

**SONY®**

PROFESSIONAL DISC RECORDER

**PDW-V1**

**XDCAM™**  
Professional Disc System



**MPEG IMX**

**DVCAM™**



OPERATION MANUAL  
1st Edition (Revised 4)

English

## Important Safety Instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings.
- Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

## WARNING

**To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.**

**To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.**

**THIS APPARATUS MUST BE EARTHED.**

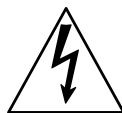
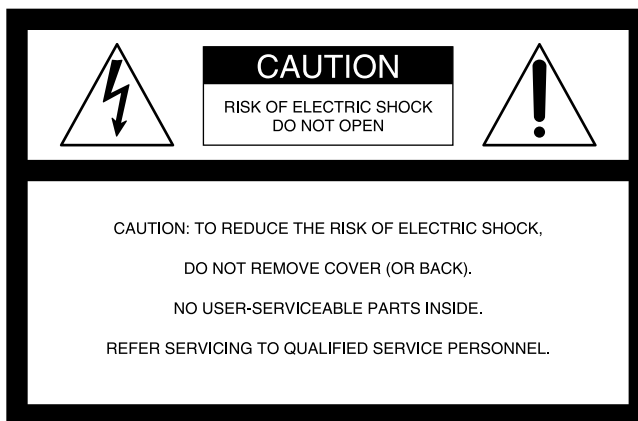
### CAUTION

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquid, such as vases, shall be placed on the apparatus.

The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.

Do not install the appliance in a confined space, such as a book case or built-in cabinet.

This apparatus is provided with a main switch on the rear panel. Install this apparatus so that user can access the main switch easily.



This symbol 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.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING: THIS WARNING IS APPLICABLE FOR USA ONLY.**

If used in USA, use the UL LISTED power cord specified below.

**DO NOT USE ANY OTHER POWER CORD.**

Plug Cap	Parallel blade with ground pin (NEMA 5-15P Configuration)
Cord	Type SJT, three 16 or 18 AWG wires
Length	Minimum 1.5 m (4 ft. 11 in.), Less than 2.5 m (8 ft. 3 in.)
Rating	Minimum 10 A, 125 V

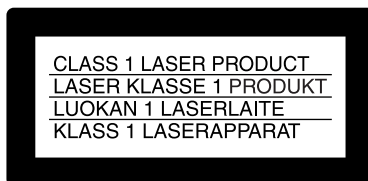
Using this unit at a voltage other than 120 V may require the use of a different line cord or attachment plug, or both. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel.

**WARNING: THIS WARNING IS APPLICABLE FOR OTHER COUNTRIES.**

1. Use the approved Power Cord (3-core mains lead)/Appliance Connector/Plug with earthing-contacts that conforms to the safety regulations of each country if applicable.

2. Use the Power Cord (3-core mains lead)/Appliance Connector/Plug conforming to the proper ratings (Voltage, Ampere).

If you have questions on the use of the above Power Cord/ Appliance Connector/Plug, please consult a qualified service personnel.



This Professional Disc Recorder is classified as a CLASS 1 LASER PRODUCT.

#### Laser diode properties

Wavelength: 403 to 410 nm

Emission duration: Continuous

Laser output power: 65 mW (max. of pulse peak), 35 mW (max. of CW)

#### Tekniska data för laserdiod

Våglängd: 403 till 410 nm

Emissionslängd: Kontinuerlig

Laserut effekt: 65 mW (max. för pulstopp), 35 mW (max. för kontinuerlig våg)

#### Spesifikasjoner laserdiode

Bølgelengde: 403 til 410 nm

Strålingens varighet: Kontinuerlig

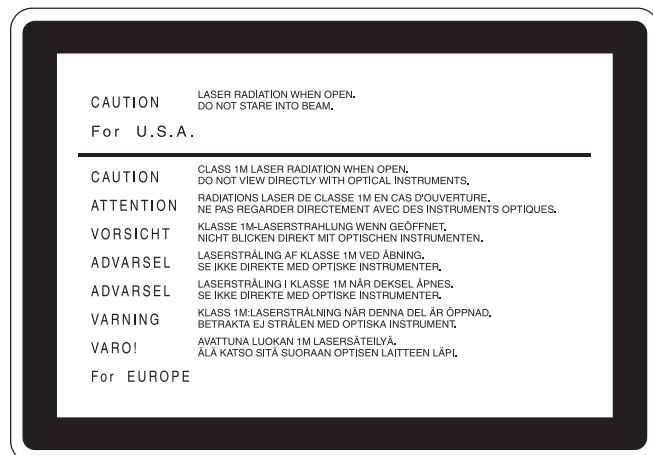
Laserens effekt: 65 mW (maks stråletpunkt), 35 mW (maks ved kontinuerlig stråling)

#### Laserdiodin ominaisuudet

Aallon pituus: 403 - 410 nm

Välityksen kesto: Jatkuva

Laserlähdon teho: 65 mW (sykehuipun maks.), 35 mW (jatkuvan aallon maks.)



This label is located on the top panel of the drive unit.

Denna etikett finns på ovansidan av driftenheten.

Denne mærkat sidder på drevenhedens øverste panel.

Tämä kyltti sijaitsee ajurilaitteen yläpinnalla.

Dette merket er plassert på oversiden av driverenheten.

#### CAUTION

The use of optical instruments with this product will increase eye hazard.

#### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

#### VAROITUS!

LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

#### VARNING

OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

#### For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures;

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

All interface cables used to connect peripherals must be shielded in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

#### For the customers in the USA

This product contains mercury. Disposal of this product may be regulated if sold in the USA. For disposal or recycling information, please contact your local authorities or the Electronics Industries Alliance ([www.eiae.org](http://www.eiae.org) <http://www.eiae.org>).

**For the customers in the USA and Canada**  
RECYCLING LITHIUM-ION BATTERIES

Lithium-Ion batteries are recyclable.  
You can help preserve our environment by  
returning your used rechargeable batteries to  
the collection and recycling location nearest  
you.



For more information regarding recycling of rechargeable  
batteries, call toll free 1-800-822-8837, or visit  
<http://www.rbrcl.org/>

Caution: Do not handle damaged or leaking lithium-ion  
batteries.

**For the customers in Europe**

This product with the CE marking complies with both the EMC  
Directive (89/336/EEC) and the Low Voltage Directive (73/23/  
EEC) issued by the Commission of the European Community.  
Compliance with these directives implies conformity to the  
following European standards:

- EN60065: Product Safety
- EN55103-1: Electromagnetic Interference (Emission)
- EN55103-2: Electromagnetic Susceptibility (Immunity)

This product is intended for use in the following  
Electromagnetic Environment(s):

E1 (residential), E2 (commercial and light industrial), E3  
(urban outdoors) and E4 (controlled EMC environment, ex. TV  
studio).

**Voor de Klanten in Nederland**

- Gooi de batterij niet weg maar lever deze in als klein  
chemisch afval (KCA).
- Dit apparaat bevat een vast ingebouwde batterij die niet  
vervangen hoeft te worden tijdens de levensduur van het  
apparaat.
- Raadpleeg uw leverancier indien de batterij toch vervangen  
moet worden.  
De batterij mag alleen vervangen worden door vakbekwaam  
servicepersoneel.
- Lever het apparaat aan het einde van de levensduur in voor  
recycling, de batterij zal dan op correcte wijze verwerkt  
worden.



**For the Customers in Taiwan only**



廢電池請回收

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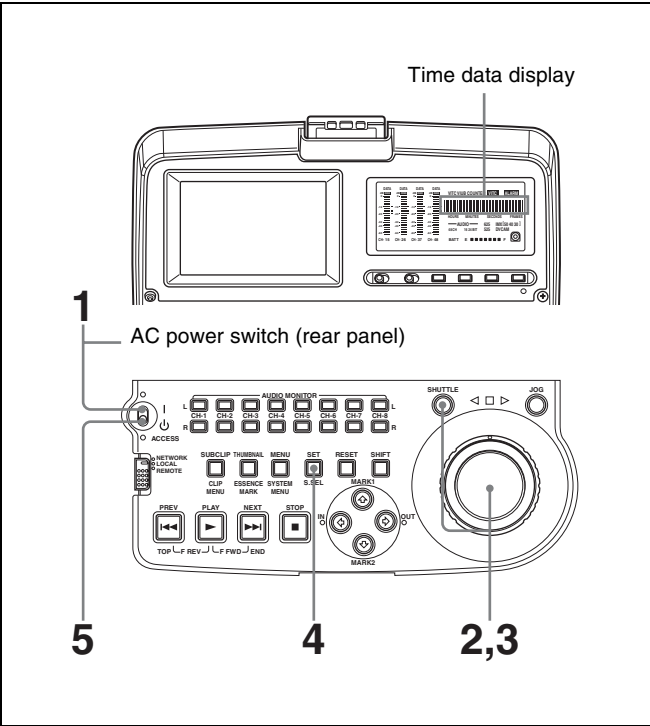
# Before Using the Unit

## Setting the Line Mode

This unit is shipped with the line mode still unset. Therefore you need to set the line mode before using the unit. (The unit cannot be used unless the line mode is set.) Once it is set, the line mode is retained even when the unit is powered off.

### Setting procedure

Use the following procedure to set the line mode.



**1** Power the unit on.

“Select ----” appears in the time data display.



**2** With the SHUTTLE button held down, rotate the jog dial.

When you rotate the jog dial in the forward direction, the “----” part of the display changes in the sequence 525U > 525J > 625. When you rotate it in the reverse direction, the display changes in the sequence 625 > 525J > 525U.



Setting	Line mode
525U	525(U): NTSC (areas outside Japan)
525J	525(J): NTSC (Japan)
625	625: PAL

**3** When the desired setting appears, release the SHUTTLE button.

“Push SET !!” appears.



**To redo the selection**  
Repeat step **2**.

**4** Press the SET button.

“Turn OFF !!” appears.



**5** Power the unit off, and then power it on again.

The selected line mode becomes available for use.

*You can change the setting made with this procedure by using basic menu item 013 “525/625 SYSTEM SELECT.” See 7-2-2 “Basic Menu Operations” (page 74) for more information about how to make basic menu settings.*

### Note

The line mode is not set, or is cleared, in the following situations. Reset the line mode.

- The unit is powered off before performing step **4** in the previous procedure.
- The “RESET ALL SETUP” command in the maintenance menu (see page 86) is executed.

### Settings affected by the line mode

The following settings are affected when the line mode is changed.



- Alarm message language  
525(J): Japanese  
525(U)/625: English
- The following menu item names, setting values, or factory default setting values

Item No.	Item name	Settings <sup>a)</sup>	
		525 (U)/525 (J)	625
Basic menu			
002	CHARACTER H-POSITION	00 to <u>0A</u> to 2A	00 to <u>09</u> to 29
003	CHARACTER V-POSITION	00 to <u>2E</u> to 38	00 to <u>37</u> to 43
Extended menu			
601	VITC POSITION SEL-1	12H to <u>16H</u> to 20H	9H to <u>19H</u> to 22H
602	VITC POSITION SEL-2	12H to <u>18H</u> to 20H	9H to <u>21H</u> to 22H
628	DF MODE	Item	No item
652	UMID SDI VANC LINE	12 H to <u>17 H</u> to 19 H	9 H to <u>17 H</u> to 18 H
660	ESSENCE MARK SDI VANC LINE	12 H to <u>17 H</u> to 19 H	9 H to <u>17 H</u> to 18 H
703	BLANK LINE SELECT	Setting range: ALL LINE, LINE 12 to LINE 20 (525(U))/LINE 12 to LINE 21 (525(J))	Setting range: ALL LINE, LINE 9, 322 to LINE 22, 335, LINE 23
713	VIDEO SETUP REFERENCE OUTPUT LEVEL	Item	No item
718	SETUP LEVEL/BLACK LEVEL	SETUP LEVEL	BLACK LEVEL

a) Underlined values are the factory defaults.



## 1-1 Features

The PDW-V1 Professional Disc Recorder is a compact and lightweight unit, offered as an affordable solution for playing back optical discs as well as for audio and video data file recording through its  (network) connector or S400 (i.LINK <sup>1)</sup>) connector. It is ideal for field applications, and for desktop viewing by journalists, producers, and other production staff.

1) i.LINK is a trademark of Sony Corporation.



The features of the PDW-V1 include the following.

### Playback of MPEG IMX/DVCAM

The PDW-V1 offers the capability to play back both MPEG IMX <sup>1)</sup> and DVCAM <sup>1)</sup> streams. Users have the flexibility to select from these formats according to their picture-quality needs.

1) MPEG IMX and DVCAM are trademarks of Sony Corporation.

### Recording video and audio data as files

Though the PDW-V1 does not have video and audio input connectors, it is possible to record AV data as files through its  (network) connector or S400 (i.LINK) connector.

### Proxy AV data

The proxy AV data is a low-resolution, MPEG-4 based version of the full-resolution MPEG IMX/DVCAM stream. When a full-resolution MPEG IMX/DVCAM file is transferred, a proxy AV stream file that is time code synchronized with the full-resolution stream, is also created automatically on the disc. This proxy AV data, which is smaller in size, is easier to work with and can be transferred over common networks at much greater speeds. The proxy AV data can be transferred at up to 30 times faster than real time.

### Thumbnail search operation

Simply press the THUMBNAIL button and the PDW-V1 instantly displays these thumbnails on either its LCD display or a connected monitor. You can easily cue up the desired scene by guiding the cursor to the corresponding thumbnail and confirming your selection with the SET button.

### Scene selection




You can create and play back clip lists of selected clips from the disc, arranged in any order. One disc can store up to 99 clip lists. Clip lists make it simple to perform offline editing in the field for later use with full-scale nonlinear editing systems (XPRI <sup>1)</sup>, etc.).

1) XPRI is a trademark of Sony Corporation.

### Quick picture search by jog and shuttle dials

The PDW-V1 has jog and shuttle dials as a conventional VTR to search picture in a clip. The jog dial is for frame-by-frame search at  $\pm 1$  times normal speed and the shuttle dial is for high-speed search at up to  $\pm 20$  times normal speed.

### IT-friendly system

In the Professional Disc, clips are recorded as video and audio data files <sup>1)</sup>. This file-based recording system also allows material to be viewed directly on a computer linked to the PDW-V1 via an i.LINK (file access mode, called FAM below) connection—in the same way that a computer reads data files on an external drive. The interfaces include the S400 (i.LINK) connector, supporting AV/C (Audio/Video Control) and i.LINK (FAM) protocols, and  (network) connector. The  (network) connector supports MXF (Material eXchange Format) file transfer capability to exchange contents with other equipment supporting MXF.

1) A clip is created every time recording is stopped.

## Supporting digital and analog interfaces

This unit supports the following interfaces.

### Digital interfaces

**SDI:** This allows the unit to output D1 (component) format digital video and audio signals.

**i.LINK:** The DVCAM format digital video and audio signals can be input and output. This unit supports the AV/C and FAM protocols. Connecting a computer with the FAM driver installed allows video and audio data to be transferred at high speeds.

### Analog interfaces

**Video:** The unit can output a composite analog video signal.

**Audio:** The unit can output two-channel stereo audio signals.

## DVCAM output from MPEG IMX playback

When the PDW-V1 plays back an MPEG IMX stream, it outputs a corresponding DVCAM stream at the same time through its i.LINK (AV/C) port. This is very useful when carrying out off-line editing with a popular non-linear editor using DVCAM format.

## Flexible metadata handing

XDCAM<sup>1)</sup> can record various types of metadata together with video and audio data, such as the date and time of shooting, the cameraman, the recording method, and comments about the material. This metadata can be used in applications such as the following.

- The supplied PDZ-1 Proxy Browsing Software can be used to add titles, comments, and other text data to discs and clips.
- Computer-readable text files can be recorded on the Professional Disc, to allow systematic content management.
- The ability to search metadata for the required audio and video scenes brings greater efficiency to various stages of the video production process (editing, archiving, etc.).

1) XDCAM is a trademark of Sony Corporation.

## Color LCD built-in

With the built-in 3.5-inch type color LCD screen, you can display contents on the disc without an external monitor.

## RGB output connector provided

The MONITOR connector outputs analog RGB signals. You can input the signals to a PC-compatible display or projector.

## Compact size, lightweight and battery-powered operation

The PDW-V1 is designed small and light enough to carry out to the field and it is operable with battery to work speedily in the field.

## Supporting SNMP for service and maintenance

The PDW-V1 is compatible with Sony remote maintenance and monitoring software—an SNMP-compliant application that can monitor and log the hardware's status in real time via a TCP/IP network. If a malfunction is detected, this system can immediately identify the problem, allowing you to take corrective action.

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# 1-2 MPEG-4 Visual Patent Portfolio License

This product is licensed under the MPEG-4 Visual Patent Portfolio License. For the personal and non-commercial use of a consumer for (i) encoding video in compliance with the MPEG-4 Visual Standard (“MPEG-4 Video”) and/or (ii) decoding MPEG-4 Video that was encoded by a consumer engaged in a personal and non-commercial activity and/or was obtained from a video provider licensed by MPEG LA to provide MPEG-4 Video.

No license is granted or shall be implied for any other use. Additional information including that relating to promotional, internal and commercial uses and licensing may be obtained from MPEG LA, LLC.

*See <http://www.mpegla.com>*

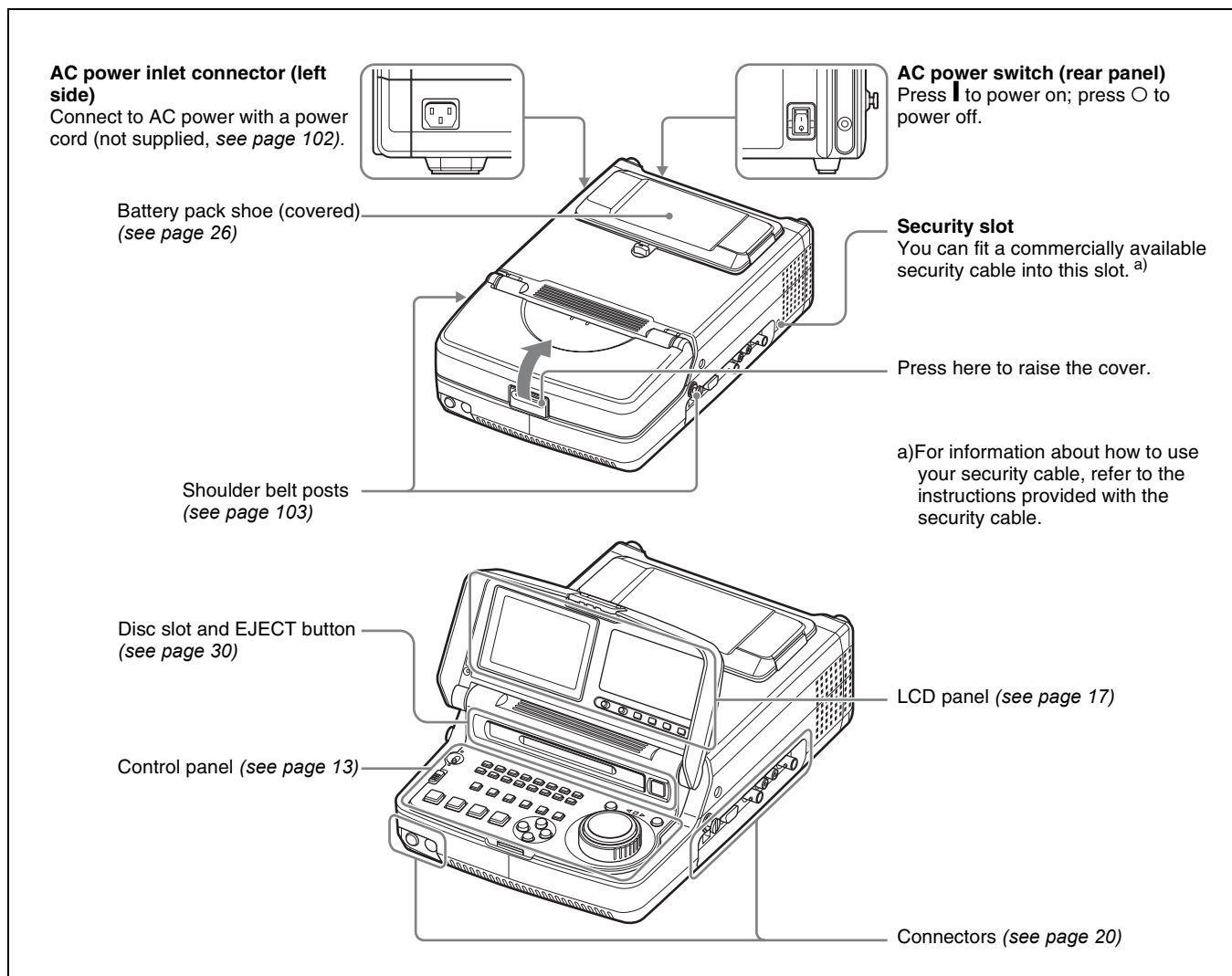
# Names and Functions of Parts

## Chapter

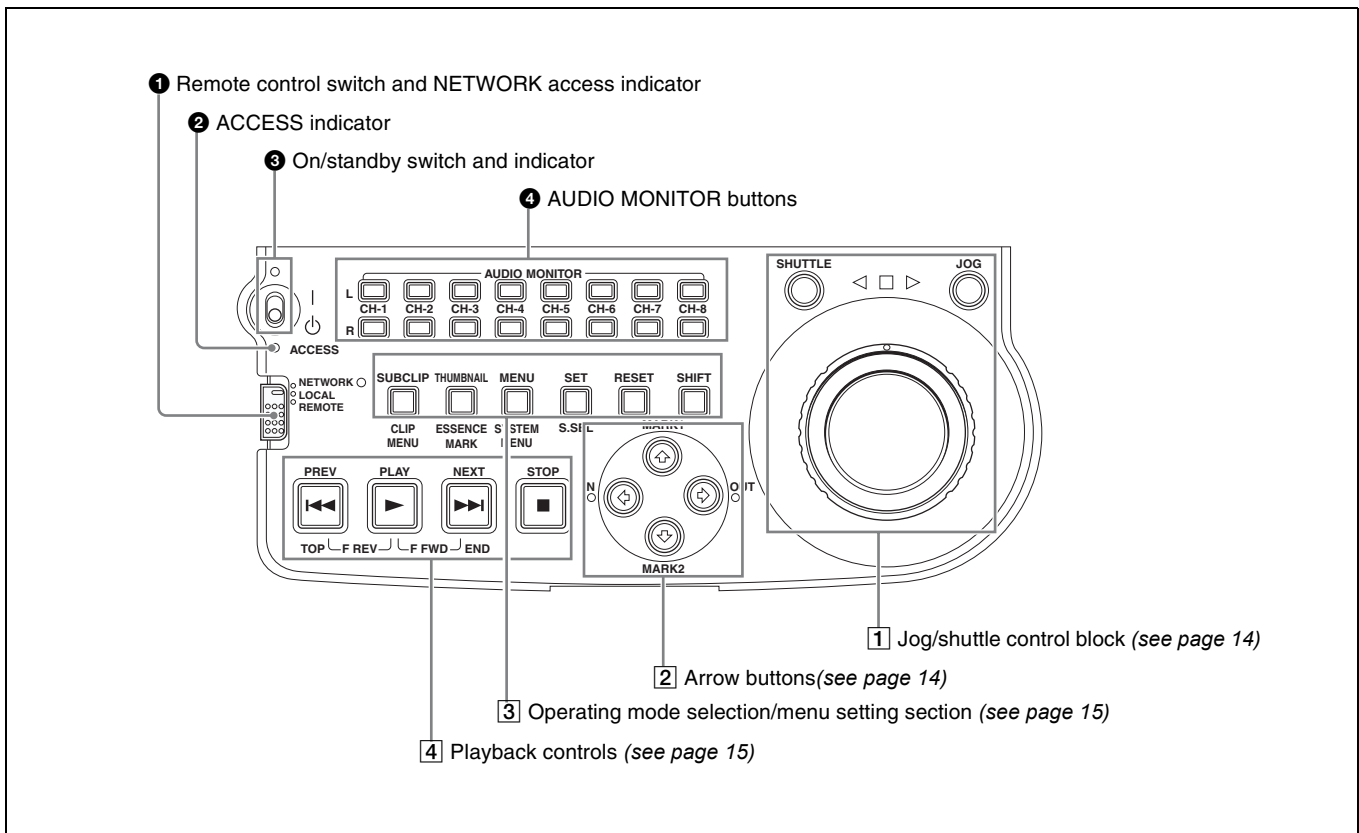
# 2

## 2-1 Configuration

Operation of the PDW-V1 uses the parts shown in the following figure.



## 2-2 Control Panel



### 1 Remote control switch and NETWORK access indicator

Different positions of the switch allow different operations as follows.

**NETWORK:** Enables access to the network. The indicator lights when an external network device is being accessed. In this state, operation from the control panel is not possible.

**LOCAL:** Enables operation from the control panel.

**REMOTE:** Enables remote control of the PDW-V1 from a device connected to the iS400 (i.LINK) connector on the side panel.

### 2 ACCESS indicator

This lights when the disc is accessed and when a file is opened by a FAM or FTP connections (see page 56). If the on/standby switch is set to the  $\text{⏏}$  position while this indicator is lit, access to the disc is completed before the unit switches to the standby state.

#### Note

While the ACCESS indicator is lit, do not turn off the AC power switch, disconnect the power cord, or remove the battery. This could lead to a loss of data from the disc.

### 3 On/standby ( $\text{⏏}$ / $\text{⏏}$ ) switch and indicator

When the AC power switch on the rear panel is in the  $\text{⏏}$  position, or a battery is loaded, this switches the PDW-V1 between the operating ( $\text{⏏}$ ) and standby ( $\text{⏏}$ ) states. When the switch is moved to the  $\text{⏏}$  position, the indicator lights. When the switch is moved to the  $\text{⏏}$  position, the indicator goes off.

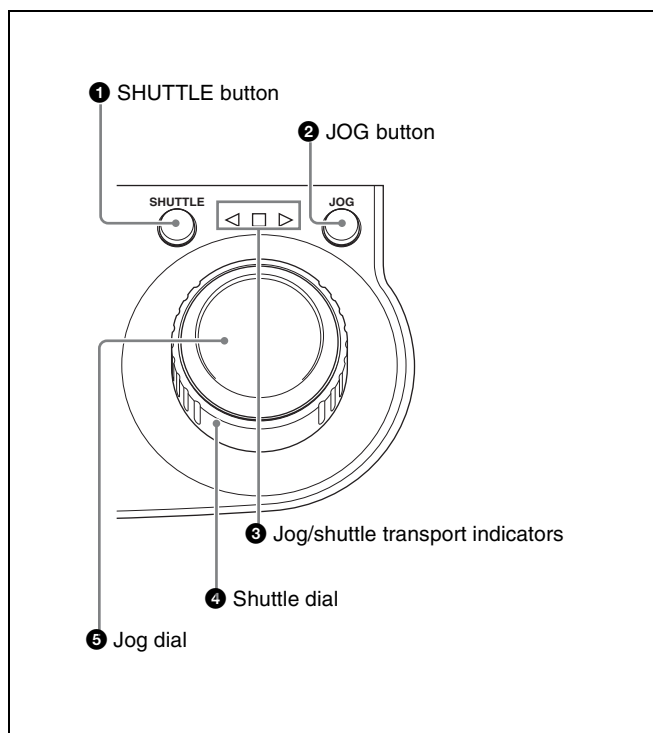
When operating the PDW-V1 from an AC power supply, normally leave the AC power switch in the  $\text{⏏}$  position, and switch the PDW-V1 between the operating and standby states using the on/standby switch.

### 4 AUDIO MONITOR (audio monitor channel selection) buttons

Each of the L (upper) and R (lower) rows has buttons CH-1 to CH-8 corresponding to channels 1 to 8. When a button is pressed, it lights, and the corresponding audio channel is output from the PHONES jack and speaker on the front panel and AUDIO MONITOR OUT L/R connectors on the side panel.

In each of the L and R rows, if the buttons for more than one channel are selected simultaneously, the selected channels are mixed on the audio monitor output.

## 1 Jog/shuttle control block



For details of playback operations with these buttons and dials, see 4-2 “Playback Operation” on page 34.

### 1 SHUTTLE button

To play back in shuttle mode using the shuttle dial, press this button, turning it on. Pressing the JOG button or turning the jog dial switches to jog mode.

### 2 JOG button

To play back in jog mode using the jog dial, press this button, turning it on. Pressing the SHUTTLE button or turning the shuttle dial switches to shuttle mode.

### 3 Jog/shuttle transport indicators

These show the playback direction in jog or shuttle mode.

- ◀ (green): Lights during playback in the reverse direction.
- ▶ (green): Lights during playback in the forward direction.
- (red): Lights during still image display.

### 4 Shuttle dial

Turn this for playback in shuttle mode. Turn clockwise for forward direction playback, and counterclockwise for reverse direction playback. In shuttle mode, the playback speed varies in the range  $\pm 20$  times normal speed, according to the angular position of the shuttle dial. The shuttle dial has a detent at the center position, for still image playback.

Normally, you press the SHUTTLE button before turning the shuttle dial, but it is also possible to make a setting to enable shuttle mode directly by turning the shuttle dial (set extended menu item 101 “SELECTION FOR SEARCH DIAL ENABLE” to “dial”).

## Note

When extended menu item 101 “SELECTION FOR SEARCH DIAL ENABLE” is set to “dial,” after using the shuttle dial, return it to the center position. If the shuttle dial is not in the center position, it is possible occasionally for vibration from other operations to activate the dial, and start playback in shuttle mode.

## 5 Jog dial

Turn this for playback in jog mode. Turn clockwise for forward direction playback, and counterclockwise for reverse direction playback. In jog mode, the playback speed varies in the range  $\pm 1$  times normal speed, according to the rotation rate of the jog dial. There are no detents. Normally, you press the JOG button before turning the jog dial, but it is also possible to make a setting to enable jog mode directly by turning the jog dial (set extended menu item 101 “SELECTION FOR SEARCH DIAL ENABLE” to “dial”).

## 2 Arrow buttons

The four arrow buttons are also used as the MARK1 button, MARK2 button, IN button, and OUT button. The correspondence with the buttons is as follows.

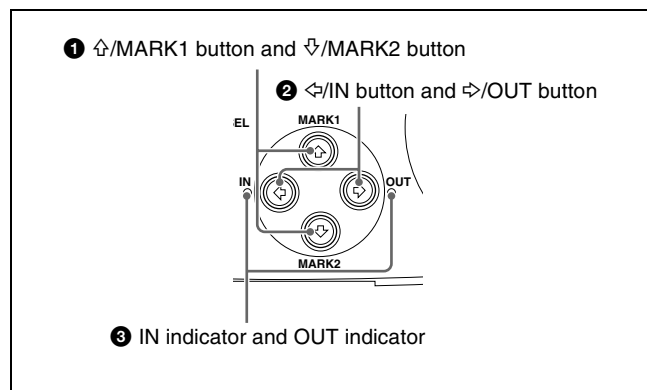
⇧ **button**: MARK1 button

⇩ **button**: MARK2 button

⇐ **button**: IN button

⇒ **button**: OUT button

You can use these buttons for thumbnail selection, menu setting operations, setting IN/OUT points, and so on.



### 1 ⇧/MARK1 button and ⇩/MARK2 button

When the THUMBNAIL button is lit, you can use these for thumbnail selection.

During playback, the ⇧/MARK1 and ⇩/MARK2 buttons can be pressed with the SET button held down to record a shot mark 1 or shot mark 2 as an essence mark.

To delete or change essence marks, use the supplied PDZ-1 Proxy Browsing Software.

### 2 ⇐/IN button and ⇒/OUT button

When the THUMBNAIL button is lit, you can use these for thumbnail selection.

An In or Out point is set when you press the SET button with the ⇄/IN or ⇄/OUT button held down. The In or Out point setting is deleted when you press the RESET button with the ⇄/IN or ⇄/OUT button held down.

### ③ IN indicator and OUT indicator

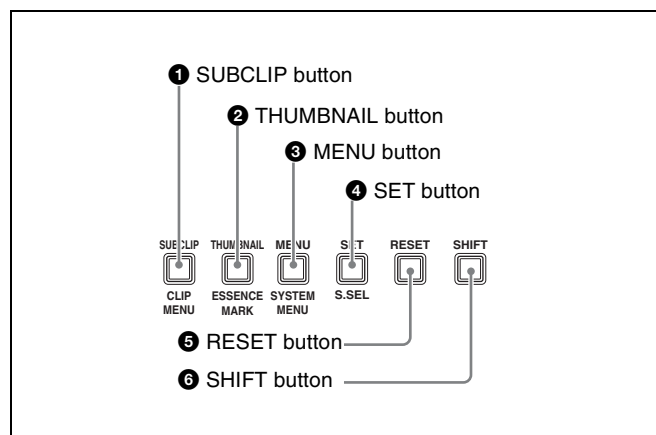
**IN indicator:** When an IN point can be set, this flashes, and when the IN point is set it changes to continuously lit.

If an attempt is made to set the IN point after a recorded OUT point, this flashes rapidly.

**OUT indicator:** When an OUT point can be set, this flashes, and when the OUT point is set it changes to continuously lit.

If an attempt is made to set the OUT point before a recorded IN point, this flashes rapidly.

## ③ Operating mode selection/menu setting section



### ① SUBCLIP button

Press this button, turning it on, to play back following a clip list (see page 38). This is also valid for jog and shuttle operations. To play the clips in the order they are recorded, press this again, turning it off.

The CLIP menu (see page 52) appears in the status display section and on an external monitor when you press this button with the SHIFT button held down. Press the MENU button to escape from the CLIP menu.

#### Note

If no clip list is registered, this button does not light when pressed. The operation is invalid.

### ② THUMBNAIL button

To carry out a thumbnail search or scene selection, press this button turning it on. Thumbnail images representing each clip appear. Press once more to turn the button off, and return to a whole-screen display.

To display the thumbnails of essence mark frames (frames with an essence mark attached), hold down the SHIFT button, and press this button. The essence mark selection menu appears. Select the desired type of essence mark, and

the corresponding essence mark frames appear in thumbnails. Press once more, turning the button off, to return to a whole-screen display.

### ③ MENU button

Use for setup menu operations. Pressing this displays the setting of a setup menu item in the time data display (see page 74). Press once more to return to the original display. The system menu (see page 91) appears in the status display section and on an external monitor when you press this button with the SHIFT button held down. Press this button again to escape from the system menu.

### ④ SET button

Use for setup menu settings (see page 75), scene selection (thumbnail search) settings, and so on.

The scene selection window or a menu for sub clip operations appears when you press this button with the SHIFT button held down with either of the following displayed. The window or menu appears in the status display section, and on an external monitor.

**When a thumbnail screen is displayed:** The scene selection window (see page 46) appears.

**When a sub clip thumbnail is displayed:** A sub clip operation menu (see page 48) appears.

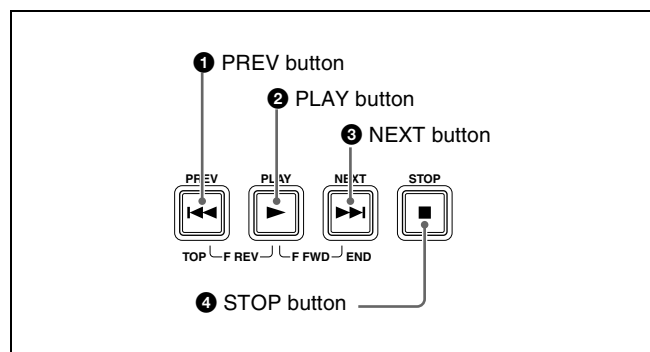
### ⑤ RESET button

Press to reset the counter. This is also used to cancel or abandon setup menu settings and scene selection (thumbnail search).

### ⑥ SHIFT button

Use to switch the functions of various buttons.

## ④ Playback controls



### ① PREV (previous) button

Press this, turning it on, to show the first frame of the current clip. While the first frame of a clip is shown, pressing this button jumps to the beginning of the previous clip.

This button is also used together with other buttons for the following operations.

**Reverse direction high-speed search:** Hold down the PLAY button, and press this button. A high-speed search in the reverse direction is carried out.

**Displaying the first frame of the first clip:** Hold down the SHIFT button, and press this button.

## ② PLAY button

To start playback, press this button, turning it on.

## ③ NEXT button

Press this, turning it on, to show the first frame of the next clip.

This button is also used together with other buttons for the following operations.

**Forward direction high-speed search:** Hold down the PLAY button, and press this button. A high-speed search in the forward direction is carried out.

