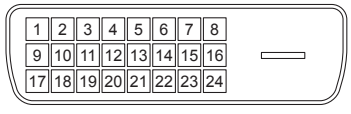


Fig. 1-10j

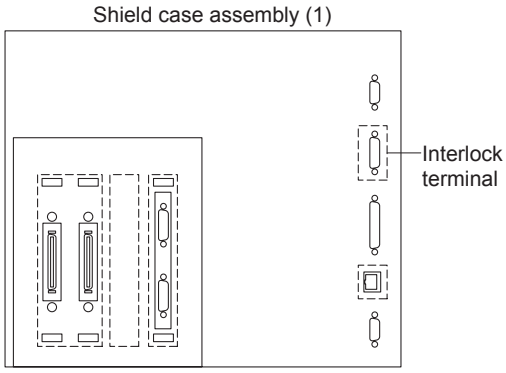
Pin location



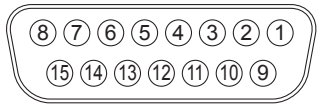
DVI-D terminal, AUX terminal

Pin No.	Signal name	Pin No.	Signal name
1	DATA2–	13	DATA3+
2	DATA2+	14	+5 V
3	GND	15	DDC_GND
4	DATA4–	16	HOTPLUG_DET
5	DATA4+	17	DATA0–
6	DDC_SCL	18	DATA0+
7	DDC_SDA	19	GND
8	NC	20	DATA5–
9	DATA1–	21	DATA5+
10	DATA1+	22	GND
11	GND	23	CLK+
12	DATA3–	24	CLK–

1-11. Interlock Terminal



Pin location



Interlock terminal

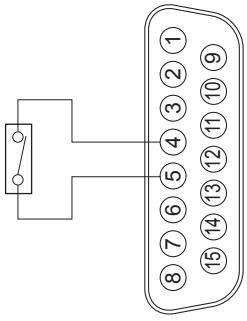
1. Interlock Function

The SRX-R320 interlock function is enabled by making the two pins of the interlock terminal open or short. The following two patterns can be used for the interlock function in the applicable serial.

Pattern 1

Normal: Open
Interlock: Short

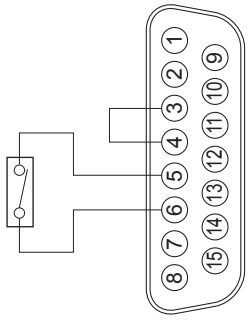
Open/short between pin 4 and pin 5



Pattern 2

Normal: Short
Interlock: Open

Open/short between pin 5 and pin 6 with the pin 3 and pin 4 shorted state



2. External fan control function

This unit mounted a power interlocking relay for external fan control.
The transfer contact type relay controls between normally-open and normally-closed by selecting the pins.

Note

The relay for external fan control is used for switching the ON/OFF control signals for fan. The driving current of fan is not switched.

PIN assign

Pin	Signal name	Function
Pin 7	RELAY1_A	make contact
Pin 8	RELAY1_B	break contact
Pin 9	RELAY1_C	transfer contact

Operation table

Operation terminal	Operating state	
	STANDBY	POWER ON
RELAY1_C ⇔ RELAY1_A	open	short
RELAY1_C ⇔ RELAY1_B	short	open

Contact specification

Contact rated voltage/current: 25 V DC/500 mA

1-12. Connecting and Wiring of External Device

WARNING

Do not plug the power cord into the power supply when performing the following wiring operations.

Signal cable wiring

When connecting this unit or LMT-300 installed in this unit to external device, connect by routing the cable through the hole of the front side.

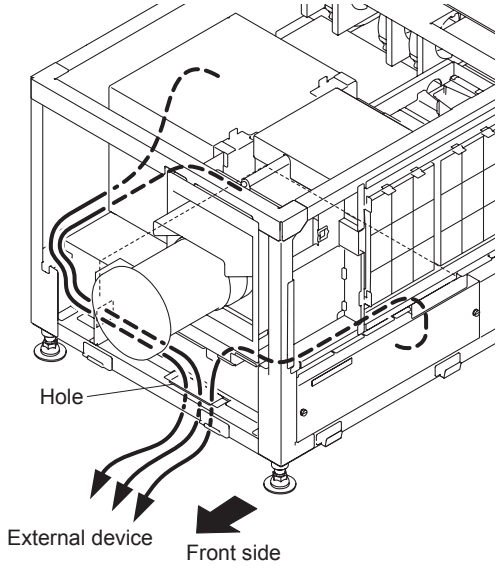


Fig. 1-12

1-13. Connecting the Power Cord

Use the 3-core power cord that satisfy AWG 8, 250 V rated and 40 A rated.
Connect the power cord to the AC IN terminal block on the rear side of this unit, referring the following procedure.

WARNING

- Connection of the main power and the electric wiring work should be done by qualified electricians only.
- Do not plug the power cord into the power supply before completing all of the following connecting operations.

1. Remove the two screws.
2. Remove the terminal block cover with attention to the two hooks.

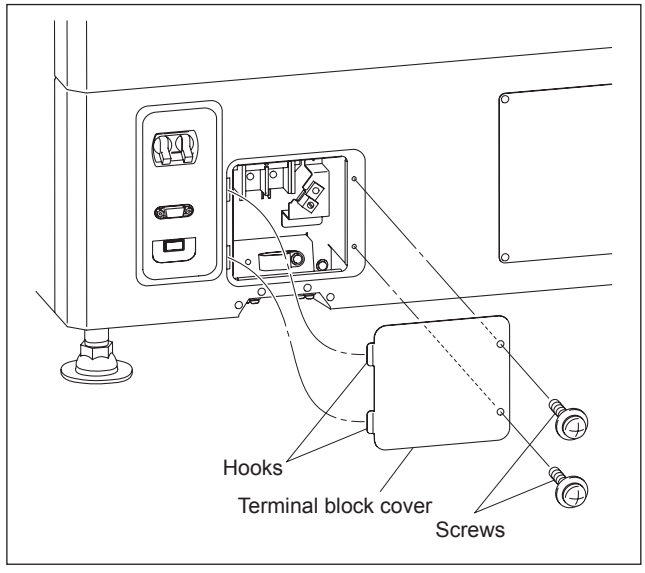


Fig. 1-13a

3. Remove the screw, then remove the cable clamp.
4. Remove the screw, then remove the ground terminal.

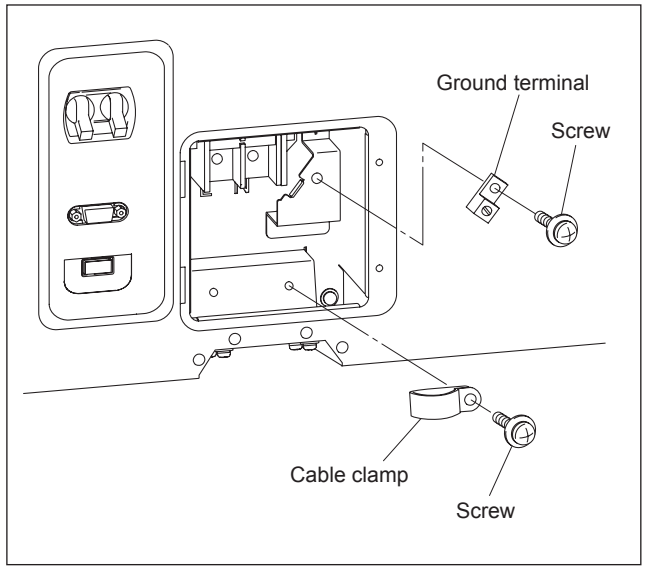


Fig. 1-13b

5. Pack by soldering the end of the ground wire.
6. Attach the ground terminal removed in step 4 to the ground wire, then fix it with the screw.

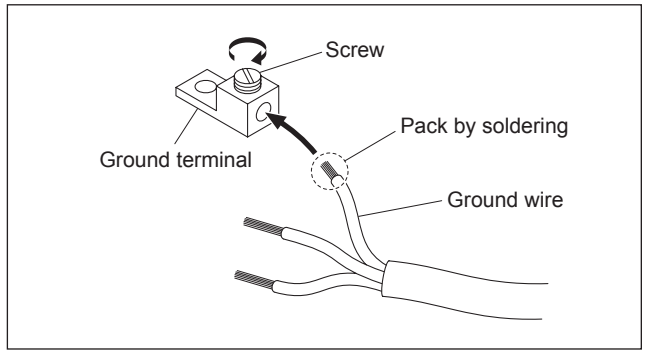


Fig. 1-13c

7. Route the cable through the lower hole of the terminal block, then fix each terminal by screw.
8. Fix the cable with the cable clamp and screw.
9. Attach the terminal block cover.

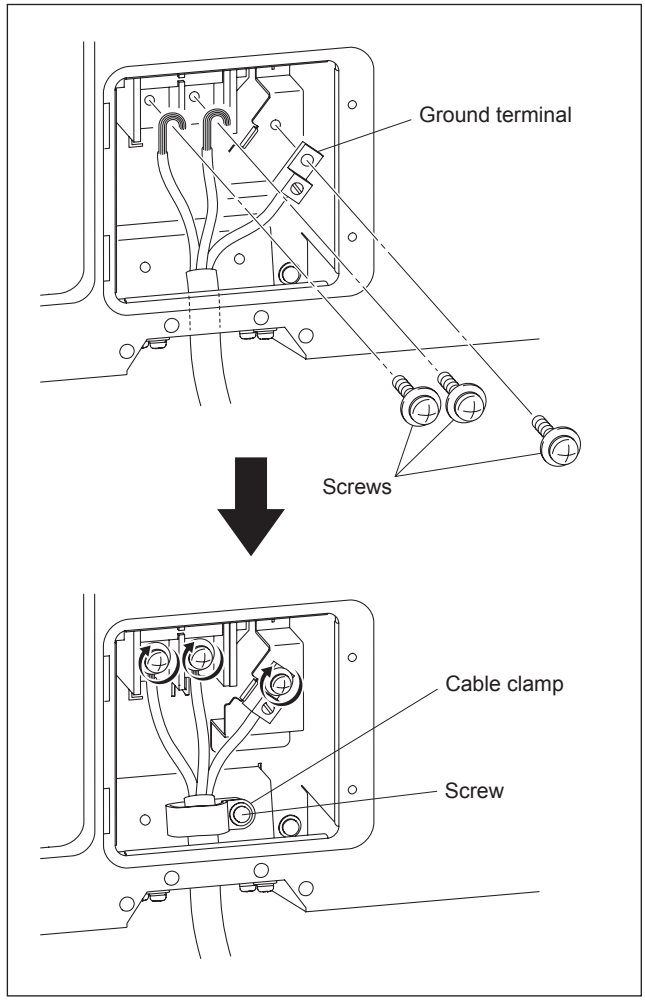
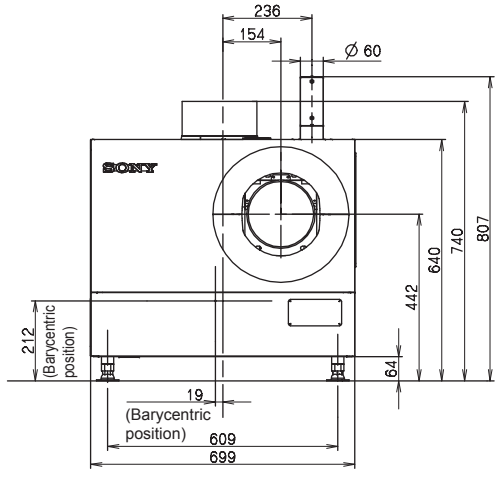


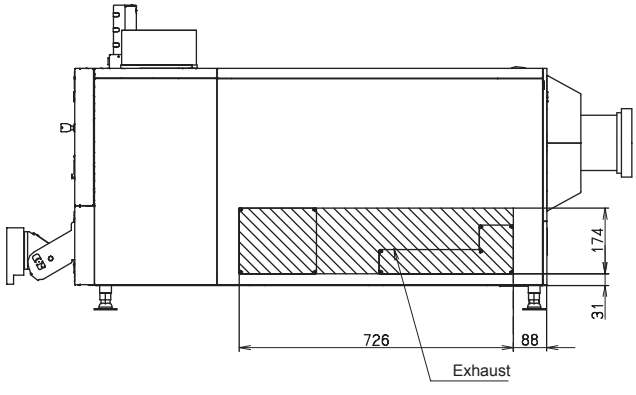
Fig. 1-13d

1-14. Dimensions

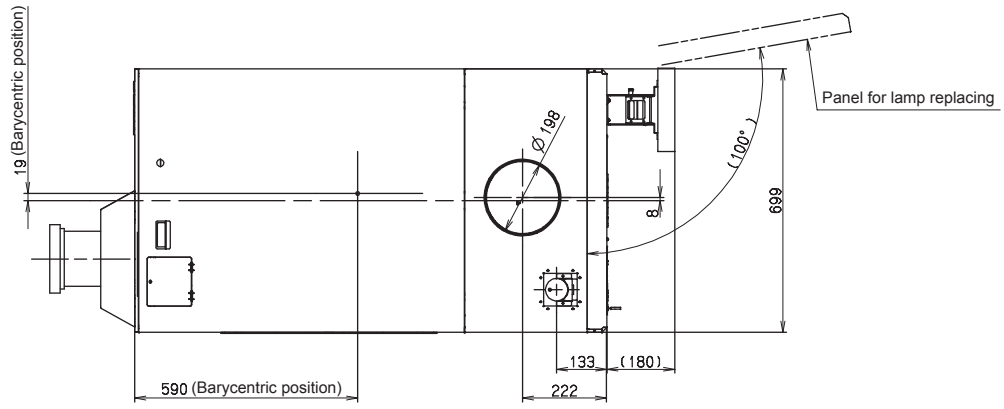
Front



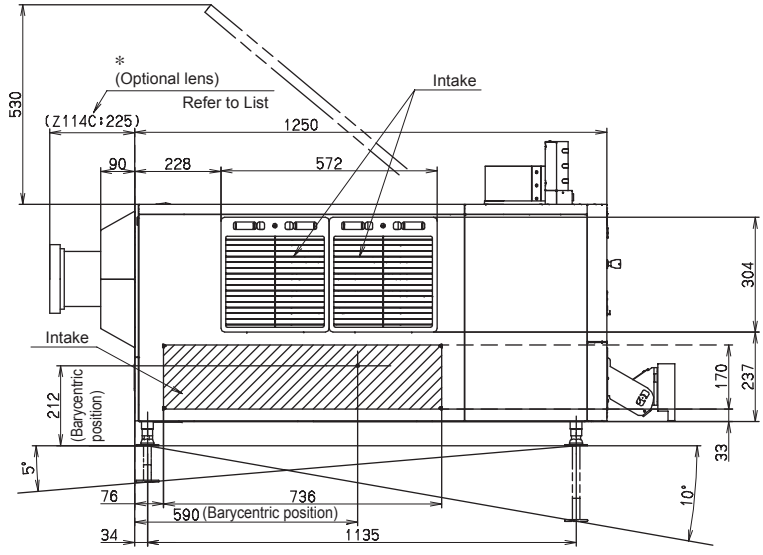
Left



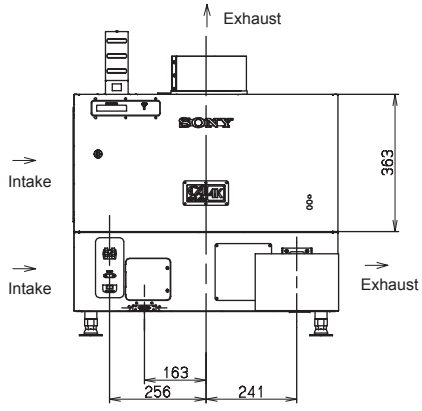
Top



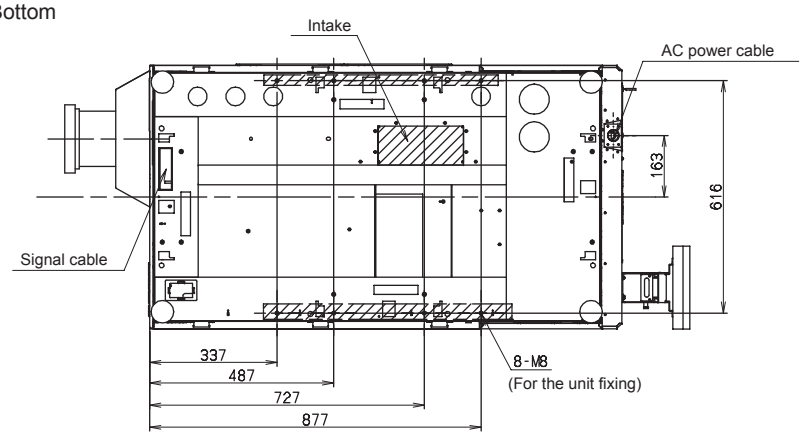
Right



Rear



Bottom



* LKRL LIST

NO.	LKRL	LENGTH	REMARKS
1	Z111C	(225)	
2	Z114C	(225)	
3	Z116C	(207)	
4	Z117	(131)	
5	Z119	(158)	
6	Z122	(148)	

Unit: mm

Section 2
Adjustment

Adjustment is performed using an SRX Controller. Refer to Section 2-8. for how to use an SRX Controller.
Perform adjustment in the procedure below.

1. Install an SRX Controller in an adjusting personal computer.
   (Refer to Section 2-1.)

2. Perform the optical axis adjustment of a lamp.
   (Perform calibration.)
   (Refer to Section 2-2.)

3. Adjust a lens.
   (Refer to Section 2-3.)

4. Perform illumination range adjustment and registration adjustment.
   (Perform these adjustments as required.)
   (Refer to Section 2-4.)

