

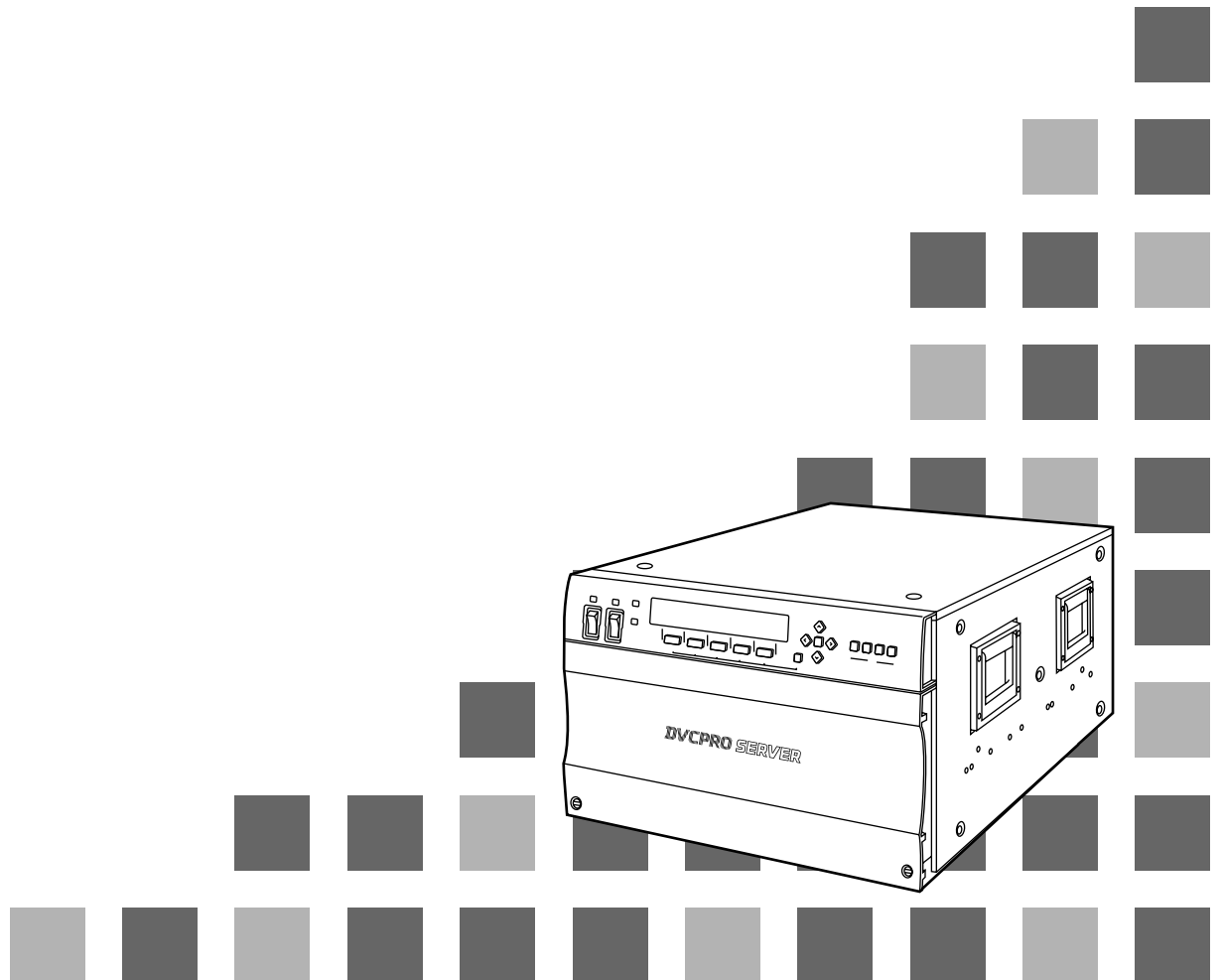
# Panasonic



HD/SD Multi Format DVCPRO Server

AJ-HDR150P

## Operating Instructions



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## IMPORTANT

“Unauthorized recording of copyrighted television programs, video tapes and other materials may infringe the right of copyright owners and be contrary to copyright laws.”

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER TO SERVICING TO QUALIFIED SERVICE PERSONNEL.		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (service) instructions in the literature accompanying the appliance.

### FCC Note:

This device complies with Part 15 of the FCC Rules. To assure continued compliance follow the attached installation instructions and do not make any unauthorized modifications.

This equipment has been tested and found to comply with the limits for a class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### CAUTION:

Do not install or place this unit in a bookcase, built-in cabinet or any other confined space in order to maintain adequate ventilation. Ensure that curtains and any other materials do not obstruct the ventilation to prevent risk of electric shock or fire hazard due to overheating.

### WARNING:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

### CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD AND ANNOYING INTERFERENCE, USE THE RECOMMENDED ACCESSORIES ONLY.

### CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER INSTALLATION OF HARD-DISK DRIVE TO QUALIFIED SERVICE PERSONNEL.  
HARD-DISK DRIVE MUST BE APPROVED BY UL AND/OR CSA.

### CAUTION:


TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER CHANGE OF SWITCH SETTING INSIDE THE UNIT TO QUALIFIED SERVICE PERSONNEL.

### CAUTION:

TO REDUCE THE RISK OF FIRE OR SHOCK HAZARD, REFER MOUNTING OF THE OPTIONAL INTERFACE BOARD TO QUALIFIED SERVICE PERSONNEL.

### CAUTION:

- Keep the temperature inside the rack to between 41°F to 95°F (5°C to 35°C).
- Bolt the rack securely to the floor so that it will not topple over when this unit is drawn out.

 indicates safety information.

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# Handling Precautions

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- This unit has been designed with foremost emphasis placed on its reliability as a transmission server. However, to prevent accidents in transmission due to breakdown or obstructions, it is requested that the server be used with a system compiled in duplicate.
- By having a newly-developed RAID device built in, the system is designed for continuous operation even if one HDD (hard disk drive) unit breaks down. However, to avoid secondary complications, if one HDD unit breaks down, terminate operation immediately and request servicing from your dealer.
- The system is designed so that a faulty HDD can be replaced even while continuity is maintained, but normal operation thereafter cannot be guaranteed. Do not replace a HDD during recording or playback.
- The system is designed to facilitate data restoration by replacing a faulty HDD with a new one, but backup copies of data on recording tape, etc., should be made so that important contents recorded on the HDD are not lost due to equipment problems, etc.  
Faulty equipment can be serviced by your dealer but lost contents cannot be restored.
- Do not execute recording or playback while data is being rebuilt.  
If recording or playback is not being executed, the system disk (9GB) can be rebuilt in approximately 10 minutes and data disks (36GB) can be rebuilt in about 1 hour.
- Do not use this unit in a vehicle.  
This may cause injury or result in problems with the hard disk drive or data.
- It takes about 3 seconds to switch to REC mode when the REC command is sent in REC CUEUP mode.
- When an HDD is loaded onto this system, extra weight is added to the front panel side. Please note this fact and exercise due caution when moving the system.
- Whenever a problem occurs with POWER A or POWER B in the power supply unit, be sure to always turn the relevant power supply switch to OFF.

## ■ Precautions for video and audio input/output operations

- For input/output of HD signal from VTR to the server, use a codex unit that is compatible with the server.
- Use the AJ-D780 when using the SDTI 4× speed for input/output from a VTR to the server.
- When using the SDTI 1× speed for input/output from a VTR to the server, use a VTR mounted with SDTI baseboard such as AJ-D850, AJ-D950 or AJ-D960.  
**The AJ-D780 does not have a SDTI 1× speed function.**
- When using analog or SDI input/output, signals buried in the video blanking area (e.g., signals for letter broadcasting) cannot be recorded or played back.  
Recording and playback are possible when a SDTI I/O board is used.

# Features

---

## **DVCPRO compression**

This digital video server incorporates the DVCPRO format that, in the development of digital technology for broadcasting applications, has won critical acclaim for its high picture and sound quality.

## **High-speed transmission made possible by an SDTI interface**

The existing SDI (SMPTE259M-C) router and cable can be used without modification. Further, by employing an SDTI interface capable of transmission at 4× speed (case of DVCPRO 25 Mbps), it is possible to upload or download image data to and from a 4× speed VTR (AJ-D780).

Multiple channels are also possible if the unit is used as the cache for a VTR system.

With an SDTI interface, input/output of all DVCPRO format signals (DVCPRO 25M/50M/P/HD) is possible.

## **4 channel input/output with 20-hour recording capacity**

This 4-channel server (2-channel with HD) can make input/output changes using commands so that it is easy to manage multiple channels and simple to construct time-difference systems, etc. The running costs of systems requiring repeat playback can be pared back since there is none of the deterioration found with tapes.

By using a 36GB HDD (optional), approximately 20 hours of recording capacity is obtained.

(When 8 units of HDD for DVCPRO 25 Mbps/data are used.)

## **High reliability with built-in RAID**

Thanks to built-in RAID, the system has been configured with system disk at RAID 1, and data disk at RAID 3, so operation can be continued even if one HDD unit malfunctions. An HDD system of high reliability is thus achieved.

## **I/O and Storage capacities can be expanded by Fibre Channel connection**

Expanding input/output channels and storage capacity is easy because I/O and Storage are connected via Fibre Channel.

## **VTR-like server with RS-422A control**

Since the server controls each channel using an RS-422A serial interface, it can provide control using images that appear to involve 4 VTRs.

## **Odetics and Louth protocols supported**

This server supports both the Odetics and Louth automation protocols used in broadcast stations so that it can easily be connected as a unit to be subject to the automation control inside a broadcast station.

## **Emergency operation possible with front panel operation**

Front panel operation makes it possible to control selection of recorded materials during an emergency and playback of the same.

When the alarm activates, alarm contents are displayed so that restorative measures can be taken in response to messages.

## **Error detection functions**

The display panel comes with functions for detecting and displaying fan stoppages, hard disk drive errors and system errors so that warnings can be issued in the unlikely event of a breakdown.

## **Optional SDTI, analog and SDI input/output**

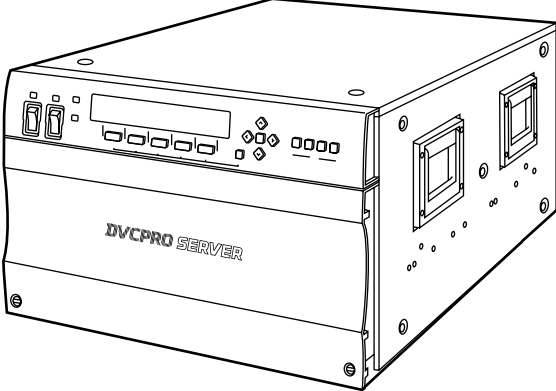
An SDTI I/O board capable of 4x speed operation, an analog I/O board that can be monitored, and a SDI I/O board are available as audio/video input/output options so the board that matches the interfaces used in the broadcast station can be selected.

## **Redundant power supply to avoid problems**

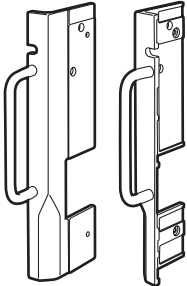
The unit has dual power supply system to avoid any problems with the power supply.

# System Configuration

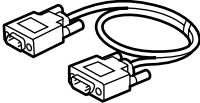
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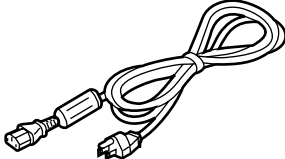
**DVC PRO server**



**6U rack mount adapter**



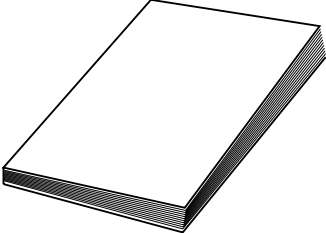
**FC (Fibre Channel) cable**



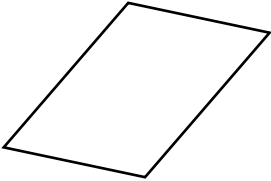
**Power cord (×2)**



**HDD mounting screws (×36)**



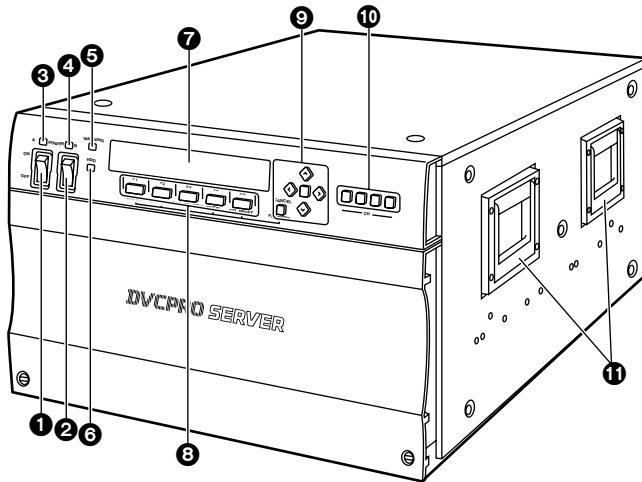
**Operating Instructions**  
(what you are now reading)



**Warranty**

# Parts and Their Functions

## Front panel



### 1 Power switch [POWER A]

This switch is used to turn the unit's [POWER A] supply ON or OFF.