**Displaying the last frame of the last clip:** Hold down the SHIFT button, and press this button.

## ④ STOP button

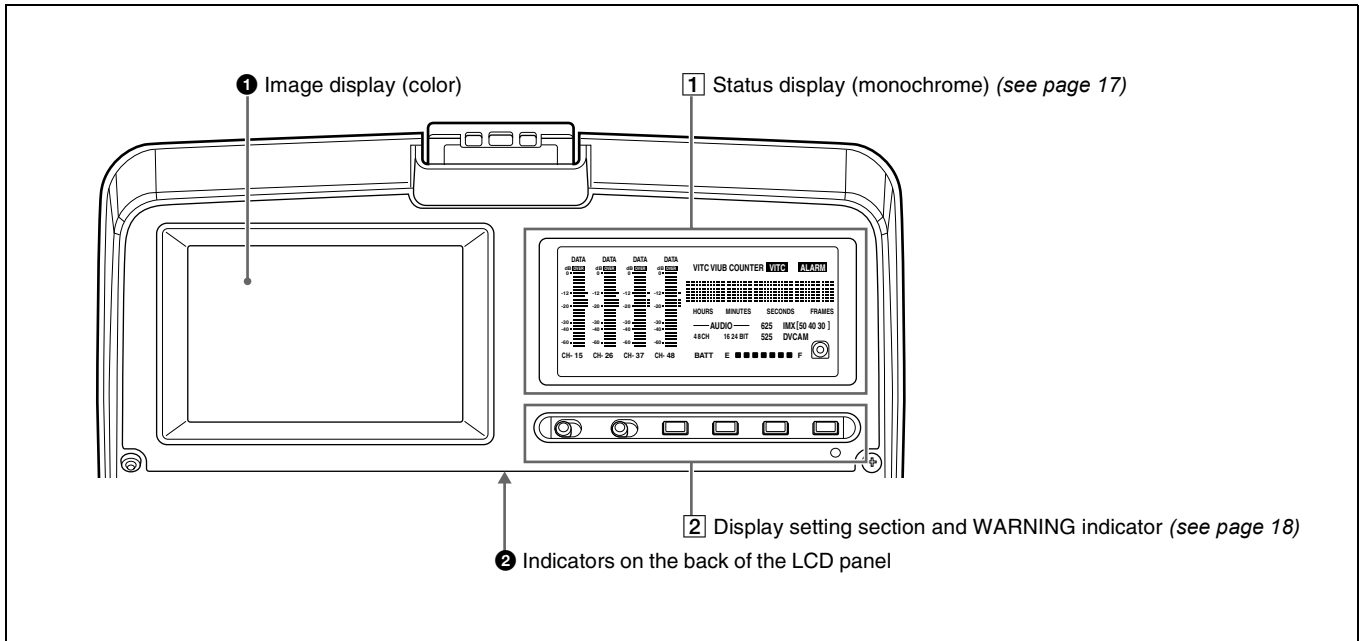
To stop playback, press this button, turning it on. The frame at the stop point appears.

The unit enters standby off mode when you press this button with the SHIFT button held down. It returns from standby off mode to the original state when you press this button again with the SHIFT button held down. (The lit or unlit status of the STOP button does not change.)

*This unit can automatically enter standby off mode whenever a specified time elapses in disc stop mode. For details, see the description of extended menu item 501 "STILL TIMER" (page 79).*



## 2-3 LCD Panel

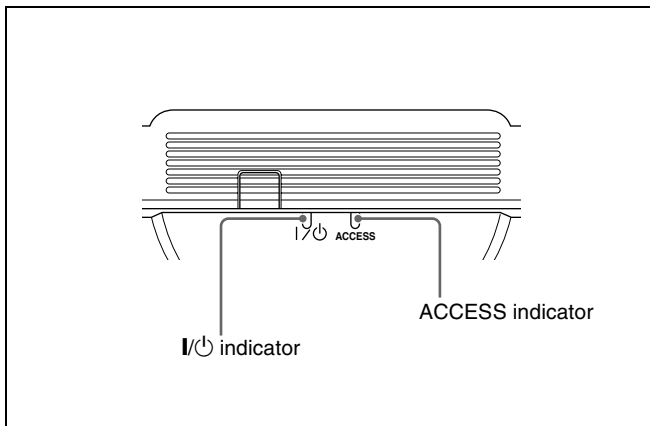


### 1 Image display (color)

In playback and editing operations, this shows the playback video, clip thumbnail images, and so on.

### 2 Indicators on the back of the LCD panel

There are two indicators, as follows.



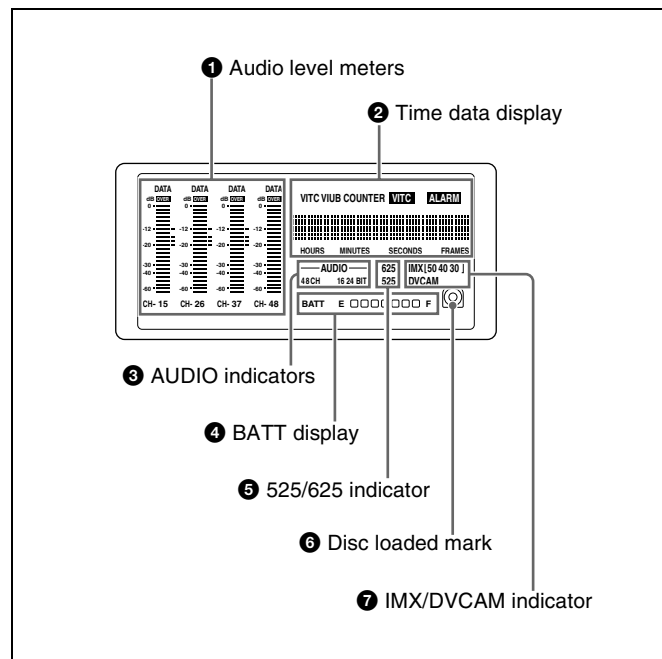
**I/O (on/standby) indicator:** Lights when the on/standby switch on the control panel is in the on (I) position.

**ACCESS indicator:** Lights when the disc is being accessed. If the on/standby switch is set to the  $\text{I/O}$  position while this indicator is lit, access to the disc is completed before the unit switches to the standby state.

### Note

While the ACCESS indicator is lit, do not turn off the AC power switch, disconnect the power cord, or remove the battery. This could lead to a loss of data from the disc.

### 1 Status display (monochrome)



#### 1 Audio level meters

These show the audio levels for channels 1 to 4 or channels 5 to 8. When the audio level exceeds 0 dB on any channel, the **OVER** indicator for that channel lights.

The DATA indicator lights when non-audio signals are played back.

## ② Time data display

Normally, this shows the disc playback time, time code, or user bit information, as selected by the COUNTER button in the display setting section and the TC/VITC button. It is also used for error messages, setup menus, and other displays.

The following indicators are arranged above the time data display, in sequence from left to right.

**TC/VITC (time code type) indicator:** This lights when TC is selected by the COUNTER button. A time code appears in the time data display.

When TC is selected by the TC/VITC button, this appears as “TC,” and when VITC is selected, as “VITC.”

**UB/VIUB (user bit type) indicator:** This lights when UB is selected by the COUNTER button. A user bit value appears in the time data display.

When TC is selected by the TC/VITC button, this appears as “UB,” and when VITC is selected, as “VIUB.”

**COUNTER indicator:** This lights when COUNTER is selected by the COUNTER button. The elapsed playback time (hours, minutes, seconds, frames) appears in the time data display.

**VITC indicator:** Regardless of the display on the time data display, this lights when VITC is being read successfully.

**ALARM indicator:** This lights when a hardware error is detected in the PDW-V1, and goes off when the error is cleared. When this indicator is lit, an error message appears in the time data display.

## ③ AUDIO indicators

During playback, these show the number of channels recorded on the disc and the number of quantizing bits.

### • Number of channels

**4ch:** 4 channels

**8ch:** 8 channels

### • Number of quantizing bits

**16bit:** 16 bits

**24bit:** 24 bits

## ④ BATT (battery) display

This shows the battery charging state as follows.

■■■■■■■■ (7 segments lit): Adequately charged. As the battery discharges, the number of LED segments lit decreases.

“BATT” flashing: Almost exhausted. Operation of the PDW-V1 continues.

“BATT” and “E” flashing: Exhausted (charging required). Operation of the PDW-V1 stops.

## ⑤ 525/625 (TV system) indicator

This displays the TV system selected in basic menu item 013 “525/625 SYSTEM SELECT.”

**525:** NTSC, 525 scan lines, field frequency 59.94 Hz

**625:** PAL, 625 scan lines, field frequency 50 Hz

## ⑥ Disc loaded mark

This lights while a disc is loaded in the PDW-V1.

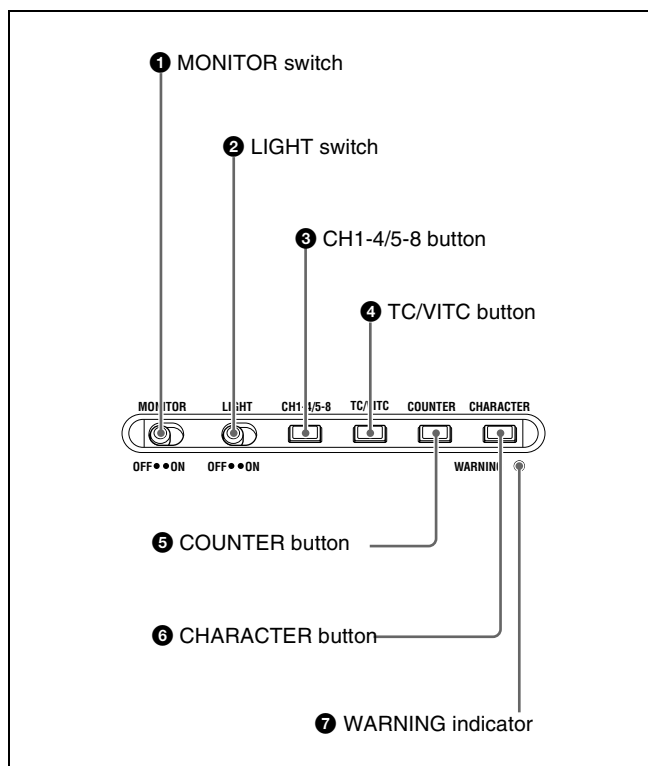
It flashes while the disc is being inserted, and while it is being ejected.

## ⑦ IMX/DVCAM (playback format) indicator

During playback, this shows the recording format of the inserted disc.

When a disc is not loaded in the unit, and during FAM and FTP connections (*see page 56*), this shows the recording format set by basic menu item 031 “RECORDING FORMAT.”

## ② Display setting section and WARNING indicator



### ① MONITOR switch

Selects whether or not the color monitor display operates.

**ON:** Operate.

**OFF:** Do not operate.

The factory default setting is ON.

### ② LIGHT switch

Selects whether the status monitor backlight is on or off.

**ON:** On.

**OFF:** Off.

The factory default setting is ON.

**③ CH1-4/5-8 (level display channel selection) button**

Selects whether the audio level meters show channels 1 to 4 or channels 5 to 8. Every time you press this button, the audio level meter channel display changes to reflect the setting.

The factory default setting is CH1-4.

**④ TC/VITC (time code display selection) button**

When the time data display is set to TC (time code display), this selects whether to display TC or VITC time code. The TC or VITC indicator in the time data display lights to reflect the selection.

The factory default setting is TC.

**⑤ COUNTER (time data display selection) button**

Switches the data shown in the time data display through TC, UB, and COUNTER in sequence.

**TC:** Playback time code read by the internal time code reader.

The selection of TC or VITC is made by the TC/VITC button.

**UB:** User bits included in the playback time code.

**COUNTER:** The elapsed playback time (hours, minutes, seconds, frames). This can be reset by pressing the RESET button (*see page 15*).

The corresponding indicator in the time data display lights to reflect the setting.

The factory default setting is TC.

**⑥ CHARACTER button**

Selects whether or not to superimpose the time code, menu settings, alarm messages, or other text information on the video signals output from the side panel SDI OUT, VIDEO OUT and MONITOR connectors and also on the unit's image display. Every time you press this button, the setting alternates.

The factory default setting is for superimposing text information.

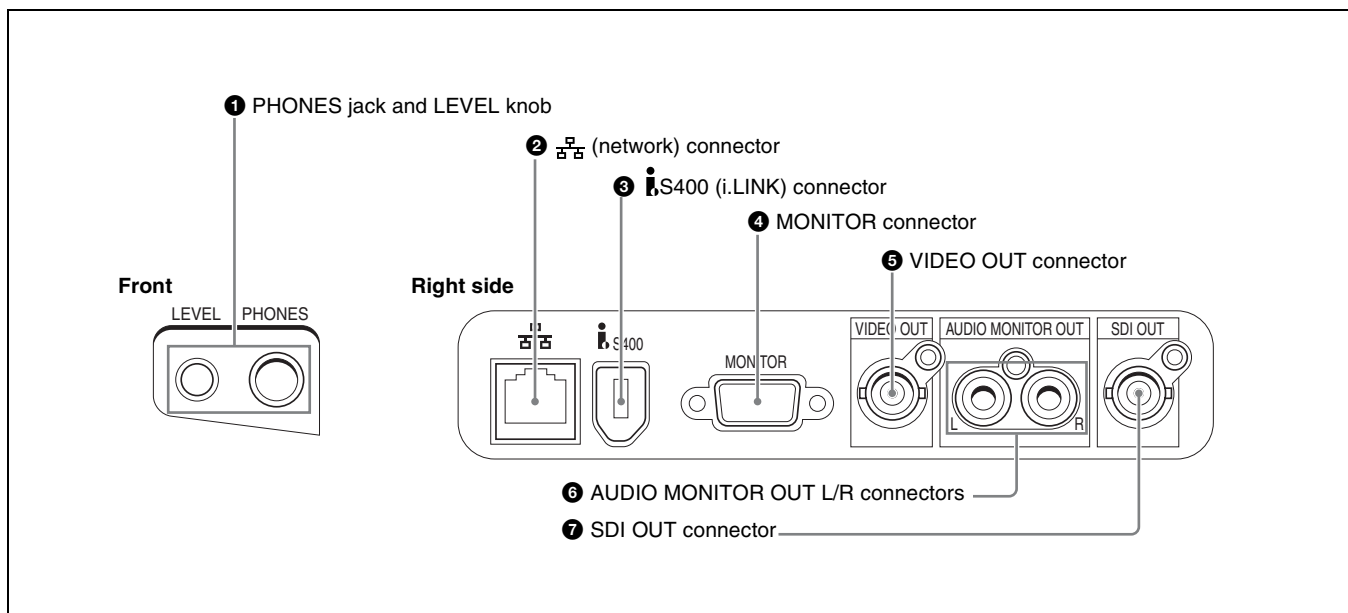
**⑦ WARNING indicator**

This lights when a fault occurs in the PDW-V1.

*For details, see 8-2 "Error Messages" (page 94) and 8-3 "Alarms" (page 94).*

## 2-4 Connectors

For the locations of the AC power inlet connector on the left side of the PDW-V1, and the AC power switch on the rear panel, see the figure on page 12.



### 1 PHONES jack and LEVEL knob

The jack is a standard stereo jack. Connect stereo headphones with an impedance of 8 ohms, to monitor the audio during playback. (Non-audio signals are muted.) The channels monitored are selected by the AUDIO MONITOR buttons.

Adjust the volume with the LEVEL knob. You can also set this to simultaneously control the output volume from the AUDIO MONITOR OUT L/R connectors on the side panel. To do this, in the setup menu, set extended menu item 114 “AUDIO MONITOR OUTPUT LEVEL” to “var.”

### 2 (network) connector (RJ-45, 100Base-TX)

To transfer files between an external device and the PDW-V1, connect a network cable to this connector and the external device.

#### CAUTION

For safety, do not connect the connector for peripheral device wiring that might have excessive voltage to this port. Follow the instructions in this manual when making connections.

### 3 iS400 (i.LINK) connector (6-pin, complying with IEEE1394)

**Using the AV/C protocol:** Outputs a DVCAM format digital video/audio signal.

**Using FAM protocol:** Transfers files to and from supporting devices.

#### Notes

- If video or audio signals from an external device connected with the iS400 (i.LINK) connector are not output, disconnect the i.LINK cable and connect it again, pushing it straight in.
- When the PDW-V1 is connected to a device with a 6-pin i.LINK connector by an i.LINK cable, before unplugging the i.LINK cable, first power off the device and disconnect the power plug from the outlet. If the i.LINK cable is unplugged with the device power plug still connected, a current from an excessive voltage (8 to 40 V) output from the i.LINK connector of the device flows into the PDW-V1. This may cause a failure of the PDW-V1.
- When connecting the PDW-V1 to a device with a 6-pin i.LINK connector, connect to the 6-pin i.LINK connector of the other device first.
- Except in playback mode (jog and shuttle modes, etc.), if you are monitoring the audio signal output from this connector on another device, the audio signal may sound differently from the audio signal played back on the PDW-V1.

### 4 MONITOR connector (D-sub 15-pin)

Outputs analog RGB signals. When connecting a PC-compatible display or projector to this connector, set it for VGA <sup>1)</sup> input.

1) VGA is a registered trademark of International Business Machines Corporation.

**5 VIDEO OUT connector (BNC type)**

Outputs an analog composite video signal. The time code, menu settings, alarm messages, or other text information can be superimposed on the output video signal. The setting as to whether or not to superimpose text information alternates every time you press the CHARACTER button (*see page 19*).

**6 AUDIO MONITOR OUT L/R connectors (pin jacks)**

Output the audio signals for the channels selected with the AUDIO MONITOR button L and R rows on the control panel.

Non-audio signals are muted.

**7 SDI (serial digital interface) OUT connector (BNC type)**

Outputs an SDI video/audio signal. The time code, menu settings, alarm messages, or other text information can be superimposed on the output video signal. The setting as to whether or not to superimpose text information alternates every time you press the CHARACTER button (*see page 19*).

## 3-1 Connections and Settings

### 3-1-1 Connecting an External Monitor

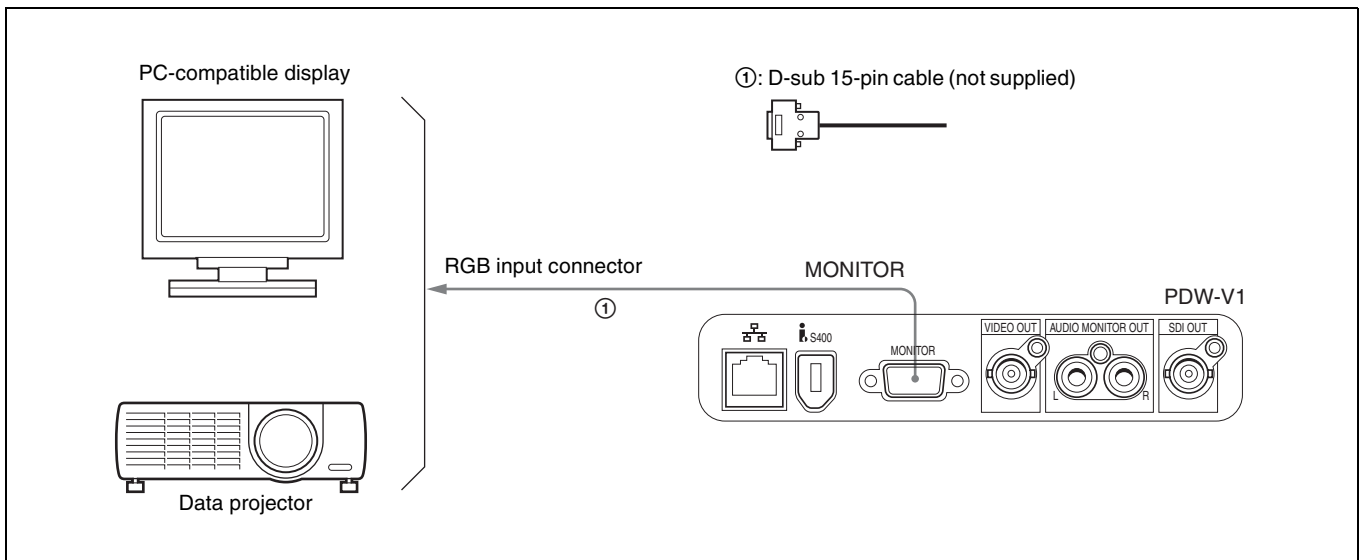
Connecting a video monitor to the MONITOR, VIDEO OUT, or SDI OUT connector of this unit enables you to see the output video on the monitor screen.

Example connections are shown in the following.

#### When connecting to the MONITOR connector

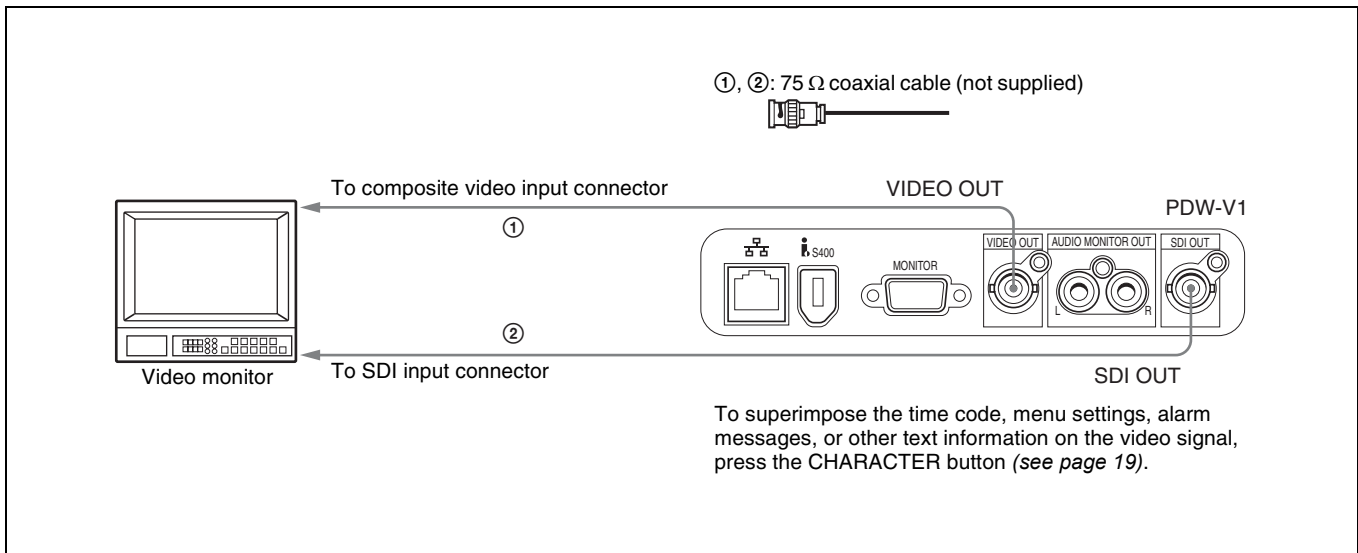
##### Note

Set the PC-compatible display or data projector to which to connect this unit for VGA input beforehand.



## When connecting to the VIDEO OUT or SDI OUT connector

Connect a video monitor as example ① or ② shown in the following figure.



### 3-1-2 Connections for Using PDZ-1 Proxy Browsing Software

Using the supplied PDZ-1 Proxy Browsing Software, you can carry out simple editing with proxy AV data.

For an overview of PDZ-1 and how to install the software, see 5-4 “Using PDZ-1 Proxy Browsing Software” on page

55.

For information about how to use the software, refer to the Help provided in the software.

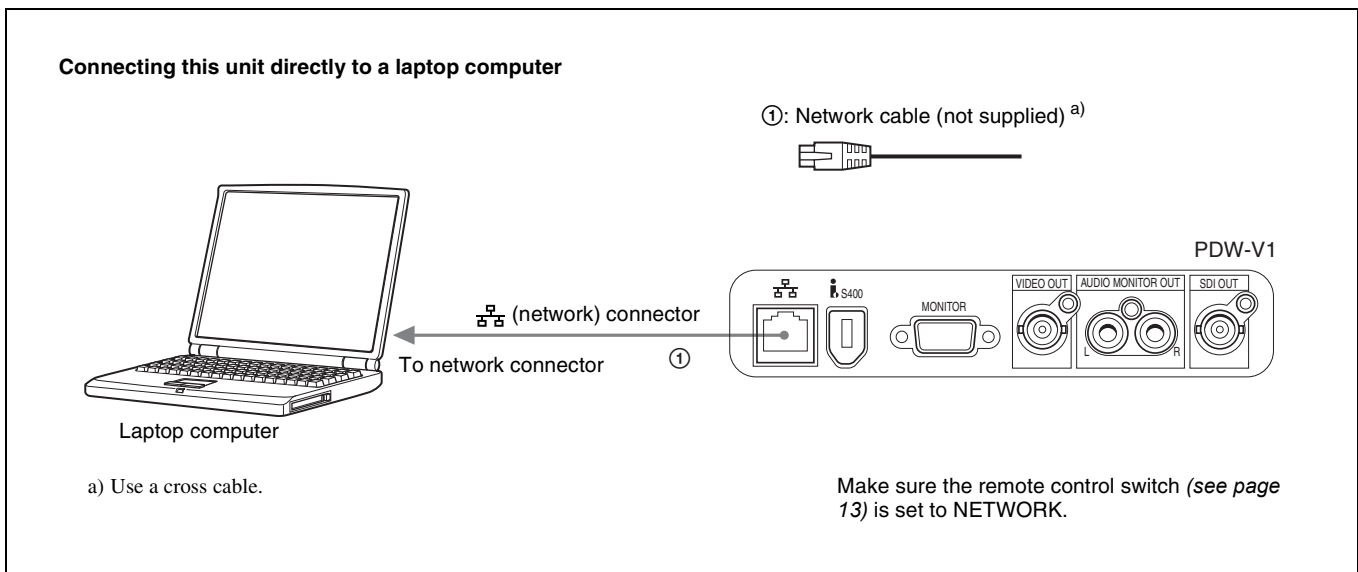
### Using the (network) connector (FTP connection)

The following shows an example of an FTP (File Transfer Protocol) connection.

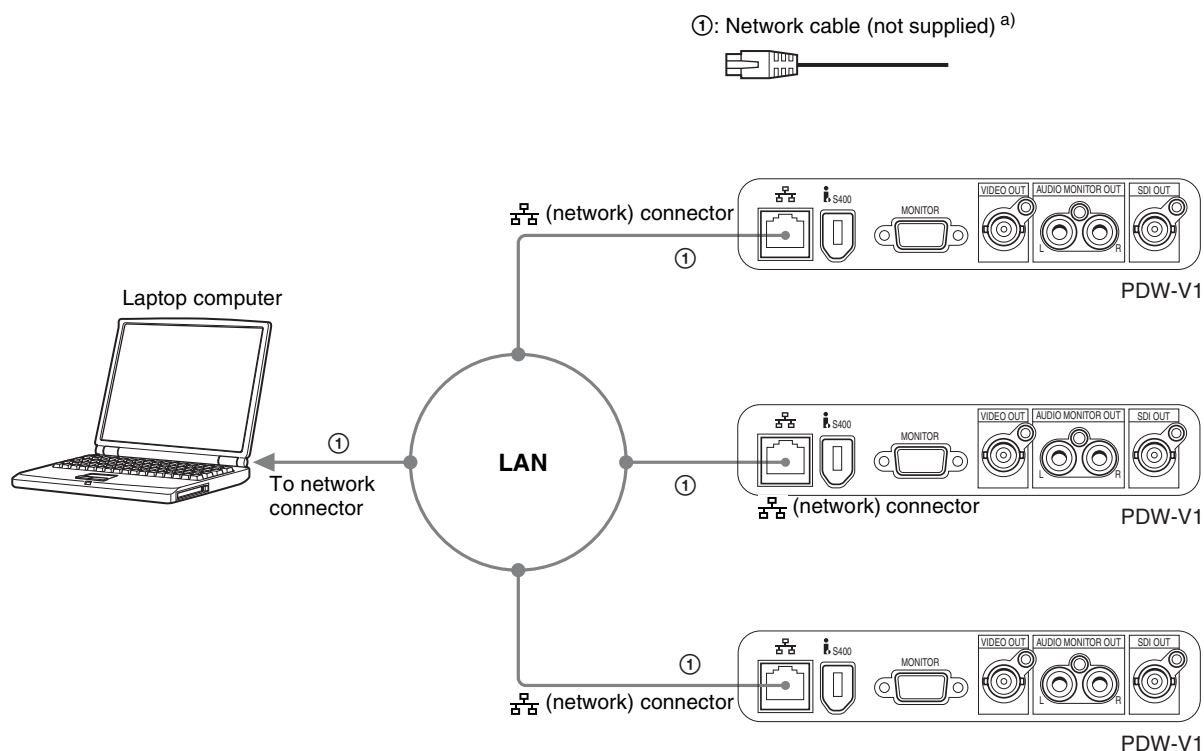
For details of the network-related settings, see “To change network settings” (page 89).

#### Note

To use PDZ-1 requires the PDW-V1 IP address and other network-related settings to be made beforehand.



### Connecting three PDW-V1 units to a laptop computer via a LAN.



a) Use a straight cable.

Make sure the remote control switch (see page 13) is set to NETWORK on each of the three PDW-V1 units.

### Using the i S400 (i.LINK) connector (FAM connection)

The following shows an example of a FAM (file access mode) connection.

#### Note

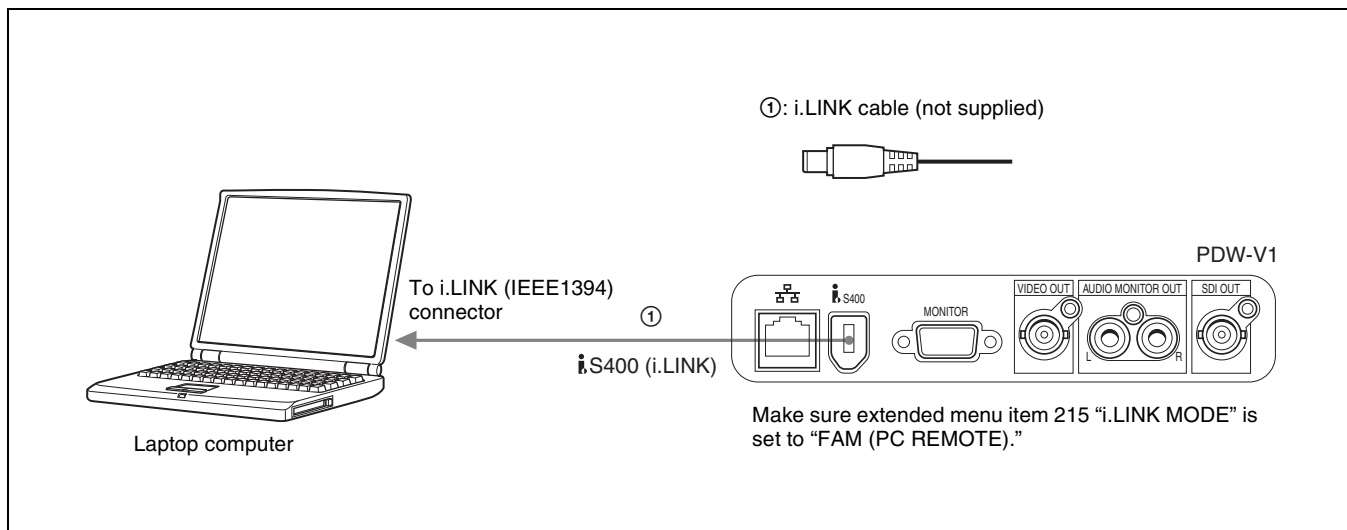
The PDZ-1 Proxy Browsing Software must be installed in advance.

The required FAM driver is also installed when you install the PDZ-1 software.

See 5-4 “Using PDZ-1 Proxy Browsing Software” (page 55) for more information about installing the PDZ-1 software.

Some limitations apply to FAM connections. For details, see 6-2 “File Access Mode File Operations” (page 60).





### 3-1-3 Connecting to a Nonlinear Editing System

You can send video/audio signals (AV/C data) from this unit to a nonlinear editing system connected to the **i.S400** (i.LINK) connector. The following figure shows an example connection.

#### Notes

- The **i.S400** (i.LINK) connector of this unit outputs video/audio signals in DVCAM format. Data recorded in MPEG IMX format is output after being converted into DVCAM format.
- The nonlinear editing system to be used being connected to this unit requires editing software (not supplied) supporting DVCAM format.

- Make the following settings before transferring video/audio signals (AV/C data) from this unit to a nonlinear editing system.

#### Audio mode selection

Use extended menu item 831 "DV OUT AUDIO MODE" to select either of the following.

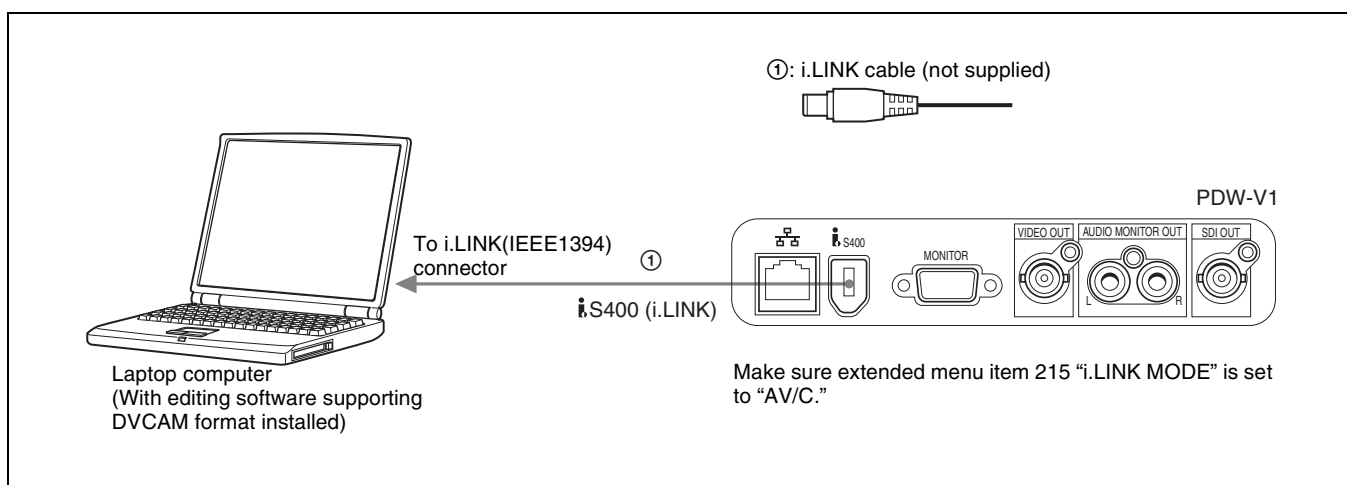
4ch: 12 bit/32 kHz/4 ch

2ch: 16 bit/48 kHz/2 ch (Factory default setting)

#### Audio output channel selection

Select the audio output channels with extended menu item 828 "SDI/DV AUDIO OUTPUT SELECT."

*For information about how to make extended menu item settings, see 7-3-2 "Extended Menu Operations" on page 82.*



*For the method of transferring video/audio signals (AV/C data) to a nonlinear editing system, refer to the manual provided with the editing software to be used.*

## 3-2 Power Preparations

This unit can be powered by a battery pack or AC power.

### 3-2-1 Using AC Power

Connect an AC power source (100 V to 240 V AC, 50/60 Hz) to the AC power inlet connector on the left side of the unit with a power cord (not supplied, *see page 102*).

### 3-2-2 Using a Battery Pack

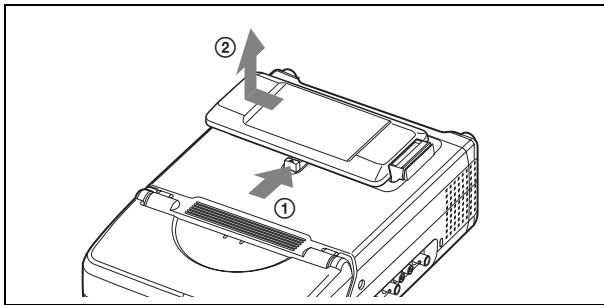
#### Usable battery packs

The battery packs usable with this unit are as follows.  
BP-L60S, BP-L80S, BP-GL65, BP-GL95

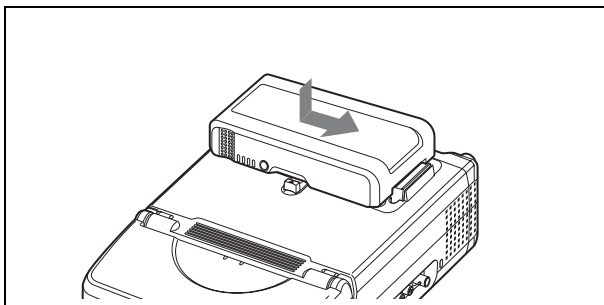
#### To attach a battery pack

Proceed as follows.

- 1 Remove the cover of the battery pack shoe.



- 2 Fit the battery pack.



#### To remove the battery pack.

Follow the above procedure in the reverse flow. After the battery pack is removed, replace the cover of the battery pack shoe.

## 3-3 Setup

The principal setup operations before operating this unit can be carried out using setup menus.

The setup menus of this unit comprise a basic setup menu and an extended setup menu. The contents of these menus are as follows.