5. Perform the γ adjustment and uniformity adjustment using the PJ COLOR ADJUSTMENT TOOL.
   (Refer to Technical Manual of SRX-R220.)

6. Set the illuminance of a screen and perform color characteristic tone correction (CSC adjustment).
   (Refer to Section 2-5.)

7. Adjust the field angle.
   (Refer to Section 2-6.)

8. Set function memory.
   (Refer to Section 2-7.)

2-1. Installation of SRX Controller

2-1-1. Installation

This unit can be operated from PC when the SRX Controller is installed in a personal computer (PC).

Note

For obtaining of the SRX Controller, please contact your local Sony Sales Office/Service Center.

Preparation

- PC

CPU:	Intel Pentium M 1.6 GHz or more, and OS-recommended
RAM capacity:	256 MB or more (512 MB or more recommended), and OS-recommended
Communication:	RS-232C (10BASE-T/100BASE-T)
Graphics mode:	XGA (1024 × 768) or higher
HDD:	Built-in Drive, having an empty capacity of 10 MB or more
CD-ROM drive:	Eight times normal speed or faster
OS:	Microsoft Windows XP Professional SP2 (except for ×64 Edition)

- Cable

COM:	RS-232C cross cable

Installation

1. Connect each equipment referring to Section 2-1-2.
2. Turn on the power of PC.
3. Copy an SRX Controller to any place of PC.
4. Double-click “setup.exe”.

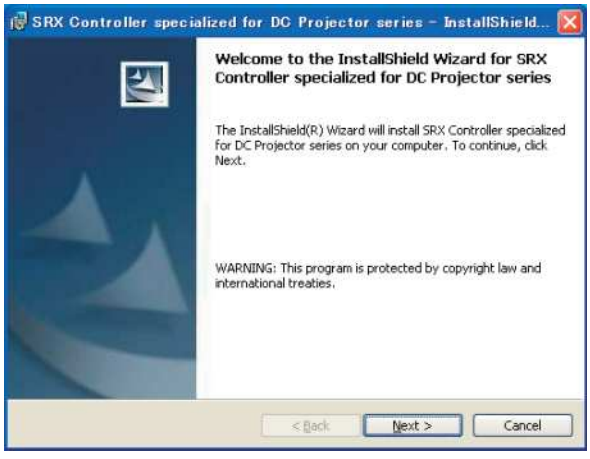


Fig. 2-1-1a

5. Click the Next button.

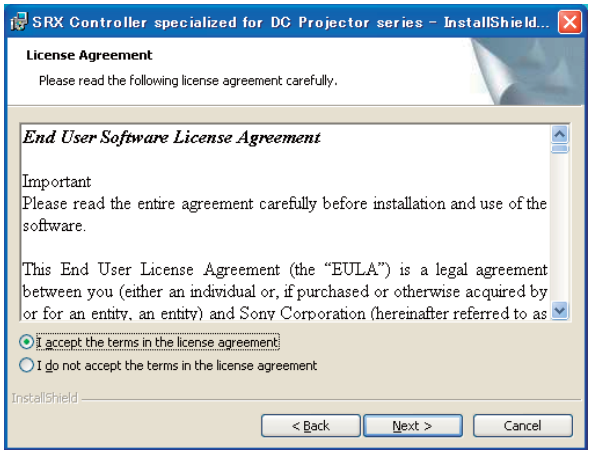


Fig. 2-1-1b

6. Confirm the contents of the license agreement and click the radio button for "I accept the terms in the license agreement". Click the Next button.

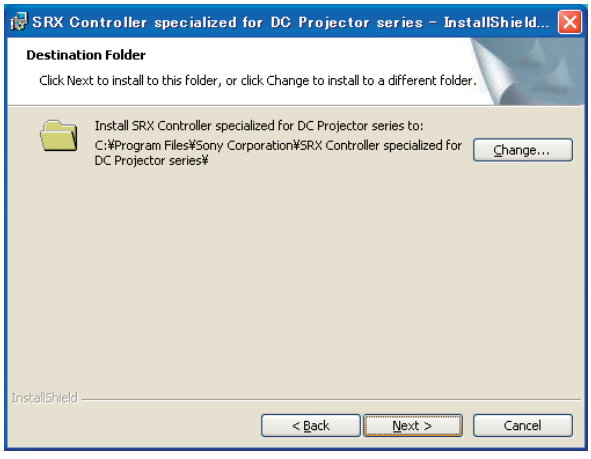


Fig. 2-1-1c

7. Select the folder in which an SRX Controller is installed.
Click the Next button if there is no problem in the displayed folder.
To change the folder to save an SRX Controller, click the Change... button and select the desired folder.

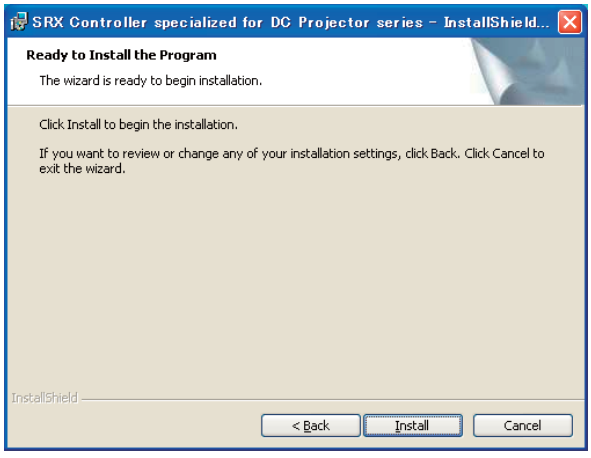


Fig. 2-1-1d

8. Click the Install button.
   Installation is started.
9. Check that the window below is displayed. (Installation is completed.)

Note

Click the check box for “Launch SRX Controller specialized for DC Projector series” when directly starting an SRX Controller in this case.

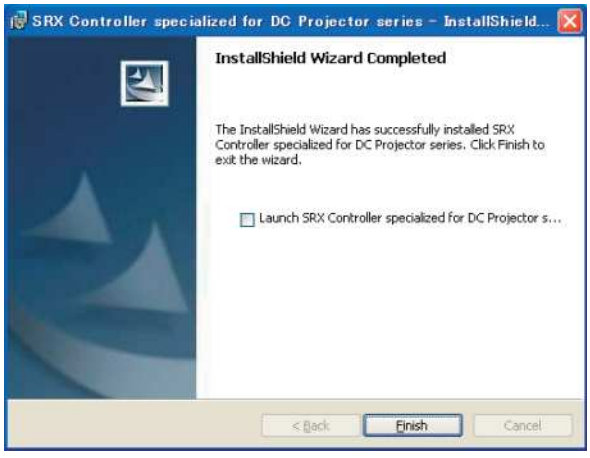


Fig. 2-1-1e

10. Click the Finish button.
    The shortcut of an SRX Controller is displayed on the desktop window.

2-1-2. Connection

Note

When performing the adjustment using the RS-232C terminal, connect nothing to the NETWORK terminal of the main unit.

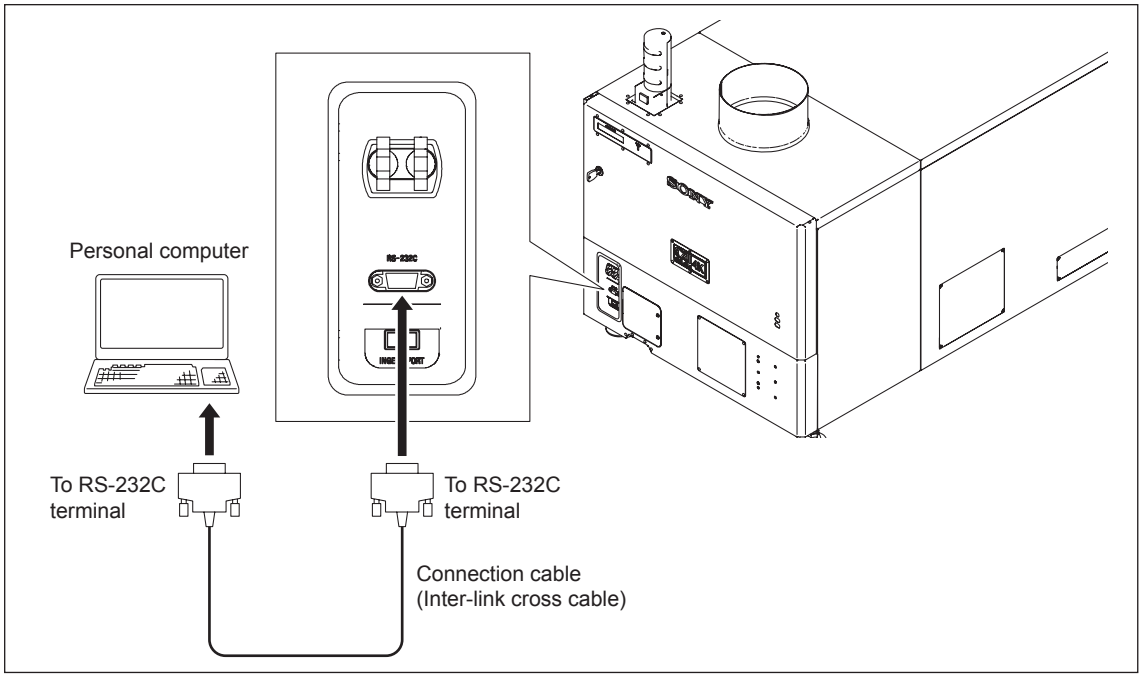


Fig. 2-1-2

2-1-3. Startup and Initialization of SRX Controller

Procedure

1. Connect each equipment according to Section 2-1-2.
2. Turn on the power switch on the rear of this unit so that it enters the standby state.
   (Refer to step 1 of "2-1-4. Startup of This Unit".)
3. Double-click "Start SRX Controller.exe" on the desktop window.
4. Click the "COM" radio button from the "Connection" menu.
   • COM selection: Enter the COM port No. to be used.
5. Select the adjustment menu (Login) to be used in a "Login" menu. The three adjustment menus below are available.
   • User: Can check the signal input to this unit or adjust an image.
   • Maintenance: Can set a lamp or adjust an image in details.
   • Installer: Can check and change the contents of setting during installation of login information or a network.
6. Enter the passwords and click the OK button.
   • User: A password is not required.
   • Maintenance: service
   • Installation: setting

   Note

   Enter the passwords of "Maintenance" and "Installer" using lower-case characters.

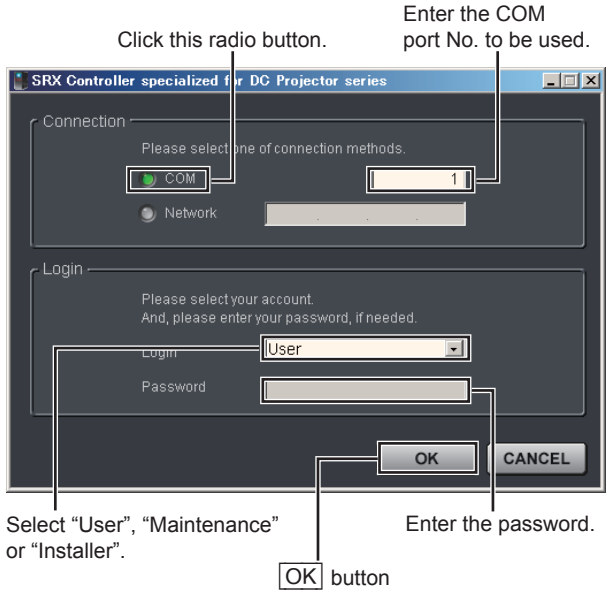


Fig. 2-1-3a

Note

Window of each adjustment menu

Window example (Login by “User”: FUNCTION MEMORY window)

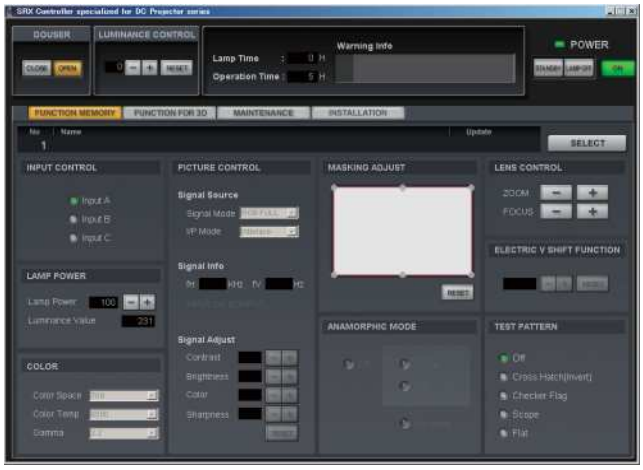


Fig. 2-1-3b

Window example (Login by “Maintenance”: MAINTENANCE window)

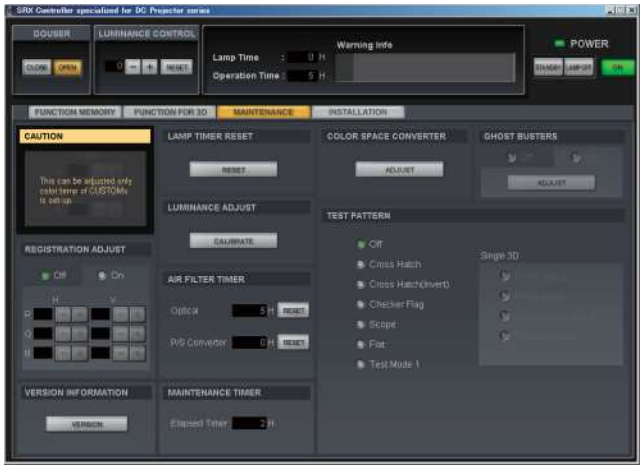


Fig. 2-1-3c

Window example (Login by “Installer”: INSTALLATION window)

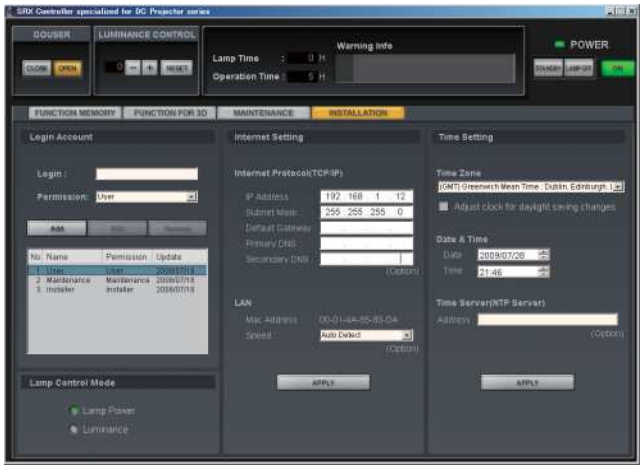


Fig. 2-1-3d

7. Click the INSTALLATION tab.
   The INSTALLATION window is displayed.

Fig. 2-1-3e

8. Set the items in "Internet Setting" and "Time Setting" menus.
   (Refer to "5. INSTALLATION window" in Section 2-8-3.)
9. Enter the serial code of the lamp bulb to be installed.
   (Refer to steps 1 to 4 in Section 2-2.)

2-1-4. Startup of This Unit

Procedure

1. Turn on the power switch on the rear of this unit. (Standby state)

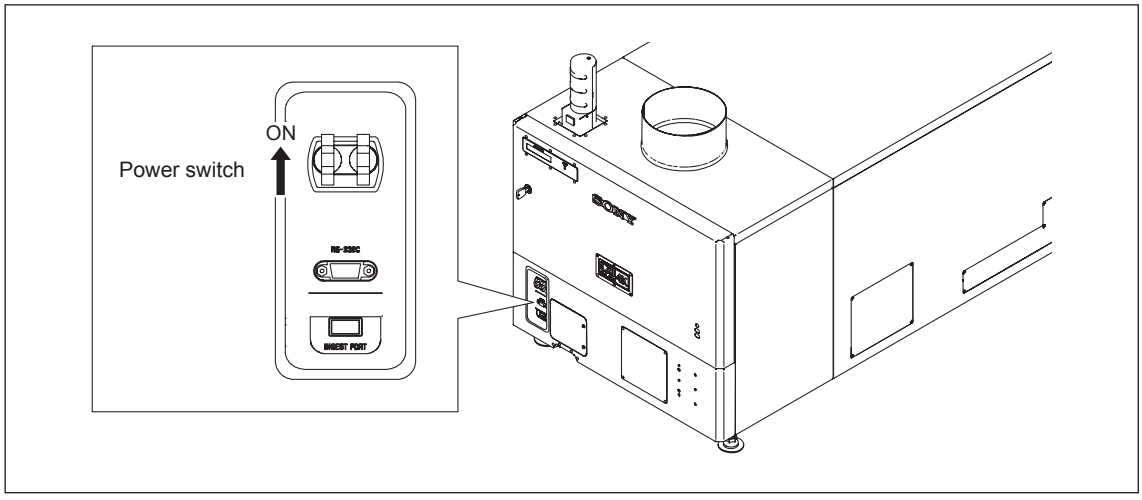


Fig. 2-1-4a

2. Start the SRX Controller. (Refer to Section 2-1-3.)

Note

This procedure is common in the adjustment menu of "User", "Maintenance" and "Installer".