Before turning the power off, execute SHUTDOWN from the display panel and wait for the display to read: "It is now safe to turn off."

Turning the power off during operation may destroy data or cause the hard disk drive to fail.

### 2 Power switch [POWER B]

This switch is used to turn the unit's [POWER B] supply ON or OFF.

The unit has dual power supply system to avoid any problems with the power supply. If a problem arises with either POWER A or POWER B, the unit operates with the other power supply.

### 3 Power LED [POWER A]

This lights when power is supplied to POWER A. It goes off when the power switches of both POWER A and POWER B are at OFF.

**Green LED:** No anomalies

**Red LED:**

- There is something wrong with the output voltage, cooling fan or power supply module temperature.
- While the POWER B switch is at ON, the POWER A switch has been turned to OFF or the POWER A supply unit has not been installed.

### 4 Power LED [POWER B]

This lights when power is supplied to POWER B. It goes off when the power switches of both POWER A and POWER B are at OFF.

**Green LED:** No anomalies

**Red LED:**

- There is something wrong with the output voltage, cooling fan or power supply module temperature.
- While the POWER A switch is at ON, the POWER B switch has been turned to OFF or the POWER B supply unit has not been installed.

### 5 WARNING LED [WARNING]

**During SILENT-MODE:**

The lamp turns orange and blinks whenever something goes wrong with the unit.

In the event of a slight error, this lamp goes out after the error log is checked.

In the event of a gross error, the lamp lights in red.

**During ATTN-MODE:**

The lamp turns orange and blinks whenever something goes wrong with the unit. The error display menu appears on the display panel and at the same time, the alarm sounds.

To stop the alarm, press the [F3] button.

In the event of a gross error, the lamp lights in red.

### 6 HDD LED [HDD]

This lamp blinks when a built-in HDD has been accessed. It blinks green when all the built-in HDDs are operating normally, and lights in orange during reconstruction. In the event of a problem with any one of the HDD units (including those not yet inserted), the lamp blinks red to give notice.

### 7 Display panel

Displays the status of channel selected with channel select button, along with information on the unit internals.

The display menu is changed by using function button (8) or cursor button (9).

### 8 Function buttons [F1 ~ F5]

Used when executing any of the functions shown in the lower register of the display panel.

The operations allocated to each function on the menu are carried out by pressing these buttons.



# Parts and Their Functions

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## Front panel

### ⑨ Cursor buttons [▲, ▼, ◀, ▶, SET, CANCEL]

#### [▲] button:

Becomes effective when the ▲ mark is shown on the display panel.

Forwarding of CLIP, etc., character selection and separate function menu are displayed.

#### [▼] button:

Becomes effective when the ▼ mark is shown on the display panel.

Forwarding of CLIP, etc., character selection and separate function menu are displayed.

#### [◀] button:

Becomes effective when the ◀ mark is shown on the display panel or the cursor ( ) is present.

Moves the cursor one space to the left.

#### [▶] button:

Becomes effective when the ▶ mark is shown on the display panel or the cursor is present. Moves the cursor one space to the right.

#### [SET] button:

Becomes effective when "SET or CANCEL" is shown on the display panel. Pressing the SET button establishes selection or setting and designated operations take place.

#### [CANCEL] button:

Becomes effective when "SET or CANCEL" is shown on the display panel. Pressing the CANCEL button erases selection or setting, and the previous screen is restored without anything taking place.

### ⑩ Channel buttons [CH1 ~ CH4]

Designates the channel shown on the display panel. The button of the selected channel lights and the selected channel status is shown on the display.

Channel 1 is selected for power supply start up.

Unit internal settings, HDD status, error status and other conditions for which no channel is designated can be viewed on the display irrespective of the channel selected.

### ⑪ Handle

### Combining the CANCEL button with function buttons

Targeted operation takes place by pressing the function button while keeping the CANCEL button depressed.

Effective only on main menu.

Processes other than LOCAL/REMOTE changeover are effective only in local mode.

#### [CANCEL]+[F1] (RECUE):

Re-cues clip currently being loaded.

#### [CANCEL]+[F2] (EMR PLAY):

Executes emergency playback.

When the EMR-OUT1 clip is present, it is loaded and playback occurs repeatedly. When that clip is absent, playback of the clip currently being loaded begins from the current stop position, and after playback to the end position, return is made to the clip head position and playback is repeated.

#### [CANCEL]+[F3] (REMOTE/LOCAL):

Switches the channel currently shown on the display between remote mode and local mode. Switch is made between REMOTE and LOCAL each time [CANCEL] + [F3] is pressed.

#### REMOTE:

The unit is controlled from an external controller. Operations cannot be performed with the front panel.

#### LOCAL:

The unit is controlled from the front panel. Operations cannot be performed with the external controller.

#### [CANCEL]+[F4] (TC/CTL):

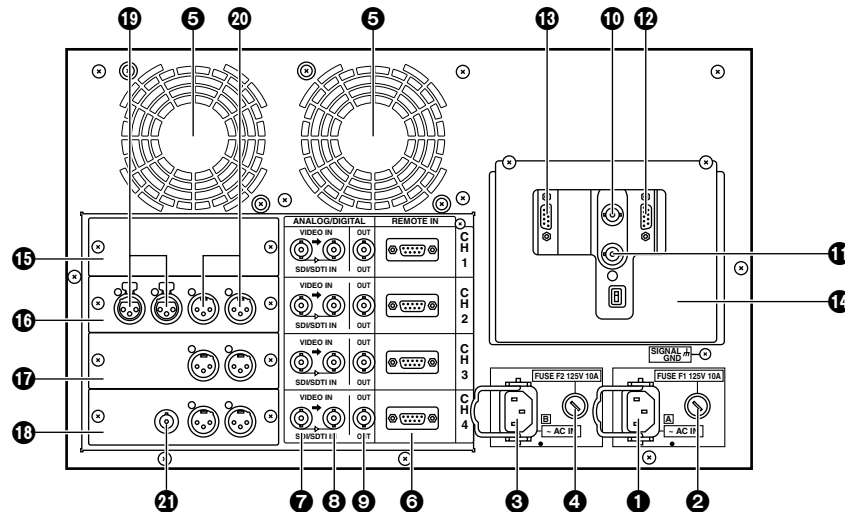
Displays the time code mode. Each time the button is pressed, switching occurs as follows: TC → CTL1 → CTL2 → TC.

#### [CANCEL]+[F5] (CTL RESET):

When the [CANCEL] + [F5] button is pressed at CTL1, the time code is reset to 00:00:00:00.

# Parts and Their Functions

## Rear panel



### 1 AC power socket [~AC IN]

This power socket is for [POWER A].  
Connect the power cord (supplied) to this socket.

### 2 Fuse holder 1 [FUSE F1]

This fuse holder is for [POWER A].  
Contains a 125V 10A fuse.

### 3 AC power socket [~ AC IN]

This power socket is for [POWER B].  
Connect the power cord (supplied) to this socket.

### 4 Fuse holder 1 [FUSE F2]

This fuse holder is for [POWER B].  
Contains a 125V 10A fuse.

### 5 Heat dissipating fan

Fan to keep the internal temperature from rising.

### 6 RS-422A connectors [REMOTE IN]

RS-422A connectors for controlling each of the server's channels.

### 7 Video signal input connector [VIDEO IN, SDI/SDTI IN]

Video signal input connectors for each of the server's channels. Used for analog, SDI and SDTI signals.

During SDI and SDTI input the embedded audio signals are supplied to these connectors.

### 8 VIDEO through/buffer output connector

Video signal through (analog)/buffer (SDTI/SDI) output connectors for each unit channel.

### 9 Video output connector [OUT]

Video signal output connectors for each of the server's channels.

During SDI and SDTI signals output the embedded audio signals are output from these connectors.

### 10 Analog reference video signal input connector [REF IN]

The analog reference video signal is input to this connector.

A stable black-burst signal from an external sync signal generator is also input to this connector.

### 11 Analog reference video signal through output connector

### 12 Fibre Channel connector [RAID]

Fibre Channel connector for RAID.

### 13 Fibre Channel connector [HOST]

Fibre Channel connector for HOST.

Connects FC cable in the same package to Fibre Channel connector for RAID.

### 14 Connector cover

This cover is to avoid connections which are not necessary for normal operation.

As a shock watcher is attached to the cover to detect any shocks, the cover should only be removed for maintenance.

# Parts and Their Functions

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The following panels change depending on their combination.

**15 SDTI panel (packed with optional board)**

Nothing is connected to the SDTI panel.

**16 Analog panel (packed with optional board)**

This is provided with analog audio signal input and output connectors.

**17 Analog out panel (packed with optional board)**

This is provided with analog audio signal output connectors.

**18 SDI panel (packed with optional board)**

This is provided with analog video signal output and analog audio signal output connectors.

**19 Analog audio signal input connectors**

**20 Analog audio signal output connectors**

**21 Analog video signal output connector**

Four optional boards are available.

1. Analog I/O board (AJ-YA7000P)
2. Analog out board (AJ-YA7200P)
3. SDTI I/O board (AJ-YAC7000P)
4. SDI I/O board (AJ-YA7100P)

(The analog out board is required for the SDI I/O board.)

The above four boards can be installed for any or all of the four channels.

**Consult your dealer for details on setting and installing the optional boards.**

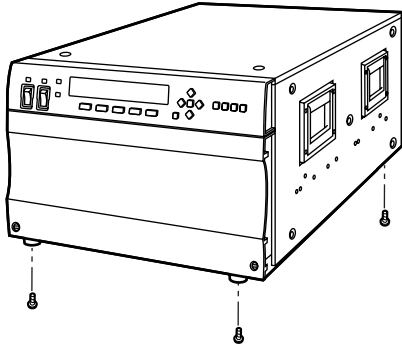
# Rack Mounting

Using the rack-mounting adapters provided, the unit can be mounted in a 19-inch standard rack. The following slide rails and brackets are recommended for mounting.

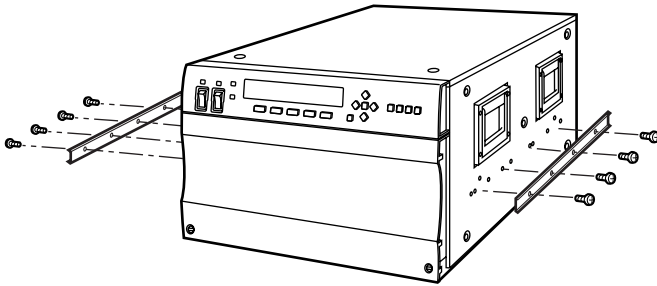
- Slide rails (CC3001-99-0191), brackets (B-308): made by CHASIS TRAK

For details, consult your dealer.

1. Remove the four feet from the bottom of the unit.
  - Take care to safeguard the unit from vibration and impact.



2. Attach the inner members of the slide rails to the unit.



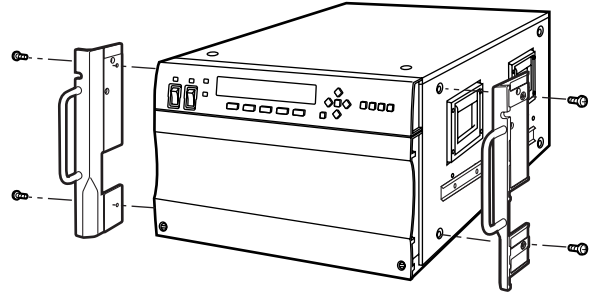
- There is a limit to the length of the screws which can be used for rack mounting. Use the accessory screws (M4×10) for the slide rails. If any of the accessory screws are lost or misplaced, use replacement screws that are less than 10 mm long.
- Ensure the inner members are screwed in place at the 4 locations on the left and right.

3. Attach the outer members of the slide rails and brackets to the rack.

**<Note>**

Check that the height at the left and right is the same.

4. Attach the rack-mounting adapters to the unit.



- Use the mounting screws provided with the rack-mounting adapters to attach these adapters.
- Ensure the rack-mounting adapters are screwed in place at the 2 locations on the left and right.

