

SONY®

HD DIGITAL VIDEOCASSETTE RECORDER

HDW-1800

HDW-D1800

HDCAM



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可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

WARNING

This manual is intended for qualified service personnel only.

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

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

HDW-1800 (SY)	Serial No. 10001 and Higher
HDW-1800 (CN)	Serial No. 50001 and Higher
HDW-D1800 (SY)	Serial No. 10001 and Higher
HDW-D1800 (CN)	Serial No. 50001 and Higher

注意

指定以外の電池に交換すると、破裂する危険があります。
使用済の電池は、説明書に従って処理してください。

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.

Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.

Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

ADVARSEL

Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en likvärdig typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt gällande föreskrifter.

VAROITUS

Paristo voi räjähtää jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

本機をラックに設置するとき

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

- ・左右両側面4 cm以上
- ・後面40 cm以上

Attention-when the product is installed in Rack:

1. Prevention against overloading of branch circuit

When this product is installed in a rack and is supplied power from an outlet on the rack, please make sure that the rack does not overload the supply circuit.

2. Providing protective earth

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

3. Internal air ambient temperature of the rack

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

4. Prevention against achieving hazardous condition due to uneven mechanical loading

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

5. Install the equipment while taking the operating temperature of the equipment into consideration

For the operating temperature of the equipment, refer to the specifications of the Operation Manual.

6. When performing the installation, keep the following space away from walls in order to obtain proper exhaust and radiation of heat.

Right, Left: 4 cm (1.6 inches) or more
Rear: 40 cm (16 inches) or more

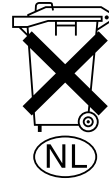
Für Kunden in Deutschland

Entsorgungshinweis: Bitte werfen Sie nur entladene Batterien in die Sammelboxen beim Handel oder den Kommunen. Entladen sind Batterien in der Regel dann, wenn das Gerät abschaltet und signalisiert "Batterie leer" oder nach längerer Gebrauchsdauer der Batterien "nicht mehr einwandfrei funktioniert". Um sicherzugehen, kleben Sie die Batteriepole z.B. mit einem Klebestreifen ab oder geben Sie die Batterien einzeln in einen Plastikbeutel.

For the customers in the Netherlands Voor de klanten in Nederland

Hoe u de batterijen moet verwijderen, leest u in de Onderhoudshandleiding.

Gooi de batterij niet weg maar lever deze in als klein chemisch afval (KCA).



For the customers in Taiwan only



廢電池請回收

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Manual Structure

Purpose of this manual

This manual is the installation manual of the HD Digital Videocassette Recorder HDW-1800/D1800.

This manual is intended for use by trained system and service engineers, and provides the information that is required to install (environment, connection information, initial setting, etc.) and the setting check sheet.

Related manuals

Besides this “installation manual”, the following manuals are available for this unit.

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

This manual is necessary for application and operation (and installation) of this unit.

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

Volume-1 : Service Instruction

Volume-2 : Parts List, Block Diagrams, and Board Layouts

Volume-3 : Schematic Diagrams

These manuals describe the maintenance and service information (service overview, adjustments, board layouts, schematic diagrams, detailed parts list, etc.) for this unit.

- **“Semiconductor Pin Assignments” CD-ROM (Available on request)**

This “Semiconductor Pin Assignments” CD-ROM allows you to search for semiconductors used in Broadcast and Professional equipment.

The maintenance manual (volume-2) contains a complete list of semiconductors and their ID Nos., and thus should be used together with the CD-ROM.

Part number: 9-968-546-0X

Section 1

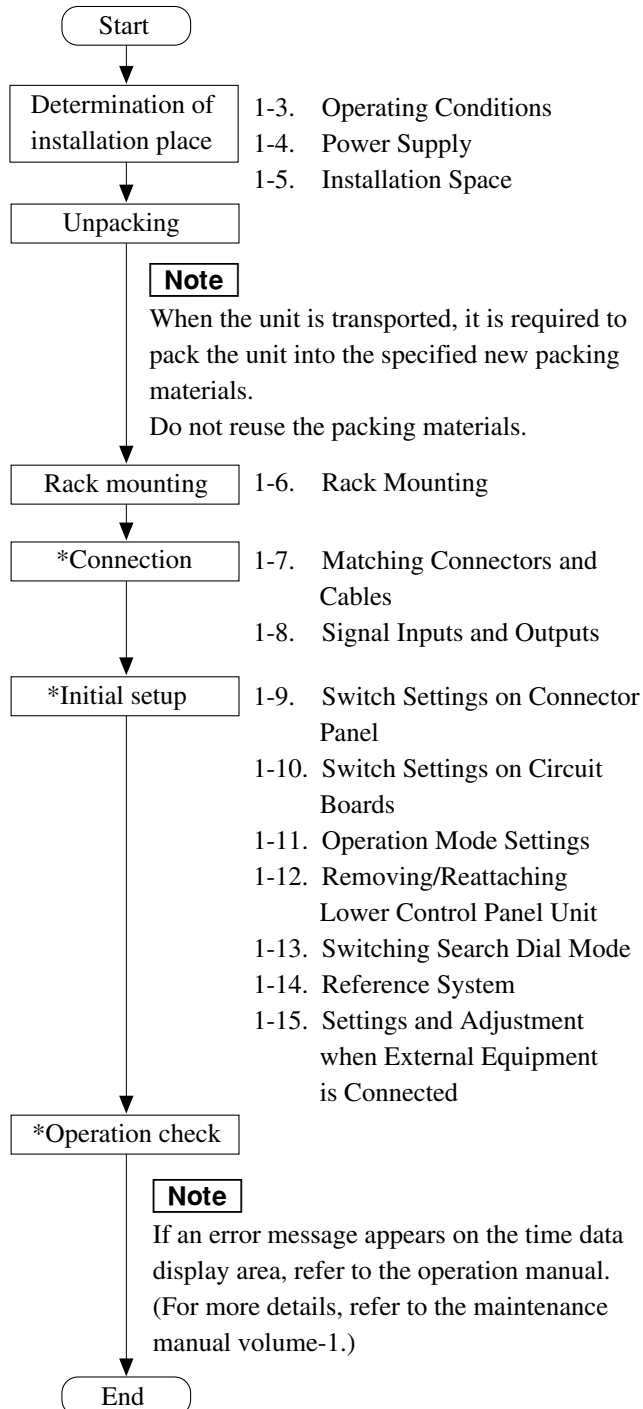
Installation

1-1. Installation Procedure

Installation procedure of this unit is shown on the following flowchart.

Refer to each section about detail of each flow.

The operation manual is also required to do *-marked flow.



1-2. Supplied Accessories

- Screws for rack mounting (PSW 4 × 16) 4
- Operation guide 1
- Operation manual CD-ROM (PDF) 1
- Installation manual 1

1-3. Operating Conditions

CAUTION

Good air circulation is essential to prevent internal heat build-up. Place the unit in location with sufficient air circulation.

Do not block the ventilation holes of the cabinet and the front and rear panels.

Operating temperature: 5 °C to 40 °C

Operating humidity: 25 % to 80 % (non-condensing)

Storage temperature: -20 °C to 60 °C

Locations to avoid:

- Areas where the unit will be exposed to direct sunlight of any other strong lights.
- Areas near heat sources.
- Dusty areas or areas subject to vibration.
- Areas with strong magnetic field.
- Areas with much electrical noise.
- Areas with much static electricity.
- Areas that is impossible to find a specified room for installation. (Refer to “1-5. Installation Space”.)
- Areas windtight.

Tilt allowance: Within 30° (Do not slant the front and rear of the unit more than 30°.)

CAUTION

Fix the unit securely to avoid drop when the unit is operated at not-horizontal place.

1-4. Power Supply

1-4-1. Voltage and Power Requirements

This unit's power line has a switching regulator.

CAUTION

Be sure to operate the unit within the range of following power voltage.

Power voltage:	AC 100 to 240 V \pm 10 %
Power frequency:	50 Hz or 60 Hz
Power consumption:	Maximum 170 W (With all of the presumed optional kits.)
Rush current:	10 A (Power voltage 100 V) 33 A (Power voltage 240 V)

Note

AC power supply is required a capacity which is commensurate with rush current.

If the capacity of the AC power supply is not enough, the breaker of AC power of a supply side may operate or this unit may not operate normally.

1-4-2. Power Cord

This unit does not come with a power cord.

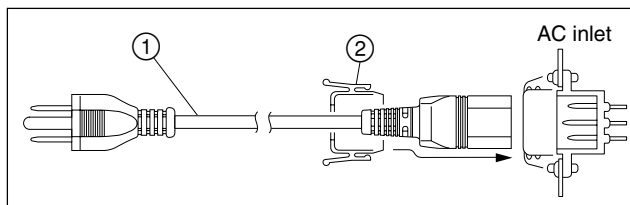
To get a power cord, please contact your local Sony Sales Office/Service Center.

WARNING

Use the specified power cord only when connecting the AC power. Never use a injured power cord.

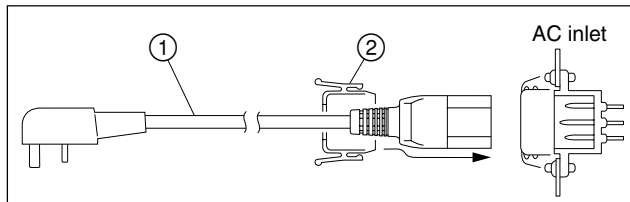
For customers in the U.S.A. and Canada:

- ① Power cord 125 V 10 A (2.4 m): Δ 1-551-812-31
- ② Plug holder (Brown): 3-613-640-01



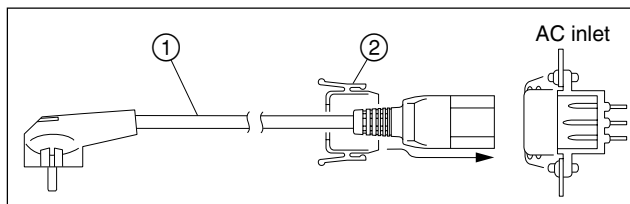
For customers in the United Kingdom:

- ① Power cord 250 V 10 A (2.0 m): Δ 1-777-823-12
- ② Plug holder (Brown): 3-613-640-01



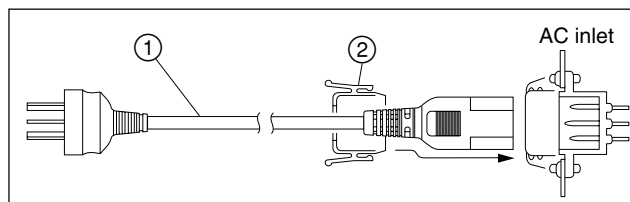
For customers in European countries except the United Kingdom:

- ① Power cord 250 V 10 A (2.0 m): Δ 1-551-631-15
- ② Plug holder (Brown): 3-613-640-01



For customers in the China:

- ① Power cord 250 V 10 A (1.8 m): Δ 1-783-481-42
- ② Plug holder (Brown): 3-613-640-01



If the unit is used in the area except above, please contact your local Sony Sales Office/Service Center.