3. Click the ON button of POWER.
   The startup of this unit is completed.

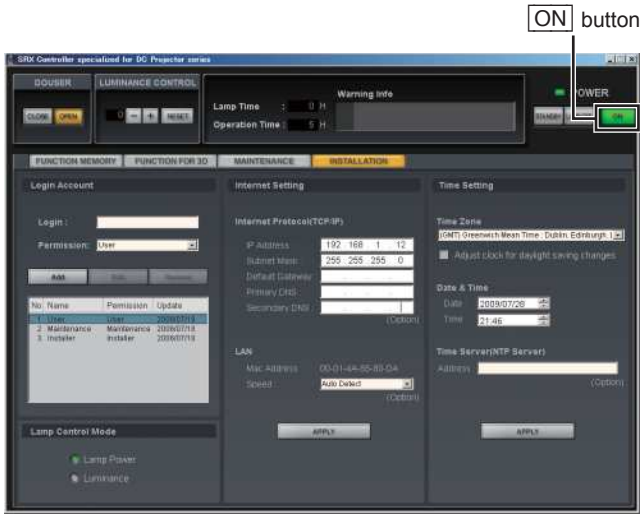


Fig. 2-1-4b

2-2. Optical Axis Adjustment of Lamp

Procedure

1. Be sure to click the "MAINTENANCE" tab in the standby state.
2. Click the RESET button in a "LAMP TIMER RESET" menu.

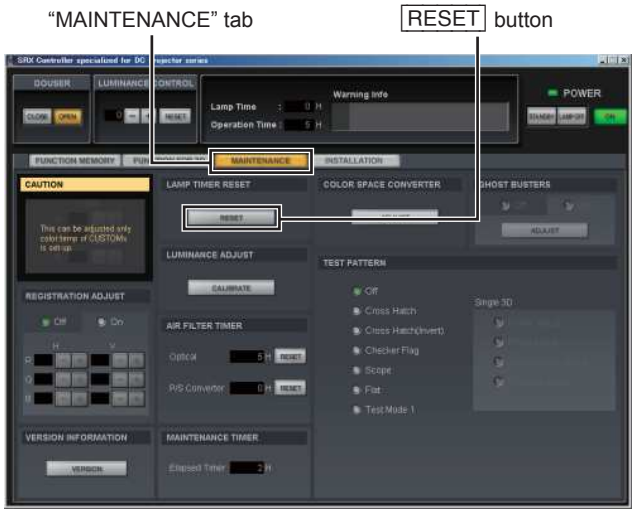


Fig. 2-2a

3. Enter the serial code described in the Operating Instructions of a lamp bulb in the “Serial Code” box and click the CHECK button.

Notes

- Be sure to perform in the standby state. (Refer to step 1 in Section 2-1-4.)
- Enter the serial code with the space not put.

4. Click the CLOSE button and close the LAMP INFORMATION window.
5. Click the ON button of POWER.

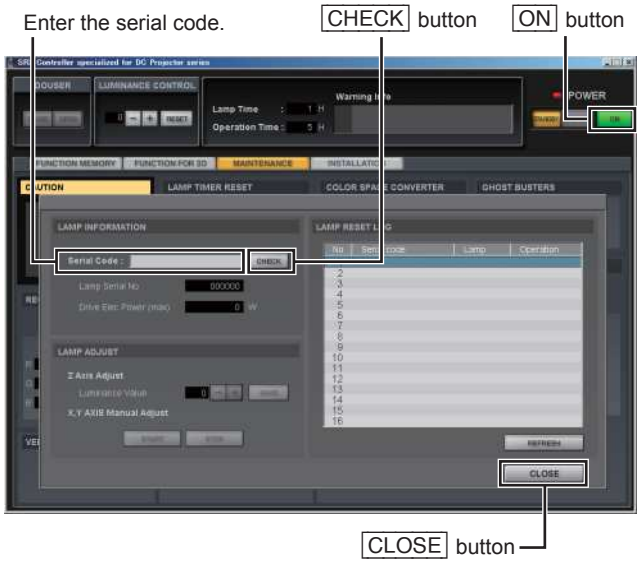


Fig. 2-2b

6. Click the “FUNCTION MEMORY” tab.
7. Set the lamp power to 100% in the “LAMP POWER” menu to project an image in 100% black. (No signal condition)

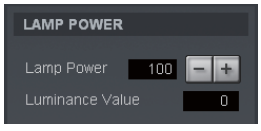


Fig. 2-2c

8. Click the START button in a “Lamp Adjust” menu on the “LAMP INFORMATION” window.
   The unit enters the lamp adjustment mode.
9. Wait for five minutes.
10. When the unit enters the lamp adjustment mode, the value of the internal luminance sensor is displayed on the status message display.
    Adjust “Z Axis Adjust” using the + / – button so that the luminance value becomes maximum.

    Note

    A lamp bulb is not installed when this unit is shipped from the factory. Therefore, an “F34/F35 ADJUSTMENT ERROR” message may be displayed on the status message display and SRX Controller at the rear of this unit before this adjustment is performed. This message disappears when you press the Save button after Z axis adjustment.

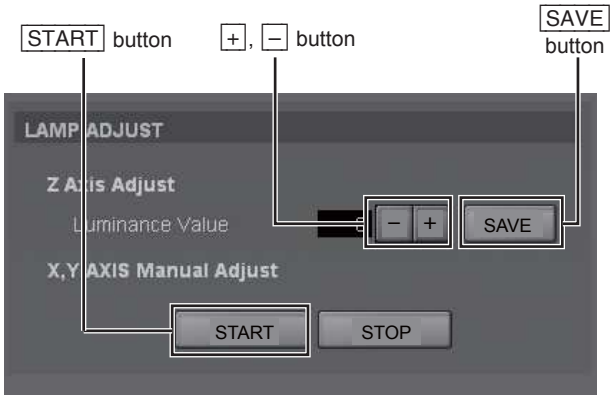


Fig. 2-2e

11. In the same way, adjust the X-axis and Y-axis direction adjusting screws so that the value of the internal luminance sensor becomes maximum.
12. Adjust “Z Axis Adjust” again using the + / – button so that the value of the internal luminance sensor becomes maximum.
13. Click the Save button.
14. Age this unit for five minutes.
15. Click the CALIBRATE button.

    Note

    Click the CALIBRATE button after at least 10 minutes turning on the lamp.

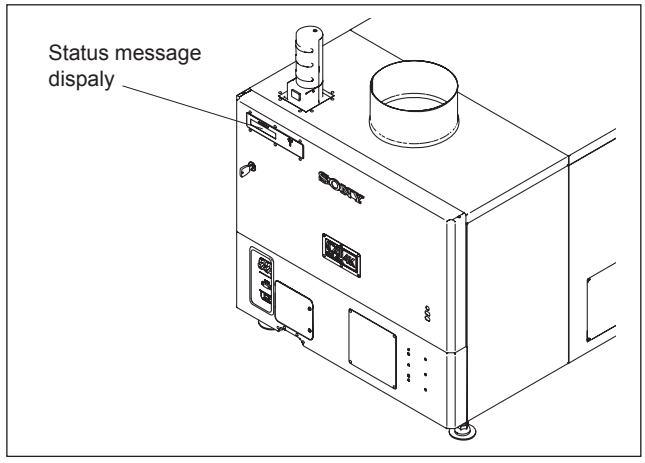


Fig. 2-2d

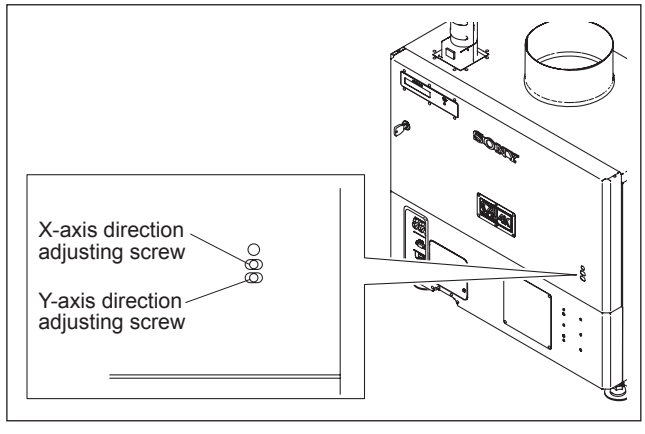


Fig. 2-2f

Luminance deterioration correction function

This unit has a function that makes the output illuminance constant using a sensor inside equipment. By pressing the CALIBRATE button, this function provides an internal sensor and lamp power output value in the internal table and controls a lamp power output value so that it becomes the luminance value set for each function memory. To maintain the precision of an output value, press the CALIBRATE button about once a week.

Note

This function is enabled when Lamp Control Mode is set to Luminance.
It is set to "Lamp Power" in the initial setting.
(Refer to "5. INSTALLATION window" in "2-8-3. Function of Each Window".)

2-3. Lens Adjustment (H Shift, V Shift, Zoom, and Focus Adjustments)

Note

For further adjustment, "2-6. Field Angle Adjustment" is required.

Procedure

1. Project a test pattern on the MAINTENANCE window.
2. Loosen the four bolts securing the projection lens. Insert the flat screwdriver between the lens bracket and the lens bracket shield and move the projection lens from side to side to adjust the horizontal position (H shift) of the image.
3. After H shift adjustment is completed, tighten the four screws loosened in step 2.

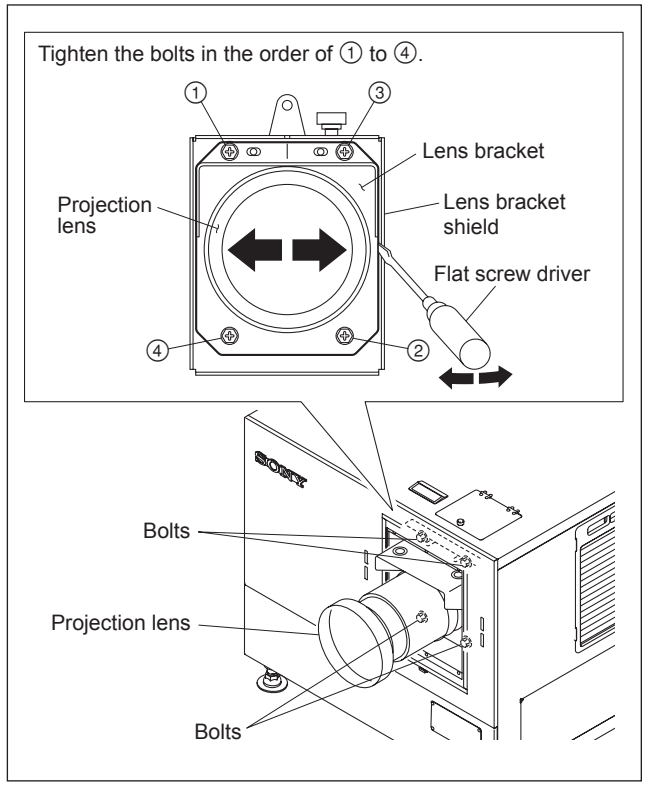


Fig. 2-3a

4. Open the adjustment lid.
5. Turn the control knob of this unit to move the lens up and down for adjusting the vertical position (V shift) of an image.
6. Adjust the zoom and focus using the [+]/[−] buttons in the “Lens Control” menu on the FUNCTION MEMORY window. (Refer to “2. FUNCTION MEMORY window” in “2-8-3. Function of Each Window”.)

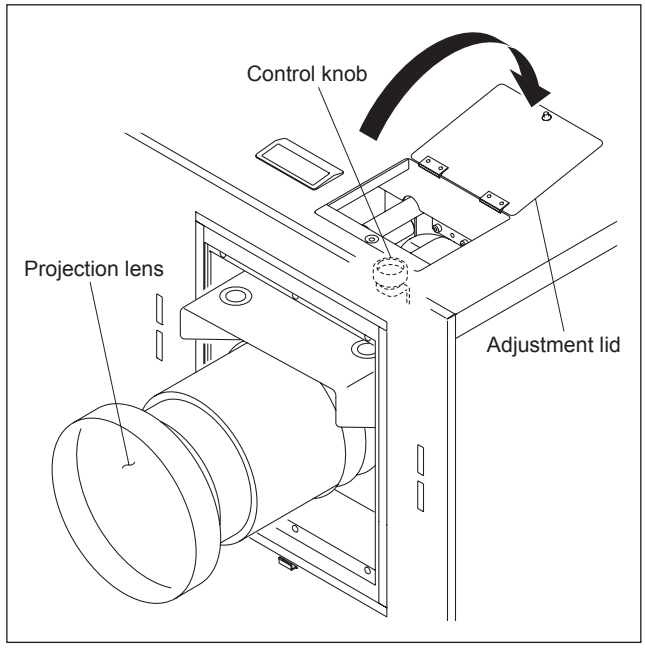


Fig. 2-3b

Note

Set the V shift amount within 1/2 screen. If it exceeds 1/2 screen, the zoom is changed, the image position may not be positioned at same place.

Check if the V shift amount exceeds 1/2 screen in the following procedure.
When the V shift amount exceeds 1/2 screen, perform the adjustment.

In the case that the V shift is lowered.

How to Check

• When the image is expanded by zoom, the upper end of image position is lowered.

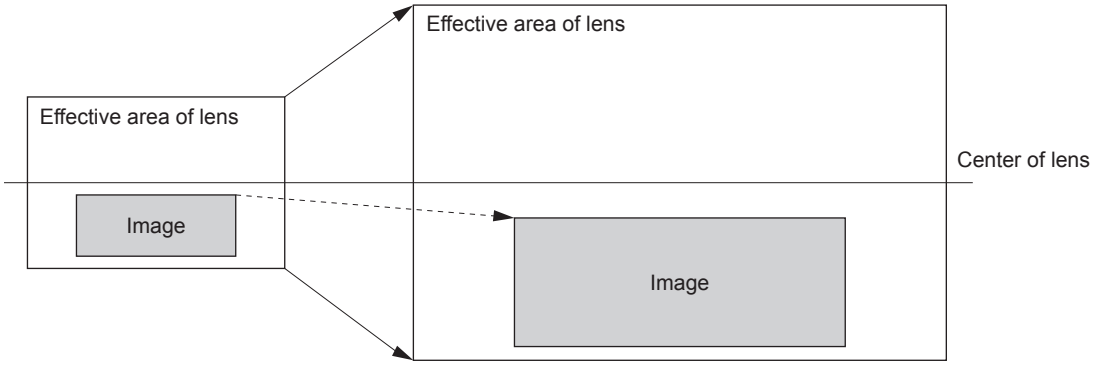


Fig. 2-3c

How to Adjust

• Adjust the V shift so that the upper end of image position remains unchanged when the image is expanded by zoom.

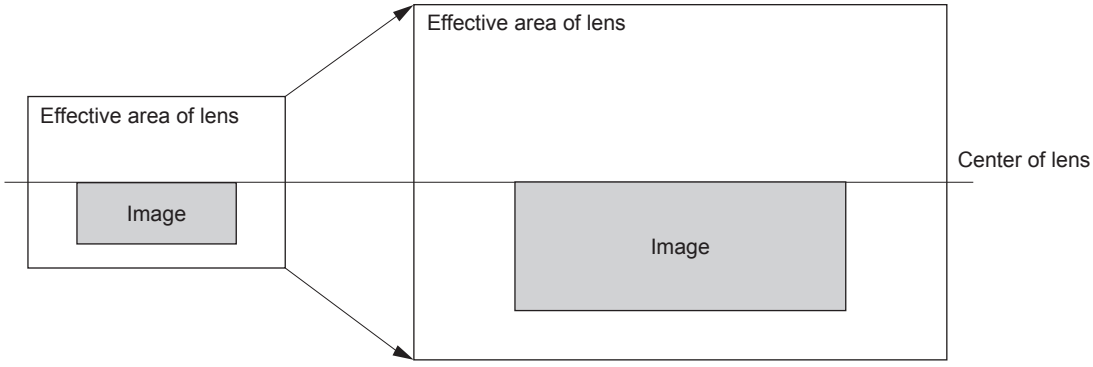


Fig. 2-3d

2-4. Illumination Area Adjustment and Registration Adjustment

2-4-1. Illumination Area Adjustment

If there is any deviation of illumination range when installing the unit, perform adjustment in the following procedure.

Note

The adjustment cannot be correctly performed with the filter cover open because the filter cover switch sensor function operates. Before starting the adjustment, be sure to close the filter cover after removing the panel duct covers 1 and the panel duct covers 2.

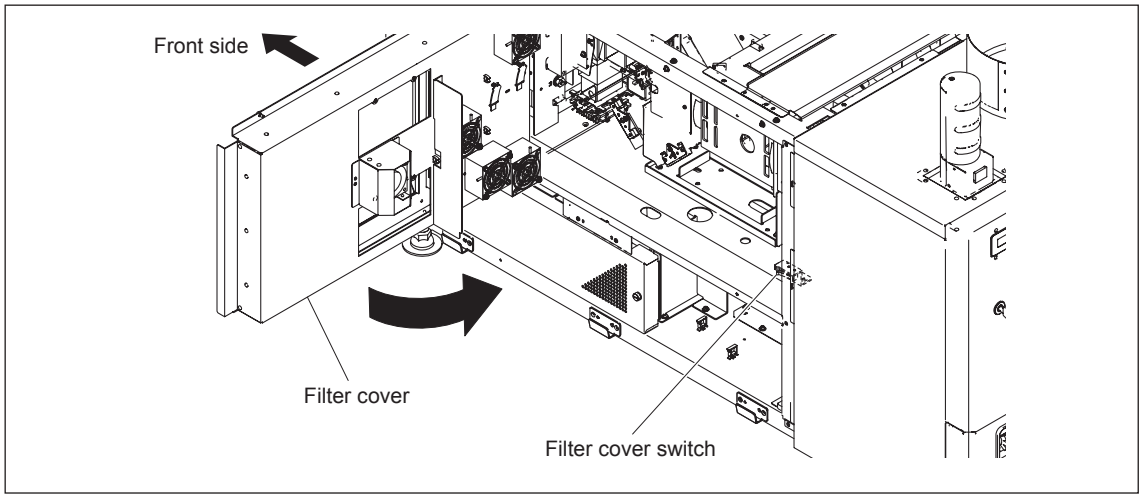


Fig. 2-4-1a

Procedure

1. Remove the panel (U7) block assembly. (Refer to Section 1-1-2.)
2. Remove the panel (U2) block assembly. (Refer to Section 1-1-3.)