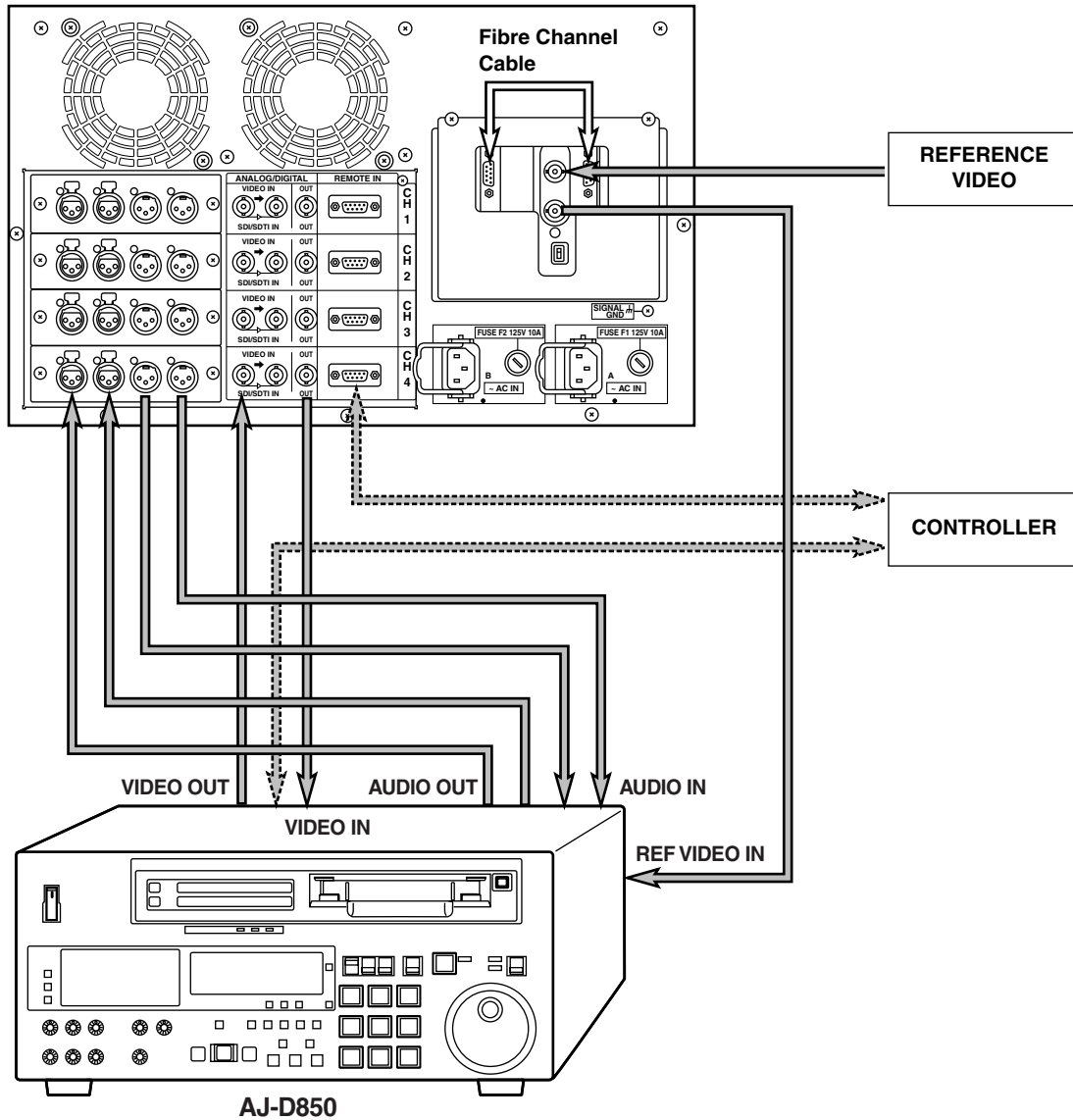
5. Release the inner member stoppers, and install the unit in the rack. Once it has been installed, check that it moves smoothly.

- Keep the temperature inside the rack to between 41°F to 95°F (5°C to 35°C).
- Bolt the rack securely to the floor so that it will not topple over when this unit is drawn out.
- When an HDD is installed, the unit becomes heavier on the front panel side, so be careful when removing the unit.
- Do not move the unit while there is electrical flow, as this could cause damage to the HDD or data.

# Connections

## 1. Analog

When all the connections have been made to the analog I/O board



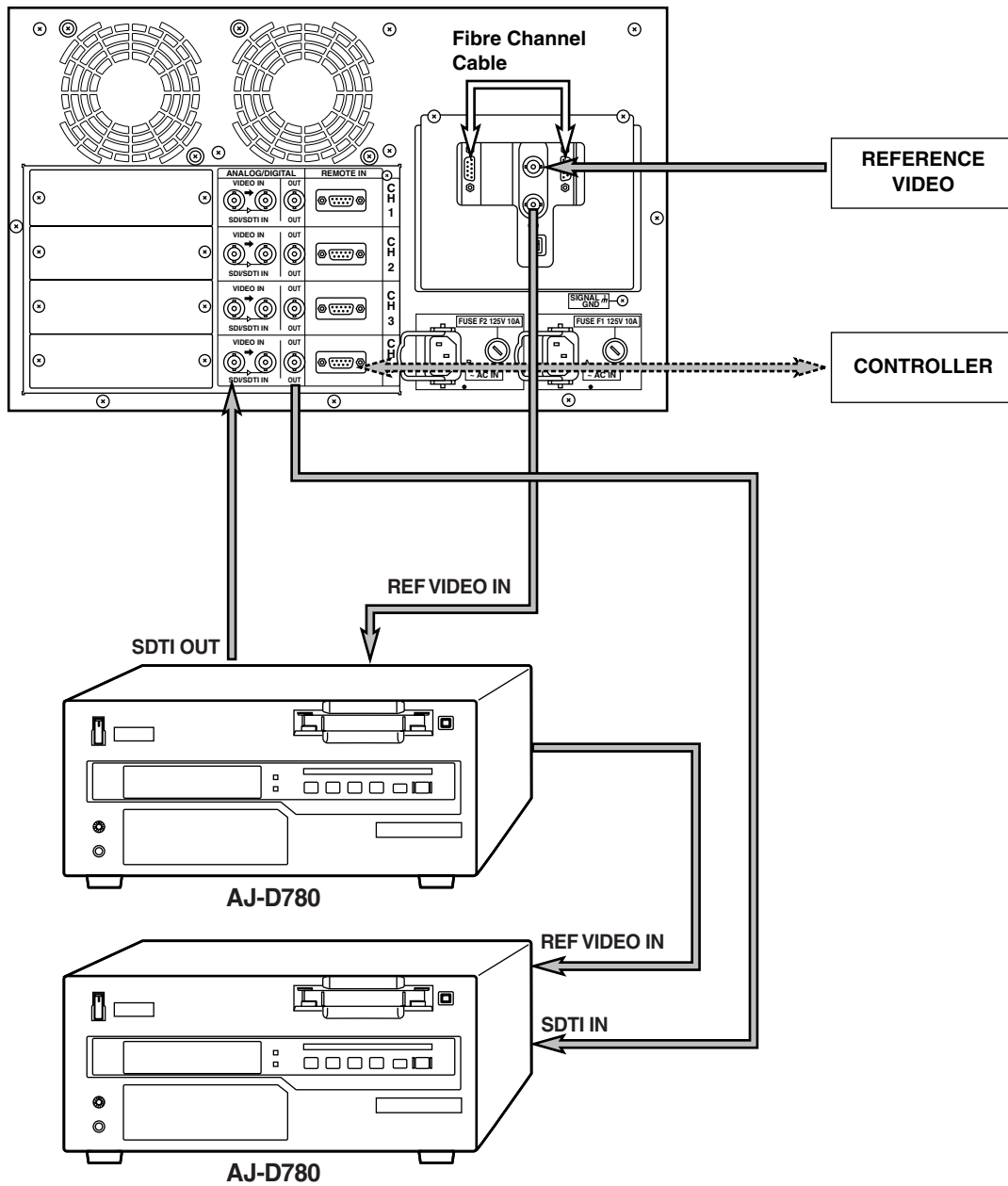
### <Note>

No sound will be heard when a tape is played back at less than normal (1×) speed with this unit.

# Connections

## 2. SDTI

When all the connections have been made to the SDTI I/O board



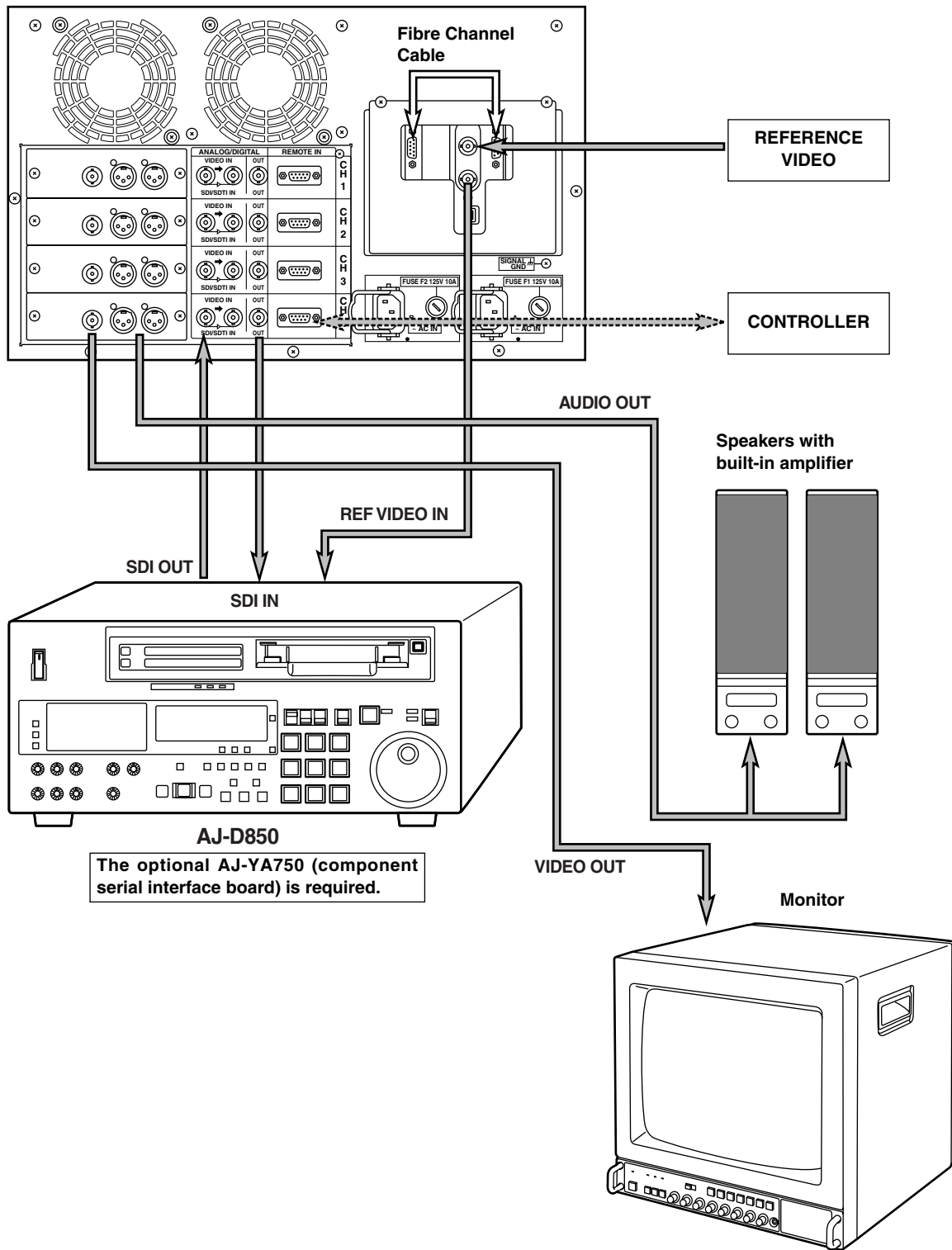
**<Note>**

No sound will be heard when a tape is played back at less than normal (1x) speed with this unit.

# Connections

## 3. SDI

When all the connections have been made to the SDI I/O board



**<Note>**

No sound will be heard when a tape is played back at less than normal (1 ×) speed with this unit.

# Starting Up and Closing Down the System

## ■ System Start Up

Follow the steps outlined below to start up the system.

1. Install the optional board. (See page 31.)
2. Install the HDD for data. (See page 36.)
3. Connect the FC cable between the Fibre Channel connectors [RAID] and [HOST].
4. Connect power cord and signal line.  
Connect the power cord to AC power socket for the power supply unit installed.
5. Turn the POWER switch on the front panel to ON.  
When the power switch is set to ON, the power supply LED above the switch lights.
6. Startup is completed when the channel status is shown on the front panel display.  
Check the setting of each channel.

```
.....NOW BOOTING.....  
XXXXXXXXXXXXXXXXXXXX
```



```
CH1 CLIP0001 00:00:00:00 (CTL1) *REW  
SDTI I/O LOCAL -DF- F5:MENU▼
```

**Never turn off the power supply during startup.  
Otherwise internal data might be destroyed.**

## ■ System Shutdown/Power Off

Follow the steps outlined below to shut down the system and turn off the power. (See page 21.)