1-5. Installation Space

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

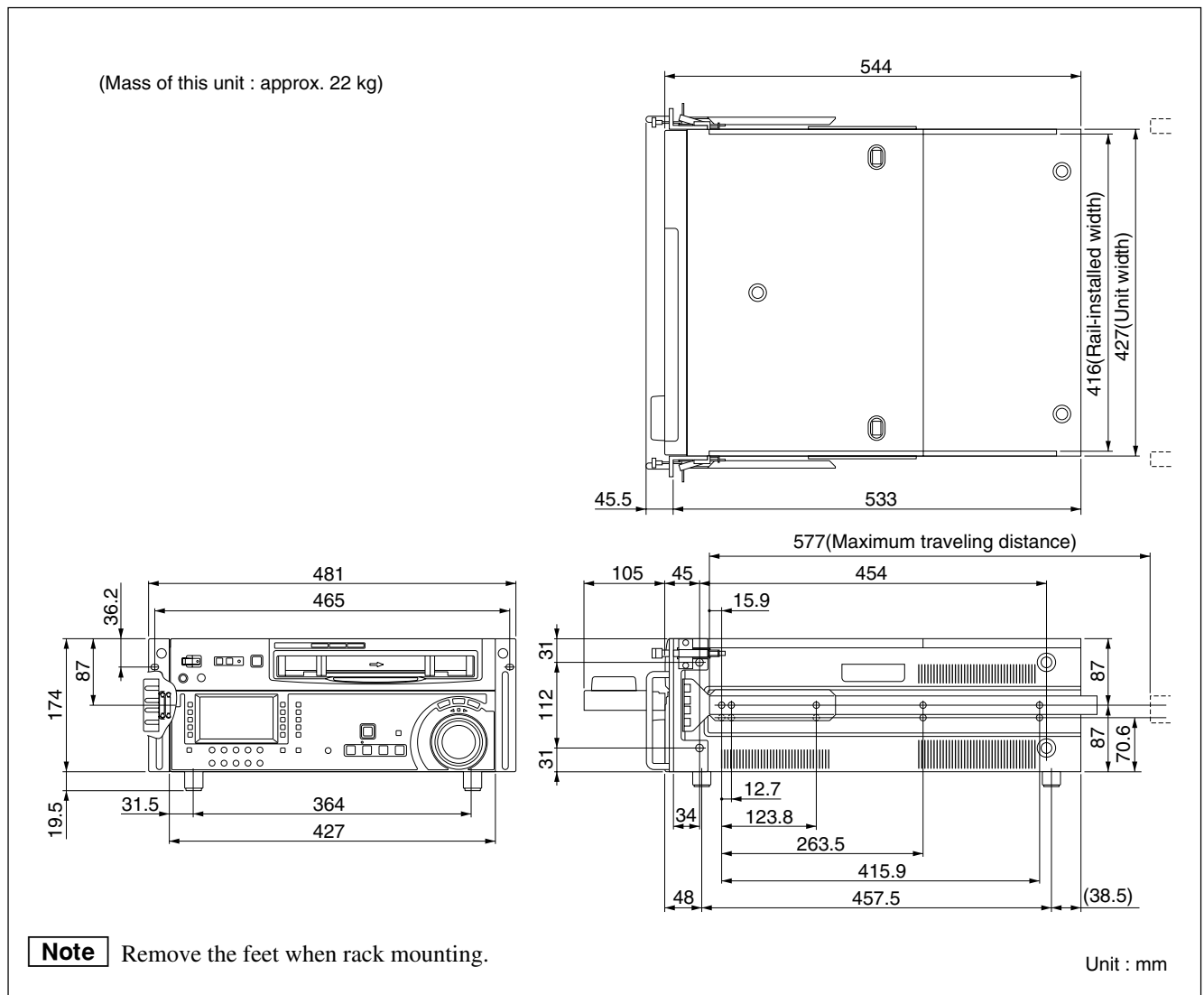
- Do not block the ventilation slots at the left side and right side panels, and vents of the fans.
- Leave a space around the unit for ventilation.
- Leave more than 40 centimeters of space in the rear of the unit to secure the operation area.

When the unit is installed on the desk or the like, leave at least four centimeters of space in the left and right sides. Leaving 40 centimeters or more of space above the unit is recommended for service operation.

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

Note

This unit is air-cooled by the five fans. The operation with the upper lid is removed affects the air cooling by the fans. Complete the work in a short time as possible when operating the unit for inspection with the upper lid removed. If it takes a long time, blow to the unit by an electric fan to cool the unit.



Dimensions when Rack-Mounting

1-6. Rack Mounting

Explains how to mount this unit into a 19-inch standard rack.

Two positions (center and low) are available to attach the inner rails of the slide rails to this unit.

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

※: The center position only is available for the units listed below.

MSW-A2000 : Serial No. 10001 through 10180

MSW-A2000P : Serial No. 40001 through 40520

WARNING

- To prevent toppling over the rack, fix it on the horizontal and firm floor securely with bolts, etc.
- When installing the unit in an Outside Broadcasting van, be sure to fix the unit to the rack using the screws and ornamental washers supplied with the rack mount kit.

CAUTION

- Use the specified rack mount rail.
The use of other rail of low strength may drop the unit and cause the risk of injury.
- Mount the unit into a rack with a steady posture.

Notes

- When other equipment with built-in hard disk drive is already mounted in the same rack for mounting this unit, turn off the power of the equipment before mounting this unit.
- Connect long enough cables on the connector panel, considering that the unit is pulled out from the rack.
- Do not operate this unit without the upper lid and bottom plate except when servicing it.
- Adjust the temperature inside the rack within the range of the unit's operating temperature.
(Refer to Section 1-3.)

Specified Rack Mount Kit

RMM-131 (Optional accessory)

Notes

- When mounting this unit into Sony LMS (Library Management System) VTR console, it is necessary to modify the VTR console.
- When mounting this unit into Flexicart, be sure to use the specified kit below.
VTR Mounting kit: BKFC-53/3
- The RMM-130 rack mount kit also can be used for the center position.

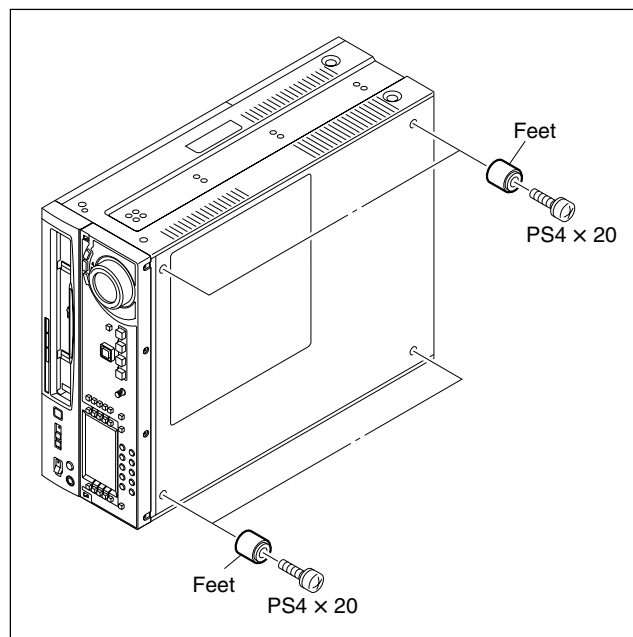
Parts Packed in RMM-131

• Slide rails	2
• Rack angles (handles) with lock mechanism ...	2
• Rail brackets	4
• Plate nuts (large)	4
• Plate nuts (small)	4
• Screws (B4 × 8)	8
• Hexagon socket head cap screws	8
• Flat washers	8
• Screws (RK5 × 14)	2
• Ornamental washers	2
• L-shaped hexagon wrench	1

Rack Mounting Procedure

• Removing the feet

1. Set the unit its side panel down.
2. Unscrew the four screws to remove the feet from the bottom plate of the unit.
3. Set the unit in a horizontal position.



Note

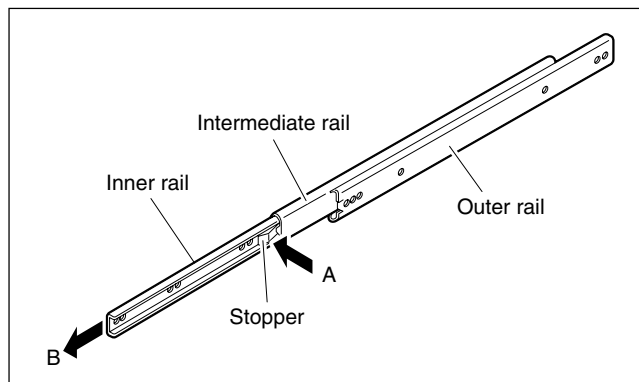
Keep these screws and the feet.

When operating the unit after demounting it from the rack, be sure to reattach the feet.

Tightening torque: $98 \times 10^{-2} \text{ N} \cdot \text{m}$ { $10 \text{ kgf} \cdot \text{cm}$ }

• Attaching the inner rails

4. Pull out the inner rails from the two intermediate rails.
5. While pressing the stopper of the inner rail in the direction of the arrow A in the figure, pull the inner rail out in the direction of the arrow B.

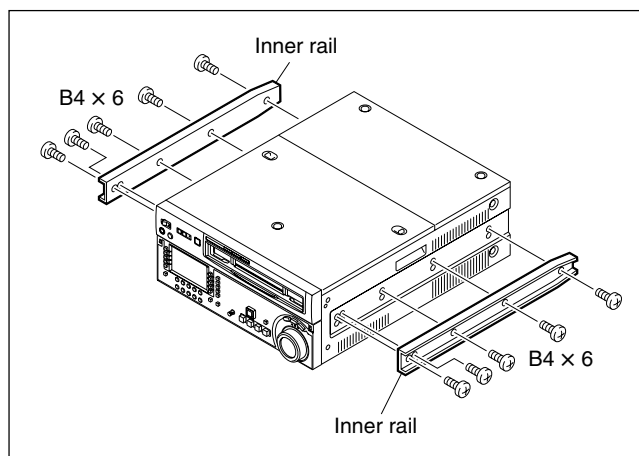


6. Remove the ten screws from both sides (left and right) of the unit as shown in the figure below.
7. Attach the two inner rails to both sides (left and right) of unit with the removed screws in the step 6.

Tightening torque: $120 \times 10^{-2} \text{ N} \cdot \text{m}$ { 12.2 kgf · cm }

Notes

- Be sure to use the (B4 × 6) screws when attaching the inner rail. The use other-sized screws may cause a malfunction.
- Pay attention not to fasten the screws to the screw holes other than actually used screw holes for fixing the inner rails on both sides of the unit. If unnecessary screws are fastened, rack mounting will be unenabled.

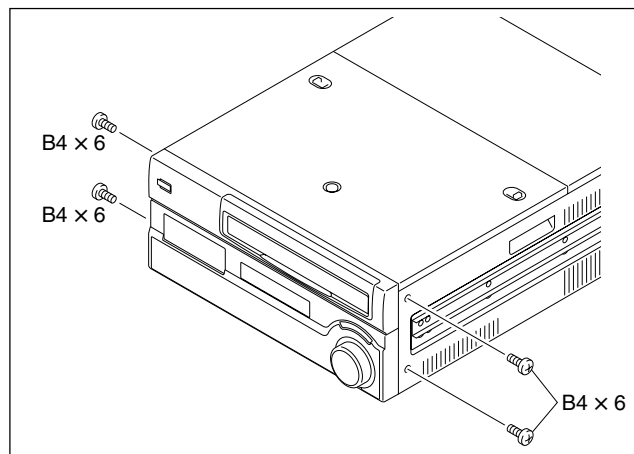


Note

When replacing a 5U size Sony VTR with this unit, attach the inner rails to the low position, so that the bottom of the unit becomes same as that of the 5U size VTR.

• Attaching the rack angles (handles)

8. Remove the four screws from both sides (left and right) of the unit.



Note

Keep these screws (B4 × 6).

Be sure to use these screws when directly fixing the side panels without the rack angles.