3. Remove the filter.
4. Remove the five screws.

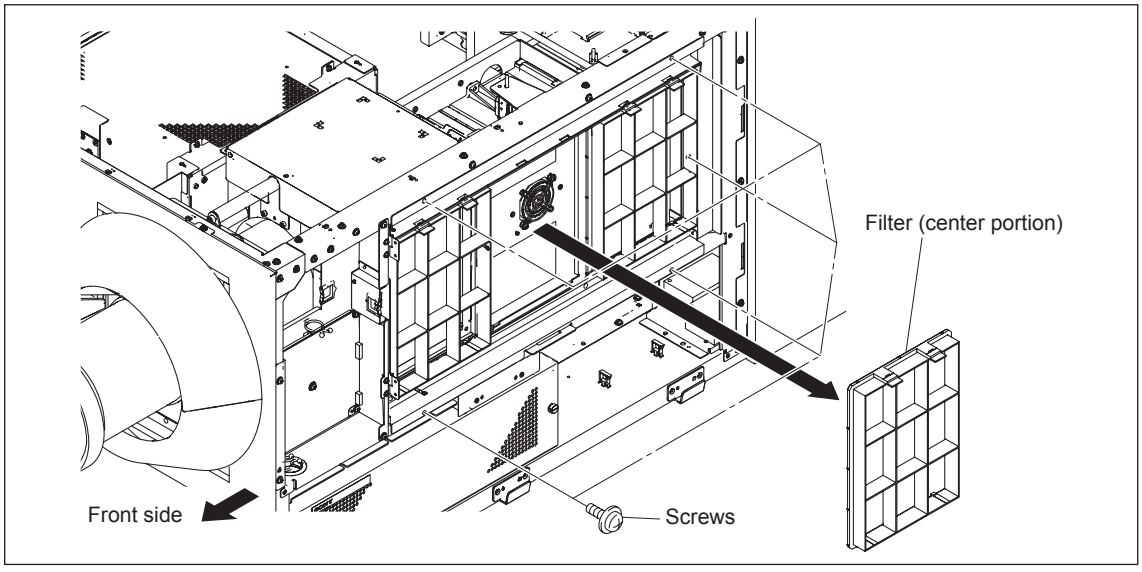


Fig. 2-4-1b

5. Open the filter cover in the direction of the arrow.
6. Remove the two screws, then remove the panel duct cover 2 (upper).
7. Remove the two screws, then remove the panel duct cover 1 (upper).
8. Remove the panel duct cover 2 (lower) and the panel duct cover 1 (lower) in the same procedure as steps 6 and 7.
9. Close the filter cover, then secure it with the screw.

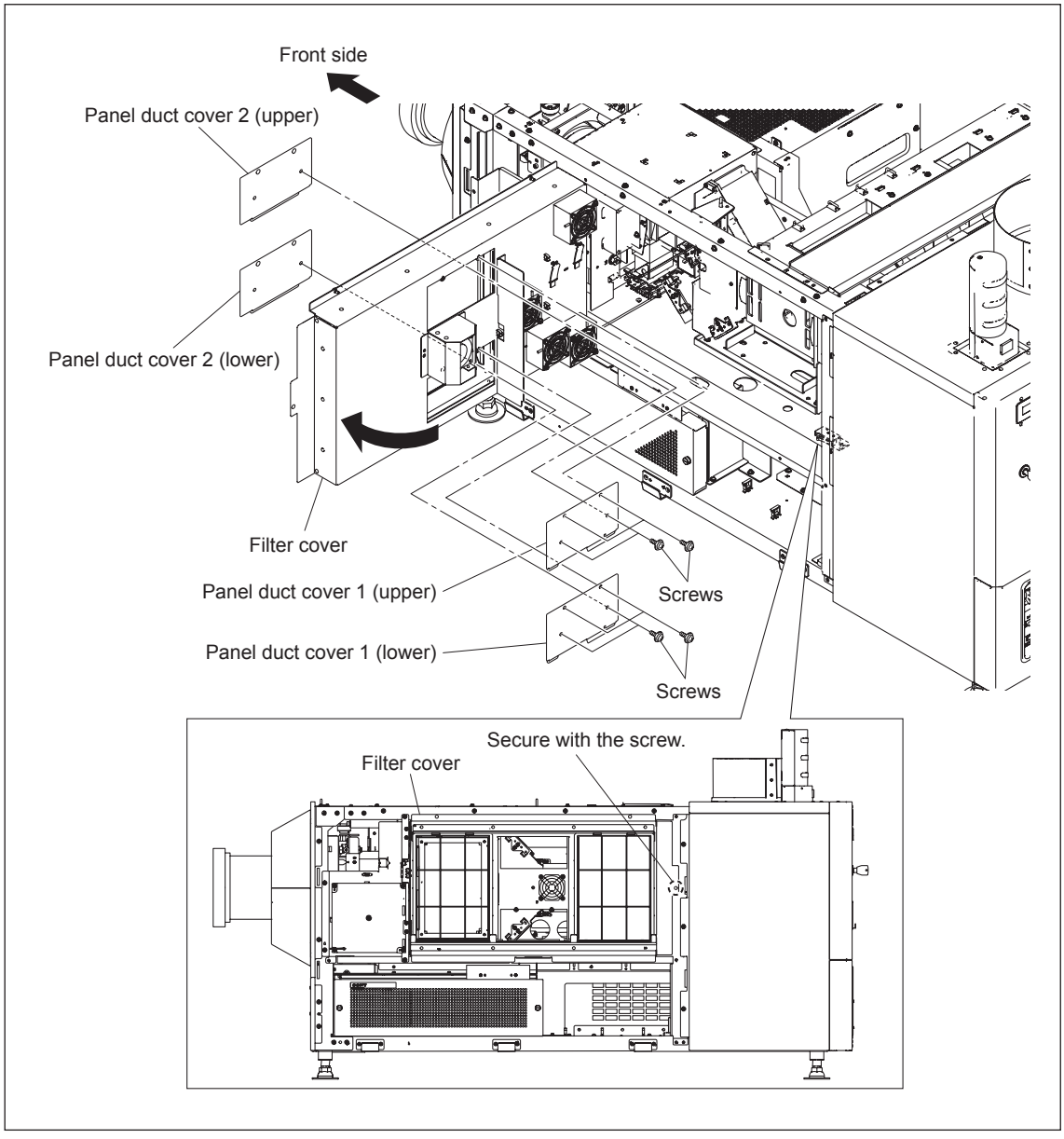


Fig. 2-4-1c

10. Start the SRX Controller. (Refer to Section 2-1-3.)
11. Click the “FUNCTION MEMORY” tab.

FUNCTION MEMORY window

Fig. 2-4-1d

MAINTENANCE window

Fig. 2-4-1e

12. Set Lamp Power to 50% immediately after the lamp is lit.
13. Project the white image on the screen using “Test Mode 1” in the “TEST PATTERN” menu on the MAINTENANCE window.

    Note

    If it is difficult to observe the left, right, top and bottom edges of the white image because it is interrupted by the black curtain and so on, reduce the white image size using the zoom so that its edges can be viewed clearly. Adjust the zoom in “LENS CONTROL” on the FUNCTION MEMORY window. In the case of out-of-focus, adjust it in the same way.
    (Refer to “2. FUNCTION MEMORY window” in “2-8-3. Functions of Each Window”.)
14. Perform steps 15 to 17 immediately after step 13 is finished.
15. Observe the left, right, top and bottom edges of the screen precisely.
16. Check the deviation of illumination range (colored area around the white image). If there is an area colored by cyan, loosen the adjusting plate fixing screws of portion A in the illustration, and tighten them after adjustment.
17. If there is an area colored by magenta/yellow, loosen the adjusting plate fixing screws of portion B in the illustration, and tighten them after adjustment.

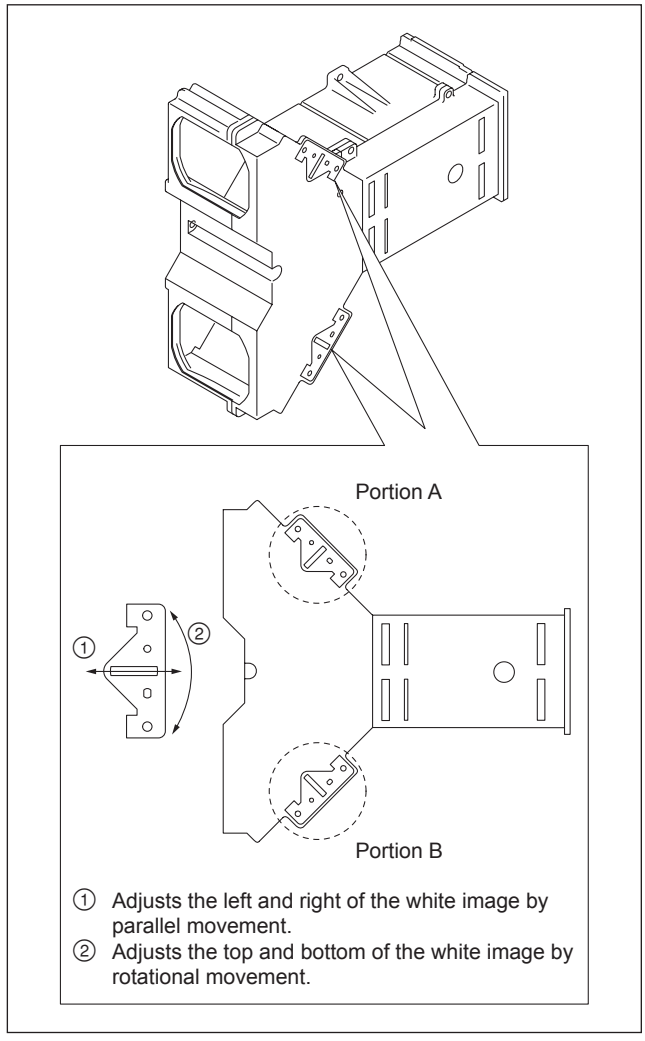


Fig. 2-4-1f

2-4-2. Registration Adjustment

Perform adjustment referring to “4. MAINTENANCE window” in “2-8-3. Function of Each Window” if registration is out of position.

2-5. Screen Illuminance Setting and Color Space Conversion (CSC Adjustment)

Before setting function memory, set the illuminance on the screen and correct the color space, with the unit installed.

Color space converter

The color space converter can correct the color characteristics of this unit (709, Virtual White and DCDM) for each color reproduction range.

Correction of color space “709”

Procedure

1. Display the FUNCTION MEMORY window of the SRX Controller. (Refer to Section 2-1-3.)
2. Click the radio button of “Input A” in the INPUT CONTROL menu.

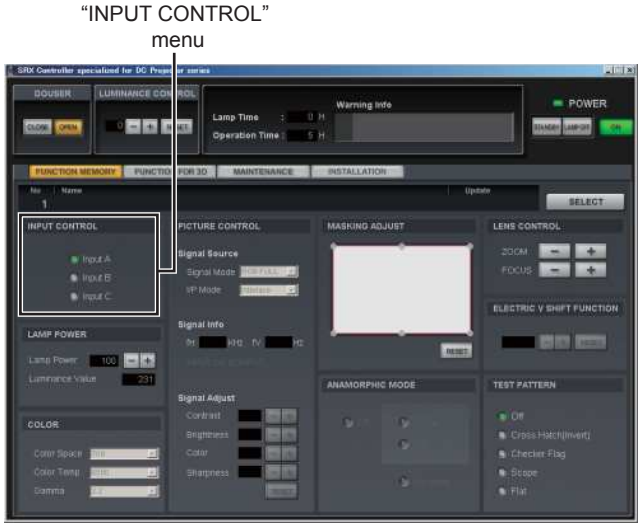


Fig. 2-5a

3. Display the MAINTENANCE window. (Refer to Section 2-1-3.)

Fig. 2-5b

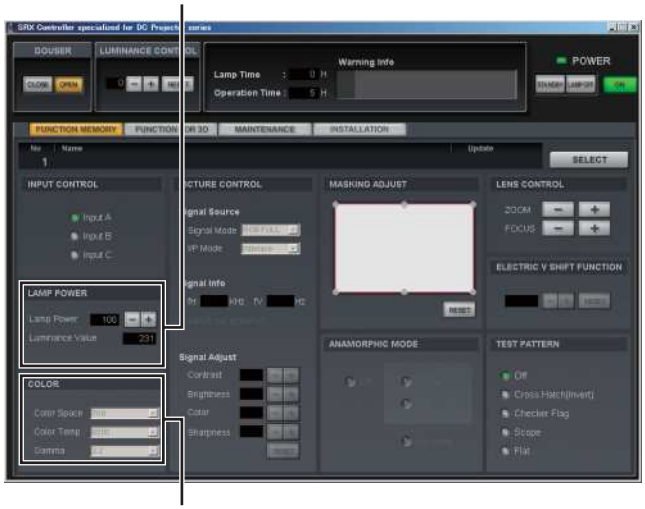
4. Click the ADJUST button in the “COLOR SPACE CONVERTER” menu.
   The COLOR SPACE window is displayed.

“TEST PATTERN SELECT” menu

Fig. 2-5c

5. Select “Gray 10” in “TEST PATTERN SELECT” menu.
   A test pattern of Gray 10 is displayed.
6. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
7. Adjust using the + / – button of the lamp power so that the illuminance on the screen is approximately 16 ft-L (the illuminance to be set + approximately 2 ft-L).
8. Select “6500” in “Color Temp” of the “COLOR” menu.
   Note When the item is not a available, input a video signal.
9. Select “709” in “Color Space” of “COLOR” menu.
   Note When the item is not a available, input a video signal.

“LAMP POWER” menu



“COLOR” menu

Fig. 2-5d

Note Each value is automatically displayed in the “Target Color Gamut” column of the “COLOR SPACE” window on the MAINTENANCE tab.
Moreover, reference white point targets “x” and “y” and luminance level “Y” are projected automatically.

10. Click the “MAINTENANCE” tab.
11. Click the ADJUST button in a “COLOR SPACE CONVERTER” menu.
    The “COLOR SPACE” window is displayed.

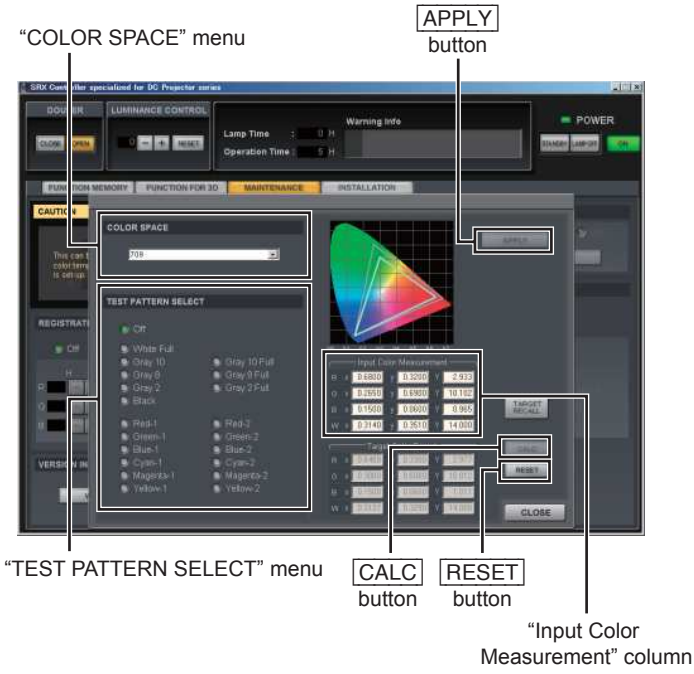


Fig. 2-5e

12. Select “709” in the “COLOR SPACE” menu.
    Note
    When “COLOR SPACE” is not available, input a video signal.
13. Click the RESET button.
    A color space function is set to OFF, and the characteristics of this unit can be measured.
14. Project Green-1, Blue-1, and Red-1, respectively in the “TEST PATTERN SELECT” menu and measure “x”, “y”, and luminance level “Y”.
15. Select “Gray 8” according to the reference white point.
    A test pattern of Gray 8 is displayed.
16. Measure “x”, “y” and luminance level “Y”.
17. Enter the measurement result in step 14 into the “Input Color Measurement” column.
18. Click the CALC button.
19. Confirm that the differences of all numeric values are less than ±0.002.
    Note
    When there is an item in which the differences of the numeric value is ±0.002 or more, repeat the steps 14 to 18.
20. Click the APPLY button.
21. Return the setting before adjusting.

Note

When the CSC adjustment is performed, the luminance is lowered by approximately 2 ft-L. Therefore, adjust the lamp power in the “LAMP POWER” menu to obtain the required luminance again.

Adjustment of color space “Virtual White”

The adjustment can be performed in the following two methods.

Procedure

Adjustment using internal test pattern

The adjustment can be performed using the internal test patterns; “Red-1”, “Green-1”, “Blue-1” and “Gray-8”.

1. Start the SRX Controller. (Refer to Section 2-1-3.)
2. Click the “MAINTENANCE” tab of the SRX Controller.
   The MAINTENANCE window is displayed.