1. Refer to the display panel menu flowchart to display the final setting menu (7).

```
SELECT: SERVER SHUTDOWN ▲  
SET or CANCEL▼
```



Press cursor button [^] or [v], select SERVER SHUTDOWN, and press the [SET] button.

```
SHUTDOWN  
Wait a moment, please
```



<Wait a moment, please> is shown on the display.

```
SHUTDOWN  
It is now safe to turn off
```



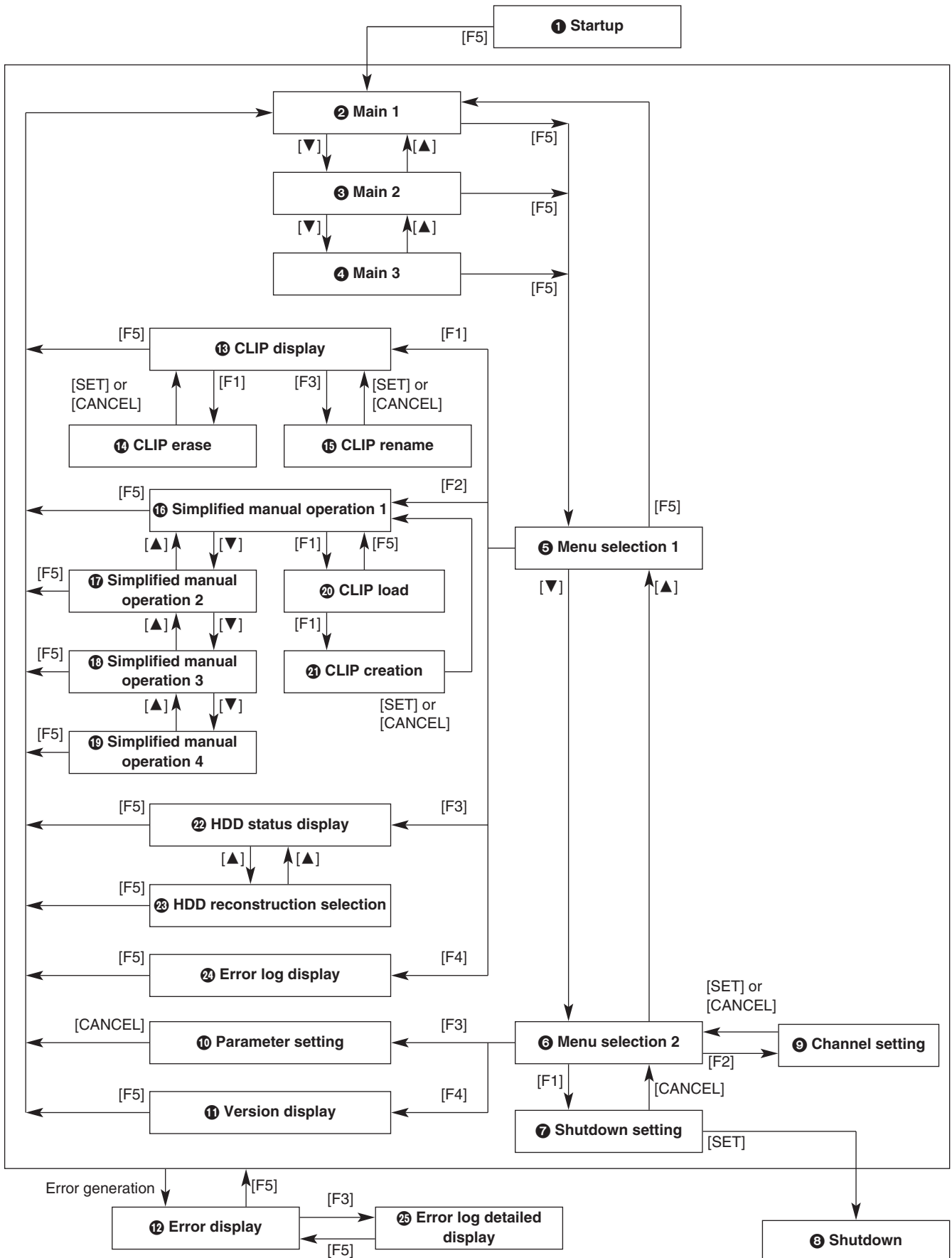
Confirm that the display has changed from <Wait a moment, please> to <It is now safe to turn off>, then turn the power switch to OFF.

**Never turn off the power supply while the unit is running.  
Otherwise internal data might be destroyed.**



# Display Panel

## ■ Display panel screen flowchart



# Display Panel

## ■ Main Screen

Displays the status of the channel selected with the channel button.

The main screen has 3 patterns, and its display can be switched by cursor button [^] or [v].

After moving to a screen other than main screen, the main screen returns to pattern 1.

Function buttons using the [CANCEL] button can only be operated on the main screen alone.

(On the main screen, operation can be implemented in any pattern.)

### Main Screen Pattern 1

①	②	③	④	⑦ -2	⑤
CH1	CLIP0001	00:00:00:00	(CTL1)	*REW	
SDTI	I/O	LOCAL	-DF-	F5:MENU	▼
⑥		⑧	⑦	⑨	⑩

### Main Screen Pattern 2

①	②	③	④	⑤	⑪
CH1	CLIP0001	00:00:00:00	(CTL1)	REW	▲
25Mx1		LOCAL	-DF-	F5:MENU	▼
⑫		⑧	⑦	⑨	⑩

### Main Screen Pattern 3

①	②	③	④	⑤	⑪
CH1	CLIP0001	00:00:00:00	(CTL1)	REW	▲
12H32M/24H00M		LOCAL	-DF-	F5:MENU	
⑬	⑭	⑧	⑦	⑨	

## Display common to all 3 patterns

### ① Selected channel number

The number of the channel displaying current status is shown.

When the power is engaged, channel 1 is shown.

### ② Selected CLIP

The CLIP loaded in the channel currently on display is shown.

If CLIP is not loaded, "DEFAULT" is shown.

### ③ Counter display

TC and CTL counter values are shown.

(With drop frame, [.] is shown between seconds and frames.)

At CTL1, reset to (00:00:00:00) can be made by pressing the [CANCEL] + [F5] button.

### ④ Display of time code mode

The time code mode shown by "③ Counter display" is displayed.

Each time the [F4]+[CANCEL] button is depressed, change is made as TC → CTL1 → CTL2 ... and "③ Counter display" is changed simultaneously.

### ⑤ Simplified operational status display

The operational status of the channel currently displayed is shown.

EJECT: CLIP is not loaded.

STOP: Stop status

PLAY: Playback in progress

REC: Recording in progress

REW: Rewinding in progress

FF: Fast forwarding in progress

SHTL: Shuttle mode

JOG: JOG mode

VAR: Variable mode

L-PLAY: Loop playback in progress

L-REC: Loop recording in progress

At the start of operation, the status of channel 1 is shown.

### ⑧ REMOTE/LOCAL display

Remote mode/local mode of the channel currently displayed is shown.

Each time the [CANCEL] + [F3] button is pressed, change is made between REMOTE and LOCAL.

During LOCAL, the local mark (\*) lights at the ⑦ -2 position.

REMOTE: The main unit is controlled from external controller. Operations from the simplified manual operations screen are not acknowledged.

LOCAL: The main unit is controlled from the front panel. Operations from the external controller are not acknowledged.

### ⑨ F5: MENU

By pressing the function [F5] button, the menu select screen is shown in the lower register of the display.

# Display Panel

---

## Main Screen Pattern 1

### ⑥ Board type display

Shown is the type of input/output board corresponding to the channel currently displayed.

NO BOARD: Board is not inserted.  
SDTI I/O: SDTI input/output board  
ANALOG OUT: Analog output board  
SDI I/O: SDI input/output board  
ANALOG I/O: Analog input/output board

### ⑦ DF display

Displays DF/NDF setting.

-DF-: Drop frame mode  
-NDF-: Non drop frame mode

### ⑩ Next pattern display

Shows that there is a screen pattern to display.  
When cursor button [V] is pressed, main screen pattern 2 is displayed.

## Main Screen Pattern 2

### ⑩ Next pattern display

Shows that there is a screen pattern to display.  
When cursor button [V] is pressed, main screen pattern 3 is displayed.

### ⑪ Previous pattern display

Shows that there is a screen pattern to display.  
When cursor button [^] is pressed, main menu pattern 1 is displayed.

### ⑫ Transmission rate and speed display

Shows the transmission rate and speed of the channel currently displayed.

25M: 25Mbps  
50M: 50Mbps  
100M: 100Mbps  
x1: 1× speed  
x2: 2× speed  
x4: 4× speed

## Main Screen Pattern 3

### ⑪ Previous pattern display

Shows that there is a screen pattern to display.  
When cursor button [^] is pressed, main screen pattern 2 is displayed.

### ⑬ Residual capacity display

Shows the remaining time to the last minute that recording can be done on the main unit.  
(Conversion by DVCPRO 25Mbps)

### ⑭ Total capacity display

Shows the total time to the last minute that recording can be done on the main unit.  
(Conversion by DVCPRO 25Mbps)

# Display Panel

## Menu Selection Screen

This is the screen for selecting each type of menu. Menus are displayed in the lower register of the main screen.

Each screen can be called up by selecting a function button.

Adjacent patterns can be shown by using cursor button [^] or [v].

### Menu Selection Screen Pattern 1

①	②	③	④	⑤	
CH1 CLIP0001 00:00:00:00 (CTL1) REW					
F1:CLIP F2:MANU F3:HDD F4:LOG F5:MAIN▼					
⑥	⑦	⑧	⑨	⑩	⑬

### Menu Selection Screen Pattern 2

①	②	③	④	⑤	⑫
CH1 CLIP0001 00:00:00:00 (CTL1) REW ▲					
F1:END F2:CH F3:CONF F4:VER. F5:MAIN					
⑪	⑭	⑮	⑯	⑩	

## Displays common to the 2 patterns

The contents from ① to ⑤ are the same as for the main screen.

### ⑩ [F5] MAIN

When the [F5] button is pressed, main screen pattern 1 is restored.

### ⑫ Previous pattern display

Shows that there is a screen pattern to display. When cursor button [^] is pressed, the previous screen pattern is displayed.

Example:

When currently at pattern 2, the change is from pattern 2 to pattern 1.

### ⑬ Next pattern display

Shows that there is a screen pattern to display. When cursor button [v] is pressed, the next screen pattern is displayed.

Example:

When currently at pattern 1, the change is from pattern 1 to pattern 2.

## Menu Selection Screen Pattern 1

### ⑥ [F1] CLIP

When the [F1] button is pressed, the CLIP display screen is shown.

See the CLIP display screen for details.

### ⑦ [F2] MANU

When the [F2] button is pressed, the simplified manual operation screen is shown.

See the simplified manual operation screen for details.

### ⑧ [F3] HDD

When the [F3] button is pressed, the HDD status display screen is shown.

See the HDD status display screen for details.

### ⑨ [F4] LOG

When the [F4] button is pressed, the error log display screen is shown.

See the error log display screen for details.

## Menu Selection Screen Pattern 2

### ⑪ [F1] END

When the [F1] button is pressed, the final settings screen is shown.

See the final setting screen for details.

### ⑭ [F2] CH

When the [F2] button is pressed, the channel setting screen is shown.

See the channel setting screen for details.

### ⑮ [F3] CONF

When the [F3] button is pressed, the parameter setting screen is shown.

See the parameter setting menu for details.

### ⑯ [F4] VER.

When the [F4] button is pressed, the version display screen is shown.

See the version display menu for details.

# Display Panel

## ■ Shutdown Settings Screen

Selects the method of shutting down the unit.



The method of shutting down the unit is selected with cursor button [^] or [v].

Each time cursor button [^] or [v] is pressed, change is made among SERVER SHUTDOWN/SERVER REBOOT/FILE SYSTEM INIT.

### ① Shutdown method display

SERVER SHUTDOWN:

Preparations are made to shut down the unit power supply.

SERVER REBOOT:

The unit is restarted.

FILE SYSTEM INIT:

The main unit is restarted after the file system has been initialized.

When the [SET] button is pressed, the main unit is shut down by the shutdown method selected with ①.

When the [CANCEL] button is pressed, menu selection screen pattern 2 is restored.

## ■ Shutdown Screen

The main unit is shut down by the shutdown method selected with the shutdown setting screen.



### ① Progress status display

<Wait a moment, please>:

Currently processing

<It is now safe to turn off>:

Processing has been completed.

<Note>

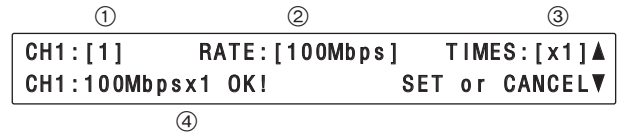
Turn off the power only after <It is now safe to turn off> has been displayed.

## ■ Channel Setting Screen

Sets the transmission rate and speed for each channel.

The location of change is moved by cursor button [<] or [>].