#### Basic setup menu:

- Items relating to the hours meter
- Items relating to operation
- Items relating to menu banks

#### Extended setup menu:

- Items relating to control panels
- Items relating to the remote control interface
- Items relating to editing operations
- Items relating to preroll
- Items relating to disc protection
- Items relating to the time code reader, metadata, and UMID
- Items relating to video control
- Items relating to audio control
- Items relating to digital processing

*For detailed information about the items, except for the basic menu items relating to the hours meter, of these menus and how to use them, see Chapter 7 “Menus” (page 71).*

*For detailed information about menu operations relating to the hours meter, see 8-1-1 “Digital Hours Meter” (page 93).*

This unit allows four different sets of menu settings to be saved in what are termed “menu banks” numbered 1 to 4. Saved sets of menu settings can be recalled for use as required.

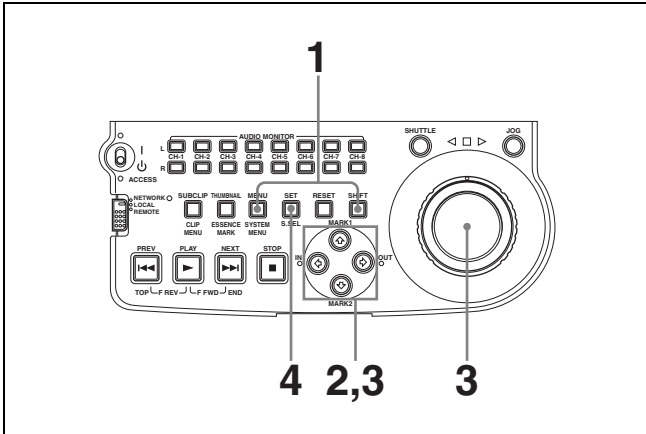
*For more information about the menu banks, see “Menu bank operations (menu items B01 to B13)” (page 76) and the description of maintenance menu item “SETUP BANK4” (page 87).*

## 3-4 Setting the Date and Time

### Note

The time zone is reset to the factory default when you execute the maintenance menu item “RESET ALL SETUP.” You will need to set it again. The date and time are not reset.

When using this unit for the first time, you should set the date and time as follows.



- 1 Holding down the SHIFT button, press the MENU button.

The system menu appears on the monitor screen.

- 2 Select “DATE/TIME PRESET” using the  $\updownarrow$  button or  $\leftarrow \rightarrow$  button, then press the  $\rightarrow$  button.

The date and time setting screen appears on the monitor, allowing you to set the following items.

- YEAR: Calendar year
- MONTH: Month
- DAY: Day
- TIME: Time
- TIME ZONE: Time zone (Difference from UTC)

- 3 Set the date, time and time zone.

You can change the setting of the flashing digits.

#### To change the flashing digits

Use the arrow buttons ( $\leftarrow$ ,  $\rightarrow$ ).

#### To increase or decrease the values of the flashing digits

Use the arrow buttons ( $\updownarrow$ ,  $\leftarrow \rightarrow$ ) or jog dial.

- 4 Press the SET button.

The date, time and time zone settings are stored.

#### To return to the previous menu page

Press the MENU button.

#### To exit the menu

Press the MENU button twice in succession.

# 3-5 Superimposed Text Information

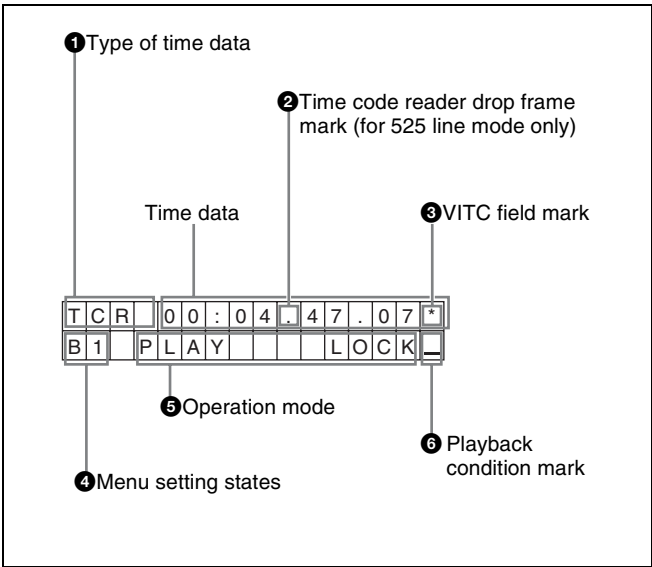
The time code, menu settings, alarm messages, or other text information can be superimposed on the video signal output from the VIDEO OUT connector or SDI OUT connector. The setting as to whether or not to superimpose text information alternates every time you press the CHARACTER button (see page 19).

## Adjusting the text display

You can adjust the position, size and type of the superimposed text using basic menu items 002, 003, 005, 009, 011, and 012.

For details, see 7-2-2 “Basic Menu Operations” (page 74).

## Information displayed



### 1 Type of time data

Display	Meaning
CNT	Counter data
TCR	TC reader time code data
UBR	TC reader user bits data
IN	IN point time data
OUT	OUT point time data
DUR	Duration between IN point and OUT point

### Note

If the time data or user's bits cannot be read correctly, they will be displayed with an asterisk. For example, “T\*R” or “U\*R.”

### 2 Time code reader drop frame mark (for 525 line mode only)

“.”: Indicates drop frame mode  
“:”: Indicates non-drop-frame mode

### 3 VITC field mark

“ ” (blank): Odd fields  
“ \* ”: Even fields

### 4 Menu setting states <sup>1)</sup>

Display	Description
B1	The current menu settings are the same as the settings in menu bank 1.
B2	The current menu settings are the same as the settings in menu bank 2.
B3	The current menu settings are the same as the settings in menu bank 3.
B4	The current menu settings are the same as the settings in menu bank 4.
DF	The current menu settings are the same as the factory defaults.
No display	The current menu settings are different from all of the above.

1) This is supported from firmware version 1.4.

### 5 Operation mode

Display		Operation mode
DISC OUT		Disc is not loaded.
LOADING		Disc is being loaded.
UNLOADING		Disc is being unloaded.
STANDBY OFF		Standby off mode
STOP		Stop mode
NEXT		Cuing up to the first frame of the next clip.
PREV		Cuing up to the first frame of the current clip.
F.FWD		Fast forward search
F.REV		Fast reverse search
PLAY		Playback mode (servo unlocked)
PLAY	LOCK	Playback mode (servo locked)
JOG	STILL	A still picture in jog mode
JOG	FWD	Jog mode in forward direction
JOG	REV	Jog mode in reverse direction
SHUTTLE	STILL	A still picture in shuttle mode
SHUTTLE	(Speed)	Shuttle mode

Display	Operation mode
TOP 0001/xxxx	Cuing up to the first frame of the first clip.
END xxxx/xxxx	Cuing up to the last frame of the last clip.
PREROLL	Cuing up during thumbnail search

## ⑥ Playback condition mark

One of three channel condition marks is displayed when the ACCESS indicator is lit. The three channel condition marks indicate the following three stages.

Display	Name	Description
—	Green condition	There is no problem with the playback condition. This unit and the disc can be used just as they are. This corresponds to the “green” channel condition indicator of a VTR.
=	Yellow condition	The playback condition has deteriorated to some degree. There are no read errors, but you should take the action described in the next section. This corresponds to the “yellow” channel condition indicator of a VTR.
≡	Red condition	The playback condition has deteriorated. There are no read errors, <sup>a)</sup> but you should take the action described in the next section. This corresponds to the “red” channel condition indicator of a VTR.

a) Read errors will occur if the playback condition continues to deteriorate. If a read error occurs, a “Disc Error!” alarm appears in the time data display, the picture freezes, and audio is muted.

To display playback condition marks, set basic menu item 012 “CONDITION DISPLAY ON VIDEO MONITOR” to “ena,” and set basic menu item 005 “DISPLAY INFORMATION SELECT” to “T&sta.”

*For details about operation, see 7-2-2 “Basic Menu Operations” (page 74).*

## Playback condition displays

You can be alerted in advance to deteriorating playback conditions and to error correction rates which are approaching their limits.

Deteriorating playback may be due to the following causes.

- Scratches and dust on the disc surface  
This includes fingerprints, dust from the air, tar from cigarette smoke, and so on.  
Scratches and soiling which occur before recording are

not a problem because they are registered in advance as defects, and recording avoids them. However, scratches and soiling which occur after recording can lead to deteriorating playback conditions.

- Aging of disc recording layers  
Over several decades, the recording layers of optical discs can age and cause deteriorating playback conditions.  
You can use this function to check archival discs and other discs which have been stored for extended periods, so that you can take action before the deterioration progresses further.
- Deteriorating laser diodes performance  
The performance of the laser diodes used in optical heads can worsen with age, leading to deteriorating playback conditions.  
You can use the digital clock to check the total optical output time of optical heads.

*For details, see 8-1-1 “Digital Hours Meter” (page 93) about this setting.*

*Refer to the Maintenance Manual for an approximate guide to when it is time to replace optical heads.*

## To prevent playback conditions from deteriorating

Pay attention to the following points when handling discs.

- Do not open disc cartridges and touch discs directly with your hands.
- Do not store for long periods in locations which are dusty or exposed to air circulated by fans.
- Do not store for long periods under high temperatures or in locations exposed to direct sunlight.

## If playback conditions have deteriorated

If a yellow or red playback condition mark appears, check the following points.

**Whether the disc displays the same playback condition on other XDCAM devices:** If so, the surface of the disc may be dirty or scratched, or the performance of the recording layers on the disc may have worsened due to age. Do not use discs with these symptoms.

**Whether every disc inserted into an XDCAM device displays the same playback conditions:** If so, the performance of the laser diodes may have deteriorated. Check the total optical output time.

## 3-6 Handling Discs

### 3-6-1 Discs Used for Playback

This unit uses the following disc for playback: PFD23 Professional Disc <sup>1)</sup> (capacity 23.3 GB)

1) Professional Disc is a trademark of Sony Corporation.

#### Note

It is not possible to use the following discs with this unit:

- Blu-ray Disc
- Professional Disc for Data

### 3-6-2 Notes on Handling

#### Handling

The Professional Disc is housed in a cartridge, and is designed to allow handling free of risk from dust or fingerprints. However, if the cartridge is subjected to a severe shock, for example by dropping it, this can result in damage or scratching of the disc. If the disc is scratched, it may be impossible to record video/audio, or to play back the content recorded on the disc. The discs should be handled and stored carefully.

- Do not touch the surface of the disc itself within the cartridge.
- Deliberately opening the shutter may cause damage.
- Do not disassemble the cartridge.
- The supplied adhesive labels are recommended for indexing discs. Apply the label in the correct position.

#### Storage

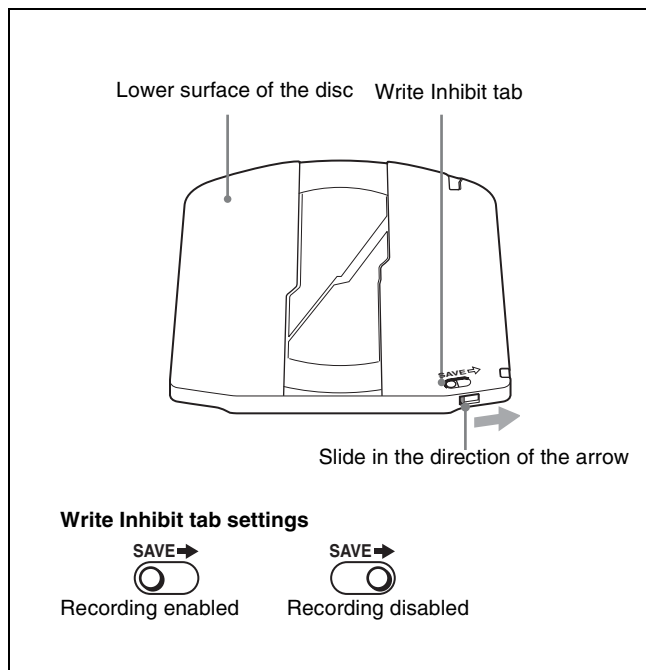
- Do not store discs where they may be subjected to direct sunlight, or in other places where the temperature or humidity is high.
- Do not leave cartridges where dust may be able to gain ingress.
- Store cartridges in their cases.

#### Care of the discs

- Remove dust and dirt on the outside of a cartridge using a soft dry cloth.
- If condensation forms, allow ample time to dry before use.

### 3-6-3 Write-Protecting Discs

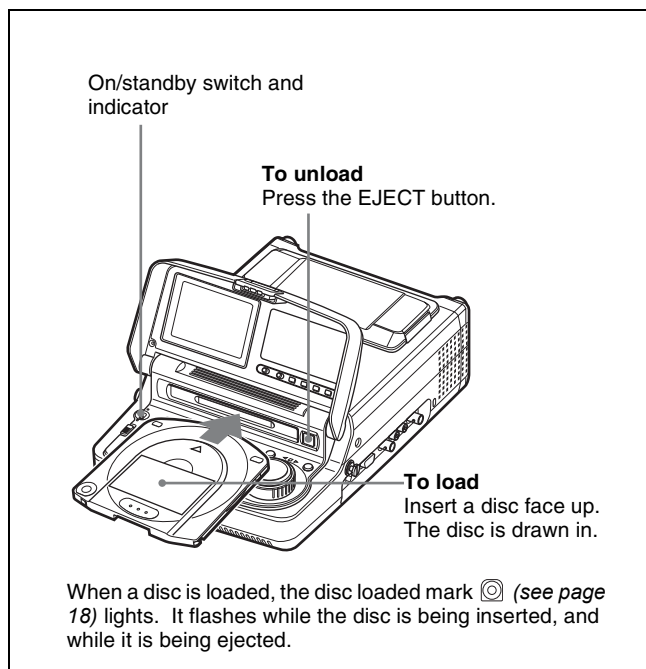
To protect the content recorded on the disc from accidental erasure, move the Write Inhibit tab on the lower surface of the disc in the direction of the arrow, as shown in the following figure.



*You can lock individual clips to prevent them from being deleted. For details, see 4-6-1 “Locking Clips” (page 39).*

### 3-6-4 Loading and Unloading a Disc

When the on/standby switch indicator is lit green, you can load and unload a disc as shown in the following figure.



#### If message “HUMID!” appears in the time data display

There is moisture condensation in the unit.

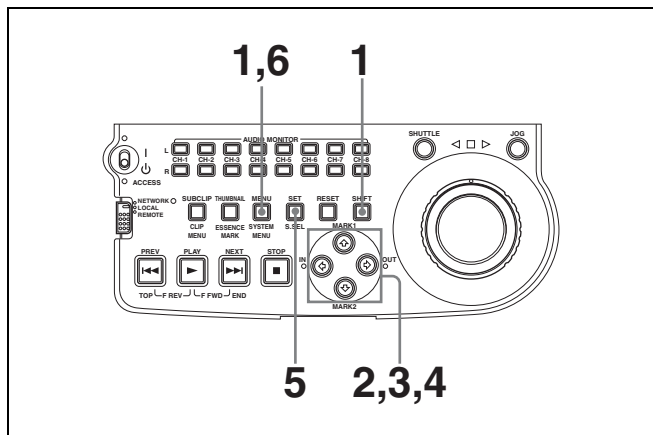
*For the steps to take when the message appears, see 8-4 “Condensation” on page 100.*

### 3-6-5 Formatting a Disc

An unused disc requires no formatting operation. The disc is automatically formatted when loaded into this unit. To format a recorded disc, load the disc into the unit, then proceed as follows.

#### Note

When a recorded disc is formatted, all the data on the disc is erased. (Locked clips (*see page 39*) are also erased.)



- 1** Holding down the SHIF button, press the MENU button.  
The system menu appears on the monitor screen.
- 2** Select “DISC MENU” using the  $\updownarrow$  button or  $\leftarrow\rightarrow$  button, then press the  $\rightarrow$  button.  
The menu item “FORMAT” is displayed.
- 3** Select “FORMAT” using the  $\updownarrow$  button or  $\leftarrow\rightarrow$  button, then press the  $\rightarrow$  button.  
The menu item “QUICK FORMAT” is selected.
- 4** Press the  $\rightarrow$  button.  
The message “QUICK FORMAT OK?” appears.

#### To return to the previous menu page without formatting the disc

Press the RESET button.

- 5** Press the SET button.  
Formatting is completed and the message “FORMAT COMPLETED.” appears.
- 6** Press the MENU button.  
This exits the menu.

### To format several discs in succession <sup>1)</sup>

- 1** Carry out steps **1** to **5** in the previous procedure, and then press the EJECT button to eject the disc.
- 2** Insert the next disc that you want to format.  
The message “QUICK FORMAT OK?” appears.
- 3** Press the SET button.
- 4** When the message “FORMAT COMPLETED.” appears, press the EJECT button to eject the disc.
- 5** Repeat steps **2** to **4** for all of the discs that you want to format.

1) This is supported from firmware version 1.4.

### 3-6-6 To Eject Discs With the Unit Powered Off

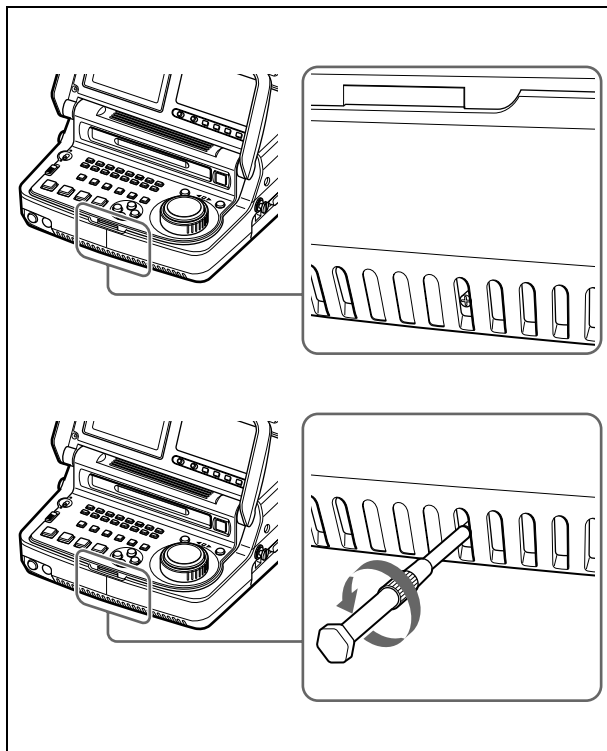
When battery power is low and at other times, it may not be possible to eject discs by pressing the EJECT button. In these situations, you can use the following as an emergency procedure to eject a disc manually.

- 1** Power the unit off.
- 2** Insert a Phillips screwdriver into the slit, as shown in the following illustration, and rotate the red screw in the counterclockwise direction.

#### Note

Use a screwdriver that fits into the slit. The width of the slit is approximately 2.5 mm.





The disc is ejected.

After removing the disc, you do not need to return the screw to its original position. Normal operation will resume when the unit is powered on again.

### 3-6-7 Using the Salvage Function

When XDCAM recording does not end normally, the file system is not updated, video and audio data recorded in real time is not recognized as files, and clip contents recorded up to that point are lost.

However, this unit has a salvage function which can hold losses to the minimum by reconstructing clips on such discs.

#### Notes

- This function salvages as much recorded material as possible after an unforeseen accident, but 100% restoration cannot be guaranteed.
- Even when this function is used, it is not possible to recover data from immediately before the interruption of recording. (From 4 to 6 seconds of data before the interruption of recording are lost.)

#### Full salvage

When a disc that was manually ejected from a device subjected to a recording interruption due to power off is loaded into this unit, clips are reconstructed on the basis of markers recorded on the disc. Processing time is about 30 seconds, although it depends on the state of the disc. Proceed as follows to perform a full salvage.

- 1 Insert the disc on which recording did not end normally.

The message “Salvage ?” appears.

- 2 Do one of the following.

#### To salvage

Press the SET button.

Processing begins and the message “Executing.” appears.

#### Notes

- If a write protected disc is loaded, the message “EJECT?” appears. Eject the disc, set the Write Inhibit tab to the recording enable position, and insert the disc again.
- This operation cannot be cancelled once it begins.

The message “Complete” appears when processing finishes. If the message reads “Incomplete!,” the clips that failed were lost.

#### To exit without salvaging

Press the RESET button.

The state of section where recording was interrupted is saved, but no salvage processing is done.

Sections which were recorded normally can be played back, but no new recording can be done on the disc. (A quick format can be done on the disc, although all of its contents will be lost.)

#### Note

Unless clips are salvaged, the message “Salvage ?” appears again the next time the disc is inserted or the unit is powered on.

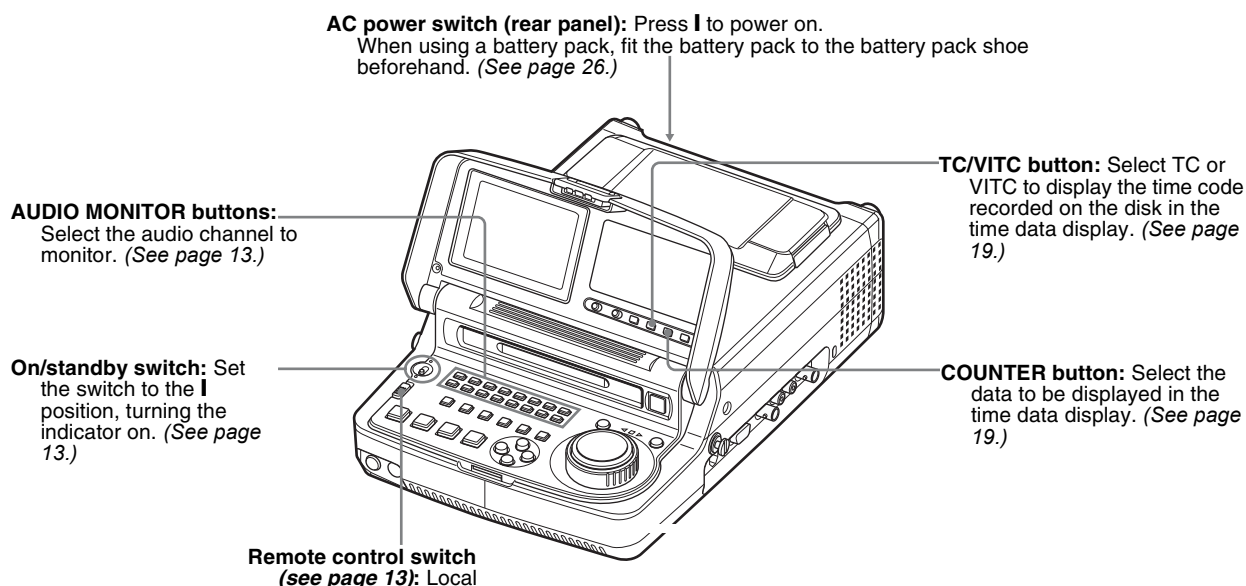


## 4-1 Preparations for Playback

### Button/Switch Settings

Before beginning playback, make any necessary button/switch settings.

*For details of the settings of the buttons/switches, see the pages indicated in parenthesis.*



## 4-2 Playback Operation

### Disc playback start position

Although this unit uses optical discs, it is designed to offer the most convenient features of tape playback by VTRs. One of these is the playback start position, which works in the same way as tape, as described below.

### After playback stop

The unit stops at the position where the STOP button was pressed.

Press the PLAY button to resume playback at the stop position.

### After disc insertion

The unit stops at the position of the disc when it was most recently ejected.

Press the PLAY button to resume playback at the most recent position.

The playback position is saved to the disc when the disc is ejected, which allows playback to start at that position whenever it is loaded into any XDCAM player.

#### Note

This function is not available when the Write Inhibit tab of the disc is set to the recording disabled position.

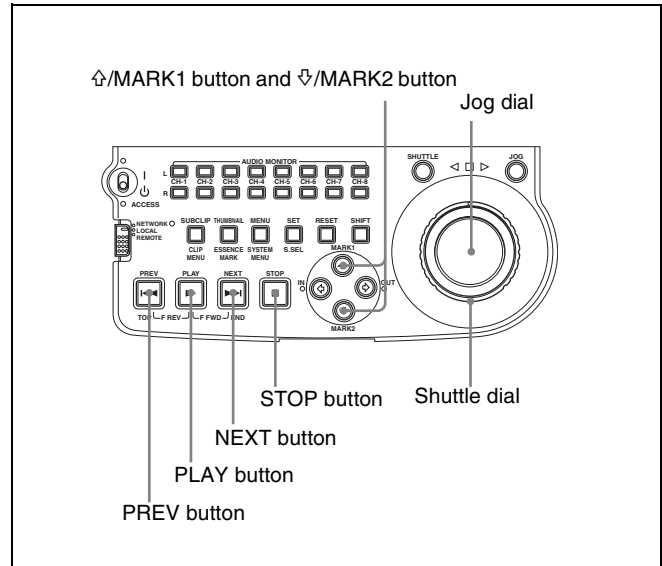
This section describes the following types of playback:

- Normal playback  
Playback at normal ( $\pm 1$ ) speed
- Playback in jog mode  
Variable speed playback, with the speed determined by the speed of turning the jog dial
- Playback in shuttle mode  
Variable speed playback, with the speed determined by the angular position of the shuttle dial

### Normal playback

First insert a disc.

*For details of how to insert a disc, see 3-6-4 “Loading and Unloading a Disc” on page 30.*



### To start playback

Press the PLAY button.

Playback starts.

When two or more clips are recorded on the disc, they are played back continuously.

#### Note

No audio is output when non-audio signals are played back.

### To jump to the next or previous clip, then start playback

Use the PREV button, NEXT button, jog dial, or shuttle dial.

*For information about the functions of these buttons, see “4 Playback controls” on page 15.*

*For details of the jog and shuttle dials, see “1 Jog/shuttle control block” on page 14.*

### To stop playback

Press the STOP button.

### If you play back to the end of the last clip

Playback automatically stops.

If, in this state, you press the PLAY button, the message “ALARM DISC END.” appears on the monitor.

To carry out playback again, move back to the desired clip using the PREV button, jog dial or shuttle dial.

### To record an essence mark

While playing back a disc, you can record essence marks such as shot mark 1 and shot mark 2 in desired frames.

To record a shot mark 1 or shot mark 2, hold down the  $\nabla$ /MARK1 or  $\nabla$ /MARK2 button and press the SET button.

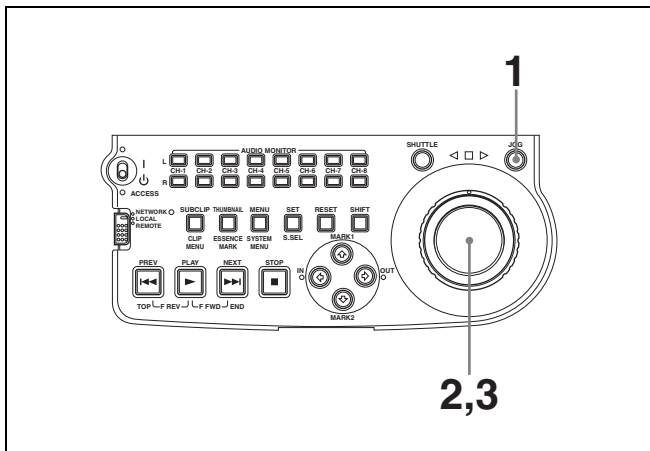
### Note

To erase or change essence marks, use the supplied PDZ-1 Proxy Browsing Software.

## Playback in jog mode

In jog mode, you can control the speed of playback by the speed of turning the jog dial. The playback speed range is  $\pm 1$  times normal speed.

To carry out playback in jog mode, proceed as follows.



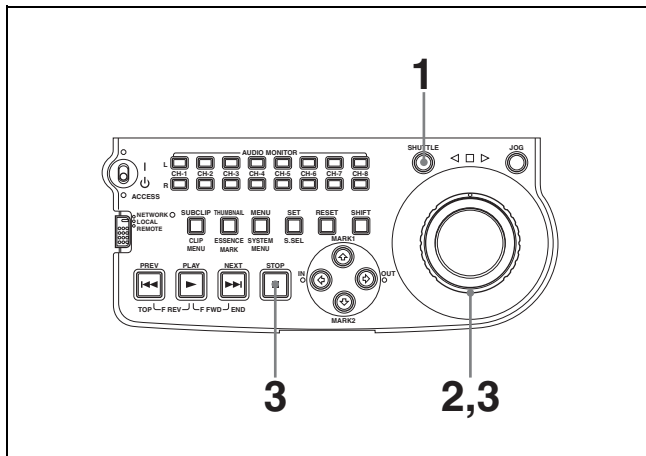
- 1 Press the JOG button, turning it on.
- 2 Turn the jog dial in the desired direction, at the speed corresponding to the desired playback speed.  
Playback in jog mode starts.
- 3 To stop playback in jog mode, stop turning the jog dial.

When extended menu item 101 “SELECTION FOR SEARCH DIAL ENABLE” is set to “dial” (factory default setting), just turning the jog dial with the JOG button off starts playback in jog mode.

## Playback in shuttle mode

In shuttle mode, you can control the speed of playback by the angular position of the shuttle dial. The range of playback speed is  $\pm 20$  times normal speed.

To carry out playback in shuttle mode, proceed as follows.



- 1 Press the SHUTTLE button, turning it on.
- 2 Turn the shuttle dial to the desired angle corresponding to the desired playback speed.  
Playback in shuttle mode starts.
- 3 To stop playback in shuttle mode, return the shuttle dial to the center position, or press the STOP button.

When extended menu item 101 “SELECTION FOR SEARCH DIAL ENABLE” is set to “dial” (factory default setting), just turning the shuttle dial with the SHUTTLE button off starts playback in shuttle mode.

### To alternate between normal-speed playback and shuttle mode playback

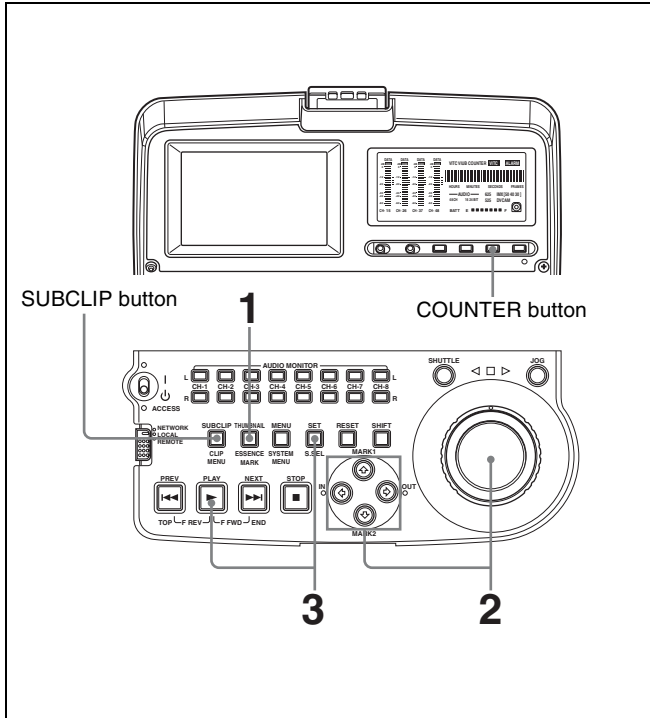
Set the shuttle dial to the position corresponding to the desired shuttle playback speed, then switch between normal-speed playback and shuttle playback by pressing the PLAY and SHUTTLE buttons alternately.

For intermittent shuttle mode playback, press the STOP and SHUTTLE buttons alternately.

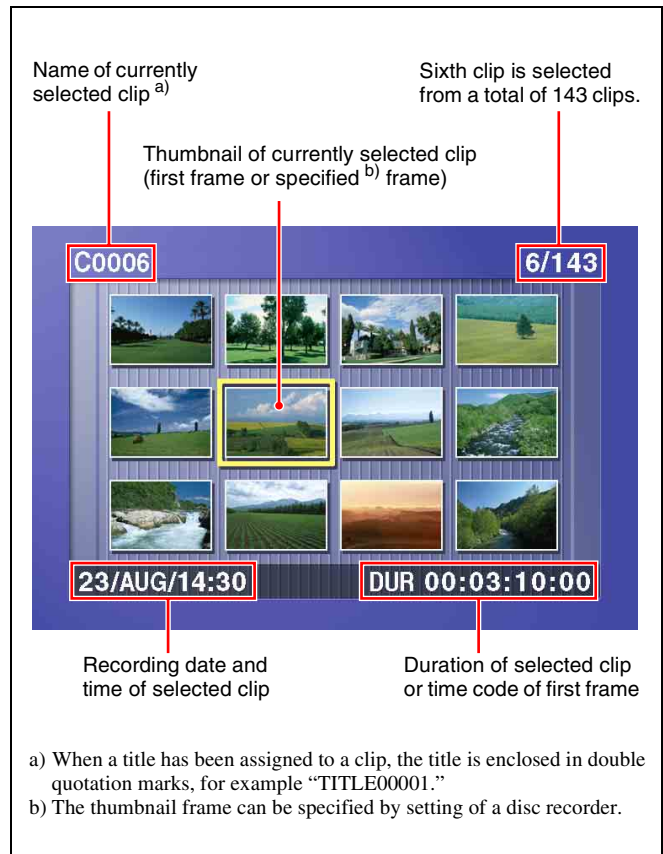
## 4-3 Thumbnail Search

### 4-3-1 Cuing Up a Desired Clip

To display the thumbnail images of all clips on the disc, and cue up a desired clip, proceed as follows.



- 1 With the SUBCLIP button off, press the THUMBNAIL button, turning it on.  
The thumbnails of clips on the disc appear.



#### To switch between duration and time code display in the thumbnail display

Press the COUNTER button. Each press of the button toggles between duration display and time code display.

#### To escape from the thumbnail display to the full-screen display

Press the THUMBNAIL button, turning it off.

- 2 Use the arrow buttons or the jog dial to select the desired clip.

You can select clips with the following operations.

**Press the PREV or NEXT button:** Move to the previous or next clip.

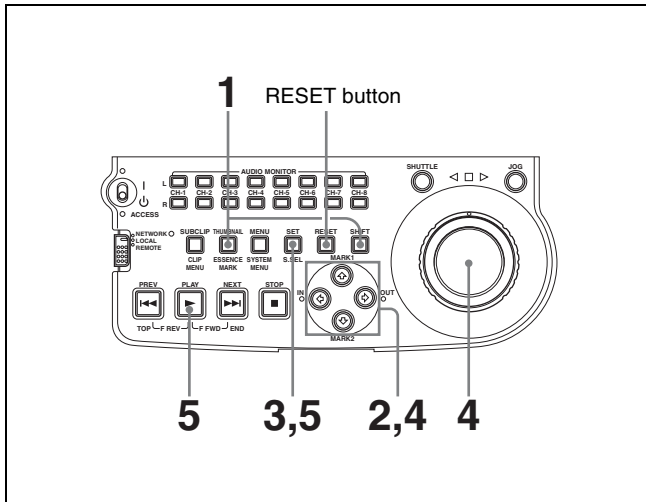
**Press the PREV or NEXT button with the SHIFT button held down:** Move to the first or last clip.

**Press the ◀ or ▶ button with the SHIFT button held down:** Switch to the previous or next page.

- 3 To cue up the selected clip, press the SET button. To start playback from the selected clip, press the PLAY button.

## 4-3-2 Cuing Up a Frame Including an Essence Mark

Proceed as follows.



- 1 Hold down the **SHIFT** button, and press the **THUMBAIL** button, turning it on.

The essence mark selection screen appears.



**To escape from the essence mark selection screen to the previous screen**

Press the **RESET** button.

- 2 Use the arrow buttons or the jog dial to select the desired essence mark.

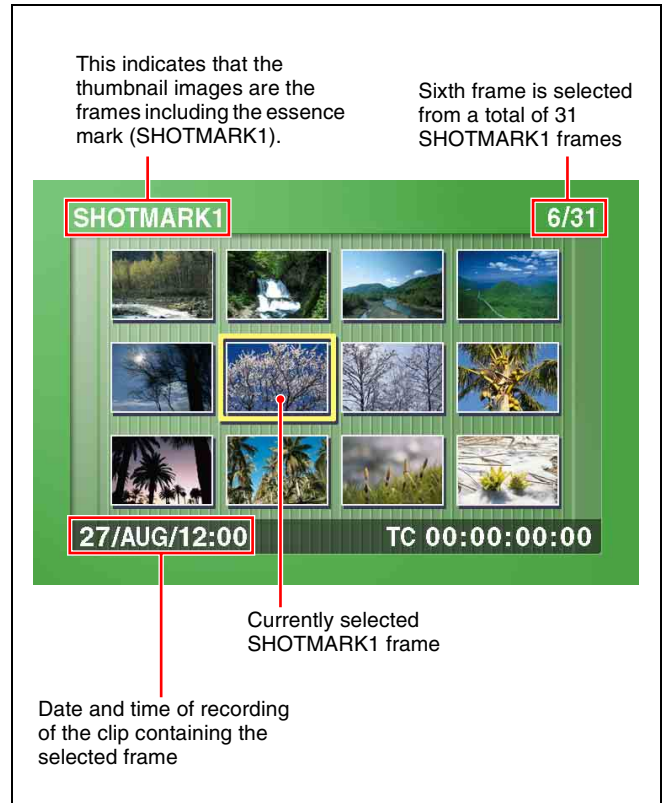
You can select essence marks with the following operations.