Fig. 2-5f

3. Click the ADJUST button in the “COLOR SPACE CONVERTER” menu.
   The COLOR SPACE window is displayed.

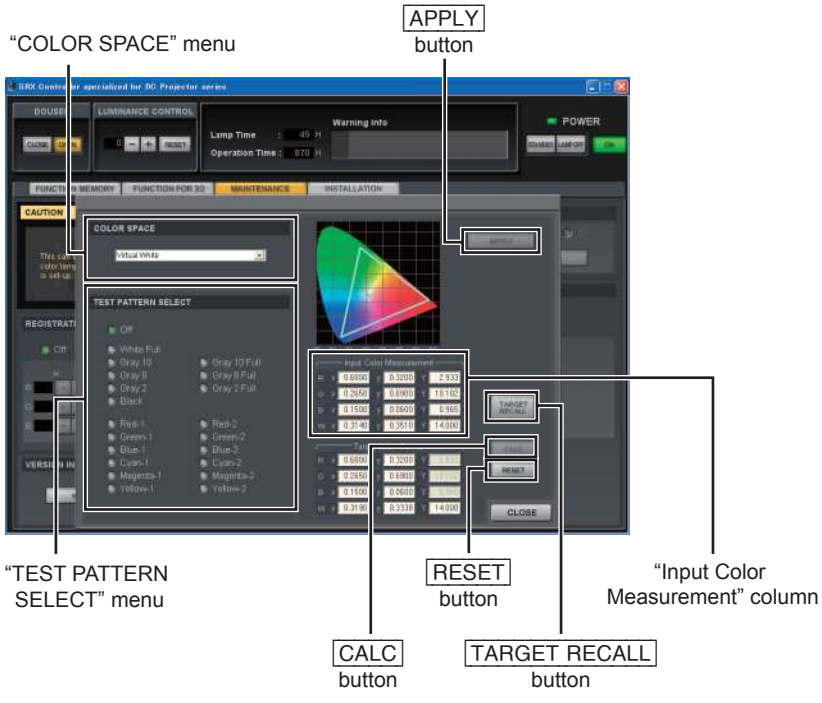


Fig. 2-5g

4. Select the “Gray-10” in the “TEST PATTERN SELECT” menu.
5. Measure the luminance of screen and adjust the lamp power in the “LAMP POWER” menu on the FUNCTION MEMORY window so that the luminance is 16 ft-L.
   After adjustment, the luminance is lowered by approximately 2 ft-L.
6. Select “Virtual White” in the “COLOR SPACE” menu.

   Note

   When “COLOR SPACE” is not available, input a video signal.
7. Check the W values of “Target Color Gamut” is x = 0.319, y = 0.3338.
8. When the W values are mismatch, click the TARGET RECALL button.
9. Click the RESET button first, and then click the APPLY button.
10. Select “Red-1”, “Green-1”, “Blue-1” and “Gray-8” respectively in the “TEST PATTERN SELECT” menu. Then, measure x and y values respectively.
11. Enter the x and y values in Input Color Measurement in the “COLOR SPACE” menu.
12. Click the CALC button first, and then click the APPLY button on the “COLOR SPACE” window.
13. Select “Red-1”, “Green-1”, “Blue-1” and “Gray-8” respectively in the “TEST PATTERN SELECT” menu. Then, measure the x and y values respectively and compare the results with the following specifications within an error range of 0.006.

	x	y
Red-1	0.680	0.320
Green-1	0.265	0.690
Blue-1	0.150	0.060
Gray-8	0.319	0.3338

   Note

   If the specifications are not satisfied, perform steps 4, 5, and 9 to 12 again.
14. Select the “Gray-10” in the “TEST PATTERN SELECT” menu.
15. Click the “FUNCTION MEMORY” tab.
    The FUNCTION MEMORY window is displayed.
16. Adjust the lamp power in the “LAMP POWER” menu so that the luminance is 14 ft-L.

Note

In this procedure, the luminance is not correctly 14 ft-L. When the correct luminance is required, input “Gray 10” of the SONY color patch by LMT-300, and adjust the lamp power.

Adjustment using “Sony Color Patch”

1. Copy the Sony color patch files (DPPJ07-080_1.zip to DPPJ07-080_4.zip) in PC.

   Note

   For obtaining, please contact your local Sony Sales Office/Service Center.
2. Create the “Sony_Color_Patch” folder and move all files obtained by decompressing the zip file to the “Sony_Color_Patch” folder.
   (The files having the extension of .xml and .mxf)
3. Import it in the same way as the normal DCP contents.
4. Start the SRX Controller and the Screen Management Controller.
5. Click the “FUNCTION MEMORY” tab of the SRX Controller.
   The FUNCTION MEMORY window is displayed.

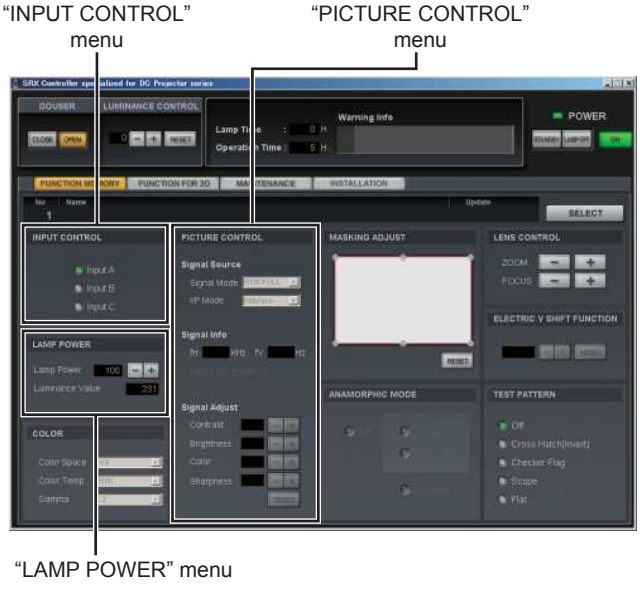


Fig. 2-5h

6. Click the “Input C” (LMT-300) radio button in the “INPUT CONTROL” menu.
7. Set Contrast to 90 and Bright to 50 in the “PICTURE CONTROL” menu.
8. Reproduce the Gray 10 of “Sony Color Patch” signal from LMT-300 by Screen Management Controller.
9. Click the “FUNCTION MEMORY” tab of the SRX Controller.
   The FUNCTION MEMORY window is displayed.
10. Measure the luminance of screen and adjust the lamp power in the “LAMP POWER” menu so that the luminance is 16 ft-L.

    Note

    After the CSC adjustment, the luminance is lowered by approximately 2 ft-L.
11. Click the “MAINTENANCE” tab of the SRX Controller.
    The MAINTENANCE window is displayed.

Fig. 2-5i

12. Click the ADJUST button in the “COLOR SPACE CONVERTER” menu.
    The “COLOR SPACE” window is displayed.

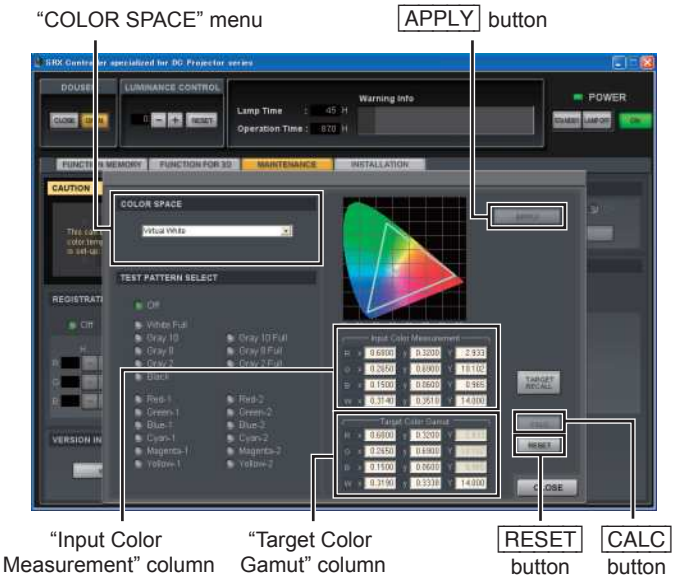


Fig. 2-5j

13. Select “Virtual White” in the “COLOR SPACE” menu.

    Note

    When “COLOR SPACE” is not available, input a video signal.
14. Click the RESET button first, and then click the APPLY button.
15. Change the W values of “Target Color Gamut” to x = 0.314, and y = 0.351.
16. Reproduce the “Red-1”, “Green-1”, “Blue-1” and “Gray-8” of Sony Color Patch signal from LMT-300 by Screen Management Controller.
    Then, measure the x and y values respectively.
17. Enter the x and y values in Input Color Measurement on the “COLOR SPACE” window.
18. Click the CALC button first, and then click the APPLY button.
19. Reproduce the “Red-1”, “Green-1”, “Blue-1” and Gray-8 of Sony Color Patch signal from LMT-300 by Screen Management Controller.
    Then, measure the x and y values respectively, and compare the results with the following DCI specifications within an error range of 0.006.

	x	y
Red-1	0.680	0.320
Green-1	0.265	0.690
Blue-1	0.150	0.060
Gray-8	0.314	0.351

    Note

    If the specifications are not satisfied, perform steps 9, 10, and 14 to 18 again.
20. Reproduce “Gray-10” from LMT-300 and adjust the lamp power in the “LAMP POWER” menu so that the luminance is 14 ft-L.

Note

If the luminance of 16 ft-L or 14 ft-L is not ensured, set the lamp power setting to 100% and perform adjustment in the maximum luminance state.

Adjustment of color space “DCDM”

The adjustment can be performed using the internal test patterns; “Red-1”, “Green-1”, “Blue-1” and “Gray-8”.

Procedure

1. Start the SRX Controller. (Refer to Section 2-1-3.)
2. Click the “MAINTENANCE” tab of the SRX Controller.
   The MAINTENANCE window is displayed.

Fig. 2-5k

3. Click the ADJUST button in the “COLOR SPACE CONVERTER” menu.
   The COLOR SPACE window is displayed.

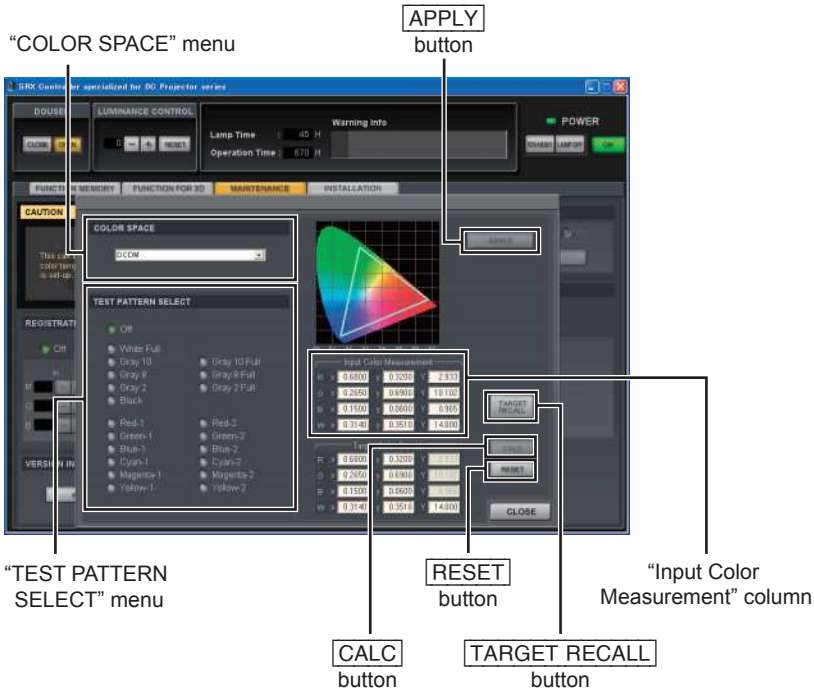


Fig. 2-5l

4. Select the “Gray-10” in the “TEST PATTERN SELECT” menu.
5. Measure the luminance of screen and adjust the lamp power in the “LAMP POWER” menu so that the luminance is 16 ft-L.
   After adjustment, the luminance is lowered by approximately 2 ft-L.
6. Select “DCDM” in the “COLOR SPACE” menu.
   Note
   When “COLOR SPACE” is not available, input a video signal.
7. Check the W values of “Target Color Gamut” is x = 0.314, y = 0.351.
8. When the W values are mismatch, click the TARGET RECALL button.
9. Click the RESET button first, and then click the APPLY button.
10. Select “Red-1”, “Green-1”, “Blue-1” and “Gray-8” respectively in the “TEST PATTERN SELECT” menu. Then, measure x and y values respectively.
11. Enter the x and y values in Input Color Measurement in the “COLOR SPACE” menu.
12. Click the CALC button first, and then click the APPLY button in the “COLOR SPACE” window.
13. Select “Red-1”, “Green-1”, “Blue-1” and “Gray-8” respectively in the “TEST PATTERN SELECT” menu. Then, measure the x and y values respectively and compare the results with the following specifications within an error range of 0.006.

	x	y
Red-1	0.680	0.320
Green-1	0.265	0.690
Blue-1	0.150	0.060
Gray-8	0.314	0.319

   Note
   If the specifications are not satisfied, perform steps 4, 5, and 9 to 12 again.
14. Select the “Gray-10” in the “TEST PATTERN SELECT” menu.
15. Click the “FUNCTION MEMORY” tab.
    The FUNCTION MEMORY window is displayed.
16. Adjust the lamp power in the “LAMP POWER” menu so that the luminance is 14 ft-L.

Note

In this procedure, the luminance is not correctly 14 ft-L. When the correct luminance is required, input “Gray 10” of the SONY color patch by LMT-300, and adjust the lamp power.

CSC adjustment for virtual white

The D61 WP (White Point) of DCDM standard specified by DCI SPEC is considerably green-tinged. Some people in the film industry recommend D65 or D55 WP. However, when the software created by D65 or D55 WP is installed in the display adjusted by DCI SPEC, some colors run out of color space causing a clipping problem. To solve this problem, Virtual White is proposed. Its chromaticity range is the same as DCDM; WP x=0.319, y=0.3338. Also, the data for realizing 14 ft-L is slightly changing. By this, the clipping problem does not occur in any of D65, D61 and D55. If Virtual White is used for adjustment, there is no problem in the DCI SPEC signal.

Note

For this unit, “Virtual White” can be selected in COLOR SPACE.

2-6. Field Angle Adjustment

The field angle adjustment method in this section conforms to the DCI specification.
(Lens, adjuster, image size, image position)
The field angle adjustment method is classified into two types depending on the masking method of the theater screen.

- Side Masking
- Height Masking

2-6-1. Side Masking

Applicable theater

The field angle of screen is changed in the horizontal direction.

Preparation

The adjustment method varies depending on whether the V shift amount required for the field angle adjustment is more or less than 1/2 screen.
Check the required V shift amount before adjustment.

1. Fix the H shift at the center.
2. Project the Scope/Flat pattern.
3. Adjust to the field angle of Flat using the zoom, focus and V shift.
   When the tilt of this unit is required, determine that the V shift is 1/2 screen or more in step 4 without performing adjustment.
4. Check whether the V shift is more or less than 1/2 screen shift according to “2-3. Lens Adjustment (H Shift, V Shift, Zoom and Focus Adjustment)”.

Adjustment

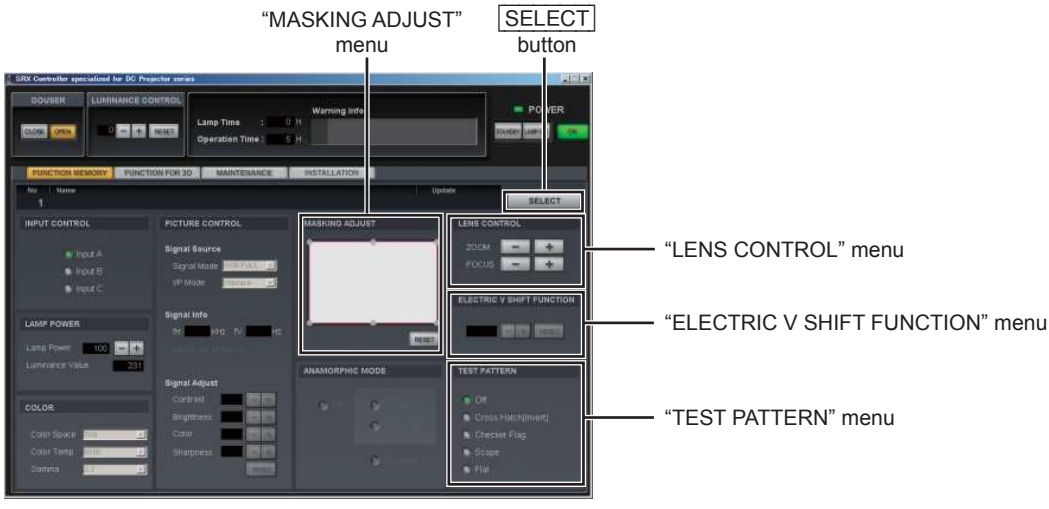


Fig. 2-6-1

In the case of the V shift amount is less than 1/2 screen (0 to 1/2 screen)

Flat adjustment

1. Start the SRX Controller. (Refer to Section 2-1-3.)
2. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
3. Click the SELECT button.
   Note
   For creation of the new function memory and for details of the function memory, refer to Section 2-7.
4. Call the FUNCTION MEMORY No. for performing the Flat setting using the RECALL button.
5. Adjust the image size, focus and image position using the zoom, focus and V shift in the “LENS CONTROL” menu.
   Note
   Adjust the deviation in the horizontal direction by moving the main unit. (Do not use the H shift.)
6. Fix this unit using the four adjusters and lock it with the nuts. (Refer to Section 1-2.)
   Note
   Adjust the height with the V shift.
   (Do not use the electric V shift.)
   (Refer to “2. FUNCTION MEMORY window” in Section 2-8-3.)
7. Click the “MAINTENANCE” tab.
   The MAINTENANCE window is displayed.
8. Adjust the luminance using the required test pattern in the “TEST PATTERN” menu.
9. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
10. Set the masking in the “MASKING ADJUST” menu.
    (Refer to “2.-⑤ MASKING ADJUST” in Section 2-8-3.)
11. Click the SELECT button.
12. Check the FUNCTION MEMORY No., and then click the APPLY button. (Memory of Function)