The settings are changed by cursor button [^] or [v].



### ① Channel number

Channels 1 to 4 can be selected.

### ② Transmission rate

25 Mbps, 50 Mbps or 100 Mbps can be selected.

### ③ Speed designation

x1 (1× speed), x2 (2× speed) or x4 (4× speed) can be selected.

When the [SET] button is pressed, the settings are incorporated.

When the settings have been incorporated, the changes are shown at ④.

If the settings cannot be incorporated for some reason or other, "STATUS SET FAILED" is displayed at ④.

When the [CANCEL] button is pressed, menu selection screen pattern 2 is restored.

# Display Panel

## ■ Parameter Setting Screen

Each parameter required by the unit is set.

```
CH1 CLIP0001 00:00:00:00 (CTL1) STOP
000 SELECT CONFIG TYPE ◀[USER SET]▶
```

1. Then screen for selection of CONFIG TYPE is shown.  
CONFIG TYPE is selected with cursor button [◀] or [▶].

```
USER SET
  ↓
A/S SET
```

If the parameter does not need to be changed, press the [CANCEL] button.

When the [CANCEL] button is pressed, main screen pattern 1 is restored.

2. When the [SET] button is pressed, the unit moves to the screen for change of setting items or setting values.
3. The setting items are changed by cursor button [^] or [v] and the settings are changed by cursor button [◀] or [▶].
4. When setting value has been determined, press the [SET] button.  
By pressing the [SET] button, changes in parameters are recorded in the main unit. (Screen does not change.)
5. Similarly, other setting items are set by cursor button [^] [v] or [◀] [▶] and recorded by the [SET] button. To select CONFIG TYPE, press the [CANCEL] button.
6. When all the settings are completed, press the [CANCEL] button and return to the screen for selecting CONFIG TYPE.

7. Press the [CANCEL] button again.

When the USER SET parameter has been changed, one of the following screens will be displayed. Press the [SET] button to restart the system.

If the USER SET parameter has not been changed, the system will return to Main Screen Pattern 1.

```
Changed Conf! Do [SERVER REBOOT]
                        SET or CANCEL
```

```
Changed Conf! Do [FILE SYSTEM INIT]
                        SET or CANCEL
```

### <Notes>

- The USER SET parameter becomes effective following restart after the setting has been changed and the [SET] button has been pressed.  
When the USER SET parameter has been changed, be sure to always restart the unit.
- The A/S SET parameter becomes effective after the setting has been changed and the [SET] button has been pressed.

# Display Panel

## Parameter List

### USER SET

Setting item	Setting	Remarks
Dropped Frame	<u>DF</u> NDF	Selects the frame mode in use.
Protocol	Odetics <u>Louth</u>	Selects the control protocol in use with RS-422A.
FF.REW Max	<u>x32</u> , x64, x128	Selects the speed for FF/REW.
SDTI Slow Audio	Valid <u>Invalid</u>	Selects audio data output for playback at $\times 1$ speed or below.
Rec Start Position	<u>00:00:00</u> 00:59:59 01:00:00	Selects the recording starting point when recording instruction has been given by operating the front panel when creating a new CLIP.
Record Duration	10min 15min <u>30min</u> 45min 1H 2H 4H 8H	Selects the recording time length of CLIP ID used during loop recording (L-REC). <b>&lt;Note&gt;</b> ● Upon writing over the existing CLIP ID, loop recording takes place within the length of recording time set from the current position. ● Loop recording operation takes place only during STOP.
FTP Put Offset	<u>00:00:00</u> 00:59:59 01:00:00	Selects the recording starting point when recording is done through transmission from a non-linear system.
SDTI Illegal Input	<u>Rec Stop</u> Continue	Selects operation when SDTI signal has detected no signal during recording.
Ch1 Default Rate	<u>25Mbps</u> 50Mbps 100Mbps	Selects the format of signals used in each channel. However, the upper limit of maximum usable stream count (25 Mbps mode taken as 1) that has been set cannot be exceeded. For details, consult your dealer.
Ch2 Default Rate	<u>25Mbps</u> 50Mbps 100Mbps	
Ch3 Default Rate	<u>25Mbps</u> 50Mbps 100Mbps	
Ch4 Default Rate	<u>25Mbps</u> 50Mbps 100Mbps	
Ch1 Default Times	<u>x1</u> , x2, x4	
Ch2 Default Times	<u>x1</u> , x2, x4	
Ch3 Default Times	<u>x1</u> , x2, x4	
Ch4 Default Times	<u>x1</u> , x2, x4	

### A/S SET

Setting item	Setting	Remarks
CH1 CF Enable	<u>On</u> Off	Selects channel 1 color frame control.
CH1 VOUT SetUp	<u>Add</u> Thru	Selects setup level during channel 1 playback.
CH1 VIN SetUp	<u>Cut</u> Thru	Selects setup level during channel 1 recording.
CH1 SYS H	-121 ~ <u>0</u> ~+120	Performs rough tuning of channel 1 system phase in relation to standard signal. (37ns step)
CH1 SYS SC	0 ~1023	Performs fine tuning of channel 1 system phase in relation to standard signal. (0.35° step)
CH1 SCH	-128 ~ <u>0</u> ~+127	Performs tuning of channel 1 SC-H (Subcarrier to Horizontal) phase. (1.41° step)
CH2 CF Enable	<u>On</u> Off	Channel 2 setting is the same as for channel 1.
CH2 VOUT SetUp	<u>Add</u> Thru	
CH2 VIN SetUp	<u>Cut</u> Thru	
CH2 SYSH	-121 ~ <u>0</u> ~ +120	
CH2 SYS SC	0 ~1023	Channel 3 setting is the same as for channel 1.
CH2 SCH	-128 ~ <u>0</u> ~ +127	
CH3 CF Enable	<u>On</u> Off	
CH3 VOUT SetUp	<u>Add</u> Thru	
CH3 VIN SetUp	<u>Cut</u> Thru	Channel 4 setting is the same as for channel 1.
CH3 SYSH	-121 ~ <u>0</u> ~ +120	
CH3 SYS SC	0 ~1023	
CH3 SCH	-128 ~ <u>0</u> ~ +127	
CH4 CF Enable	<u>On</u> Off	Channel 4 setting is the same as for channel 1.
CH4 VOUT SetUp	<u>Add</u> Thru	
CH4 VIN SetUp	<u>Cut</u> Thru	
CH4 SYSH	-121 ~ <u>0</u> ~ +120	
CH4 SYS SC	0 ~1023	
CH4 SCH	-128 ~ <u>0</u> ~ +127	

\_\_\_\_\_ indicates factory setting mode.

# Display Panel

## ■ Version Display Screen

Displays the version of software for the server or front panel controller, etc.

Data on each version is switched by cursor button [^] or [v].

```
CH1 CLIP0001 00:00:00:00 (CTL1) REW
Server Soft:Vx.xx.xx                F5:MAIN▼
```

### Information displayed:

```
Server Soft:Vx.xx.xx
Raid Board :Vx.xx.xx
Fpc Soft   :Vx.xx.xx
DVCPCI Soft:Vx.xx.xx
ISIO       :Vx.xx.xx
SDTI IF    :Vx.xx.xx
CH1 Board  :Vx.xx.xx
CH2 Board  :Vx.xx.xx
CH3 Board  :Vx.xx.xx
CH4 Board  :Vx.xx.xx
```

Press the [F5] button to return to main screen pattern 1.

## ■ Error Display Screen

When an error has occurred in the server, it is displayed.

```
①
00/05/19 12:24:43 DISK FULL
F1:SILENT-MODE  F3:BUZZER-OFF  F5:BACK
②                ③                ④
```

### ① Error content display

Error contents are displayed.

Display is made in the following format: year, month, day, hour, minute, second and error contents.

### ② [F1] SILENT-MODE

When the [F1] button is pressed, the SILENT-MODE is assumed and even if an error occurs, the error display screen is not shown.

Display is restored by establishing ATTN-MODE with the error log display screen.

### ③ [F3] BUZZER-OFF

When the [F3] button is pressed, the alarm stops.

### ④ [F5] BACK

When the [F5] button is pressed, the screen shown prior to the error display screen is restored.



# Display Panel

## ■ CLIP Display Screen

Shows the CLIP in storage.



### ① File number display

Displays the number of registered CLIPS and the order of CLIPS to be displayed.

### ② CLIP name display

Displays the CLIP name.

### ③ Recording format display

Displays the recording format of the CLIP displayed.

### ④ [F1] ERASE

Press the [F1] button to erase CLIP.  
When the [F1] button is pressed, the CLIP erase screen is called up.

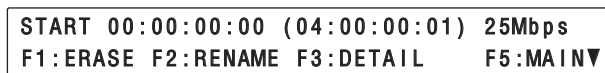
### ⑤ [F2] RENAME

Press the [F2] button to change the name of the CLIP.  
When the [F2] button is pressed, the CLIP name change screen is called up.

### ⑥ [F3] DETAIL

When the [F3] button is pressed, information on the CLIP displayed is shown for two seconds.  
The following three types of information are displayed.

Start time code  
Material duration  
Recording format



### ⑦ [F5] MAIN

Press the [F5] button to return to main screen pattern 1.

### ⑧ Previous CLIP display

Shows that there is a CLIP to display.  
When cursor button [▲] is pressed, the previous CLIP is displayed.

### ⑨ Next CLIP display

Shows that there is a CLIP to display.  
When cursor button [▼] is pressed, the next CLIP is displayed.

## ■ CLIP Erase Screen

Erases the CLIP on display.



### ① CLIP name display

The CLIP name selected by the CLIP display screen is shown.

When the [SET] button is pressed, the CLIP shown at ① is erased.

When erasure is completed, the CLIP display screen is restored and the next CLIP is shown.

If erasure cannot be completed, ERASE FAILURE is shown and the CLIP erase screen remains as is.

Press the [CANCEL] button to return to CLIP display screen.

## ■ CLIP Rename Screen

Changes the name of the CLIP on display.



### ① CLIP name display

The CLIP name selected by CLIP display screen is shown.

With cursor button [←] [→], select the characters to be changed; change the characters with cursor button [▲] [▼]. Characters are shown in the sequence: A ~ Z, a ~ z, 0 ~ 9, -, \$, %.

Up to 8 characters can be input.

### ② [F3] DEL

When the [F3] button is pressed while inputting characters, the character at the cursor position is deleted, and subsequent characters fill in the gap.

When the [SET] button is pressed, the CLIP name is changed.

When name change is completed, the CLIP display screen is restored and the next CLIP is shown.

If name change cannot be completed, RENAME FAILURE is shown and the CLIP rename screen remains as is.

Press the [CANCEL] button to return to CLIP display screen.

# Display Panel

## ■ Simplified Manual Operation Screen

Facilitates simplified manual operation of the unit. The upper register has the same display as the main screen. The screen for simplified manual operation is shown in the lower register.

### <Note>

Perform simplified manual operations after switching the relevant channel to local mode at main screen.

### Simplified Manual Operation Screen Pattern 1

①	②	③	④	⑤	
CH1	CLIP0001	00:00:00:00	(CTL)	REW	
F1:LOAD	F2:CUE	F3:PLAY	F4:STOP	F5:MAIN	▼
⑥	⑦	⑧	⑨	⑩	⑪

### Simplified Manual Operation Screen Pattern 2

①	②	③	④	⑤	⑫
CH1	CLIP0001	00:00:00:00	(CTL)	REW	▲
F1:LOAD	F2:CUE	F3:REC	F4:STOP	F5:MAIN	▼
⑥	⑦	⑬	⑨	⑩	⑪

### Simplified Manual Operation Screen Pattern 3

①	②	③	④	⑤	⑫
CH1	CLIP0001	00:00:00:00	(CTL)	REW	▲
F1:REW	F2:FF	F3:PLAY	F4:STOP	F5:MAIN	▼
⑭	⑮	⑧	⑨	⑩	⑪

### Simplified Manual Operation Screen Pattern 4

①	②	③	④	⑤	⑫
CH1	CLIP0001	00:00:00:00	(CTL)	REW	▲
F1:L-PLAY	F2:L-REC	F4:EJECT	F5:MAIN		
⑯	⑰	⑱	⑩		

## Displays common to the 4 patterns

The contents from ① to ⑤ are the same as for the main screen.

### ⑩ [F5] MAIN

When the [F5] button is pressed, main screen pattern 1 is restored.

### ⑪ Next pattern display

Shows that there is a screen pattern to display. When cursor button [V] is pressed, the next screen pattern is displayed.

Example:

When currently at pattern 1, the change is from pattern 1 to pattern 2 to pattern 3 to pattern 4.

### ⑫ Previous pattern display

Shows that there is a screen pattern to display. When cursor button [^] is pressed, the previous screen pattern is displayed.

Example:

When currently at pattern 4, the change is from pattern 4 to pattern 3 to pattern 2 to pattern 1.