**Press the PREV or NEXT button:** Move to the previous or next essence mark.

- 3 Press the **SET** button.

Thumbnails of the frames including the selected essence mark appear.

(The example shows the case where **SHOTMARK1** is selected as the essence mark.)



- 4 Use the arrow buttons or the jog dial to select the desired frame.

You can select frames with the following operations.

**Press the PREV or NEXT button:** Move to the previous or next frame.

**Press the PREV or NEXT button with the SHIFT button held down:** Move to the first or last frame.

**Press the ◀ or ▶ button with the SHIFT button held down:** Switch to the previous or next page.

- 5 Press the **SET** button to cue up the selected clip.

To start playback from the selected frame, press the **PLAY** button.

## 4-4 Clip List Playback

You can play back clips in the order of clip lists created with the scene selection function (see page 42).

### 4-4-1 Playing Back in Clip List Order

Proceed as follows.

- 1 If the clip list that you want to play exists on the disc, load it into the current clip list.

*About the current clip list, see page 44.*

*For the clip list loading operation, see 5-3-1 “Loading a Clip List From Disc Into Unit Memory” (page 52).*

- 2 Press the SUBCLIP button, turning it on.
- 3 Press the PLAY button.

Playback begins from the first sub clip in the current clip list.

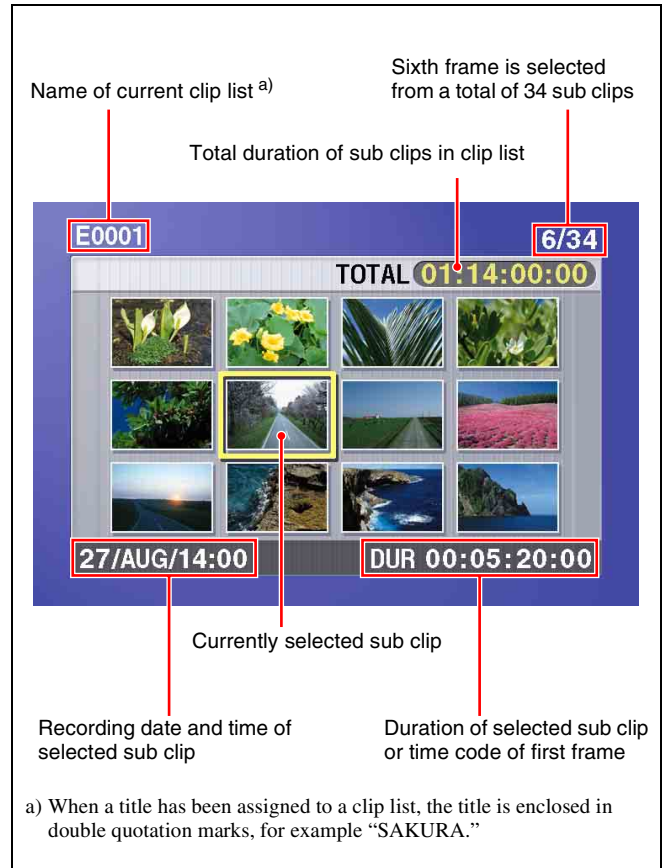
#### Note

Depending on the length of sub clips in the clip list and their arrangement on the disc, playback may freeze momentarily between sub clips.

### 4-4-2 Cuing Up With Sub Clip Thumbnails

With the desired clip list loaded in the current clip list, proceed as follows.

- 1 Press the SUBCLIP button and the THUMBNAIL button, turning them on.  
Thumbnails of the first frames in the sub clips appear.



#### To switch between duration and time code display in the thumbnail display

Press the COUNTER button. Each press of the button toggles between duration display and time code display.

#### To escape from the thumbnail display to the full-screen display

Press the THUMBNAIL button, turning it off.

- 2 Use the arrow buttons or the jog dial to select the sub clip you want to cue up.

You can select sub clips with the following operations.

**Press the PREV or NEXT button:** Move to the previous or next sub clip.

**Press the PREV or NEXT button with the SHIFT button held down:** Move to the first or last sub clip.

**Press the ⬅ or ➡ button with the SHIFT button held down:** Switch to the previous or next page.

- 3 To cue up the selected sub clip, press the SET button. To start playback from the selected sub clip, press the PLAY button.



## 4-5 Repeat Playback

You can perform repeat playback <sup>1)</sup> for normal and clip list playback.

To perform repeat playback, set extended menu item 142 “REPEAT MODE” to “play,” and then proceed as follows.

1) This is supported from firmware version 1.4.

### 1 Insert a disc.

To perform repeat playback for normal playback, proceed to step **3**.

### 2 To perform repeat playback for clip list playback, press the SUBCLIP button.

### 3 Press the PLAY button.

Playback starts from the saved playback position, and “Repeat Play” appears in the time data display for 2.5 seconds.

**Normal play:** When playback of the last clip finishes, it resumes from the start of the disc, repeatedly playing from the first through the last clip on the disc.

**Clip list play:** When playback of the last sub clip finishes, it resumes from the start of the clip list, repeatedly playing from the first through the last sub clip in the clip list.

If extended menu item 142 “REPEAT MODE” is set to “play,” repeat playback starts from the first clip automatically whenever you power the unit on with a disc loaded. Clip list playback starts from the first sub clip in the clip list.

### To stop repeat playback

Operate any of the playback buttons except the PLAY button, or operate the jog or shuttle dial.

The unit executes the operation for the button press, or jog or shuttle dial operation. (The unit enters search mode when you conduct a search, and stop mode at the end of the disc.)

### To disable repeat playback

Set extended menu item 142 “REPEAT MODE” to “off.”

## 4-6 Locking and Deleting Clips

In the thumbnail screen, you can delete selected clips or lock them so that they cannot be deleted. <sup>1)</sup>

1) This is supported from firmware version 1.5.

### 4-6-1 Locking Clips

Locking prevents the following operations on clips.

- Deletion
- Renaming by FAM or FTP

#### Notes

- Locked clips are erased along with other clips when you format a disc.
- Clips cannot be locked or unlocked when the Write Inhibit tab of the disc is set to the recording disabled position, or when extended menu item 310 “REC INHIBIT” is set to “on.”

### 1 With the SUBCLIP button off, press the THUMBNAIL button, turning it on.

The thumbnails of the clips on the disc appear.

### 2 Use the arrow buttons or the jog dial to select the clip to lock.

You can select clips with the following operations.

**Press the PREV or NEXT button:** Move to the previous or next clip.

**Press the PREV or NEXT button with the SHIFT button held down:** Move to the first or last clip.

**Press the ⏮/⏭ button with the SHIFT button held down:** Switch to the previous or next page.

### 3 With the SHIFT button held down, press the SUBCLIP button. Or press the MENU button.

The THUMBNAIL MENU appears.

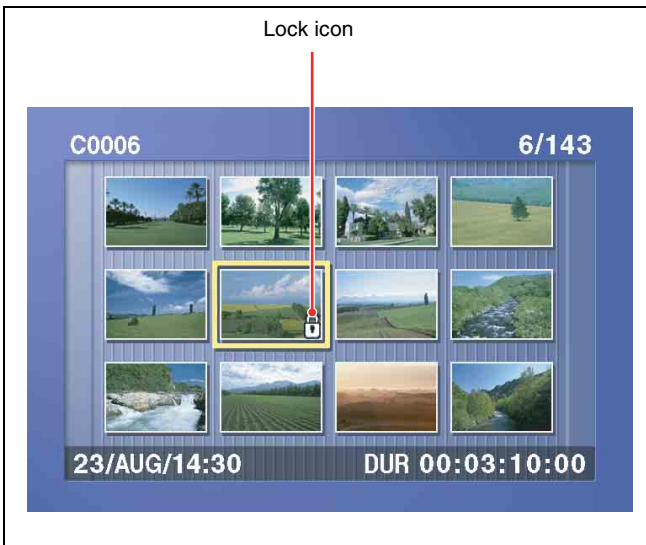


#### To escape from the THUMBNAIL MENU to the previous screen

Press the RESET button.

- 4 With LOCK/UNLOCK CLIP selected, press the SET button.

You return to the thumbnail screen, and a lock icon appears on the thumbnail of the selected clip to show that it is locked.



Locked clips cannot be deleted, overwritten, or renamed. Unlock the clip if you want to perform any of these operations.

#### To lock clips without displaying the THUMBNAIL MENU

After carrying out step 2 in the procedure, press the STOP button with the SHIFT button held down (shortcut operation).

#### To unlock clips

Carry out step 2 of “Locking Clips” to select a locked clip (one with the lock icon displayed on its thumbnail). Then do one of the following.

- Carry out steps 3 and 4 of “Locking Clips.”

- Press the STOP button with the SHIFT button held down (shortcut operation).

#### To lock all clips

- 1 Carry out steps 1 and 3 of “Locking Clips” to display the THUMBNAIL MENU.
- 2 Use the arrow buttons or the jog dial to select LOCK ALL CLIPS, and then press the SET button.

A confirmation screen appears.

#### To cancel the lock operation and return to the thumbnail screen

Do one of the following.

- Use the ⇐ or ⇒ button to select “CANCEL,” and then press the SET button.
- Press the RESET button.

- 3 Use the ⇐ or ⇒ button to select “OK,” and then press the SET button.

All clips are locked, and you return to the thumbnail screen.

#### To unlock all clips

Carry out the procedure in “To lock all clips,” selecting UNLOCK ALL CLIPS in step 2.

### 4-6-2 Deleting Clips

#### Notes

- Clips cannot be deleted when the Write Inhibit tab of the disc is set to the recording disabled position.
- Locked clips cannot be deleted.
- When the target clip is referenced in a clip list, the clip list that references the clip will also be deleted.

*You can use the DISC MENU to delete the last clip or all clips. For details, see page 92.*

- 1 With the SUBCLIP button off, press the THUMBNAIL button, turning it on.  
The thumbnails of the clips on the disc appear.
- 2 Use the arrow buttons or the jog dial to select the clip to delete.

You can select clips with the following operations.

**Press the PREV or NEXT button:** Move to the previous or next clip.

**Press the PREV or NEXT button with the SHIFT button held down:** Move to the first or last clip.



**Press the  $\triangleleft/\triangleright$  button with the SHIFT button held down:** Switch to the previous or next page.

- 3** With the SHIFT button held down, press the SUBCLIP button. Or press the MENU button.

The THUMBNAIL MENU appears (*see step 3 of 4-6-1 “Locking Clips” (page 39)*).

**To escape from the THUMBNAIL MENU to the previous screen**

Press the RESET button.

- 4** Use the arrow buttons or the jog dial to select DELETE CLIP, and then press the SET button.

Thumbnails of four frames in the target clip appear. One of the following messages appears in a confirmation dialog, depending on whether the target clip is referenced in a clip list.

**When the target clip is not referenced in a clip list:** “DELETE CLIP?”

**When the target clip is referenced in a clip list:** “DELETE CLIP & CLIP LIST?” (The clip list that references the clip will also be deleted.)



**To go to the clip deletion screen without displaying the THUMBNAIL MENU**

After step 2, press the RESET button with the SHIFT button held down (shortcut operation).

**To cancel the deletion and return to the thumbnail screen**

Do one of the following.

- Use the  $\triangleleft$  or  $\triangleright$  button to select “CANCEL,” and then press the SET button.
- Press the RESET button.

- 5** Use the  $\triangleleft$  or  $\triangleright$  button to select “OK,” and then press the SET button.

The clip is deleted and you return to the thumbnail screen.

**To delete all clips**

- 1** Carry out steps 1 and 3 of “Deleting Clips” to display the THUMBNAIL MENU.
- 2** Use the arrow buttons or the jog dial to select DELETE ALL CLIPS, and then press the SET button.

A confirmation screen appears.

**To cancel the deletion and return to the thumbnail screen**

Do one of the following.

- Use the  $\triangleleft$  or  $\triangleright$  button to select “CANCEL,” and then press the SET button.
- Press the RESET button.

- 3** Use the  $\triangleleft$  or  $\triangleright$  button to select “OK,” and then press the SET button.

All clips are deleted, and you return to the thumbnail screen.

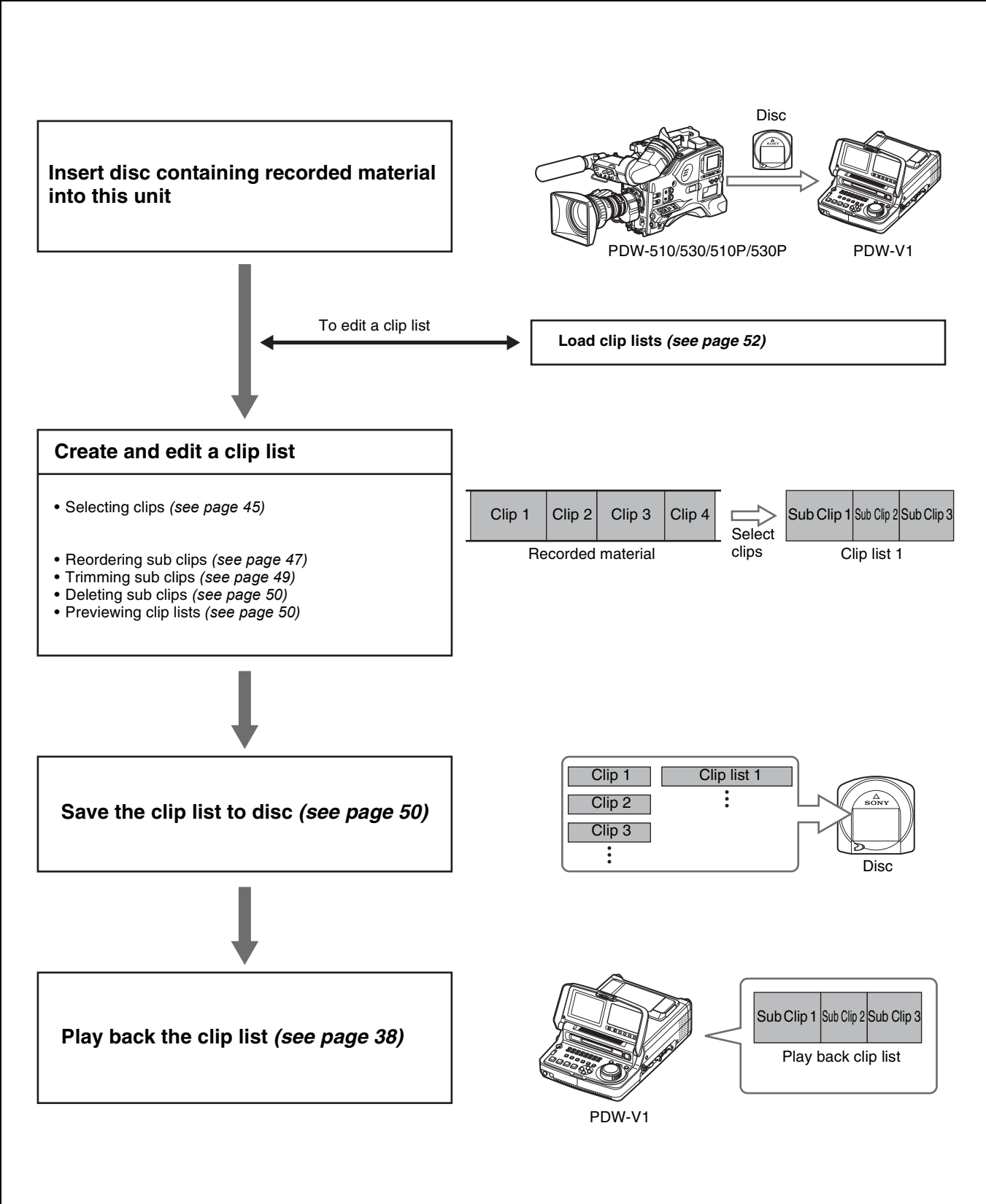
## 5-1 Overview

### What is scene selection?

Scene selection is a function which allows you to select material (clips) from the material recorded on a disc and perform cut editing. You can do this by operating on this unit only.

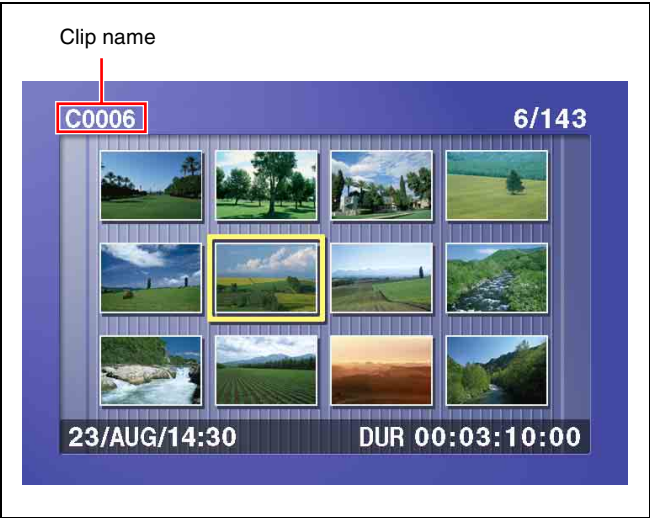
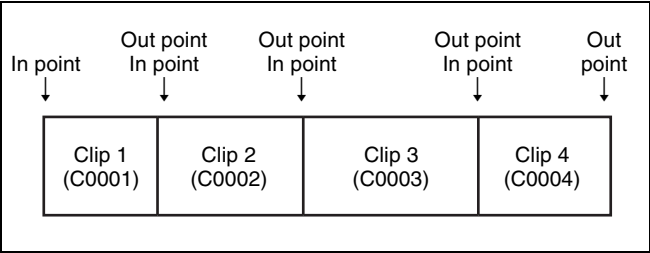
- Scene selection is a convenient way to perform cut editing in the field and in other offline situations.
- Clip lists (edit data) created with the scene selection function can be used on XPRI and other full-feature nonlinear editing systems.

Flow of scene selection editing



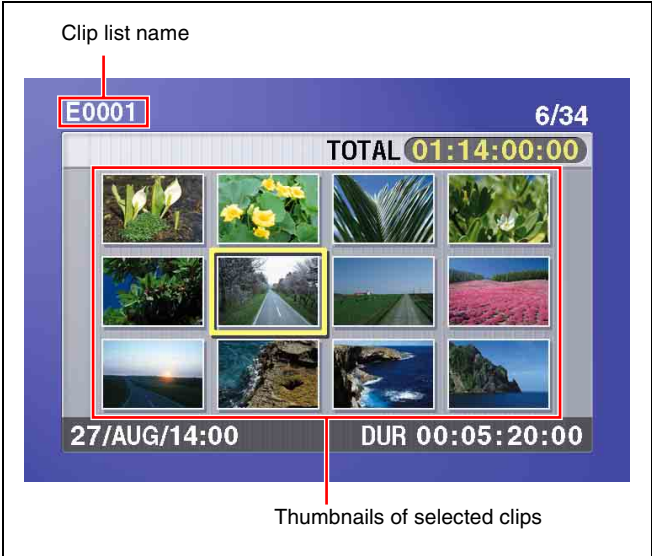
### Clips

Material recorded on a disc with this unit is managed in units called “clips.” A clip contains the material between a recording start point (In point) and a recording end point (Out point). Clips have names beginning with “C,” for example “C0001.”



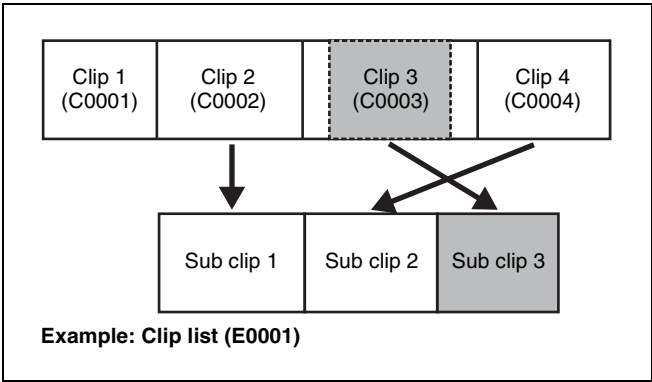
### Clip lists

Data called a “clip list” is created when you use the scene selection function to select desired clips from the clips stored on a disc. Clip lists have names beginning with “E,” for example “E0001.” You can save up to 99 clip lists on a disc.



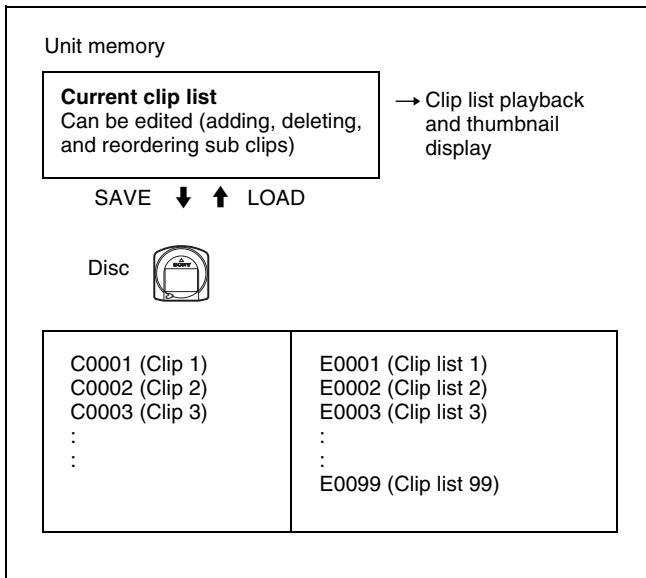
### Sub clips (clips in clip lists)

The specified clips (or parts of clips) in a clip list are called “sub clips.” Sub clips are virtual data specifying ranges in the original clips. Clip data in the original clips is not overwritten.



### Clip list editing (current clip list)

Clip lists cannot be edited on disc. To edit clip lists, you need to load them, one at a time, into the unit memory. The clip list which is currently loaded into the unit memory is called the “current clip list.” The current clip list is always the target of sub clip creation and editing. Clip list playback also uses the current clip list. After creating and editing a clip list, you need to save it to disc.



## Clip list playback

Clips and clip lists are saved together on a disc.  
Clips are played back according to clip list data.

## 5-2 Creating Clip Lists

## Before starting

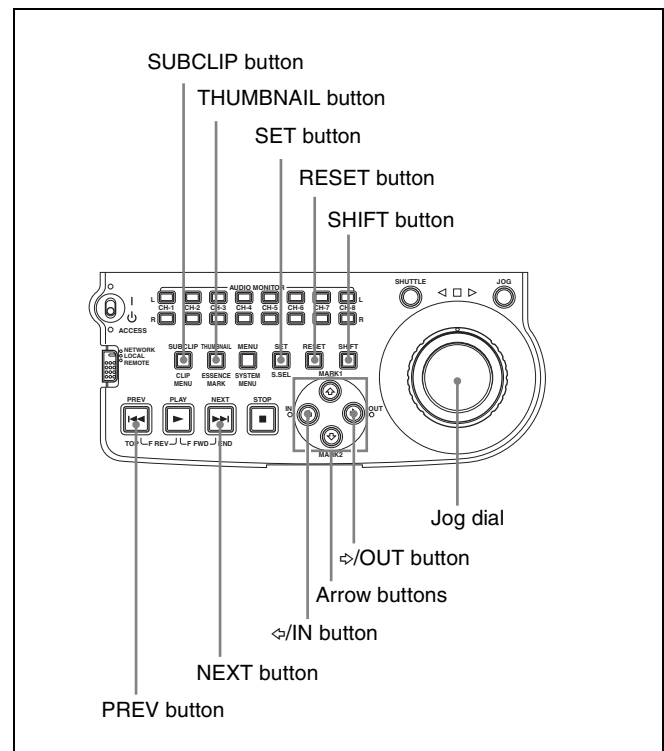
Insert a disc containing recorded clips into the unit.

### 5-2-1 Selecting Clips

There are two ways to select clips.

- Select from the thumbnail screen.  
You can select the desired clips from the thumbnail screen.
- Select while playing back or searching.  
You can select the scene to use while viewing the video.

The clips selected here are added to the current clip list as sub clips.



## To select from the thumbnail screen

- 1 With the SUBCLIP button off, press the THUMBNAIL button, turning it on.

Thumbnails of the clips on the disc appear.



- 2 Use the arrow buttons or the jog dial to select the desired clip.

You can also select clips with the following operations.

**Press the PREV or NEXT button:** Moves to the previous or next clip.

**Press the PREV or NEXT button with the SHIFT button held down:** Moves to the first or last clip.

**Press the ⬆ or ⬇ button with the SHIFT button held down:** Switches to the previous or next page. (Does not switch when there is only one page.)

- 3 With the SHIFT button held down, press the SET button.

The scene selection window appears.



**To return to the original screen**  
Press the RESET button.

- 4 Press the SET button.

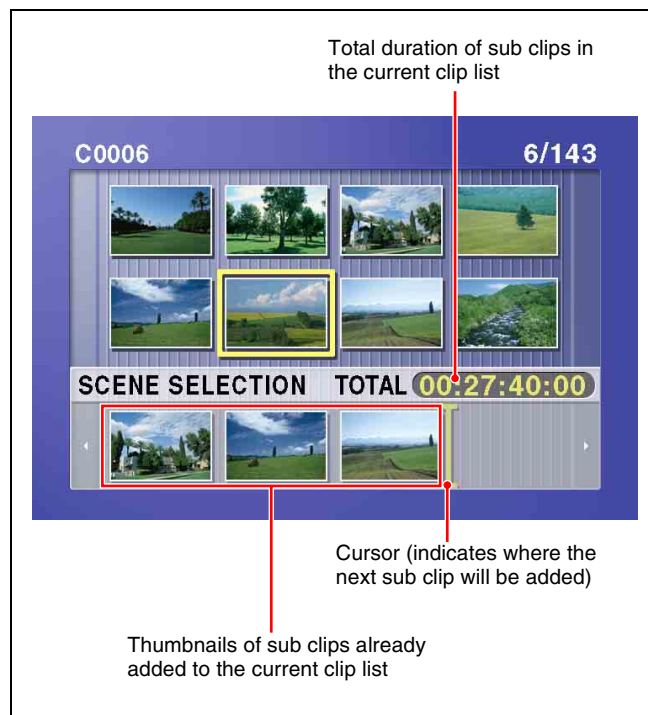
The selected clip is added to the current clip list as a sub clip.

At the same time, the scene selection window closes and you return to the original thumbnail screen.

- 5 Repeat steps 2 to 4 until you have added all of the desired clips to the current clip list.

You can select the same clip any number of times.

The scene selection window displays thumbnails of the sub clips that have been added to the current clip list. The cursor in the window indicates the position where the next sub clip will be added.



**To move the cursor in the scene selection window**

After carrying out step 3 to display the scene selection window, press the ⬅ or ➡ button.

- 6 When you have finished selecting all the clips you want, save the current clip list to disc.

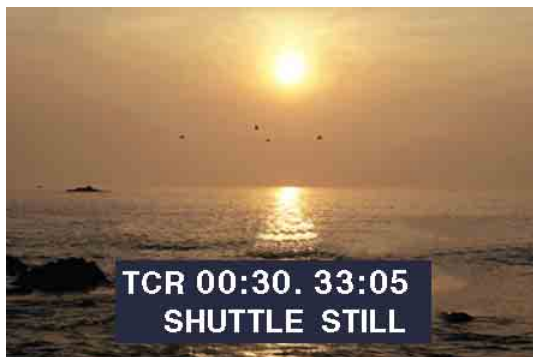
See 5-2-6 “Saving the Current Clip List to Disc” (page 50).

**To select while playing back and searching (quick scene selection)**

- 1 With the SUBCLIP button off, and the clip displayed in full-screen mode, play back the clip or conduct a search to find the point that you want to set as the In point.

**To display the desired clip in full-screen mode**

If the thumbnail screen is displayed, use the arrow buttons or jog dial to select the clip to display in full-screen mode, and then press the SET button.



### To search

Use the jog and shuttle dials.

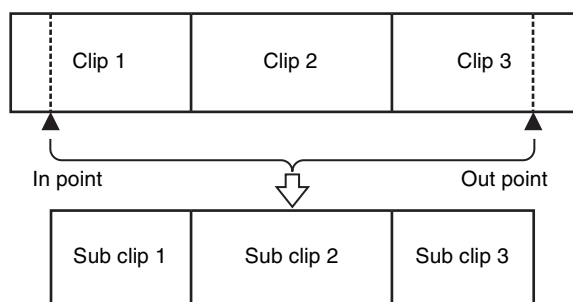
- 2 At the point you want to set as the In point, hold down the ⇐/IN button and press the SET button.

An In point is set, and the IN indicator lights.

- 3 In the same way, search for the point you want to set as the Out point, and then hold down the ⇐/OUT button and press the SET button.

An Out point is set, and the OUT indicator lights.

Clips recorded on the disc



### To check the duration

Press the ⇐/IN button and the ⇐/OUT button at the same time.

The duration appears on the screen.

### To reset an In point or Out point

With the ⇐/IN button or ⇐/OUT button held down, press the RESET button.

- 4 With the SHIFT button held down, press the SET button.

The section between the In point and Out point is added to the end of the current clip list as a sub clip.

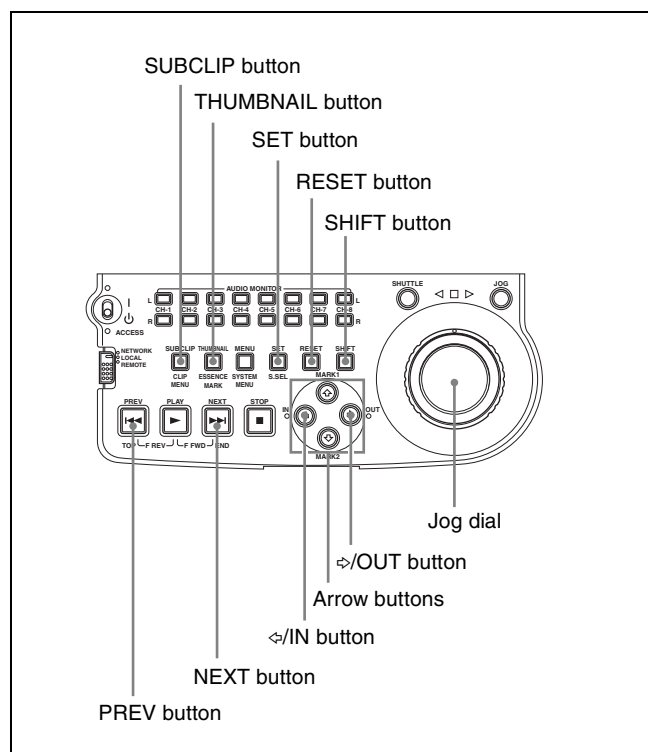
### When you set In and Out points stretching across several clips

One sub clip is created for each of the clips.

- 5 Repeat steps 1 to 4 until you have added all of the clips you want to the current clip list.
- 6 Save the current clip list to disc.

See 5-2-6 “Saving the Current Clip List to Disc” (page 50).

## 5-2-2 Reordering Sub Clips



- 1 Press the SUBCLIP button, turning it on.
- 2 Press the THUMBNAIL button, turning it on.

Thumbnails of the sub clips in the current clip list appear.





**If the clip list you want to edit is not the current clip list**

Load the clip list from the disc into the unit memory (see page 52).

**To return to the full-screen display**

Press the THUMBNAIL button, turning it off.

- 3** Use the arrow buttons or the jog dial to select the desired sub clip.

You can also select sub clips with the following operations.

**Press the PREV or NEXT button:** Moves to the previous or next sub clip.

**Press the PREV or NEXT button with the SHIFT button held down:** Moves to the first or last sub clip.

**Press the ⬅ or ➡ button with the SHIFT button held down:** Switches to the previous or next page. (Does not switch when there is only one page.)

- 4** With the SHIFT button held down, press the SET button.

The sub clip operation menu appears.



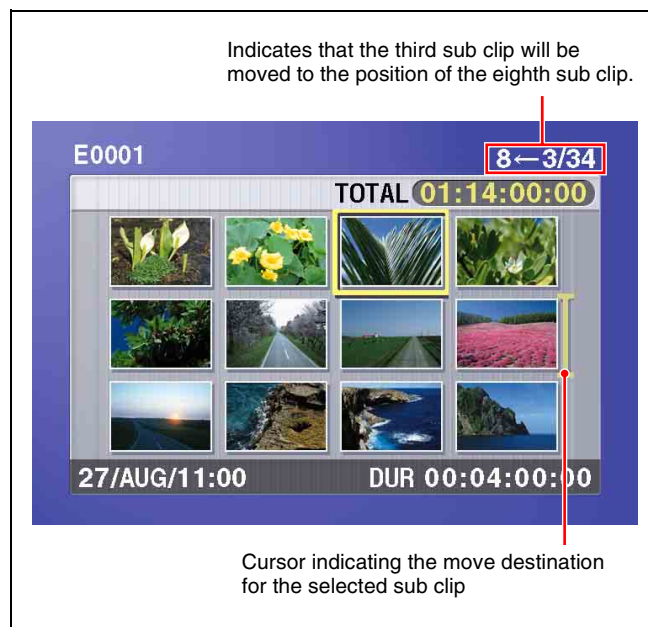
**To return to the thumbnail screen without moving the sub clip**

Do one of the following.

- Press the ⬅ or ➡ button to select EXIT, and then press the SET button.
- Press the RESET button.

- 5** Use the ⬅ or ➡ button to select MOVE, and then press the SET button.

The sub clip movement screen appears. The clip selected in step 3 appears surrounded by a frame.



**To return to the previous screen**

Press the RESET button.

- 6** Use the arrow buttons or the jog dial to move the cursor to the position where you want to move the selected sub clip.

**To return to the previous screen**

Press the THUMBNAIL button.

- 7** Press the SET button.

The sub clip thumbnail screen appears, allowing you to check the results of the sub clip movement.

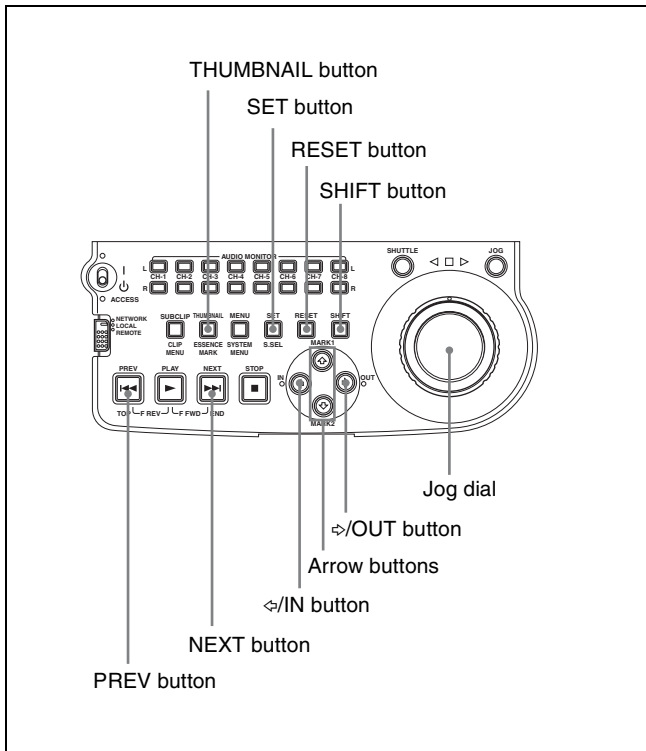


- 8** Save the current clip list to disc.

See 5-2-6 “Saving the Current Clip List to Disc” (page 50).

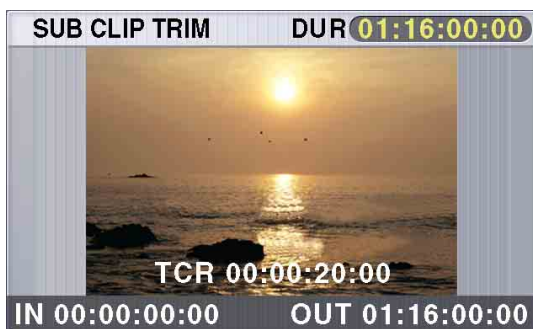


## 5-2-3 Trimming Sub Clips



- 1 Carry out steps 1 to 4 of 5-2-2 “Reordering Sub Clips” to select a sub clip and display the sub clip operation menu.
- 2 Use the  $\updownarrow$  or  $\leftarrow\rightarrow$  button or jog dial to select TRIM, and then press the SET button.

The first frame of the selected sub clip appears. In this state, you can play back and search the entire disc.



### To cancel the trim and return to the previous screen

With the SHIFT button held down, press the SET button.

- 3 Play back and search the disc to find scenes to set new In and Out points.