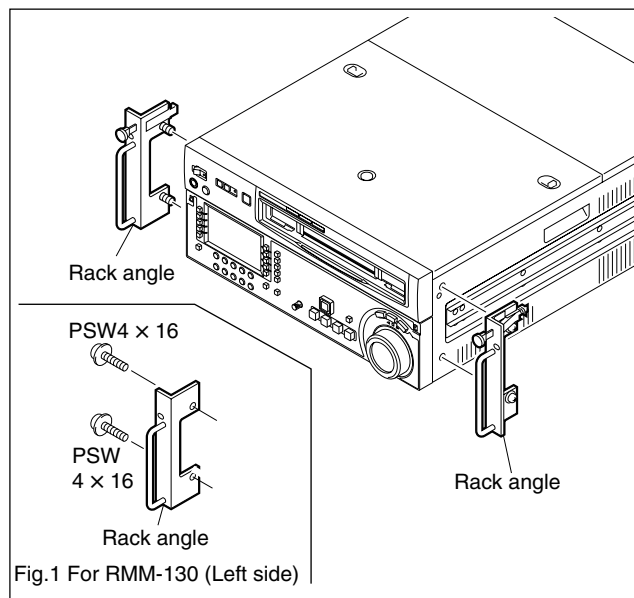
The use of longer screws such as the screws (PSW 4 × 16) for fixing the rack angles of RMM-130 will cause a malfunction of the unit.

9. Attach the two rack angles to both sides (left and right) of the unit with the four screws (PSW4 × 16).

Tightening torque: $120 \times 10^{-2} \text{ N} \cdot \text{m}$ { 12.2 kgf · cm }

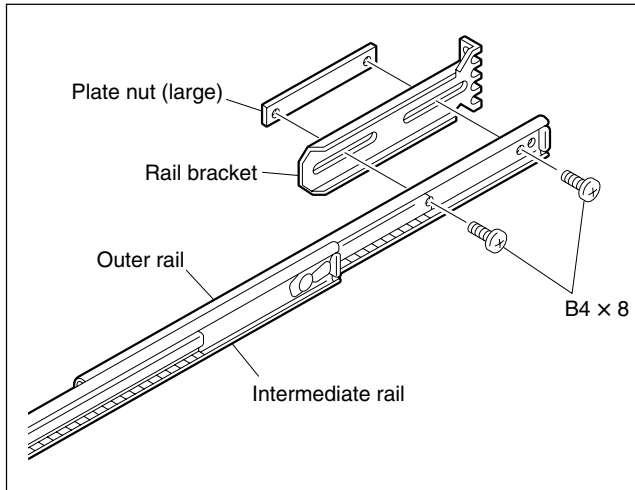
Note

- For RMM-131, screws with stop washers are used for fixing the rack angles.
- For RMM-130, use the supplied screws PSW4 × 16 as shown in Fig. 1.

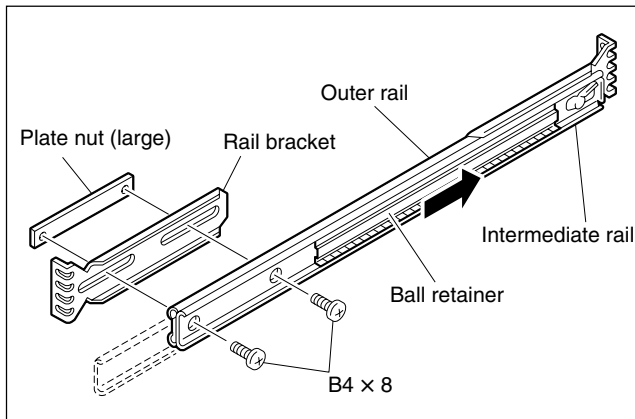


• **Loosely attaching the rail brackets**

10. Slide the intermediate rail as shown in the figure, and then loosely attach the rear rail bracket to the outer rail with a plate nut (large) and the two screws.

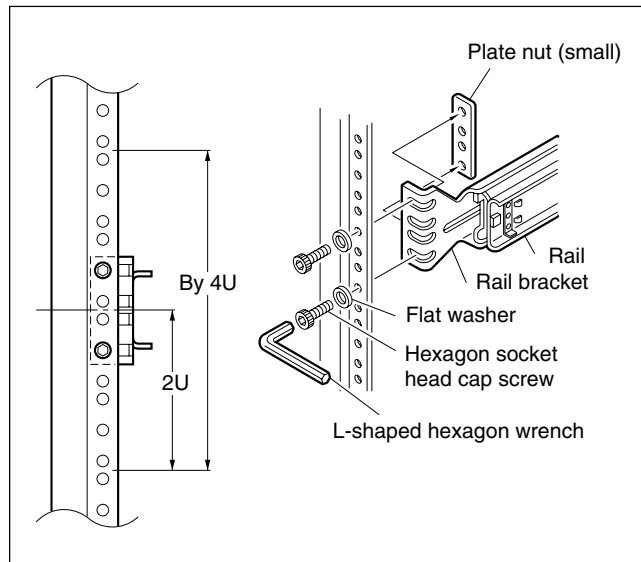


11. Slide the ball retainer in the direction of the arrow, and then loosely attach the front rail bracket to the outer rail with a plate nut (large) and the two screws.



• **Attaching the outer rails**

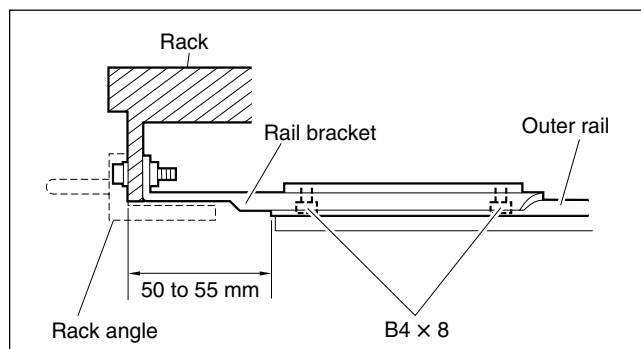
12. Loosely attach the two outer rails to the middle of the 4U space in the rack for mounting this unit, with the eight hexagon socket head cap screws, eight flat washers, and four plate nuts (small).



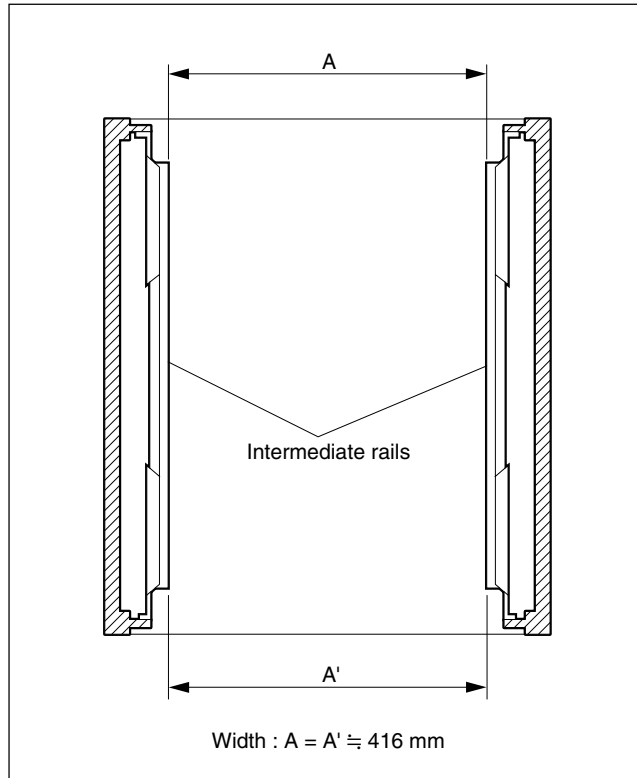
13. As shown in the following figure, adjust each front-side position of the outer rails on both sides (left and right) so that the distance from the surface of the rack to the tip of the rail becomes within the range of 50 to 55 millimeters.

14. Fully tighten the eight screws ($B4 \times 8$) fixing the four rail brackets.

Tightening torque: $120 \times 10^{-2} \text{ N} \cdot \text{m}$ { 12.2 kgf · cm }



15. Check that the two intermediate rails attached to the rack are parallel.



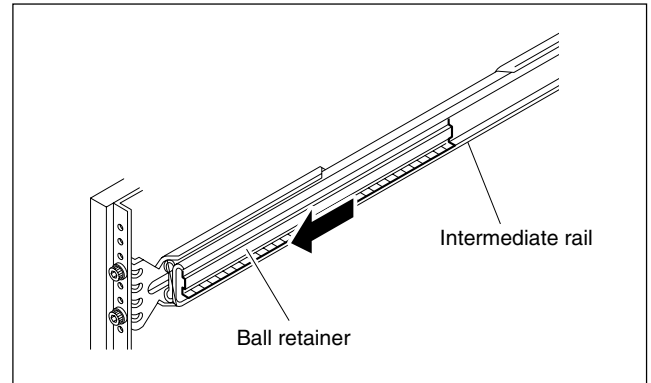
16. To fix the two outer rails to the rack, fully tighten the eight loosely fitted hexagon socket head cap screws in step 12 using the L-shaped hexagon wrench.

• Mounting in rack

CAUTION

Be sure to carry the unit by the two persons or more.

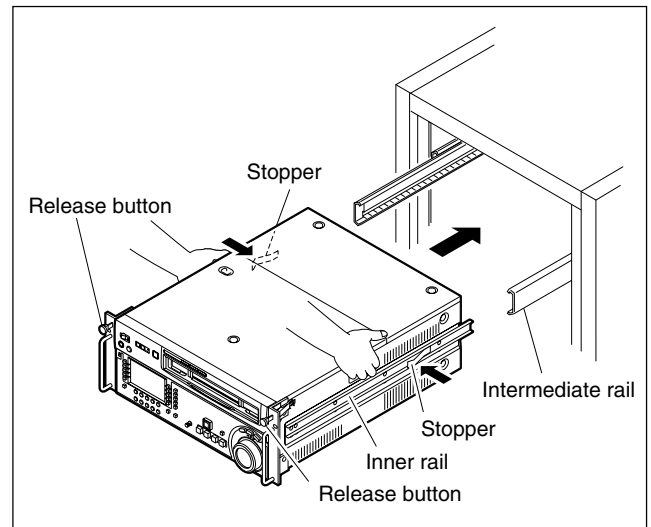
17. Slide each ball retainer of intermediate rails on both sides (left and right) in the direction of the arrow.



18. Pull equal length of each rail on both sides out.
19. Lift the unit holding the grips on both sides, slowly insert the inner rails into the intermediate rails.
20. While pressing each stopper of inner rails on both sides, slowly push the unit into the rack.

CAUTION

Be careful not to catch your finger or hand in rack mount rail.



Note

Pushing the unit in the depths of the rack, the lock mechanism prevents the unit from being pulled out.

To pull the unit out of the rack, pull the unit while pressing the release buttons of the rack angles.

21. Slide the unit in and out from the rack about three times and check that the slide rails move smoothly. If they are not smoothly, demount the unit and go back to “Attaching the outer rails” (step 12).

CAUTION

When demounting the unit, carry it by the two persons or more.

Note

This unit does not have the feet at this operating. Put down the unit on the floor or other, being careful not to damage the unit.

22. Push the unit in the depths of the rack. The unit is fixed to the rack by the lock mechanism. Attempt to pull the rack angles and confirm that the unit cannot be pulled out of the rack.