# Display Panel

---

## Simplified Manual Operation Screen Pattern 1

- ⑥ **[F1] LOAD**  
When the [F1] button is pressed, the CLIP load screen is shown.  
See the CLIP load screen for details.
- ⑦ **[F2] CUE**  
When the [F2] button is pressed, the CLIP currently being loaded is queued up again.
- ⑧ **[F3] PLAY**  
When the [F3] button is pressed, the CLIP currently being loaded is played back.
- ⑨ **[F4] STOP**  
When the [F4] button is pressed, the CLIP currently being loaded is stopped.

## Simplified Manual Operation Screen Pattern 2

- ⑥ **[F1] LOAD**  
When the [F1] button is pressed, the CLIP load screen is shown.  
See the CLIP load screen for details.
- ⑦ **[F2] CUE**  
When the [F2] button is pressed, the CLIP currently being loaded is queued up again.
- ⑬ **[F3] REC**  
When the [F3] button is pressed, input signal to the relevant channel is recorded in the CLIP currently being loaded from the current position.
- ⑨ **[F4] STOP**  
When the [F4] button is pressed, the CLIP currently being loaded is stopped.

## Simplified Manual Operation Screen Pattern 3

- ⑭ **[F1] REW**  
When the [F1] button is pressed, the CLIP currently being loaded is rewound.
- ⑮ **[F2] FF**  
When the [F2] button is pressed, the CLIP currently being loaded is fast forwarded.
- ⑨ **[F4] STOP**  
When the [F4] button is pressed, the CLIP currently being loaded is stopped.

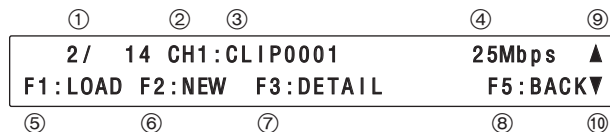
## Simplified Manual Operation Screen Pattern 4

- ⑯ **[F1] L-PLAY**  
When the [F1] button is pressed, the CLIP currently being loaded is played back repeatedly.
- ⑰ **[F2] L-REC**  
When the [F2] button is pressed, recording takes place repeatedly in the CLIP currently being loaded for the time set by Record Duration in the parameter setting screen.
- ⑱ **[F4] EJECT**  
When the [F4] button is pressed, the CLIP assumes unloaded status and the display of ② Selection CLIP becomes "DEFAULT."

# Display Panel

## ■ CLIP Load Screen

Shows the CLIP in storage.



### ① File number display

Displays the number of registered CLIPS and the order of CLIPS to be displayed.

### ② Channel display

Displays the channel number to be loaded.

### ③ CLIP name display

Displays the CLIP name.

### ④ Recording format display

Displays the recording format of the CLIP displayed.

### ⑤ [F1] LOAD

When the [F1] button is pressed, the CLIP on display is loaded into the current display channel and simplified manual operation menu pattern 1 is restored.

### ⑥ [F2] NEW

Press the [F2] button to create a new CLIP. When the [F2] button is pressed, the CLIP creation screen is called up.

### ⑦ [F3] DETAIL

When the [F3] button is pressed, information on the CLIP displayed is shown for two seconds. The following three types of information are displayed.

- Start time code
- Material duration
- Recording format

### ⑧ [F5] BACK

Press the [F5] button to return to simplified manual operation screen pattern 1.

### ⑨ Previous CLIP display

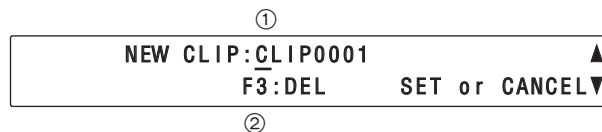
Shows that there is a CLIP to display. When cursor button [^] is pressed, the previous CLIP is displayed.

### ⑩ Next CLIP display

Shows that there is a CLIP to display. When cursor button [v] is pressed, the next CLIP is displayed.

## ■ CLIP Creation Menu

Creates a new CLIP.



### ① CLIP name display

The new CLIP name is shown. With cursor button [<] [>], select the characters to be changed; change the characters with cursor button [^] [v]. Characters are shown in the sequence: A ~ Z, a ~ z, 0 ~ 9, -, \$, %. Up to 8 characters can be input.

### ② [F3] DEL

When the [F3] button is pressed while inputting characters, the character at the cursor position is deleted, and subsequent characters fill in the gap.

When the [SET] button is pressed, the created CLIP is loaded into the current display channel and simplified manual operation screen pattern 1 is restored.

Press the [CANCEL] button to return to simplified manual operation screen pattern 1.

# Display Panel

## ■ HDD Status Display Screen

Displays HDD status.

When there are 8 HDDs for data

S1	S2	1	2	3	4	5	6	7	8	P	STATUS▲	③
OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	F5:MAIN	②

①

When there are 4 HDDs for data

S1	S2	1	2	3	4	P	STATUS▲	③
OK	OK	OK	OK	OK	OK	OK	F5:MAIN	②

①

### <Note>

S1 and S2 apply to SYS1 HDD and SYS2 HDD, respectively.

### ① HDD status display

Each HDD status is displayed.

OK: Operating normally

NG: Not operating normally

RE: Data are being reconstructed.

### ② [F5] MAIN

Press the [F5] button to return to main screen pattern 1.

### ③ ▲

When the cursor button [^] is pressed, the reconstruction selection screen is called up.

## ■ HDD Reconstruction Selection Screen

Reconstructs the HDD.

When there are 8 HDDs for data

S1	S2	1	2	3	4	5	6	7	8	P	REBUILD▲	③
↑											F5:MAIN	②

①

When there are 4 HDDs for data

S1	S2	1	2	3	4	P	REBUILD▲	③
↑							F5:MAIN	②

①

Press cursor button [<] [>] to select the HDD to be reconstructed. When the cursor button [<] [>] is pressed, the arrow at ① moves.

Reconstruction of the selected HDD begins when the [SET] button has been pressed after selection of the HDD.

### <Note>

Do not execute this operation while another HDD is being reconstructed.

Press the [CANCEL] button to abort reconstruction and return to the HDD status display screen.

### ② [F5] MAIN

Press the [F5] button to return to main screen pattern 1.

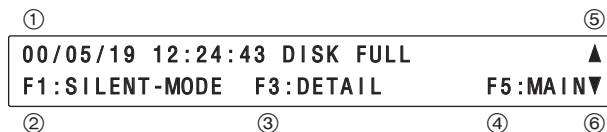
### ③ ▲

When the cursor button [^] is pressed, the HDD status display screen is restored.

# Display Panel

## ■ Error Log Display Screen

Displays error log. Up to 100 errors stored.



### ① Error content display

Error contents are displayed.

Display is made in the following format: year, month, day, hour, minute, second and error contents.

### ② [F1] SILENT-MODE

When the [F1] button is pressed, change is made between SILENT-MODE and ATTN-MODE.

In SILENT-MODE, even if an error occurs, the error display screen is not shown.

In ATTN-MODE, if an error occurs, the error display screen is shown.

### ③ [F3] DETAIL

When the [F3] button is pressed, the error log detailed display screen is called up.

### ④ [F5] MAIN

When the [F5] button is pressed, display returns to main screen pattern 1.

### ⑤ Previous error log display

Shows that there is an error log to display.

When cursor button [^] is pressed, the previous error log is displayed.

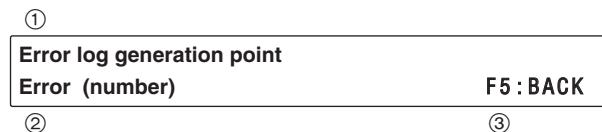
### ⑥ Next error log display

Shows that there is an error log to display.

When cursor button [v] is pressed, the next error log is displayed.

## ■ Error Log Detailed Display Screen

Shows details of the error log.



### ① Error generation point display

Shows where an error has been generated.

### ② Error number display

Error is shown by number.

Display is in the following format: error type, channel number, error generation point, error content, optional data.

#### <Note>

Data on numbers for error type

10: Shown when running cannot be continued or when operations are abnormal.

Consult your dealer immediately.

11: Running can be continued.

Remove the cause of the warning generation.

20: Running can be continued.

Shows internal processing data.

### Display examples:

- Abnormal heat discharge fan

```
(XX) Fan/Temp. Error  
(10-00-0110-2001-0001) F5:MAIN▼
```

- Recording not possible because ID maximum number has been exceeded.

```
(XX) ID MaxNum. Error  
(10-00-0310-1305-0000) F5:MAIN▼
```

- Cannot control from external controller because control is in local mode.

```
(XX) F.Panel Sel. Local  
(11-00-0106-2700-0000) F5:MAIN▼
```

- Assessment of input/output boards is complete.

```
(XX) Option Board Search  
(20-00-0100-2100-0001) F5:MAIN▼
```

### ③ [F5] BACK

Press the [F5] button to return to error log display screen.

# Optional Board Installation Method

Four optional boards are available.

1. Analog I/O board (AJ-YA7000P)
2. Analog out board (AJ-YA7200P)
3. SDTI I/O board (AJ-YAC7000P)
4. SDI I/O board (AJ-YA7100P)

(The analog out board is required for the SDI I/O board.)

The above four boards can be installed for any or all of the four channels. The installation locations are described below.

Attach the connectors for connection with the rear panel to the slots marked "F3" on the AV block, and then insert the boards.

The number and types of connectors differs depending on the type of board concerned.

**Consult your dealer for details on setting and installing the optional boards.**

## Optional Board Installation

**Always be sure the power cord is removed before installing the optional board.**

1. Remove the two coin screws securing the unit's top panel. Remove the top panel.
2. Remove the three screws holding down the circuit board securing fittings, then remove the fittings. Unplug the two SDTI flat cables from the IF board.

**<Note>**

Be sure to note the connector locations so you can reconnect them properly when reassembling the unit later.

3. Connect the connector panel (packed together with the optional board) to the optional board.
4. Connect the unit's rear panel connector and the optional board. Insert the optional board into the unit.

**<Note>**

Confirm that the rear panel connector channel matches the channel of the slot into which the optional board is inserted.

5. Reconnect the two SDTI flat cables to the IF board.

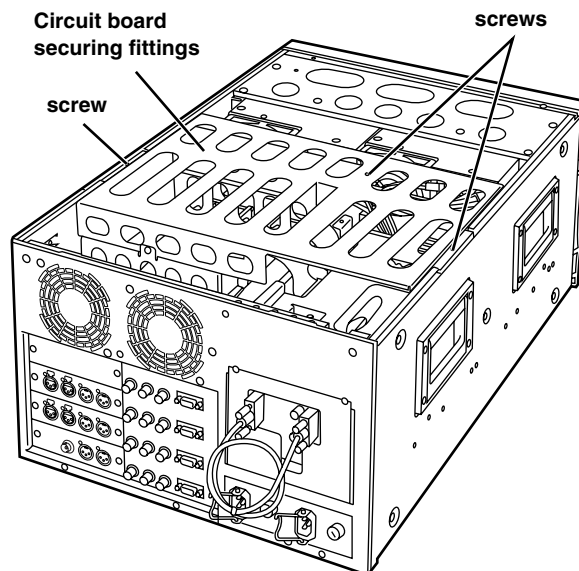
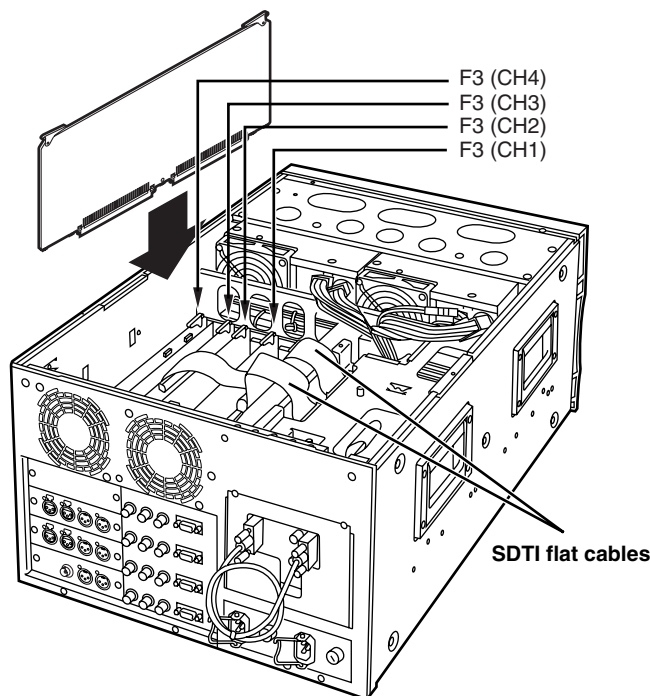
**<Note>**

Make sure the cables are plugged in at the correct locations.

6. Remount the circuit board securing fittings with the three screws and reattach the top panel.

**<Note>**

Be sure to secure the top panel in place using the coin screws.