- 4 At the scene where you want to set a new In or Out point, hold down the  $\leftarrow$ /IN button (to change the In point) or the  $\rightarrow$ /OUT button (to change the Out point) and press the SET button.

Depending on the button that you pressed, a new In or Out point is set, and the IN or OUT indicator lights.

### To change both the In and Out points

Carry out steps 3 and 4 for both the In and Out points.

### To reset the In or Out point

With the  $\leftarrow$ /IN button or  $\rightarrow$ /OUT button held down, press the RESET button. The In or Out point is restored to the value it had before the sub clip trim screen opened.

### To cue up the In or Out point

With the  $\leftarrow$ /IN button held down, press the PREV button. Or with the  $\rightarrow$ /OUT button held down, press the NEXT button.

### Note

You can escape from the sub clip trim screen to full-screen display without executing a trim if you press the THUMBNAIL button.

- 5 Once you have set the new In point or Out point, hold down the SHIFT button and press the SET button.

The trim is executed, and you return to the sub clip thumbnail display.



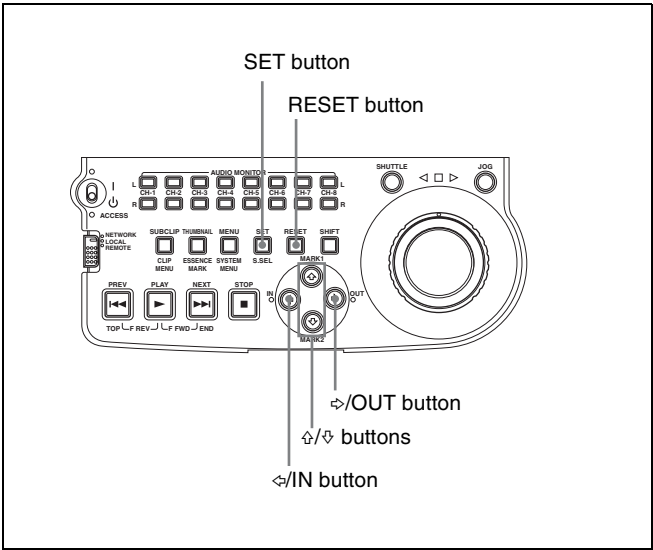
### To cancel the trim

Reset the In or Out point to the value it had before you entered the sub clip trim screen, and then hold down the SHIFT button and press the SET button.

- 6 Save the current clip list to disc.

See 5-2-6 “Saving the Current Clip List to Disc” (page 50).

# 5-2-4 Deleting Sub Clips



- 1 Carry out steps 1 to 4 of 5-2-2 “Reordering Sub Clips” to select a sub clip and display the sub clip operation menu.
- 2 Use the  $\leftarrow$  or  $\rightarrow$  button to select DELETE, and then press the SET button.

The sub clip deletion screen appears.



**To cancel the deletion and return to the previous screen**

Do one of the following.

- Use the  $\leftarrow$  or  $\rightarrow$  button to select CANCEL, and then press the SET button.
- Press the RESET button.

The screen returns to the sub clip thumbnail display.

- 3 Use the  $\leftarrow$  or  $\rightarrow$  button to select OK, and then press the SET button.

The selected sub clip is deleted, and the screen returns to the sub clip thumbnail display.



- 4 Save the current clip list to disc.

See 5-2-6 “Saving the Current Clip List to Disc” (page 50).

## 5-2-5 Previewing the Current Clip List

Press the SUBCLIP button, turning it on, and then press the PLAY button.

When the THUMBNAIL button is lit, playback starts from the beginning of the selected sub clip.

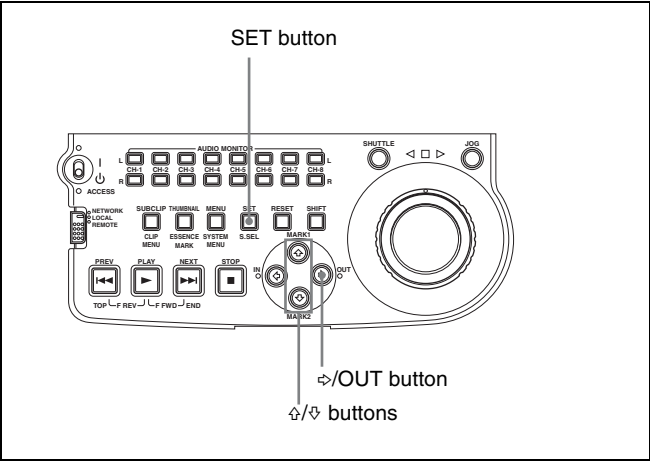
When the THUMBNAIL button is not lit, playback starts from the first sub clip in the clip list.

## 5-2-6 Saving the Current Clip List to Disc

The current clip list is not saved to disc unless you carry out this procedure. After editing clip list data, you should always save it to disc.

### Notes

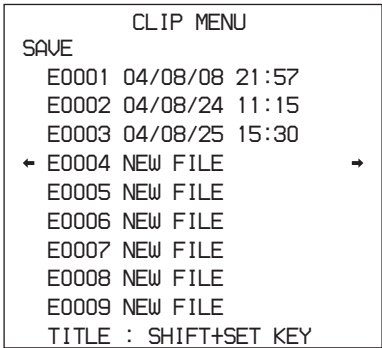
- The current clip list is not saved to disc if the Write Inhibit tab of the disc is set to the recording disabled position.
- Unless you carry out this procedure, the unit does not enter the standby state even if you move the on/standby switch to the  $\text{O}$  position. Follow the message that appears and return the on/standby switch to the  $\text{I}$  side, and then save the clip list or, if you do not need it, clear it (see page 53).



- 1 Display the CLIP menu.  
*See “To display the CLIP menu” (page 52).*

- 2 Use the ⇧ or ⇩ button to move the cursor to SAVE, and then press the ⇨ button.  
A list of clip lists appears.  
“NEW FILE” is displayed for clip lists without any registered data.

The date of creation or the title is displayed for each clip list.

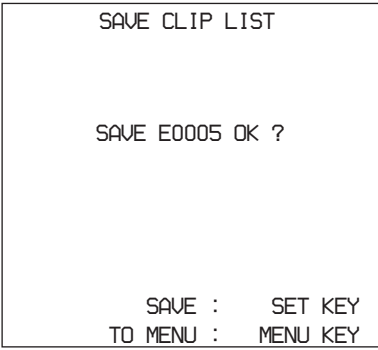


### To switch between display of dates of creation, titles, and clip list names

With the SHIFT button held down, press the SET button.  
With each press, the display changes as follows.  
Dates of creation > titles > clip list names > dates of creation ...

- 3 Use the ⇧ or ⇩ button or the jog dial to select the desired clip list, and then press the ⇨ button.

A confirmation message like the one shown below appears.



**To cancel the save**  
Press the MENU button.

- 4 Press the SET button.  
The current clip list is saved to disc.

**To assign a title to a clip list**  
Use the supplied PDZ-1 software.

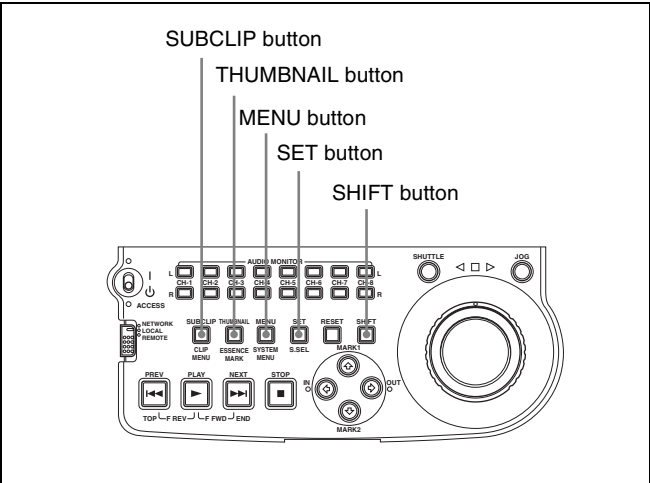
*For details, refer to the PDZ-1 online help.*

# 5-3 Managing Clip Lists (CLIP Menu)

After you create a clip list, you can use the CLIP menu to save it to disc, load it from disc into the unit memory, and delete it from the disc. The CLIP menu also allows you to clear and edit the current clip list.

**Note**  
Carry out CLIP menu operations with the unit stopped. If the message “STOP ONCE, THEN EXECUTE.” appears, press the STOP button.

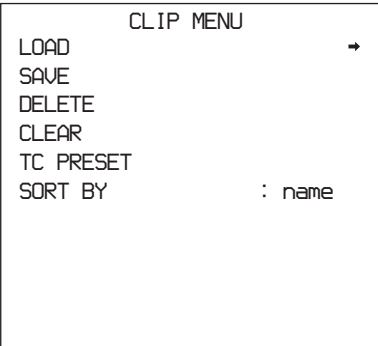
## To display the CLIP menu



With the THUMBNAIL button off, hold down the SHIFT button and press the SUBCLIP button.

**If the THUMBNAIL button is lit**  
Press the THUMBNAIL button to turn it off.

The CLIP menu appears.



Item	Operation
LOAD	Load a clip list from the disc into the current clip list (see page 52)
SAVE	Save the current clip list to disc (see page 50)
DELETE	Delete a clip list from the disc (see page 53)
CLEAR	Clear the current clip list from the unit memory (see page 53)
TC PRESET	Preset the first time code in the current clip list (see page 53)
SORT BY	Sort clip lists by name or date of creation (see page 54)

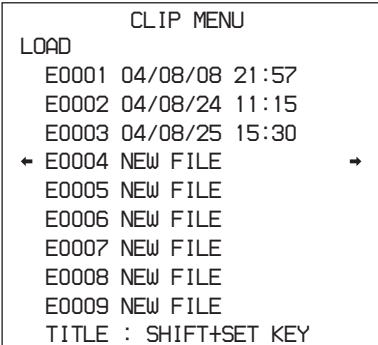
**To escape from the CLIP menu.**  
Press the MENU button.

## 5-3-1 Loading a Clip List From Disc Into Unit Memory

The clip list loaded with this procedure becomes the current clip list.

- 1 Display the CLIP menu.  
*See “To display the CLIP menu” (page 52).*
- 2 Use the  $\uparrow$  button to move the cursor to LOAD, and then press the  $\Rightarrow$  button.

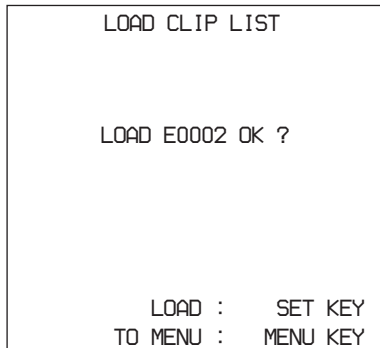
A list of clip lists appears.  
The date of creation or the title is displayed for each clip list.



**To switch between display of dates of creation, titles, and clip list names**  
With the SHIFT button held down, press the SET button.  
With each press, the display changes as follows.  
Dates of creation > titles > clip list names > dates of creation ...

- 3 Use the  $\uparrow$  or  $\downarrow$  button or jog dial to select the desired clip list, and then press the  $\Rightarrow$  button.

A confirmation message like the one shown below appears.



- 4 Press the SET button.

The selected clip list is loaded into the unit memory as the current clip list.

#### If an unsaved current clip list exists in the unit memory

A warning message like the following appears.

“CLIP LIST IS NOT SAVED. OVERWRITE CLIP LIST?”

Press the SET button to overwrite the unsaved current clip list, or press the MENU button to quit without overwriting.

#### To display thumbnails of the sub clips in the newly loaded current clip list

Press the SUBCLIP button, and then press the THUMBNAIL button.

### 5-3-2 Deleting Clip Lists From a Disc

- 1 Display the CLIP menu.

See “To display the CLIP menu” (page 52).

- 2 Use the  $\uparrow$  or  $\downarrow$  button to move the cursor to DELETE, and then press the  $\Rightarrow$  button.

A list of clip lists appears.

The date of creation or the title is displayed for each clip list.

#### To switch between display of dates of creation, titles, and clip list names

With the SHIFT button held down, press the SET button.

With each press, the display changes as follows.

Dates of creation > titles > clip list names > dates of creation ...

- 3 Use the  $\uparrow$  or  $\downarrow$  button or the jog dial to select the desired clip list, and then press the  $\Rightarrow$  button.

A confirmation message like the one shown below appears.



- 4 Press the SET button.

The selected clip list is deleted from the disc.

### 5-3-3 Clearing the Current Clip List From the Unit Memory

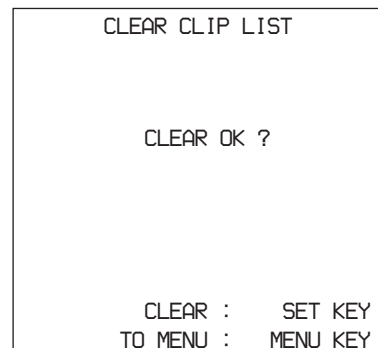
This operation clears the current clip list, so that no clip list is loaded in the unit memory.

- 1 Display the CLIP menu.

See “To display the CLIP menu” (page 52).

- 2 Use the  $\uparrow$  or  $\downarrow$  button to move the cursor to CLEAR, and then press the  $\Rightarrow$  button.

A message like the one shown below appears.



- 3 Press the SET button.

The current clip list is cleared from the unit memory.

### 5-3-4 Presetting the Initial Timecode of the Current Clip List

When the unit is powered on, and when you insert a new disc, the initial timecode of the current clip list is set to “00:00.00.00.” You can set the initial timecode to any value.

- 1 Load an existing clip list for which you want to set the initial timecode into to the unit memory as the current clip list.

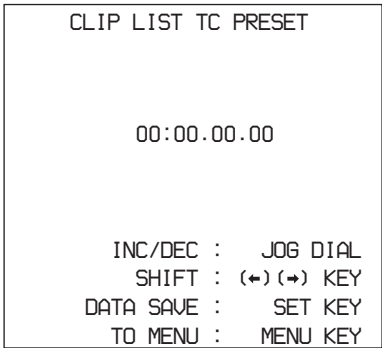
For details, see 5-3-1 “Loading a Clip List From Disc Into Unit Memory” (page 52).

- 2 Display the CLIP menu.

See “To display the CLIP menu” (page 52).

- 3 Use the  $\nabla$  button to select TC PRESET, and then press the  $\Rightarrow$  button.

A screen like the one shown below appears.



The timecode shown in this screen is the current initial timecode of the current clip list. If you have already set the initial timecode for this clip list, that timecode is displayed.

- 4 Repeat the following operations to set a timecode value (LTC).
  - Press the  $\nabla$  or  $\Rightarrow$  button to select the digit to replace.
  - Rotate the jog dial to set a value.

- 5 Press the SET button.

The initial timecode (LTC) of the current clip list is set. When the clip list is played back, timecode will start counting from that value.

#### To check the timecode after setting it

Press the SUBCLIP button, turning it on. The initial timecode of the current clip list appears in the TCR field.

- 6 Save the current clip list to disc.

See 5-2-6 “Saving the Current Clip List to Disc” (page 50).

## 5-3-5 Sorting Clip Lists

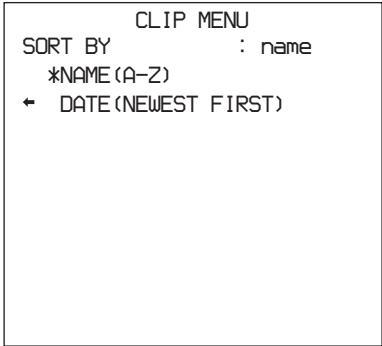
Proceed as follows to sort the existing clip lists by clip list name or by date of creation.

- 1 Display the CLIP menu.

See “To display the CLIP menu” (page 52).

- 2 Use the  $\nabla$  or  $\Rightarrow$  button to select SORT BY, and then press the g button.

A screen like the one shown below appears.



- 3 Use the  $\nabla$  or  $\Rightarrow$  button to select NAME or DATE.

**NAME:** Sort in ascending order by clip list name (factory default setting).

**DATE:** Sort by date of creation, with the newest clip list first.

- 4 Press the  $\Rightarrow$  button to return to the CLIP menu screen.

The clip lists are sorted by the method you chose in step 3.

Unused clip lists are excluded from the sort.

---

## 5-4 Using PDZ-1 Proxy Browsing Software

When a computer with the PDZ-1 Proxy Browsing Software installed is connected to this unit, you can transfer the proxy AV data and metadata files recorded on a disc to the computer. On the computer side, PDZ-1 enables you to browse the proxy AV data, add or modify metadata (titles, comments, essence marks, etc.), or create a clip list.

The modified metadata and the created clip list can then be written back to the disc loaded in this unit.

### System requirements

The following are required to use PDZ-1.

- Computer: PC with Intel Pentium III CPU, at least 1 GHz  
Installed memory: at least 512 MB
- Operating system: Microsoft Windows 2000 Service Pack 4 or higher, or Microsoft Windows XP Professional Service Pack 1 or higher
- Web browser: Internet Explorer 6.0 Service Pack 1 or higher
- DirectX: DirectX 8.1b or higher

### To install PDZ-1

Insert the supplied CD-ROM (PDZ-1 Proxy Browsing Software) in the CD-ROM drive of the computer and execute the Setup.exe file, then follow the installation instructions.

*For details, refer to the ReadMe file contained on the CD-ROM disc.*

### Notes

- Make sure that the hard disk drive on which the work folder to store the material transferred from this unit has adequate free space. The amount of proxy AV data transferred is about 1.4 GB per disc (when recording in the DVCAM format).
- To transfer files between the computer and this unit requires this unit's IP address and other network-related settings to be made.

*For details of the network-related settings, see "To change network settings" (page 89).*

# *File Operations* | Chapter

# 6

## 6-1 Overview

A remote computer can be connected to this unit and used to operate on recorded data which has been saved in data files, such as video and audio data files.

There are two ways to connect a remote computer.

- FAM connection

Connect the i.S400 (i.LINK) connector on this unit to the i.LINK (IEEE1394) connector on the remote computer, using an i.LINK cable (*see page 60*).

- FTP connection

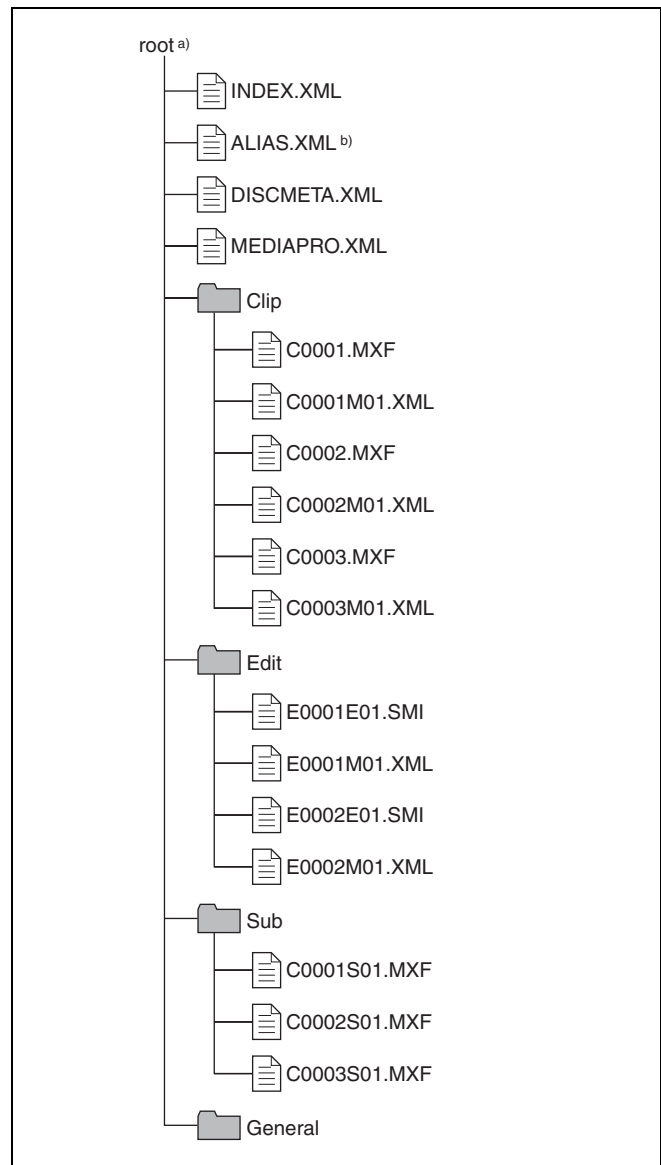
Connect the network connectors on this unit and the remote computer, using a network cable (*see page 62*).

### 6-1-1 Directory Structure

The following figure shows the directory structure of discs visible to a remote computer.

**Note**

This structure is not the same as the actual structure recorded on the disc.



a) Root directory

b) Only when sub item "NAMING FORM" of basic menu item 036 is set to "free"



## 6-1-2 File Operation Restrictions

This section explains which operations are possible on files stored in each directory.

When required, the following operation tables distinguish reading and overwriting from partial reading and overwriting.

**Read:** Read data sequentially from the start to the end of the file.

**Partial read:** Read only a part of the data in the file.

**Overwrite:** Overwrite data sequentially from the start to the end of the file.

**Partial overwrite:** Overwrite data to a part of the file only.

### Root directory

File name	Content	Operations				
		Read/ Partial read	Overwrite/ Partial overwrite	Rename	Create	Delete
INDEX.XML	Contains data for management of the audio/video material on the disc.	Yes	No	No	No	No
ALIAS.XML <sup>a)</sup>	Contains conversion tables for assigning user-defined names to clips and clip lists.	Yes	No	No	No	No
DISCMETA.XML	Contains metadata to indicate the disc properties.	Yes	Yes <sup>b)</sup>	No	No	No
MEDIAPRO.XML	Contains a list of audio/video material on the disc, basic properties, related information, and information about access methods.	Yes	No	No	No	No
Other files	Files other than the above	—	No	—	No	—

a) Only when sub item “NAMING FORM” of basic menu item 036 is set to “free”

b) Only files which can be overwritten by XDCAM

#### Notes

- Directories cannot be created in the root directory.
- The directories in the root directory (Clip, Edit, Sub, and General) cannot be deleted or renamed.

### Clip directory

File name	Content	Operations				
		Read/ Partial read	Overwrite/ Partial overwrite	Rename	Create	Delete
C*.MXF <sup>a)</sup>	Clip file created by recording (MXF file) *: 0001 to 4999	Yes	No	No <sup>b)</sup>	Yes <sup>c)</sup>	Yes <sup>d)</sup>
C*M01.XML <sup>a)</sup>	Metadata file generated automatically when C*.MXF file is created. *: 0001 to 4999	Yes	Yes <sup>e)</sup>	No <sup>f)</sup>	No <sup>g)</sup>	No <sup>h)</sup>
Other files	Files other than the above	—	No	—	No	—

a) With firmware version 1.5 and higher, the unit can handle files with user-defined names in the “C\*” part.

b) Possible with firmware version 1.5 and higher.

c) Only files which are 2 seconds or longer in length, in a format matching the line mode format (525/625) and recording format (IMX50/IMX40/IMX30/DVCAM and number of audio channels) of the recorded sections of the disc, and which can be overwritten by XDCAM.

d) Only when the write inhibit tab on the disc is set to enable recording, and when extended menu item 310 “REC INHIBIT” is set to “off.” With firmware version 1.4x and lower, only the most recently recorded clip may

be deleted. With firmware version 1.5 and higher, any clip may be selected and deleted.

e) Only files which can be overwritten by XDCAM

f) With firmware version 1.5 and higher, when the “C\*” part of a C\*.MXF file name is changed, a C\*M01.XML with the same name in the “C\*” part is also changed automatically.

g) When a C\*.MXF file is created, a C\*M01.XML file with the same name in the “C\*” part is created automatically.

h) When a C\*.MXF file is deleted, the C\*M01.XML file with the same name in the “C\*” part is also deleted automatically.

## Notes

- Directories cannot be created in the Clip directory.
- When the following operations, supported by version 1.5 and higher XDCAM devices, are carried out on a disc, then it becomes impossible for version 1.4x and lower XDCAM devices to record new clips or delete existing clips on that disc. (The only possible operations are playback and disc formatting.)

- Writing of clips with user-defined names
- Locking of clips
- Deletion of clips (except the last recorded clip)
- If you attempt to write a C\*.MXF file which does not meet the conditions specified as remark d) on this table via a FAM connection, a Windows error message appears to the effect that the file or directory is corrupt and cannot be read.

## Edit directory

File name	Content	Operations				
		Read/ Partial read	Overwrite/ Partial overwrite	Rename	Create	Delete
E*E01.SMI <sup>a)</sup>	Clip list file *: 0001 to 0099	Yes	Yes <sup>b)</sup>	No <sup>c)</sup>	Yes <sup>d)</sup>	Yes <sup>e)</sup>
E*M01.XML <sup>a)</sup>	Metadata file generated automatically when E*E01.SMI file is created. *: 0001 to 0099	Yes	Yes <sup>b)</sup>	No <sup>f)</sup>	No <sup>g)</sup>	No <sup>h)</sup>
Other files	Files other than the above	—	No	—	No	—

- a) With firmware version 1.5 and higher, the unit can handle files with user-defined names in the “E\*E01” part.
- b) Only files which can be overwritten by XDCAM. Partial overwriting is not possible.
- c) Possible with firmware version 1.5 and higher.
- d) Only files which can be overwritten by XDCAM
- e) Only when the write inhibit tab on the disc is set to enable recording.
- f) With firmware version 1.5 and higher, when the “E\*01” part of an E\*E01.SMI file name is changed, an E\*M01.XML file with the same name in the “E\*” part is generated automatically.

- g) When an E\*E01.SMI file is created, an E\*M01.XML file with the same name in the “E\*” part is created automatically.
- h) When an E\*E01.SMI file is deleted, the E\*M01.XML file with the same name in the “E\*” part is also deleted automatically.

## Note

Directories cannot be created in the Edit directory.

## Sub directory

File name	Content	Operations				
		Read/ Partial read	Overwrite/ Partial overwrite	Rename	Create	Delete
C*S01.MXF <sup>a)</sup>	Proxy AV data (MXF) file generated automatically when a C*.MXF file is created. *: 0001 to 4999	Yes	No	No <sup>b)</sup>	No <sup>c)</sup>	No <sup>d)</sup>
Other files	Files other than the above	—	No	—	No	—

- a) With firmware version 1.5 and higher, the unit can handle files with user-defined names in the “C\*” part.
- b) With firmware version 1.5 and higher, when the “C\*” part of a C\*.MXF file name is changed, a C\*S01.MXF file with the same name in the “C\*” part is generated automatically.
- c) When a C\*.MXF file is created, a C\*S01.XML file with the same name in the “C\*” part is created automatically.

- d) When a C\*.MXF file is deleted, the C\*S01.XML file with the same name in the “C\*” part is also deleted automatically.

## Note

Directories cannot be created in the Sub directory.

## General directory

File name	Content	Operations				
		Read/ Partial read	Overwrite/ Partial overwrite	Rename	Create	Delete
Any file		Yes	Yes	Yes <sup>a)</sup>	Yes	Yes <sup>b)</sup>

- a) UTF-8 file names can be up to 63 bytes in length. (Depending on the character type, file names (including extension) may be limited to 21 characters.)
- b) Only when the write inhibit tab on the disc is set to enable recording.

The following directory operations are possible in the General directory.

- Directory creation (up to 64 levels, including the General directory)
- Deletion and renaming of directories

#### Notes

- The maximum number of files which can be created on a disc, including directories, is 5,000.
- File names and directory names can use letters, numbers, and symbols from the Unicode 2.0 character set.<sup>1)</sup>
  - However, the following control characters and symbols cannot be used.
  - Control characters: U+0000 to U+001F, U+007F
  - Symbols: “, \*, /, :, <, >, ?, \, |

1) This is supported from firmware version 1.4. However, the following character codes cannot be used by FAM connections.  
 U+010000, U+020000, U+030000, U+040000, U+050000, U+060000, U+070000, U+080000, U+090000, U+0A0000, U+0B0000, U+0C0000, U+0D0000, U+0E0000, U+0F0000, U+100000  
 (There are no limits to characters which can be used by FTP connections.)

## 6-1-3 Assigning User-Defined Clip and Clip List Names

The following standard format names are assigned automatically to clips and clip lists that are created or recorded by XDCAM devices.

**Clips:** C0001.MXF to 4999.MXF

**Clip lists:** E0001E01.SMI to E0099E01.SMI

This unit can handle clips and clip lists with user-defined names as well as names in the standard format.<sup>1)</sup>

1) This is supported from firmware version 1.5.

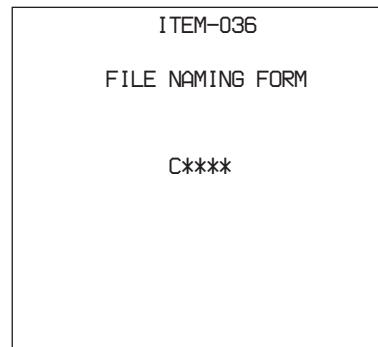
#### Limitations

- Letters, numbers and symbols from the Unicode 2.0 character set can be used.  
 However, the following control characters and symbols cannot be used.
  - Control characters: U+0000 to U+001F, U+007F
  - Symbols: “, \*, /, :, <, >, ?, \, |
- Depending on the character type, the length of user-defined names (the “C\*” or “E\*E01” part) may be limited to 14 characters. (The limit for ASCII characters is 56 characters.)
- All file name extensions are converted automatically to uppercase.
- Files generated along with clips and clip lists use the same names (the “C\*” or “E\*” part of the following file names).
  - Clips: Metadata files (C\*M01.XML), proxy AV data files (C\*S01.MXF)
  - Clip lists: Metadata files (E\*M01.XML)

- The following names cannot be assigned.
  - Clips: C0000.MXF
  - Clip lists: E0000E01.SMI, E0100E01.SMI to E9999E01.SMI, E0000.SMI, E0100.SMI to E9999.SMI
- The following names should be avoided.
  - Clips: C5000.MXF to C9999.MXF
  - Clip lists: E0001.SMI to E0099.SMI

#### To use clips and clip lists with user-defined names over FAM and FTP connections

- 1 Press the MENU button.
- 2 Rotate the jog dial or the shuttle dial to display menu item 036.

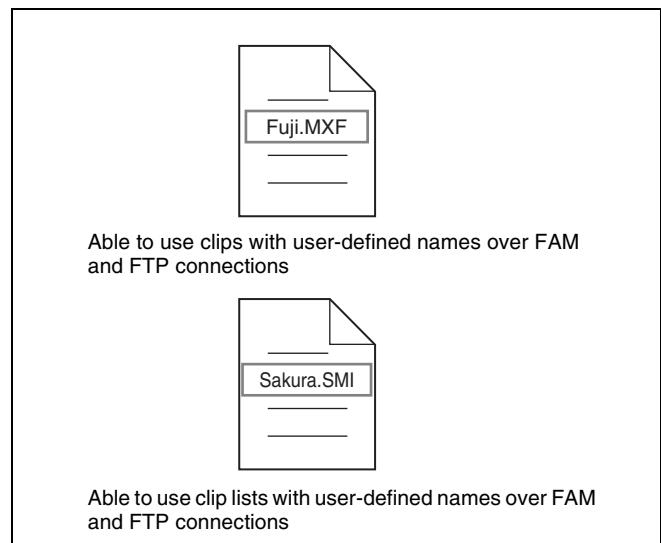


- 3 With the SHUTTLE button held down, rotate the jog dial or the shuttle dial to select “free.”

You are now able to use clips and clip lists with user-defined names.

- 4 Press the SET button.

It is now possible to write, transfer, and rename clips and clip lists with user-defined names over file access mode (FAM) connections (*see page 60*) and FTP connections (*see page 62*).



### To check clip names

Press the THUMBNAIL button to display the thumbnail screen, and select the clip whose name you want to check. The name of the selected clip appears at the upper left of the screen.

See 4-3-1 “Cuing Up a Desired Clip” (page 36) for more information about the thumbnail screen.

#### Notes

- The item at the upper left of the screen is displayed according to the following order of priority.  
Title > User-defined clip name > Standard format clip name  
Therefore, the display of this item changes as following, depending on whether there is a title.
  - When a title has been set as a clip name on a disc recorder, the title is displayed.
  - The user-defined name or standard format name is displayed for clips without a title.
- If the firmware of your XDCAM device is version 1.4x or lower, clips with user-defined names appear as “C5000” to “C9999,” in order of recording.

## 6-2 File Access Mode File Operations

### File access mode operating environment

Operating system requirements for file operations by file access mode (called FAM below) are as follows.

- Computer operating system: Microsoft Windows 2000 Service Pack 4 or higher, or Microsoft Windows XP

### Preparations

Do the following on the remote computer and this unit.

- Install the FAM driver on the remote computer (*see the next section*).
- Set extended menu item 215 “i.LINK MODE” to “FAM.”

See 7-3-2 “Extended Menu Operations” (page 82) for more information about how to make this setting.

### To install the FAM driver

Insert the supplied CD-ROM (PDZ-1 Proxy Browsing Software) in the CD-ROM drive of the computer and execute the Setup.exe file, then follow the installation instructions.

For details, refer to the ReadMe file contained on the CD-ROM disc.

#### Note

Use Version 1.4 or higher of the FAM driver. The FAM driver on the supplied CD-ROM is Version 1.4 or higher. If a FAM driver is already installed on your computer, check the version.



To check the version, click “Add or Remove Programs” (Windows XP) or “Add/Remove Programs” (Windows 2000), select “ProDisc,” and then click “Click here for support information.”

### 6-2-1 Making FAM Connections

- 1 If there is a disc loaded in this unit, put the unit into the following state.
  - Playback, search and other disc operations (*see page 15*): Stopped
  - THUMBNAIL button (*see page 15*): Off
  - Disc access by DELETE, FORMAT, and so on in the System menu (*see page 91*): Stopped
  - Unsaved current clip list: Save or clear
- 2 If this unit is connected to a remote computer by FTP, log out from the FTP session (*see page 63*).

- 3 Connect the i.S400 (i.LINK) connector on this unit to the i.LINK (IEEE1394) connector on the remote computer, using an i.LINK cable (*see connections illustration on page 20*).

Windows recognizes this unit as a removable disc, and displays one of the following icons on the remote computer's task bar:

- **Windows 2000:** 
- **Windows XP:** 

The remote computer is now able to perform file operations when a disc is inserted into this unit.

#### Note

You will not be able to log in if you put the unit into the state described in step 1 after connecting the cable. To log in, disconnect the cable, put the unit into the state described in step 1, and connect it again.

### Operation limitations during FAM connections

- Front panel operations are disabled, except for operations with the EJECT button.
- This unit cannot be controlled from devices connected to the i.S400 (i.LINK) connector with the AV/C protocol.
- Signal input to this unit and signal output from this unit are stopped.

## 6-2-2 Operating on Files

- 1 Start Explorer.

Check that a drive letter has been assigned to this unit. (The drive letter will differ depending on the number of other peripherals connected to the remote computer.)

- 2 Use Explorer to perform file operations on the disc loaded in this unit.

You can operate in the same way that you operate on local drives and files on network computers.

#### Notes

- If you power this unit off during an FAM connection, the data transferred thus far is discarded.
- All file operations are not possible for some types of files.

*For details, see 6-1-2 "File Operation Restrictions" (page 57).*



### To eject discs from a remote computer

Right click the icon representing this unit in Explorer, and select Eject from the menu which appears.

## 6-2-3 Exiting File Operations

#### Note

Do not disconnect the cable before performing steps 1 to 3.

- 1 Do one of the following on the  or  icon displayed in the remote computer's taskbar.
  - Double click.
  - Right click, and select one of the following commands from the menu which appears.
    - **Windows 2000:** The Unplug or Eject Hardware
    - **Windows 2000:** Unplug or eject hardware
    - **Windows XP:** Safely Remove Hardware
  - **Windows 2000:** The Unplug or Eject Hardware dialog appears.
  - **Windows XP:** The Safely Remove Hardware dialog appears.
- 2 Select "Sony XDCAM PDW-V1 IEEE 1394 SBP2 Device" and click Stop.
 

The Stop a Hardware device dialog appears.
- 3 Select "Sony XDCAM PDW-V1 IEEE 1394 SBP2 Device" and click OK.
  - **Windows 2000:** A confirmation message appears.
  - **Windows XP:** "Sony XDCAM PDW-V1 IEEE 1394 SBP2 Device" is deleted from the Hardware devices list.

This unit can now resume normal operations. (The limitations described in "Operation limitations during FAM connections" (*see page 61*) no longer apply.)

- 4 Disconnect the i.LINK cable as required.

### To reconnect

To reconnect after exiting file operations, do one of the following, depending on whether an i.LINK cable is connected.

**i.LINK cable is not connected:** Connect this unit and a remote computer with an i.LINK cable.

**i.LINK cable is connected:** Disconnect the i.LINK cable from either this unit or the remote computer, wait for at least 10 seconds, and then reconnect the disconnected cable.