Scope adjustment

1. Start the SRX Controller. (Refer to Section 2-1-3.)
2. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
3. Click the SELECT button.
   Note
   For creation of the new function memory and for details of the function memory, refer to Section 2-7.
4. Call the FUNCTION MEMORY No. for performing the Scope setting using the RECALL button.
5. Adjust the image size, focus and image position using the zoom and focus in the “LENS CONTROL” menu and the electric V shift in the “ELECTRIC V SHIFT FUNCTION” menu.
   (Refer to “2. FUNCTION MEMORY window” in Section 2-8-3.)
6. Click the “MAINTENANCE” tab.
   The MAINTENANCE window is displayed.
7. Adjust the luminance using the required test pattern in the “TEST PATTERN” menu.
8. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
9. Set the masking in the “MASKING ADJUST” menu.
   (Refer to “2.-⑤ MASKING ADJUST” in Section 2-8-3.)
10. Click the SELECT button.
11. Check the FUNCTION MEMORY No., and then click the APPLY button. (Memory of Function)

In the case of the V shift amount is 1/2 screen or more

Flat adjustment

1. Align the V shift with the 1/2 screen position. (Refer to Section 2-3.)
2. Start the SRX Controller. (Refer to Section 2-1-3.)
3. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
4. Click the SELECT button.
   Note
   For creation of the new function memory and for details of the function memory, refer to Section 2-7.
5. Call the FUNCTION MEMORY No. for performing the Flat setting using the RECALL button.
6. Adjust the image size, focus and image position in the horizontal direction using the zoom and focus in the “LENS CONTROL” menu. (Refer to “2. FUNCTION MEMORY window” in Section 2-8-3.)
   Note
   Adjust the deviation in the horizontal direction by moving the main unit. (Do not use the H shift.)
7. Adjust the image position in the vertical direction using the adjuster.
8. Fix this unit using the four adjusters and lock it with the nuts.
   Note
   When the fine adjustment of height is required, perform adjustment with the V shift. (Do not use the electric V shift.)
   Perform the adjustment with the V shift only in the direction that the shift amount becomes smaller. If the shift amount exceeds 1/2 screen, the field angle adjustment of Scope cannot be performed correctly.
9. Click the “MAINTENANCE” tab.
   The MAINTENANCE window is displayed.
10. Adjust the luminance using the required test pattern in the “TEST PATTERN” menu.
11. Click the “FUNCTION MEMORY” tab.
    The FUNCTION MEMORY window is displayed.
12. Set the masking in the “MASKING ADJUST” menu.
    (Refer to “2.-⑤ MASKING ADJUST” in Section 2-8-3.)
13. Click the SELECT button.
14. Check the FUNCTION MEMORY No., and then click the APPLY button. (Memory of Function)

Scope adjustment

1. Start the SRX Controller. (Refer to Section 2-1-3.)
2. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
3. Click the SELECT button.
   Note
   For creation of the new function memory and for details of the function memory, refer to Section 2-7.
4. Call the FUNCTION MEMORY No. for performing the Scope setting using the RECALL button.
5. Adjust the image size, focus and image position using the zoom, focus in the “LENS CONTROL” menu and the electric V shift in the “ELECTRIC V SHIFT FUNCTION” menu.
   (Refer to “2. FUNCTION MEMORY window” in Section 2-8-3.)
6. Click the “MAINTENANCE” tab.
   The MAINTENANCE window is displayed.
7. Adjust the luminance using the required test pattern in the “TEST PATTERN” menu.
8. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
9. Set the masking in the “MASKING ADJUST” menu. (Refer to “2.-⑤ MASKING ADJUST” in Section 2-8-3.)
10. Click the SELECT button.
11. Check the FUNCTION MEMORY No., and then click the APPLY button. (Memory of Function)

2-6-2. Height Masking

Applicable theater

The field angle of screen is changed in the vertical direction.

Preparation

1. Project the Scope/Flat pattern.

Adjustment

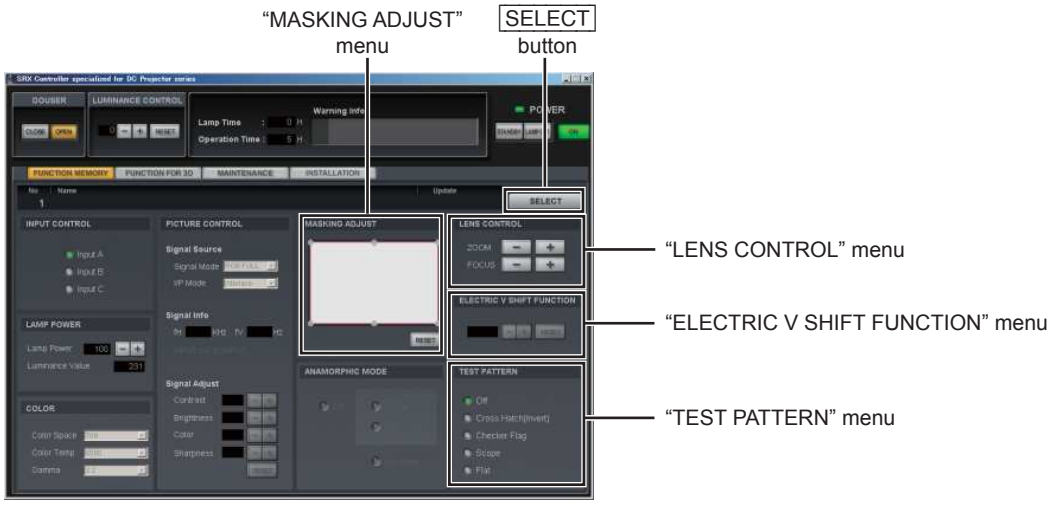


Fig. 2-6-2

Flat adjustment

1. Start the SRX Controller. (Refer to Section 2-1-3.)
2. Click the "FUNCTION MEMORY" tab.
   The FUNCTION MEMORY window is displayed.
3. Click the SELECT button.
   Note
   For creation of the new function memory and for details of the function memory, refer to Section 2-7.
4. Call the FUNCTION MEMORY No. for performing the Flat setting using the RECALL button.
5. Adjust the zoom and focus in the "LENS CONTROL" menu, and the V shift and H shift (refer to Section 2-3.) according to the field angle of Flat.
   (For the "LENS CONTROL" menu, refer to "2. FUNCTION MEMORY window" in Section 2-8-3.)
   Note
   When the projection angle is insufficient, adjust the image position in the vertical direction using the adjuster.
6. Fix this unit using the four adjusters and lock it with the nuts. (Refer to Section 1-2.)
7. Click the "MAINTENANCE" tab.
   The MAINTENANCE window is displayed.
8. Adjust the luminance using the required test pattern in the "TEST PATTERN" menu.
9. Click the "FUNCTION MEMORY" tab.
   The FUNCTION MEMORY window is displayed.

10. Set the masking in the “MASKING ADJUST” menu.
    (Refer to “2.-⑤ MASKING ADJUST” in Section 2-8-3.)
11. Click the SELECT button.
12. Check the FUNCTION MEMORY No., and then click the APPLY button. (Memory of Function)

Scope adjustment

1. Start the SRX Controller. (Refer to Section 2-1-3.)
2. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
3. Click the SELECT button.

   Note

   For creation of the new function memory and for details of the function memory, refer to Section 2-7.
4. Call the FUNCTION MEMORY No. for performing the Scope setting using the RECALL button.
5. Adjust the image size, focus and image position using the zoom and focus in the “LENS CONTROL” menu and the electric V shift in the “ELECTRIC V SHIFT FUNCTION” menu.
   (Refer to “2. FUNCTION MEMORY window” in Section 2-8-3.)
6. Click the “MAINTENANCE” tab.
   The MAINTENANCE window is displayed.
7. Adjust the luminance using the required test pattern in the “TEST PATTERN” menu.
8. Click the “FUNCTION MEMORY” tab.
   The FUNCTION MEMORY window is displayed.
9. Set the masking in the “MASKING ADJUST” menu.
   (Refer to “2.-⑤ MASKING ADJUST” in Section 2-8-3.)
10. Click the SELECT button.
11. Check the FUNCTION MEMORY No., and then click the APPLY button. (Memory of Function)

2-7. Setting of Function Memory

2-7-1. Setting of New Function Memory

Note

Perform this adjustment with the external signal input. For a blank signal, adjustment cannot be performed.

Procedure

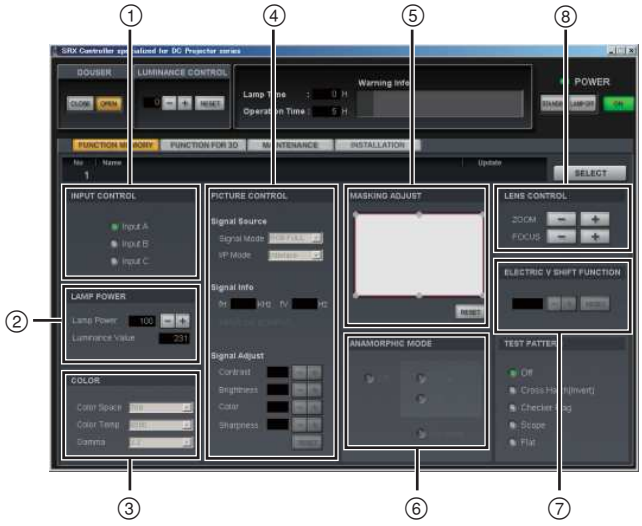


Fig. 2-7-1a

1. The items below are adjusted.
   (Refer to “2. FUNCTION MEMORY window” in “2-8-3. Functions of Each Window”.)
   - ① INPUT CONTROL
   - ② LAMP POWER (∗1)
   - ③ COLOR
     - – Color Space
     - – Color Temp
     - – Gamma
   - ④ PICTURE CONTROL
     - – Signal Source
       - Signal Mode
       - I/P Mode
     - – Signal Adjust
       - Contrast
       - Brightness
       - Color
       - Sharpness
   - ⑤ MASKING ADJUST
   - ⑥ ANAMORPHIC MODE
   - ⑦ ELECTRIC V SHIFT FUNCTION
   - ⑧ LENS CONTROL
     - – ZOOM
     - – FOCUS

(∗1):
Setting of lamp power: After the zoom adjustment of a lens, adjust using lamp power so that the screen illuminance becomes the desired brightness.

2. Click the SELECT button on the FUNCTION MEMORY window.

Fig. 2-7-1b

3. Click the setting No. you want to register and enter a name.
4. Click the APPLY button after entering the name.

Note

If you cannot click the APPLY button, set “LUMINANCE CONTROL” to “0”.

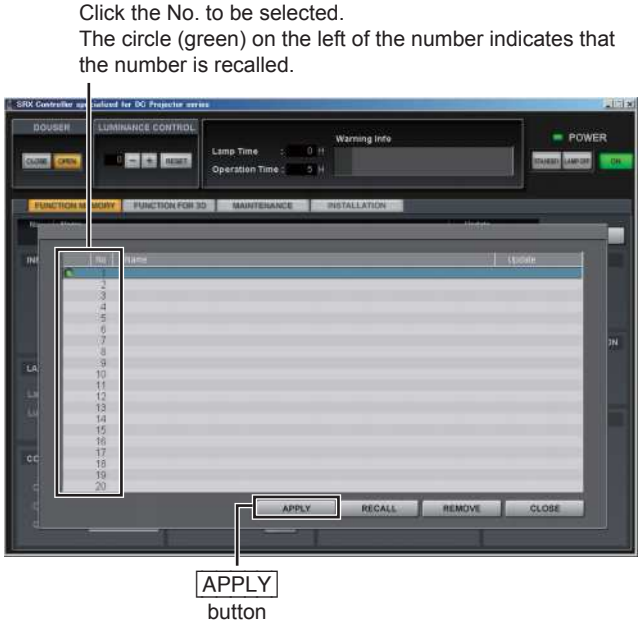


Fig. 2-7-1c

2-7-2. Change in Setting of Registered Function Memory

1. Click the SELECT button from the FUNCTION MEMORY window.

Fig. 2-7-2a

2. Click the function memory No. you want to change, then click the RECALL button to call memory.
3. Change the item you want to change and click the SELECT button.
4. Confirm the function memory No. and click the APPLY button.

Note

If you cannot click the APPLY button, set "LUMINANCE CONTROL" to "0".

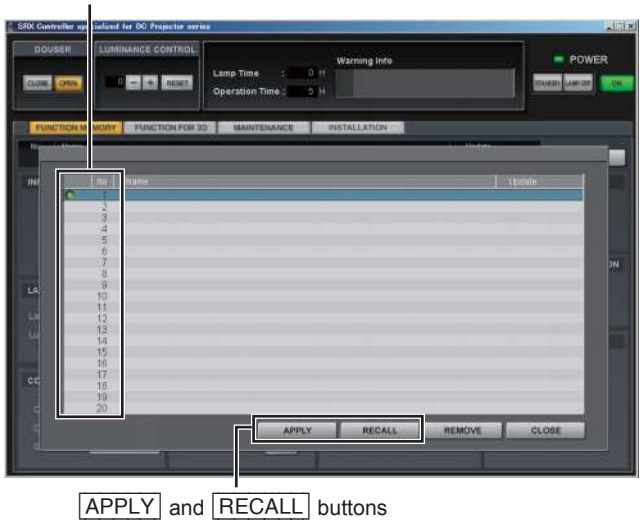


Fig. 2-7-2b

2-7-3. Copying of Registered Function Memory to Create New Function Memory

1. Click the SELECT button from the FUNCTION MEMORY window.

Fig. 2-7-3a

2. Click the function memory No. you want to copy, then click the RECALL button to call memory.
3. Change the item you want to change and click the SELECT button.
4. Click the setting No. you want to register, enter a name, and click the APPLY button.

Note

If you cannot click the APPLY button, set "LUMINANCE CONTROL" to "0".

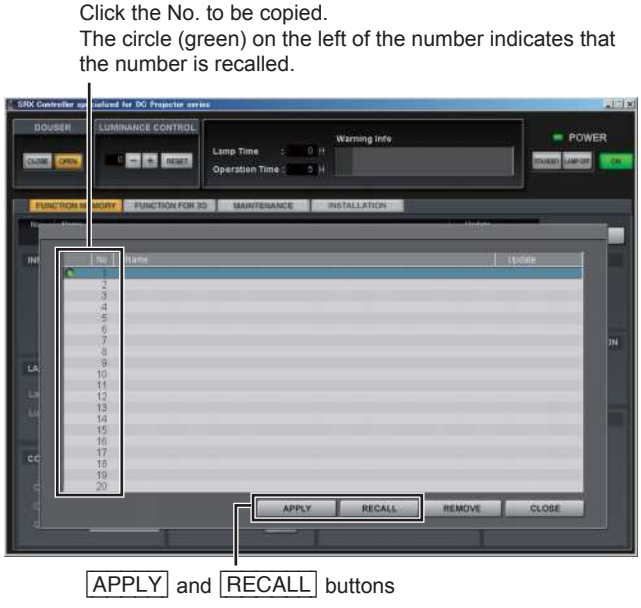


Fig. 2-7-3b

2-7-4. Switching of Registered Function Memory

1. Click the SELECT button from the FUNCTION MEMORY window.

Fig. 2-7-4a

2. Click the setting No. you want to switch.
3. Click the RECALL button.
4. Click the CLOSE button.

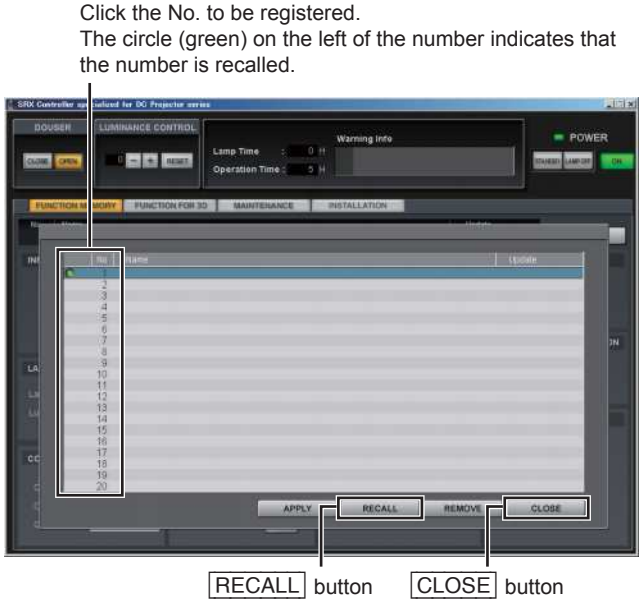


Fig. 2-7-4b

2-8. How to Use the SRX Controller

The adjustment items of an SRX Controller are described below.

Note

Refer to the described sections for the items below on an SRX Controller.

- Installation: Section 2-1-1.
- Connection: Section 2-1-2.
- Startup: Section 2-1-3.

2-8-1. Configuration

The SRX Controller consists of the following.

- FUNCTION MEMORY window (Refer to 2 in Section 2-8-3.)
- FUNCTION FOR 3D window (Refer to 3 in Section 2-8-3.)
- MAINTENANCE window (Refer to 4 in Section 2-8-3.)
- INSTALLATION window (Refer to 5 in Section 2-8-3.)