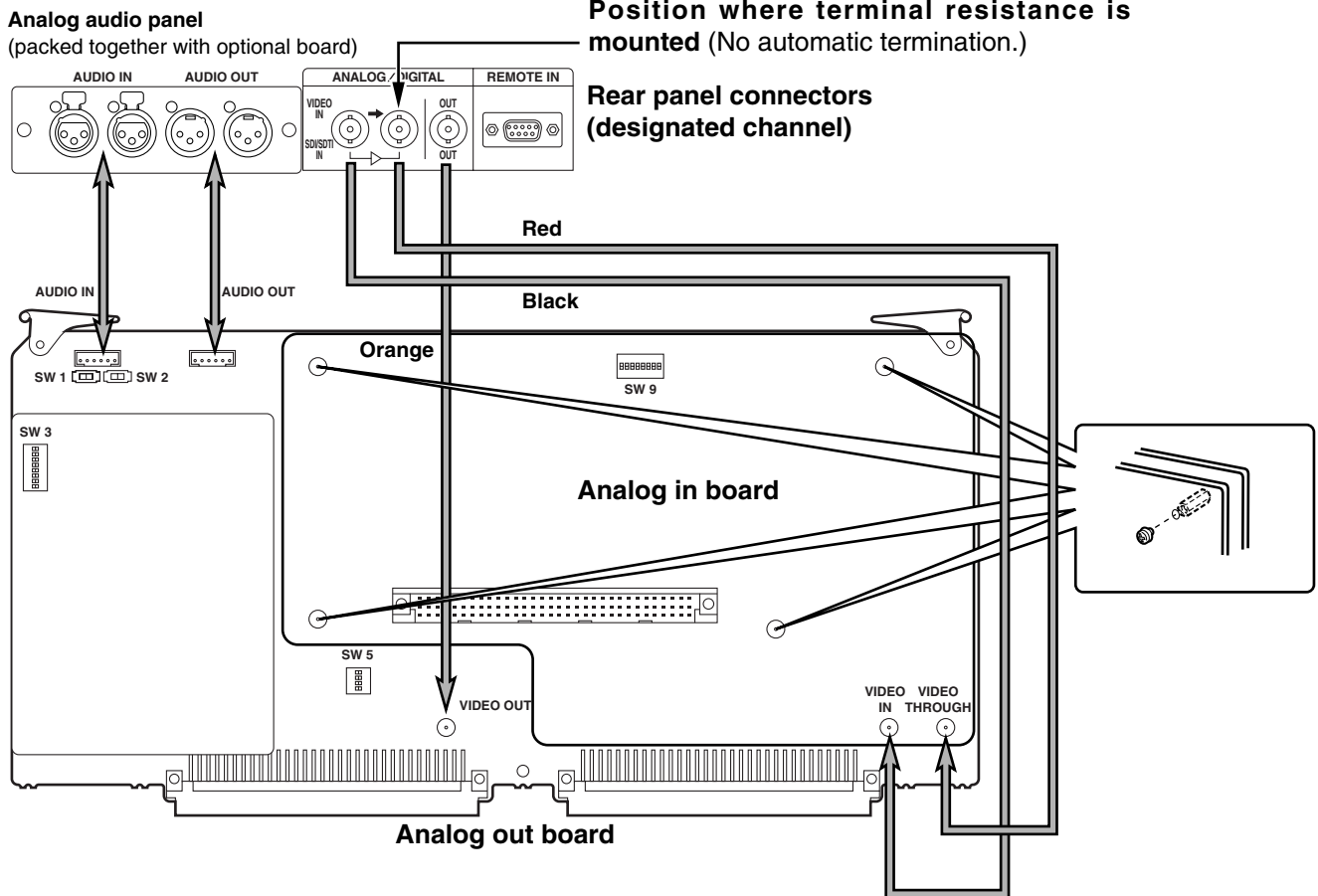


# Optional Board Installation Method

## 1. Analog I/O board (AJ-YA7000P)

Proceed with the connections in the sequence described below.

1. Remove the four screws, and remove the analog in board from analog out board.
2. Connect the cables (for composite signals  $\times 3$ ) from the unit to the analog in board.
3. Orient the analog out board and analog in board so that the sides on which components are mounted are facing each other. Place spacers between them, and attach them together with four screws in the four places indicated.
4. Install the analog I/O board in the server. Perform the connections as illustrated below.



### SW1 setting

(for input audio signals with 600-ohm termination) (CH1)  
ON: 600-ohm termination OFF: High impedance

### SW2 setting

(for input audio signals with 600-ohm termination) (CH2)  
ON: 600-ohm termination OFF: High impedance

### SW3 setting

For the NTSC system (factory setting)

5: OFF 6: ON 7: OFF 8: ON

For the PAL system (setting must be changed)

5: ON 6: OFF 7: ON 8: OFF

Input audio level selection

	1	2	3	4
+4 dBu	ON	OFF	ON	OFF
0 dBu	OFF	ON	OFF	ON
-20 dBu	ON	ON	ON	ON

### SW5 setting

Output audio level selection

	1	2	3	4
+4 dBu	OFF	OFF	OFF	OFF
0 dBu	ON	OFF	ON	OFF
-20 dBu	OFF	ON	OFF	ON

### SW9 setting

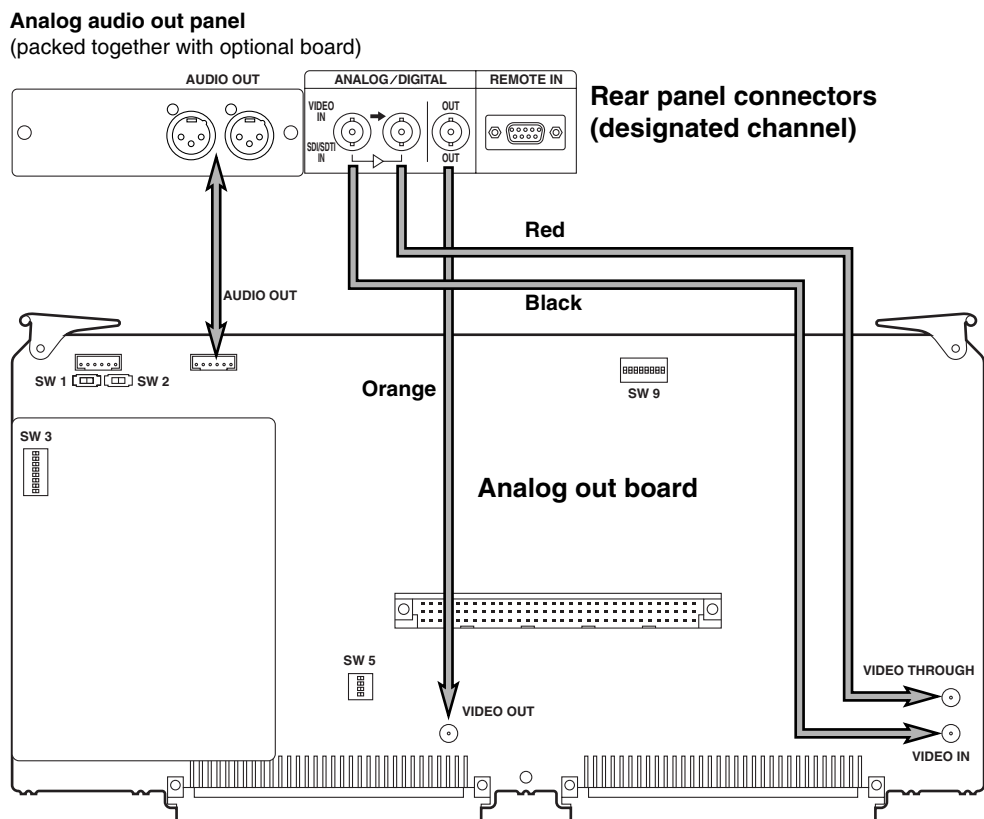
ON for all switches



# Optional Board Installation Method

## 2. Analog out board (AJ-YA7200P)

Perform the connections as illustrated below.



### SW1 setting

(for input audio signals with 600-ohm termination) (CH1)  
ON: 600-ohm termination OFF: High impedance

### SW2 setting

(for input audio signals with 600-ohm termination) (CH2)  
ON: 600-ohm termination OFF: High impedance

### SW3 setting

For the NTSC system (factory setting)

5: OFF 6: ON 7: OFF 8: ON

For the PAL system (setting must be changed)

5: ON 6: OFF 7: ON 8: OFF

Input audio level selection

	1	2	3	4
+4 dBu	ON	OFF	ON	OFF
0 dBu	OFF	ON	OFF	ON
-20 dBu	ON	ON	ON	ON

### SW5 setting

Output audio level selection

	1	2	3	4
+4 dBu	OFF	OFF	OFF	OFF
0 dBu	ON	OFF	ON	OFF
-20 dBu	OFF	ON	OFF	ON

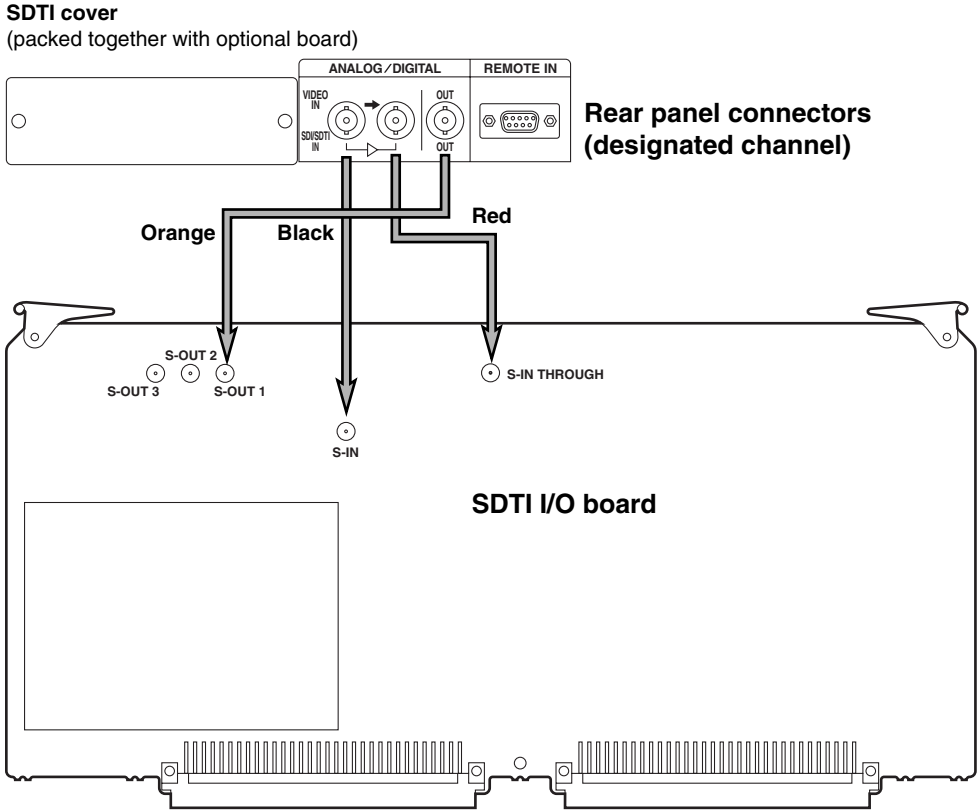
### SW9 setting

ON for all switches

# Optional Board Installation Method

## 3. SDTI I/O board (AJ-YAC7000P)

Perform the connections as illustrated below.