**The unit is powered off and an i.LINK cable is connected:** Power the unit on.

### To disable FAM connections

Execute one of the procedures described in the previous section "Reconnecting" to make a FAM connection between this unit and the remote computer. To disable

FAM connections, set extended menu item 215 “i.LINK MODE” to “AV/C.”

*For more information about how to make this setting, see 7-3-2 “Extended Menu Operations” (page 82).*

---

## 6-3 FTP File Operations

File operations between this unit and a remote computer can be carried out by the File Transfer Protocol (called FTP below).

### Preparations

- 1 Connect the network connectors of this unit and a remote computer with a network cable (*see connections illustration on page 23*). Or connect this unit to the network to which the remote computer is connected (*see connections illustration on page 24*).
- 2 Set the IP address and other network setting items for this unit.

*For details, see “To change network settings” (page 89).*

**If network settings have already been made**  
Check the IP address of this unit.

*For details, see “To check the assigned IP address” (page 89).*

- 3 Set the remote control switch to “NETWORK” (*see page 13*).

---

### 6-3-1 Making FTP Connections

FTP connections between this unit and a remote computer can be made with either of the following.

- The command prompt
- FTP client software

This section explains how to use the command prompt. For more information about using FTP client software, refer to the documentation of the FTP client software on your system.

#### Note

An FTP client that supports UTF-8 is required to use Unicode characters other than ASCII characters. Command prompt FTP commands do not support UTF-8.

### To log in

If this unit is connected to a remote computer with a FAM connection, first exit file operations on the FAM connection (*see page 61*).

- 1 Load a disc into this unit and put the unit into the following state.

- Playback, search and other disc operations (*see page 15*): Stopped
- THUMBNAIL button (*see page 15*): Off
- Disc access by DELETE, FORMAT, and so on in the System menu (*see page 91*): Stopped
- Unsaved current clip list: Save or clear

**Note**

Login is not possible unless a disc is loaded and the unit is in the state described above.

- 2 Start the command prompt.
- 3 Enter “ftp <SP> <IP address>,” and press the Enter key. (<SP> refers to a space.)

For example, if the IP address of this unit is set to “192.168.001.010,” enter “ftp 192.168.1.10.”

*Refer to the Windows help for more information about the FTP command.*

If the connection succeeds, you are prompted to enter a user name.

- 4 Enter the user name “admin” and press the Enter key.

When the user name is verified, you are prompted to enter a password.

- 5 Enter the password and press the Enter key.

The password is set to “pdw-v1” when the unit is shipped from the factory.  
The login is complete when the password is verified.

*See 6-3-2 “Command List” (page 64) for the FTP protocol commands supported by this unit.*

**If the connection times out**

This unit terminates FTP connections if no command is received within 90 seconds of the last command. If this occurs, log out (*see the next section*) and repeat steps **2** to **4**.

**Note**

If you power this unit off during an FTP connection, the data transferred thus far is discarded.

## To log out

To log out after finishing file operations, enter “QUIT” at the command prompt and press the Enter key.

## 6-3-2 Command List

The FTP protocol commands supported by this unit include standard commands (*see the next section*) and extended commands (*see page 68*).

### Notes

- To execute FTP commands, you must install application software such as PDZ-1 on your computer.
- The commands supported by application software vary.

### Standard commands

The following table shows the standard FTP commands supported by this unit.

In the command syntax column, <SP> means a space, entered by pressing the space bar, and <CRLF> means a new line, entered by pressing the Enter key.

Command name	Description	Command syntax
USER	Send this command to begin the login process.	USER <SP> <username> <CRLF> Input example: USER admin
PASS	After sending the USER command, send this command to complete the login process.	PASS <SP> <password> <CRLF> Input example: PASS pdw-v1
QUIT	Terminates the FTP connection. If a file is being transferred, terminates after completion of the transfer.	QUIT <CRLF>
PORT	Specifies the IP address and port to which this unit should connect for the next file transfer (for data transfer from this unit).	PORT <SP> <h1,h2,h3,h4,p1,p2> <CRLF> <ul style="list-style-type: none"> <li>• h1 (most significant byte) to h4 (least significant byte): IP address</li> <li>• p1 (most significant byte), p2 (least significant byte): Port address</li> </ul> Input example: PORT 10,0,0,1,242,48 (IP address: 10.0.0.1, Port number: 62000)
PASV	This command requests this unit to “listen” on a data port (which is not its default data port). (It puts this unit into passive mode, waiting for the remote computer to make a data connection.)	PASV <CRLF>
TYPE	Specifies the type of data to be transferred.	TYPE <SP> <type-code (options delimited by <SP>)> <CRLF>  <type-code> can be any of the following. However, for XDCAM, data is always transferred as “I,” regardless of the type-code specification. <ul style="list-style-type: none"> <li>• A: ASCII               <ul style="list-style-type: none"> <li>- N: Non-print</li> <li>- T: Telnet format</li> <li>- C: ASA Carriage Control</li> </ul> </li> <li>• E: EBCDIC               <ul style="list-style-type: none"> <li>- N: Non-print</li> <li>- T: Telnet format</li> <li>- C: ASA Carriage Control</li> </ul> </li> <li>• I: IMAGE (Binary) (default)</li> <li>• L: LOCAL BYTE               <ul style="list-style-type: none"> <li>- SIZE: byte size</li> </ul> </li> </ul> Input example: TYPE I



Command name	Description	Command syntax
STRU	Specifies the data structure.	<p>STRU &lt;SP&gt; &lt;structure-code&gt; &lt;CRLF&gt;</p> <p>&lt;structure-code&gt; can be any of the following. However, for XDCAM, the structure is always "F," regardless of the structure-code specification.</p> <ul style="list-style-type: none"> <li>• F: File structure (default)</li> <li>• R: Record structure</li> <li>• P: Page structure</li> </ul> <p>Input example: STRU F</p>
MODE	Specifies the transfer mode.	<p>MODE &lt;SP&gt; &lt;mode-code&gt; &lt;CRLF&gt;</p> <p>&lt;mode-code&gt; can be any of the following. However, for XDCAM, the mode is always "S," regardless of the mode-code specification.</p> <ul style="list-style-type: none"> <li>• S: Stream mode (default)</li> <li>• B: Block mode</li> <li>• C: Compressed mode</li> </ul> <p>Input example: MODE S</p>
LIST	Sends a list of files from this unit to the remote computer.	<p>LIST &lt;SP&gt; &lt;options&gt; &lt;SP&gt; &lt;path-name&gt; &lt;CRLF&gt;</p> <p>&lt;options&gt; can be any of the following.</p> <ul style="list-style-type: none"> <li>• -a: Also display file names that begin with "."</li> <li>• -F: Append "/" to directory names.</li> </ul> <p>The following data is transferred, depending on whether &lt;path-name&gt; specifies a directory or file.</p> <ul style="list-style-type: none"> <li>• Directory specified: A list of the files in the specified directory</li> <li>• File specified: Information about the specified file</li> <li>• No specification: A list of the files in the current directory</li> </ul> <p>The wildcard characters "*" (any string) and "?" (any character) may be used in &lt;path-name&gt;.</p> <p>Input example 1: LIST -a Clip Input example 2: LIST Clip/*.MXF</p>
NLST	Sends a list of file names from this unit to the remote computer, with no other information.	<p>NLST &lt;SP&gt; &lt;options or path-name&gt; &lt;CRLF&gt;</p> <p>The following options may be specified when no path name is specified.</p> <ul style="list-style-type: none"> <li>• -a: Also display file names that begin with "."</li> <li>• -l: Display information other than file name (gives the same result as the LIST command).</li> <li>• -F: Append "/" to directory names.</li> </ul> <p>The following data is transferred, depending on whether &lt;path-name&gt; specifies a directory or file.</p> <ul style="list-style-type: none"> <li>• Directory specified: A list of the file names only in the specified directory</li> <li>• No specification: A list of the file names only in the current directory.</li> </ul> <p>The wildcard characters "*" (any string) and "?" (any character) may be used in &lt;path-name&gt;.</p> <p>Input example 1: NLST -l Input example 2: NLST Clip/*.MXF</p>
RETR	Begins transfer of a copy of a file in the specified path on this unit to the current directory on the remote computer.	<p>RETR &lt;SP&gt; &lt;path-name&gt; &lt;CRLF&gt;</p> <p>Input example: RETR Clip/C0001.MXF</p>

Command name	Description	Command syntax
STOR	<p>Begins transfer of a copy of a file in the specified path on the remote computer to the current directory on this unit. Depending on the type of file transferred, the following files are created.</p> <ul style="list-style-type: none"> <li>• C*.MXF file <sup>a) c)</sup> <ul style="list-style-type: none"> <li>- C*M01.XML file (metadata)</li> <li>- C*S01.MXF file (proxy AV data)</li> </ul> </li> <li>• E*E01.SMI file <sup>b) c)</sup> <ul style="list-style-type: none"> <li>- E*M01.XML file (metadata)</li> </ul> </li> </ul> <p>a) *: 0001 to 4999  b) *: 0001 to 0099  c) With firmware version 1.5 and higher, the unit can handle files with user-defined names in the “C*” or “E*E01” part.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>• For C*.MXF files, the UMID of the copy source file is not saved. However, it is saved if an immediately preceding SITE UMMD extended command has been issued.</li> <li>• For C*.MXF files, some data, such as file header metadata, may be missing.</li> <li>• Depending on the transfer destination directory and the file type, transfer may not be possible.</li> </ul> <p><i>For details, see 6-1-2 “File Operation Restrictions” (page 57).</i></p>	<p>STOR &lt;SP&gt; &lt;path-name&gt; &lt;CRLF&gt;</p> <p>Input example: STOR Edit/E0001E01.SMI</p>
RNFR RNT0	<p>Rename a file. Specify the file to be renamed with the RNFR command, and specify the new name with the RNT0 command. (Always follow a RNFR command with a RNT0 command.)</p> <p><i>For details, see 6-1-2 “File Operation Restrictions” (page 57).</i></p>	<p>RNFR &lt;SP&gt; &lt;path-name (before change)&gt; &lt;CRLF&gt;  RNT0 &lt;SP&gt; &lt;path-name (after change)&gt; &lt;CRLF&gt;</p> <p>Input example:  RNFR General/info.txt  RNT0 General/clip_info.txt</p>
DELE	<p>Deletes the specified file on this unit.</p> <p><b>Note</b>  Depending on the directory and file type, deletion may not be possible.</p> <p><i>For details, see 6-1-2 “File Operation Restrictions” (page 57).</i></p>	<p>DELE &lt;SP&gt; &lt;path-name&gt; &lt;CRLF&gt;</p> <p>Input example: DELE Clip/C0099.MXF</p>

Command name	Description	Command syntax
STAT	<p>Sends information about properties of the specified file, or about data transfer status, from this unit to the remote computer.</p> <p>The following property information is sent, depending on the file type.</p> <ul style="list-style-type: none"> <li>• MXF file <ul style="list-style-type: none"> <li>- File name</li> <li>- File type</li> <li>- CODEC type</li> <li>- Frame rate</li> <li>- Number of audio channels</li> <li>- Duration</li> <li>- UMID</li> </ul> </li> <li>• non-MXF file <ul style="list-style-type: none"> <li>- File name</li> </ul> </li> </ul>	<p>STAT &lt;SP&gt; &lt;path-name&gt; &lt;CRLF&gt;</p> <p>The following data is transferred, depending on whether a file is specified with &lt;path-name&gt;.</p> <ul style="list-style-type: none"> <li>• File specified: The properties of the specified file</li> <li>• No specification: The size of the data transferred thus far (unit: bytes)</li> </ul> <p>Input example: STAT Clip/C0001.MXF</p>
ABOR	Requests this unit to abort a file transfer currently in progress.	ABOR <CRLF>
SYST	Displays the system name of this unit.	SYST <CRLF>
HELP	Displays a list of the commands supported by this unit, or an explanation of the specified command.	<p>HELP &lt;SP&gt; &lt;command-name&gt; &lt;CRLF&gt;</p> <p>The following data is transferred, depending on whether a command name is specified with &lt;command-name&gt;.</p> <ul style="list-style-type: none"> <li>• Command name specified: Explanation of the specified command.</li> <li>• No specification: Command list</li> </ul> <p>Input example: HELP RETR</p>
NOOP	Does nothing except return a response. (Used to check whether this unit is running.)	NOOP <CRLF>
PWD	Displays the current directory ("/" if the directory is the root directory).	PWD <CRLF>
CWD	Changes the current directory (moves from the current directory to another directory).	<p>CWD &lt;SP&gt; &lt;path-name&gt; &lt;CRLF&gt;</p> <p>Moves to a directory as follows, depending on whether a directory is specified with &lt;path-name&gt;.</p> <ul style="list-style-type: none"> <li>• Directory specified: To the specified directory</li> <li>• No specification: To the root directory</li> </ul> <p>Input example: CWD General</p>
CDUP	Moves one level up in the directory structure (makes the parent of the current directory be the current directory).	CDUP <CRLF>
MKD	<p>Creates a new directory.</p> <p><b>Note</b> Directories can be created only in the General directory.</p> <p><i>For details, see 6-1-2 "File Operation Restrictions" (page 57).</i></p>	MKD <SP> <path-name> <CRLF>

Command name	Description	Command syntax
RMD	<p>Deletes a directory.</p> <p><b>Note</b> Directories can be deleted only in the General directory.</p> <p><i>For details, see 6-1-2 “File Operation Restrictions” (page 57).</i></p>	RMD <SP> <path-name> <CRLF>

## Extended commands

The following table shows the extended FTP commands supported by this unit.

In the Command syntax column, <SP> means a space, entered by pressing the space bar, and <CRLF> means a new line, entered by pressing the Enter key.

Command name	Description	Command syntax
SITE REPF	<p>Sends an MXF file from the specified path on this unit to the remote computer. This command allows you to specify a segment in the body of the MXF file (composed of video and audio data), for transfer of the required segment only.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>A segment greater than the file size cannot be specified.</li> <li>This command cannot be used when the path names contains a space. Use the SITE REPFL command instead.</li> </ul>	<p>SITE REPF &lt;SP&gt; &lt;path-name&gt; &lt;SP&gt; &lt;start-frame&gt; &lt;SP&gt; &lt;transfer-size&gt; &lt;CRLF&gt;</p> <p>&lt;start-frame&gt; specifies an offset from the start of the file. Data is transferred from the video frame at the offset (the first frame is 0).</p> <p>&lt;transfer-size&gt; specifies the number of video frames to transfer (specify 0 to transfer to the end of the file).</p> <p>Input example: SITE REPF Clip/C0001.MXF 5 150 (Transfer C0001.MXF. Body data is transferred only from frame 6 to frame 155.)</p>
SITE REPFL <sup>a)</sup>	<p>Sends an MXF file from the specified path on this unit to the remote computer. This command allows you to specify a segment in the body of the MXF file (composed of video and audio data), for transfer of the required segment only.</p> <p><b>Note</b> A segment greater than the file size cannot be specified.</p>	<p>SITE REPFL &lt;SP&gt; "&lt;path-name&gt;" &lt;SP&gt; &lt;start-frame&gt; &lt;SP&gt; &lt;transfer-size&gt; &lt;CRLF&gt;</p> <p>&lt;path-name&gt; specifies the path name of the file to transfer. Enclose the path name in double quotation marks.</p> <p>&lt;start-frame&gt; specifies an offset from the start of the file. Data is transferred from the video frame at the offset (the first frame is 0).</p> <p>&lt;transfer-size&gt; specifies the number of video frames to transfer (specify 0 to transfer to the end of the file).</p> <p>Input example: SITE REPFL "Clip/sakura 0001.MXF" 5 150 (Transfer sakura 0001.MXF. Body data is transferred only from frame 6 to frame 155.)</p>
SITE FSTS	<p>Acquires the system status of this unit. One of the following status codes is sent.</p> <p>0: Initial state, or no disc is loaded.</p> <p>1: File system mount is OK.</p> <p>3: File system mount is not OK.</p>	SITE FSTS <CRLF>
SITE MEID	Acquires the media ID of the disc loaded in this unit.	SITE MEID <CRLF>

Command name	Description	Command syntax
SITE FUNC	Acquires the function and version of the extended commands. Information is sent in the following format. <main function> <SP> <branch function> <SP> <branch function version> For XDCAM, sent in a format like "200 MXF DISK 1" ("200" is a response code).	SITE FUNC <CRLF>
SITE UMMD	When a C*.MXF file is sent with the STOR command, the copy source UMID is saved if this command is invoked immediately before the STOR command.	SITE UMMD <CRLF>
SITE DF <sup>a)</sup>	Acquires the amount of free disc space.	SITE DF <CRLF>
SITE CHMOD <sup>a)</sup>	Locks and unlocks clips. Also sets permissions for directories and files in the General directory.	SITE CHMOD <SP> <flag> <SP> <path-name> <CRLF>  Specify one of the following values in <flag>, according to the specification in <path-name>. <ul style="list-style-type: none"> <li>• When a clip is specified in &lt;path-name&gt; 444: Lock. 666: Unlock.</li> <li>• When a directory in the General directory is specified in &lt;path-name&gt; 555: Forbid writing to the directory. 777: Allow writing to the directory.</li> <li>• When a file in the General directory is specified in &lt;path-name&gt; 444: Forbid writing to and execution of the file. 555: Forbid writing to the file, but allow execution. 666: Allow writing to the file, but forbid execution. 777: Allow writing to and execution of the file.</li> </ul> Input example: SITE CHMOD 444 Clip/C0001.MXF (Lock clip C0001.MXF)

a) This is supported from firmware version 1.5.

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## 6-4 Recording Continuous Time Code With FAM and FTP Connections

When you are connected to the unit by FAM or FTP, you can create new clips with time code that is continuous with the time code of the last frame of the last clip on the disc. To record continuous time code, set extended menu item 626 “TC MODE” to “int regen,” and then proceed as follows.

*See 7-3-2 “Extended Menu Operations” (page 82) for more information about how to make extended menu settings.*

### **FAM connection**

Write clip files to the unit from the computer or other device that is connected to this unit.

### **FTP connection**

Use the “STOR” command to transfer clip files from the computer that is connected to this unit.

If you issue the “SITE UMMD” command immediately before the “STOR” command, the original time code of the transferred file is recorded, regardless of the setting of extended menu item 626.

## 7-1 Menu System Configuration

The settings for this unit use the following menus.

- **Setup menu**  
*See the next item.*
- **Maintenance menu**  
This provides audio control, and network and setup menu settings, and also shows version information.  
*For details, see 7-4 “Maintenance Menu” (page 86).*
- **System menu**  
This provides disc formatting, date setting, and similar operations.  
*For details, see 7-5 “System Menu” (page 91).*

### Setup menu

The setup menu system of this unit comprises the basic setup menu (also referred to simply as “basic menu”) and extended setup menu (also referred to simply as “extended menu”).

- **Basic menu**  
This menu is used to make settings relating, for example, to the following.
  - the digital hours meter
  - the preroll time
  - the text information superimposed on the video output to the monitor
  - the menu banks for retaining menu settings
- **Extended menu**  
This menu is used to make a wide range of settings relating to the functions of this unit, for example, the control panel functions, video and audio control, and digital data processing.

### Configuration of the basic setup menu

The basic setup menu comprises the following groups of items.

Item group	Function	Refer to
Items H01 to H15	Display of the total number of hours the unit has been powered on, and other information collected by the digital hours meter	page 93
Items 001 to 099	Settings relating to the preroll time, superimposed text information, switching between 525(U) line, 525(J) line and 625 line operation modes, etc.	page 72
Items B01 to B20	Settings relating to the menu banks for saving menu settings	page 74

### Configuration of the extended setup menu

The extended setup menu comprises the following groups of items.

Item group	Function	Refer to
Items 100 to 199	Settings relating to control panels	page 78
Items 200 to 299	Settings relating to the remote control interface	page 78
Items 300 to 399	Settings relating to editing operations	page 78
Items 400 to 499	Settings relating to preroll	page 78
Items 500 to 599	Settings relating to disc protection	page 79
Items 600 to 699	Settings relating to the time code reader, metadata, and UMID	page 79
Items 700 to 799	Settings relating to video control	page 80
Items 800 to 899	Settings relating to audio control	page 81
Items 900 to 999	Settings relating to digital processing	page 82

# 7-2 Basic Setup Menu

## 7-2-1 Items in the Basic Setup Menu

The basic menu items (excluding the items related to the digital hours meter) are listed in the following table.

- Item names are the names which appear in the image display.

An abbreviated name appears in the time data display section when you press the NEXT button.

- The values in the Settings column are the values which appear in the time data display section. (The values may appear in a different format in the image display. In this case, the image display values are shown in parentheses.) Underlined values are the factory defaults.

Item number	Item name	Settings
001	PREROLL TIME	<b>0 s (0 sec)... <u>5 s (5 sec)</u>... 30 s (30 sec)</b> : Set the preroll time to between 0 and 30 seconds in steps of 1 second. A preroll time of at least 5 seconds is recommended when using this unit for editing.
002	CHARACTER H-POSITION	Adjust the horizontal screen position (as a hexadecimal value) of the text information output from the VIDEO OUT connector and SDI OUT connector for superimposed display on the monitor. <b>00... <u>0A</u> ...2A (525(U)/525(J) line modes) /00... <u>09</u> ...29 (625 line mode)</b> : The hexadecimal value 00 is for the far left of the screen. Increasing the value moves the position of the characters to the right.  Set this item by adjusting to the required position while viewing the monitor.
003	CHARACTER V-POSITION	Adjust the vertical screen position (as a hexadecimal value) of the text information output from the VIDEO OUT connector and SDI OUT connector for superimposed display on the monitor. <b>00... <u>2E</u> ...38 (525(U)/525(J) line modes)/00... <u>37</u> ...43 (625 line mode)</b> : The hexadecimal value 00 is for the top of the screen. Increasing the value lowers the position of the characters.  Set this item by adjusting to the required position while viewing the monitor.
005	DISPLAY INFORMATION SELECT	Determine the kind of text information to be output from the VIDEO OUT connector and SDI OUT connector. <b>T&amp;sta (time data &amp; status)</b> : Time data and the units status. <b>T&amp;UB (time data &amp; UB)</b> : Time data and user bit data. (When UB (user bit data) is selected with the COUNTER button, the user bit data and time data arranged in that order are displayed.) <b>T&amp;CNT (time data &amp; CNT)</b> : Time data and counter count. (When COUNTER is selected with the COUNTER button, the counter count and time data arranged in that order are displayed.) <b>T&amp;T (time data &amp; time data)</b> : Time data and time code (TC or VITC). <b>T&amp;clip (time data &amp; clip name)</b> : Time code and clip name <b>time (time data only)</b> : Time data only.
006	LOCAL FUNCTION ENABLE	Determine which recording and playback control buttons on the control panel are enabled when this unit is controlled from external equipment. <b>dis (all disable)</b> : All buttons and switches are disabled. <b><u>st&amp;ej</u> (stop &amp; eject)</b> : Only the STOP button and EJECT button are enabled. <b>ena (all enable)</b> : All buttons and switches are enabled.
007	TAPE TIMER DISPLAY	Determine whether to display the counter in 12-hour mode or 24-hour mode. <b><u>+ -12H (+/-12H)</u></b> : 12-hour mode <b>24H</b> : 24-hour mode



Item number	Item name	Settings
009	CHARACTER TYPE	<p>Determine the type of characters such as time code output from the VIDEO OUT connector and SDI OUT connector for superimposed display on the monitor.</p> <p><b>white:</b> White letters on a black background.  <b>black:</b> Black letters on a white background.  <b>W/out:</b> White letters with black outline.  <b>B/out:</b> Black letters with white outline.</p> <p>Set this item by selecting the required type while viewing the monitor.</p>
011	CHARACTER V-SIZE	<p>Determine the vertical size of characters such as time code output from the VIDEO OUT connector and SDI OUT connector for superimposed display on the monitor.</p> <p>×1 :Standard size  ×2 :2 times standard size</p> <p>Set this item by selecting the required size while viewing the monitor.</p>
012	CONDITION DISPLAY ON VIDEO MONITOR	<p>Select whether to display disc condition marks in the image display and external monitor output (output from the VIDEO OUT and SDI OUT connectors).</p> <p><b>dis (disable):</b> Do not display.  <b>ena (enable):</b> Display.</p>
013	525/625 SYSTEM SELECT	<p>Specify whether to enable switching between 525(U) line, 525(J) line and 625 line modes.</p> <p><b>off:</b> Do not enable system switching.  <b>on:</b> Enable system switching.</p> <p><i>For the switching between 525(U)/525(J)/625 line modes, see page 76.</i></p> <p><b>Note</b>  When you switch line modes, all basic menu and extended menu items are set to the factory defaults for the selected line mode.</p>
016	ALARM DISPLAY	<p>Select whether or not to display alarm messages.</p> <p><b>off:</b> Do not display alarm messages. (However, certain important alarms are displayed).  <b>limit (on (limited)):</b> Display only a minimum number of alarm messages.  <b>on:</b> Display all alarm messages.</p> <p><i>For details about alarm message display conditions, see 8-3-1 "Alarm List" (page 94).</i></p>
017	SUB STATUS DISPLAY SELECT	<p>Determine the kind of sub status information to be output from the VIDEO OUT connector and SDI OUT connector.</p> <p><b>off:</b> Do not output sub status information.  <b>clip (clip no):</b> Order of playback of the selected clip/total number of clips  <b>pbr (playback remain):</b> The remaining playback time of the selected clip from the current playback position (hours:minutes:seconds:frames).</p> <p><b>Note</b>  When the CHARACTER button setting is for no superimposing text information, sub status information is not displayed when this item is set to "clip name."</p>
024	MENU CHARACTER TYPE	<p>Determine the type of characters in menu text output from the VIDEO OUT connector and SDI OUT connector for superimposed display on the monitor.</p> <p><b>white:</b> White letters on a black background.  <b>black:</b> Black letters on a white background.  <b>W/out:</b> White letters with black outline.  <b>B/out:</b> Black letters with white outline.</p> <p>Set this item by selecting the required type while viewing the monitor.</p>
029	STORED OWNERSHIP	<p>Specify whether to enable changing UMID ownership information settings (COUNTRY, ORGANIZATION and USER).</p> <p><b>off:</b> Do not enable.  <b>on:</b> Enable.</p> <p><i>See 7-3-3 "Using UMID Data" (page 84) for more information about UMID.</i></p>

Item number	Item name	Settings
031	RECORDING FORMAT	Select the recording format. <b>IMX50 (IMX 50Mbps)</b> : MPEG IMX 50 Mbps <b>IMX40 (IMX 40Mbps)</b> : MPEG IMX 40 Mbps <b>IMX30 (IMX 30Mbps)</b> : MPEG IMX 30 Mbps <b>DVCAM</b> : DVCAM
032	LCD MONITOR MODE	Set the aspect ratio for the image display. <b>auto</b> : the aspect ratio of the display screen automatically adjusts to the aspect ratio of the input material. <b>16:9</b> : set the aspect ratio to 16:9. <b>4:3</b> : set the aspect ratio to 4:3.
034	MENU STATUS DISPLAY ON VIDEO MONITOR <sup>a)</sup>	Specify whether to display the setup menu status at the left edge of the status display line when basic menu item 005 "DISPLAY INFORMATION SELECT" is set to "T&sta." <b>dis (disable)</b> : Do not display. <b>ena (enable)</b> : Display. (The display is visible only when no disc is loaded, and during insertion and ejection of a disc.)
036	FILE NAMING FORM <sup>b)</sup>	Specify the clip and clip list naming format. (Specify whether to allow use of files with user-defined names.) <b>C****</b> : Standard format (Do not allow use of files with user-defined names) <b>free</b> : Free format (Allow use of files with user-defined names)  <i>See 6-1-3 "Assigning User-Defined Clip and Clip List Names" (page 59) for details about how to make the settings.</i>
B01	RECALL SETUP BANK-1	Set to "on" to recall menu settings from menu bank 1.
B02	RECALL SETUP BANK-2	Set to "on" to recall menu settings from menu bank 2.
B03	RECALL SETUP BANK-3	Set to "on" to recall menu settings from menu bank 3.
B11	SAVE SETUP BANK-1	Set to "on" to save current menu settings to menu bank 1.
B12	SAVE SETUP BANK-2	Set to "on" to save current menu settings to menu bank 2.
B13	SAVE SETUP BANK-3	Set to "on" to save current menu settings to menu bank 3.
B20	RESET SETUP MENU <sup>a)</sup>	Set to "on" to return the settings of the current menu to the factory default settings. Set to "bank-4" to set the current menu to the settings saved in menu bank 4. <b>off</b> <b>on (on (default))</b> : Return the current menu to the factory default settings. <b>bank-4</b> : Set the current menu to the settings saved in menu bank 4.

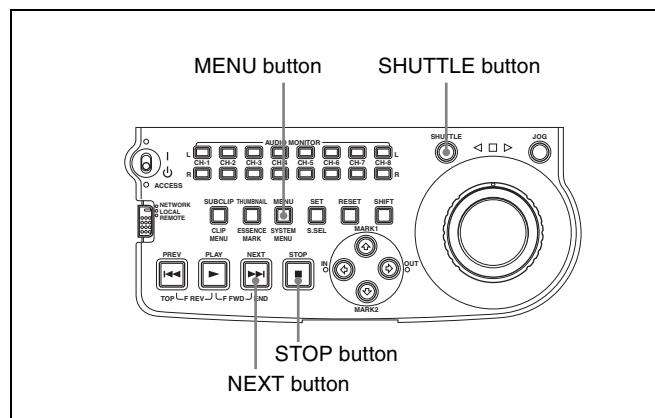
a) This is supported from firmware version 1.4.

b) This is supported from firmware version 1.5.

## 7-2-2 Basic Menu Operations

This section describes the basic menu display and how to change the settings.

### Displaying the menu



Press the MENU button.

The SHUTTLE button and NEXT button light and the setting of the currently selected menu item appears in the image display and status display. (The STOP button also lights when a menu item with sub-items is selected.)

Cursor indicating the currently selected item

Group name for the currently selected item

HOUR METER  
\*H01 : OPE HOURS - 102  
H11 : OPE HOURS r- 102

Indications in the image display

H01: 000109

Item number (flashing)

Setting

Indications in the status display

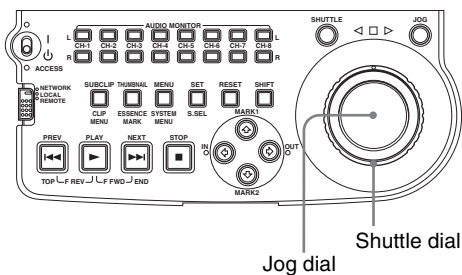
### To display the full item name

Hold down the NEXT button.

OPE HOURS

Item name

### Changing the currently displayed menu item



Jog dial

Shuttle dial

Turn the jog dial or shuttle dial.

Turning the jog dial clockwise increments the item number, and turning it counterclockwise decrements the

item number. The item number changes at a rate depending on the jog dial rotation rate.

When you turn the shuttle dial, the item number changes at a rate depending on the shuttle dial position.

### To change the currently displayed sub-item

Hold down the STOP button, and turn the jog dial or shuttle dial.

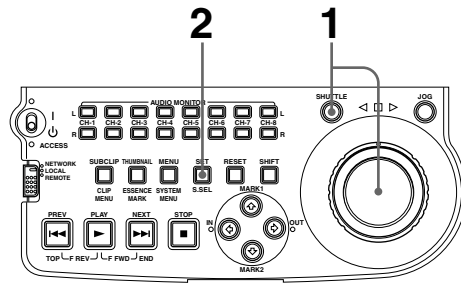
The sub-item number changes at a rate depending on the jog dial rotation rate or on the shuttle dial position.

703-01: ...

Sub-item number (flashing while changing)

### Changing a menu item setting value

To change the setting value of the currently displayed menu item, proceed as follows.



- 1 Hold down the SHUTTLE button, and turn the jog dial or shuttle dial.

The setting value changes at a rate depending on the jog dial rotation rate or on the shuttle dial position.

001: 55

Setting value (flashing while changing)

- 2 When the desired setting value is displayed, press the SET button.

This saves the new setting value, and the menu display disappears from the image display and status display.

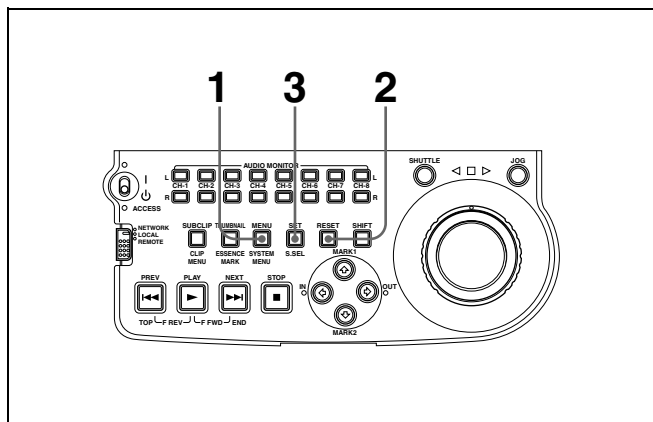
### To abandon making a change

Press the MENU button before pressing the SET button.

The menu display disappears from the image display and status display without the new setting value being saved.

## Resetting the menu settings to their factory default values

To reset the current active menu settings to their factory default values, proceed as follows.



- 1 Press the MENU button.

The menu appears in the image display and status display.

- 2 Press the RESET button.

The message “INITIALIZE ALL ITEMS TO FACTORY RESET VALUES?” appears in the image display and a message “Init setup” appears in the status display.

### To abandon operations and return to the setup menu display

Press the RESET button again.

- 3 Press the SET button.

The menu settings are reset to their factory default settings.

## Switching between 525(U) line, 525(J) line and 625 line modes (menu item 013)

To switch between 525(U) line, 525(J) line and 625 line operation modes, proceed as follows.

- 1 Press the MENU button.

- 2 Turn the jog dial or shuttle dial to display menu item 013 in the time data display.
- 3 Hold down the SHUTTLE button, and turn the jog dial or shuttle dial to set menu item 013 to “on.”
- 4 Press the SET button.
- 5 Hold down the SHUTTLE button, and turn the jog dial or shuttle dial to select the line mode 525(U), 525(J) or 625.
- 6 Press the SET button.
- 7 Turn the unit off (move the on/standby switch to the position to put the unit in the standby state).

Next time the unit is turned on (when the unit is put in the operating state by moving the on/standby switch to the position), it operates in the new mode.

## Menu bank operations (menu items B01 to B13)

This unit allows menu settings to be saved in what are termed “menu banks.” Saved sets of menu settings can be recalled for use as required.

### To jump to menu item B01

You can recall any required menu by turning the jog dial or shuttle dial after pressing the MENU button.

If you press the MENU button first, then the COUNTER button, you can jump directly to menu item B01 or H01. The recalled menu item toggles between B01 and H01 every time you press the COUNTER button.

### Saving the current active menu settings

Set one of basic menu items B11 “SAVE SETUP BANK-1” to B13 “SAVE SETUP BANK-3” to “on,” depending on which of the menu banks you wish to save in, then press the SET button.

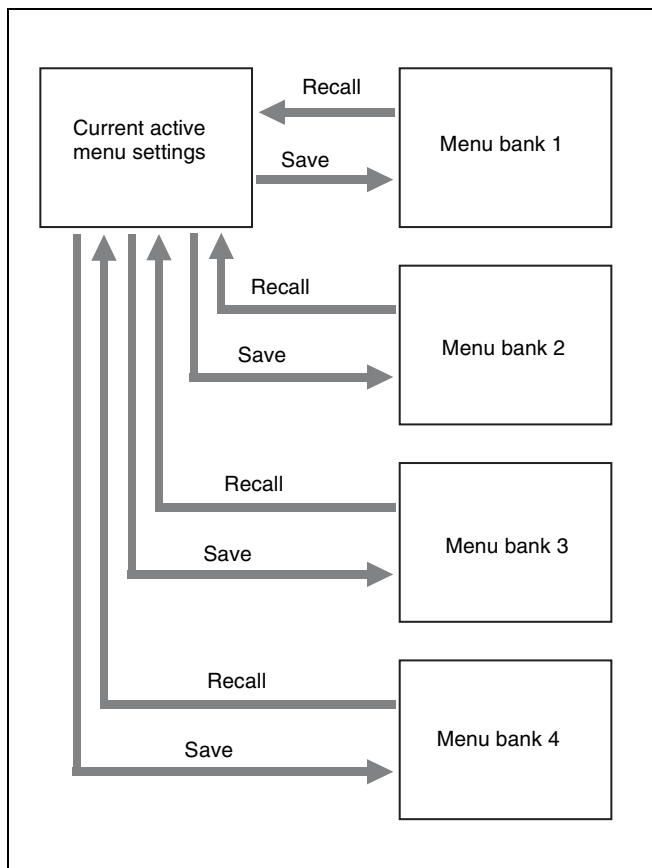
### Recalling settings from a menu bank

Set one of basic menu items B01 “RECALL SETUP BANK-1” to B03 “RECALL SETUP BANK-3” to “on,” depending on which of the menu banks you wish to recall from, then press the SET button.