WARNING

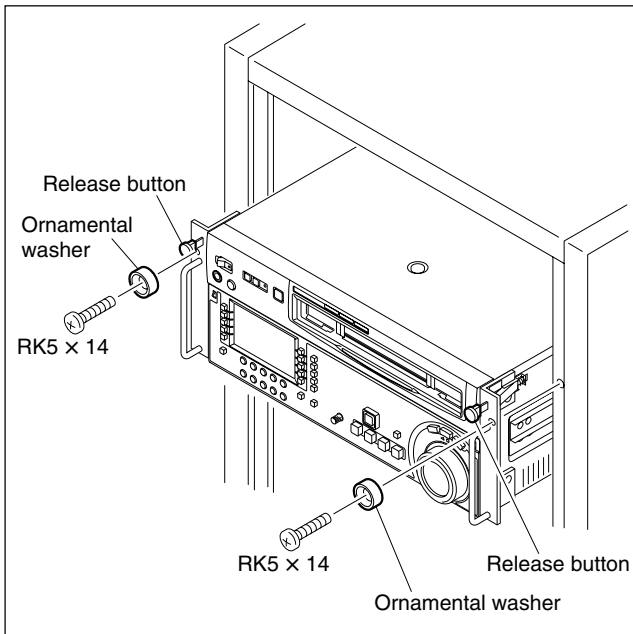
When installing the unit in an Outside Broadcasting van, be sure to fix the unit to the rack using the screws and ornamental washers supplied with the rack mount kit.

Tightening torque: $120 \times 10^{-2} \text{ N} \cdot \text{m}$ { $12.2 \text{ kgf} \cdot \text{cm}$ }

Note

When the unit is not fixed to the rack or the clearances between the rack angle and rack are existed, it is necessary to perform the adjustment for the lock mechanism.

Refer to the RMM-131 installation guide for more detailed information.



1-7. Matching Connectors and Cables

When external cables are connected to the connector of this unit, the hardware listed below (or equivalents) must be used.

Panel indication	Matching connector (cable)	Sony part No.	Remarks
AUDIO INPUT TIME CODE IN	XLR 3P, MALE	1-508-084-00	
AUDIO OUTPUT MONITOR OUT TIME CODE OUT	XLR 3P, FEMALE	1-508-083-00	
REF INPUT VIDEO OUTPUT	BNC 75Ω, MALE	1-569-370-12	
AUDIO INPUT (AES/EBU) AUDIO OUTPUT (AES/EBU)	BNC 75Ω, MALE *1	1-569-370-12	
REMOTE 2 PARALLEL I/O (50P)	D-SUB 50P, MALE and JUNCTION SHELL 50P	1-565-516-11 1-563-379-11	
REMOTE 1-IN (9P) REMOTE 1-OUT (9P)	9P remote control cable (RCC-G series) or D-SUB 9P, MALE and JUNCTION SHELL 9P	— or 1-560-651-00 1-561-749-00	
RS-232C	D-SUB 9P, FEMALE	1-563-815-21	
CONTROL PANEL	20P, MALE (exclusive connecting cable)	1-833-620-11	
VIDEO CONTROL (9P)	D-SUB 9P, MALE and JUNCTION SHELL 9P	1-561-651-00 1-561-749-00	
HDV IN (OPTION)	Specified by optional kit	—	
HD SDI	BNC 75Ω, MALE *2	1-569-370-12	
SDI	BNC 75Ω, MALE *3	1-569-370-12	
PHONES	JM-60 stereo phone plug	—	Upper control panel connector

*1: Coaxial cable length : max. 600 meters (Reference value based on HDW series)

It is recommended to connect the BELDEN 8281 cable or equivalent to this connector.

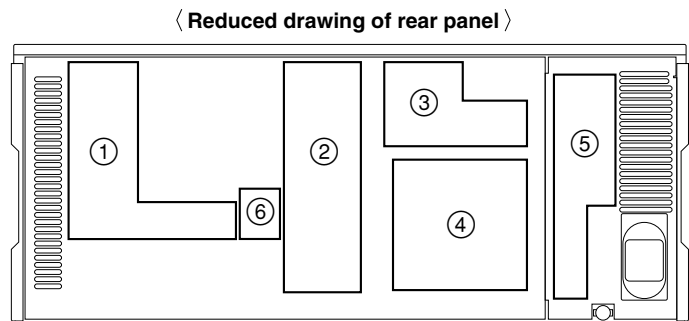
*2: Coaxial cable length : max. 100 meters (Reference value based on HDW series)

It is recommended to connect the BELDEN 1694A cable or equivalent to this connector.

*3: Coaxial cable length : max. 200 meters (Reference value based on HDW series)

It is recommended to connect the BELDEN 8281 cable or equivalent to this connector.

1-8. Signal Inputs and Outputs



Input connectors

① AUDIO INPUT	XLR 3-pin × 2 (1 set : CH1, CH2) Analog audio LOW OFF : −60 dBu, high impedance, balanced HIGH OFF : +4 dBu (Standard), high impedance, balanced HIGH ON : +4 dBm (Standard), 600 Ω termination, balanced
① TIME CODE IN	XLR 3-pin × 1 Time code 0.5 to 18 V p-p, 10 kΩ, balanced
② REF. INPUT	BNC × 2 in loop through connection Outside reference video signal SD : 0.3 V p-p, 75 Ω, sync negative (Black burst or composite sync) HD : 0.6 V p-p, 75 Ω, sync negative (Ternary SYNC)
③ AUDIO INPUT (AES/EBU)	BNC × 2 (1 set : CH1/2, CH3/4) Digital audio AES/EBU format, complies with AES-3id-1995
⑤ HD SDI INPUT	BNC × 1 Serial digital interface (1.485 Gbit/s), complies with SMPTE 292M
⑥ HDV IN (OPTION)	i.LINK 6-pin × 1 Complies with IEEE1394

Remote connectors

④ REMOTE 2 PARALLEL I/O (50P) ***	D-SUB 50P connector
④ REMOTE1-IN (9P)	D-SUB 9P connector (RS-422A interface), Remote control
④ REMOTE1-OUT (9P)	D-SUB 9P connector (RS-422A interface), Remote control
④ RS-232C	D-SUB 9P connector (RS-232C interface) for ISR (Interactive Status Reporting)
④ VIDEO CONTROL (9P)	D-SUB 9P connector for a TBC remote controller (HKDV-900) connection

*** : Refer to Optional "Interface manual" for details.

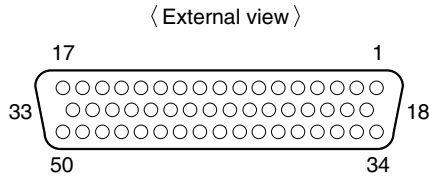
Output connectors

① AUDIO OUTPUT	XLR 3-pin × 2 (1 set : CH1, CH2) Analog audio +4 dBm (Standard) (600 Ω load), low impedance, balanced
① TIME CODE OUT	XLR 3-pin × 1 Time code 2.2 V p-p, low impedance, balanced
① MONITOR OUTPUT	XLR 3-pin × 2 (1 set : L and R) Analog audio +4 dBm (Standard) (600 Ω load), low impedance, balanced
② VIDEO OUTPUT, COMPOSITE	BNC × 3 (including 1 for character superimpose) Analog composite video 1.0 V p-p, 75 Ω, sync negative
③ AUDIO OUTPUT (AES/EBU)	BNC × 4 (1 set : CH1/2, CH3/4, CH5/6, and CH7/8) or BNC × 2 (1 set : CH1/2, CH3/4) Digital audio AES/EBU format, complies with AES-3id-1995
⑤ HD SDI OUTPUT	BNC × 3 (including 1 for character superimpose) Serial digital interface (270 Mbit/s), complies with SMPTE 292
⑤ SDI OUTPUT	BNC × 3 (including 1 for character superimpose) Serial digital interface (270 Mbit/s), complies with SMPTE 259M & ITU-R BT.656
PHONES (Upper control panel)	JM-60 stereo phone jack Analog audio up to –12 dBu (8 Ω load), unbalanced

Other

Memory stick (Switch panel)	Memory stick × 1 Applicable memory stick (8 MB to 128 MB)
--------------------------------	--

REMOTE 2 PARALLEL I/O: 50-pin (female)



Pin No.	I/O *1	Setting change *2	Signal	Description
1	IN	○	FF	CLOSURE SW (FF)
2	OUT	×	REC SW	PANEL REC SW OUT
3	OUT	×	PLAY SW	PANEL PLAY SW OUT
4	OUT	×	STOP SW	PANEL STOP SW OUT
5	OUT	×	ENTRY SW	PANEL ENTRY SW OUT
6	OUT	×	REF SYSTEM ALARM	Non-REFERENCE
7	OUT	×	CF LOCK	COLOR FRAME LOCK STATUS
8	OUT	×	DRUM LOCK	LOCK STATUS OF DRUM SERVO
9	OUT	×	CAP LOCK	LOCK STATUS OF CAPSTAN SERVO
10	OUT	○	CUE PRESET	EDIT PRESET STATUS of the CUE Channel
11	OUT	○	TC PRESET	EDIT PRESET STATUS of the TC Channel
12	OUT	○	OXIDE/METAL	OXIDE/METAL TAPE STATUS
13	OUT	○	TAPE THICKNESS	TAPE THICKNESS STATUS
14	OUT	×	SPARE	SPARE
15	OUT	×	SPARE	SPARE
16	—	—	+12V	(Maximum output current 50 mA)
17	—	—	GND	SIGNAL GND
18	IN	○	PREROLL	CLOSURE SW (PREROLL)
19	IN	○	STBY ON	CLOSURE SW (STANDBY ON)
20	IN	○	REW	CLOSURE SW (REW)
21	IN	○	ENTRY	CLOSURE SW (ENTRY IN)
22	IN	○	STBY OFF	CLOSURE SW (STANDBY OFF)
23	IN	○	EJECT	CLOSURE SW (EJECT)
24	OUT	×	REC	REC STATUS
25	OUT	×	CH CONDITION RED	CHANNEL CONDITION RED STATUS
26	OUT	○	ASSEMBLE PRESET	ASSEMBLE PRESET STATUS
27	OUT	○	EDIT OUT	EDIT STATUS
28	OUT	○	EJECT OUT	EJECT STATUS
29	OUT	○	ANALOG/DIGITAL	ANALOG/DIGITAL STATUS
30	OUT	○	REEL HUB	REEL HUB STATUS
31	OUT	×	REM2 SETTING DATA RESET	REMOTE2 SETTING DATA RESET STATUS
32	OUT	×	ALL REC INHIBIT	ALL REC INHIBIT STATUS
33	—	—	GND	
34	IN	○	PLAY	CLOSURE SW (PLAY)
35	IN	○	STOP	CLOSURE SW (STOP)

(Continue)

(Continued)

Pin No.	I/O *1	Setting change *2	Signal	Description
36	IN	○	REC	CLOSURE SW (REC)
37	OUT	×	REV LAMP	REV LAMP STATUS
38	OUT	○	DA2 PRESET	DA2 EDIT PRESET STATUS
39	OUT	○	DA1 PRESET	DA1 EDIT PRESET STATUS
40	OUT	×	FWD LAMP	FWD LAMP STATUS
41	OUT	○	DA4 PRESET	DA4 EDIT PRESET STATUS
42	OUT	○	DA3 PRESET	DA3 EDIT PRESET STATUS
43	OUT	×	STOP	STOP STATUS
44	OUT	○	VIDEO PRESET	VIDEO EDIT PRESET STATUS
45	OUT	○	INSERT PRESET	INSERT EDIT PRESET STATUS
46	OUT	×	STBY ON	STANDBY ON STATUS
47	OUT	×	PLAY	PLAY STATUS
48	OUT	×	REMOTE	REMOTE STATUS
49	OUT	×	ALARM	SYSTEM ALARM STATUS
50	OUT	○	PREROLL	PREROLL STATUS

*1: Input ; 47 kΩ pull up to +5 V (close/open)

Output ; 10 kΩ pull up to +5 V (0 V or open)

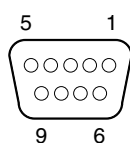
*2: The pins described as ○ mark are possible to change the setting.

Refer to the optional interface manual for changing the setting.