2-8-2. Function Memory

In the SRX Controller, a total of 20 setting values for both 2D and 3D can be registered.
In an initial value, the setting value is automatically memorized to No. 1. To register the setting value in another No., click the No. to be registered and adjust and set it on each window. (Refer to Section 2-7.)
Refer to steps 1 and 2 of Section 2-7-3 when calling the registered setting value.

2-8-3. Functions of Each Window

1. Common items

Fig. 2-8-3a

① DOUSER
② LUMINANCE CONTROL
③ Lamp Time/Operation Time/Warning Info
④ STANDBY/LAMP OFF/(POWER) ON

① DOUSER

Sets “CLOSE” and “OPEN” of DOUSER.

② LUMINANCE CONTROL

Sets the luminance of a lamp in this unit. The luminance is set in units of 1% by lamp power.

Note

In a premium preview, this function controls brightness without using the setting of function memory. Function memory cannot be used when this function is used.

- [+] button: Luminance increases.
- [–] button: Luminance decreases.

③ Lamp Time/Operation Time/Warning Info

- Lamp Time: Displays the operation time of a lamp.
- Operation Time: Displays the operation time of this unit.
- Warning Info: Displays the contents of warning.

④ STANDBY/LAMP OFF/(POWER) ON

- STANDBY: Puts this unit into the standby state. (Canceled using an [ON] button.)
- LAMP OFF: Turns off a lamp. (Canceled using an [ON] button.)
- (POWER) ON: Turns on the power.

2. FUNCTION MEMORY window

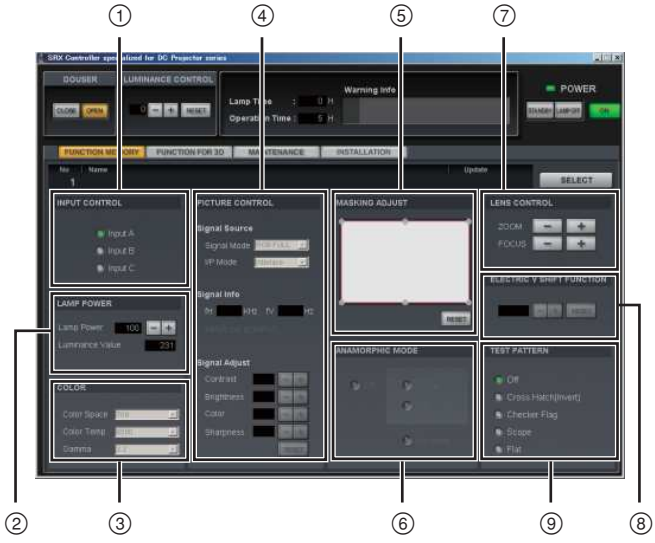


Fig. 2-8-3b

① INPUT CONTROL
② LAMP POWER
③ COLOR
④ PICTURE CONTROL
⑤ MASKING ADJUST
⑥ ANAMORPHIC MODE
⑦ LENS CONTROL
⑧ ELECTRIC V SHIFT FUNCTION
⑨ TEST PATTERN

① INPUT CONTROL

Selects from which equipment the data is input.

- Input A: Input from the DVI board (default) or optional board
- Input B: Input from the optional board
- Input C: Input from LMT-300

② LAMP POWER

Can adjust the output of a light source lamp in units of 1% between 50% and 100%. The screen becomes dark when a numeric value decreases. In this case, however, the power consumption decreases and the life of a lamp becomes long.

- [+] button: The numeric value increases.
- [−] button: The numeric value decreases.

Note

When the 4.2 kW lamp bulb is used, it can be adjusted between 53% and 100%.

③ COLOR

Sets so that color reproduction can be obtained correctly.
Confirm the color from the setting of Color Space when there is abnormality in the color of an image.

- Color Space: Adjusts the reproduction range of color tune.
  - 709: Select when projecting an ordinary Hi-Vision signal or RGB signal.
  - DCDM: Used when projecting using Minimum D-Cinema Color Gamut prescribed in a DCI specification book/version 1.0.
  - CIE XYZ: Used when projecting a special material having a wide chromaticity band exceeding DCDM.
  - CUSTOM1: The initial value of DCDM is set.
  - Virtual White: Select when displaying the signal created by D65 or D55 WP on the display adjustment DCI SPEC.
- Color Temp: Select the color temperature.
  - DCI W/P: Select when projecting a movie material.
  - 6500: It is recommended to use this setting when projecting an ordinary Hi-Vision signal or RGB signal.
  - CUSTOM1 to 4: The initial value of DCI W/P is set.
- Gamma: Select a gamma correction mode. (Select from 2.6, 2.2, or 1.8.)
  The screen becomes bright as a numeric value decreases. Select the gamma correction mode according to the video source. It is recommended to use 2.2 when projecting an ordinary Hi-Vision signal or RGB signal.

④ PICTURE CONTROL

Performs the selection of an input signal or the adjustment of picture quality.

- Signal Source
  - Signal Mode: Select the input signal from the equipment selected using INPUT CONTROL.
    Note
    If the setting of Signal Mode does not correspond to the input signal, the tone is not correctly displayed and the black is displayed grayly.
  - I/P Mode: Select an I/P conversion mode. Select Interlace, PsF, and 1080 50p/60p according to the input signal.
- Signal Info (Signal information): Displays the horizontal/vertical frequency of an input signal automatically. (The numeric value is displayed as a rough standard.) The type of an input signal is displayed below the frequency display.
  - fH: Displays a horizontal frequency.
  - fV: Displays a vertical frequency.
- Signal Adjust: Adjusts the picture quality of an input signal.
  A setting value increases when you click the [+] button. A numeric value decreases when you click the [−] button. The adjustable items in a Signal Adjust menu are returned to the factory setting when you click the [RESET] button.
  - Contrast: Adjusts the contrast. The contrast becomes strong as a setting value increases.
  - Brightness: Adjusts the brightness. The brightness becomes strong as a setting value increases.
  - Color: Adjusts the depth of color. The color becomes dark as a setting value increases.
  - Sharpness: Adjusts the sharpness. An image becomes sharp as a setting value increases. It becomes soft as a setting value decreases.

⑤ MASKING ADJUST

Adjusts the image masking according to the screen shape by the six adjusting point respectively. And adjustment value is displayed by pointing the cursor at each adjusting point.

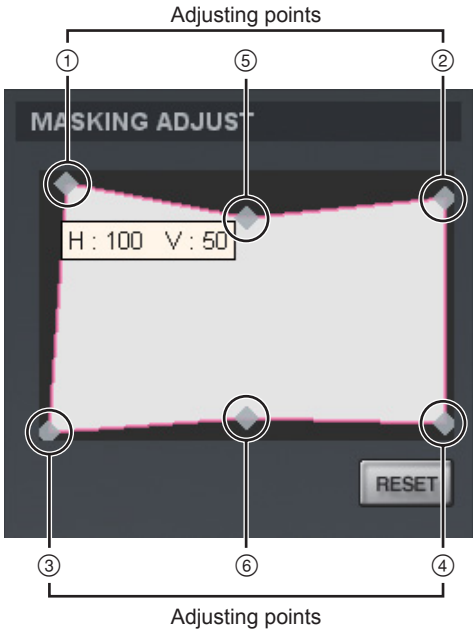


Fig. 2-8-3c

When an adjusting point is double-clicked, the adjustment window is displayed.

Fig. 2-8-3d

A setting value increases when you click the [+] button. A numeric value decreases when you click the [–] button. The numeric value can also be entered directly.
Each setting value is as follows:
① to ④: 0 to 950
⑤, ⑥: −500 to 500

Note

After the adjusting of adjusting point ① to ④ is completed, perform the adjusting of adjusting point ⑤ and ⑥.

All items in a MASKING ADJUST menu are returned to the factory setting when you click the [RESET] button.

⑥ ANAMORPHIC MODE

Sets the mode when the anamorphic lens is attached. And sets the squeeze ON/OFF when the standard lens is installed.

Note

When Scope or Flat is set, a signal convert to the anamorphic lens size data (1280 × 720 or 1920 × 1080), even if the signal input from INPUT A / B is not DCP.

- Off: Normal image size
- Scope: When the anamorphic lens is attached, this is selected in the case of the DCP for Scope size.
- Flat: When the anamorphic lens is attached, this is selected in the case of the DCP for Flat size.
- Squeeze: When the normal lens is attached, this is selected when you want to set Squeeze for aspect.

⑦ LENS CONTROL

Adjusts the image projected on the screen.

- ZOOM: Adjusts the size of an image. An image is expanded when you click the [+] button. It is reduced when you click the [–] button.
- FOCUS: Adjusts a focus. A focus is adjusted to the distance place when you click the [+] button. It is adjusted to the nearby place when you click the [–] button.

⑧ ELECTRIC V SHIFT FUNCTION

Adjusts the vertical position of the projection screen electrically. The screen moves upwards when a setting value increases. It moves downwards when a setting value decreases. The setting value is returned to the factory setting when you click the [RESET] button.

⑨ TEST PATTERN

An image can be adjusted by projecting the test pattern, built in this unit, on the screen without inputting the signal from other equipment.

Each test pattern is as follows:

- Cross Hatch (Invert)
- Checker Flag
- Scope
- Flat

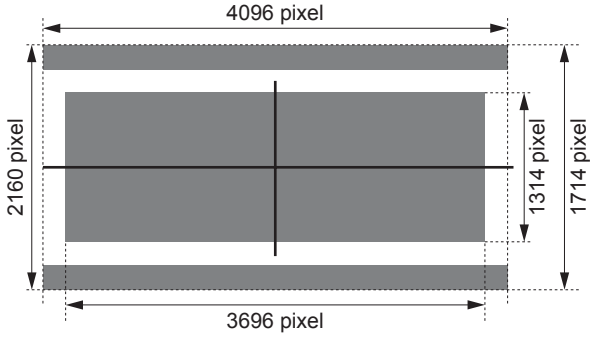
Select Off when not projecting a test pattern on the screen.

Note

The test patterns Scope and Flat are as shown in the figure below.

When installing, those patterns are used in fitting the image size or masking the projection data.

Scope



Flat

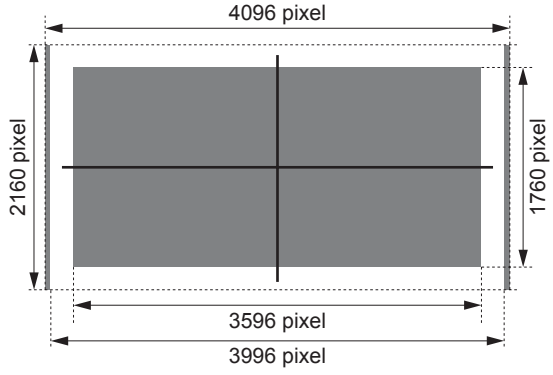


Fig. 2-8-3e

3. FUNCTION FOR 3D window

Fig. 2-8-3f

This function is used for adjustment of 3D lens.
For this function, refer to the “INSTALLATION AND SERVICE MANUAL” of LKRL-A002/A003.

4. MAINTENANCE window

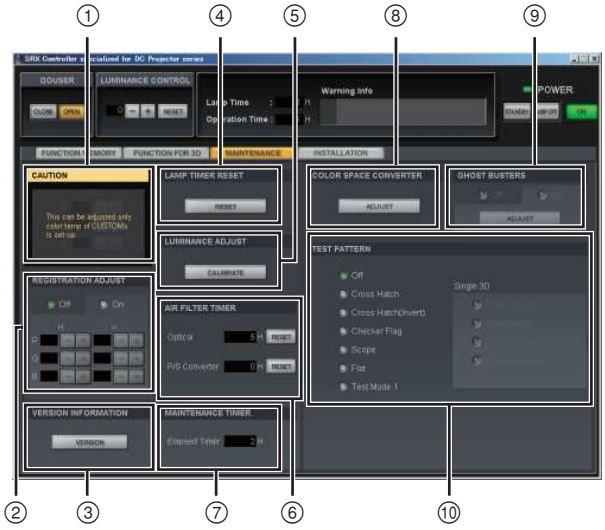


Fig. 2-8-3g

① WHITE BALANCE
② REGISTRATION ADJUST
③ VERSION INFORMATION
④ LAMP TIMER RESET
⑤ LUMINANCE ADJUST
⑥ AIR FILTER TIMER
⑦ MAINTENANCE TIMER
⑧ COLOR SPACE CONVERTER (Refer to Section 2-5.)
⑨ GHOST BUSTERS
⑩ TEST PATTERN

① WHITE BALANCE

Changes the Custom1 to Custom4 values of “Color Temp” in the “COLOR” menu on the FUNCTION MEMORY window.

Notes

- This menu is displayed only when Custom1 to Custom4 of “Color Temp” is selected.

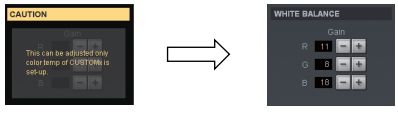


Fig. 2-8-3h

- The value changed here is reflected on only “Color Temp”.

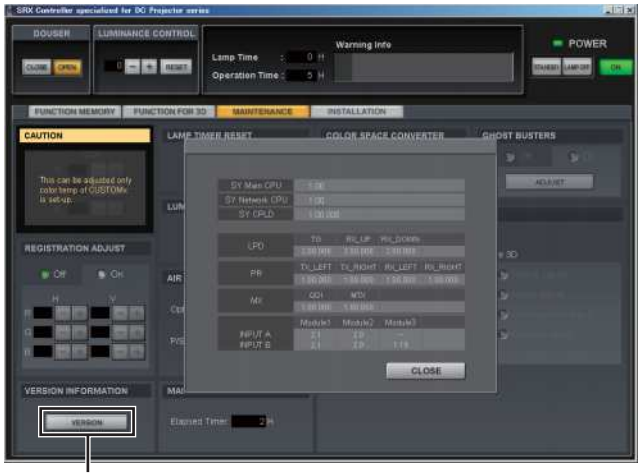
② REGISTRATION ADJUST

Moves R (red), G (green), and B (blue) in the horizontal and vertical directions by two pixels (maximum) one pixel at a time so as to adjust registration.

- H: Pixels move in the horizontal direction.
  - R: Red pixels horizontally move by two pixels (maximum) one pixel at a time when you click the [+]/[−] button.
  - G: Green pixels horizontally move by two pixels (maximum) one pixel at a time when you click the [+]/[−] button.
  - B: Blue pixels horizontally move by two pixels (maximum) one pixel at a time when you click the [+]/[−] button.
- V: Pixels moves in the vertical direction.
  - R: Red pixels vertically moves by two pixels (maximum) one pixel at a time when you click the [+]/[−] button.
  - G: Green pixels vertically moves by two pixels (maximum) one pixel at a time when you click the [+]/[−] button.
  - B: Blue pixels vertically moves by two pixels (maximum) one pixel at a time when you click the [+]/[−] button.

③ VERSION INFORMATION

Displays the version of this unit.
Click the [VERSION] button.



[VERSION] button

Fig. 2-8-3i

④ LAMP TIMER

Resets the operation time of a used lamp before replacement.
Click the [RESET] button and enter a serial number in the “LAMP INFORMATION” menu.

⑤ LUMINANCE ADJUST

Keeps the brightness of a lamp constant. Click the [CALIBRATE] button when a lamp became dark. The brightness of a lamp is adjusted automatically.

Note

It is operative when “Luminance” is selected in the Lamp Control Mode menu on the INSTALLATION window.

⑥ AIR FILTER TIMER

Resets the operation time of a used filter before replacement.
After the filter is replaced, click the RESET button.

- Optical
- P/S Converter

Note

No P/S converter filter is used for this unit.

⑦ MAINTENANCE TIMER

- Elapsed Timer

Displays the cumulative operation time of lamp.
Click the CLOSE button to exit the "MAINTENANCE TIMER" menu.

⑨ GHOST BUSTERS

This function is used for adjustment of an 3D lens.
For this function, refer to the "INSTALLATION AND SERVICE MANUAL" of LKRL-A002/A003.

⑩ TEST PATTERN

An image can be adjusted by projecting the test pattern, built in this unit, on the screen without inputting the signal from other equipment.
Each test pattern is as follows:

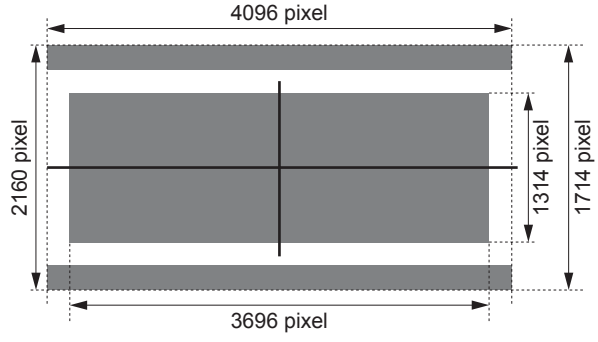
- Cross Hatch
- Cross Hatch (Invert)
- Checker Flag
- Scope
- Flat
- Test Mode 1

Select Off when not projecting a test pattern on the screen.

Notes

- A "COLOR SPACE CONVERTER" menu cannot be operated while a test pattern is displayed.
- For TEST PATTERN of signal 3D, refer to the "INSTALLATION AND SERVICE MANUAL" of LKRL-A002/A003.
- The test patterns Scope and Flat are as shown in the figure below.
  When installing, those patterns are used in fitting the image size or masking the projection data.