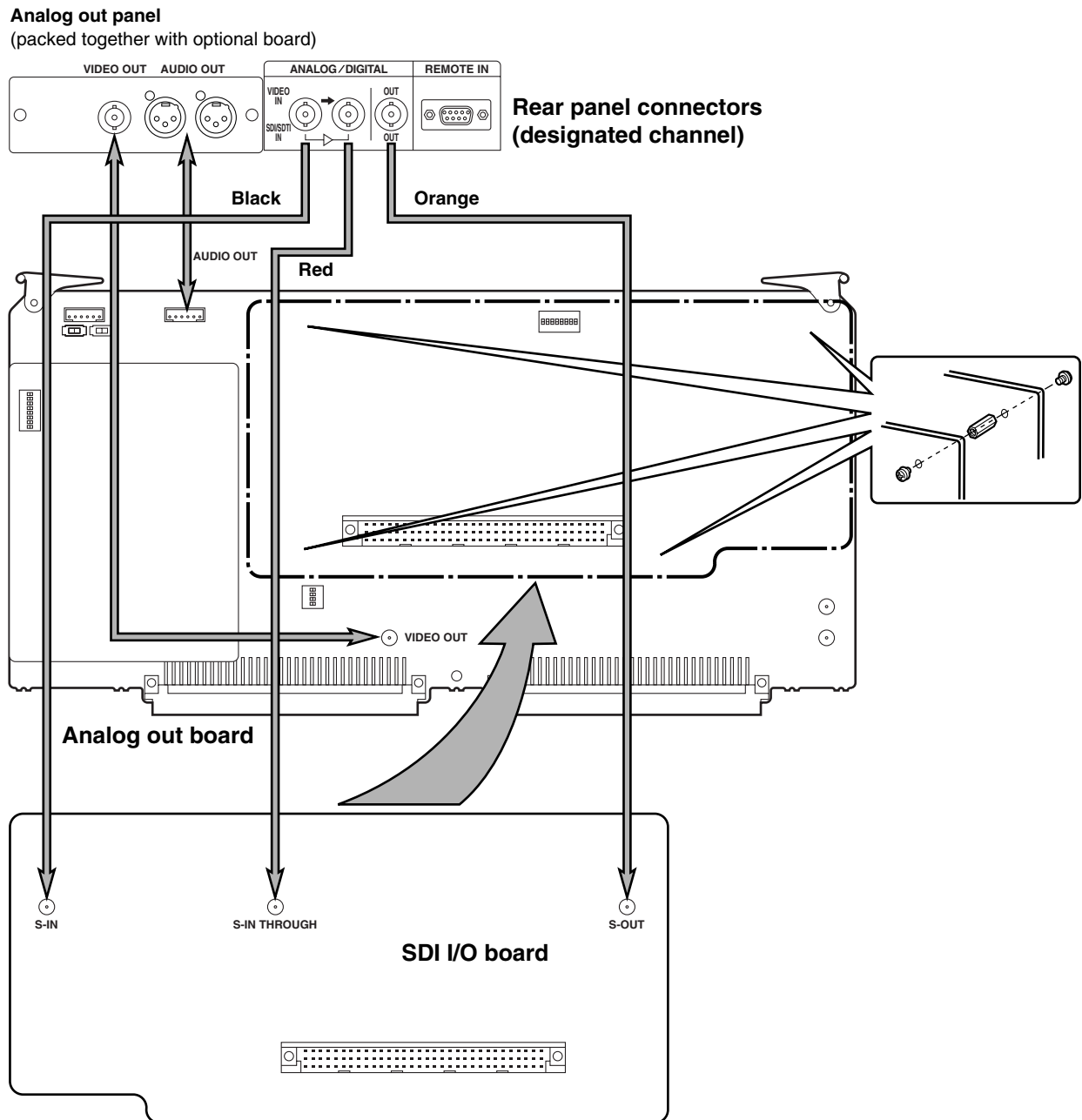
# Optional Board Installation Method

## 4. SDI I/O board (AJ-YA7100P)

Proceed with the connections in the sequence described below.

1. Connect the cables (for SDI signals ×3) from the unit to the SDI I/O board.
2. Connect the coaxial cables (for video signals ×1, for audio signals ×1) packed with the SDI I/O board to the analog out board.
3. Orient the SDI I/O board and analog out board so that the sides on which components are mounted are facing each other. Place spacers between them, and attach them together with a total of eight screws in the four places indicated.
4. Install the SDI I/O board and analog out board in the server.

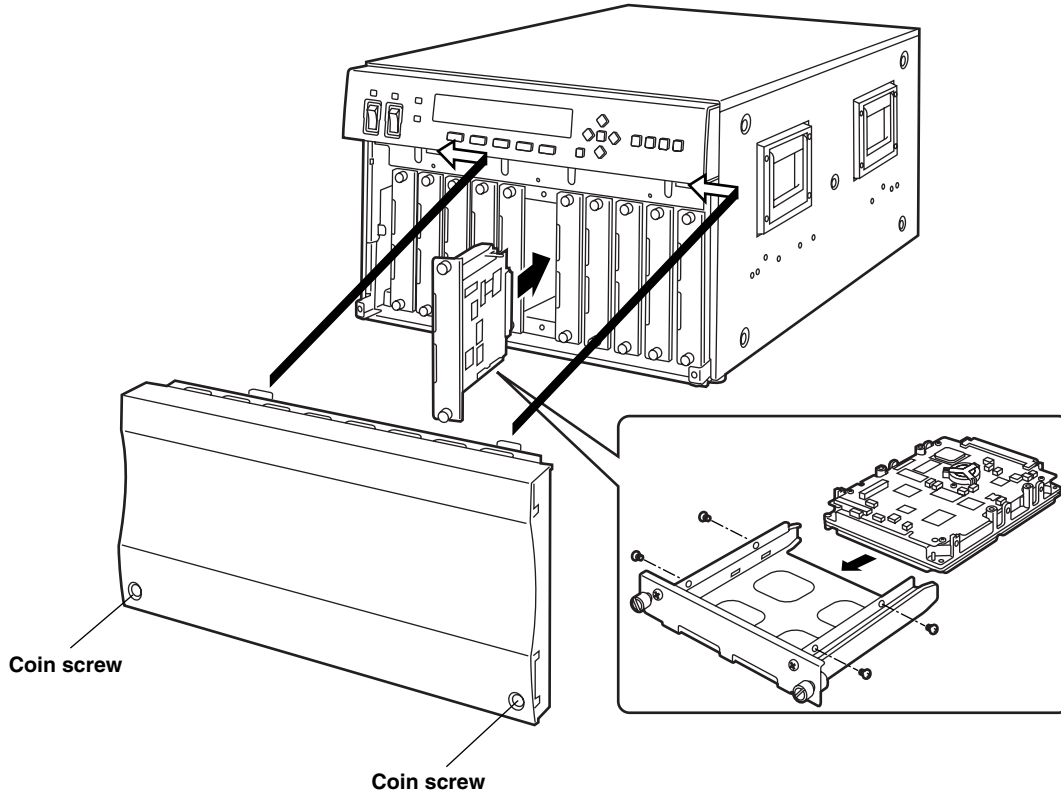
Perform the connections as illustrated below.



# Optional HDD

## <Warning>

- The optional HDD (AJ-HDD36P) is exclusively for the unit (AJ-HDR150).  
Do not use it for any other applications.  
If any damages should arise as a result of use for other applications, the Company cannot assume any responsibility or warranty.
- To install the optional HDD, consult your dealer.



# Troubleshooting

Symptom	Suggested remedial action
<ul style="list-style-type: none"> <li>■ Server's power LED fails to light even when the power switch is ON.</li> </ul>	<ul style="list-style-type: none"> <li>● Has the power cord been connected?</li> <li>● Do the installed fuses have the rated amperage?</li> </ul>
<ul style="list-style-type: none"> <li>■ No display on the display panel even though the power switch is on.</li> </ul>	<ul style="list-style-type: none"> <li>● Has the power been turned back on immediately after it was turned off? Wait at least 10 seconds after turning off the power before turning it back on.</li> </ul>
<ul style="list-style-type: none"> <li>■ The buzzer continues to sound after the operation LED has lighted.</li> </ul>	<ul style="list-style-type: none"> <li>● Something has malfunctioned. Check on the display panel.</li> </ul>
<ul style="list-style-type: none"> <li>■ No control can be exercised using RS-422A.</li> </ul>	<ul style="list-style-type: none"> <li>● Have the cables been connected properly?</li> <li>● Is the server mode set to LOCAL? Check on the display panel.</li> </ul>
<ul style="list-style-type: none"> <li>■ There is no sound.</li> </ul>	<ul style="list-style-type: none"> <li>● Are the cables connected properly?</li> <li>● There is no audio output during playback at speeds lower than 1 × speed.</li> </ul>
<ul style="list-style-type: none"> <li>■ Video recording stops at an interim point.</li> </ul>	<ul style="list-style-type: none"> <li>● Is there space on the HDD? Check remaining time on the display panel or using Odetics/Louth protocol.</li> <li>● Is access to the HDD delayed?</li> <li>● Is there anything wrong with the input signal?</li> <li>● Is FC cable connected properly?</li> </ul>

# Connector Signals

## ■ REF VIDEO IN

BNC×2, loop-through with 75 Ω termination switch

## ■ SVGA-I/F (for maintenance)

Pin No.	Signal
1	CRV
2	CGV
3	CBV
4	_____
5~8	GND
9	_____
10	GND
11	_____
12	DCI Comm
13	- CHSYNC
14	- CVSYNC
15	_____

## ■ RS-232C (for maintenance)

Pin No.	Signal
1	CD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	CI

## ■ Mouse/Keyboard (for maintenance)

Pin No.	Signal
1	DATA
2	_____
3	GND
4	+5 V
5	CLOCK
6	_____

## ■ LAN (for system expansion)

Pin No.	Signal
1	TX +
2	TX -
3	RX +
4	_____
5	_____
6	RX -
7	_____
8	_____

## ■ RS-422A (REMOTE IN)

Pin No.	Signal
1	GND
2	RXD -
3	TXD +
4	GND
5	spare
6	GND
7	RXD +
8	TXD -
9	GND

## ■ Fibre Channel (HOST/RAID)

Pin No.	Signal
1	TX +
2	_____
3	_____
4	_____
5	RX +
6	TX -
7	_____
8	_____
9	RX -

**Maintenance terminals are used by service personnel for maintenance. Customers are asked to never connect these terminals.**

# Connector Signals

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## ■ Analog I/O board

### VIDEO IN:

BNC×2, loop-through with 75-ohm termination switch

(This board does not support non-standard signals.)

### VIDEO OUT:

BNC×1

(The EE output is not locked to the REF input.)

### AUDIO IN (ANALOG):

XLR×2, CH1/CH2

### AUDIO OUT (ANALOG):

XLR×2, CH1/CH2

## ■ Analog out board

### VIDEO OUT:

BNC×1

### AUDIO OUT (ANALOG):

XLR×2, CH1/CH2

## ■ SDTI I/O board

### SDTI IN:

BNC×2, with buffer out

Complies with SMPTE305M standard

### SDTI OUT:

BNC×1

Complies with SMPTE305M standard

(The EE output is not locked to the REF input.)

### Data stream format:

Complies with the SMPTE321M standard

## ■ SDI I/O board (+ analog out board)

### SDI IN:

BNC×2, with buffer out

Complies with SMPTE259M-C and 272M standard

### SDI OUT:

BNC×1

Complies with SMPTE259M-C and 272M standard

(The EE output is not locked to the REF input.)

### VIDEO OUT (ANALOG):

BNC×1

(The EE output is not locked to the REF input.)

### AUDIO OUT (ANALOG):

XLR×2, CH1/CH2

# Specifications

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## [GENERAL]

<b>Power supply:</b> 120 V $\pm$ 10% AC, 50 – 60 Hz <b>Power consumption:</b> 3.8 A
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**Ambient operating temperature:**

41°F to 95°F (5°C to 35°C)

**Ambient operating humidity:**

10% to 80% (no condensation)

**Dimensions (W×H×D):**

16 3/4"×10 7/16"×25 1/8" (424×265×637 mm)

**Weight:**

91.52 lb (41.6 kg)

With all optional devices installed: 105.6 lb (48 kg)

## [PC component]

**CPU:**

Celeron, 433 MHz

**OS:**

Windows NT 4.0 (English version)

**Memory:**

128 MB

**System HDD:**

9 GB ×2 units

**Data HDD (Optional):**

36 GB ×9 units

**Recording time:**

20 hours (calculated at DVCPRO 25 Mbps)

**Recording format:**

DVCPRO 25 Mbps, DVCPRO 50 Mbps,  
DVCPRO P, DVCPRO HD

**Recording content:**

Digital video, Time code (subcode domain), Digital audio

**CLIP count:**

Maximum 5000

**CLIP length:**

1 second minimum

20 hours maximum (calculated at DVCPRO 25 Mbps)

## [Control Component]

**RS-422A:**

4 channel (D-SUB, 9 pin)

**RS-422A protocol:**

Odetics/Louth

**Playback response time:**

At STBY ON:

0.5 sec or less (CUE UP completed)

At STBY OFF:

2 sec or less (prior to CUE UP)

**RS-232C:**

1 channel (for monitor, maintenance)

**Alarms:**

Fan alarm, HDD alarm, system alarm

**Fibre Channel:**

One port each for HOST and RAID



# Specifications

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## [Option]

### ■ VIDEO

#### Digital

**Sampling frequencies:**

Y: 13.5 MHz, P<sub>B</sub>/P<sub>R</sub>: 3.375 MHz

**Quantizing:**

8 bits

#### Analog composite IN/OUT

**Video band:**

Y: 30 Hz to 4.5 MHz ( $\pm 1$  dB)

**Differential gain:**

Less than 6%

**Differential phase:**

Less than 4.5 degrees

**Y/C delay:**

Less than 20 ns

**K factor:**

Less than 2%

### ■ AUDIO

#### Digital

**Sampling frequencies:**

48 kHz

**Quantizing:**

16 bits

#### Analog IN/OUT

**Frequency response:**

20 Hz to 20 kHz (+1 dB, -2dB)

**Dynamic range:**

More than 80 dB

(1 kHz, "A" weighted)

**Distortion:**

Less than 0.15%

(1 kHz, reference level)

**Crosstalk:**

Less than -74 dB

**Headroom:**

20 dB

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# Panasonic

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