REMOTE1-IN: 9-pin (female)

REMOTE1-OUT: 9-pin (female)

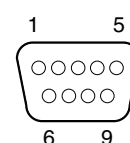
〈 External view 〉



Pin No.	Signal
1	GND
2	RM TX(−)
3	RM RX(+)
4	GND
5	PRIORITY
6	GND
7	RM TX(+)
8	RM RX(−)
9	GND

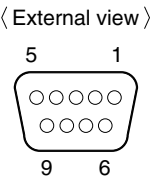
RS-232C: 9-pin (male)

〈 External view 〉



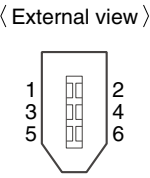
Pin No.	Signal
1	DCD ; Data Carrier Detect (Input)
2	RXD ; Received Data (Input)
3	TXD ; Transmitted Data (Output)
4	DTR ; Data Terminal Ready (Output)
5	SG ; Signal Ground
6	DSR ; Data Set Ready (Input)
7	RTS ; Request to Send (Output)
8	CTS ; Clear to Send (Input)
9	NC

VIDEO CONTROL: 9-pin (female)



Pin No.	Signal
1	GND
2	RM TX (–)
3	RM RX (+)
4	GND
5	—
6	GND
7	RM TX (+)
8	RM RX (–)
9	GND

HDV IN (OPTION): 6-pin



Pin No.	Signal
1	VP
2	VG
3	NTPB
4	TPB
5	NTPA
6	TPA

1-9. Switch Settings on Connector Panel

When the unit is installed, be sure to perform the following setup.

Refer to the operation manual “Section 2 Location and Function of Parts” for setup.

- Analog audio input level/600 Ω termination switches
- 75 Ω termination switch of reference video input

1-10. Switch Settings on Circuit Boards

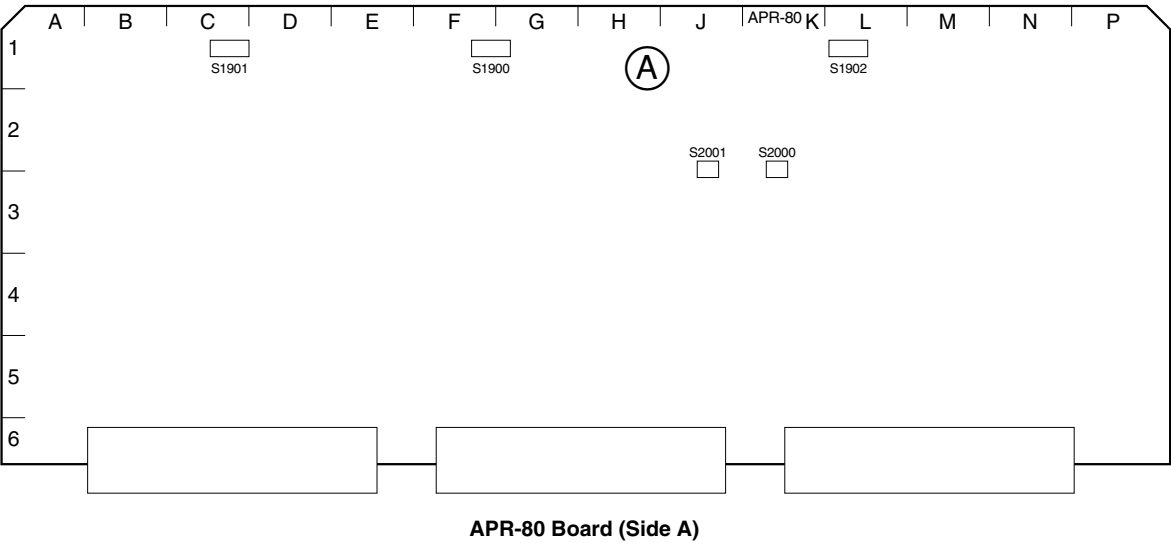
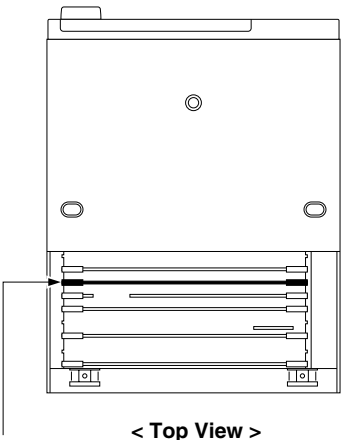
1-10-1. APR-80 Board

If necessary, perform the following audio-related settings using the switches on the APR-80 board.

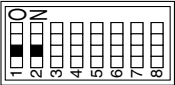
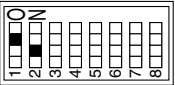
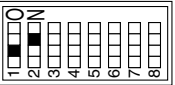
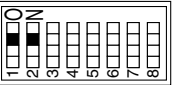
- Audio input, output, and monitor output
- Audio input reference level
- Audio output reference level
- Monitor output reference level
- Monitor output level, fixed/variable selection

Note

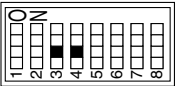
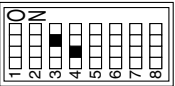
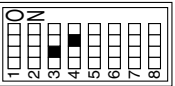
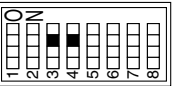
Refer to Section 1-16 for removing and reattaching the plug-in boards.



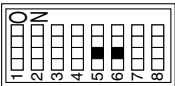
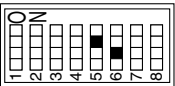
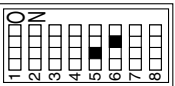
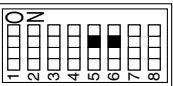
Audio input, output, and monitor output headroom settings

Ref. No.	Switch state (■ : Knob position)			
S1902-1, 2				
	20 dB (Factory setting)	18 dB	16 dB	12 dB

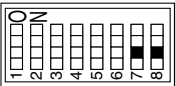
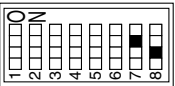
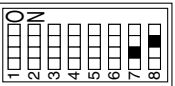
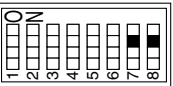
Audio input reference level settings

Ref. No.	Switch state (■ : Knob position)			
S1902-3, 4				
	+4 dBm/600 Ω (Factory setting)	0 dBm/600 Ω	-3 dBm/600 Ω	-20 dBm/600 Ω

Audio output reference level settings



Ref. No.	Switch state (■ : Knob position)			
S1902-5, 6				
	+4 dBm/600 Ω (Factory setting)	0 dBm/600 Ω	-3 dBm/600 Ω	-20 dBm/600 Ω

Monitor output reference level settings

Ref. No.	Switch state (■ : Knob position)			
S1902-7, 8				
	+4 dBm/600 Ω (Factory setting)	0 dBm/600 Ω	-3 dBm/600 Ω	-20 dBm/600 Ω

Monitor output level switching (fixed or variable)

When the variable level is selected, the level is adjusted with the PHONES level control knob.

Channel	Ref. No.	Switch state (■ : Knob position)	
L	S2001	Fixed	Variable
R	S2000		
		(Factory setting)	

Factory use

Note

Never change the setting.

Ref. No.	Switch state
S1900, S1901	All OFF

1-11. Operation Mode Settings

When turning on the POWER switch for the first time or after executing “M49: RESET ALL SETUP” in the maintenance mode, the mode for selecting a destination (J or SYL) appears.

Select a destination following the operation procedure of the destination selection mode.

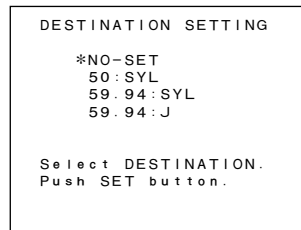
Once a destination is selected, this mode does not appear when the POWER switch is turned on and the unit operates with the selected destination.

Notes

- Be sure to select a destination before use.
If no destination is selected, the unit will not perform the playback and recording operations correctly even though these operations are enabled.
- Destination: “J” is for the models for Japan, and “SYL” is for the models for the countries other than Japan.

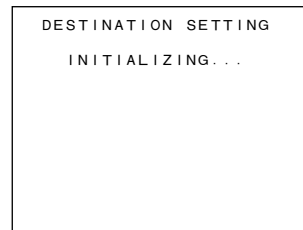
1-11-1. Operation Procedure of Destination Selection Mode

1. When no destination has not been selected, turning on the POWER switch displays the following indication in the menu display area of the control panel.
2. Pressing the F3 (–) or F4 (+) button selects the destination 50 : SYL, 59.94 : SYL or 59.94: J.



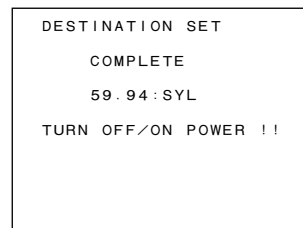
3. Press the F9 (SET) button.
 - Pressing the F9 (SET) button accepts the selected destination.
 - Screen 2 appears after Screen 1 is displayed for about 10 seconds as shown in the figure. Then turn off the POWER switch.

Screen 1



About 10 seconds

Screen 2



To return the destination to the “NO-SET” status:

Reset all the unit settings to the factory settings using “M49: RESET ALL SETUP” of the maintenance mode. For details about the maintenance mode, refer to Section 3 in the Maintenance Manual Volume-1.

Note

All the settings, including the setup menu, are reset.

1-12. Removing/Reattaching Lower Control Panel Unit

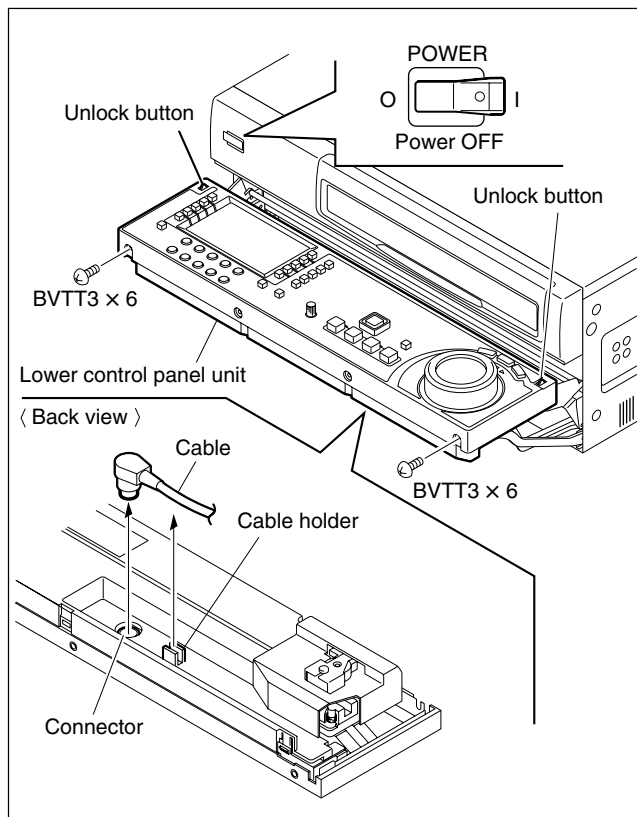
Removal

1. Turn off the power of VTR.
2. After pressing the unlock button, open the lower control panel as shown in the figure below.
3. Disconnect the cable from the connector on the back side of the lower control panel unit and from the cord holder.