Scope



Flat

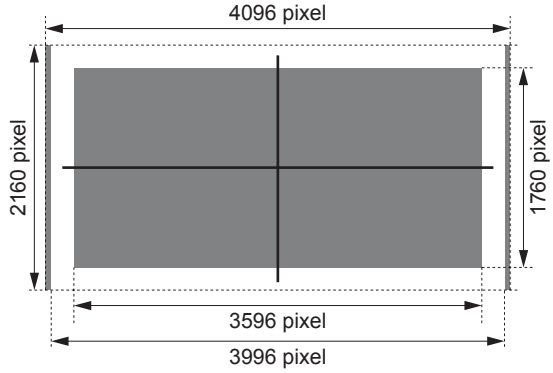


Fig. 2-8-3j

5. INSTALLATION window

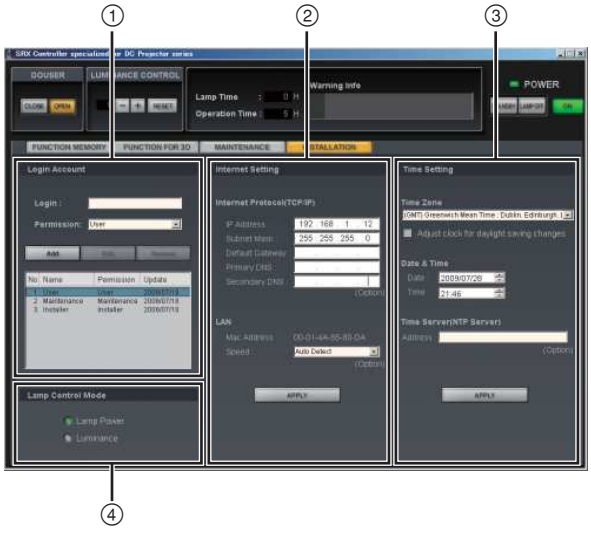


Fig. 2-8-3k

① Login Account
② Internet Setting
③ Time Setting
④ Lamp Control Mode

① Login Account

A login account can be added.

② Internet Setting

Set when connecting this unit and PC through Ethernet during use of an SRX Controller. After setting, click the APPLY button.
During initial setting, this item is set to RS-232C connection.

③ Time Setting

Sets the installation place of this unit and the current time.
After setting, click the APPLY button.

- Time Zone: Sets the area in which this unit is installed.
  Click the check box for "Adjust clock for daylight saving changes" when setting summer time.
- Date & Time: - Date: Sets the date.
  - Time: Sets the time.
- Time Server (NTP Server): Enter the address of a network time server in the "Address" column.

④ Lamp Control Mode

Selects the Lamp Control Mode.

- Lamp Power
  The lamp wattage is stored in the Function memory.
- Luminance
  The internal sensor luminance value is stored in the Function memory.

Note When Luminance is selected, perform calibration periodically in order to maintain the stored luminance at a constant level correcting the deterioration of lamp luminance. (Refer to Section 2-2.)

Section 3
Error Message

The following messages are displayed in the status message display at the back of the main unit and the "Warning Info" of an SRX controller.
These messages are classified into ALERT (degree of risk: high), WARNING (degree of risk: middle), and FAILURE (degree of risk: low) according to the degree of risk.
Take proper measures according to the message number and the remedy.

Note

For WARNING (degree of risk: middle) and FAILURE (degree of risk: low), the power is not automatically turned off during operation of the main unit (during projection). However, take proper measures according to the remedy when the power is turned off next.

ALERT (Degree of risk: high)

Message No.	Error message	Trouble	Remedy
ALERT_01	BOARD ERROR	The power of IFA board is defective.	Check the IFA board. Replace the IFA board if it is damaged.
ALERT_02	BOARD ERROR	The power of IFB board is defective.	Check the IFB board. Replace the IFB board if it is damaged.
ALERT_03	BOARD ERROR	The power of IFC board is defective.	Check the IFC board. Replace the IFC board if it is damaged.
ALERT_04	BOARD ERROR	The power of IFD board is defective.	Check the IFD board. Replace the IFD board if it is damaged.
ALERT_05	BOARD ERROR	The power of the MX board is defective.	Check the MX board. Replace the MX board if it is damaged.
ALERT_06	BOARD ERROR	The power of the LPD board is defective.	Check the LPD board. Replace the LPD board if it is damaged.
ALERT_07	BOARD ERROR	The power of the CT board is defective.	Check the CT board. Replace the CT board if it is damaged.
ALERT_08	BOARD ERROR	The power of the DST board is defective.	Check the DST board. Replace the DST board if it is damaged.
ALERT_09	BOARD ERROR	The power of the PR1 board is defective.	Check the PR1 board. Replace the PR1 board if it is damaged.
ALERT_10	BOARD ERROR	The power of the PR2 board is defective.	Check the PR2 board. Replace the PR2 board if it is damaged.
ALERT_11	BOARD ERROR	The power of the SY board is defective.	Check the SY board. Replace the SY board if it is damaged.
ALERT_12	BOARD DETACHED	The CN board is disconnected.	Check the CN board.
ALERT_13	BOARD DETACHED	The MX board is disconnected.	Check the MX board.
ALERT_14	BOARD DETACHED	The LPD board is disconnected.	Check the LPD board.
ALERT_15	BOARD DETACHED	The CT board is disconnected.	Check the CT board.
ALERT_16	BOARD DETACHED	The DST board is disconnected.	Check the DST board.
ALERT_17	BOARD DETACHED	The PR1 board is disconnected.	Check the PR1 board.
ALERT_18	BOARD DETACHED	The PR2 board is disconnected.	Check the PR2 board.
ALERT_19	TEMPERATURE ERROR	The unit stops operation by temperature abnormality of the R panel.	Check the outside air temperature, and air supply and exhaust. Check the Peltier R. Replace the Peltier R if it is damaged.
ALERT_20	TEMPERATURE ERROR	The unit stops operation by temperature abnormality of the G panel.	Check the outside air temperature, and air supply and exhaust. Check the Peltier G. Replace the Peltier G if it is damaged.
ALERT_21	TEMPERATURE ERROR	The unit stops operation by temperature abnormality of the B panel.	Check the outside air temperature, and air supply and exhaust. Check the Peltier B. Replace the Peltier B if it is damaged.
ALERT_22	COVER DETACHED	The rear cabinet is detached and/or the cold mirror is out of position.	Check the panel (U4) block assembly and cold mirror position.
ALERT_27	FAN ERROR	The lamp fan A is defective.	Check the lamp fan A. Replace the fan if it is damaged.
ALERT_28	FAN ERROR	The lamp fan B is defective.	Check the lamp fan B. Replace the fan if it is damaged.
ALERT_29	FAN ERROR	The lamp fan C is defective.	Check the lamp fan C. Replace the fan if it is damaged.
ALERT_30	FAN ERROR	The lamp fan D is defective.	Check the lamp fan D. Replace the fan if it is damaged.
ALERT_32	BALLAST ERROR	The unit stops operation by temperature abnormality of the power unit for lamp.	Check the outside air temperature, air supply and exhaust, and power unit for lamp. Replace the power unit for lamp if it is damaged.

(Continued)

Message No.	Error message	Trouble	Remedy
ALERT_33	BALLAST ERROR	The power unit for lamp fan is abnormal.	Check the power unit for lamp fan. Replace the fan if it is damaged.
ALERT_34	BALLAST ERROR	The power unit for lamp is abnormal.	Check the cable between the power unit for lamp and lamp house. Check the power unit for lamp. Replace the power unit for lamp if it is damaged.
ALERT_35	LAMP ERROR	The lamp goes off.	Check the lamp. Replace lamp bulb if it is damaged. Check the power unit for lamp. Replace the power unit for lamp if it is damaged.
ALERT_36	BALLAST ERROR	The power unit for lamp is abnormal.	Check the cable between the power unit for lamp and lamp house. Check the power unit for lamp. Replace the power unit for lamp if it is damaged.
ALERT_37	COVER DETACHED	The maintenance cover assembly is out of position.	Check the maintenance cover assembly.
ALERT_38	BOARD ERROR	The power of the CN board is defective.	Check the CN board. Replace the board if it is damaged.
ALERT_39	TEMPERATURE ERROR	The unit stops operation by temperature abnormality of the 8-inch duct block.	Check the outside air temperature, the suction amount of a 8-inch duct, and the lamp fans A to D.
ALERT_41	COVER DETACHED	The unit stops operation by the filter cover detaching.	Check that the filter cover (door) is not open.

WARNING (Degree of risk: middle)

Message No.	Error message	Trouble	Remedy
WARN_01	FAN ERROR	The power fan 1 is abnormal.	Check the power fan 1. Replace the power fan 1 if it is damaged.
WARN_02	FAN ERROR	The power fan 2 is abnormal.	Check the power fan 2. Replace the power fan 2 if it is damaged.
WARN_05	FAN ERROR	The board fan 1 is abnormal.	Check the board fan 1. Replace the board fan 1 if it is damaged.
WARN_06	FAN ERROR	The board fan 2 is abnormal.	Check the board fan 2. Replace the board fan 2 if it is damaged.
WARN_12	FAN ERROR	The Peltier R fan is abnormal.	Check the Peltier R fan. Replace the Peltier R fan if it is damaged.
WARN_13	FAN ERROR	The Peltier G fan is abnormal.	Check the Peltier G fan. Replace the Peltier G fan if it is damaged.
WARN_14	FAN ERROR	The Peltier B fan is abnormal.	Check the Peltier B fan. Replace the Peltier B fan if it is damaged.
WARN_20	DEVICE ERROR	The Peltier R is out of control.	Check the outside air temperature, and air supply and exhaust. Check the Peltier R. Replace the Peltier R if it is damaged.
WARN_21	DEVICE ERROR	The Peltier G is out of control.	Check the outside air temperature, and air supply and exhaust. Check the Peltier G. Replace the Peltier G if it is damaged.
WARN_22	DEVICE ERROR	The Peltier B is out of control.	Check the outside air temperature, and air supply and exhaust. Check the Peltier B. Replace the Peltier B if it is damaged.
WARN_23	CONNECTOR DETACHED	The connector of a Peltier R is disconnected.	Check the connector of a Peltier R.
WARN_24	CONNECTOR DETACHED	The connector of a Peltier G is disconnected.	Check the connector of a Peltier G.
WARN_25	CONNECTOR DETACHED	The connector of a Peltier B is disconnected.	Check the connector of a Peltier B.

(Continued)

Message No.	Error message	Trouble	Remedy
WARN_26	DOUSER ERROR	DOUSER operation is failed.	Check the connector of a shift block. Check the shift block. Replace the shift block if it is damaged.
WARN_27	BALLAST ERROR	A power unit for lamp communication failed.	Check the cable between the power unit for lamp and lamp house. Check the power unit for lamp. Replace the power unit for lamp if it is damaged.
WARN_28	BALLAST ERROR	Lamp serial number setting is wrong.	Check the range setting of power unit for lamp and the serial information of a lamp.
WARN_29	EXHAUST ERROR	The air volume of the 8-inch duct is abnormal.	Check the air volume at the outlet of the 8-inch duct.∗1
WARN_30	COVER DETACHED	The filter cover is detached.	Check that the filter cover (door) is not opened.
WARN_31	FAN ERROR	PS converter fan 2 in abnormal.	Check the PS converter fan 2. Replace the PS converter fan 2 if it is damaged.
WARN_32	FAN ERROR	PS converter fan 1 in abnormal.	Check the PS converter fan 1. Replace the PS converter fan 1 if it is damaged.
WARN_33	FAN ERROR	PBS fan in abnormal.	Check the PBS fan. Replace the PBS fan if it is damaged.

∗1: Warning is displayed when the air volume at the outlet of the 8-inch duct is under 250 ft^3/min (7 m^3/min).
The exhaust air volume required is 450 to 550 ft^3/min (12.7 to 15.6 m^3/min).

FAILURE (Degree of risk: low)

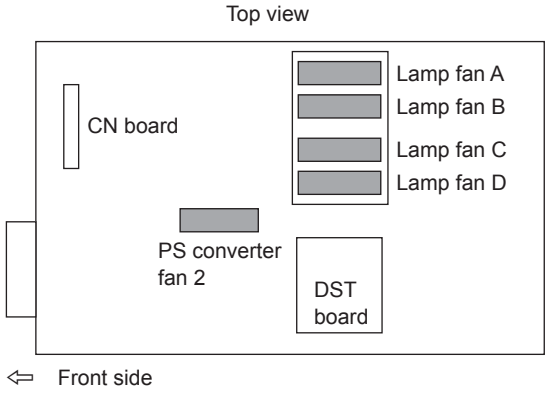
Message No.	Error message	Trouble	Remedy
FAIL_02	TEMPERATURE ERROR	Warning for temperature abnormality of the 8-inch duct.	Check the outside air temperature, the suction amount of a 8-inch duct, and the lamp cooling fans.
FAIL_04	TEMPERATURE ERROR	Intake temperature is abnormal.	Check the outside air temperature.
FAIL_06	TEMPERATURE ERROR	The optical unit block temperature is abnormal.	Check the outside air temperature, and air supply and exhaust.
FAIL_10	TEMPERATURE ERROR	Warning for temperature abnormality of the R panel.	Check the outside air temperature, and air supply and exhaust. Check the Peltier R. Replace the Peltier R if it is damaged.
FAIL_11	TEMPERATURE ERROR	Warning for temperature abnormality of the G panel.	Check the outside air temperature, and air supply and exhaust. Check the Peltier G. Replace the Peltier G if it is damaged.
FAIL_12	TEMPERATURE ERROR	Warning for temperature abnormality of the B panel.	Check the outside air temperature, and air supply and exhaust. Check the Peltier B. Replace the Peltier B if it is damaged.
FAIL_15	TEMPERATURE ERROR	Warning for temperature abnormality of the power unit for lamp.	Check the outside air temperature. Check the power unit for lamp. Replace the power unit for lamp if it is damaged.
FAIL_16	LENS ERROR	Zoom does not reach the registered position.	Check the function operation, lens, and lens cable. Check the SY board. Replace the SY board if it is damaged.
FAIL_17	LENS ERROR	Focus does not reach the registered position.	Check the function operation, lens, and lens cable. Check the SY board. Replace the SY board if it is damaged.
FAIL_18	LENS ERROR	Zoom operation is failed.	Check the lens and lens cable. Check the SY board. Replace the SY board if it is damaged.

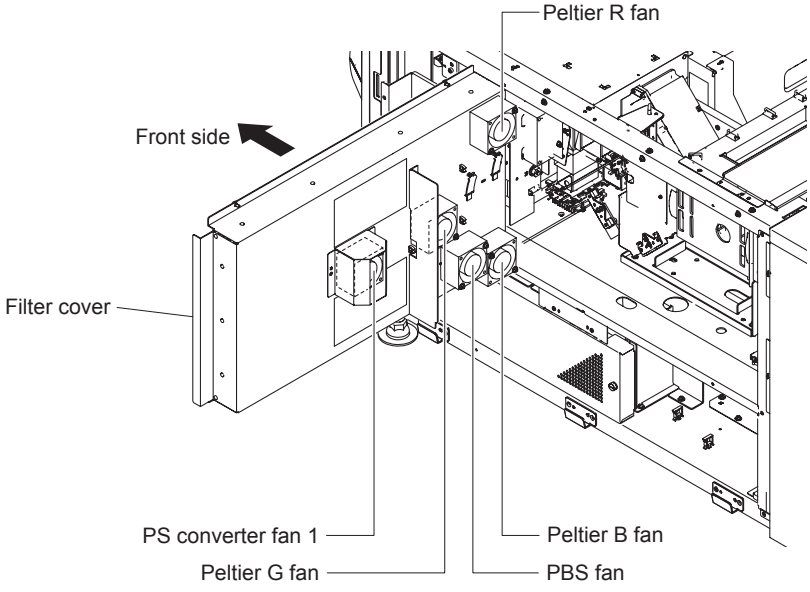
(Continued)

Message No.	Error message	Trouble	Remedy
FAIL_19	LENS ERROR	Focus operation is failed.	Check the lens and lens cable. Check the SY board. Replace the SY board if it is damaged.
FAIL_21	ADJUSTMENT ERROR	The Z-axis operation is failed.	Check the lamp house-supplied motor and harness. Replace the motor if it is damaged. Check the SY board. Replace the SY board if it is damaged.
FAIL_24	ADJUSTMENT ERROR	Calibration is failed.	Perform recalibration, check the lamp (luminance deterioration). Replace the lamp bulb if it is deteriorated.
FAIL_25	DEVICE ERROR	FPGA configuration fails.	Turn off the power once, then turn on it again.
FAIL_26	DEVICE ERROR	I^2C communication error.	Turn off the power once, then turn on it again.
FAIL_27	DEVICE ERROR	LVDS error	Turn off the power once, then turn on it again.
FAIL_28	DEVICE ERROR	PLL error	Turn off the power once, then turn on it again.
FAIL_29	DEVICE ERROR	Parity error	Turn off the power once, then turn on it again.
FAIL_30	BALLAST ERROR	The power unit for lamp is interlocked.	Turn off the power once, then turn on it again.
FAIL_34	ADJUSTMENT ERROR	The Z-axis is gotten out of range in the + direction.	Readjust the Z-axis and save it. Return the Z-axis in the – direction. (Refer to Section 2-2.)
FAIL_35	ADJUSTMENT ERROR	The Z-axis is gotten out of range in the – direction.	Readjust the Z-axis and save it. Return the Z-axis in the + direction. (Refer to Section 2-2.)
FAIL_36	DEVICE ERROR	Setting error of DVI.	Check the setting and set the operation again.

Note

Fan location





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Package list
gcc-4.1
glibc-2.3.6
binutils-2.17
hermit-pj-1.0.0.0
linux-2.6.12.5-pj3
sony-dist-20090311

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Version 2.1, February 1999

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Theodore Ts’o
26-Jul-2000

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eraseall.c -- erase the whole of a MTD device

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Renamed to flash_eraseall.c

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thttpd.c - tiny/turbo/throttling HTTP server

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