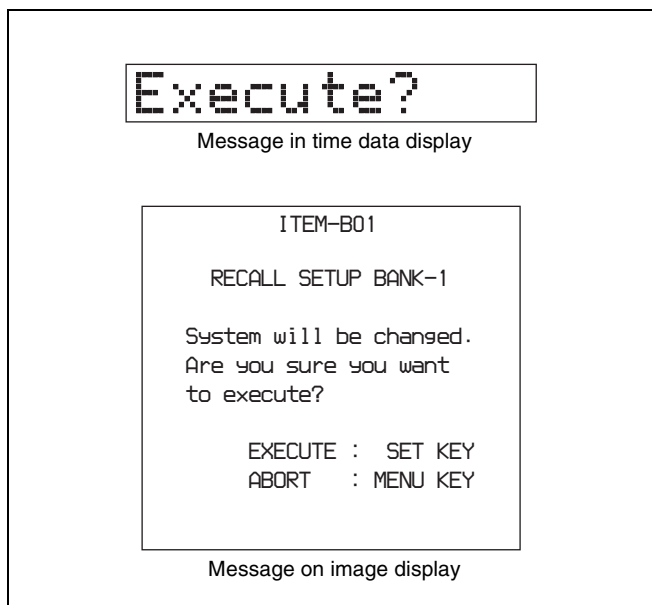
To recall menu bank 4, select “bank-4” under menu item B20 “RESET SETUP MENU.”<sup>1)</sup>

1) This is supported from firmware version 1.4.

*Refer to the maintenance manual for more information about menu bank 4.*

**Note**

The following message appears if the line mode of the menu bank that you are about to recall differs from the current line mode.



Press the SET button to recall the settings and switch to the line mode saved in the menu bank. When you power the unit off and then on again, it will use the line mode and settings of the selected bank.

To cancel the recall, press the MENU button.

# 7-3 Extended Menu

## 7-3-1 Items in the Extended Menu

The following tables show the items in the extended menu.

- Item names are the names which appear in the image display.

An abbreviated name appears in the time data display section when you press the NEXT button.

- The values in the Settings column are the values which appear in the time data display section. (The values may appear in a different format in the image display. In this case, the image display values are shown in parentheses.) Underlined values are the factory defaults.

Menu items in the 100s, relating to the control panels

Item number	Item name	Settings
101	SELECTION FOR SEARCH DIAL ENABLE	Select how the unit enters the shuttle or jog mode. <b>dial (dial direct)</b> : Press the SHUTTLE or JOG button or, except during recording/editing, turn the jog dial or shuttle dial. <b>key (via search key)</b> : Press the SHUTTLE or JOG button.
114	AUDIO MONITOR OUTPUT LEVEL	Select whether or not to control the level of the audio signal output from the AUDIO MONITOR OUT connector with the LEVEL knob for the PHONES jack. <b>var (variable)</b> : Control. <b>fixed</b> : Do not control.
121	FRAME PB MODE <sup>a)</sup>	Specify the frame mode for variable speed playback. <b>field</b> : Field playback <b>frame</b> : Frame playback. Compared to field playback, frame playback gives still pictures with higher precision.
142	REPEAT MODE <sup>a)</sup>	Put the unit into repeat playback mode, or exit from repeat playback mode. <b>off</b> : Exits from repeat playback mode. <b>play</b> : Puts the unit into repeat playback mode.

a) This is supported from firmware version 1.4.

Menu items in the 200s, relating to the remote control interface

Item number	Item name	Settings
215	i.LINK MODE	Select the connection method for the i.S400 (i.LINK) connector. <b>AV/C</b> : Connect with AV/C. <b>FAM (FAM (PC REMOTE))</b> : Connect with FAM.

Menu items in the 300s, relating to editing operations

Item number	Item name	Settings
320	DIGITAL AUDIO PB PROCESS ON EDIT POINT	Select the treatment of audio playback at edit points. <b>cut</b> : Carry out a cut (possibly resulting in audio discontinuities at the edit point). <b>fade</b> : Fade out and fade in.

Menu items in the 400s, relating to preroll

Item number	Item name	Settings
401	FUNCTION MODE AFTER CUE-UP	Select the state that the unit goes into after a cuing-up operation. <b>stop</b> : Stops (the stop mode). <b>still</b> : Still playback (in jog and shuttle mode).

### Menu items in the 500s, relating to disc protection

Item number	Item name	Settings
501	STILL TIMER	<p>To protect the disc against shock and vibrations, and to lengthen the life of the laser diodes, the unit automatically enters standby off mode whenever a specified time elapses in a disc stop mode (stop mode or the still picture mode of search mode). This allows you to set the time after which the unit exits a disc stop mode and enters standby off mode.</p> <p><b>0.5 s (0.5 sec)... 8 m (8 min)... 30 m (30 min):</b> Can be set in the range from 0.5 seconds to 30 minutes.</p> <p><b>off:</b> Do not put into standby off mode.</p>

### Menu items in the 600s, relating to the time code reader, metadata, and UMID

Item number	Item name	Settings
601	VITC POSITION SEL-1	<p>Select a line into which to insert VITC signals for DVCAM playback signals. <sup>a)</sup></p> <p><b>12 H (12 line)... 16 H (16 line)... 20 H (20 line) (in 525(U)/525(J) line modes)</b></p> <p><b>9 H (9 line)... 19 H (19 line)... 22 H (22 line) (in 625 line mode)</b></p> <p><b>Note</b></p> <p>You can insert the VITC signal in two places. To insert it in two places, set both items 601 and 602.</p> <p>a) In the DVCAM format, VITC is recorded as VAUX (Video Auxiliary) data. Because VITC is inserted into video signals by the VITC generator only during playback, the insertion line can be specified only for playback.</p>
602	VITC POSITION SEL-2	<p>Select a line into which to insert VITC signals for DVCAM playback signals. <sup>a)</sup></p> <p><b>12 H (12 line)... 18 H (18 line)... 20 H (20 line) (in 525(U)/525(J) line modes)</b></p> <p><b>9 H (9 line)... 21 H (21 line)... 22 H (22 line) (in 625 line mode)</b></p> <p><b>Note</b></p> <p>You can insert the VITC signal in two places. To insert it in two places, set both items 601 and 602.</p> <p>a) In the DVCAM format, VITC is recorded as VAUX (Video Auxiliary) data. Because VITC is inserted into video signals by the VITC generator only during playback, the insertion line can be specified only for playback.</p>
626	TC MODE <sup>b)</sup>	<p>Select the time code recording method for files written or transferred by a FAM or FTP connection.</p> <p><b>e-prs (ext preset):</b> Record the original time code of the clip file.</p> <p><b>i-reg (int regen):</b> Record clip file time code that is continuous with the time code of the last frame of the last clip on the disc.</p>
628	DF MODE	<p>Select either drop-frame mode or non-drop frame mode for the counter (when 525(U) or 525(J) line mode is selected).</p> <p><b>df (on (df)):</b> Drop-frame mode</p> <p><b>ndf (off (ndf)):</b> Non-drop frame mode</p>
651	UMID SDI OUTPUT	<p>Select whether to output UMID in the VANC of the SDI output.</p> <p><b>off:</b> Do not output.</p> <p><b>on:</b> Output.</p> <p>See 7-3-3 "Using UMID Data" (page 84) for more information about UMID.</p>

### Menu items in the 600s, relating to the time code reader, metadata, and UMID

Item number	Item name	Settings
652	UMID SDI VANC LINE	Select the line in which UMID is output when menu item 651 is set to "on." <b>12 H (12 line), 13 H (13 line), 15 H (15 line), 16 H (16 line), 17 H (17 line), 18 H (18 line), 19 H (19 line) (525(U)/525(J) line modes)</b> <b>9 H (9 line), 10 H (10 line), 12 H (12 line), 13 H (13 line), 14 H (14 line), 15 H (15 line), 16 H (16 line), 17 H (17 line), 18 H (18 line) (625 line mode)</b>  <i>See 7-3-3 "Using UMID Data" (page 84) for more information about UMID.</i>
657	ESSENCE MARK SDI OUTPUT	Select whether to output essence marks in the SDI output VANC. <b>off:</b> Do not output. <b>on:</b> Output.
660	ESSENCE MARK SDI VANC LINE	When item 657 is set to "on," select the line to which to output essence marks. <b>12 H (12 line), 13 H (13 line), 15 H (15 line), 16 H (16 line), 17 H (17 line), 18 H (18 line), 19 H (19 line) (525(U)/525(J) line modes)</b> <b>9 H (9 line), 10 H (10 line), 12 H (12 line), 13 H (13 line), 14 H (14 line), 15 H (15 line), 16 H (16 line), 17 H (17 line), 18 H (18 line) (625 line mode)</b>

b) This is supported from firmware version 1.4.

### Menu items in the 700s, relating to video control

Item number	Item name			Settings
703	BLANK LINE SELECT			Switch blanking of the video output signal on or off for individual lines in the vertical blanking interval.
	Sub-item			The Y/C signal and odd/even fields are blanked simultaneously.
	1	ALL LINE		- - -: Specify the blanking for each line separately. <b>blink (blank)</b> : Regardless of the setting of other sub-items, blank all lines which can be specified in this menu item. <b>thru (throu)</b> : Regardless of the setting of other sub-items, switch off blanking for all lines which can be specified in this menu item.
	2 ... 9	LINE 12 ... LINE 19	In 525(U) line mode	Specify blanking for lines 12 to 19. <b>blink (blank)</b> : Carry out blanking. <b>thru (throu)</b> : Switch off blanking.
	10	LINE 20		Specify blanking for line 20. <b>blink (blank)</b> : Carry out blanking. <b>half</b> : Carry out half-blanking. <b>thru (throu)</b> : Switch off blanking.
	2 ... 10	LINE 12 ... LINE 20	In 525(J) line mode	Specify blanking for lines 12 to 20. <b>blink (blank)</b> : Carry out blanking. <b>thru (throu)</b> : Switch off blanking.
	11	LINE 21		Specify blanking for line 21. <b>blink (blank)</b> : Carry out blanking. <b>half</b> : Carry out half-blanking. <b>thru (throu)</b> : Switch off blanking.
	2 ... 15	LINE 9, 322 ... LINE 22, 335	In 625 line mode	Specify blanking for lines 9, 322 to 22, 335. <b>blink (blank)</b> : Carry out blanking. <b>thru (throu)</b> : Switch off blanking.
	16	LINE 23		Specify blanking for line 23. <b>half</b> : Carry out half-blanking. <b>thru (throu)</b> : Switch off blanking.
705	EDGE SUBCARRIER REDUCER MODE			Select whether to enable the edge subcarrier reducer (ESR). <b>on</b> : Enable. <b>off</b> : Do not enable. When playing back a composite signal, set this to “on.”



### Menu items in the 700s, relating to video control

Item number	Item name	Settings
707	FORCED VERTICAL INTERPOLATION OFF	<p>The “Y-add” function is normally switched on automatically during jog or variable speed playback. This item selects whether or not to force the “Y-add” function off.</p> <p><b>auto:</b> Automatically switch the “Y-add” function on.</p> <p><b>off (forced YADD off):</b> Force the “Y-add” function off.</p> <p>The “Y-add” function is off when the unit enters stop mode.</p> <p>The “Y-add” function is a circuit operation to interpolate the video signal vertically during jog or variable speed playback for the purpose of reducing the vertical movement of the playback picture.</p>
713	VIDEO SETUP REFERENCE OUTPUT LEVEL	<p>Select whether to add the setup (7.5%) to the output analog video signals (when 525(U) or 525(J) line mode is selected).</p> <p><b>0.0%:</b> Do not add.</p> <p><b>7.5%:</b> Add.</p> <p>The factory default settings for each line mode are as follows:</p> <p><b>525(U) line mode: 7.5%</b></p> <p><b>525(J) line mode: 0.0%</b></p>
715	VIDEO GAIN CONTROL	<p>Adjust the video output level.</p> <p><b>–512 to 0 to 511</b></p>
716	CHROMA GAIN CONTROL	<p>Adjust the chroma output level.</p> <p><b>–512 to 0 to 511</b></p>
717	CHROMA PHASE CONTROL	<p>Adjust the chroma phase.</p> <p><b>–128 to 0 to 127</b></p>
718	SETUP LEVEL (525(U)/525(J) line modes)/BLACK LEVEL (625 line mode)	<p>Adjust the setup level (black level).</p> <p><b>–512 to 0 to 511</b></p>
731	WIDE MODE <sup>a)</sup>	<p>Specify whether to add wide picture information recorded on a disc to the output signal during MPEG IMX playback.</p> <p><b>thru (through):</b> Output the video signals of the disc being played back without adding wide picture information.</p> <p><b>auto:</b> When wide picture information is detected on the disc being played back, add wide picture information to the output video signals.</p> <p><b>Notes</b></p> <ul style="list-style-type: none"> <li>To add wide picture information to the output signal, it is necessary, in addition to setting this item to “auto,” to operate extended menu item 703 to set line 20 (in 525 line mode) to “thru” or set line 23 (in 625 line mode) to “thru.”</li> <li>In 525 line mode, wide picture information may not be output if VITC signal insertion position is set to line 20 in extended menu item 601 or 602.</li> </ul>

a) This is supported from firmware version 1.4.

### Menu items in the 800s, relating to audio control

Item number	Item name	Settings
802	DIGITAL AUDIO MUTING IN SHUTTLE MODE	<p>Set the audio muting conditions during shuttle playback.</p> <p><b>off:</b> Not muted.</p> <p><b>on:</b> Muted.</p>
823	NON-AUDIO FLAG PB	Control non-audio flags in digital audio output.
	Sub-item	
	1 CH1/CH2	<p>During playback (except E-E mode), set non-audio flags in digital audio output to the following states.</p> <p><b>on:</b> Set to on (data is non-audio)</p> <p><b>auto:</b> Set as follows.</p> <ul style="list-style-type: none"> <li>When data is read from disc and confirmed: Follow the data.</li> <li>When data from disc is not confirmed: Maintain current state.</li> </ul>
	2 CH3/CH4	
	3 CH5/CH6	
	4 CH7/CH8	

### Menu items in the 800s, relating to audio control

Item number	Item name	Settings
828	SDI/DV AUDIO OUTPUT SELECT	Select the audio signals to assign to SDI and i.LINK(AV/C) audio output channels.
	Sub-item	
	1 CH1/CH2	<b>tr1/2:</b> Tracks 1 and 2 assigned to audio output channels 1 and 2. <b>tr3/4:</b> Tracks 3 and 4 assigned to audio output channels 1 and 2. <b>tr5/6:</b> Tracks 5 and 6 assigned to audio output channels 1 and 2. <b>tr7/8:</b> Tracks 7 and 8 assigned to audio output channels 1 and 2.
	2 CH3/CH4	<b>tr1/2:</b> Tracks 1 and 2 assigned to audio output channels 3 and 4. <b>tr3/4:</b> Tracks 3 and 4 assigned to audio output channels 3 and 4. <b>tr5/6:</b> Tracks 5 and 6 assigned to audio output channels 3 and 4. <b>tr7/8:</b> Tracks 7 and 8 assigned to audio output channels 3 and 4.
831	DV OUT AUDIO MODE	Select the audio mode for i.S400 (i.LINK) connector (output). <b>4ch:</b> 12 bit/32 kHz/4ch <b>2ch:</b> 16 bit/48 kHz/2ch

### Menu items in the 900s, relating to digital process

Item number	Item name	Settings
920	SD-SDI H-ANC CONTROL	Select whether or not to add information to the SDI output.
	Sub-item	
	1 AUDIO 5CH-8CH	<b>off:</b> Do not add digital audio data channels 5 to 8. <b>on:</b> Add digital audio data channels 5 to 8.
	2 RP188 ATC	<b>off:</b> Do not add RP188 time code data. <b>on:</b> Add RP188 time code data.

## 7-3-2 Extended Menu Operations

The extended menu can be used with the same procedures as in the basic menu.

However, since with the factory default settings the extended menu is not displayed, it is first necessary to enable display of the extended menu.

See 7-2-2 “Basic Menu Operations” (page 74) for more information about how to select menu items and how to change their values.

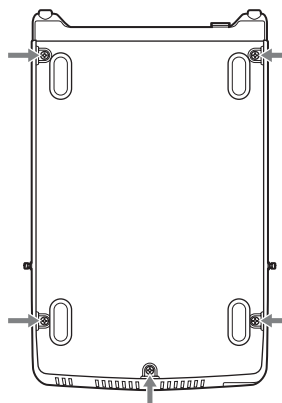
### Enabling display of the extended menu

To enable display of the extended menu, an internal switch must be set to on, and extended menu display must be enabled in the maintenance menu. (The internal switch is set to on when the unit is shipped from the factory. Unless you have set it to off, there is no need to change the switch setting.)

#### To set the internal switch to on

- 1 Using a Phillips screwdriver, remove the bottom cover.

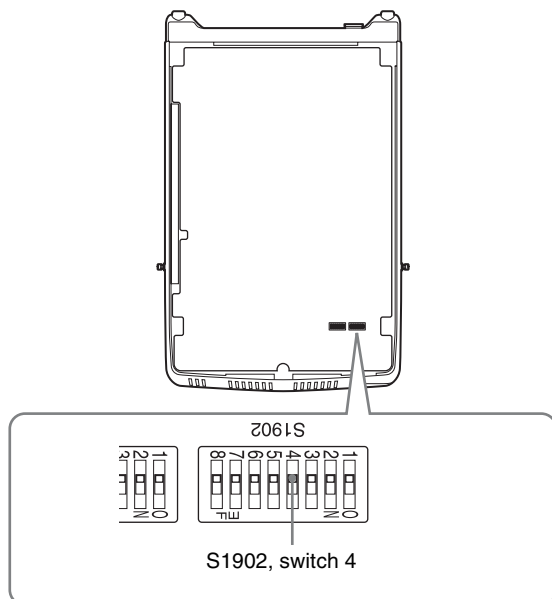
There are five screws fixing the cover.



- 2 Using a sharp implement such as a ball-point pen, set switch 4 in the S1902 group to the ON position (on the front side).

#### Note

Do not use a pencil for this operation, as graphite deposits can cause short circuits and lead to failure.



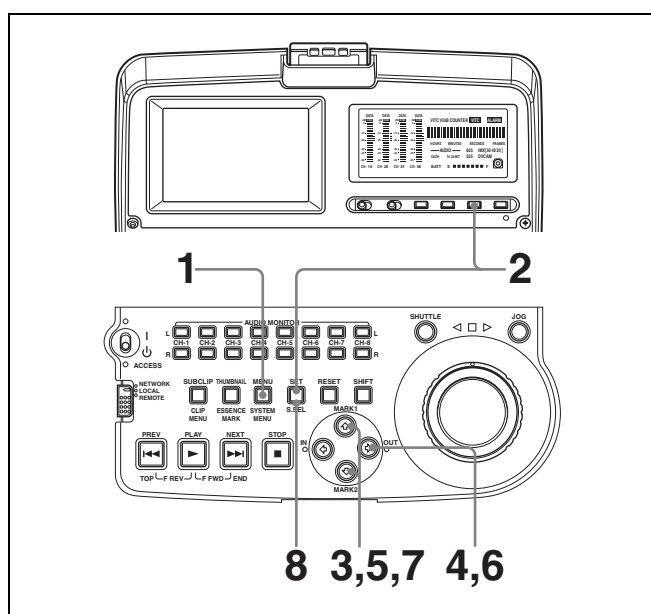
- 3 Replace the bottom cover.

#### Note

Tighten the screws firmly.

### To enable extended menu display in the maintenance menu

Carry out the following operations.



- 1 Press the MENU button.

The menu appears in the status display.

- 2 Hold down the COUNTER button, and press the SET button.

In the status display, first “MAINTE MENU” appears momentarily, and then the item group name appears.

- 3 Using the  $\Delta/\nabla$  buttons, display “Setup” in the status display.

Setup

- 4 Press the  $\Rightarrow$  button.

- 5 Using the  $\Delta/\nabla$  buttons, display “> Extended” in the status display.

> Extended

- 6 Press the  $\Rightarrow$  button.

The status display shows the current setting (“>> DISABLE”).

- 7 Press the  $\nabla$  button, to display “>> ENABLE” in the status display.

>> ENABLE

- 8 Press the SET button.

When you next display the menu and change the item display, the extended menu will appear after the basic menu.

### 7-3-3 Using UMID Data

To perform operations from interviewing to editing effectively and to detect audio-visual materials easily when reusing them, metadata that provides additional

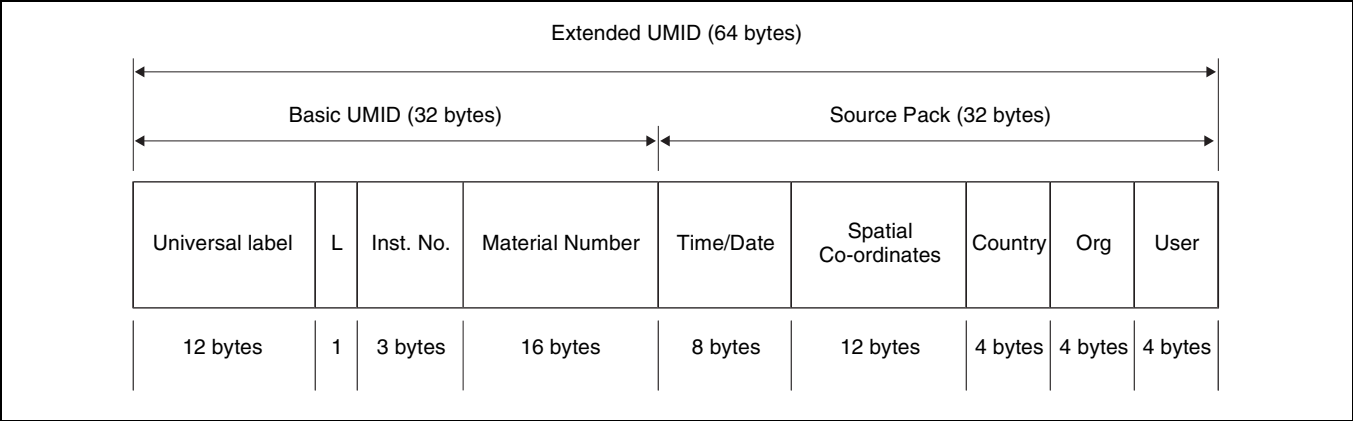
information is recorded along with audio-visual data. As one of application of metadata, the UMID (Unique Material Identifier) is internationally standardized.

#### What is a UMID?

The UMID (Unique Material Identifier) is a unique identifier for audio-visual material defined by the SMPTE330M-2003 standard.

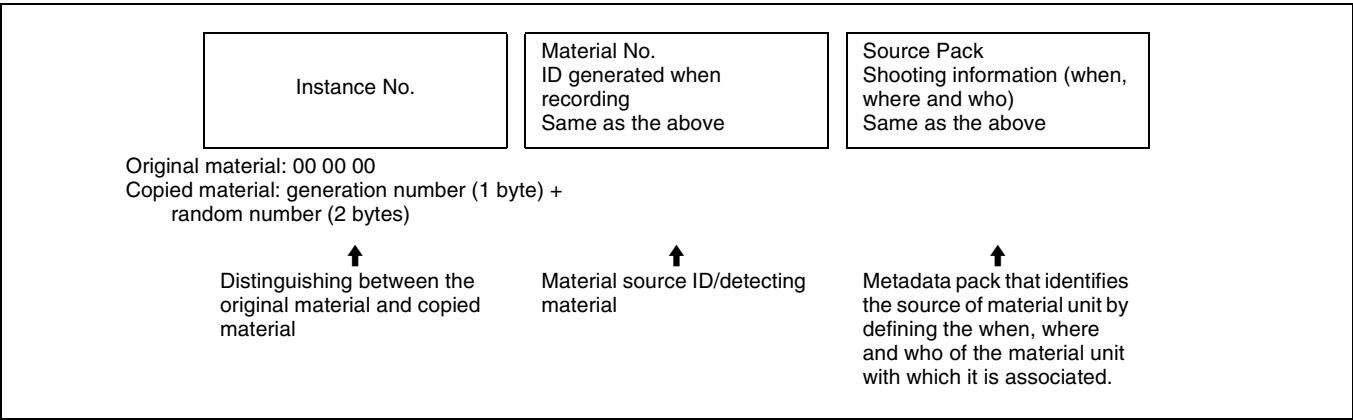
The UMID may be used either as the 32-byte Basic UMID or as the Extended UMID, which includes an additional 32 bytes of Source Pack to make a total 64 bytes.

For details, refer to SMPTE 330M.



Globally unique ID is automatically recorded in clip units. The Extended UMID is metadata that provides additional information such as location, time/date, company and so on.

The UMID is applied as follows.



#### Using the Extended UMID

You have to enter a country code, organization code and user code. Set the country code referring to the ISO-3166 table, and set the organization code and user code independently.

For details, see “About UMID ownership information” (page 85).

#### Functions of UMID data

The UMID data enables the followings:

- Add a globally unique ID to every clip of audio-visual material. The unique ID is used to detect the material source and to link it with the original source material.
- Distinguishing between original material and copied material. 00 is added to the Instance Number for original material.
- Recording based on the UTC. The UTC is used when recording the UMID. This enables uniform control of source material recorded all over the world based on the universal time code.

- Calculating the date difference among source materials. The source material is recorded based on the MJD (Modified Julian Date), which enables easy calculation of date difference among source materials.

## Setting UMID ownership information

Proceed as follows.

- 1 Set extended menu item 029 “STORED OWNERSHIP” to “on.”

*See 7-2-2 “Basic Menu Operations” (page 74) for more information about how to make this setting.*

- 2 Set the following item.

Item	Contents
COUNTRY	Country code
ORGANIZATION	Organization code
USER	User code

### To change the currently selected item

Hold down the STOP button, and turn the jog dial or shuttle dial.

### To select a different digit to be changed

Turn the jog dial or shuttle dial.

### To change the value of a digit

Hold down the SHUTTLE button, and turn the jog dial or shuttle dial.

- 3 Press the SET button.

## About UMID ownership information

### COUNTRY (country code)

Enter an abbreviated alphanumeric string (4-byte alphanumeric strings) according to the values defined in ISO 3166-1.

There are about 240 country codes.

Find your own country code on the following home page.

Refer to ISO-3166-1:

<http://www.evertype.com/standards/iso3166/iso3166-1-en.html>

When the country code is less than 4 bytes, the active part of the code will occupy the first part of the 4-bytes and the remainder must be filled with the space character (20h).

### Example: In the case of Japan

For Japan, if the country code is JP, it is 2 bytes, if JPN, it is 3 bytes.

Thus, enter the following:

JP \_ \_  
or

JPN \_

where \_ represents a space.

### ORGANIZATION (organization code)

Enter an abbreviated 4-byte alphanumeric string for the organization code.

#### Notes

- Organization codes must be acquired by applying to the SMPTE registration office.  
When no organization code has been acquired, it is forbidden to enter an arbitrary string. As a rule, the code “00” must be entered. Freelance operators who do not belong to an origination should enter “~.”
- There are no problems in recording or playing back audio-video signals, if ORGANIZATION is not set.

### USER (user code)

Enter the 4-byte alphanumeric strings for user identification.

The user code is registered with each organization locally. It is usually not centrally registered.

When the country code is less than 4 bytes, enter the country code from the beginning of the 4 bytes and enter the space character (20h) in the remaining strings.

This user code is determined by the organization. The methods used depend on the organization.

#### Note

User code cannot be entered when no organization code has been entered.

# 7-4 Maintenance Menu

## 7-4-1 Items in the Maintenance Menu

The following tables show the items in the maintenance menu.

- Item names are the names which appear in the image display.
- The values in the Settings column are the values which appear in the time data display section. (The values may appear in a different format in the image display. In this

case, the image display values are shown in parentheses.) Underlined values are the factory defaults.

*For details about DRIVE MAINTENANCE, ADJUST, CHECK, BATTERY CONFIG, SERVICE SUPPORT, and OTHERS, refer to the Maintenance Manual.*

AUDIO CONFIG: items relating to audio control

Item	Setting
DATA LENGTH	When “IMX50,” “IMX40,” or “IMX30” is selected in setup menu item 031, this selects the audio quantization bit count and number of recording channels. <b>16×8 (16bit × 8ch)</b> : 16 bits × 8 channels <b>24×4 (24bit × 4ch)</b> : 24 bits × 4 channels  <b>Note</b> When item 031 is set to “DVCAM,” the setting is automatically fixed at 16 bits × 4 channels.
NON-AUDIO INPUT	Select whether to handle digital audio signals as non-audio signals during recording.
Sub-item	<b>Audio (audio)</b> : Handle as audio signals. <b>data</b> : Handle as non-audio signals.
tr1/tr2	
tr3/tr4	
tr5/tr6	
tr7/tr8	

NETWORK CONFIG: items relating to network settings

Item	Setting
DHCP	Set whether to assign an IP address automatically with the DHCP server. <b>DISABLE</b> : Do not assign automatically. <b>ENABLE</b> : Assign automatically.
IP ADDRESS PRESET	Set IP address. <b>192.168.001.010</b>  <b>Note</b> When DHCP is set to “ENABLE,” it is not possible to set the IP address.
SUBNET MASK PRESET	Set the subnet mask. <b>255.255.255.000</b>  <b>Note</b> When DHCP is set to “ENABLE,” it is not possible to set the subnet mask.
DEFAULT GATEWAY PRESET	Set the default gateway. <b>000.000.000.000</b>  <b>Note</b> When DHCP is set to “ENABLE,” it is not possible to set the default gateway.
LINK SPEED	Set the communications speed. <b>AUTO, 10Mbps, 100Mbps</b>

### NETWORK CONFIG: items relating to network settings

Item	Setting
DUPLEX	Set the communications method. <b>AUTO, Full (Full Duplex), Half (Half Duplex)</b>

For details of how to make settings, see “To change network settings” (page 89).

### SETUP MAINTENANCE: items relating to the setup menu

Item	Setting
EXTENDED MENU	Select whether or not to display the extended menu. <b>DISABLE:</b> Do not display. <b>ENABLE:</b> Display.
SETUP BANK4	Select the bank to be stored in menu bank 4, or reset menu bank 4. <b>Cur to 4 (CURRENT TO BANK4):</b> Store the current menu settings in menu bank 4. <b>1 to 4 (BANK1 TO BANK4):</b> Store the menu bank 1 settings in menu bank 4. <b>2 to 4 (BANK2 TO BANK4):</b> Store the menu bank 2 settings in menu bank 4. <b>3 to 4 (BANK3 TO BANK4):</b> Store the menu bank 3 settings in menu bank 4. <b>Reset (RESET BANK4):</b> Reset menu bank 4.
SAVE MENU DATA	Select whether to temporarily back up (save) setup menu settings before operations such as software upgrades. <b>SET button:</b> Back up (save) the settings. <b>MENU button:</b> Return to next highest menu level without backing up.
LOAD MENU DATA	Select whether to restore (load) setting that were backed up (saved) with the “SAVE MENU DATA” item. <b>SET button:</b> Restore (load) the settings. <b>MENU button:</b> Return to the next highest menu level without restoring.
AU BANK RECALL	Select whether to recall settings automatically from a menu bank when the system is powered on, and if so which menu bank to recall from. <b>off:</b> Do not recall settings from a menu bank. <b>Bank1 (from BANK1):</b> Recall settings from menu bank 1. <b>Bank2 (from BANK2):</b> Recall settings from menu bank 2. <b>Bank3 (from BANK3):</b> Recall settings from menu bank 3. <b>Bank4 (from BANK4):</b> Recall settings from menu bank 4.
RESET ALL SETUP	Reset the current menu settings to the factory settings. <b>SET button:</b> Reset. <b>MENU button:</b> Return to the next highest menu level without resetting.  <b>Notes</b> <ul style="list-style-type: none"> <li>The line mode setting is also cleared. If you execute this item, reset the line mode (see page 7).</li> <li>Date and time settings are not cleared, but the time zone setting is cleared. After executing this item, reset the time zone (see page 27).</li> </ul>

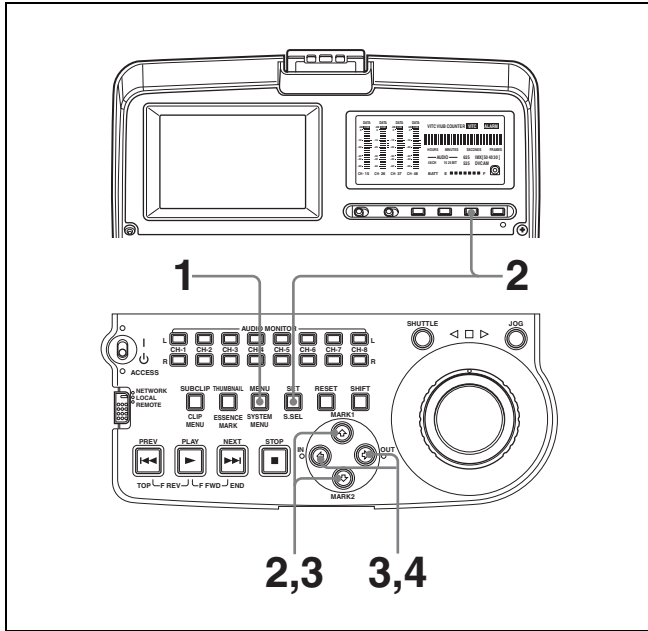
## 7-4-2 Maintenance Menu Operations

This section describes the indications in the maintenance menu and how to change the settings.

### To display a menu item setting

First change the switch setting within the unit, then carry out the following operations.

*For information about how to change the switch setting within the unit, see page 82.*



- 1 Press the MENU button.

The menu appears in the status display.

- 2 Hold down the COUNTER button, and press the SET button.

In the status display, first “MAINTENANCE MENU” appears momentarily, and then the item group name appears.

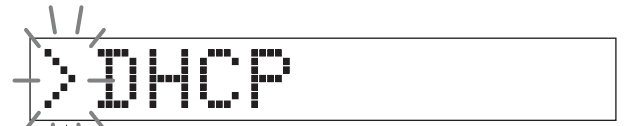
Network

### To change the item group

Use the  $\triangle/\nabla$  buttons.

- 3 Press the  $\Rightarrow$  button.

The item name appears.



Flashes to indicate that there is a next level (sub-item/setting).

### To return to the item group

Press the  $\Leftarrow$  button.

### To change the menu item

Use the  $\triangle/\nabla$  buttons.

- 4 Press the  $\Rightarrow$  button.

The setting value appears.

ENABLE

### To return to the menu item

Press the  $\Leftarrow$  button.

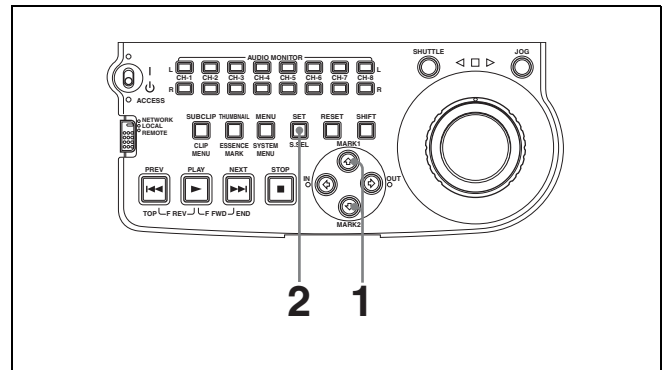
### When there is a sub-item

Repeat step 3.

### To change the setting of a menu item

To change the setting of the currently displayed menu item, carry out the following operations.

*For details of changing settings of network-related items, see the next item, “To change network settings.”*



- 1 Using the  $\triangle/\nabla$  buttons, display the desired setting.

- 2 Press the SET button.

This saves the new setting, and the menu disappears from the status display.

### To cancel changing a setting

Before pressing the SET button, press the MENU button.



The menu disappears from the status display, without saving the new setting.

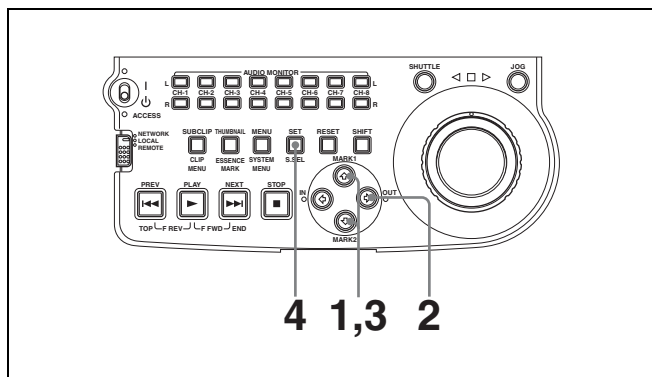
## To change network settings

To change network settings, carry out steps **1** to **3** in the item, “To display a menu item setting” above, to display the NETWORK CONFIG menu item, then carry out the following operations.

*For details of the settings, consult your network administrator.*

### When the IP address is assigned automatically

Check that the network cable is connected to this unit before carrying out the operation.