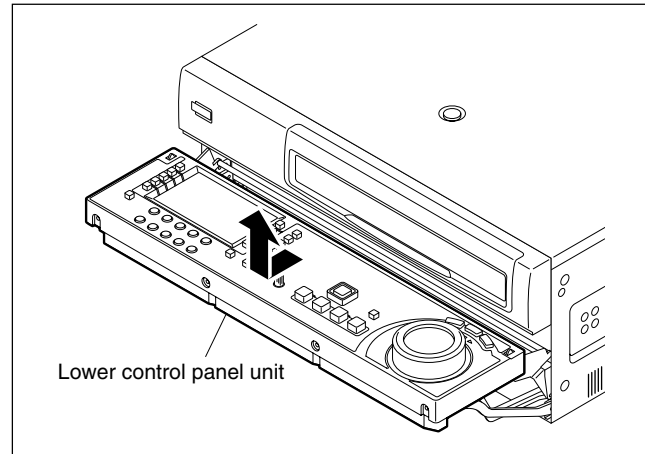
Note

Check the power of the VTR is turned off before disconnecting the cable. Disconnecting or connecting the cable in the power-on state will damage the control panel.

4. Remove the two screws shown in the figure.



5. Lightly draw the lower control panel unit toward you, and then lift it upward.



Reattaching

Reattach the lower control panel unit in the reverse order of removal. Yet when reattaching, use care about following points.

- If the arms are not open, press the both side of unlock buttons, then secure the arm to the 90 ° position.
- When reattaching the lower control panel unit to the arms, place the lower control panel which square holes aligned to the unlock buttons, and slide it slightly to the VTR.
- Check the screw holes are visible from your side before tightening the screws.

1-13. Switching Search Dial Mode

There are two kinds of operation to switch the mode of the search dial on the lower control panel.

- **Button selecting**

To enter the shuttle mode, press the SHUTTLE button.

To enter the jog mode, press the JOG button.

To enter the variable mode, press the VAR button.

- **Search dial pressing**

When you press the search dial, the search dial mode switches in order to shuttle, jog, variable.

It is possible to prohibit a manner of switching.

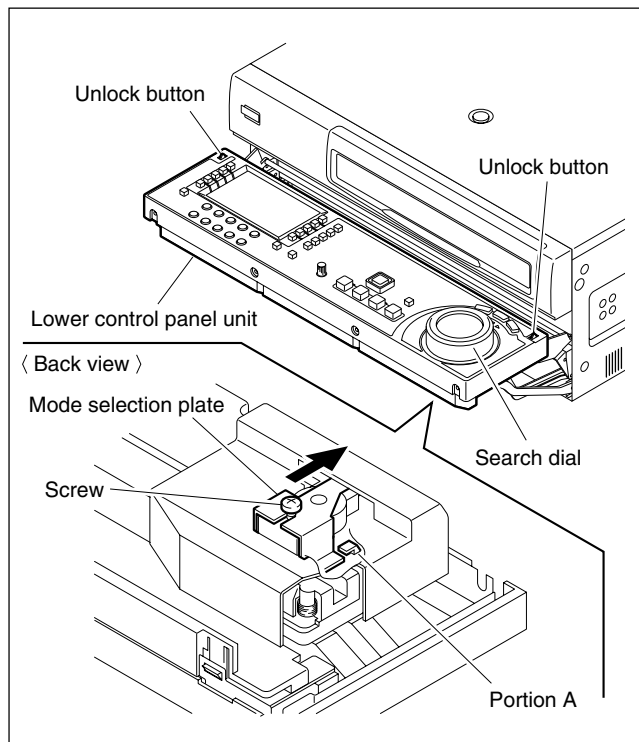
Prohibiting Search Dial Pressing

1. After pressing the unlock buttons, open the lower control panel as shown in the figure below.
2. Loosen a screw on the backside of the search dial as shown in the figure.

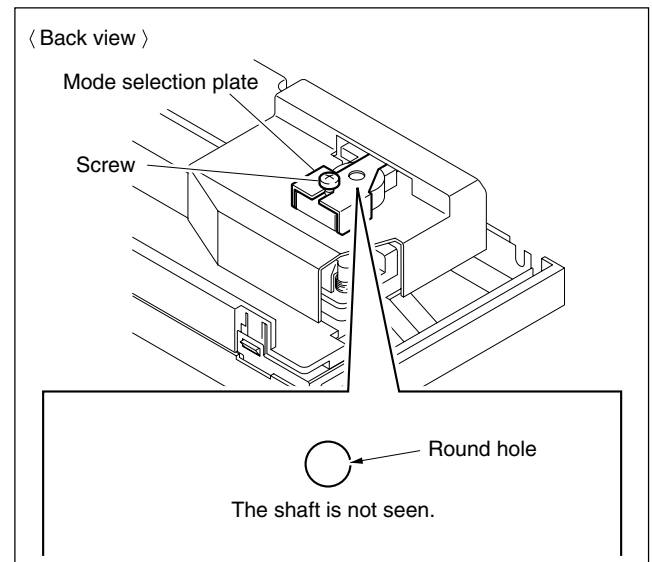
Note

If it is difficult to loosen the screw, remove the lower control panel unit in advance.
(Refer to Section 1-12.)

3. Slide the mode selection plate in the direction indicated by the arrow until it contacts the portion A.

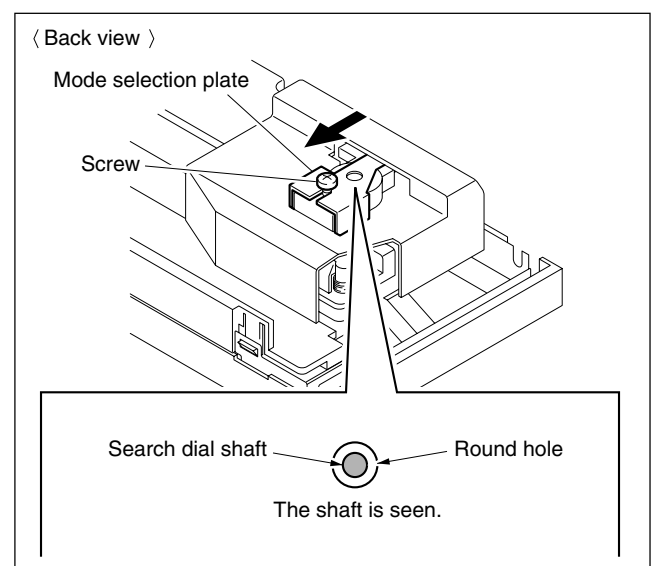


4. Check to see that the shaft of the search dial is not seen in the round hole of the mode selection plate, and then tighten the screw.



Allowing Search Dial Pressing

1. Open the lower control panel. (Operation side up)
2. Loosen a screw on the backside of the search dial as shown in the figure.
3. Fully slide the mode selection plate in the direction indicated by the arrow.
4. Check to see that the shaft of the search dial is seen in the round hole of the mode selection plate, and then tighten the screw.



1-14. Reference System

For each reference signal, either of an external reference video signal (*3) or input video signal (*4) is automatically selected according to the setting of function menu item OUT REF, the setting of setup menu ITEM-309, and the operation mode (PB/EDIT/REC) of this unit. (Refer to the table 1-14-1 below.)

Notes

- To select the video input, use F1 (VIDEO IN) in the function menu page P01 : HOME.
- To set the OUT REF, use F2 (REF VID) in the function menu page P03 : VID PROC.

Audio Signal Independent Recording

Even if an input video signal is selected as the reference signal, the reference signal is automatically selected to an external reference video signal for the period in which the no input video signal is input. When no external reference video signal is input, the internal-generated reference signal is automatically selected for the period.

An audio signal can be independently recorded by this system even if no reference video signal is input from the outside.

Alarm Display for Video Input Signal and Reference Signal

1. Blink of the selected input video indication area of the video input selection

The selected input video indication area on the system information blinks when signal is not input to the connector selected by the video input selection.

2. Blink of the STOP button

The button blinks when the reference signal is not locked to an input video signal.

(This function can be canceled in the setup menu ITEM-105.)

- When the OUT REF is set to “INPUT”:
The STOP button blinks when the signal is not input to the connector selected by the video input selection.
- When the OUT REF is set to “REF”:
The STOP button blinks in the following either cases.
When no reference signal is input to REF. VIDEO connector.
When the reference video signal (REF.VIDEO input) is not synchronized with an input video signal selected by the video input selection.

Table 1-14-1. Reference System

Menu ITEM-309	EXT	AUTO				
OUT REF	_____	REF				INPUT
Operation mode	_____	PB	EDIT ^(*1)	EDIT ^(*2)	REC	_____
Video output process	External Reference Video ^(*3)			Input Video ^(*4)		
Digital audio						
Servo system						

*1: When the setup menu ITEM-309 is set to “AUTO1”.

*2: When the setup menu ITEM-309 is set to “AUTO2”.

*3: REF. VIDEO input

*4: The input video signal is selected by the video input selection.

1-15. Settings and Adjustment when External Equipment is Connected

1-15-1. Settings for Time Code

To set the TIME CODE, open the the P02 : TC page on the function menu.

When Editing with an Editor (BVE-2000, etc.) Capable of the 1st Edit

When this unit is used by connecting to an editor, set as follows.

Button	Item (Display)	Setting
F1	TCG SOURCE (TCG SRC)	INTERNAL
F2	TCG PRESET/REGEN (TCG MODE)	PRESET
F3	TCG RUN (TCG RUN)	FREE

When Editing with Direct Machine-to-Machine (VTR to VTR)

Note

The setup menu ITEM-610 : REGEN CONTROL MODE setting data must be set to “AS&IN”.

Button	Item (Display)	Setting
F1	TCG SOURCE (TCG SRC)	INTERNAL
F2	TCG PRESET/REGEN (TCG MODE)	PRESET
F3	TCG RUN (TCG RUN)	FREE

1-15-2. VTR Constant Values Settings of Editor

Set the VTR constant values according to the table 1-15-2 below when the editor which needs the setting of VTR constant values is connected. Moreover, the change of VTR constant values are required when the operation mode is switched by setup menu of this unit.

Note

When remote-controlling this unit by the editor, set the setup menu ITEM-401: FUNCTION MODE AFTER CUE-UP to “STOP”.

Table 1-15-2. VTR Constant Values Settings of Editor

Model	Operation Mode	VTR CONSTANT 1								VTR CONSTANT 2							
		Data No.								Data No.							
		1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
HDW-1800, HDW-D1800	59.94, 29.97P	20	E2	00	96	07	07	03	8A ^{*1}	0D	08	00	00	81	3D	FF	5A
	50, 25P	21	E2	00	7D	07	07	03	8A ^{*1}	0D	07	00	00	83	3B	FF	4B
	24P, 23.98P	22	E2	00	78	07	07	03	8A ^{*1}	0D	07	00	00	83	3B	FF	4B

(Standard value is expressed in hexadecimal.)

*1: Set the data of No.8 of the VTR CONSTANT 1 to “0A” for the following editors.

- BVE-900 ROM versions earlier than 1.08
- BVE-600 ROM versions earlier than 1.01

1-15-3. System Phase Alignment

An external reference video signal must be input to this unit after it is adjusted so that SC-H conforms to the specifications.

When Connecting to a Digital Switcher

Fundamentally, the system phase adjustment is not necessary.

Refer to the manual of the digital switcher for details.

When Connecting to an Analog Switcher

Perform the system phase adjustment according to the manual of the analog switcher.

To adjust the system phase of this unit, use the MULTI CONTROL knob at the P03 : VID PROC page on the function menu.

When adjusting (i.e. changing the settings), press the button below to blink the current setting value, and then turn the MULTI CONTROL knob.

Button	Item	Display
F3	SYSTEM SYNC PHASE	SYNC PHS
F4	SYSTEM SYNC PHASE (fine djustmen)	SYNC FIN

Notes

- Be sure to adjust in PB mode.
The system phase does not change even if the SYNC PHS/SYNC FIN is adjusted in the REC mode, but it changes when the REC mode is shifted to the PB mode.
- The playback sound may be momentarily interrupted if the SYNC PHS/SYNC FIN is adjusted during tape playback.
- The system phase of SD output can be adjusted in ITEM-719 and -720 of the extended setup menu.

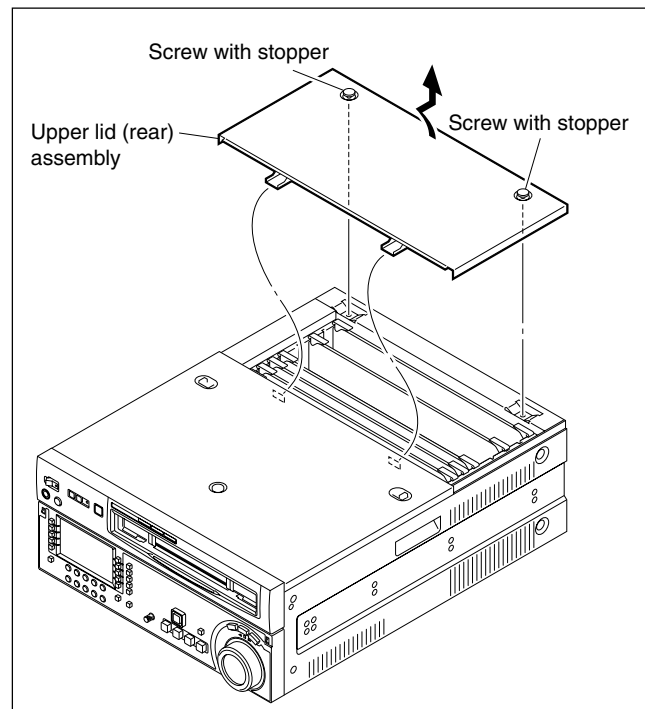
1-16. Removing/Reattaching Plug-in Board

Notes

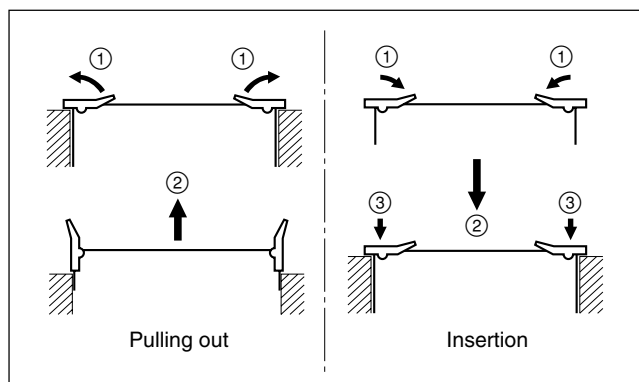
- Turn off the power and unplug the power cord before removing/reattaching the board.
- When the plug-in board is replaced, refer to the maintenance manual, volume-1.

Removing

1. Fully loosen the two fixing screws.
2. Remove the upper lid (rear) assembly by moving in the direction indicated by the arrow.



- Open the eject levers on both ends of the board in the direction of the arrows.
- Hold the eject levers and slowly pull the board out.



Note

The SY-340 and DU-386 boards should be removed together due to their structural feature.

Reattaching

When reattaching the board, install in the reverse order of removal.

Notes

- After inserting the board, push in the two folded eject levers simultaneously to firmly connect the plug-in board to the connector on the motherboard.
- When reattaching the upper lid (rear) assembly, be sure to insert the protrusions in the square holes on the chassis, and then secure the lid.

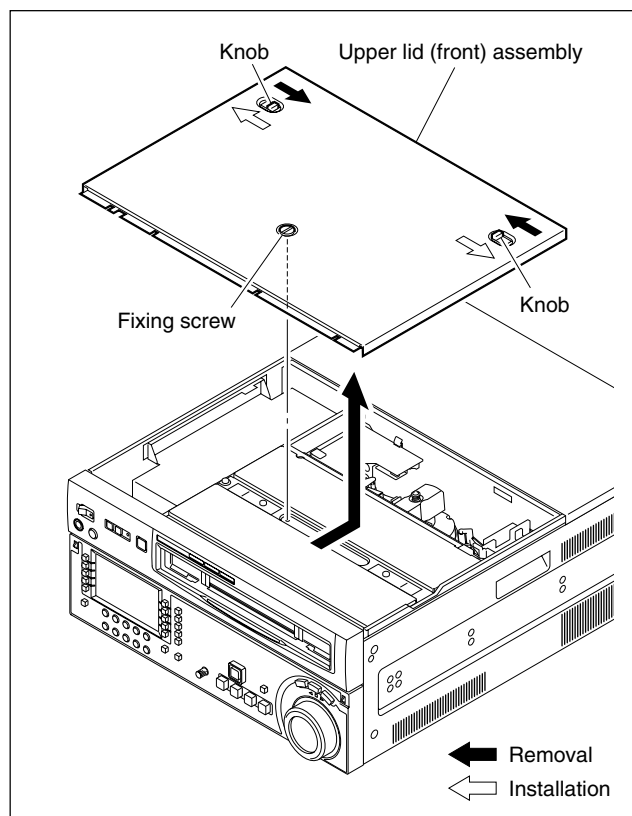
1-17. Taking Out the Cassette in Tape Slacking

When slacking the tape in this unit, follow the steps below to take out the cassette tape.

Note

Being careful not to damage the tape, take out the cassette tape with care.

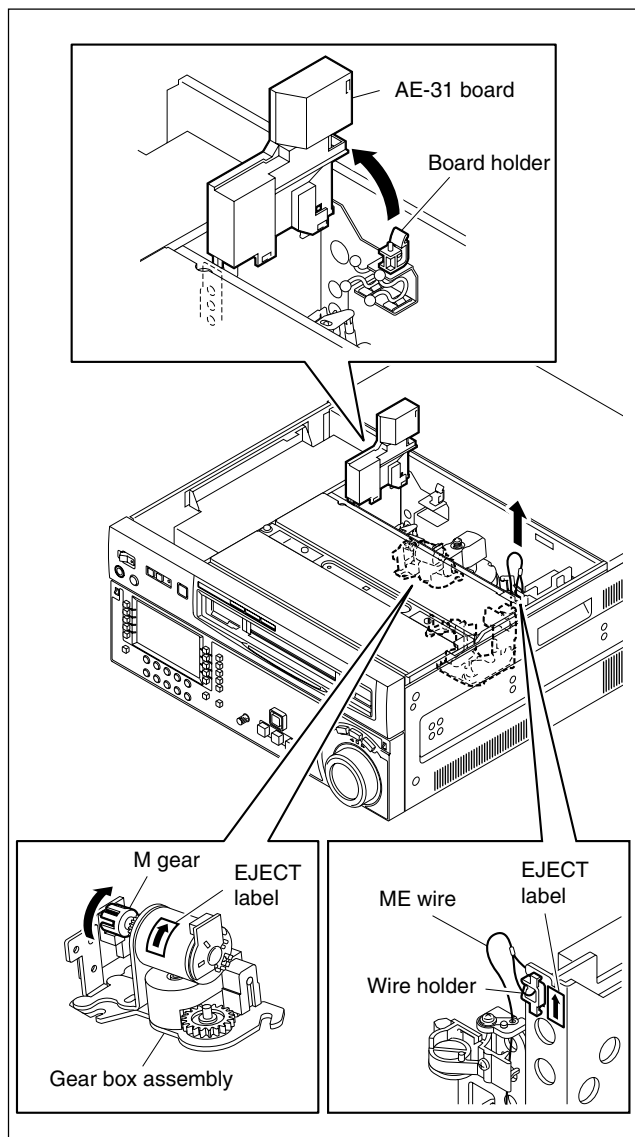
- Turn off the power.
- Fully loosen the fixing screw.
- Slide the knobs on upper lid (front) assembly each in the inside. (Move the knobs to the outside to fix the upper lid (front) assembly).
- Remove the upper lid (front) assembly.



5. Release the lock of the board holder and open the AE-31 board in the arrow direction.
6. Check by eye that the unit is in the state to be able to wind manually the tape.
7. Pull the ME wire for a few times with short steps to take up the tape inside the cassette.

Notes

- Be careful for the tape not to catch in parts such as a flange of a tape guide.
 - Don't take the ME wire off the wire holder.
 - The ME wire links with the T real table.
The T real table rotates about 1/24 turns clockwise (take-up direction) by pulling the ME wire about 6 mm.
8. Rotate the M gear of the threading motor block in direction of arrow shown in the EJECT label by about a half turn to slack off the tape.
 9. Pull the ME wire for a few times with short steps in the direction of arrow shown in the EJECT label to take up the tape inside the cassette.

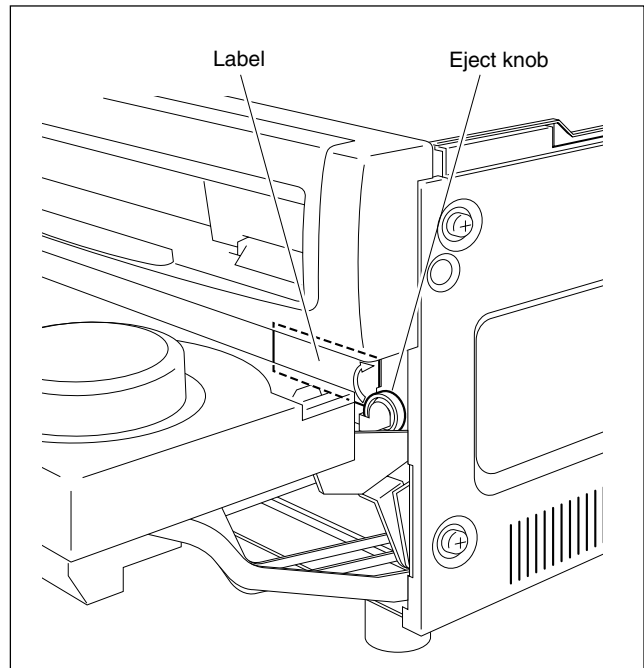


10. To wind up the tape into the cassette, repeat steps 8 and 9.

Note

On completely winding up the tape into the cassette, the M gear will be tighten.
(Unthreading end state)

11. Check that the ME wire is slacken.
12. Open the lower control panel.
13. Turn the eject knob in the arrow direction of the label until the cassette is completely ejected.



Appendix A

Setting Check Sheet

It is recommended to copy these check sheets and write down the setup conditions (switch and so on) under the application.

If the setting is changed temporarily by changing operating condition, the setting can be reset easily.

It is recommended to attach the sheets to the unit when check, maintenance and repair.

If the unit is used frequently by changing the combination of each system, making the sheets are convenient.

(Make use of the check sheets in prevention of setting error.)

Model name: _____ Serial No.: _____

- Firmware

SY1 ROM version: _____

SY2 ROM version: _____

SV ROM version: _____

- RS-232C baud rate: _____ bps

- Hours meter

Write down the value of hours meter when checking, servicing, and maintaining.

ITEM	Date	Hours meter
H01: OPERATION HOURS	/	
H02: DRUM RUNNING HOURS	/	
H03: TAPE RUNNING HOURS	/	
H04: THREADING COUNTER	/	
H12: DRUM RUNNING HOURS (Resettable)	/	
H13: TAPE RUNNING HOURS (Resettable)	/	
H14: THREADING COUNTER (Resettable)	/	

Note

The current settings of setup menu can be saved and read using a Memory Stick.
For details, refer to the maintenance manual volume 1.