- 1** Using the  $\triangle/\nabla$  buttons, display “>DHCP.”
- 2** Press the  $\Rightarrow$  button.
- 3** Press the  $\nabla$  button, to display “>> ENABLE.”
- 4** Press the SET button.

### To check the assigned IP address

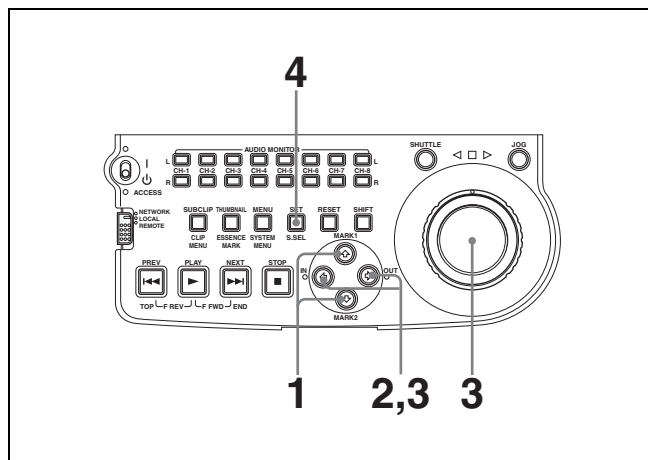
In the NETWORK CONFIG menu, using the  $\triangle/\nabla$  buttons, display “>IP address,” then press the  $\Rightarrow$  button.

#### Note

If the IP address cannot be assigned, this is shown as “000.000.000.000.” In this case, consult the network administrator.

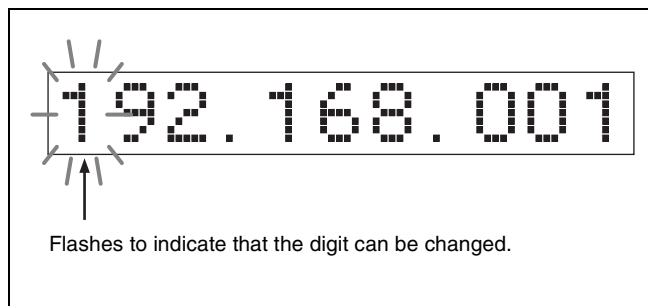
### To set the IP address

First set DHCP to “DISABLE.” (See the previous item, “When the IP address is assigned automatically.”)



- 1** Using the  $\triangle/\nabla$  buttons, display “>IP address.”
- 2** Press the  $\Rightarrow$  button.

The IP address appears, and the digit that can be changed flashes.



Flashes to indicate that the digit can be changed.

- 3** Set the IP address.

### To select a different digit to be changed

Use the  $\triangle/\nabla$  buttons.

### To change the value of a digit

Turn the jog dial or shuttle dial.

Turning clockwise increases the value, and turning counterclockwise decreases the value.

The  $\triangle/\nabla$  buttons can be used.

### To return to the factory default setting

Press the RESET button.

- 4** When all digits are set, press the SET button.

This returns to the NETWORK CONFIG menu.

### To cancel a setting

Before pressing the SET button, press the MENU button.

This returns to the NETWORK CONFIG menu, without saving the new setting.

- 5** Repeat steps **1** to **4** as required, to set the subnet mask and default gateway.

- 6 In the NETWORK CONFIG menu, press the SET button.
- 7 When the “NOW SAVING...” message vanishes, power the unit off and then on again with the on/standby switch.

### **Setting the communications speed**

Set the communications speed (LINK SPEED) and communications method (DUPLEX) to match the network environment.

*For details of the operation, see “To change the setting of a menu item” (page 89).*



## 7-5 System Menu

### 7-5-1 Items in the System Menu

The following tables show the items in the system menu.

Item names are the names which appear in the image display.

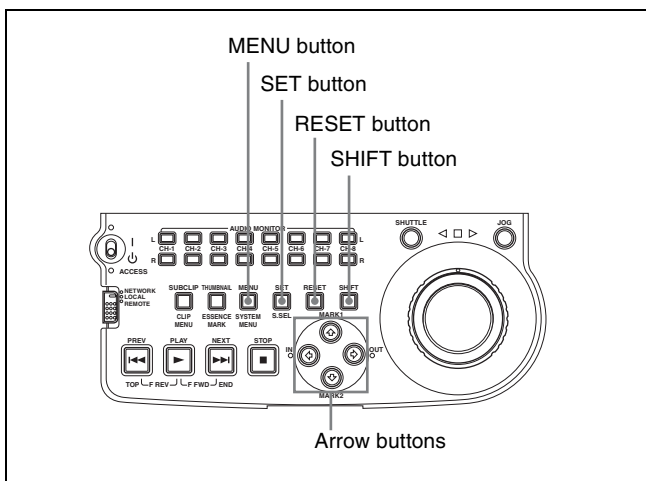
**DISC MENU: items relating to disc**

Item	Setting
STATUS	Display disc status or clip status.
Sub-item	<b>Note</b> Although the PDZ-1 Proxy Browsing Software can write TITLE1 and TITLE2, only TITLE1 is displayed here.
1 DISC	Display disc status.
2 CLIP	Display clip status.
DELETE	Delete clips on the disc.
Sub-item	
1 LAST CLIP	Delete the last clip.
2 ALL CLIP	Delete all the clips. (Locked files and files in the General directory cannot be deleted.)
FORMAT	Select the disc format, and carry out formatting.
Sub-item	
1 QUICK FORMAT	Quick format (Deletes all data on the disc, including the contents of the General directory.)

**DATE/TIME PRESET: items relating to date and time setting**

Item	Setting
YEAR	Set the year, month, day, time, and time zone.
MONTH	
DAY	
TIME	
TIME ZONE	

### 7-5-2 System Menu Operations



#### To display disc status and clip status

Insert a disc and proceed as follows.

- 1 Hold down the SHIFT button and press the MENU button.  
The system menu appears in the image display.
- 2 Press the  $\updownarrow$  button or  $\leftarrow\rightarrow$  button to select "DISC MENU," then press the  $\rightarrow$  button.  
The DISC MENU page appears.
- 3 Press the  $\updownarrow$  button or  $\leftarrow\rightarrow$  button to select "STATUS," then press the  $\rightarrow$  button.  
The "STATUS" menu item appears.

- 4** Display the disc status or the status of the current clip.

#### To display the disc status

Press the  $\triangleleft$  button or  $\triangleright$  button to select “DISC,” then press the  $\Rightarrow$  button.

The status of the loaded disc appears.

DISC STATUS	
USER ID:	(no ID)
TITLE :	(no name)
REMAIN	: 029 min
REWRITE	: 0002 times
SALVAGE	: OK
FILE SYSTEM :	OK
TO MENU : MENU KEY	

#### To display the status of the current clip

Press the  $\triangleleft$  button or  $\triangleright$  button to select “CLIP,” then press the  $\Rightarrow$  button.

The status of the clip at the current position appears.  
(When the current clip changes because of playback or a search, the display switches to the status of the new clip.)

CLIP STATUS	
CLIP NO	: 001/010
NAME :	C0001
TITLE:	(no name)
RECORD DEVICE:	PDW-1500
SERIAL:	10001
DATE :	01/01/06
TIME :	19:54:38
TO MENU : MENU KEY	

#### To return to the previous menu page

Press the MENU button.

#### To exit the menu system

Press the MENU button twice.

## To delete clips

### Notes

- Clips cannot be deleted when the Write Inhibit tab of the disc is set to the recording disabled position.
  - Locked clips (*see page 39*) are not deleted.
- Proceed as follows.

- 1** Carry out steps **1** and **2** in the previous section “To display disc status and clip status.”

- 2** Press the  $\triangleleft$  button or  $\triangleright$  button to select “DELETE,” then press the  $\Rightarrow$  button.

The “DELETE” menu item appears.

- 3** Delete the last clip or all clips.

#### To delete the last clip

Press the  $\triangleleft$  button or  $\triangleright$  button to select “LAST CLIP,” then press the  $\Rightarrow$  button.

The name of the clip to be deleted appears.

To cancel the deletion and return to the previous page, press the MENU button.

#### To delete all clips

Press the  $\triangleleft$  button or  $\triangleright$  button to select “ALL CLIP,” then press the  $\Rightarrow$  button.

The message “ALL DELETE OK?” appears.

To cancel the deletion and return to the previous page, press the RESET button.

To cancel the deletion and exit the menu system, press the MENU button.

- 4** Press the SET button.

The last clip is deleted, or all clips are deleted.

*You can use the THUMBNAIL MENU to delete the selected clip or all clips. For details, see page 40.*

## To format discs

*See 3-6-5 “Formatting a Disc” (page 31).*

## To set the date and time

*See 3-4 “Setting the Date and Time” (page 27).*

# Maintenance and Troubleshooting

## Chapter

# 8

## 8-1 Periodic Maintenance

### 8-1-1 Digital Hours Meter

The digital hours meter can provide six items of information about the operational history of the unit. The information can be displayed in the time data display and also, by text superimposition, on the monitor connected to the unit. Use the information as a guide in scheduling periodic maintenance.

*For periodic maintenance, consult your Sony dealer.*

#### Display modes of the digital hours meter

##### H01: OPERATION mode

Displays the total number of hours the unit has been powered on in units of 1 hour.

##### H11: OPERATION mode (resettable)

Same as H01 except that the count is resettable. This can be used as a guide in determining when to replace parts.

##### H12: LASER PARAMETER mode (resettable)

This shows a counter of the cumulative light output time by the optical head in units of hours.<sup>1)</sup> The count is resettable.

This can be used as a guide in determining when to replace the optical head.

<sup>1)</sup> The counter precision is affected by the ambient temperature.

##### H13: SEEK RUNNING mode (resettable)

This shows the cumulative seek operation time for the optical head in units of hours. The count is resettable. This can be used as a guide in determining when to replace the seek motor.

##### H14: SPINDLE RUNNING mode (resettable)

This shows the cumulative spindle rotation time, in units of hours. The count is resettable.

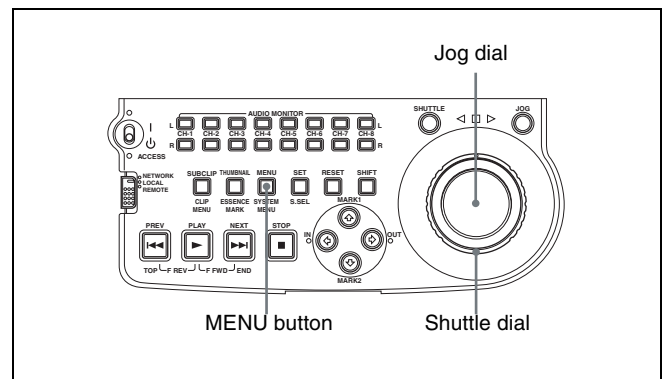
This can be used as a guide in determining when to replace the spindle motor.

##### H15: LOADING COUNTER mode (resettable)

Display the total number of times disc has been loaded in the unit. The count is resettable.

#### To display the digital hours meter

Press the MENU button, then turn the jog dial or shuttle dial to display the required item in the time data display and on the monitor connected to the unit.



#### To exit from the digital hours meter

Press the MENU button.

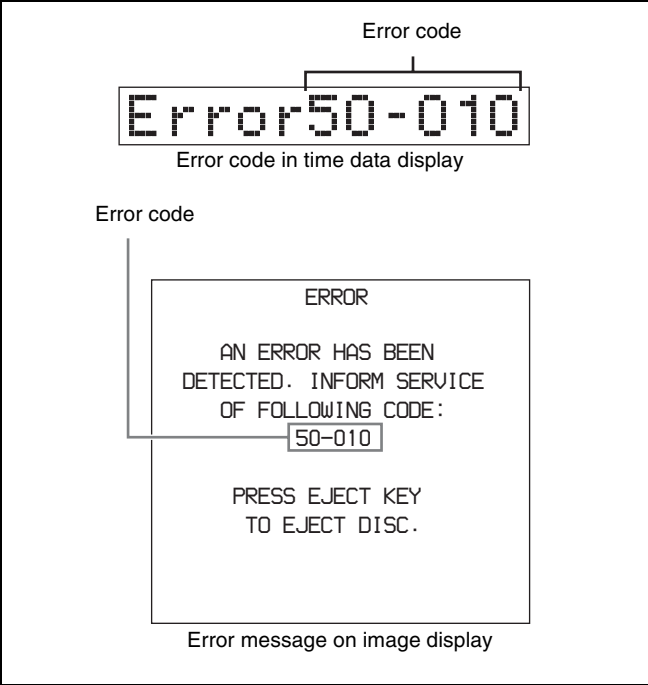
#### To jump to H01

Press the MENU button, then the COUNTER button. Every time you press the COUNTER button, menu item H01 or B01 is recalled alternately.

## 8-2 Error Messages

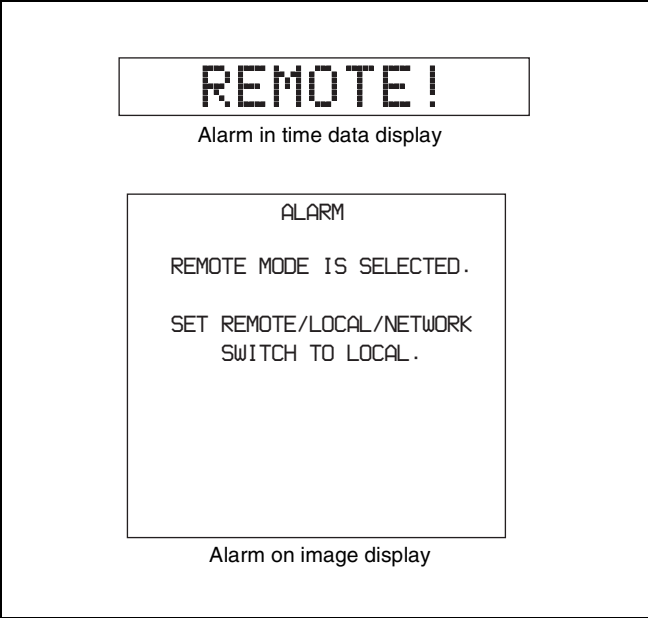
Error codes appear in the time data display when an error (usually a hardware problem) occurs. Error codes and error messages appear on the image display. When an error message appears, follow the instructions in the error message to resolve the problem.

Error code



## 8-3 Alarms

An alarm (warning message) appears in the time data display when an operation is attempted which is inappropriate for the settings on this unit or the state of the disc. The image display shows the alarm message and also the action to take to resolve the problem.



### 8-3-1 Alarm List

The following tables list the alarms displayed by this unit, categorized according to the state of the unit when the alarms occur.

The setting of basic menu item 016 “ALARM DISPLAY” determines whether or not some of these alarms appear. The “Display condition” column in the tables shows whether the alarm is displayed according to or regardless of the setting of menu item 016.

*See 7-2-2 “Basic Menu Operations” (page 74) for more information about how to set menu item 016.*

### When the unit is powered on

Message in time data display	Display condition <sup>a)</sup>	Description	Action
MENU Ver.UP	on, limit, off	Setup menu settings were reset, because this unit was upgraded.	Reset the setup menu items.  <i>See 7-2-2 "Basic Menu Operations" (page 74) and 7-3-2 "Extended Menu Operations" (page 82) for information about making setup menu settings. Maintenance menu item "SETUP MAINTENANCE" - "SAVE MENU DATA/LOAD MENU DATA" (see page 87) can be used to temporarily back up and restore the current menu settings.</i>
ILL. SETUP!	on, limit, off	Setup menu data is invalid, or data recalled with the maintenance menu item "SETUP MAINTENANCE" - "AUTO BANK RECALL" is invalid.	Reset the items in the setup menu.
Exchg batt!	on, limit, off	NVRAM battery is exhausted.	It is time to exchange the battery on the board. Contact your Sony service representative.
LOW BATT!	on, limit, off	Battery pack power is low.	Exchange with a charged battery pack.  <i>See 3-2-2 "Using a Battery Pack" (page 26) for more information about exchanging battery packs.</i>
BATT EMPTY!	on, limit, off	Battery pack power is exhausted.	

a) With respect to setting of basic menu item 016

### When a disc is inserted

Message in time data display	Display condition <sup>a)</sup>	Description	Action
Unknown FS!	on, limit, off	The loaded disc was formatted by an unknown file system.	Eject or format the disc.  <i>See 3-6-5 "Formatting a Disc" (page 31) for more information about formatting.</i>
No FS!	on, limit, off	The file system cannot be detected.	Eject the disc.
ILL. Disc!	on, limit, off	An unsupported disc was inserted.	
Salvage NG	on, limit, off	Recovery of disc contents (salvage) failed.	<i>See 3-6-7 "Using the Salvage Function" (page 32).</i>
525/60 Clip	on, limit	A disc recorded in NTSC format was inserted when this unit is in 625 line mode (PAL system).	Use a disc recorded with the PAL system.
625/50 Clip	on, limit	A disc recorded in PAL format was inserted when this unit is in 525(U) or 525(J) line mode (NTSC system).	Use a disc recorded with the NTSC system.
IMX50 Clip IMX40 Clip IMX30 Clip DVCAM Clip	on, limit	The recording format of the loaded disc differs from the format specified with basic menu item 031 "RECORDING FORMAT."	To record on the disc, change the setting of basic menu item 031.  <i>See 7-2-2 "Basic Menu Operations" (page 74) about how to change this setting.</i>
4CHx24 Clip 8CHx16 Clip	on, limit	The number of channels and quantizing bits of the loaded disc differ from the specifications of maintenance menu item "AUDIO CONFIG" - "DATA LENGTH."	To record on the disc, change the setting of maintenance menu item "AUDIO CONFIG" - "DATA LENGTH."  <i>See 7-4-2 "Maintenance Menu Operations" (page 88) about how to change this setting.</i>

Message in time data display	Display condition <sup>a)</sup>	Description	Action
No Support!	on, limit, off	A disc recorded in an unsupported recording format was inserted.	Use a disc recorded in the MPEG IMX or DVCAM format.
ILL. Index!	on, limit, off	An index file error was detected.	Format the disc. <i>For details, see 3-6-5 "Formatting a Disc" (page 31).</i>
FORMAT NG!	on, limit, off	Automatic format failed.	Use another disc.
DI read err	on, limit, off	A disc read error occurred.	Try ejecting the disc and inserting it again, or insert another disc.
DRV ADJ err	on, limit, off	Adjustment processing failed when a disc was inserted.	

a) With respect to setting of basic menu item 016

### During playback

Message in time data display	Display condition <sup>a)</sup>	Description	Action
525/60 Disc	on, limit	An attempt was made to play back a disc recorded with the NTSC system when this unit is in 625 line mode (PAL system).	Use a disc recorded with the PAL system.
625/50 Disc	on, limit	An attempt was made to play back a disc recorded with the PAL system when this unit is in 525(U) or 525(J) line mode (NTSC system).	Use a disc recorded with the NTSC system.
Disc Error!	on, limit, off	Normal playback is not possible because of a disc defect.	Use another disc. You can check the state of a disc by checking playback condition marks (see page 29).

a) With respect to setting of basic menu item 016

### During control panel operations

Message in time data display	Display condition <sup>a)</sup>	Description	Action
REMOTE!	on	A button was pressed while the remote control switch was set to "REMOTE."	To operate from the control panel, wait until control by the remote device ends and then set the remote control switch to "LOCAL."
No Disc!	on	A button was pressed with no disc loaded.	Operate after inserting a disc.
REC INHI.!	on	An attempt was made to record, display an E-E display, record an essence mark, or add a quick scene selection sub clip.	Try the operation again after setting the Write Inhibit tab to the recording enabled position.
REC INHI.!	on, limit	An attempt was made to save the current clip list on a write-protected disc.	
REC INHI.!	on, limit, off	An attempt was made to delete a clip from a write-protected disc.	
REC INHI.!	on, limit, off	An attempt was made to format a write-protected disc.	



Message in time data display	Display condition <sup>a)</sup>	Description	Action
No Clip!	on, limit	A playback or search button was pressed for a disc containing no recorded clips.	These operations are not possible.
No Clip!	on, limit, off	An attempt was made to delete a clip from a disc containing no recorded clips.	
Disc Top!	on	The PREV button was pressed while stopped at the top of the disc, or an attempt was made to perform a high-speed reverse search.	
Disc End!	on	The NEXT button was pressed while stopped at the end of the disc, or an attempt was made to perform a high-speed forward search.	
MAX# SB CLP	on, limit, off	An attempt was made to add a sub clip when the number of registered sub clips had already reached the upper limit (300) of the specifications of this unit.	These operations are not possible.
CL OVER DUR	on, limit, off	An attempt was made to add a sub clip when the total duration of sub clips in the clip list had already reached the upper limit (24 hours) of the specifications of this unit.	
Run Salvage	on, limit, off	A recording, E-E display, record an essence mark, or add a quick scene selection sub clip was attempted on a disc which requires clip recovery (salvage).	Try the operation again after executing the salvage function.  <i>For details, see 3-6-7 "Using the Salvage Function" (page 32).</i>
No SEL List	on, limit	The SUBCLIP button was pressed without loading a clip list from the disc into the current clip list.	Try the operation again after loading a clip list.  <i>For details, see 5-3-1 "Loading a Clip List From Disc Into Unit Memory" (page 52).</i>
No SUB Clip	on, limit	A button in the playback control section was pressed when there were no sub clips in the current clip list.	Playback is not possible without a sub clip in the current clip list.
SB CLP mode	on, limit	The SHIFT button and the THUMBNAIL button were pressed together with the SUBCLIP button lit.	Press the SUBCLIP button, turning it off, and try the operation again.
SUB CLIP NG	on, limit	The SHIFT and SET buttons were pressed together when IN and OUT points were not set correctly (the OUT point was set before the IN point, etc.).	Set the IN and OUT points correctly and try the operation again.
No List!	on, limit, off	An attempt was made to delete a clip list with no clip lists saved on the disc.	This operation is not possible.
STOP ONCE!	on, limit	The SUBCLIP button was pressed during playback of a clip list.	Try the operation again after stopping playback.
STOP ONCE!	on, limit, off	An attempt was made to display the CLIP menu during playback.	
No EM Space	on, limit, off	Recording of an essence mark failed because the number of essence marks recorded on the disc reached the upper limit of the specifications of this unit.	Use the PDZ-1 Proxy Browsing Software to delete unneeded essence marks.
EM Full!	on, limit, off	An attempt was made to add an essence mark with the number of recorded essence marks at the upper limit of the specifications of this unit.	
Formatting!	on, limit, off	An attempt was made to display the DISC MENU page in the system menu during an auto format.	Wait until the end of the auto format.

Message in time data display	Display condition <sup>a)</sup>	Description	Action
Disc Damage	on, limit, off	An attempt was made to record, display an E-E picture, record an essence mark, or add a quick scene selection sub clip when there was no free sparing area.	This disc cannot be recorded. Exchange the disc.
Non AV Full	on, limit, off	An attempt was made to record, display an E-E picture, record an essence mark, or add a quick scene selection sub clip when there was no free Non-Real-Time space.	Insert a different disc with enough free capacity.
Index File! <sup>b)</sup>	on, limit, off	An attempt was made to record to a disc containing an unsupported index file.	Exchange the disc for one that contains an index file supported by this unit. Alternatively, format the disc (see page 31).
File System <sup>b)</sup>	on, limit, off	An attempt was made to record to a disc with an unsupported file system	It may be possible to play back the disc, but recording is not possible. Exchange the disc for one formatted in a file system supported by this unit. Alternatively, format the disc (see page 31).
File System <sup>b)</sup>	on, limit, off	An attempt was made to record to a disc when its file system was set to inhibit recording.	

a) With respect to setting of basic menu item 016

b) This appears from firmware version 1.4.

### During reception of commands from an external device connected to the i S400 (i.LINK) connector <sup>1)</sup>

1) When extended menu item 215 has been set to "AV/C," and the remote control switch has been set to "REMOTE."

Message in time data display	Display condition <sup>a)</sup>	Description	Action
MAX# SB CLP	on, limit, off	A command was received to add a sub clip when the number of registered sub clips had already reached the upper limit (300) of the specifications of this unit.	These operations are not possible.
CL OVER DUR	on, limit, off	A command was received to add a sub clip when the total duration of sub clips in the clip list had already reached the upper limit (24 hours) of the specifications of this unit.	
Non AV Full	on, limit, off	A command was received to record, display an E-E picture, record an essence mark, or add a quick scene selection sub clip when there was no free Non-Real-Time space.	Insert a different disc with enough free capacity.
No Disc!	on	A recording, playback, search, or other command was received with no disc loaded.	Try the operation again after loading a disc.
No Clip!	on, limit	A playback or search command was received for a disc containing no recorded clips.	These operations are not possible.
Disc Top!	on	A PREV or reverse high-speed search command was received with the disc stopped at the top.	
Disc End!	on	A NEXT or forward high-speed search command was received with the disc stopped at the end.	

a) With respect to setting of basic menu item 016

## Chapter 8 Maintenance and Troubleshooting

a) With respect to setting of basic menu item 016

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## 8-4 Condensation

When this unit is moved from a cold place to a warmer place, or operated in high humidity, condensation may form on the optical pickup. This is called condensation, and if the unit is operated in this state, it may make correct playback impossible.

Note the following points, to avoid problems with condensation.

- When moving the unit under conditions in which condensation is likely, first insert the disc, and close the lid on the disc slot.
- If when you move the on/standby switch to the **I** position the indication “HUMID” appears in the status display, do not insert a disc until the indication disappears.

# Appendixes

## Specifications

### General

#### Power requirements

100 V to 240 V AC, 50/60 Hz  
DC (with battery)

#### Power consumption

45 W

#### Peak inrush current

- (1) Power ON, current probe method:  
44 A (240 V), 17 A (100 V)
- (2) Hot switching inrush current,  
measured in accordance with  
European standard EN55103-1: 13 A  
(230 V)

#### Operating temperature

0°C to 40°C (32°F to 104°F)

#### Storage temperature

–20°C to +60°C (–4°F to +140°F)

#### Operating relative humidity

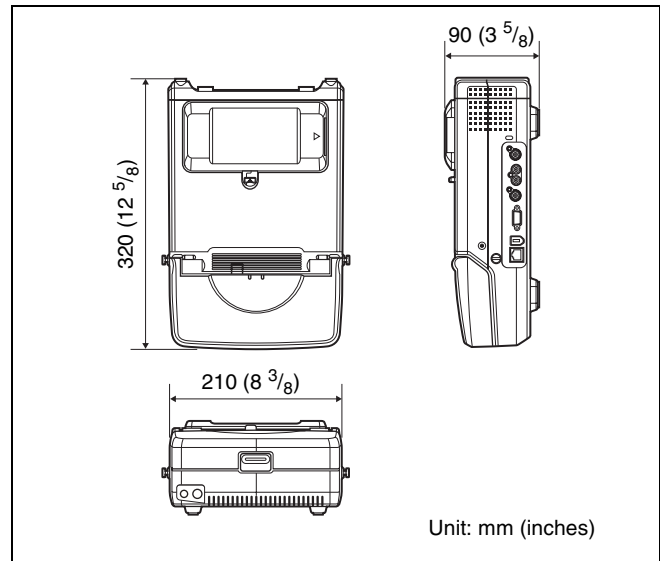
20% to 90%  
Less than 90%

#### Mass

3.5 kg (7 lb 11 oz)

#### External dimensions (w/h/d, excluding projections)

210 × 90 × 320 mm  
(8<sup>3</sup>/<sub>8</sub> × 3<sup>5</sup>/<sub>8</sub> × 12<sup>5</sup>/<sub>8</sub> inches)



### System

#### Recording format

Proxy video

MPEG-4<sup>1)</sup>

Proxy audio

A-law (8/4 channels, 8 bits, 8 kHz)

1) The MPEG-4 Codec is a product of Ingenient Technologies, Inc.

#### Playback format

Video MPEG IMX (50/40/30 Mbps), DVCAM  
(25 Mbps)

Proxy video

MPEG-4

Audio MPEG IMX: 16 bits/48 kHz (8 channels)  
or 24 bits/48 kHz (4 channels)

DVCAM: 16 bits/48 kHz (4 channels)

Proxy audio

A-law (8/4 channels, 8 bits, 8 kHz)

#### Recording/Playback time

MPEG IMX

50 Mbps: 45 min.

40 Mbps: 55 min.

30 Mbps: 68 min.  
 DVCAM 85 min.  
 Search speed  
 Jog mode  
 ±1 times normal speed  
 Shuttle mode  
 ±20 times normal speed

## Video performance

Sampling frequency  
 Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz  
 Quantization 10 bits/sample

## Output/input connectors

VIDEO OUT BNC ×1 (character out), 1.0 Vp-p, 75 Ω,  
 sync negative  
 SDI OUT BNC ×1 (character out)  
 SDI format, SMPTE 259M (ITU-R  
 BT656-3), 270 Mbps  
 MONITOR D-sub 15-pin ×1, analog RGB  
 Scanning frequency (525-line mode):  
 horizontal 31.5 kHz, vertical 60 Hz  
 Scanning frequency (625-line mode):  
 horizontal 31.2 kHz, vertical 50 Hz  
 AUDIO MONITOR OUT  
 RCA ×2 (L, R), −11 dBu, 47 kΩ,  
 unbalanced  
 PHONES JM-60 Stereo phone jack ×1, −∞ to −13  
 dBu, 8 Ω, unbalanced  
 i.S400 (i.LINK)  
 6-pin, complying with IEEE 1394,  
 supporting file access mode  
 100Base-TX (RJ-45 ×1)

## Accessories supplied

Operation manuals  
 English version (1)  
 Japanese version (1)  
 CD-ROM manual (1)  
 PDZ-1 Proxy Browsing Software (1)  
 Shoulder belt (1)

## Accessories not supplied

AC power cord  
 • For the customers in the U.S.A and Canada  
 Part No. 1-551-812-41 (125 V, 10 A, about 2.4 m)  
 • For the customers in the United Kingdom  
 Part No. 1-777-823-12 (250 V, 10 A, about 2.0 m)  
 • For the customers in European countries other than the  
 United Kingdom  
 Part No. 1-551-631-61 (250 V, 10 A, about 2.0 m)

## Related products

Battery packs

BP-L60S, BP-L80S, BP-GL65, BP-  
 GL95

Design and specifications are subject to change without  
 notice.

### Notes

- Always make a test recording, and verify that it was recorded successfully.  
 SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF FAILURE OF THIS UNIT OR ITS RECORDING MEDIA, EXTERNAL STORAGE SYSTEMS OR ANY OTHER MEDIA OR STORAGE SYSTEMS TO RECORD CONTENT OF ANY TYPE.
- Always verify that the unit is operating properly before use. SONY WILL NOT BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, BUT NOT LIMITED TO, COMPENSATION OR REIMBURSEMENT ON ACCOUNT OF THE LOSS OF PRESENT OR PROSPECTIVE PROFITS DUE TO FAILURE OF THIS UNIT, EITHER DURING THE WARRANTY PERIOD OR AFTER EXPIRATION OF THE WARRANTY, OR FOR ANY OTHER REASON WHATSOEVER.

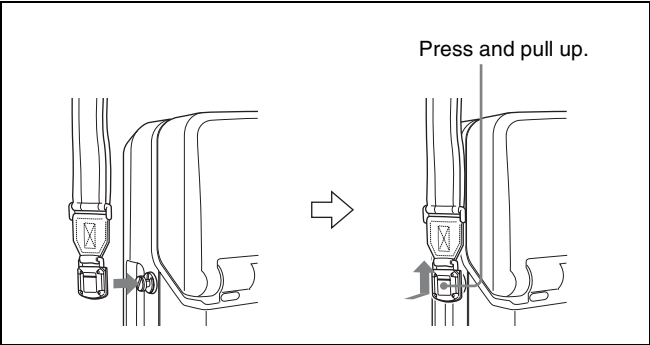
# Using the Shoulder Belt

The following figures show how to fit the supplied shoulder belt.

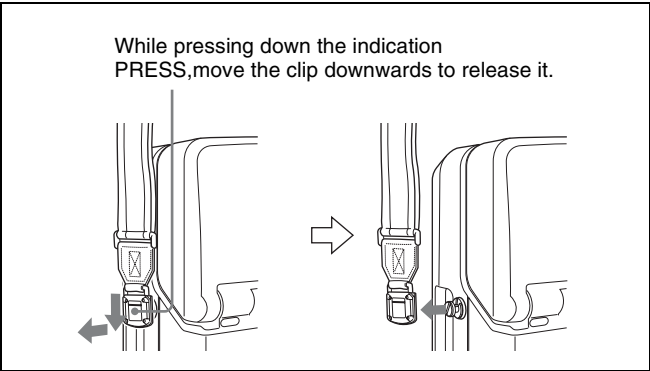
**Caution**

If you fit the shoulder belt incorrectly, the unit may fall down and cause body injury. Follow the procedures described below to fit or remove the shoulder belt.

## To fit the shoulder belt



## To remove the shoulder belt



# Glossary

## AES/EBU

A standard established jointly by the AES (Audio Engineering Society) and EBU (European Broadcasting Union) for serial transmission of digital audio. Two channels of audio can be transmitted via a single connector.

## Clip

A recording unit. Clips are created every time recording starts and stops.

## Clip list

A list of locations in the material recorded on the disc, arranged in any order. Clips lists can be created with the scene selection function of this unit, and with the supplied PDZ-1 Proxy Browsing Software.

## Color subcarrier

In a composite video signal, a signal superimposed upon the picture (luminance) information for the purpose of conveying the associated color information. Color and saturation information is conveyed by the phase and amplitude of the color subcarrier. Also called subcarrier.

## Composite video signal

A video signal in which luminance and chrominance are combined along with timing reference “sync” information to make composite video.

## Drop frame mode

SMPTE time code runs at 30 frames/second, while the NTSC color television system runs at about 29.97 frames/second. Drop frame mode adjusts the running of time code to eliminate the discrepancy between time code value and actual time by dropping two frames from the time code value at the beginning of each minute except every tenth minute.

## E-E mode

Electric-to-Electric mode. When you operate a VDR in E-E mode, input video and/or audio signals pass

through electric circuits only and then come out from the output connectors, without passing through electromagnetic conversion circuits such as recording heads.

## Essence mark

A type of metadata that may be set for a specified frame.

For more efficient searches, XDCAM equipment records essence marks as part of Non-RealTime metadata, and uses them to display thumbnails.

## i.LINK

Another name for the IEEE1394-1995 standards and their revisions. XDCAM uses the i.LINK interface to transfer DV streams by the AV/C protocol, and to read and write MPEG IMX and DVCAM data files by FAM (file access mode).

## Metadata

Information about the properties of video and audio content. XDCAM records metadata such as UMIDs and essence marks, and the supplied PDZ-1 Proxy Browsing Software can be used to record information such as titles and comments.

## MXF

Material eXchange Format. A file exchange format developed by the Pro-MPEG Forum. Equipment from different manufacturers can exchange files in this format.

## Non-audio

General term for audio signals other than linear PCM, such as Dolby E and Dolby Digital (AC-3).<sup>1)</sup> XDCAM can record non-audio as an input signal.

1) Dolby is a trademark of Dolby Laboratories.

## Non-drop-frame mode

A mode of advancing time code which ignores the difference in frame values between real time and the time code. Using this mode produces a difference of approximately 86 seconds per day between real time and time code, which causes problems when editing programs in units of seconds using the number of frames as a reference.

## Proxy AV data

Low-resolution data with a video bandwidth of 1.5 Mbps and an audio bandwidth of 64 kbps per channel. This unit records proxy AV data automatically whenever high-resolution MPEG IMX or DVCAM data is recorded.

## Reference video signal

A video signal that contains a sync signal or sync and burst signals, used as a reference for synchronization of video equipment.

## SDI

Serial Digital Interface. An interface standardized as SMPTE 259M which enables the transmission of an uncompressed digital component stream.

## S/N

Signal-to-Noise ratio. The relation of the strength of the desired signal to the accompanying electronic interference, the noise. If S/N is high, sounds are reproduced with less noise and pictures are reproduced clearly without snow.

## SNMP

Simple Network Management Protocol. XDCAM uses this protocol to monitor equipment operating status via network connectors.

## Sub clip

One of the sections which make up a clip list. A sub clip may be part of a clip or an entire clip.

## Thumbnail image

A reduced still picture of video for display on a GUI screen. XDCAM creates thumbnail images from proxy video, and displays them as index pictures on GUI screens.

## Time code

A digitally encoded signal which is recorded with video data to identify each frame of the video by hour, minute, second and frame number. SMPTE time code is applied to NTSC system, and EBU time code to PAL and SECAM systems.



**UMID**

Unique Material Identifier. A standard (SMPTE 330M) for video and audio metadata. The Basic section of a UMID contains a globally unique number and a material number for the identification of recorded material. An optional section called the “Source Pack” contains information such as the time and location of recording. A UMID with the Basic section only is called a Basic UMID. A UMID with the Source Pack is called an Extended UMID.

**User bits**

A total of 32 bits are provided in the time code which the user can use to record such information as date, reel number, or scene number on video tape. Also called user’s bits.



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