Connector panel

Switch		Factory setting	Setting			
Analog audio input level 600 Ω	CH1	HIGH ON	<input type="checkbox"/> LOW OFF	<input type="checkbox"/> HIGH OFF	<input type="checkbox"/> HIGH ON	
	CH2	HIGH ON	<input type="checkbox"/> LOW OFF	<input type="checkbox"/> HIGH OFF	<input type="checkbox"/> HIGH ON	
Reference video input 75 Ω	1	ON	<input type="checkbox"/> ON	<input type="checkbox"/> OFF		
	2	ON	<input type="checkbox"/> ON	<input type="checkbox"/> OFF		

Upper control panel

Switch	Factory setting	Setting			
REMOTE 1 (9P)	LOCAL	<input type="checkbox"/> Lighting (REMOTE)	<input type="checkbox"/> Lightless (LOCAL)		
REMOTE 2 (50P)	LOCAL	<input type="checkbox"/> Lighting (REMOTE)	<input type="checkbox"/> Lightless (LOCAL)		

Switch panel

Switch	Factory setting	Setting	
KEY INHIBIT	OFF	<input type="checkbox"/> ON	<input type="checkbox"/> OFF

Switches on the board

Note

Never change the setting of Factory use switches.

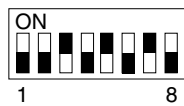
Board	Name	Channel	Switch No.	Factory setting	Setting
AE-31	Factory use (HEAD TUNE switch)	CH1	S100	All OFF	—
		CH2	S200	All OFF	—
APR-80	Audio input, output, and monitor output headroom	CH1/2/L/R	S1902	20 dB	<input type="checkbox"/> 20 <input type="checkbox"/> 18 <input type="checkbox"/> 16 <input type="checkbox"/> 12
	Audio input reference level	CH1/2	S1902	+4 dBm/600 Ω	<input type="checkbox"/> +4 <input type="checkbox"/> 0 <input type="checkbox"/> -3 <input type="checkbox"/> -20
	Audio output reference level	CH1/CH2	S1902	+4 dBm/600 Ω	<input type="checkbox"/> +4 <input type="checkbox"/> 0 <input type="checkbox"/> -3 <input type="checkbox"/> -20
	Monitor output reference level	L/R	S1902	+4 dBm/600 Ω	<input type="checkbox"/> +4 <input type="checkbox"/> 0 <input type="checkbox"/> -3 <input type="checkbox"/> -20
	Monitor output level FIXED/VARIABLE switch	L	S2001	Fixed (UNITY)	<input type="checkbox"/> Fixed <input type="checkbox"/> Variable
		R	S2000	Fixed (UNITY)	<input type="checkbox"/> Fixed <input type="checkbox"/> Variable
	Factory use	—	S1900	All OFF	—
	Factory use	—	S1901	All OFF	—
HPR-21	Factory use	—	S400	All OFF	—
SY-340	Factory use	—	S105	All OFF	—

(Continued)

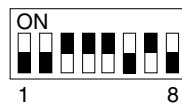
Board	Switch No.	: Name	Factory setting	Setting
SS-101	S101	1 : TRACKING ENABLE	OFF	
		2 : Factory use	OFF	—
		3 : DT WOBBLING	OFF	
		4 : SV ERR DISABLE	OFF	
	S1501	Never change the settings of S1501 switch since each switch is set according to the characteristics of the unit.		
		1 : Factory use	OFF	—
		2 - 6 : Model ID switch	See below.	—
		7 : J/SY	ON	—
		8 : 525/625	OFF	
	S1502	1 : EXTENDED MENU	ON	
		2 : MAINTENANCE MODE ACCESS ENABLE	ON	
		3 - 8 : Factory use	OFF	—

S1501 factory setting (■ : Knob position)

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Page	Button	Name	Factory setting	Setting		
P01 : HOME	F1	VIDEO IN	SDI	<input type="checkbox"/> SDI	<input type="checkbox"/> SG	
	F2	—				
	F3	EDIT	—	—		
	F4	E.PRESET	—	—		
	F5	CLR CNT	—	—		
	F6	PB/EE	EE	<input type="checkbox"/> EE	<input type="checkbox"/> PB	
	F7	CONFI	DISABLE	<input type="checkbox"/> DISABLE	<input type="checkbox"/> ENABLE	
	F8	COUNTER	TC	<input type="checkbox"/> TC	<input type="checkbox"/> UB	<input type="checkbox"/> CTL
	F9	MENU	—	—		
	F10	TCG SET	—	—		
P02 : TC	F1	TCG SRC	INTERNAL	<input type="checkbox"/> INTINTERNAL	<input type="checkbox"/> EXT LTC	<input type="checkbox"/> SDI IN
	F2	TCG MODE	PRESET	<input type="checkbox"/> PRESET	<input type="checkbox"/> RGN : LTC	<input type="checkbox"/> RGN : VITC
	F3	TCG RUN	REC	<input type="checkbox"/> REC	<input type="checkbox"/> FREE	
	F4	DROP FRM	DF	<input type="checkbox"/> DF	<input type="checkbox"/> NDF	
	F5	—				
	F6	—				
	F7	—				
	F8	—				
	F9	—				
	F10	TCR	AUTO	<input type="checkbox"/> LTC	<input type="checkbox"/> AUTO	<input type="checkbox"/> VITC
P03 : VID PROC	F1	VIDEO IN	SDI	<input type="checkbox"/> SDI	<input type="checkbox"/> SG	
	F2	REF VID	INPUT	<input type="checkbox"/> REF	<input type="checkbox"/> INPUT	
	F3	SYNC PHS	0	VALUE: _____		
	F4	SYCN FIN	0	VALUE: _____		
	F5	V.PROC	LOCAL	<input type="checkbox"/> LOCAL	<input type="checkbox"/> MENU	
	F6	VID LEVL	PRESET	<input type="checkbox"/> PRESET	<input type="checkbox"/> VALUE: _____	
	F7	CHR LEVL	PRESET	<input type="checkbox"/> PRESET	<input type="checkbox"/> VALUE: _____	
	F8 *1	HUE/CHR PHAS		PRESET	<input type="checkbox"/> PRESET	<input type="checkbox"/> VALUE: _____
	F9 *2	SETUP LV/BLK LEVL PRESET		<input type="checkbox"/> PRESET	<input type="checkbox"/> VALUE: _____	
	F10	PRESET	—	—		
P04 : MISC-1	F1	CAPSTAN	4F	<input type="checkbox"/> 2F	<input type="checkbox"/> 4F	<input type="checkbox"/> 8F
	F2	—				
	F3	PREREAD	OFF	<input type="checkbox"/> ON	<input type="checkbox"/> OFF	
	F4	—				
	F5	CHARA	ON	<input type="checkbox"/> ON	<input type="checkbox"/> OFF	
	F6	T-INFO	TOTAL	<input type="checkbox"/> TOTAL	<input type="checkbox"/> REMAIN	
	F7	—				
	F8	—				
	F9	—				
	F10	—				

*1: HUE (59.94i, 29.97PsF mode) /CHR PHAS (50i, 25PsF, 23.98PsF, 24PsF mode)

*2: SETUP LV (59.94i, 29.97PsF mode) /BLK LEVL (50i, 25PsF, 23.98PsF, 24PsF mode)

Page	Button	Name	Factory setting	Setting
P05 : MISC-2	F1	–		
	F2	UMID	–	–
	F3	SHOT MRK	–	–
	F4	STP CODE	–	–
	F5	–		
	F6	–		
	F7	–		
	F8	FREEZE	–	–
	F9	FRZOFF	–	–
	F10	–		
P06 : EDIT	F1	AUTOEDIT	–	–
	F2	PREVIEW	–	–
	F3	REVIEW	–	–
	F4	DMC	–	–
	F5	PREROLL	–	–
	F6	R/P SEL	OFF	<input type="checkbox"/> OFF <input type="checkbox"/> RECDER <input type="checkbox"/> PLAYER
	F7	AUD IN	–	–
	F8	AUD OUT	–	–
	F9	IN	–	–
	F10	OUT	–	–
P07 : E.PRESET	F1	REC INHI	OFF	<input type="checkbox"/> ON <input type="checkbox"/> OFF
	F2	INS TC	–	–
	F3	INS CUE	–	–
	F4	EDIT	–	–
	F5	ASSEMBLE	–	–
	F6	INS VID	–	–
	F7	INS A1	–	–
	F8	INS A2	–	–
	F9	INS A3	–	–
	F10	INS A4	–	–

Page	Button	Name	Factory setting	Setting		
P08 : AUD INP	F1	EMPHASIS	OFF	<input type="checkbox"/> ON	<input type="checkbox"/> OFF	
	F2 *3 (→P102)	AUD MIX	—	—		
	F3 *4 (→P100)	AUD MONI	—	—		
	F4	MT.SCALE	FULL	<input type="checkbox"/> FULL	<input type="checkbox"/> FINE	
	F5	—				
	F6	AUDIO SG	OFF	<input type="checkbox"/> OFF	<input type="checkbox"/> ON	
	F7	INP A1	ANA-1	<input type="checkbox"/> SDI-1	<input type="checkbox"/> AES-1	<input type="checkbox"/> ANA-1
	F8	INP A2	ANA-2	<input type="checkbox"/> SDI-2	<input type="checkbox"/> AES-2	<input type="checkbox"/> ANA-2
	F9	INP A3	ANA-1	<input type="checkbox"/> SDI-3	<input type="checkbox"/> AES-3	<input type="checkbox"/> ANA-1
	F10	INP A4	ANA-2	<input type="checkbox"/> SDI-4	<input type="checkbox"/> AES-4	<input type="checkbox"/> ANA-2

*3: When F2 (AUD MIX) in the function menu page P08 : AUD INP is selected, P102 : AUD MIX is displayed to allow audio mixing setting.

Note

Audio mixing setting for the CUE track is available with the setup menu ITEM-833 (CUE AUDIO INPUT SELECT).

Page	Recording track	Factory setting	Setting			
P102 : AUD MIX	CH-1	NOT MIX	<input type="checkbox"/> NOT MIX	<input type="checkbox"/> MIX [<input type="checkbox"/> CH-1 <input type="checkbox"/> CH-2 <input type="checkbox"/> CH-3 <input type="checkbox"/> CH-4]		
	CH-2	NOT MIX	<input type="checkbox"/> NOT MIX	<input type="checkbox"/> MIX [<input type="checkbox"/> CH-1 <input type="checkbox"/> CH-2 <input type="checkbox"/> CH-3 <input type="checkbox"/> CH-4]		
	CH-3	NOT MIX	<input type="checkbox"/> NOT MIX	<input type="checkbox"/> MIX [<input type="checkbox"/> CH-1 <input type="checkbox"/> CH-2 <input type="checkbox"/> CH-3 <input type="checkbox"/> CH-4]		
	CH-4	NOT MIX	<input type="checkbox"/> NOT MIX	<input type="checkbox"/> MIX [<input type="checkbox"/> CH-1 <input type="checkbox"/> CH-2 <input type="checkbox"/> CH-3 <input type="checkbox"/> CH-4]		

*4: When F3 (AUD MONI) in the function menu page P08 : AUD INP is selected, P100 : AUD MONI is displayed to allow audio monitor setting.

Note

F5 (TRCK CHG) of the function menu page P100 : AUD MONI is displayed only during playback of MPEG IMX to allow selective setting (CH-5 to CH-8).

Page	Channel monitored	Factory setting	Setting			
P100 : AUD MONI or P101 : AUD MONI	L	CH-1 only	<input type="checkbox"/> CH-1 <input type="checkbox"/> CH-5 <input type="checkbox"/> CUE	<input type="checkbox"/> CH-2 <input type="checkbox"/> CH-6	<input type="checkbox"/> CH-3 <input type="checkbox"/> CH-7	<input type="checkbox"/> CH-4 <input type="checkbox"/> CH-8
	R	CH-1 only	<input type="checkbox"/> CH-1 <input type="checkbox"/> CH-5 <input type="checkbox"/> CUE	<input type="checkbox"/> CH-2 <input type="checkbox"/> CH-6	<input type="checkbox"/> CH-3 <input type="checkbox"/> CH-7	<input type="checkbox"/> CH-4 <input type="checkbox"/> CH-8

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